

RECOMMENDATION ITU-R SM.1413-2

**Radiocommunication Data Dictionary
for notification and coordination purposes**

(Question ITU-R 65/1)

(1999-2003-2005)

Scope

The aim of the Radiocommunication Data Dictionary (RDD) is to improve the exchange of notification and coordination data between administrations and between administrations and the Radiocommunication Bureau (BR) by:

- providing a single comprehensive reference source;
- presenting consistent, accurate and unambiguous descriptions for the data with, where appropriate, references to other ITU documentation containing additional relevant information;
- providing administrations with a resource for their internal frequency management processes which could include such items as staff training, exchange of technical data, upgrading of computer-based systems, and conference and meeting preparation.

The ITU Radiocommunication Assembly,

considering

- a) that the notification and coordination procedures cover a wide range of radio systems that have been developed over time;
- b) that there is a need to develop and adopt more precise criteria for frequency sharing and coordination of new and existing systems in both space and terrestrial environments;
- c) that the impact of rapidly changing technology and the introduction of new services will increase the number of data elements to be uniquely identified and will require a data dictionary to be both flexible and part of a managed system;
- d) that administrations need to be able to adequately and correctly identify frequency management information and descriptions for many internal processes including staff training, conference and meeting preparations;
- e) that the variations in data definitions and units across the different services and frequency bands complicate the unique identification of every data element;
- f) that for electronic data exchange to be successful the data to be exchanged between administrations and the ITU Radiocommunication Bureau must first be agreed and uniquely identified;
- g) that Appendix 4 of the Radio Regulations (RR) defines the data sets to be provided, at different stages or for different categories of services, to the ITU Radiocommunication Bureau by the administrations, but does not define in detail the data elements themselves or their formats;
- h) that more detailed definitions and formats for data elements are spread over a number of ITU-R texts, including Circular Letters and the Preface to the International Frequency List (IFL), and that it would be advisable to concentrate all of this information into a single text;

j) that the introduction of a data dictionary containing the radiocommunication terms for uniquely defined data elements associated with the notification process would:

- aid the introduction of Electronic Data Exchange;
- simplify the translation process for ITU-R texts and other texts into other languages;
- make it easier for all administrations to understand the definition of terms regardless of the original language used to define them;
- improve the accuracy of data supplied by administrations;

k) that a data dictionary would need to be maintained to allow for changing technology and future expansion in the number of data elements listed;

l) that the existence of a data dictionary would provide assistance to World Radiocommunication Conferences (WRCs) in updating and improving the RR, in particular Appendix 4,

recognizing

a) that a data dictionary will require an on-going procedure for making improvements and keeping it up-to-date with developments in radiocommunications,

recommends

1 that the Radiocommunication Data Dictionary (RDD) contained in Annex 1 should be used as a reference to supplement Appendix 4 of the RR for facilitating the advanced publication, coordination and notification processes of frequency assignments with the ITU Radiocommunication Bureau and in the coordination processes between administrations;

2 that Radiocommunication Study Group 1 should ensure that the RDD is maintained on an on-going basis with the help of a Rapporteur group including participation by the ITU Radiocommunication Bureau.

Annex 1

Radiocommunication Data Dictionary

Background

In developing guidelines for administrations on the electronic exchange of spectrum management information, it was recognized that notification and coordination data were the most common items of information exchanged between administrations, and between administrations and the Radiocommunication Bureau (BR). However, the information required to facilitate this exchange is contained in numerous documents often with inconsistent or inaccurate descriptions. In some documents this information, or the associated explanation, is so brief that its meaning is ambiguous or misleading. These problems make the notification and coordination of radio systems difficult for both administrations and the BR, introducing unnecessary delays and causing the whole process to take more effort. If the delays in the notification and coordination process result in delays to the introduction of services, this could increase the associated costs for both administrations and radio system operators.

Increasing congestion in the radio spectrum and the need for greater sharing will increase the volume of data to be exchanged. If data exchange, in paper form, is to be accomplished efficiently and effectively, it is important that the precise meaning of the data to be exchanged is understood by all parties involved in the process. If this data is to be exchanged electronically, then a precise understanding becomes essential. To resolve these problems it was proposed that a dictionary of radiocommunication data used in the notification and coordination processes should be developed. Such a document could also be useful to administrations in their own internal frequency management processes, particularly where computer-based systems are being implemented which by necessity must cover a multitude of functions such as licensing, engineering tools and applications, staff training, etc. It also has potential for assisting administrations in developing their various inputs to technical meetings and conferences both within the ITU structure and with other external organizations where technical issues may be discussed.

The RDD is intended to serve as an authoritative reference for information concerning data used in the notification and coordination processes. It is also expected that the RDD will replace the data descriptions in the Preface to the IFL.

The RDD includes for each data element: an accurate, unambiguous description; data format information; and conditions of use. In addition, tables are provided for each type of radio service that outline the information required when coordinating or notifying stations in those radio services.

It has also become apparent that there is a possible impact on sections of the Radio Regulations, particularly Appendix 4 which provides the current requirement and definitions of data items used for coordination and notification. While many of the ambiguities in RR Appendix 4 have been resolved, the complexity of the systems and their changing requirements can always lead to the need for further clarification of the RR Appendix 4 data requirements and rationalization of redundant data. Administrations are invited to regularly consider these possible changes since, if they are to be implemented, they will need to provide suitable proposals to an appropriate WRC.

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SECTION 1

INTRODUCTION

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1.0 Introduction

The Radiocommunication Data Dictionary (RDD) describes the information required for the notification of terrestrial and space radiocommunication systems. The RDD also describes the specific conditions under which notifications are required by Appendix 4 of the Radio Regulations (RR), other provisions of the RR and the various Regional Plans. In addition, the RDD contains the information required for the coordination of terrestrial and space services. Further, the RDD provides a common data structure for the exchange of radiocommunication data among different parties, whether electronically or by other means, in accomplishing various spectrum management functions. In fact, the single data format for each data element that the RDD provides is not only a necessity when performing automated, electronic retrievals used in calculations, but a very useful tool for exchange of data by any means. The common data structure also promotes common understanding as all parties communicate using the same definitions, formats, etc. for the same piece of information.

1.1 Background

The information required for the international filing process is contained in a variety of documents (e.g., Radio Regulations, Regional Plans, Rules of Procedure, BR Circular Letters, ITU-R Recommendations and the Preface to the IFL). In general, this information may be viewed from three distinct perspectives:

- a) at treaty level in the Radio Regulations and Regional Plans,
- b) at the notice level in BR Circular Letters, and
- c) at the notice/BR publication level in the Preface to the IFL.

In each case, the information presented is influenced by the purpose of the respective documents:

- for the Radio Regulations and Regional Plans, to define concisely an administration's treaty obligations in respect of the regulatory requirements for the international filing process;
- for the BR Circular Letters, in the context of the regulatory requirements, the related technical and regulatory examinations performed on notices and the structure of the BR's databases, to present the details required to complete the various notice forms; and
- for the Preface to the IFL, to describe the data recorded in the BR's various publications (e.g., International Frequency Information Circular (BR IFIC)) and additionally to assist an administration in the completion of a notice.

The purpose of each document ultimately affects the structure and understanding of the information (although there is a similarity between the views from the perspective of the Preface to the IFL and the BR Circular Letters that provide guidance on completing the notice forms). In addition, the information that is presented in many of the documents is usually structured on the requirements of multiple Services and this can make it difficult to identify the precise requirements relating to an individual Service.

While the international filing process information is described from these different perspectives, the information held by administrations and operators in their data systems is based on national requirements (e.g., licensing or engineering requirements) that are usually held at the service (application) or radiocommunication system level. Due to the differences between the data required for the international filing process and the data held by administrations and operators, there can be differences in understanding that make matching the two sets of data problematic. Bridging this gap in understanding is difficult: for the BR, due to the wide variation in national requirements (also further complicated by variations in computing systems); and, for administrations, due to the highly specialized knowledge requirements associated with the international filing process. This gap in understanding indicates the need for a new, additional perspective on the information requirements that is based on the viewpoint of the administrations and operators.

In reviewing the range of information requirements, variations in the descriptions of individual data items were identified between different types of documents. As a consequence, there could be inconsistencies between descriptions. Hence, it was concluded that a new view of the international filing process information requirements would not only have to consider the context of the regulatory requirements and the structure of the BR's databases, but also the data descriptions would have to be based on the purpose for which they were

required. In order to include all of these requirements within this new view of the international filing process information requirements, it was realized that new data descriptions needed to be developed and that these descriptions had to show how individual pieces of data related to each other. Further, it was realized that to reduce the impact of changes in notice forms and different methods of filing on the resulting data structure, the data descriptions and format statements ideally needed to be independent of the physical implementation - although this latter requirement is not easy to attain.

The resulting document, the RDD, sits between the treaty-level texts and the notice-level texts, effectively providing a link from the data requirements contained in the Radio Regulations and Regional Plans to the physical presentation described by BR Circular Letters. Further, by viewing the information requirements from the administration/operator perspective at the application/service or radiocommunication system level, the RDD can complement both the Radio Regulations and BR Circular Letters.

The RDD is useful also to administrations in their own internal frequency management processes, particularly where computer-based systems are being implemented which by necessity must cover a multitude of functions, such as licensing, engineering tools and applications, staff training, etc. It also has potential for assisting administrations in developing their various inputs to technical meetings and conferences, both within the ITU structure and with other external organizations where technical issues may be discussed.

1.2 Purpose and Scope

The aim of the RDD is to improve the exchange of notification and coordination data between administrations and between administrations and the Radiocommunication Bureau (BR) by:

- providing a single comprehensive reference source;
- presenting consistent, accurate and unambiguous descriptions for the data with, where appropriate, references to other ITU documentation containing additional relevant information;
- providing administrations with a resource for their internal frequency management processes which could include such items as staff training, exchange of technical data, upgrading of computer-based systems, and conference and meeting preparation.

1.3 Approach

Development of the RDD and its subsequent revision following changes to the coordination and notification data requirements at a WRC have involved the consideration of:

- various editions of the Radio Regulations, Regional Plans, Rules of Procedure, BR Circular Letters, ITU-R Recommendations and the Preface to the IFL; and
- interviews conducted by Rapporteurs (from administrations and the BR) with radio system operators, as well as individuals within administrations and the BR responsible for providing and processing the notification and coordination data.

The result of this work forms the basis of this text.

1.4 Organization of Data Descriptions

The data in the RDD is subdivided into three different categories and these are described below. Each entry in these three categories is given a unique identification number, and this number is called the “RDD reference number”. In addition, to assist in the identification of information described in the RDD, each category has a specific fixed presentation style.

1.4.1 Data Items

Individual units of information relevant to the coordination and notification process have been identified and are described in the RDD. These individual units of information are called “data items” and they form the basic component of the RDD. The names of data items appear in title case with bold typeface (e.g., the data item referenced as item 1A in Annex 1A to RR Appendix 4 is the **Notified Assigned Frequency**).

1.4.2 Data Groups

Individual data items that have a common reference are grouped together. These groups of data items are known as “data groups”. Each data group is an object relevant to the coordination and notification process and the names of data groups appear in title case with bold *italic* typeface, e.g. ***Class of Station, Antenna, Non-geostationary Orbit***. A data group may contain several different data items, and each one belongs specifically to that data group. For example, ***Antenna*** is a data group, and it has data items like ***Geographical Coordinates***. By associating data items in individual groups, it is possible to define the data item in a way that is relevant to the complete data group and avoid ambiguities in the meaning of the data item, e.g., do the ***Geographical Coordinates*** belong to the ***Site*** or ***Antenna***? - While this distinction may not always appear to be relevant particularly in some frequency bands, for some systems like ILS or very large sites it can be important. The data group name is also used to assist in identifying individual data items, so the full reference for a specific data item is read as ***Class of Station Code, Non-geostationary Orbit Inclination Angle, Antenna Geographical Coordinates, Beam Designation, Signal Configuration Operational Frequency***, etc.

1.4.3 Relationships

Data groups may be related to other data groups. These relationships describe the type of connection or association between data groups. It is often the description attached to the relationship that explains why a particular data item is used or required, and that gives sense to the overall structure. A relationship has two “ends,” one for each data group it connects, that is based on the view of the connection or association between the data groups from the originating data group e.g., “An ***Antenna*** must be located at a single ***Site***.” and “A ***Site*** may be the location of one or more ***Antennas***.” As shown in the example, normally one end of the relationship has a single ending and the other end of the relationship has a multiple ending, e.g., “A ***Site*** may be the location of one or more ***Antennas***”. In the example, the description associated with both ends of the relationship clearly shows the overall structure between the data groups ***Site*** and ***Antenna***.

1.5 RDD Structure and Section Summaries

The RDD is sub-divided into ten sections, and the following section summaries provide a brief description of the contents of the RDD. The description of terrestrial data items is mainly located within Sections 2 and 3. The description of space data items is mainly located within Sections 4 and 5. The other sections of the RDD provide supporting material, a mapping table between the RDD and RR Appendix 4, and a comprehensive indexing facility.

Section 2: Terrestrial Notification Data

This Section contains a series of tables that are based on the BR’s *TerRaSys* notice forms and that describe the notification data for terrestrial radio systems. Each table lists the data items required in RR Appendix 4 for notification of the radio system together with the specific conditions under which they are required by the Radio Regulations, or Regional Plans. The tables also contain data used by the BR for the control of the notice forms as well as data associated with the entry of the frequency assignment in the MIFR. These data items are provided to assist administrations in completing the form and interpreting the entry in the MIFR. In addition, each table contains a short description of the radio systems to which it is applicable, the associated main operational frequency ranges, and any significant RR provisions.

Section 3: Description of Data Items for Systems and Services

This Section contains a description of all the terrestrial system data items, data groups and relationships listed in Section 2 together with some additional data items that are not part of the specific notification data but could be of assistance to administrations and operators in clarifying which data are, or are not, required in the notification process.

Section 4: Space Advance Publication Notification and Coordination Data

This Section contains a series of tables that are based on the BR’s notice forms and that describe the notification data for space radio systems. Each table lists the data items required in RR Appendix 4 for notification of the radio system together with the specific conditions under which they are required by the Radio Regulations or Regional Plans. The tables also contain data used by the BR for the control of the

notice forms as well as data associated with the entry of the frequency assignment in the MIFR. These data items are provided to assist administrations in completing the form and interpreting the entry in the MIFR. In addition, each table contains a short description of the space systems to which it is applicable.

Section 5: Description of Space Data Items

This Section contains a description of all the space system data items, data groups and relationships listed in Section 4 together with some additional data items that are not part of the specific notification data but could be of assistance to administrations in clarifying which data are, or are not, required in the notification process.

Section 6: Data Item Formats

This Section contains standard formats of data presentation, e.g., Long/Lat (dms). These standard formats are referred to in the “data format” statement at the end of the definition of each item in Sections 3 and 5.

Section 7: Diagrams

This Section contains graphical representations of the data structures defined in Sections 3 and 5.

Section 8: Cross-Reference Tables between RR Appendix 4 and the RDD

This Section identifies the differences between the information listed in RR Appendix 4 and data items listed in the RDD. Where a difference occurs, a reason is provided.

This Section contains two subsections: the first concerns terrestrial notification data, and the second concerns space notification data. In each subsection, information is presented in a table that associates each RR Appendix 4 data item to the RDD data item that most closely represents this information. Any significant variance between the presentation in the table or the requirements under which the data item is required is explained in the notes that follow each table.

Section 9: Appendices to Sections 1 to 8 of the RDD

This Section contains 14 Appendices to Sections 1 to 8.

Appendices 1 to 14 to Sections 1 to 8

- Appendix 1: Codes Designating Notifying Administrations
- Appendix 2: List Of Intergovernmental Satellite Organizations
- Appendix 3: Codes Designating Geographical Areas
- Appendix 4: Radiocommunication Services
- Appendix 5: Table Of Classes Of Station
- Appendix 6: Antenna Patterns
- Appendix 7: Standard Abbreviations For Site Names Compression
- Appendix 8: Standard Defined Areas
- Appendix 9: TV Systems
- Appendix 10: Symbols Used For Coordination And Agreement
- Appendix 11: BR Favourable Or Unfavourable Findings
- Appendix 12: BR Finding References, Remarks And Dates
- Appendix 13: Nature Of Service Codes
- Appendix 14: Power Measurement Method Code For Each Class Of Emission

Section 10: Data Item Reference Index

This Section contains a comprehensive index of all the information presented in both alphabetic order and by RDD reference number. Separate indexes are provided for terrestrial and space services.

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2.0 Introduction

This Section contains a series of tables describing the notification data for a number of radio systems. Each table provides:

- a clarification or expansion of the information contained in Annex 1B to RR Appendix 4;
- lists of the data items required for the notification and coordination of the radio system, together with the specific conditions under which they are required by the Radio Regulations or the relevant Regional Plans; and,
- a short description of the radio systems the data cover, the main operational frequency bands or ranges of the radio systems, and any relevant RR provisions.

This introduction and the following subsections provide information on the structure of the tables in Section 2 and how to use them. In addition it also provided information on the terrestrial filing process and the terrestrial notification system, including the identification of filing data.

2.0.1 Section 2 Table Structure

Each table presents the information required in the notification and coordination of one or more radio systems for one or more frequency bands, as indicated by the title of each subsection. For example, § 2.1 is entitled **Broadcasting Service, FM Sound, In The VHF Band** and this paragraph describes the radio systems and the frequency ranges covered by the table. Where a table represents a single radio system, the values listed in the column “Data Format” cover that system only. For a table representing several radio systems, the values in the column “Data Format” cover all the systems. Further clarification, regarding the requirement for each data item, appropriate to a radio system is provided in the column “Conditions of Use”. Each table has five columns structured as follows:

RDD ref:	This column contains the RDD Reference Number. The RDD Reference Number is a unique identifier and one is assigned to each data item, data group or relationship.
Data Item Name:	This column contains the Data Item Name as it appears in the RDD. Every data item contained in the tables is described in detail in Section 3.
Data Format:	This column contains information regarding the format in which the data item is to be provided during the notification and coordination processes for the specific radio systems and frequency bands of that table.
Use:	This column contains information that indicates under what conditions the data item is to be used. This column contains codes with meanings as follows:
M:	<i>Mandatory:</i> the information must be submitted by the notifying <i>Administration</i> ; indicates the data item must be provided for the specific services and frequency bands covered by the table.
R:	<i>Required:</i> the information is mandatory under a specific condition. This condition is specified in the “Conditions of Use” column. The notifying <i>Administration</i> will supply this information.
O:	<i>Optional:</i> the information may be submitted by the notifying <i>Administration</i> at its discretion; indicates the data item may be provided at the discretion of the notifying administration for the specific services and frequency bands covered by the table.

C: *Coordination*: indicates the data item is mandatory if it has been used as a basis to effect coordination with another **Administration** for the specific services and frequency bands covered by the table.

BR: *Radiocommunication Bureau*: indicates that the BR provides the data item and that the data would appear against the frequency assignment if entered into the MIFR so that it can be classified and identified against the other entries in the MIFR for the application of, for example, search routines.

Conditions of Use: This column specifies how and when a data item should be supplied when “R” is used in the “Use” column. Information in this column is provided whenever “R” is used in the “Use” column to indicate the type of conditions under which the data item is a mandatory requirement. The column may also contain supplementary information relevant to notification of the data item.

Sample Data Table

The following is a sample from a table in this Section.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0217	• Notified Assigned Frequency	Frequency.	M	Frequency.
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration</i> 's modulation envelope is asymmetric or composite.
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0351	Class Of Emission Code	Up to 5 Char.	M	
0546	• Two Dimensional Service Zone consisting of		M	
0069	either a <i>Circular Zone</i> , defined by		R	Mandatory if the <i>Class Of Station</i> Code is “FA” or “FG” and <i>Zone Boundary Coordinates</i> or <i>Geographical Areas</i> are not provided. Mandatory if the <i>Class Of Station</i> is “FD” and <i>Zone Boundary Coordinates</i> or <i>Aeronautical Zones</i> are not provided. Mandatory if the <i>Class Of Station</i> Code is “BC” and <i>Geographical Areas</i> are not provided.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 20 000 in km.	R	Mandatory as defined in RDD 0069.
0328	or between 3 and 6 <i>Zone Boundary Coordinates</i> , defined by		R	Mandatory if the <i>Class Of Station</i> Code is “FA” or “FG” and a <i>Circular Zone</i> is not provided. Mandatory if the <i>Class Of Station</i> Code is “FD” and a <i>Circular Zone</i> or <i>Aeronautical Zones</i> are not provided.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as defined in RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as defined in RDD 0328.
0174	or one or more <i>Geographical Area</i> Codes	Up to 3 Char.	R	Mandatory if the <i>Class Of Station</i> Code is “FA” or “FG” and <i>Circular Zone</i> or <i>Zone Boundary Coordinates</i> are not provided. Mandatory if the <i>Class Of Station</i> Code is “BC” and a <i>Circular Zone</i> is not provided.
0033	or one or more <i>Aeronautical Zone</i> Codes	Up to 9 Char.	R	Mandatory if the <i>Class Of Station</i> Code is “FD” operating in exclusive bands between 2 850 kHz and 22 000 kHz and a <i>Circular Zone</i> or <i>Zone Boundary Coordinates</i> are not provided.

2.0.2 Table Usage

Each data item that is required for notification is indicated by a “bullet” mark and the tables have been structured so that the information can be read in the form of a standard sentence. With respect to the Sample Data Table outlined above, this is demonstrated as follows:

For each *Terrestrial Service Notice*, provide the **Notified Assigned Frequency**, or

For the *Signal Configuration* that is the subject of the *Terrestrial Service Notice*, provide the **Class Of Emission Code**.

To determine how and when these data items are used, the columns “Use” and “Conditions of Use” must be consulted. In this example, the **Notified Assigned Frequency** is mandatory in all cases as indicated by the symbol “M” in the column “Use”. The **Reference (Carrier) Frequency**, on the other hand, is only required under specified conditions, as indicated by the symbol “R” in the “Use” column, with the “Conditions of Use” column indicating that this data item is only required if the modulation envelope is asymmetric.

Some data items, as noted in the Sample Data Table above, may be divided into a number of subcomponents with each component providing a different method of describing the form in which the data is to be supplied. This subdivision of data items occurs with “Zones” and “Patterns” for example, a **Two Dimensional Service Zone** contains several subcomponents and can be described by a **Circular Zone**, **Geographical Area** or **Aeronautical Zone**.

This information also can be read in the form of a standard sentence and this can be demonstrated from the following extract from the Sample Data table above:

For the *Signal Configuration* that is the subject of the *Terrestrial Service Notice*, provide the **Two Dimensional Service Zone**, consisting of either

a **Circular Zone**, defined by **Centre Geographical Coordinates**, and **Radius**;

or one or more **Geographical Area Codes**;

or one or more **Aeronautical Zone Codes**.

This example shows there is an option under the **Two Dimensional Service Zone**, that, depending on the constraints imposed in the “Conditions of Use” column, permits the **Two Dimensional Service Zone** to be provided in one of three different formats. In this example, if the **Class Of Station Code** is “FD” and the signal is in the exclusive bands between 2 850 kHz and 22 000 kHz then the **Two Dimensional Service Zone** must be identified by the use of the appropriate **Aeronautical Zone Code**.

The “Data Format” column provides information concerning the format in which the data must be provided and the allowable range of values for that data. Any values that are not applicable to all systems are further clarified in the “Conditions of Use” column. The values in the “Data Format” column therefore indicate the likely range of values for all the radio systems covered in that table whereas Section 3 contains a data item’s maximum possible range of values for all of the terrestrial radio systems in the RDD. The “Data Format” column also provides details on the units, form and precision required for the data items. These formats are shown in their full form in Section 3, but in Section 2 they have been abbreviated to reduce the space required in the table.

Abbreviations are used in the tables as follows:

Int.: Integer.

Char.: Character.

Dec.: Decimal.

Long/Lat(dm): Longitude/Latitude (degrees and min).

2.0.3 Terrestrial Filing Process

According to the RR, the purpose of notification to the BR is to inform other administrations on those frequency usages in a given Member State that may have international implications. In the context of terrestrial services, the major part of the notifications is for information purposes (although the RR use the term “international recognition” it does not involve any specific right). In some specific cases (e.g., in the bands that are governed by frequency assignment and frequency allotment plans, in the bands shared with space services on an equal basis), there is a need to establish a status of the assignment: the status is derived from the application of the procedures relating to the coordination or associated with the particular plan. To fulfil these requirements (as well as other requirements stipulated in some Regional Agreements), Member States have stipulated, in RR Appendix 4, the data elements that need to be submitted for various purposes. Consequently, RR Appendix 4 specifies only the essential data elements that need to be supplied to the ITU so as to enable the ITU to perform the required examinations with a view to formulate appropriate findings, which would determine the status of the assignment once it is recorded in the MIFR.

It also should be kept in mind, however, that the introduction of more complex systems (as well as the development of more complex procedures) has resulted in an increase in the complexity of the data that needs to be notified (e.g., in the bands governed by the Regional Agreements RJ81 and GE84). Although the Regional Agreements are not part of the RR, the examination of the notices with respect to their conformity with these agreements is a part of the RR (see provision No. 11.34); consequently, there is a need to prescribe the format of the data that needs to be submitted to the BR so as to enable complete examination of the concerned notice in accordance with the applicable procedures.

Application of the procedures prescribed in the Radio Regulations requires a Member State to provide information to another Member State or to the BR in the context of the modification of a Plan, a request for agreement, coordination of an assignment, or a notification to the BR with a view to updating the MIFR. The information to be provided varies from case to case, depending on the intention, the particular service, the frequency band and the type of station involved. Necessary details in this respect, concerning the terrestrial services, are included in RR Appendix 4 as well as in the respective Regional Agreements.

Article 11 of the Radio Regulations, in provision RR Nos. 11.2-11.8, specifies the conditions when a notification to the Bureau is necessary (these conditions apply to a transmitting station and to its associated receiving station). Provision RR Nos. 11.9-11.11 specify further the conditions for notification of a frequency assignment to a land station for reception from mobile stations. Provision RR Nos. 11.13-11.14 specify the cases when no notification is required. Provision RR Nos. 11.17-11.21A specify the conditions when a typical station may be notified.

RR Article 11 also specifies the time-frame for submission of notices to stations in terrestrial services. The frequency assignment shall be notified normally after its bringing into use, but it also may be notified before the date that is brought into use. If the frequency assignment is notified before it is brought into use, then the relevant notices shall reach the BR:

- not earlier than **five years** before the assignment is brought into use, for those assignments that pertain to high altitude platform stations in the fixed service in the bands 47.2-47.5 GHz and 47.9-48.2 GHz (see RR No. 11.26; on the notice, these stations have to be identified by the symbol “HP” under item 6B of Annex 1A in RR Appendix 4 (**Nature Of Service Code-RDD 0156**));
- not earlier than **three years** before the assignment is brought into use, for those assignments that are involved in coordination with a satellite network (i.e., in the bands shared between terrestrial and space services, where the allocation to the space service comprises the space-to-Earth direction; see RR No. 11.25);
- not earlier than **three months** before the assignment is brought into use, for all other cases (see RR No. 11.24).

The frequency assignments that are notified in advance of their being brought into use shall be entered provisionally in the Master Register (if all other conditions are fulfilled). The provisional entry shall be deleted from the Master Register, following the appropriate procedure, if no confirmation is received that the assignment was effectively brought into use (RR No. 11.47).

Appendix 4 of the Radio Regulations, lists the characteristics of stations in the terrestrial services that are required for notification in every particular case. All mandatory characteristics and those characteristics that are mandatory under specified conditions (indicated by the symbol “+”), as specified in RR Appendix 4 for the relevant type of notice, have to be submitted by the notifying administration; otherwise the notice will be declared incomplete and will be returned to the notifying administration (see RR No. 11.27).

Appendix 4 of the Radio Regulations also contains information for the use of the frequency bands allocated to high frequency broadcasting (HFBC) between 5 900 kHz and 26 100 kHz. The use of these bands is based on the principles given in RR Article 12 and must be in conformity with seasonal planning which is based on a coordination procedure between administrations (referred to in RR Article 12 as the Procedure).

2.0.4 The TerRaSys Notification System

The BR has introduced the *TerRaSys* notification system to replace the FMS system that was been used until December 1999. This new system has introduced a number of changes to the process of submitting notices to the BR including to the data requirements for paper and electronic submission. In addition, the BR have attempted to simplify the notification process by removing the requirement for supplying redundant and non-essential data. The results of these changes, which have resulted in a new series of notice forms, were included in the RRs in Annexes 1A and 1B of RR Appendix 4 at WRC-2000.

2.0.4.1 Identification of frequency assignments

TerRaSys combines the assignments for the Plans and MIFR in a single database – previously two separate databases. This integration of the databases and some other changes have meant that the previous unique identification code used by the BR – the nine character BR Identification Code – can no longer be used to uniquely identify an assignment. Hence, *TerRaSys* has introduced a new means of identifying assignments based either on the use of an administration’s own unique identification code for an assignment or identifying a specific group of parameters on the terrestrial service notice.

Identification of frequency assignments by using an administration’s own unique identification code

This method only applies to new assignments (unless the administration retrospectively assigns its own unique code to each of its existing assignments in the BR’s database). It requires that the administration issues a unique code, within its administration, to each frequency assignment submitted to the BR. This unique code and the **Administration’s Code** can then be used to individually identify an assignment within the BR’s database.

Identification of frequency assignments by using a group of specific data items

This method can be used for existing and new assignments, including the case where the administration uses its own unique identification code for an assignment. In this case the values associated with specific data items are used to identify an individual frequency assignment. These specific data items are known as the “target” data items within the *TerRaSys* notification system and they vary with the type of terrestrial service notice – see the table below.

In the context of the submissions for modification or suppression of a recorded assignment or allotment, as well as in the context of a withdrawal or other amendment of a notice, one of the following identifying information has to be submitted, either:

- a) Administration Unique Identifier (for notices in the BR database, or under examination, that have been previously allocated a unique identification code); or
- b) the combination of “target” data items listed in the following table:

Data Item	Notice Types
<i>Terrestrial Service Notice Notified Assigned Frequency</i> RDD ref: 0217	T01, T02, T03, T04, T11, T12, T13, T14, T16, T17
<i>Terrestrial Service Notice Notified Channel Number</i> RDD ref: 0619	T15
<i>Class Of Station Code</i> ref: RDD 0277	T11, T12, T13, T14, T15, T16, T17
<i>Signal Configuration Class Of Emission Code</i> RDD ref: 0351 and, <i>Signal Configuration Necessary Bandwidth</i> RDD ref: 0157	T11, T12, T13, T14, T15, T16, T17
<i>Signal Configuration Class Of Operation Code</i> RDD ref: 0494	T11, T17
<i>Regular Operation Period Start Time</i> RDD ref: 0307 and, <i>Regular Operation Period Stop Time</i> RDD ref: 0308	T11, T12, T13, T14, T15, T16, T17
<i>Transmitting Antenna Geographical Coordinates</i> RDD ref: 0037	T01, T02, T03, T04, T11, T12, T16, T17
<i>Receiving Antenna Geographical Coordinates</i> RDD ref: 0037	T13
<i>Circular Zone Centre Geographical Coordinates</i> RDD ref: 0070 (if RDD ref: 0174 is not supplied)	T14
<i>Geographical Area Code</i> RDD ref: 0174 ⁽¹⁾ (if RDD ref: 0070 is not supplied)	T14
<i>Maritime HF Allotment Area Code</i> RDD ref: 0578 ⁽¹⁾	T15

⁽¹⁾ For the electronic notice this data will also require submission of the Geographic type - see paragraph on Auxiliary data below

2.0.5 Terrestrial Notice Forms

For notification under the TerRaSys system a number of notice forms have been developed. The forms fall into two categories, those forms that are used for supplying the mandatory characteristics listed in RR Appendix 4 (see table below) and forms that are used for performing specific administrative actions. The administrative functions are covered by a series of forms TB1 to TB9 as shown below:

Notice Form	Applies to Tables	Purpose
TB1	2.1 and 2.2 (T01 and T02)	Notification of a modification to the Administration unique identifier
TB6	2.3 and 2.4 (T03 and T04)	
TB2	2.1 and 2.2 (T01 and T02)	Notification under RR Article 11 for an assignment with all technical characteristics as in the Plan
TB7	2.3 and 2.4 (T03 and T04)	
TB3	2.1 and 2.2 (T01 and T02)	Requesting publication of a modification in Part B of the corresponding Special Section
TB8	2.3 and 2.4 (T03 and T04)	
TB4	2.1 and 2.2 (T01 and T02)	Updating of the coordination information of a notice under treatment
TB5	2.1 and 2.2 (T01 and T02)	Suppressing an assignment or Notification of withdrawing a notice under treatment
TB9	2.3 and 2.4 (T03 and T04)	

As noted in the above table, the forms TB1 to TB9 used for performing these administrative functions only apply to the broadcasting plans (T01 to T04). For the other notice forms (T11 to T17) the administrative functions:

- modification to the Administration's unique identifier;
- updating the coordination information of a notice under treatment;
- suppressing an assignment or for withdrawing a notice under treatment;

are integral to the notice.

Notice Code	Purpose
T01	VHF Sound Broadcasting Station
T02	VHF/UHF Television Broadcasting Station
T03	LF/MF Sound Broadcasting Station Regions 1 & 3
T04	MF Sound Broadcasting Station Region 2
T11	Terrestrial Transmitting Station (Tx) in the Fixed Service
T12	Terrestrial Transmitting Station (Tx) (Except station in the fixed, or LF/MF/VHF/UHF broadcasting services, or typical station)
T13	Terrestrial Receiving Land Station (Rx)
T14	Terrestrial Typical Transmitting Station (TP)
T15	Frequency Allotment in the Maritime Mobile Service (RR Appendix 25)
T16	Terrestrial Transmitting Station (Tx) (Plan update Regional Agreement Geneva, 1985)
T17	Terrestrial Transmitting Station (Tx) Using Adaptive Systems

2.0.6 Electronic notification to TeraSys

The BR has developed a special format for electronic supply of data for notices in fixed, mobile and some other terrestrial services (FXM). The specific guidelines explaining the file structure and its usage is accessible on the Web. (<http://web/ITU-R/terrestrial/pub-reg/notice-forms/index.html>).

The mandatory characteristics are specified in the Radio Regulations (see § 2.03) but, in addition to these data requirements, there are also additional data requirements relating to the completion of the notice (e.g., the code of the regulatory provision under which the notice is submitted) the method of submission i.e., paper notice or electronic file. In the case of electronic notification there are further additional data requirements associated with the greater flexibility of electronic notices over paper notices.

NOTE 1 – Some of these data elements are mandatory when notifying electronically.

This supplementary data for electronic notices is characteristic of a correspondence package rather than the content and consists of two types.

Wrapping data

This data is equivalent to a cover letter, or possibly an envelope, containing a package of notices. This data is put either in HEAD or in TAIL section of the electronic file:

- Character set, determines what character set is used in all notices for character data. Currently the purpose of this data is not clear as the required character set is always ISO-8851-1. Optional, in HEAD section;
- Date when file sent, is an equivalent of the date put on the cover letter. It does not need to be the actual date when his file will be sent (e.g. via e-mail). Optional, in HEAD section.
- E-mail address is essentially RDD ref: 0561. Optional, in HEAD section.
- Number of notices, determines the number of notices contained in the file. This is mandatory, in TAIL section. If this value is not consistent with file content, the package will be considered corrupted and it will be rejected i.e. the Administration will be asked to send it again.

Auxiliary data

This is additional information that does not form part of the regulatory requirements, but data that helps the BR to avoid errors when processing the data. This data is supplied in NOTICE section.

- An indicator (called t_fragment in *TerRaSys*) to identify the part of the *TerRaSys* database to which the information should be written. Although this data is for internal use in the BR and can be determined from other data, **currently is a mandatory requirement**. It is understood the BR will change this requirement at its next revision of the software.
- Date of notice. A date put on the notice by the *Administration* indicating, perhaps, the date the notice was prepared. This data may be useful for internal purposes within the *Administration* and may also assist in the identification of the notice. Optional.
- Type of notice. A code used in electronic notification to identify the corresponding paper form of the *Terrestrial Service Notice*. Mandatory.
- Geographic type. An indicator identifying the type of area or zone used in the notice. It may have values: POINT, MULTIPOINT, CIRCLE, ZONE. Actual use depends on the type of notice. Mandatory.

2.1 Broadcasting Service, FM sound, in the VHF band (Terrestrial Notice Form T01)

This table covers FM sound broadcasting radio systems between 30 MHz and 300 MHz.

FM sound broadcasting in accordance with the Regional Agreements, including the related modification procedures:

- Stockholm, 1961 as modified by the Geneva 1985 Conference;
- Geneva, 1984.

Notification under RR Article (Art.) 11 in the following bands:

- 87.5-108 MHz in Region 1, Afghanistan and Iran;
- 76-108 MHz in Region 2;
- 87-108 MHz in Region 3;
- other bands allocated to the broadcasting service by footnotes in the Table of Frequency Allocations between 30 MHz and 300 MHz.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0217	• Notified Assigned Frequency	Frequency.	M	
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	GE84, ST61 or RR Art. 11.
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0165	• FM Transmission System Code	1 Char. in range 1 to 5.	M	
0157	• Necessary Bandwidth	Int. in the range 001 to 999 in kHz.	M	
0347	• Call Sign	Up to 10 Char.	O	Optional and only if the Station Identification is not supplied.
0150	• Station Identification	Up to 20 Char.	O	Optional and only if a Call Sign is not supplied.
0141	• Date Of Bringing Into Use	Date.	R	Mandatory for notification under RR Art. 11.
0159	• Power Measurement Method Code	1 Char.	BR	Always “Y”.
0149	• Maximum Horizontally Polarized Radiated Power	Dec. In range 10.0 to 60.0 in dBW with Gain Reference Antenna Code = “E”.	R	Mandatory if the <i>Transmitting Antenna’s</i> Polarization Code is “H” or “M”.
0170	• Maximum Vertically Polarized Radiated Power	Dec. in range 10.0 to 60.0 in dBW with Gain Reference Antenna Code = “E”.	R	Mandatory if the <i>Transmitting Antenna’s</i> Polarization Code is “V” or “M”.
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	BR	Always “BC”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i>	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i>	Up to 3 Char.	R	Mandatory for notification under RR Art. 11.
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i>	3 Char. in range 001 to 999.	O	RR Art. 11 only.
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i>	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	R	Mandatory for notification under RR Art. 11.
0308	• Stop Time	Time in UTC.	R	Mandatory for notification under RR Art. 11.
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	Paper notice “D is True” and “ND is False”.
0131	• Polarization Code	1 Char.	M	Always “H”, “M” or “V”.
0121	• Ground Altitude Above Mean Sea Level	Int. in range –1 000 to 8 848 in metres.	M	
0125	• Height Above Ground Level	Int. in range 0 to 1 000 in metres.	M	
0123	• Effective Height Pattern consisting of 36 vectors, defined by the		R	Mandatory if the Effective Antenna Height at any azimuth is different from the Maximum Effective Height.
0123a	Effective Antenna Height Value at the following	Int. in range –400 to 5 000 in metres.	R	Mandatory as described in RDD 0123.
0123b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	R	Mandatory as described in RDD 0123.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0128	• Maximum Effective Height	Int. in range –400 to 5 000 in metres.	M	
0060	• Vertically Polarized Component Horizontal Attenuation Pattern consisting of 36 Vectors, defined by the		R	Mandatory if the <i>Transmitting Antenna</i> is directional and its Polarization Code is “V” or “M”.
0060a	Attenuation Value at the following	Dec. in range 0.0 to 40.0 in dB.	R	Mandatory as defined in RDD 0060.
0060b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	R	Mandatory as defined in RDD 0060.
0273	• Horizontally Polarized Component Horizontal Attenuation Pattern consisting of 36 Vectors, defined by the		R	Mandatory if the <i>Transmitting Antenna</i> is directional and its Polarization Code is “H” or “M”.
0273a	Attenuation Value at the following	Dec. in range 0.0 to 40.0 in dB.	R	Mandatory as defined in RDD 0273.
0273b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	R	Mandatory as defined in RDD 0273.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i>	Up to 3 Char.	M	

2.2 Broadcasting Service, Television, in the VHF and UHF Bands (Terrestrial Notice Form T02)

This table covers television broadcasting radio systems between 30 MHz and 960 MHz.

Television in accordance with the Regional Agreements, including the related modification procedures:

- Stockholm, 1961 as modified by the Geneva 1985 Conference;
- Geneva, 1989.

Notification under RR Article (Art.) 11 in the following bands:

- 47-68 MHz, 88-100 MHz, 174-230 MHz and 470-960 MHz in Region 1;
- 54-72 MHz, 174-216 MHz and 470-890 MHz in Region 2;
- 47-50 MHz, 54-68 MHz, 174-230 MHz and 470-960 MHz in Region 3;
- other bands allocated to the broadcasting service by footnotes in the Table of Frequency Allocations between 30 MHz and 960 MHz.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0217	• Notified Assigned Frequency	Frequency.	M	
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	GE89, ST61 or RR Art. 11.
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0482	• Sound Carrier Frequency Offset Code	Up to 4 Char.	R	Mandatory for analogue television in GE89 and for ST61 if its value is not equal to the Vision Carrier Frequency Offset Code (i.e. Frequency Offset Stability Indicator is not “Precision” or “Normal”) and for other cases if the Sound Carrier Frequency Offset is not supplied. In the paper notice this data is supplied in the remarks section.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0551	• Sound Carrier Frequency Offset	Dec. in range –500.000 to 500.000 kHz.	R	Mandatory for analogue television outside GE89 or ST61 if its value is not equal to the Vision Carrier Frequency Offset (i.e. Frequency Offset Stability Indicator is not “Precision” or “Normal”) and if the Sound Carrier Frequency Offset Code is not supplied. In the paper notice this data is supplied in the remarks section.
0065	• Vision Carrier Frequency Offset Code	Up to 4 Char.	R	Mandatory for analogue television in GE89 and for ST61 or for other cases if the Vision Carrier Frequency Offset is not supplied.
0552	• Vision Carrier Frequency Offset	Dec. in range –500.000 to 500.000 kHz.	R	Mandatory for analogue television outside GE89 or ST61 and if the Vision Carrier Frequency Offset Code is not supplied.
0553	• Frequency Offset Stability Indicator	Up to 9 Char.	R	Mandatory for analogue television. GE89: “Precision” or “Normal” only. ST61: if the ERP is ≥ 30 dBW in bands below 470 MHz, or the ERP is ≥ 40 dBW in bands above 470 MHz, the Frequency Offset Stability Indicator must be “Precision” or “Normal”. If the Frequency Offset Stability Indicator is either “Precision” or “Normal” RDD 0065 = RDD 0482.
0347	• Call Sign	Up to 10 Char.	O	Optional and only if the Station Identification is not supplied.
0150	• Station Identification	Up to 20 Char.	O	Optional and only if a Call Sign is not supplied.
0141	• Date Of Bringing Into Use	Date.	R	Mandatory for notification under RR Art. 11.
0159	• Power Measurement Method Code	1 Char.	BR	Always “X” for the Vision Carrier Nominal Frequency.
0149	• Maximum Horizontally Polarized Radiated Power	Dec. in range 0.0 to 70.0 in dBW with Gain Reference Antenna Code = “E”	R	Mandatory if the <i>Transmitting Antenna</i> ’s Polarization Code is “H” or “M”.
0170	• Maximum Vertically Polarized Radiated Power	Dec. in range 0.0 to 70.0 in dBW with Gain Reference Antenna Code = “E”	R	Mandatory if the <i>Transmitting Antenna</i> ’s Polarization Code is “V” or “M”.
0066	• Vision To Sound Power Ratio	Int. in range 5 to 23 in dB.	R	Mandatory for analogue television.
0283	• Code of the <i>Television System</i> used by the <i>Signal Configuration</i>	Up to 2 Char.	M	
0078	• Code of the <i>Colour System</i> used by the <i>Signal Configuration</i>	1 Char.	R	Mandatory for analogue television.
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	BR	Always “BT”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i>	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i>	Up to 3 Char.	R	Mandatory for notification under RR Art. 11.
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i>	3 Char. in range 001 to 999.	O	RR Article 11 only.
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	R	Mandatory for notification under RR Art. 11.
0308	• Stop Time	Time in UTC.	R	Mandatory for notification under RR Art. 11.
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	
0131	• Polarization Code	1 Char.	M	“V” or “H” or “M” (“V” or “H” digital television and GE89 only).
0121	• Ground Altitude Above Mean Sea Level	Int. in range –1 000 to 8 848 in metres.	M	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0125	Height Above Ground Level	Int. in range 0 to 1 000 in metres.	M	
0123	• Effective Height Pattern consisting of 36 vectors, defined by the		R	Mandatory if the Effective Antenna Height at any azimuth is different from the Maximum Effective Height.
0123a	Effective Antenna Height Value at the following	Int. in range –400 to 5 000 in metres.	R	Mandatory as described in RDD 0123.
0123b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	R	Mandatory as described in RDD 0123.
0128	• Maximum Effective Height	Int. in range –400 to 5 000 in metres.	M	
0060	• Vertically Polarized Component Horizontal Attenuation Pattern consisting of 36 Vectors, defined by the		R	Mandatory if the <i>Transmitting Antenna</i> is directional and its Polarization Code is “V” or “M”.
0060a	Attenuation Value at the following	Dec. in range 0.0 to 40.0 in dB.	R	Mandatory as defined in RDD 0060.
0060b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	R	Mandatory as defined in RDD 0060.
0273	• Horizontally Polarized Component Horizontal Attenuation Pattern consisting of		R	Mandatory if the <i>Transmitting Antenna</i> is directional and its Polarization Code is “H” or “M”.
0273a	Attenuation Value at the following	Dec. in range 0.0 to 40.0 in dB.	R	Mandatory as defined in RDD 0273.
0273b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	R	Mandatory as defined in RDD 0273.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.3 Broadcasting Service, Regions 1 and 3, in the LF and MF Bands (Terrestrial Notice Form T03)

This table covers sound broadcasting in accordance with the Regional Agreement, Geneva, 1975, including the related modification procedure.

Notification under RR Article (Art.) 11 in the following bands:

- 148.5-283.5 kHz and 526.5-1 606.5 kHz in Region 1;
- 526.5-1 606.5 kHz in Region 3.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0217	• Notified Assigned Frequency	Frequency.	M	
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	GE75, RR Art. 11.
	For each <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			Maximum of two <i>Signal Configurations</i> ; one for the day-time and one for the night-time periods of operation.
0120	• Adjacent Channel Protection Ratio	1 Char.	M	Either “A”, “B”, “C” or “D”.
0157	• Necessary Bandwidth	Int. in the range 001 to 999 in kHz.	M	RR Art. 11.
0535	• Synchronized Network Identification Code	Up to 20 Char.	R	Mandatory if the <i>Signal Configuration</i> is part of a synchronized network (GE75, P341).

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0347	• Call Sign	Up to 10 Char.	O	Optional and only if a Station Identification is not supplied.
0150	• Station Identification	Up to 20 Char.	O	Optional and only if a Call Sign is not supplied.
0141	• Date Of Bringing Into Use	Date.	R	Mandatory for notification under RR Art. 11.
0183	• Local Operation Period Code	Up to 2 Char.	M	Either "HJ" or "HN".
0159	• Power Measurement Method Code	1 Char.	BR	Always "Z".
0554	• Antenna Input Power	Dec in range 0.01 to 1 000.00 kW.	M	
0155	• Maximum Radiated Power	Dec. in range 0.0 to 30.0 in dBkW with Gain Reference Antenna Code = "M".	M	
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	BR	Always "BC".
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	R	Mandatory for notification under RR Art. 11.
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	RR Article 11 only.
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	O	
0308	• Stop Time	Time in UTC.	O	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0124	• Ground Conductivity	Dec. in the range 0.01 to 4 000 in milli-siemens/m.	M	Permitted values only, see Section 3.
0133	• Type Code	1 Char.	M	Either "A" or "B"
	Option A: if a <i>Type A Transmitting Antenna</i> provide the			Type Code = "A" only.
0536	• Physical Height	Int. in range 10 to 300 in metres.	M	.
	Option B: if a <i>Type B Transmitting Antenna</i> provide the			Type Code = "B" only.
0507	• Horizontal Gain Pattern consisting of 36 Vectors, defined by the		M	.
0507a	Gain Value at the following	Dec. in range -5.0 to 10.0 in dB with Gain Reference Antenna Code = "V".	M	
0507b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	M	
0508	• Hemispherical Gain Pattern consisting of up to 36 Vectors repeated for each one of nine		O	For night-time operation only It is recommended that a Vertical Gain Pattern is supplied, if a full Hemispherical Gain Pattern is not available.
0508c	Elevation Angles with each Vector defined by the	Int. in range 10 to 90 in multiples of 10 in degrees.	O	
0508a	Gain Value at the following	Dec. in range -5.0 to 10.0 in dB with Gain Reference Antenna Code = "V".	O	
0508b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	O	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0502	• Vertical Gain Pattern consisting of 9 Vectors, defined by the		O	Recommended to be supplied for night-time operations only if an Hemispherical Gain Pattern is not supplied.
0502a	Gain Value at the following	Dec. in range –5.0 to 10.0 in dB with Gain Reference Antenna Code = “V”.	O	
0502b	Elevation Angle	Int. in range 10 to 90 in multiples of 10 in degrees.	O	
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.4 Broadcasting Service, Region 2, in the MF Bands (Terrestrial Notice Form T04)

This table covers sound broadcasting in accordance with the Regional Agreement, Rio de Janeiro, 1981, including the related modification procedure.

Notification under RR Article (Art.) 11 in the following bands:

- 525-535 kHz;
- 535-1 605 kHz;
- 1 605-1 705 kHz.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0217	• Notified Assigned Frequency	Frequency.	M	
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	Either RIO-81, or RR Art. 11.
	For each <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			Maximum of two <i>Signal Configurations</i> ; one for the day-time and one for the night-time periods of operation.
0157	• Necessary Bandwidth	Int. in the range 001 to 999 in kHz.	M	
0535	• Synchronized Network Identification Code	Up to 20 Char.	R	Mandatory if the <i>Signal Configuration</i> is part of a synchronized network (RJ81, Annex 2 Section 1 Item 1.15).
0347	• Call Sign	Up to 10 Char.	O	Optional and only if RDD 0150 is not supplied.
0150	• Station Identification	Up to 20 Char.	O	Optional and only if RDD 0347 is not supplied.
0141	• Date Of Bringing Into Use	Date.	R	Mandatory for notification under RR Art. 11.
0183	• Local Operation Period Code	Up to 2 Char.	M	Either “HJ” or “HN”.
0159	• Power Measurement Method Code	1 Char.	BR	Always “Z”.
0554	• Antenna Input Power	Dec in range 0.01 to 10.00 kW.	M	
0471	• RMS Radiation	Dec. in range 0.0 to 9 999.99 in mV/m at 1 km.	M	
0360	• Station Coverage Code	1 Char.	M	Either “A”, “B” or “C”.
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	BR	Always “BC”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	R	Mandatory for notification under RR Art. 11.
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	RR Article 11 only.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each Coordination Agreement obtained for the Signal Configuration , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the Provision that determines the regulatory requirement for the Coordination Agreement .	Up to 12 Char.	O	
0011	• Code of the Administration party to the Coordination Agreement .	Up to 3 Char.	O	
	For each Regular Operation Period that is the operating time for the Signal Configuration , provide the			
0307	• Start Time	Time in UTC.	O	
0308	• Stop Time	Time in UTC.	O	
	For the Transmitting Antenna emitting the Signal Configuration , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0133	• Type Code	1 Char.	M	Either "A" or "B"
	Option A: if a Type A Transmitting Antenna provide the			Type Code = "A" only.
0382	• Electrical Height	Dec. in range 50.0 to 250.0 in degrees.	M	
	Option B: if a Type B Transmitting Antenna provide the			Type Code = "B" only.
0383	• Pattern Type	1 Char.	M	Either "T" "M" or "E"
0359	• Special Quadrature Factor	Dec. in range 0.01 to 10.00 in mV/m.	O	If requested by the Administration for a Type B Transmitting Antenna with Pattern Type "M" or "E".
	For each Tower that forms a part of Type B Transmitting Antenna , provide the			
0396	• Identification Number	Int. in range 1 to 12.	M	Pre-printed on notice form.
0397	• Structure Code	1 Char.	M	Either "0" "1" or "2"
0390	• Angular Orientation	Dec. in range 0.00 to 359.99 in degrees.	R	Mandatory for multiple Towers .
0392	• Electrical Spacing	Dec. in range 40.0 to 1 200.0 in degrees.	R	Mandatory for multiple Towers .
0393	• Field Phase Difference	Dec. in range -359.99 to 359.99 in degrees.	R	Mandatory for multiple Towers .
0394	• Electrical Height	Dec. in range 50.0 to 250.0 in degrees.	M	For Structure Code "0". For Structure Code "1" this is TLS_A. For Structure Code "2" this is TLS_C.
0395	• Field Strength Ratio	Dec. in range 0.0000 to 10.0000.	R	Mandatory for multiple Towers .
	Option A: if a Top Loaded Tower provide the			For Structure Code = "1" only.
0388	• Height Difference	Dec. in range 10.0 to 180.0 in degrees.	M	For Structure Code "1" this is TLS_B.
	Option B: if a Sectionalized Tower provide the			For Structure Code = "2" only.
0377	• Lower Section Electrical Height	Dec. in range 50.0 to 250.0 in degrees.	M	For Structure Code "2" this is TLS_A.
0376	• Lower Section Height Difference	Dec. in range 0.0 to 180.0 in degrees.	M	For Structure Code "2" this is TLS_B.
0379	• Height Difference	Dec. in range 0.0 to 30.0 in degrees.	M	For Structure Code "2" this is TLS_D. Note: if the Sectionalized Tower is not itself top loaded the Height Difference is 0 degrees.
	For each Antenna Radiation Pattern Augmentation that describes a modification to the radiation pattern of a Type B Transmitting Antenna , provide the			
0357	• Serial Number	Int. in range 1 to 99.	R	Mandatory if the Pattern Type is "M". Pre-printed on notice form.
0356	• Central Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the Pattern Type is "M".
0355	• Central Azimuth Field Strength	Dec. in range 0.0 to 9 999.9 in mV/m at 1 km.	R	Mandatory if the Pattern Type is "M".
0358	• Total Span	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the Pattern Type is "M".
	For the Site where the Transmitting Antenna is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the Geographical Area that is the location for the Site .	Up to 3 Char.	M	

2.5 Broadcasting Service, in the HF Bands following the RR Article 12 Procedure

This table covers HF sound broadcasting radio systems in the planned bands between 5 900 and 26 100 kHz in accordance with RR Article 12. HFBC data is published in a separate CD-ROM and not included in the BR IFIC. A schedule including all requirements from an administration is submitted, electronically only, in a text format file. In all cases, administrations shall submit the whole schedule, not just the amended requirements.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0611	• Notified Reference (Carrier) Frequency	Int. in the range 5 950 to 26 100 kHz in multiples of 5 kHz.	R	Mandatory if a Preferred Frequency Band is not supplied. For SSB modulation it is understood the upper sideband is used.
0616	• First Alternative Frequency	Int. in the range 5 950 to 26 100 kHz in multiples of 5 kHz.	O	
0617	• Second Alternative Frequency	Int. in the range 5 950 to 26 100 kHz in multiples of 5 kHz.	O	
0618	• Third Alternative Frequency	Int. in the range 5 950 to 26 100 kHz in multiples of 5 kHz.	O	
0622	• Preferred Frequency Band	Int. in the range 6 to 26 in MHz.	R	Mandatory if a frequency assignment is requested under RR No. 7.6.
0623	• First Alternative Frequency Band	Int. in the range 6 to 26 in MHz.	O	
0624	• Second Alternative Frequency Band	Int. in the range 6 to 26 in MHz.	O	
0625	• Third Alternative Frequency Band	Int. in the range 6 to 26 in MHz.	O	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0512	• HF Transmission System Code	1 Char.	M	Either 'D', 'F', 'S' or 'N'
0636	• Language Of Service	Up to 10 Char.	O	
0554	• Antenna Input Power	Int. in range 1 to 5 000 kW.	M	Using Power Measurement Method Code = X for SSB; and, = Z for DSB.
0546	• Two Dimensional Service Zone consisting of		M	
0366	one or more <i>CIRAF Zones</i> , using		M	
0368	Zone Number and	Int. in range 1 to 99.	M	Maximum of 12 <i>CIRAF Zones</i> and quadrants.
0367	Quadrant Code	Up to 2 Char.	R	Mandatory if the <i>CIRAF Zone</i> is divided into quadrants.
0632	• Code for each <i>Day Of Operation</i> that is the transmission period for the <i>Signal Configuration</i>	1 Char.	M	
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i>	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i>	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used in planning the HFBC Tentative Schedule for the <i>Signal Configuration</i>	Up to 3 Char.	O	If blank, assumed to be the same as that of the notifying <i>Administration</i> .
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i>	3 Char.	O	
	For each <i>Season of Operation</i> during which the <i>Signal Configuration</i> operates, provide the			
0247	• Code	3 Char.	M	
0538	• Start Date	Date.	R	Mandatory if operation starts after the standard schedule start date.
0539	• Stop Date	Date.	R	Mandatory if operation ends before the standard schedule end date.
	For each <i>Regular Operation Period</i> the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	R	Mandatory for a new site only.
0478	• Design Frequency	Int. in range 2 000 to 30 000 in kHz.	M	The symbol "0" indicates the antenna is designed for the operating frequency.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0108	• Azimuth of Maximum Gain	Int. in range 0 to 359 in degrees.	M	
0480	• Slew Angle	Int. in range –30 to 30 in degrees.	R	Mandatory if the <i>Directional Transmitting Antenna's</i> beam is slewed.
0641	• Code of the <i>Reference Pattern</i> for the <i>Transmitting Antenna</i>	Up to 3 Char.	M	For HFBC the 10 character code has been converted to a 3 digit code in the range 100 to 999.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	R	Mandatory for a new site only.
0628	• Code	3 Char.	M	

2.6 Aeronautical Mobile Service, Base Transmit in the MF, HF, VHF and UHF Bands, Tropical Broadcasting and Broadcasting outside the planned bands (Terrestrial Notice Form T12)

This table covers aeronautical stations in the Aeronautical Mobile Service and the Broadcasting Service not covered by tables of § 2.1 to 2.5.

Aeronautical Station (Base Transmit)

Vertical Polarization.

A base to mobile (aircraft) transmission in the Aeronautical Mobile Service, which may not be used for public correspondence in the exclusive bands. The transmitting antenna may be directional or non-directional depending on the frequency range, the service area to be covered and whether the transmission is in the aeronautical on-route or off-route service. The service area therefore may be defined by circular areas, specific points or zones and a maximum height. The operational range is limited by the frequency range and the transmit power of the aircraft.

MF/HF

Frequency Range: 2 850-22 000 kHz (in specific bands).

The conditions for use of the bands allocated exclusively to the Aeronautical Mobile (OR) Service are contained in RR Appendix 26. The conditions for use of the bands allocated exclusively to the Aeronautical Mobile (R) Service are contained in RR Appendix 27.

Maximum range at MF is normally 500 km and at HF 20 000 km. The system operates mainly in SSB mode using the upper sideband.

VHF

Frequency Range: 117.975-137 MHz.

The VHF communications system is the fundamental tool of the Air Traffic Service (ATS) and Aeronautical Operational Control (AOC) in airspace that can be served by line-of-sight communications. The conditions for use of this band, by the Aeronautical Mobile (R) Service, and the recommended channelling arrangement are normally specified by the ICAO. The system currently operates mainly in DSB (A3E).

UHF

Frequency Range: Ground to Air 1 670-1 675 MHz.

An aeronautical public correspondence system has a three dimensional reception volume or cell (the shape of the cell is basically cylindrical but the cell diameter may be reduced with increasing altitude to reduce interference into neighbouring cells). There are three types of cell, a standard cell for on-route service, an intermediate cell for close to intermediate range (during ascent and descent) and an airport cell for taxiing and take-off/landing. The airport cell shape may vary depending on the size and shape of the airport. Handover between cells is automatic.

Each assigned ground to air frequency is paired with a single air to ground frequency. With the codes in use initially, each frequency pair can support up to four simultaneous calls at a ground station. A ground station consists of one (or more) assigned transmit frequencies, the paired receive frequency plus an external system timing reference. For planning purposes, frequencies are grouped into interleaved blocks of four, each with an identification code.

Broadcasting Station

Frequency Range:

Tropical Broadcasting: 2 300-2 498 kHz (Region 1); 2 300-2 495 kHz (Regions 2 and 3); 3 200-3 400 kHz (all Regions); 4 750-4 995 kHz (all Regions); 5 005-5 060 kHz (all Regions).

HF Broadcasting outside the HFBC planned bands in the range 2 300-26 100 kHz; and any notification that is not in conformity with the table of frequency allocations (RR Article 5).

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice, “MODIFY” or “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration</i> ’s modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	E.g., RR Nos. 9.21, 11.2.
	For each <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0150	• Station Identification	Up to 20 Char.	R	Mandatory below 28 MHz if a Call Sign is not required for the <i>Signal Configuration</i> .
0347	• Call Sign	Up to 10 Char.	R	Mandatory below 28 MHz. if a Station Identification is not provided.
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range 5.0 to 60.0 in dBW.	R	Mandatory in the bands below 28 000 kHz as well as in those bands shared with space services that are listed in RR Art. 21 with the indication of power limits. For other bands mandatory if the Maximum Radiated Power is not supplied. Mandatory for <i>Class of Station</i> Codes “FD” & “FG”.
0155	• Maximum Radiated Power	Dec. in range 0.0 to 60.0 in dBW with Gain Reference Antenna Code.	R	Mandatory in those bands shared with space services that are listed in RR Art. 21 with the indication of power limits. For other bands mandatory above 28 MHz if the Transmitter Output Power and the <i>Transmitting Antenna</i> ’s Maximum Gain are not supplied.
0545	• Three Dimensional Service Zone consisting of		O	
0001	<i>Three Dimensional Zone</i> defined by			
0003	Maximum Operating Height	Int. in range 0 to 60 000 in feet.	C	Only valid above VHF.
0004	Minimum Operating Height	Int. in range 0 to 60 000 in feet.	C	Only valid for Aeronautical Public Correspondence systems.
0083	Altitude Radius Reduction	Int. in range 0 to 10 in metres/foot.	C	Only valid for Aeronautical Public Correspondence systems.
0546	• Two Dimensional Service Zone consisting of		M	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0069	either a Circular Zone , defined by		R	Mandatory if the Class Of Station Code is "FA" or "FG" and the Zone Boundary Coordinates or Geographical Areas are not provided. Mandatory if the Class Of Station is "FD" and Zone Boundary Coordinates or Aeronautical Zones are not provided. Mandatory if the Class Of Station Code is "BC" and Geographical Areas are not provided.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 20 000 in km.	R	Mandatory as defined in RDD 0069.
0328	or between 3 and 6 Zone Boundary Coordinates , defined by		R	Mandatory if the Class Of Station Code is "FA" or "FG" and a Circular Zone is not provided. Mandatory if the Class Of Station Code is "FD" and Circular Zone or Aeronautical Zones are not provided.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as defined in RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as defined in RDD 0328.
0174	or one or more Geographical Area Codes	Up to 3 Char.	R	Mandatory if the Class Of Station Code is "FA" or "FG" and a Circular Zone or Zone Boundary Coordinates are not provided. Mandatory if the Class Of Station Code is "BC" and a Circular Zone is not provided.
0033	or one or more Aeronautical Zone Codes	Up to 9 Char.	R	Mandatory if the Class Of Station Code is "FD" operating in exclusive bands between 2 850 kHz and 22 000 kHz and a Circular Zone or the Zone Boundary Coordinates are not provided.
0446	• Maximum Length of Circuit	Int. in range 0 to 20 000 in km.	O	
0156	• Nature of Service Code	2 Char.	M	"CP", "CR" are not permitted in bands allocated exclusively to the Aeronautical Mobile Service RR No. 43.4.
0277	• Code of the Class Of Station that classifies the operation of the Signal Configuration	2 Char.	M	Only "BC", "FA", "FD", or "FG" are valid.
0011	• Code of the Administration notifying the Signal Configuration , using	Up to 3 Char.	M	
0094	• Code of the Correspondence Address to be used for the notification of the Signal Configuration .	Up to 3 Char.	M	
0219	• Code of the Operator responsible for the Signal Configuration .	3 Char. In range 001 to 999.	O	
	For each Coordination Agreement obtained for the Signal Configuration , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the Provision that determines the regulatory requirement for the Coordination Agreement .	Up to 12 Char.	BR	Always "RR No. 6.7".
0011	• Code of the Administration party to the Coordination Agreement .	Up to 3 Char.	R	Mandatory in bands shared with space services if coordination is successfully completed.
	For each Regular Operation Period that is the operating time for the Signal Configuration , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the Transmitting Antenna emitting the Signal Configuration , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	
0129	• Maximum Gain	Dec. in range -5.0 to 40.0 in dB with Gain Reference Antenna Code.	R	Mandatory if the Transmitting Antenna is directional. Mandatory if the Signal Configuration is in a band shared with Space Services. Mandatory if the Transmitter Output Power or Maximum Radiated Power is not supplied.
0131	• Polarization Code	Up to 2 Char.	R	Mandatory if the Signal Configuration is in a band shared with Space Services.
0121	• Ground Altitude Above Mean Sea Level	Int. in range -1 000 to 8 848 in metres.	R	Mandatory if the Signal Configuration is in a band shared with Space Services.
0125	• Height Above Ground Level	Int. in range 0 to 1 000 in metres.	R	Mandatory if the Signal Configuration is in a band shared with Space Services.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0168	• Vertical Beamwidth	Dec. in range 0.1 to 180.0 in degrees.	O	Only valid if different from the horizontal beamwidth.
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional.
0109	• Elevation Angle Of Maximum Gain	Dec. in range 0.0 to 90.0 in degrees.	R	Mandatory in the bands shared with space services.
0108	• Azimuth Of Maximum Gain	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional in the horizontal plane and its beam is not rotating or swept.
0641	• Code of the <i>Reference Pattern</i> for the <i>Transmitting Antenna</i>	A compound structure presented in one of the ways described in Section 3.	O	.
	For each <i>Operational Sector</i> identifying the area of the Earth's surface swept by a <i>Directional Transmitting Antenna</i> provide the			
0509	• Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
0510	• Finish Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			Note: RR Nos. 21.1 - 21.2.
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.7 Aeronautical Mobile Service, Base Receive in the MF, HF, VHF and UHF Bands and Meteorological Aids Service in the UHF Band (Terrestrial Notice Form T13)

This table covers receiving aeronautical stations in the Aeronautical Mobile Service and meteorological receiving stations (Sondes-air-to-ground) in the Meteorological Aids Service.

Aircraft Station (Transmit)

Vertical Polarization.

A mobile (aircraft) to Aeronautical Station, or Aeronautical Land Station, transmission in the Aeronautical Mobile Service that may not be used for public correspondence in the exclusive bands. Although the transmitting antenna is non-directional, the roaming area may be defined by specific points or zones and a maximum height, as a result of the use of a directive antenna at the receiving base station. The operational range is limited by the propagational properties of the frequency range and the transmit power of the aircraft. Frequency assignments to aircraft stations are not to be notified when the communications are made in a single frequency simplex mode of operation, as these assignments are covered by the notification of the frequency assignments related to the corresponding aeronautical stations.

MF/HF

Frequency Range: 2 850-22 000 kHz (in specific bands).

The conditions for use of the bands allocated exclusively to the Aeronautical Mobile (OR) Service are contained in RR Appendix 26. The conditions for use of the bands allocated exclusively to the Aeronautical Mobile (R) Service are contained in RR Appendix 27. As the communications in these bands are almost always in a single frequency simplex mode of operation, there is rarely a need to notify a frequency assignment to a receiving aeronautical station in the bands governed by RR Appendices 26 and 27. Such notifications are not receivable by the BR (see Rules of Procedure provision RR No. 11.14, Rule No. 3).

Maximum range at MF is normally 500 km and at HF 20 000 km. The system operates mainly in SSB mode using the upper sideband.

VHF

Frequency Range: 117.975-137 MHz.

UHF

Frequency Range: air-to-ground 1 800-1 805 MHz.

An aeronautical public correspondence system using a three dimensional reception volume or cell (the shape of the cell is basically cylindrical but the cell diameter may be reduced with increasing altitude to reduce interference into neighbouring cells). There are three types of cell, a standard cell for on-route service, an intermediate cell for close to intermediate range (during ascent and descent) and an airport cell for taxiing and take-off/landing. The airport cell shape may vary depending on the size and shape of the airport. Handover between cells is automatic.

Each assigned ground to air frequency is paired with a single air to ground frequency. With the codes in use initially, each frequency pair can support up to four simultaneous calls at a ground station. A ground station consists of one (or more) assigned transmit frequencies, the paired receive frequency plus an external system timing reference. For planning purposes, frequencies are grouped into interleaved blocks of four, each with an identification code.

Meteorological Aids (Sondes)

Frequency Range: 400.15-406 MHz and 1 668.4-1 700 MHz.

Meteorological Aids Station the ground station receive antenna and the transmitting antenna on board the sonde (which is regarded as an aircraft station) are non-directional. The radius of the circular reception area is up to 300 km and notified stations normally operate intermittently over a 24 h period. Flights may occur once or many times a day, with transmissions lasting for up to 1.5 h. The **Assigned Frequency** is selected from a group of frequencies and is chosen on the basis that it is not in use at that time. The position of the sonde can be tracked by primary radar, or by the re-transmission by the sonde of signals received from international maritime navigation aids (e.g. LORAN C).

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice, “MODIFY” or “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration's</i> modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	E.g., RR Nos. 9.21, 11.9.
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range - 10.0 to 30.0 in dBW.	R	Mandatory in the bands below 28 000 kHz. For other bands mandatory if the Maximum Radiated Power is not supplied.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0155	• Maximum Radiated Power	Dec. in range - 10.0 to 30.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the Transmitter Output Power is not supplied.
0194	• Three Dimensional Roaming Zone consisting of a		O	
0001	<i>Three Dimensional Zone</i> , defined by		C	
0003	Maximum Operating Height	Int. in range 100 to 5 000 in feet.	C	
0004	Minimum Operating Height	Int. in range 0 to 5 000 in feet.	C	Only valid for Aeronautical Public Correspondence systems.
0083	Altitude Radius Reduction	Int. in range 0 to 10 in metres/foot.	C	Only valid for Aeronautical Public Correspondence systems.
0544	• Two Dimensional Roaming Zone consisting of		M	
0069	a <i>Circular Zone</i> , defined by		M	
0070	Centre Geographical Coordinates	Long/Lat(dm).	M	
0071	Radius	Int. in range 1 to 20 000 in km.	M	
0156	• Nature Of Service Code	2 Char.	M	“CP”, “CR” are not permitted in bands allocated exclusively to the Aeronautical Mobile Service RR No. 43.4.
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	“MA” for frequency bands outside RR AP 26 and AP 27 or “SA”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Receiving Antenna</i> that is the target of the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
	For the <i>Site</i> where the <i>Receiving Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.8 Aeronautical Radionavigation Service, ILS, MLS and VOR and En-Route Marker Beacons in the VHF, UHF and SHF Bands (Terrestrial Notice Form T12)

This table covers Aeronautical Radionavigation systems above 30 MHz.

Instrument Landing System (ILS)

ILS Localizer

Frequency range: 108-111.975 MHz interleaved with VOR.

Horizontal polarization.

The radiation from the localizer antenna system produces a composite field pattern which is amplitude modulated by 90 Hz and a 150 Hz tone. The radiation field pattern produces a course sector with one tone predominating on one side of the course and with the other tone predominating on the opposite side. In addition, the transmission can carry Morse identification and speech, both of which are amplitude modulated. The ILS localizer operates on a frequency pairing basis with the glide path transmitter.

The localizer coverage sector extends from the centre of the localizer antenna system to distances of:

46.3 km (25 NM) within plus or minus 10° from the front course line;

31.5 km (17 NM) between 10° and 35° from the front course line;

18.5 km (10 NM) outside of plus or minus 35° if coverage is provided.

ILS Glide slope

Frequency range: 328.6-335.4 MHz.

Horizontal polarization.

The radiation from the glide path antenna produces a composite field pattern which is amplitude modulated by a 90 Hz and a 150 Hz tone. The pattern is arranged to provide a straight line descent path in the vertical plane containing the centre line of the runway, with the 150 Hz tone predominating below the path and the 90 Hz tone predominating above the path. The glide path transmitter operates on a frequency pairing basis with the ILS localizer.

Marker Beacon

Frequency Range: 75 MHz.

Horizontal Polarization.

A beacon with a vertical radiation pattern which is used in conjunction with an ILS to indicate predetermined distances from the landing threshold along the ILS glide path. The beacon is amplitude modulated with an audio frequency that carries the beacon's identification. The system comprises two or three beacons which are known as the: Inner Marker (where installed) using a modulation frequency of 3 000 Hz; Middle Marker using a modulation frequency of 1 300 Hz; Outer Marker using a modulation frequency of 400 Hz. Normally, it is not notified because it is covered by common frequencies.

Microwave Landing Systems (MLS)

Frequency Range: 5 000-5 150 MHz.

Vertical Polarization.

MLS is a precision approach and landing guidance system that provides position information and various ground-to-air data. The position information is provided in a wide coverage sector and is determined by an azimuth angle measurement, an elevation angle measurement and a range (distance) measurement. The MLS equipment operates on a frequency pairing basis with the DME equipment.

Radiators in a linear array are fed sequentially from a microwave power source which produces a Time Referenced Scanning Beam (TRSB), that is equivalent to the source moving along a linear track. An aircraft will receive the signal with a Doppler shift which depends on the component of the apparent velocity of the source towards the aircraft, and is proportional to the cosine of the angle between the aircraft and the line of the transmitting array. To eliminate effects of frequency drift and Doppler shift due to the movement of the aircraft, the same r.f. signal is simultaneously radiated from a antenna. Azimuth guidance is obtained from a horizontal transmitting array, while a vertical array gives guidance in the elevation plane. A measure of the distance to touchdown is obtained using a Precision DME in a frequency paired relationship with the MLS.

VHF Omnidirectional Range (VOR)

Frequency Range: 108-111.975 MHz interleaved with ILS/Localizer
111.975-117.975 MHz on an exclusive basis

Horizontal Polarization.

The VOR radiates a radio frequency carrier which has two separate 30 Hz modulations. One of these modulations is such that its phase is independent of the azimuth of the point of observation and is known as the reference phase. The other modulation, known as the variable phase, is arranged such that its phase at the point of observation differs from that of the reference phase by an angle equal to the bearing of the point of observation with respect to the VOR. The reference and variable phase modulations are in phase along the reference meridian through the station. In addition, the transmission can carry Morse identification and speech, both amplitude modulated. The VOR facility is usually associated with DME on a paired frequency basis and used together provides both range and bearing information.

En-Route Marker Beacon

Frequency Range: 75 MHz

Horizontal Polarization.

A beacon with a vertical radiation pattern that may be directional in the direction of the flight path. The beacon is amplitude modulated with a 3 000 Hz tone. There are two types of beacon: fan marker beacon which is recommended for marking a position on any route; Z marker which is recommended for marking the position of a radionavigation aid giving directional or track guidance en-route.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice, “MODIFY” or “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration</i> 's modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0150	• Station Identification	Up to 20 Char.	O	
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range 0.0 to 60.0 in dBW.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services. In other bands mandatory if the Maximum Radiated Power is not supplied.
0155	• Maximum Radiated Power	Dec. in range 0.0 to 70.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services. In other bands mandatory if the Transmitter Output Power and the <i>Transmitting Antenna</i> 's Maximum Gain is not supplied.
0545	• Three Dimensional Service Zone consisting of a		O	
0001	<i>Three Dimensional Zone</i> defined by		O	Only valid for VOR, in the coordination process.
0003	Maximum Operating Height	Int. in range 1 to 60 000 in feet.	O	Valid as described for RDD 0001

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0546	• Two Dimensional Service Zone consisting of		M	
0069	either a <i>Circular Zone</i> , defined by		R	Mandatory for VOR.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as described for RDD 0069.
0071	Radius	Int. in range 1 to 100 in km.	R	Mandatory as described for RDD 0069.
0328	or between 3 and 6 <i>Zone Boundary Coordinates</i> , defined by		R	Mandatory if a <i>Circular Zone</i> is not provided.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as described for RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as described for RDD 0328.
0156	• Nature Of Service Code	2 Char.	R	Mandatory if "RC" or "RD" or "RG" or "RT".
0226	• <i>Protection Mask</i> that defines the protection for the <i>Signal Configuration</i> using		C	
0231	Shape	Diagram.	C	
0229	Minimum Protected Field Strength	Dec. in range 10.0 to 30.0 in dBuV/m.	C	
0230	Protection Margin	Dec. in range 5.0 to 25.0 in dB.	C	
0227	Signal to Interference Ratio	Dec. in range 10.0 to 25.0 in dB.	C	
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	Always "AL".
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char in range 001 to 999.	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	BR	Always "RR No. 6.7".
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	R	Mandatory in bands shared with space services if coordination is successfully completed.
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	
0129	• Maximum Gain	Dec. in range 0.0 to 40.0 in dB with Gain Reference Antenna Code.	R	Mandatory if the <i>Transmitting Antenna</i> is directional. Mandatory if the Transmitter Output Power or Maximum Radiated Power is not supplied. Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0131	• Polarization Code	Up to 2 Char.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0121	• Ground Altitude Above Mean Sea Level	Int. in range -1 000 to 8 848 in metres.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0125	• Height Above Ground Level	Int. in range 0 to 1 000 in metres.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0168	• Vertical Beamwidth	Dec. in range 0.1 to 180.0 in degrees.	O	Only valid if different from the horizontal beamwidth.
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional.
0109	• Elevation Angle Of Maximum Gain	Dec. in range 0.0 to 90.0 in degrees.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0108	• Azimuth Of Maximum Gain	Dec. In range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional in the horizontal plane and its beam is not rotating or swept.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0641	• Code of the <i>Reference Pattern</i> for the <i>Transmitting Antenna</i>	A compound structure presented in one of the ways described in Section 3.	O	Only RDD 0642d and 0642e for VOR.
	For each <i>Operational Sector</i> identifying the area of the Earth's surface swept by a <i>Directional Transmitting Antenna</i> provide the:			
0509	• Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
0510	• Finish Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.9 Maritime Radionavigation Service, Maritime Radio beacon, Hyperbolic Systems, in the MF Band DGPS and Aeronautical Radionavigation Service, Aeronautical Radio-beacons, in the LF/MF Bands (Terrestrial Notice Form T12)

This table covers non-directional radio beacons (NDB) in the Aeronautical Radionavigation Service and maritime radio beacons (MB) and hyperbolic systems in the Maritime Radionavigation Service.

Aeronautical Non-Directional Radio Beacon (NDB)

Parts of the Frequency Range: 160-1 750 kHz

Vertical Polarization.

A beacon used for obtaining a bearing within a designated service area. They are also used either wholly, or partly as holding, approach and landing aids. The beacons generally radiate an uninterrupted carrier. Identification is by on/off keying of an amplitude modulated tone (either a 1 020 Hz or 400 Hz), although this does not preclude the use of other types of modulation in addition to those specified for identification, including simultaneous identification and voice modulation. In certain conditions (see ICAO International Standards and Recommended Practices) NDBs other than those wholly, or partly serving as holding, approach and landing aids may be identified by on/off keying of the unmodulated carrier.

The use of the bands 415-435 kHz and 510-526.5 kHz, in Region 1, by the Aeronautical Radionavigation Service (radio beacons) is governed by the Regional Agreement GE85-MM-R1. For RR Art. 11 notification of these systems use this table with Terrestrial Notice Form T12, and for plan modification, use the Table in § 2.18 with Terrestrial Notice Form T16.

Maritime Radio Beacon

Frequency Band: 283.5-335 kHz

Vertical Polarization.

A beacon for direction finding purposes. The signal transmitted normally comprises an A1A identification signal, a long dash for direction finding purposes, and an optional transmission sequence for transmission of data to ships.

Some maritime radiobeacon stations also transmit supplementary navigational information (e.g., transmission of differential corrections for GNSS).

The use of the band 283.5-315 kHz, in the European Maritime Area, by the Maritime Radionavigation Service (radiobeacons), is governed by the Regional Agreement GE85-EMA.

Hyperbolic Maritime Radionavigation Systems

Frequency bands: 283.5-315 kHz and 405-415 kHz.

This is a multi-frequency system, operating by phase comparison between different unmodulated carriers emitted sequentially by at least three synchronous transmitters. In addition, each station constantly emits a characteristic unmodulated carrier, on a specific frequency, for purposes of identification and constant updating of bearings during intervals of the sequential rhythm.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice, “MODIFY” or “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration</i> ’s modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0150	• Station Identification	Up to 20 Char.	M	
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range –20.0 to 60.0 in dBW.	R	Mandatory if the Maximum Radiated Power is not supplied.
0155	• Maximum Radiated Power	Dec. in range –26.0 to 70.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the <i>Signal Configuration</i> is in a band governed by the GE85 Agreements and the administration is a party to the relevant Agreement – for this case the Gain Reference Antenna Code = “M”. In other cases mandatory if Transmitter Output Power and <i>Transmitting Antenna</i> ’s Maximum Gain are not supplied.
0546	• Two Dimensional Service Zone consisting of		M	
0069	a <i>Circular Zone</i> , defined by		M	
0070	Centre Geographical Coordinates	Long/Lat(dm).	M	
0071	Radius	Int. in range 1 to 20 000 in km.	M	
0446	• Maximum Length Of Circuit	Int. in range 0 to 20 000 in km.	O	
0156	• Nature Of Service Code	2 Char.	R	Mandatory if “RC”
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	Always “AL” or “NL”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	Always False i.e. omnidirectional.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0129	• Maximum Gain	Dec. in range –5.0 to 5.0 in dB with Gain Reference Antenna Code.	R	Mandatory if <i>Signal Configuration's</i> Maximum Radiated Power or Transmitter Output Power is not supplied.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.10 Aeronautical Radionavigation Service (DME, SSR) and Maritime Radionavigation Service (Radar Beacons), in the UHF and SHF Bands (Terrestrial Notice Form T13)

This table covers radar systems involving a mobile transmitter in two-way communication with a fixed base station. Consequently, there may be a need to notify both the transmitting and receiving ground stations. The tables for these radio systems have been based on the assumption the mobile transmit signal would be more susceptible to interference and therefore the notifying administration would want to protect its reception.

Distance Measuring Equipment (DME)

Frequency Range: 960-1 215 MHz

Vertical Polarization.

A system in which the aircraft interrogator transmits a series of coded pulses which are received at the ground transponder and retransmitted on a new frequency 50 μ s later. By timing the period from transmission of the interrogating pulse to the reception of the transponder reply, a measure is obtained of the distance of the aircraft from the transponder. Usually associated with ILS, MLS or VOR facility. When associated with a VOR, the DME facility is co-located with the VOR facility.

Secondary Surveillance Radar (SSR)

Frequency Range: ground-to-air 1 030 MHz; air-to-ground 1 090 MHz

Vertical Polarization.

The SSR system is used as an aid to air traffic services and it consists of two components: a ground interrogator and an airborne transponder. The ground interrogator can operate in different modes (A, B, C, D). Mode A is used to initiate a response from the aircraft transponder for identification and tracking; Mode C is used to initiate automatic pressure altitude transmission. The interrogation and control transmissions are in the ground to air direction on the centre frequency 1 030 MHz. The reply transmission, in the air to ground direction, is on the centre frequency 1 090 MHz. The transponder antenna system, installed onboard aircraft has an omnidirectional antenna pattern in the horizontal plane. The SSR system is intended to provide service under all weather conditions at all bearings and at all distances between 1.85 km and 370 km, and at all operational altitudes up to at least 30 480 m above mean sea level between at least the angles of elevation of 0.5° and 45°.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	"ADD" new notice, "MODIFY" or "SUPPRESS" an existing notice or "WITHDRAW" a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration</i> 's modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range 0.0 to 25.0 in dBW.	R	Mandatory if the Maximum Radiated Power is not supplied.
0155	• Maximum Radiated Power	Dec. in range 0.0 to 25.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the Transmitter Output Power is not supplied.
0194	• Three Dimensional Roaming Zone consisting of		O	
0001	<i>Three Dimensional Zones</i> , defined by a		C	
0003	Maximum Operating Height	Int. in range 1 to 60 000 in feet.	C	Aeronautical Radionavigation Only.
0544	• Two Dimensional Roaming Zone consisting of		M	
0069	either a <i>Circular Zone</i> , defined by		R	Mandatory for DME.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as described for RDD 0069.
0071	Radius	Int. in range 1 to 100 in km.	R	Mandatory as described for RDD 0069.
0174	or one or more <i>Geographical Area</i> Codes	Up to 3 Char.	R	Mandatory if a <i>Circular Zone</i> is not provided.
0156	• Nature Of Service Code	2 Char.	R	Mandatory if "RC" or "RD" or "RG" or "RT".
0462	• <i>Protection Mask</i> that defines the protection for the <i>Signal Configuration</i> , using		C	For DME only.
0231	Shape	Diagram.	C	
0229	Minimum Protected Field Strength	Dec. in range 10.0 to 30.0 in dBuV/m.	C	
0230	Protection Margin	Dec. in range 5.0 to 25.0 in dB.	C	
0227	Signal to Interference Ratio	Dec. in range 10.0 to 25.0 in dB.	C	
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	"AM", or "MR".
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Receiving Antenna</i> that is the target of the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
	For the <i>Site</i> that is the location for the <i>Receiving Antenna</i> , provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.11 Meteorological Aids Service - Aeronautical Radionavigation Service, Radiolocation (Radar) in the VHF, UHF and SHF Bands (Terrestrial Notice Form T12)

This table covers Wind Profiler primary radar stations in the Radiolocation Service and when notifying a primary radar station in the Radiolocation Service, Meteorological Aids Service or Radionavigation Service.

Wind Profiler Radar

Frequency Range: parts of the bands in the vicinity of 50 MHz, 400 MHz and 1 000 MHz.

The wind profiler radars are important meteorological systems for measuring wind direction and speed as a function of altitude.

For a Wind Profiler radar station the transmitting antenna is an antenna array with a directional beam shape that is electronically moved through a range of azimuth angles at two different elevation angles. The radar system radiates five segments of the atmosphere: one segment in four different azimuths (90° steps) at the lower elevation angle (min. 72°) and one segment at an elevation angle of 90°.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice, “MODIFY” or “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration</i> 's modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0150	• Station Identification	Up to 20 Char.	R	Mandatory for <i>Class of Station</i> Code “SM”.
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range 10.0 to 60.0 in dBW.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space services. For other bands mandatory if the Maximum Radiated Power is not supplied. Mandatory for <i>Class of Station</i> Code “SM”.
0155	• Maximum Radiated Power	Dec. in range 10.0 to 99.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space services. For other bands mandatory if the Transmitter Output Power and <i>Transmitting Antenna</i> 's Maximum Gain are not supplied.
0274	• Horizontal Radiation Pattern consisting of 36 Vectors, defined by		C	
0274b	Azimuth	Int. in range 0 to 350 in multiples of 10 in degrees.	C	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0274a	Radiated Power	Dec. in range 0.0 to 99.0 in dBW with Gain Reference Antenna Code.	C	
0275	• Vertical Radiation Pattern consisting of up to 19 Vectors, defined by		C	
0275b	Elevation Angle	Int. in range –90 to 90 in multiples of 10 in degrees.	C	The number of vectors is dependent on location.
0275a	Radiated Power	Dec. in range 0.0 to 99.0 in dBW with Gain Reference Antenna Code.	C	
0545	• Three Dimensional Service Zone consisting of a		O	
0001	<i>Three Dimensional Zone</i> , defined by a			
0003	Maximum Operating Height	Int. in range 0 to 60 000 in feet.	C	
0546	• Two Dimensional Service Zone consisting of		M	
0069	either a <i>Circular Zone</i> , defined by		R	Mandatory for Wind Profiler Radar.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 100 in km.	R	Mandatory as defined in RDD 0069.
0328	or between 3 and 6 <i>Zone Boundary Coordinates</i> , defined by		R	Mandatory if a <i>Circular Zone</i> is not provided.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as defined in RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as defined in RDD 0328.
0156	• Nature Of Service Code	2 Char.	M	
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	“AL”, “LR”, “RN”, “SM”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	BR	Always “RR No. 6.7”.
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	R	Mandatory in bands shared with space services if coordination is successfully completed.
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	
0129	• Maximum Gain	Dec. in range 5.0 to 60.0 in dB with Gain Reference Antenna Code.	R	Mandatory if the <i>Transmitting Antenna</i> is directional. Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services. Mandatory if the <i>Signal Configuration</i> 's Maximum Radiated Power or Transmitter Output Power is not supplied.
0131	• Polarization Code	Up to 2 Char.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0121	• Ground Altitude Above Mean Sea Level	Int. in range –1 000 to 8 848 in metres.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0125	• Height Above Ground Level	Int. in range 0 to 1 000 in metres.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0168	• Vertical Beamwidth	Dec. in range 0.1 to 180.0 in degrees.	C	Only valid if different from the horizontal beamwidth.
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional.
0109	• Elevation Angle Of Maximum Gain	Dec. in range 0.0 to 90.0 in degrees.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services above 1 GHz.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0108	• Azimuth Of Maximum Gain	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional in the horizontal plane and its beam is not rotating or swept.
	For each <i>Operational Sector</i> identifying the area of the Earth's surface swept by a <i>Directional Transmitting Antenna</i> provide the:			
0509	• Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
0510	• Finish Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.12 Fixed Service, Point to Point and Point to Multi-point in the HF, VHF, UHF, SHF and EHF Bands (Terrestrial Notice Form T11)

This table covers fixed point to point and point to multi-point stations in the Fixed Service.

For a HF Fixed Station the transmitting antenna may be directional or non-directional. The signal configuration from a transmitting antenna may be received at a number of different sites as the sky wave returns to earth. Propagation is affected by ionospheric variations and the frequency used and/or the distance from transmit site. Ionospheric conditions to receive site varies between night and day.

For HF Fixed Stations in the Fixed Service reference should be made to RR Article 24 concerning the operation and restrictions on *Signal Configurations* described by this model.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	"ADD" new notice, "MODIFY" or "SUPPRESS" an existing notice or "WITHDRAW" a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration's</i> modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For each <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0485	• Pre-emphasis PP Frequency Deviation	Dec. in range 0.0 to 15.0 in MHz.	C	
0572	• Pre-emphasis RMS Frequency Deviation	Dec. in range 20.0 to 300.0 in kHz.	C	
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	"F3E" and "G3E" emissions are prohibited below 30 MHz RR No. 24.2.
0150	• Station Identification	Up to 20 Char.	R	Mandatory below 28 MHz if a Call Sign is not required for the <i>Signal Configuration</i> (RR Nos. 19.7 and 19.1.1).
0347	• Call Sign	Up to 10 Char.	R	Mandatory below 28 MHz (RR Nos. 19.7 and 19.1.1) if a Station Identification is not provided.
0494	• Class Of Operation Code	1 Char.	R	Mandatory for HF (3 000-27 500 kHz) only.
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0166	• Transmitter Output Power	Dec. in range –40.0 to 70.0 in dBW.	R	Mandatory if the Signal Configuration is in a band below 28 MHz or in a band shared with Space services. In other bands mandatory if the Maximum Radiated Power is not supplied. Maximum Transmitter Output Power 70 dBW for Nature of Service Code = ST; Maximum power 40 dBW for Nature of Service Code ≠ ST.
0155	• Maximum Radiated Power	Dec. in range –30.0 to 99.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the Signal Configuration is in a band shared with Space services. In other bands mandatory if the Transmitter Output Power and the Transmitting Antenna 's Maximum Gain are not supplied. Maximum Radiated power 99 dBW for Nature of Service Code = ST; Maximum power 70 dBW for Nature of Service Code ≠ ST.
0154	• Maximum Power Density Over 4 kHz	Dec. in range –170 to 30.0 in dB(W/Hz).	C	
0571	• Maximum Power Density Over 1 MHz	Dec. in range –200.0 to 20.0 in dB(W/Hz).	C	
0484	• Energy Dispersal Description	Text.	C	
0546	• Two Dimensional Service Zone consisting of		R	Mandatory if the Sites for the individual Receiving Antenna are not known.
0328	between 3 and 6 Zone Boundary Coordinates , defined by		R	Mandatory as defined in RDD 0328.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as defined in RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as defined in RDD 0328.
0446	• Maximum Length Of Circuit	Int. in range 0 to 20 000 in km.	O	
0156	• Nature Of Service Code	2 Char.	M	Only "AX", "CO", "CP", "CR", "CV", "HP", "PX", "MX", "OT" and "ST" valid.
0277	• Code of the Class Of Station that classifies the operation of the Signal Configuration	2 Char.	M	Always "FX".
0011	• Code of the Administration notifying the Signal Configuration , using	Up to 3 Char.	M	
0094	• Code of the Correspondence Address to be used for the notification of the Signal Configuration .	Up to 3 Char.	M	
0219	• Code of the Operator responsible for the Signal Configuration .	3 Char. in range 001 to 999.	O	
	For each Coordination Agreement obtained for the Signal Configuration , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the Provision that determines the regulatory requirement for the Coordination Agreement .	Up to 12 Char.	BR	Always "RR No. 6.7".
0011	• Code of the Administration party to the Coordination Agreement .	Up to 3 Char.	R	Mandatory in bands shared with space services if coordination is successfully completed.
	For each Regular Operation Period that is the operating time for the Signal Configuration , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the Transmitting Antenna emitting the Signal Configuration , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	
0129	• Maximum Gain	Dec. in range –5.0 to 50.0 in dB with Gain Reference Antenna Code.	R	Mandatory if the Transmitting Antenna is directional. Mandatory in shared bands. Mandatory if the Transmitter Output Power or Maximum Radiated Power is not supplied.
0131	• Polarization Code	Up to 2 Char.	R	Mandatory if the Signal Configuration a is in a band shared with Space Services.
0121	• Ground Altitude Above Mean Sea Level	Int. in range –1 000 to 8 848 in metres.	R	Mandatory if the Signal Configuration is in a band shared with Space Services.
0125	• Height Above Ground Level	Int. in range 0 to 30 000 in metres.	R	Mandatory if the Signal Configuration is in a band shared with Space Services. HAPs 0 to 30 000, all other systems 0 to 1 000 m.
0168	• Vertical Beamwidth	Dec. in range 0.1 to 180.0 in degrees.	C	Only valid if different from the horizontal beamwidth.
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the Transmitting Antenna is directional.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0109	• Elevation Angle Of Maximum Gain	Dec. in range –90.0 to 90.0 in degrees.	R	Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0108	• Azimuth Of Maximum Gain	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional in the horizontal plane and its beam is not rotating or swept.
0641	• Code of the <i>Reference Pattern</i> for the <i>Transmitting Antenna</i>	A compound structure presented in one of the ways described in Section 3.	O	
	For each <i>Operational Sector</i> identifying the area of the Earth's surface swept by a <i>Directional Transmitting Antenna</i> provide the:			
0509	• Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
0510	• Finish Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			Note: RR Nos. 21.1 - 21.2.
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	
	For each <i>Receiving Antenna</i> that is the point of reception the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	R	Mandatory if the <i>Signal Configuration's</i> Two Dimensional Service Zone is not supplied.
0160	• Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvin.	C	Only valid if individual receiving antenna are notified.
	For the <i>Site</i> where the <i>Receiving Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	R	Mandatory if the <i>Signal Configuration's</i> Two Dimensional Service Zone is not supplied.
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	R	Mandatory as defined in RDD 0267.

2.13 Land Mobile Service, Base Receive, in the HF, VHF and UHF Bands (Terrestrial Notice Form T13)

This table covers the signal transmitted from a mobile station for reception either by a known *Receiving Antenna* at a fixed location, or by a transportable *Receiving Antenna* where protection is sought for the Roaming Zone. Although the transmitting antenna is non-directional, the roaming zone may be defined by specific points as a result of the use of directive antenna at the receiving base station.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	"ADD" new notice, "MODIFY" or "SUPPRESS" an existing notice or "WITHDRAW" a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration's</i> modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range 0.0 to 30.0 in dBW.	R	Mandatory in the bands below 28 000 kHz. For other bands mandatory if the Maximum Radiated Power is not supplied.
0155	• Maximum Radiated Power	Dec. in range –10.0 to 40.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the Transmitter Output Power is not supplied.
0544	• Two Dimensional Roaming Zone consisting of		M	
0069	either a <i>Circular Zone</i> , defined by		R	Mandatory if <i>Geographical Areas</i> are not provided.
0070	Centre Geographical Coordinates	Long/Lat (dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 20 000 in km.	R	Mandatory as defined in RDD 0069.
0174	or one or more <i>Geographical Area</i> Codes	Up to 3 Char.	R	Mandatory if a <i>Circular Zone</i> is not provided.
0156	• Nature of Service Code	2 Char.	M	Only “CO” “CP” “CR” “CV” and “OT” valid.
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	Always “ML”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Receiving Antenna</i> that is the target of the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
	For the <i>Site</i> where the <i>Receiving Antenna</i> is located, provide the			Note: RR Nos. 21.1-21.2.
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.14 Land Mobile Service, Base Transmit, in the HF, VHF and UHF Bands (Terrestrial Notice Form T12)

This table covers the signal transmitted from a *Transmitting Antenna* at a fixed location for reception either by a mobile station or by a transportable station where protection is sought for the transmitter and its Service Zone.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice, “MODIFY” or “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the Signal Configuration's modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the Provision that determines the regulatory requirements for the Terrestrial Service Notice .	Up to 12 Char.	M	
	For the Signal Configuration that is the subject of the Terrestrial Service Notice , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0150	• Station Identification	Up to 20 Char.	R	Mandatory below 28 MHz.
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range –5.0 to 40.0 in dBW	R	Mandatory in the bands below 28 000 kHz. Mandatory if the Signal Configuration is in a band shared with space services. For other bands mandatory if the Maximum Radiated Power is not supplied.
0155	• Maximum Radiated Power	Dec. in range 0.0 to 50.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the Signal Configuration is in a band shared with space services. For other bands mandatory if the Transmitter Output Power and the Transmitting Antenna's Maximum Gain are not supplied.
0546	• Two Dimensional Service Zone consisting of		M	
0069	either a Circular Zone , defined by		R	Mandatory if the Zone Boundary Coordinates or the Geographical Areas are not provided.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 20 000 in km.	R	Mandatory as defined in RDD 0069.
0328	or between 3 and 6 Zone Boundary Coordinates , defined by		R	Mandatory if the Circular Zone or the Geographical Areas are not provided.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as defined in RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as defined in RDD 0328.
0174	or one or more Geographical Area Codes	Up to 3 Char.	R	Mandatory if the Zone Boundary Coordinates or the Circular Zones are not provided.
0446	• Maximum Length Of Circuit	Int. in range 0 to 20 000 in km.	O	Not allowed with Circular Zones .
0156	• Nature of Service Code	2 Char.	M	Only “CO”, “CP”, “CR”, “CV” and “OT” valid.
0277	• Code of the Class Of Station that classifies the operation of the Signal Configuration	2 Char.	M	Always “FB”.
0011	• Code of the Administration notifying the Signal Configuration , using	Up to 3 Char.	M	
0094	• Code of the Correspondence Address to be used for the notification of the Signal Configuration .	Up to 3 Char.	M	
0219	• Code of the Operator responsible for the Signal Configuration .	3 Char. in range 001 to 999	O	
	For each Coordination Agreement obtained for the Signal Configuration , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the Provision that determines the regulatory requirement for the Coordination Agreement .	Up to 12 Char.	BR	Always “RR No. 6.7”.
0011	• Code of the Administration party to the Coordination Agreement .	Up to 3 Char.	R	Mandatory in bands shared with space services if coordination is successfully completed.
	For each Regular Operation Period that is the operating time for the Signal Configuration , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the Transmitting Antenna emitting the Signal Configuration , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0129	• Maximum Gain	Dec. in range –5.0 to 20.0 in dB with Gain Reference Antenna Code.	R	Mandatory if the Transmitting Antenna is directional. Mandatory if the Signal Configuration 's Transmitter Output Power or Maximum Radiated Power is not supplied.
0131	• Polarization Code	Up to 2 Char.	R	Mandatory if the Signal Configuration is in band shared with Space Services.
0121	• Ground Altitude Above Mean Sea Level	Int. in range –1 000 to 8 848 in metres.	R	Mandatory if the Signal Configuration is in a band shared with Space Services.
0125	• Height Above Ground Level	Int. in range 0 to 1 000 in metres.	R	Mandatory if Signal Configuration is in band shared with Space Services.
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the Transmitting Antenna is directional.
0109	• Elevation Angle Of Maximum Gain	Dec. in range 0.0 to 90.0 in degrees.	R	Mandatory if the Signal Configuration is in a band shared with Space Services.
0108	• Azimuth of Maximum Gain	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the Transmitting Antenna is directional in the horizontal plane.
0641	• Code of the Reference Pattern for the Transmitting Antenna	A compound structure presented in one of the ways described in Section 3.	O	.
	For the Site where the Transmitting Antenna is located, provide the			Note: RR Nos. 21.1 - 21.2.
0267	• Name	Up to 30 Char.	M	
0174	• Code of the Geographical Area that is the location for the Site .	Up to 3 Char.	M	

2.15 Maritime Mobile Service, Coast Station (Transmit), in the VLF, LF, MF, HF and VHF Bands (Terrestrial Notice Form T12)

This table covers a transmitting Coast Station in the Maritime Mobile service.

Coast Station (Transmit)

Vertical Polarization.

A Coast Station to mobile (ship) transmission in the Maritime Mobile Service. The transmitting antenna is usually non-directional, but a directive antenna may be used to prevent interference into land based systems or, at VHF, to extend coverage into bays and inlets. The service area which is normally circular may be defined by specific points or zones, either as a result of the use of directive antenna, or site shielding. The operational range is limited by the frequency range and the transmit power of the ship.

Frequency Ranges:

VLF-LF;

MF Range is normally 500 km;

HF Range is normally 20 000 km;

VHF 156-174 MHz. Range is normally 60 km.

NAVTEX

The international NAVTEX service is the system for the broadcast and automatic receipt of Maritime Safety Information by means of narrow band direct printing on 518 kHz using the English language to meet the requirements of the Safety of Life at Sea (SOLAS) convention. NAVTEX stations operate on a single frequency network. Each service covers a specific sea area and transmits for a period of MM minutes every HHMM hours and minutes, or at irregular periods. The transmission coverage area is identified by a B1 character (A-Z) and can be selected by setting the receiver to select only messages from certain stations.

Frequency Ranges:

518 kHz: international NAVTEX service, English language transmission only;

490 kHz: national language transmission (optional), may be implemented only after the full implementation of the GMDSS;

4 209.5 kHz: tropical zone alternative to 518 kHz.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	"ADD" new notice, "MODIFY" or "SUPPRESS" an existing notice or "WITHDRAW" a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration's</i> modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0150	• Station Identification	Up to 20 Char.	R	Mandatory below 28 MHz if a Call Sign is not required for the <i>Signal Configuration</i> .
0347	• Call Sign	Up to 10 Char.	R	Mandatory if the assignment is used for Radiotelephony or NAVTEX. For other systems mandatory below 28 MHz if a Station Identification is not provided.
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range 0.0 to 40.0 in dBW.	R	Mandatory in the bands below 28 000 kHz. In other bands mandatory if the Maximum Radiated Power is not supplied. Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0155	• Maximum Radiated Power	Dec. in range 0.0 to 45.0 in dBW with Gain Reference Antenna Code.	R	Mandatory in the bands below 28 000 kHz. and if the Transmitter Output Power and the <i>Transmitting Antenna's</i> Maximum Gain are not supplied. Mandatory if the <i>Signal Configuration</i> is in a band shared with Space Services.
0546	• Two Dimensional Service Zone consisting of		M	
0069	either a <i>Circular Zone</i> , consisting of		R	Mandatory for NAVTEX. For other radio systems mandatory if <i>Zone Boundary Coordinates</i> or <i>Geographical Areas</i> are not provided.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 50 to 500 in km.	R	Mandatory as defined in RDD 0069.
0328	or between 3 and 6 <i>Zone Boundary Coordinates</i> , defined by			Mandatory if a <i>Circular Zone</i> or <i>Geographical Area</i> are not provided.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as defined in RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as defined in RDD 0328.
0187	or one or more <i>Maritime Zone</i> Codes	5 Char.		Allowed in the bands below 28 000 kHz.
0446	• Maximum Length Of Circuit	Int. in range 0 to 20 000 in km.	O	
0156	• Nature of Service Code	2 Char.	M	Always "CO", "CP", "CR", "CV", "FS" or "OF".
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	Always "FC" or "FP".

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	BR	Always "RR No. 6.7".
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	R	Mandatory in bands shared with space services if coordination is successfully completed.
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	
0129	• Maximum Gain	Dec. in range –5.0 to 20.0 in dB with Gain Reference Antenna Code.	R	Mandatory if the <i>Transmitting Antenna</i> is directional. Mandatory if the <i>Signal Configuration</i> 's Transmitter Output Power or Maximum Radiated Power is not supplied.
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional.
0108	• Azimuth of Maximum Gain	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional in the horizontal plane and its beam is not rotating or swept.
0641	• Code of the <i>Reference Pattern</i> for the <i>Transmitting Antenna</i>		O	
	For each <i>Operational Sector</i> identifying the area of the Earth's surface swept by a <i>Directional Transmitting Antenna</i> provide the			
0509	• Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
0510	• Finish Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.16 Maritime Mobile Service, Coast Station (Receive), in the VLF, LF, MF, HF and VHF Bands (Terrestrial Notice Form T13)

This table covers a receiving Coast Station in the Maritime Mobile Service in the MF band.

Ship Station (Transmit)

A mobile (ship) to Coast Station transmission in the Maritime Mobile Service. Although the *Transmitting Antenna* is non-directional, the roaming area may be defined by specific points or zones, as a result of the use of directive antenna (e.g. to extend coverage into bays and inlets) at the receiving base station. The operational range is limited by the frequency range and the transmit power of the ship station.

Frequency ranges:

VLF-LF;

MF range is normally 500 km;

HF range is normally 20 000 km;

VHF 156-174 MHz range is normally 60 km.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each Terrestrial Service Notice , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice, “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the Signal Configuration ’s modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the Provision that determines the regulatory requirements for the Terrestrial Service Notice .	Up to 12 Char.	M	
	For the Signal Configuration that is the subject of the Terrestrial Service Notice , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range –5.0 to 30.0 in dBW.	R	Mandatory in the bands below 28 000 kHz. For other bands mandatory if the Maximum Radiated Power is not supplied. For VHF maximum power is 25 W carrier power.
0155	• Maximum Radiated Power	Dec. in range 0.0 to 30.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if in band above 28 000 kHz and if Transmitter Output Power is not supplied.
0544	• Two Dimensional Roaming Zone consisting of		M	
0069	either a Circular Zone , defined by		R	Mandatory if a Maritime Zone is not provided.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 20 000 in km.	R	For VHF 5 to 60 km; MF 50 to 500 km; HF/LF/VLF to 20 000 km. Mandatory as defined in RDD 0070.
0187	or one or more Maritime Zone Codes	5 Char.	R	Allowed only in the bands below 28 000 kHz.
0156	• Nature Of Service Code	2 Char.	M	Always “CO”, “CP”, “CR”, “CV”, “FS” or “OT”.
0277	• Code of the Class Of Station that classifies the operation of the Signal Configuration	2 Char.	M	Always “MS”.
0011	• Code of the Administration notifying the Signal Configuration , using	Up to 3 Char.	M	
0094	• Code of the Correspondence Address to be used for the notification of the Signal Configuration .	Up to 3 Char.	M	
0219	• Code of the Operator responsible for the Signal Configuration .	3 Char. in range 001 to 999.	O	
	For each Coordination Agreement obtained for the Signal Configuration , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the Provision that determines the regulatory requirement for the Coordination Agreement .	Up to 12 Char.	O	
0011	• Code of the Administration party to the Coordination Agreement .	Up to 3 Char.	O	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each Regular Operation Period that is the operating time for the Signal Configuration , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the Receiving Antenna that is the target of the Signal Configuration , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
	For the Site where the Receiving Antenna is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the Geographical Area that is the location for the Site .	Up to 3 Char.	M	

2.17 Maritime Mobile Service, Coast Stations RR Appendix 25, in the HF Bands (Terrestrial Notice Form T15)

This table covers the application of the procedure for updating the frequency allotment plan contained in RR Appendix 25.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each Terrestrial Service Notice , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	"ADD" new notice or "MODIFY" an existing notice, "SUPPRESS" an existing notice or "WITHDRAW" a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0619	• Notified Channel Number	Int. in range 401 to 2 509.	R	Mandatory if the Preferred Frequency Band is not supplied.
0620	• Alternative Channel Number	Int. in range 401 to 2 509.	O	Only valid if the Preferred Frequency Band is not supplied.
0621	• Channel Number to Be Replaced	Int. in range 401 to 2 509.	R	Mandatory if an existing allotment is being suppressed or the Channel Number changed.
0622	• Preferred Frequency Band	Int. in range 04 to 30 in MHz.	R	Mandatory if an Administration requests the assistance of the Bureau under RR No. 7.6. Example values "04", "06", "08".
0626	• Remarks	Text.	O	
0608	• Code of the Provision that determines the regulatory requirements for the Terrestrial Service Notice .	Up to 12 Char.	M	
	For the Signal Configuration that is the subject of the Terrestrial Service Notice , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	Always "2K80".
0351	• Class Of Emission Code	Up to 5 Char.	M	Always "3E".
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	M	Always "X".
0166	• Transmitter Output Power	Dec. in range -10.0 to 40.0 in dBW.	M	
0546	• Two Dimensional Service Zone consisting of		M	
0187	one or more Maritime Zone Codes	5 Char.	M	
0446	• Maximum Length Of Circuit	Int. in range 0 to 20 000 in km.	O	
0156	• Nature Of Service Code	2 Char.	M	
0277	• Code of the Class Of Station that classifies the operation of the Signal Configuration	2 Char.	M	Always "FC".
0011	• Code of the Administration notifying the Signal Configuration .	Up to 3 Char.	M	
0094	• Code of the Correspondence Address to be used for the notification of the Signal Configuration .	Up to 3 Char.	M	
	For each Coordination Agreement obtained for the Signal Configuration , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the Provision that determines the regulatory requirement for the Coordination Agreement .	Up to 12 Char.	BR	Always "RR AP25/1.4".

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	R	Mandatory if coordination successfully completed. A copy of the <i>Coordination Agreement</i> should be supplied.
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
0467	• Daily Volume	Int. in range 0 to 999 in minutes.	M	
	For each <i>Traffic Characteristics</i> that further defines the <i>Signal Configuration</i> , provide the			
0465	• Start Peak Hours	Time.	M	
0466	• Stop Peak Hours	Time.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	R	Mandatory for initial allotments (RR AP25/1.1.1).
0122	• Directivity Indicator	True or False.	M	
0129	• Maximum Gain	Dec. in range –5.0 to 10.0 in dB with Gain Reference Antenna Code.	M	
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional in the horizontal plane.
0108	• Azimuth Of Maximum Gain	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> is directional in the horizontal plane and its beam is not rotating or swept.
	For each <i>Operational Sector</i> identifying the area of the Earth's surface swept by a <i>Directional Transmitting Antenna</i> provide the:			
0509	• Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
0510	• Finish Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory if the <i>Transmitting Antenna</i> beam is rotational or swept.
	For the <i>Site</i> where the <i>Transmitting Antenna</i> may be located, provide the			
0267	• Name	Up to 30 Char.	R	Mandatory for initial allotments (RR AP25/1.1.1).
0578	• Code of the <i>Maritime HF Allotment Area</i> that is the location for the <i>Site</i> .	Up to 6 Char.	M	Use symbols from Appendix 8 to the RDD.

2.18 Maritime Mobile Service, and Aeronautical Radionavigation Service, GE85-MM-R1 Plan Update (Terrestrial Notice Form T16)

This table covers a plan update the GE85-MM-Region 1 Plan for the Maritime Mobile Service and non-directional radio beacons (NDB) in the Aeronautical Radionavigation Service.

Aeronautical NDB

Frequency Range: 415-435 kHz and 510-526.5 kHz, in Region 1.

Vertical Polarization.

A beacon used for obtaining a bearing within a designated service area and governed by the Regional Agreement GE85-MM-R1. They are also used either wholly, or partly as holding, approach and landing aids. The beacons generally radiate an uninterrupted carrier. Identification is by on/off keying of an amplitude modulated tone (either a 1 020 Hz or 400 Hz), although this does not preclude the use of other types of modulation in addition to those specified for identification, including simultaneous identification and voice modulation. In certain conditions (see ICAO International Standards and Recommended Practices) NDBs other than those wholly, or partly serving as holding, approach and landing aids may be identified by on/off keying of the unmodulated carrier.

Maritime Mobile Coast Station (Transmit)

Vertical Polarization.

Frequency Range: 505-526.5 kHz, 1 606.5-1 625 kHz, 1 635-1 800 kHz, and 2 045-2 160 kHz in Region 1.

Maritime Mobile Service governed by the Regional Agreement GE85-MM-R1. The transmitting antenna is usually non-directional and the service area is normally circular. The operational range is limited by the frequency range and the transmit power of the ship.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice, “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration's</i> modulation envelope is asymmetric or composite.
0619	• Notified Channel Number	Int. in range 401 to 2 509.	O	Only valid in the case of a non-unique ship station assignment.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0546	• Two Dimensional Service Zone consisting of		M	
0069	a <i>Circular Zone</i> , consisting of		M	
0070	Centre Geographical Coordinates	Long/Lat(dm).	M	
0071	Radius	Int. in range 50 to 500 in km.	M	
0156	• Nature of Service Code	2 Char.	M	
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	Always “AL” or “FC”.
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
	For the <i>Site</i> where the <i>Transmitting Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	M	
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	M	

2.19 Adaptive Systems in the MF and HF Bands (Terrestrial Notice Form T17)

This table covers the signal transmitted from a single *Transmitting Antenna* at a fixed location or anywhere within a **Two Dimensional Service Zone** to one or more *Receiving Antenna* for stations below 28 MHz. For frequency adaptive systems either the **Notified Usable Frequency Range** and the **Notified Centre**

Frequency of that range are provided or individual notices are submitted for each **Signal Configuration Operational Frequency** used.

For a HF Station the transmitting antenna may be directional or non-directional. The signal configuration from a transmitting antenna may be received at a number of different sites as the sky wave returns to earth. Propagation is affected by ionospheric variations and the frequency used and/or the distance from transmit site. Ionospheric conditions to receive site varies between night and day. For HF Fixed Stations in the Fixed Service, reference should be made to RR Article 24 concerning the operation and restrictions on frequency assignments.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each Terrestrial Service Notice , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice, “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0216	• Resubmission Indicator	True or False.	R	Mandatory if subject to coordination procedures with space services and returned with unfavourable finding under RR Nos. 11.41, 11.43C, 11.43D, 11.46.
0217	• Notified Assigned Frequency	Frequency.	R	Mandatory if notifying each individual frequency used by a frequency adaptive system.
0612	• Notified Centre Frequency	Frequency.	R	Mandatory if a Notified Usable Frequency Range is supplied.
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the Signal Configuration 's modulation envelope is asymmetric or composite.
0615	• Notified Usable Frequency Range	Dec. in range 0.01 to 2.00 in MHz.	R	Mandatory if notifying the range of frequencies in which a frequency adaptive system operates.
0626	• Remarks	Text.	O	
0608	• Code of the Provision that determines the regulatory requirements for the Terrestrial Service Notice .	Up to 12 Char.	M	
	For the each Signal Configuration that is the subject of the Terrestrial Service Notice , provide the			
0157	• Necessary Bandwidth Code	4 Char. Code.	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	For FX, “F3E” and “G3E” emissions are prohibited below 30 MHz RR No. 24.2.
0150	• Station Identification	Up to 20 Char.	R	Mandatory if a Call Sign is not required for the Signal Configuration (RR Nos. 19.7 and 19.1.1).
0347	• Call Sign	Up to 10 Char.	R	Mandatory (RR Nos. 19.7 and 19.1.1) if a Station Identification is not provided.
0494	• Class Of Operation Code	1 Char.	R	Mandatory for HF (3 000-27 500 kHz) only.
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	M	
0166	• Transmitter Output Power	Dec. in range 10.0 to 40.0 in dBW.	M	
0155	• Maximum Radiated Power	Dec. in range 10.0 to 60.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the Transmitting Antenna 's Maximum Gain is not supplied. For adaptive systems with power control, the Maximum Radiated Power must include the full power available in the Power Control Range.
0570	• Power Control Range	Dec. in range 10.0 to 20.0 in dB.	R	Mandatory for adaptive systems with power control if the Maximum Radiated Power is not supplied.
0546	• Two Dimensional Service Zone consisting of		R	Mandatory for all Class Of Station Codes except FX. Mandatory for Class Of Station Code FX if the Sites for the individual Receiving Antenna are not known.
0328	either between 3 and 6 Zone Boundary Coordinates , defined by		R	Mandatory as defined for RDD 0546 if a Circular Zone or Geographical Areas are not provided.
0329	Geographical Coordinates	Long/Lat(dms).	R	Mandatory as defined in RDD 0328.
0511	Sequence Number	Int. in range 1 to 6.	R	Mandatory as defined in RDD 0328.
0174	or one or more Geographical Area Codes	Up to 3 Char.	R	Mandatory as defined for RDD 0546 if a Circular Zone or Zone Boundary Coordinates are not provided. Not allowed for Class of Station Code “FX”

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0069	or a Circular Zone , defined by		R	Mandatory as defined for RDD 0546 if Zone Boundary Coordinates or Geographical Areas are not provided. Not allowed for Class of Station Code "FX".
0070	Centre Geographical Coordinates	Long/Lat(dm)	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 20 000 km.	R	Mandatory as defined in RDD 0069.
0446	• Maximum Length Of Circuit	Int. in range 0 to 20 000 in km.	O	
0156	• Nature Of Service Code	2 Char.	M	One of the symbols shall be always "AS".
0277	• Code of the Class Of Station that classifies the operation of the Signal Configuration	2 Char.	M	Permitted Class of Station Codes "FA", "FB", "FL", "FP", "FX", ("FC", "FD", "FG" - in the non-planned bands).
0011	• Code of the Administration notifying the Signal Configuration , using	Up to 3 Char.	M	
0094	• Code of the Correspondence Address to be used for the notification of the Signal Configuration .	Up to 3 Char.	M	
0219	• Code of the Operator responsible for the Signal Configuration .	3 Char. in range 001 to 999.	O	
	For each Coordination Agreement obtained for the Signal Configuration , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the Provision that determines the regulatory requirement for the Coordination Agreement .	Up to 12 Char.	O	
0011	• Code of the Administration party to the Coordination Agreement .	Up to 3 Char.	O	
	For each Regular Operation Period that is the operating time for the Signal Configuration , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the Transmitting Antenna emitting the Signal Configuration , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	M	
0122	• Directivity Indicator	True or False.	M	
0129	• Maximum Gain	Dec. in range -5.0 to 50.0 in dB with Gain Reference Antenna Code.	R	Mandatory if the Transmitting Antenna is directional. Mandatory if the Signal Configuration's Maximum Radiated Power is not supplied.
0147	• Horizontal Beamwidth	Dec. in range 0.1 to 359.9 in degrees.	R	Mandatory if the Transmitting Antenna is directional.
0108	• Azimuth Of Maximum Gain	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the Transmitting Antenna is directional in the horizontal plane and its beam is not rotating or swept.
0641	• Code of the Reference Pattern for the Transmitting Antenna	A compound structure presented in one of the ways described in Section 3.	O	
	For each Operational Sector identifying the area of the Earth's surface swept by a Directional Transmitting Antenna provide the:			
0509	• Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory if the Transmitting Antenna beam is rotational or swept.
0510	• Finish Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory if the Transmitting Antenna beam is rotational or swept.
	For the Site where the Transmitting Antenna is located, provide the			Note: RR Nos. 21.1-21.2.
0267	• Name	Up to 30 Char.	M	
0174	• Code of the Geographical Area that is the location for the Site .	Up to 3 Char.	M	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For the each <i>Receiving Antenna</i> that is the target point of reception for the <i>Signal Configuration</i> , provide the			
0037	• Geographical Coordinates	Long/Lat(dms).	R	Mandatory for <i>Class of Station</i> Code “FX” only and if the <i>Signal Configuration’s</i> Two Dimensional Service Zone is not supplied.
	For the <i>Site</i> where the <i>Receiving Antenna</i> is located, provide the			
0267	• Name	Up to 30 Char.	R	Mandatory for <i>Class of Station</i> Code “FX” only and if the <i>Signal Configuration’s</i> Two Dimensional Service Zone is not supplied.
0174	• Code of the <i>Geographical Area</i> that is the location for the <i>Site</i> .	Up to 3 Char.	R	Mandatory as defined in RDD 0267.

2.20 Typical Transmitting Stations in the Non-planned Bands (Terrestrial Notice Form T14)

When a given frequency is used by a large number of terrestrial transmitting stations of the same service, (e.g. land mobile), with identical characteristics they can be represented by a typical station and notified under RR No. 11.17. This type of notification is not authorized for stations covered by allotment plans in RR Appendices 25, 26 and 27; broadcasting stations (RR No. 11.19); nor for terrestrial transmitting stations in the coordination area of an earth station in the same frequency band (RR No. 11.20); nor for terrestrial transmitting stations operating in the frequency bands defined in Tables 8a, 8b, 8c, 8d of RR Appendix 7 when their equivalent isotropically radiated power exceeds the limits given in these Tables or exceed the limits in RR No. 21.3 (RR No. 11.21); nor for terrestrial transmitting stations in the frequency bands listed in RR Table 21-2.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Terrestrial Service Notice</i> , provide the			
0201	• Administration Notice Identification Code	Up to 20 Char.	O	
0206	• Intended Action Code	Up to 8 Char.	M	“ADD” new notice or “MODIFY” an existing notice, “SUPPRESS” an existing notice or “WITHDRAW” a notice under treatment.
0212	• Date	Date.	O	
0202	• BR Date Received	Date.	BR	
0217	• Notified Assigned Frequency	Frequency.	M	
0611	• Notified Reference (Carrier) Frequency	Frequency.	R	Mandatory if the <i>Signal Configuration’s</i> modulation envelope is asymmetric or composite.
0626	• Remarks	Text.	O	
0608	• Code of the <i>Provision</i> that determines the regulatory requirements for the <i>Terrestrial Service Notice</i> .	Up to 12 Char.	M	
	For the <i>Signal Configuration</i> that is the subject of the <i>Terrestrial Service Notice</i> , provide the			
0157	• Necessary Bandwidth	4 Char. Code	M	
0351	• Class Of Emission Code	Up to 5 Char.	M	
0141	• Date Of Bringing Into Use	Date.	M	
0159	• Power Measurement Method Code	1 Char.	R	Mandatory if the Transmitter Output Power is supplied.
0166	• Transmitter Output Power	Dec. in range –5.0 to 40.0 in dBW.	R	Mandatory if the Signal Configuration is in a band below 28 MHz or if the Maximum Radiated Power is not supplied.
0155	• Maximum Radiated Power	Dec. in range 0.0 to 70.0 in dBW with Gain Reference Antenna Code.	R	Mandatory if the Transmitter Output Power and the <i>Transmitting Antenna’s</i> Maximum Gain are not supplied.
0544	• Two Dimensional Roaming Zone consisting of		M	
0069	either a <i>Circular Zone</i> , defined by		R	Mandatory if <i>Geographical Areas</i> are not provided.
0070	Centre Geographical Coordinates	Long/Lat(dm).	R	Mandatory as defined in RDD 0069.
0071	Radius	Int. in range 1 to 20 000 in km.	R	Mandatory as defined in RDD 0069.
0174	or one or more <i>Geographical Area</i> Codes	Up to 5 Char.	R	Mandatory if a <i>Circular Zone</i> is not provided.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
0156	• Nature of Service Code	2 Char.	M	
0277	• Code of the <i>Class Of Station</i> that classifies the operation of the <i>Signal Configuration</i>	2 Char.	M	Permitted <i>Class of Station</i> Codes “FP”, “OE”, “RN”, “SM”, “SS” (“AL”, “FA”, “FB”, “FC”, “FD”, “FG”, “FL”, “FX”, “LR”, “NL” in the non-plan bands).
0011	• Code of the <i>Administration</i> notifying the <i>Signal Configuration</i> , using	Up to 3 Char.	M	
0094	• Code of the <i>Correspondence Address</i> to be used for the notification of the <i>Signal Configuration</i> .	Up to 3 Char.	M	
0219	• Code of the <i>Operator</i> responsible for the <i>Signal Configuration</i> .	3 Char. in range 001 to 999.	O	
	For each <i>Coordination Agreement</i> obtained for the <i>Signal Configuration</i> , provide the			
0090	• Status Code	Up to 6 Char.	BR	
0608	• Code of the <i>Provision</i> that determines the regulatory requirement for the <i>Coordination Agreement</i> .	Up to 12 Char.	O	
0011	• Code of the <i>Administration</i> party to the <i>Coordination Agreement</i> .	Up to 3 Char.	O	
	For each <i>Regular Operation Period</i> that is the operating time for the <i>Signal Configuration</i> , provide the			
0307	• Start Time	Time in UTC.	M	
0308	• Stop Time	Time in UTC.	M	
	For the <i>Transmitting Antenna</i> emitting the <i>Signal Configuration</i> , provide the			
0129	• Maximum Gain	Dec. in range –5.0 to 40.0 in dB with Gain Reference Antenna Code.	R	Mandatory if <i>Transmitting Antenna</i> is directional. Mandatory if the <i>Signal Configuration</i> ’s Transmitter Output Power or the Maximum Radiated Power is not supplied.

SECTION 3

DESCRIPTION OF DATA ITEMS FOR TERRESTRIAL
SYSTEMS AND SERVICES

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3.2	<i>Coordination Agreement</i>	RDD ref: 0088	71
3.3	<i>Correspondence Address</i>	RDD ref: 0093	71
3.4	<i>Operator</i>	RDD ref: 0218	72
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3.6	<i>Provision</i>	RDD ref: 0605	79
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3.7	<i>Site</i>	RDD ref: 0265	82
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3.11	<i>Directional Transmitting Antenna</i>	RDD ref: 0107	86
3.12	<i>Type A Transmitting Antenna</i>	RDD ref: 0380	89
3.13	<i>Type B Transmitting Antenna</i>	RDD ref: 0381	89
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3.23	<i>Traffic Characteristic</i>	RDD ref: 0464	100
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3.24	<i>Colour System.....</i>	RDD ref: 0077	103
3.25	<i>Class Of Station</i>	RDD ref: 0276	103
3.26	<i>Protection Mask.....</i>	RDD ref: 0226	104
3.27	<i>Radiocommunication Service</i>	RDD ref: 0241	104
3.28	<i>Signal Configuration</i>	RDD ref: 0140	105
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3.0 Introduction

This Section lists all the data items required for notification and coordination. Provided for each data item are a description, the units of measurement and the likely range of values covering all radio systems described in Section 2.

Each data item is a part of a “data group” in the RDD. Each data group may have several data items. The names of many data groups are familiar (e.g., *Antenna*, *Site*, *Terrestrial Service Notice*), however for some data groups there has been no identifiable name suitable and for these new names have had to be created (e.g., *Signal Configuration*). If the reader is uncertain in which group a particular data item appears, it is listed by both name and RDD reference number in Section 10.

To make finding information easier, this section has been divided into a number of topics (e.g., Antenna Data). Each topic contains a number of data groups and its own table of contents, showing the data groups and the individual data items, referenced by page and RDD reference number.

3.0.1 Section 3 Structure and Usage

All data groups within Section 3 are similarly structured with the data group name being followed by the RDD reference number, the data group definition, the unique identifier statement (see example below), relationships to associated data groups, and its data items and their formats. It is important to understand this structure in order to obtain information accurately from this Section.

More detailed information concerning the structure of Section 3 is shown in the example below. For the purposes of explanation, § 3.1 of the RDD has been copied below. This subsection contains the *Administration* data group along with some of the data items pertinent to an *Administration*.

Example:

3.1 Administration RDD ref: 0010

A governmental department, or service, of a Member State of the ITU responsible for discharging the obligations undertaken in the Constitution, the Convention and the Regulations of the ITU.

◇ An *Administration* is identified by its **Code**.

An *Administration* may be party to one or more *Coordination Agreements* RDD ref: 0017

An *Administration* may notify one or more *Signal Configurations* RDD ref: 0016

An *Administration* may submit one or more *Terrestrial Service Notices* RDD ref: 0209

An *Administration* may submit one or more *Correspondence Addresses* RDD ref: 0556

An *Administration* may inform the BR of the address of one or more *Operators* RDD ref: 0557

An *Administration* may nominate one or more *Sites* RDD ref: 0559

• Code RDD ref: 0011

The code used to identify an *Administration*.

A list of *Administration Codes* can be found in Appendix 1 to the RDD.

Recordings in the Master Register that do not result from a notification, such as allotments and frequencies for common use which are entered by the BR in accordance with the provisions of the Radio Regulations, are indicated by the symbol “ITU” in this column. This symbol now stands for the Radiocommunication Bureau (formerly International Frequency Registration Board).

Format: Up to 3 characters.

• Name RDD ref: 0012

The name of the Member State.

Format: Text.

• **Official Postal Address** **RDD ref: 0013**

The postal address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text

• **Official Telex Address** **RDD ref: 0014**

The telex address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text.

• **Official Facsimile Address** **RDD ref: 0560**

The facsimile address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an **Official Facsimile Address** may be acceptable providing there is independent or automatic confirmation of origin of the fax. However, in some countries facsimile transmissions do not have the same legal status as telex transmissions.

Format: Text.

• **Official E-mail Address** **RDD ref: 0561**

The e-mail address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an **Official E-mail Address** may be acceptable providing there is independent or automatic confirmation of origin of the e-mail. However, in some countries e-mail transmissions do not have the same legal status as telex transmissions.

For notices submitted electronically only.

Format: Text.

• **ITU Language Code** **RDD ref: 0562**

An indication of an ITU language, chosen by the *Administration* for communication of notification data with the ITU.

Format: 1 character.

Code Meaning

E English

F French

S Spanish

In the example above:

“*Administration*” represents the data group name. All data group names in the RDD are presented in italics and bold typeface.

“**RDD ref: 0010**” represents the RDD reference number. All RDD reference numbers are presented in bold typeface.

Immediately below the data group name is the data group definition. This is presented in normal typeface and serves to uniquely define the data group.

Immediately below the data group definition is the data group’s unique identifier statement. This unique identifier statement is indicated by the “diamond” and it provides information on a fundamental aspect of any data group, the identification of a particular occurrence of that data group e.g., which *Administration* is

submitting the notice. If it is not possible to identify a particular occurrence of a data group then it is not possible to determine what other characteristics it may possess. As such the identification statement describes how to determine individual occurrences of a data group. In this example, this identification statement states: “An *Administration* is identified by its **Code**” and means that by knowing only the *Administration’s Code* the administration itself can be identified.

Below the unique identifier statement any associations to other data groups are described. These associations are called relationships. The data group may have different kinds of association with other data groups. Sometimes this association may be to a single occurrence of an associated data group, and at other times it may be to many occurrences of an associated data group. The relationships provide the description of the type of association between the two groups. The full relationship text contains the name of both the data group and the associated data group, together with the description of the association or relationship between them. The full relationship text is presented in a standardized format, e.g., “An *Administration* may be party to one or more *Coordination Agreements*,” “An *Administration* may notify many *Signal Configurations*.” These examples demonstrate that *Administration* is related to both *Coordination Agreement* and *Signal Configuration*. Each associated data group has its own RDD reference number. In addition, each relationship has two ends. From the former example, one end is *Administration* and the other is *Coordination Agreements*. Each end of the relationship possesses its own RDD reference number for the purpose of identification.

Below the relationships are listed the data items belonging to that data group. Data items are individual pieces of data that form a part of each data group. Each data item name is in title case with bold typeface and is presented as bulleted text. In this example, the data items associated with *Administration* are: “**Code**”; “**Name**”; “**Official Postal Address**”; “**Official Telex Address**”. The full data item name is read as *Administration’s Code* or *Administration’s Official Postal Address*.

By convention, if reference is made to a data item within the same data group, only the short data item name (e.g., **Code**) is used. If reference is made to a data item of another data group the full name is used.

Each data item is identified by an RDD reference number, a definition and a format statement. The format statement describes the format in which the data must be presented, the size of the field, and, in most cases its possible level of accuracy. In this example, the format statement for **Code** indicates that “Up to 3 characters” are permissible for supplying information concerning an *Administration’s Code*.

All other topics within Section 3 of the RDD are structured in the same manner.

3.0.2 Notes

Note: Indented and italicized Notes appear in this section to draw attention to specific issues arising during the revision of the RDD. It is expected that these Notes will be removed from a later version of the RDD.

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3.1	<i>Administration</i>	RDD ref: 0010 70
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	Name	RDD ref: 0012 70
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	Official Telex Address	RDD ref: 0014 70
	Official Facsimile Address	RDD ref: 0560 70
	Official E-mail Address	RDD ref: 0561 70
	ITU Language Code	RDD ref: 0562 71
3.2	<i>Coordination Agreement</i>	RDD ref: 0088 71
	Status Code	RDD ref: 0090 71
3.3	<i>Correspondence Address</i>	RDD ref: 0093 71
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3.4	<i>Operator</i>	RDD ref: 0218 72
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3.5	<i>Terrestrial Service Notice</i>	RDD ref: 0200 73
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3.1 *Administration*

RDD ref: 0010

A governmental department, or service, of a Member State of the ITU responsible for discharging the obligations undertaken in the Constitution, the Convention and the Regulations of the ITU.

◇ An *Administration* is identified by its **Code**.

An *Administration* may be party to one or more *Coordination Agreements*

RDD ref: 0017

An *Administration* may notify one or more *Signal Configurations*

RDD ref: 0016

An *Administration* may submit one or more *Terrestrial Service Notices*

RDD ref: 0209

An *Administration* may submit one or more *Correspondence Addresses*

RDD ref: 0556

An *Administration* may inform the BR of the address of one or more *Operators*

RDD ref: 0557

An *Administration* may nominate one or more *Sites*

RDD ref: 0559

- **Code**

RDD ref: 0011

The code used to identify an *Administration*.

A list of *Administration Codes* can be found in Appendix 1 to the RDD.

Recordings in the Master Register that do not result from a notification, such as allotments and frequencies for common use which are entered by the BR in accordance with the provisions of the Radio Regulations, are indicated by the symbol “ITU” in this column. This symbol now stands for the Radiocommunication Bureau (formerly International Frequency Registration Board).

Format: Up to 3 characters.

- **Name**

RDD ref: 0012

The name of the Member State.

Format: Text.

- **Official Postal Address**

RDD ref: 0013

The postal address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text

- **Official Telex Address**

RDD ref: 0014

The telex address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text.

- **Official Facsimile Address**

RDD ref: 0560

The facsimile address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an **Official Facsimile Address** may be acceptable providing there is independent or automatic confirmation of origin of the fax. However, in some countries facsimile transmissions do not have the same legal status as telex transmissions.

Format: Text.

- **Official E-mail Address**

RDD ref: 0561

The e-mail address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an **Official E-mail Address** may be acceptable providing there is independent or automatic confirmation of origin of the e-mail. However, in some countries e-mail transmissions do not have the same legal status as telex transmissions.

For notices submitted electronically only.

Format: Text.

- **ITU Language Code**

RDD ref: 0562

An indication of an ITU language, chosen by the *Administration* for communication of notification data with the ITU.

Format: 1 character.

Code	Meaning
E	English
F	French
S	Spanish

3.2 *Coordination Agreement*

RDD ref: 0088

An agreement between two *Administrations* regarding the operation of a particular *Signal Configuration* and its maximum acceptable field strength at named test points under specified conditions. The named test points may be part of a designated contour, or a geographic or national boundary. A *Coordination Agreement* is required for each *Administration* that is adversely affected by the operation of the *Signal Configuration*.

◇ A *Coordination Agreement* is identified by the **Provision** and the *Signal Configuration* that it is in respect of and the *Administration* with which it must be reached.

A *Coordination Agreement* must be reached with a single *Administration*

RDD ref: 0092

A *Coordination Agreement* must be in respect of a single *Signal Configuration*

RDD ref: 0091

A *Coordination Agreement* must be in respect of a single *Provision*

RDD ref: 0609

- **Status Code**

RDD ref: 0090

A code allocated by the BR to indicate progress on the *Coordination Agreement*.

Format: Up to 6 characters.

Code	Meaning
COORD	Coordination requested by notifying <i>Administration</i>
AFFECT	An <i>Administration</i> has been identified as potentially being affected by the <i>Signal Configuration</i>
REFUSE	Agreement on the <i>Signal Configuration</i> has been refused by one or both <i>Administrations</i>
AGREED	Agreement on the <i>Signal Configuration</i> has been given by an <i>Administration</i>

3.3 *Correspondence Address*

RDD ref: 0093

For a specific *Geographical Area* an alternative address to that of the “Official” address of an *Administration* where communication should be sent (when requested by the notifying *Administration*) on matters regarding interference, quality of emissions and questions referring to the notification or operation of a specific *Signal Configuration*.

- ◇ A *Correspondence Address* is identified by its **Code** and the notifying *Administration* by which it has been nominated.

A *Correspondence Address* must be nominated by a single *Administration* RDD ref: 0563

A *Correspondence Address* must have validity in one or more *Geographical Areas* RDD ref: 0097

A *Correspondence Address* may be used for the notification of one or more *Signal Configurations* RDD ref: 0098

A *Correspondence Address* may be used in planning the HFBC Tentative Schedule for one or more *Signal Configurations* RDD ref: 0210

• **Code** RDD ref: 0094

A code allocated by the BR to uniquely identify a *Correspondence Address* of an *Administration*. Currently the **Code** used by the BR for identifying the *Correspondence Address* has been implemented in a manner that makes it specific to a single *Geographical Area*. Hence if the same *Correspondence Address* appears in two *Geographical Areas*, it is likely they will be identified by a different **Code**. This difference in **Code** applies even if the two *Geographical Areas*, are the responsibility (under the Convention of the ITU and the Regulations) of the same *Administration* and the address is that of the notifying *Administration*.

Format: Up to 3 characters.

• **Postal Address** RDD ref: 0095

The postal address nominated by the notifying *Administration* as the address to which correspondence relating to radiocommunication matters concerning a specific *Terrestrial Service Notice* should be sent.

Format: Text.

• **Telex Address** RDD ref: 0096

The telex address nominated by the notifying *Administration* as the address to which correspondence relating to radiocommunication matters concerning a specific *Terrestrial Service Notice* should be sent.

Format: Text.

• **Facsimile Address** RDD ref: 0564

The facsimile address nominated by the notifying *Administration* as the address to which correspondence relating to radiocommunication matters concerning a specific *Terrestrial Service Notice* should be sent.

Format: Number.

• **E-mail Address** RDD ref: 0565

The e-mail address nominated by the notifying *Administration* as the address to which correspondence relating to radiocommunication matters concerning a specific *Terrestrial Service Notice* should be sent.

Format: Text.

3.4 *Operator* RDD ref: 0218

An organization that is responsible for the operation of radio systems in a specific *Geographical Area*. The **Code** used by the BR for identifying the *Operator* is specific to the *Geographical Area*. Hence if the same organization appears in two or more *Geographical Areas*, each occurrence is treated as a different *Operator* and it is likely they will be identified by a different **Code**.

◇ An **Operator** is identified by its **Code** and the **Geographical Area** within which it operates.

An **Operator** may operate within a single **Geographical Area** RDD ref: 0221

An **Operator** may be responsible for the operation of one or more **Signal Configurations** RDD ref: 0222

An **Operator** must have been registered with the BR by a single **Administration** RDD ref: 0603

• **Code** RDD ref: 0219

The code used to identify an **Operator**. The **Code** is assigned to the **Operator** by the BR.

Format: 3 characters (in the numeric range 001 to 999).

• **Name** RDD ref: 0220

The name of the **Operator**, as submitted by the **Administration**

Format: Text.

3.5 **Terrestrial Service Notice** RDD ref: 0200

A request, by an **Administration** to the Radiocommunication Bureau (BR) to register the details of a number of existing or proposed **Signal Configurations** in the Master International Frequency Register (MIFR).

◇ A **Terrestrial Service Notice** is identified by its **Administration Notice Identification Code** and the **Administration** by which it has been submitted.

Note: In the case an **Administration Notice Identification Code** is not supplied, the BR will try to identify the notice using the set of other relevant data.

A **Terrestrial Service Notice** must be submitted according to the requirements of one or more **Provisions** RDD ref: 0610

A **Terrestrial Service Notice** must be submitted by a single **Administration** RDD ref: 0211

A **Terrestrial Service Notice** must inform the BR of the actual or potential use of one or more **Signal Configurations** RDD ref: 0208

Note: It is only possible to use a **Terrestrial Service Notice** to notify multiple **Signal Configurations** under certain conditions.

Condition 1: the **Signal Configuration's Operational Frequency** must be the same value as either the **Notified Assigned Frequency** or the **First Alternative Frequency** (if supplied) of the **Terrestrial Service Notice** that informs the BR of the actual or potential use of the **Signal Configuration(s)** but only in the case when the **Terrestrial Service Notice** is not covered by Conditions 2, 3 or 4.

Condition 2: the **Signal Configuration's Reference (Carrier) Frequency** must be the same value as either the **Notified Reference (Carrier) Frequency** or the **First Alternative Frequency** (if supplied) or the **Second Alternative Frequency** (if supplied) or the **Third Alternative Frequency** (if supplied) of the **Terrestrial Service Notice** that informs the BR of the actual or potential use of the **Signal Configuration(s)** but only in the case when the **Terrestrial Service Notice** concerns a submission under RR Article 12.

Condition 3: the **Signal Configuration's Operational Frequencies** must be within the range of frequencies specified by the **Notified Centre Frequency** and the **Notified Usable Frequency Range** of the **Terrestrial Service Notice** that informs the BR of the actual or potential use of the **Signal Configuration(s)** but only in the case when the **Terrestrial Service Notice** concerns a submission for frequency adaptive systems where the individual operating frequencies are not individually notified.

Condition 4: the **Signal Configuration's Channel Number** must be the same value as either the **Notified Channel Number** or the **Alternative Channel Number** (if supplied) of the **Terrestrial Service Notice** that informs the BR of the actual or potential use of the **Signal Configuration(s)**.

Condition 5: each of the **Signal Configurations**, which are the subject of the same **Terrestrial Service Notice**, must have the same value for the following corresponding data items unless all values for that data item are empty (no value). The data items are:

- » **Signal Configuration's Class Of Emission Code**;
- » **Signal Configuration's Two Dimensional Roaming Zone**;
- » **Signal Configuration's Three Dimensional Roaming Zone**;
- » The **Code** of the **Class Of Station** that classifies the operation of the **Signal Configuration**;
- » **Signal Configuration's Necessary Bandwidth Code** but only in the case when the **Terrestrial Service Notice** does not concern LF/MF Broadcasting under Rio 81 or GE75;
- » The **Geographical Coordinates** of the **Antenna** used to transmit the **Signal Configuration** but only in the case when the **Terrestrial Service Notice** does not concern an allotment under RR Appendix 25;
- » The **Code** of the **Maritime HF Allotment Area** encompassing the **Site** that is the location for the **Antenna** used to transmit the **Signal Configuration** but only in the case when the **Terrestrial Service Notice** concerns an allotment under RR Appendix 25.

• **Administration Notice Identification Code** **RDD ref: 0201**

A unique national identification code used by an **Administration** to individually identify any one of their **Terrestrial Service Notices** that have been submitted to the ITU.

An **Administration's Notice Identification Code** together with the **Administration's Code** enable the BR to uniquely identify any **Terrestrial Service Notice** under examination or in the MIFR. It is strongly recommended that this data is supplied with the **Terrestrial Service Notice**.

Format: Up to 20 characters.

• **Intended Action Code** **RDD ref: 0206**

The reason why the **Administration** sent the **Terrestrial Service Notice** to the BR. There are five valid intended actions.

Format: Up to 8 characters.

Code	Meaning
ADD	Add either a new notification or for RR Appendix 25 an additional allotment.
MODIFY	Modification of an existing entry in the MIFR.
SUPPRESS	Deletion of an existing entry in the MIFR.
WITHDRAW	Withdrawal of a notice still under treatment.
NOTE: the Intended Action Codes "SUPPRESS" and "WITHDRAW" are only used by Terrestrial Service Notice Forms T11, T12, T13, T14, T15, T16 and T17. For Terrestrial Service Notice Forms T01, T02, T03, T04 see § 2.05.	

• **Date** **RDD ref: 0212**

The date given by the Administration to the **Terrestrial Service Notice**.

Format: Date.

- **BR Date Received**

RDD ref: 0202

The date on which the *Terrestrial Service Notice* is received by the BR and as recorded by the BR. This date determines the seniority accorded to a specific *Terrestrial Service Notice* and is the date from which it must be taken into consideration, as a potential entry in the MIFR, by all subsequent *Terrestrial Service Notices*.

Format: Date.

- **Notification Category Code**

RDD ref: 0214

The code used in electronic notification to identify the corresponding paper form of the *Terrestrial Service Notice*.

Format: 3 characters.

Code	Meaning
T01	VHF Sound Broadcasting Station Region 1
T02	VHF/UHF Television Broadcasting Station
T03	LF/MF Sound Broadcasting Station Regions 1 and 3
T04	MF Sound Broadcasting Station Region 2
T11	Terrestrial Transmitting Station (Tx) In The Fixed Service
T12	Terrestrial Transmitting Station (Tx) (Except a station in the fixed, or LF/MF/VHF/UHF broadcasting services, or typical station)
T13	Terrestrial Receiving Land Station (Rx)
T14	Terrestrial Typical Transmitting Station (TP)
T15	Frequency Allotment In The Maritime Mobile Service (RR Appendix 25)
T16	Terrestrial Transmitting Station (Tx) (Plan update Regional Agreement, Geneva, 1985)
T17	Terrestrial Transmitting Station (Tx) Using Adaptive Systems
TB1	Notification of a modification to the Administration's unique identifier (applicable to notifications on Terrestrial Service Notice Forms T01, T02 only).
TB2	Notification under RR Article 11 of an assignment with all technical characteristics as in the Plan (applicable to notifications on Terrestrial Service Notice Forms T01, T02 only).
TB3	Requesting publication of a modification in Part B of the corresponding Special Section (applicable to notifications on Terrestrial Service Notice Forms T01, T02 only).
TB4	Updating of the coordination information of a notice under treatment (applicable to notifications on Terrestrial Service Notice Forms T01, T02 only).
TB5	Suppressing an assignment or Notification of withdrawing a notice under treatment (applicable to notifications on Terrestrial Service Notice Forms T01, T02 only).
TB6	Notification of a modification to the Administration unique identifier (applicable to notifications on Terrestrial Service Notice Forms T03, T04 only).
TB7	Notification under RR Article 11 of an assignment with all technical characteristics as in the Plan (applicable to notifications on Terrestrial Service Notice Forms T03, T04 only).
TB8	Requesting publication of a modification in Part B of the corresponding Special Section (applicable to notifications on Terrestrial Service Notice Forms T03, T04 only).
TB9	Suppressing an assignment or Notification of withdrawing a notice under treatment (applicable to notifications on Terrestrial Service Notice Forms T03, T04 only).

- **Plan Name**

RDD ref: 0215

The conventional coding used to identify the name of the frequency plan referenced by the *Terrestrial Service Notice*.

Format: 4 characters.

Code	Meaning
ST61	VHF/UHF Television Broadcasting, Stockholm, 1961
GE75	LF/MF Sound Broadcasting Regions 1 and 3, Geneva, 1975
RJ81	MF Sound Broadcasting Region 2, Rio de Janeiro, 1981
GE84	VHF Sound Broadcasting Region 1, Geneva, 1984
GE89	VHF Sound Broadcasting Region 1, Geneva, 1989

- **Resubmission Indicator**

RDD ref: 0216

An indicator used to identify if the *Terrestrial Service Notice* is being resubmitted, under RR Article 11, to the BR within six months of the date the *Terrestrial Service Notice* was previously returned to the notifying *Administration* by the BR.

Format: True or False.

- **Notified Assigned Frequency**

RDD ref: 0217

A frequency communicated to the BR by the notifying *Administration* as the actual, planned or preferred frequency for the operation of the *Signal Configuration(s)* that are the subject of the *Terrestrial Service Notice*.

If no alternative frequency is supplied then the **Notified Assigned Frequency** is the common operating frequency for the whole set of *Signal Configurations* that are the subject of the *Terrestrial Service Notice*. If the alternative frequency is supplied then the **Notified Assigned Frequency** should be considered as the preferred choice for the operation of the whole set of *Signal Configurations*.

This data item is not applicable to frequency adaptive systems.

Format: Frequency (convert to MHz for electronic notification).

- **Notified Reference (Carrier) Frequency**

RDD ref: 0611

A frequency communicated to the BR by the notifying *Administration* as the reference frequency for the operation of the *Signal Configuration(s)* that are the subject of the *Terrestrial Service Notice*.

Normally the **Notified Reference (Carrier) Frequency** and **Notified Assigned Frequency** are the same value, however if the modulation envelope is asymmetric then the **Notified Reference (Carrier) Frequency** and **Notified Assigned Frequency** values will be different.

Format: Frequency (except for RR Article 12 (HFBC), convert to MHz for electronic notification).

- **Notified Centre Frequency**

RDD ref: 0612

A frequency communicated to the BR by the notifying *Administration* as the actual or proposed centre frequency for the range of all possible operating frequencies of the *Signal Configuration(s)* that are the subject of the *Terrestrial Service Notice*.

Frequency adaptive systems only. In this case each operating frequency in the **Notified Usable Frequency Range** is not individually notified.

Format: Frequency (convert to MHz for electronic notification).

- **Notified Usable Frequency Range**

RDD ref: 0615

A range of frequencies communicated to the BR by the notifying *Administration* as the actual or proposed difference between the minimum and maximum operating frequencies of the *Signal Configuration(s)* that are the subject of the *Terrestrial Service Notice*.

Frequency adaptive systems only for the case where each operating frequency in the **Notified Usable Frequency Range** is not individually notified.

Format: Decimal (in the range 0.01 to 2.00) to two decimal places in MHz.

- **First Alternative Frequency**

RDD ref: 0616

A frequency suggested to the BR by the notifying *Administration* as the preferred alternative to the **Notified Assigned Frequency** (or in the case of RR Article 12, the **Notified Reference (Carrier) Frequency**) for the operation of the *Signal Configuration(s)* that are the subject of the *Terrestrial Service Notice*. The **First Alternative Frequency** can be used for the planning process if the **Notified Assigned Frequency** (or in the case of RR Article 12, the **Notified Reference (Carrier) Frequency**) is not acceptable to any affected *Administrations* or the BR.

Format: Integer (in the range 3 000 to 28 000) in kHz (except for RR Article 12 (HFBC), convert to MHz for electronic notification).

- **Second Alternative Frequency**

RDD ref: 0617

A frequency suggested to the BR by the notifying *Administration* as the second preferred alternative to the **Notified Reference (Carrier) Frequency** for the operation of the *Signal Configuration* that is the subject of the *Terrestrial Service Notice*. The **Second Alternative Frequency** can be used for the planning process if the **Notified Reference (Carrier) Frequency** and the **First Alternative Frequency** are not acceptable to any affected *Administrations* or the BR.

HFBC (RR Article 12) only.

Format: Integer (in the range 5 950 to 26 100) in kHz.

- **Third Alternative Frequency**

RDD ref: 0618

A frequency suggested to the BR by the notifying *Administration* as the third preferred alternative to the **Notified Reference (Carrier) Frequency** for the operation of the *Signal Configuration* that is the subject of the *Terrestrial Service Notice*. The **Third Alternative Frequency** can be used for the planning process if the **Notified Reference (Carrier) Frequency**, the **First Alternative Frequency** and the **Second Alternative Frequency** are not acceptable to any affected *Administrations* or the BR.

HFBC (RR Article 12) only.

Format: Integer (in the range 5 950 to 26 100) in kHz.

- **Notified Channel Number**

RDD ref: 0619

The number of the channel within the HF Coast Stations Plan (RR Appendix 25) submitted to the BR by the notifying *Administration* as the actual channel or the preferred channel for the operation of the *Signal Configuration(s)* that are the subject of the *Terrestrial Service Notice*.

If no **Alternative Channel Number** is supplied then the **Notified Channel Number** is the common operating channel for the whole set of *Signal Configurations* that are the subject of the *Terrestrial Service Notice*. If the **Alternative Channel Number** is supplied then the **Notified Channel Number** should be considered as the preferred choice for the operation of the whole set of *Signal Configurations*.

Format: Integer (in the range 401 to 2 509) in kHz.

- **Alternative Channel Number**

RDD ref: 0620

A channel number suggested to the BR by the notifying *Administration* as the preferred alternative to the **Notified Channel Number** for the operation of the *Signal Configuration(s)* that are the subject of the

Terrestrial Service Notice. The **Alternative Channel Number** can be used for the planning process if the **Notified Channel Number** is not acceptable to any affected *Administrations* or the BR.

RR Appendix 25 only.

Format: Integer (in the range 401 to 2 509) in kHz.

- **Channel Number To Be Replaced**

RDD ref: 0621

The number of a channel that has been allotted to the notifying *Administration* in the HF Coast Stations Plan and which they wish to replace with a new **Notified Channel Number** so that they may improve or extend their service.

RR Appendix 25 only.

Format: Integer (in the range 401 to 2 509) in kHz.

- **Preferred Frequency Band**

RDD ref: 0622

The frequency band, within which the *Administration* would prefer to operate the station when no **Notified Assigned Frequency** has been identified for the operation of the *Signal Configuration(s)* that are the subject of the *Terrestrial Service Notice*. The **Preferred Frequency Band** is used when the BR is requested to help select a frequency that can be used for the *Signal Configuration*.

RR Appendix 25 and HFBC (RR Article 12) only.

Format: Integer (in the range 4 to 26) in MHz.

- **First Alternative Frequency Band**

RDD ref: 0623

A frequency band suggested to the BR by the notifying *Administration* as the primary alternative to the **Preferred Frequency Band** for the operation of the *Signal Configuration* that is the subject of the *Terrestrial Service Notice*. The **First Alternative Frequency Band** can be used for the planning process if the **Preferred Frequency Band** is not acceptable to any affected *Administrations* or the BR.

HFBC (RR Article 12) only.

Format: Integer (in the range 6 to 26) in MHz.

- **Second Alternative Frequency Band**

RDD ref: 0624

A frequency band suggested to the BR by the notifying *Administration* as the secondary alternative to the **Preferred Frequency Band** for the operation of the *Signal Configuration* that is the subject of the *Terrestrial Service Notice*. The **Second Alternative Frequency Band** can be used for the planning process if the **Preferred Frequency Band** and the **First alternative Frequency Band** are not acceptable to any affected *Administrations* or the BR.

HFBC (RR Article 12) only.

Format: Integer (in the range 6 to 26) in MHz.

- **Third Alternative Frequency Band**

RDD ref: 0625

A frequency band suggested to the BR by the notifying *Administration* as the third alternative to the **Preferred Frequency Band** for the operation of the *Signal Configuration* that is the subject of the *Terrestrial Service Notice*. The **Third Alternative Frequency Band** can be used for the planning process if the **Preferred Frequency Band**, the **First Alternative Frequency Band** and the **Second Alternative Frequency Band** are not acceptable to any affected *Administration* or the BR.

HFBC (RR Article 12) only.

Format: Integer (in the range 6 to 26) in MHz.

- **Remarks**

RDD ref: 0626

A set of voluntary comments by the notifying *Administration* on some aspect of the submission of the *Terrestrial Service Notice* or the operation of the *Signal Configuration(s)* that are the subject of the

Terrestrial Service Notice. This area of the *Terrestrial Service Notice* can also be used to provide information for which no provision has been made in the electronic file or the paper form (e.g., **RR Conformity Indicator**) or, to increase the flexibility of the paper notice, which has fewer options than the electronic version, by providing a space to notify other required data items e.g., the *Signal Configuration's Sound Carrier Frequency Offset*, or more than two *Signal Configuration Nature of Service Codes*.

Format: Text.

3.6 *Provision*

RDD ref: 0605

The regulatory provisions under which notification or coordination has been requested or successfully completed, or agreement sought or reached (see Appendix 10 to the RDD).

◇ A *Provision* may be identified by its **Code**.

A *Provision* may determine the requirements for one or more
Coordination Agreements

RDD ref: 0606

A *Provision* may determine the regulatory requirements for one or
more *Terrestrial Service Notices*

RDD ref: 0607

• **Code**

RDD ref: 0608

The means of identifying the regulatory *Provision* under which the *Terrestrial Service Notice* or *Coordination Agreement* is required.

Format: Up to 12 characters.

ANTENNA DATA

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3.7 *Site*

RDD ref: 0265

A name used for the purpose of conveying the general position of *Antennas* without having to refer to the *Antenna's Geographical Coordinates*.

◇ A *Site* is identified by its **Name** and the *Administration* by which it is submitted.

A *Site* must be submitted by a single *Administration*

RDD ref: 0567

A *Site* may be the location for one or more *Antennas*

RDD ref: 0268

One and only one of the following two relationships must apply:

A *Site* must be located within a single *Geographical Area*

RDD ref: 0040

A *Site* must be located within a single *Maritime HF Allotment Area*

RDD ref: 0627

- **Name**

RDD ref: 0267

The name by which the *Site* is known, e.g., the locality in which the *Site* is situated, as provided by the notifying *Administration*. Appendix 7 to the RDD contains the list of standard abbreviations used to compress the *Site* names to 30 characters when the complete names are longer.

The name may consist of one or more words and may be structured similar to an address, with a number of "locations" each becoming more generic than its predecessor

Format: Up to 30 characters.

- **Code**

RDD ref: 0628

A unique code used within the RR Article 12 planning procedure for HFBC in the planned bands to identify a particular *Site* within a *Geographical Area*. The **Code** also identifies a set of geographical coordinates for the *Site*. The geographical coordinates should be different for each *Antenna* located at the *Site* but, due to the long wavelength, the planning procedure has assumed that one set applies to every HFBC *Antenna* on the *Site*.

HFBC (RR Article 12) only.

Format: 3 Characters.

3.8 *Antenna*

RDD ref: 0035

A device used for radiating, or receiving, electromagnetic waves. An *Antenna* may consist of a single element, or an array of radiating elements that are linked physically, or electronically, to form a single gain pattern. An *Antenna* includes both omnidirectional and directional *Antenna*.

An *Antenna* may be one of the following types: a *Transmitting Antenna* or a *Receiving Antenna* or in some radio systems, both a *Transmitting Antenna* and a *Receiving Antenna*.

Detailed information on *Antennas* (specifically for the HF, VHF and UHF frequency bands) can be found in Recommendations ITU-R BS.80, ITU-R BS.705 and ITU-R BS.1195. Formulae for Radio Relay Systems *Antenna* patterns in the range 1-40 GHz can be found in Recommendation ITU-R F.699.

The information presented in the following sections on *Antennas* is structured almost exclusively to the requirements of notification, where the location (i.e., the *Antenna's Geographical Coordinates*) and its effective performance are needed but not its precise identification. For coordination purposes those data items that describe the performance of a transmitting *Antenna* may theoretically be applied to a receiving *Antenna*, due to the principle of reciprocity. However, in practice, due to size and cost limitations many receiving *Antennas* may be less sophisticated than the transmitting *Antenna*. For example, at frequencies below 2 GHz - two common types of receiving antennas are a telescopic, short monopole or a whip antenna.

- ◇ An *Antenna* is for the purposes of notification and coordination, identified by its **Geographical Coordinates** and additionally for: a *Receiving Antenna* by its **Receiving System Noise Temperature**; a *Transmitting Antenna* by its **Height Above Ground Level**; a *Type A Transmitting Antenna* either by its **Physical Height** or its **Electrical Height**; a *Directional Transmitting Antenna* by its **Azimuth Of Maximum Gain**.

An *Antenna* must be located at a single *Site*

RDD ref: 0039

- **Geographical Coordinates**

RDD ref: 0037

The geographical position of the physical centre of the *Antenna*.

Format: Long/Lat in degrees, minutes and seconds.

- **Mast Identification**

RDD ref: 0038

A code used for the identification of the mast on which the *Antenna* is mounted. It is used by the *Administration* for the identification of the *Antenna's* location within a *Site* and it may also be used for more precise identification of the *Antenna* location in the coordination process.

Format: Up to 20 characters.

- **Operator's Identification Code**

RDD ref: 0130

A code notified by the *Administration* as the code used by the *Operator* for the identification of the *Antenna* and also optionally within the coordination process for the identification of the *Antenna's* characteristics.

Format: Up to 20 characters.

3.9 *Receiving Antenna*

RDD ref: 0114

A *Receiving Antenna* is a type of *Antenna* used for receiving electromagnetic waves at a fixed location.

- ◇ A *Receiving Antenna* is identified in the same way as its generic type (*Antenna*), i.e., *Antenna's* **Geographical Coordinates** and additionally for a *Receiving Antenna* by its **Receiving System Noise Temperature**.

A *Receiving Antenna* may receive a signal from one or more *Transmitting Antennas*

RDD ref: 0117

A *Receiving Antenna* may be the intended point of reception for one or more *Signal Configurations*

RDD ref: 0118

- **Receiving System Noise Temperature**

RDD ref: 0160

The temperature above absolute zero which is equivalent to the noise associated with the receiving system. The noise is generated from the *Antenna's* environment, the *Receiving Antenna* and from within the receiving system.

Format: Integer (in the range 20 to 6 000) in K.

3.10 *Transmitting Antenna*

RDD ref: 0119

A *Transmitting Antenna* is a type of *Antenna* (which may be omnidirectional) used for radiating electromagnetic waves from a fixed location.

A *Transmitting Antenna* may be one of the following types: a *Directional Transmitting Antenna*, a *Type A Transmitting Antenna*, or a *Type B Transmitting Antenna*.

- ◇ A **Transmitting Antenna** is identified in the same way as its generic type (**Antenna**) i.e., **Antenna's Geographical Coordinates** and additionally for a **Transmitting Antenna** by its **Height Above Ground Level**.

A **Transmitting Antenna** may transmit a signal to one or more
Receiving Antennas

RDD ref: 0137

A **Transmitting Antenna** must emit signals described by one or more
Signal Configurations

RDD ref: 0136

- **Directivity Indicator**

RDD ref: 0122

An indicator used to identify if the **Transmitting Antenna** is directional.

Format: True or False.

- **Maximum Gain**

RDD ref: 0129

*Note: The **Maximum Gain** is currently determined at the **Signal Configuration's Operational Frequency**, however it is proposed that in future it should be determined at the mid-band point for the range of frequencies for which the **Antenna** is designed.*

The ratio of the power required at the input of a loss-free reference antenna (gain reference antenna) to the power supplied to the input of the **Transmitting Antenna** to produce, in the direction of maximum radiation, the same field strength, or the same power flux-density at the same distance. The gain may be considered for a specified polarization. Whether the **Maximum Gain** is relative to a dipole, an isotrope or a short vertical **Antenna** is determined by the type of reference **Antenna** (e.g., dipole) used to determine the relative value of **Antenna** gain. This is described by the gain reference antenna code. The gain reference antenna code applies to **Transmitting Antenna** gain and **Signal Configuration** radiated power. The same gain reference antenna must apply to both.

Format: A complex format comprised of

a) Decimal (in the range –5.0 to 60.0) to 1 decimal place in dB

and

b) Gain Reference Antenna Code.

- **Vertical Beamwidth**

RDD ref: 0168

The angular width of the main lobe of radiation, measured in the vertical plane containing the direction of the **Maximum Gain**, within which the off-axis gain in any direction does not fall more than 3 dB below the value of the **Maximum Gain**.

Format: Decimal (in the range 0.1 to 180.0) to 1 decimal place in degrees.

- **Polarization Code**

RDD ref: 0131

The code for representing the angular relationship between the plane of the electric field vector and the vertical or horizontal plane. The angular relationship is observed in any fixed plane normal to the direction of propagation and whilst looking in the direction of propagation.

Format: Up to 2 characters.

Code	Meaning
CL	Left hand circular or indirect: the electric field vector rotates anti-clockwise.
CR	Right hand circular or direct: the electric field vector rotates clockwise.
D	Dual: when substantially equal-amplitude vertically and horizontally polarized components are radiated without particular control of the phase relation between them. Typically, the vertically and horizontally polarized sources may be displaced one from the other so that the resultant polarization varies between circular and slant, according to azimuth angle.
H	Horizontal linear: the electric field vector is in the horizontal plane.

M	Mixed: the collective term applied when both vertical and horizontal components are radiated, embracing slant, circular and dual polarization.
SL	Left hand slant: the electric field vector is in the plane rotated 45° anti-clockwise from the vertical plane.
SR	Right hand slant: the electric field vector is in the plane rotated 45° clockwise from the vertical plane.
V	Vertical linear: the electric field vector is in the vertical plane.

- **Height Above Ground Level**

RDD ref: 0125

The height of the centre of the *Transmitting Antenna* above the level of the ground. The **Height Above Ground Level** applies to *Antennas* operating in a fixed location and for all terrestrial radiocommunication systems with this type operation, except High Altitude Platforms (HAPs), the maximum **Height Above Ground Level** is 1 000 m.

Format: Integer (in the range 0 to 30 000) in metres.

- **Ground Altitude Above Mean Sea Level**

RDD ref: 0121

The altitude of the ground above mean sea level where the *Transmitting Antenna* is located. The altitude is measured at the *Antenna's Geographical Coordinates* and may be positive or negative (i.e., it may be below sea level).

Format: Integer (in the range –1 000 to 8 848) in metres.

- **Effective Height Pattern**

RDD ref: 0123

The pattern of the *Transmitting Antenna's* effective height for equally spaced angles of azimuth around the *Antenna's Geographical Coordinates*. The effective height of the *Transmitting Antenna* is defined as its height over the average level of the ground between distances of 3 and 15 km from the *Transmitting Antenna* in the direction of the receiver. Detailed information on effective height and the “VHF and UHF Propagation Curves For The Frequency Range 30-1 000 MHz” can be found in Recommendation ITU-R P.370.

Format: 36 vectors defined by:

Effective Antenna Height Value (RDD ref: 0123a): the effective height value at the specified **Azimuth**; integer (in the range –400 to 5 000) in metres; and,

Azimuth (RDD ref: 0123b): the angle of the direction of the **Effective Antenna Height Value**, measured in the horizontal plane from True North in a clockwise direction; integer (in the range 0 to 350 in multiples of 10) in degrees.

- **Maximum Effective Height**

RDD ref: 0128

The maximum value of the *Transmitting Antenna's Effective Antenna Height*.

VHF/UHF Broadcasting only.

Format: Integer (in the range –400 to 5 000) in metres.

- **Azimuth Of Maximum Effective Height**

RDD ref: 0550

Note: *The Maximum Effective Height is of limited use without the azimuth at which the Maximum Effective Height occurs. It is therefore proposed that the Azimuth Of Maximum Effective Height is recorded.*

The angle of the direction of the **Maximum Effective Height**, measured in the horizontal plane from True North in a clockwise direction.

VHF/UHF Broadcasting only.

Format: Integer (in the range 0 to 359) in degrees.

- **Ground Conductivity**

RDD ref: 0124

The value of ground conductivity in the service area that determines which set of ground wave propagation curves contained in Section 2 of Annex 2 to the LF/MF Broadcasting Agreement, Geneva, 1975 are applicable.

Used for LF/MF Broadcasting.

Format: Decimal (in the range 0.01 to 4 000.00) to 2 decimal places in milli-siemens/m.

The only permitted values are:

	4 000 milli-siemens/m
	30 milli-siemens/m
	10 milli-siemens/m
	3 milli-siemens/m
	1 milli-siemens/m
	0.3 milli-siemens/m
	0.1 milli-siemens/m
	0.03 milli-siemens/m
	0.01 milli-siemens/m.

- **Type Code**

RDD ref: 0133

The code used to identify whether the *Transmitting Antenna* is a simple vertical antenna (e.g., a whip), or of a more complex construction (e.g., a *Top-Loaded Tower*) and perhaps consisting of multiple *Towers*.

LF/MF Broadcasting

Format: 1 character.

Code	Meaning
A	Simple vertical antenna.
B	Complex antenna construction: LF/MF Regions 1 and 3 – a directional <i>Antenna</i> ; MF Region 2 – directional or omnidirectional <i>Antenna</i> (including a <i>Top-Loaded Tower</i> or <i>Sectionalized Tower</i>).

- **Design Frequency**

RDD ref: 0478

The frequency at which the antenna construction is designed to be used. The **Design Frequency** is not necessarily the operating frequency.

HFBC only.

Format: Integer (in the range 2 000 to 30 000) in kHz.

3.11 *Directional Transmitting Antenna*

RDD ref: 0107

A *Directional Transmitting Antenna* is a type of *Transmitting Antenna* with a non-uniform gain in the horizontal plane.

- ◇ A *Directional Transmitting Antenna* is identified in the same way as its generic types (*Antenna* and *Transmitting Antenna*), i.e., *Antenna's Geographical Coordinates*, a *Transmitting Antenna's Height Above Ground Level* and additionally for a *Directional Transmitting Antenna* by its *Azimuth of Maximum Gain*.

A *Directional Transmitting Antenna* may sweep across one or more *Operational Sectors*

RDD ref: 0629

A *Directional Transmitting Antenna* may have its off-axis radiation characteristics described by a single *Antenna Reference Pattern*

RDD ref: 0640

- **Horizontal Beamwidth** **RDD ref: 0147**

The angular width of the main lobe of radiation, measured in the horizontal plane containing the direction of the *Transmitting Antenna's Maximum Gain*, within which the off-axis gain in any direction does not fall more than 3 dB below the value of the *Transmitting Antenna's Maximum Gain*.

Format: Decimal (in the range 0.1 to 359.9) to 1 decimal place in degrees.

- **Elevation Angle Of Maximum Gain** **RDD ref: 0109**

The angle measured in the vertical plane between the direction of the *Transmitting Antenna Maximum Gain* and the horizontal plane. The angle may be negative, i.e., some *Directional Transmitting Antennas* may be pointing towards the ground.

Format: Decimal (in the range –90.0 to 90.0) to 1 decimal place in degrees.

- **Azimuth Of Maximum Gain** **RDD ref: 0108**

The angle of the direction of the *Transmitting Antenna's Maximum Gain*, measured in the horizontal plane from True North in a clockwise direction.

Format: Decimal (in the range 0.0 to 359.9) to 1 decimal place in degrees.

- **Azimuth To The Normal Of The Plane Of The Radiating Elements** **RDD ref: 0479**

The angle of the direction of maximum radiation for an unslewed beam, measured from True North in a clockwise direction in the horizontal plane. For an unslewed beam the normal of the plane of the radiating elements is the direction in which the *Directional Transmitting Antenna* is pointing.

Used in HF bands.

Format: Integer (in the range 0 and 359) in degrees.

- **Slew Angle** **RDD ref: 0480**

The angular difference between the **Azimuth Of The Normal To The Plane Of The Radiating Elements** (i.e., the direction of the maximum radiation of the unslewed beam), and the azimuth of the slewed beam. A positive slew angle is measured clockwise with respect to the **Azimuth Of The Normal To The Plane Of The Radiating Elements** and a negative slew angle is measured counter clockwise. The actual angle of slew may vary with operating frequency.

When an antenna beam is slewed horizontally, the horizontal radiation pattern is not symmetrical with respect to the azimuth of maximum radiation. The degree of the asymmetry increases as the magnitude of the slew angle increases. In addition as the slew angle increases, side-lobe gain also increases and the gain of the main lobe decreases.

The slew angle does not always precisely define the centre of the horizontal radiation pattern (see Recommendations ITU-R BS.80 and ITU-R BS.705). Slewing is usually effected by phase-shifting the feeds of horizontally displaced radiating elements and a consequence of this process is that the rearward directed side-lobes are rotated in the opposite direction to the main lobe.

Used in HF bands.

Format: Integer (in the range –30 to 30) in degrees.

- **Radiator Type** **RDD ref: 0476**

An agreed set of characters used to identify the feeding arrangement for a horizontal dipole array. The dipole array may be centre-fed or end-fed.

In centre-fed arrays, each dipole element has its own feeding point. *Directional Transmitting Antennas* with two or more half-wavelength dipoles in a row of dipoles can be slewed. Centre-fed feeds are more complex but allow a greater slewing angle than an end-fed array for the same type of *Directional Transmitting Antenna*.

In the end-fed array, two adjacent dipoles offer a common feeding point connected to a single transmission line. Slewing capability is provided when the number of the pairs of half-wavelength dipoles in a row is even.

Used in HF bands.

Format: 1 character.

Code	Meaning
C	Centre-fed antenna array.
E	End-fed antenna array.

- Reflector Type**

RDD ref: 0477

An agreed set of characters used to identify the type of reflector used in a horizontal dipole array. The reflector may be either a tuned reflector or an untuned reflector (aperiodic reflector).

Tuned reflectors have, in practice, a maximum operating frequency range which covers two adjacent broadcasting bands, giving a frequency range from the lowest to the highest frequency of approximately 1.25:1.

This type of reflector is generally tuned to provide the optimum front-to-back electric field ratio for a single frequency within the required frequency band and the front-to-back ratio can be expected to decrease if the **Directional Transmitting Antenna** is operated at any other frequency. This type of reflector is known as either a “tuned dipole” or a “parasitic reflector”.

Untuned reflectors can be operated over a maximum of five consecutive broadcasting bands, giving an operating frequency range of up to 2:1. The range is limited by the performance of the radiating elements. This type of reflector is known as an “aperiodic reflector” or “screen reflector”.

Used in HF bands.

Format: 1 character.

Code	Meaning
T	Tuned reflector: an identical array of dipoles tuned to provide an optimum front-to-back ratio over a limited range of operating frequencies.
A	Aperiodic reflector: a screen consisting of horizontal wires which act as an untuned reflector.

- Horizontally Polarized Component Horizontal Attenuation Pattern**

RDD ref: 0273

The pattern of the attenuation values for a horizontally polarized **Antenna** measured with respect to 0 dB in the horizontal plane at equally spaced azimuths around the **Antenna's Geographical Coordinates**. The point of 0 dB is taken in the direction of the **Transmitting Antenna's Maximum Gain**.

Format: 36 vectors defined by:

Attenuation Value (RDD ref: 0273a): the attenuation at the specified **Azimuth**; Decimal (in the range 0.0 to 40.0) to 1 decimal place in dB; and,

Azimuth (RDD ref: 0273b): the angle of the direction of the **Attenuation Value**, measured in the horizontal plane from True North in a clockwise direction; Integer (in the range 0 to 350 in multiples of 10) in degrees.

- Vertically Polarized Component Horizontal Attenuation Pattern**

RDD ref: 0060

The pattern of the attenuation values for a vertically polarized **Antenna** measured with respect to 0 dB in the horizontal plane at equally spaced azimuths around the **Antenna's Geographical Coordinates**. The point of 0 dB is taken in the direction of the **Transmitting Antenna's Maximum Gain**.

Format: 36 vectors defined by:

Attenuation Value (RDD ref: 0060a): the attenuation at the specified **Azimuth**; Decimal (in the range 0.0 to 40.0) to 1 decimal place in dB; and,

Azimuth (RDD ref: 0060b): the angle of the direction of the **Attenuation Value**, measured in the horizontal plane from True North in a clockwise direction; Integer (in the range 0 to 350 in multiples of 10) in degrees.

3.12 *Type A Transmitting Antenna*

RDD ref: 0380

A *Type A Transmitting Antenna* is a type of *Transmitting Antenna* of simple construction (e.g., a vertical monopole) with a uniform gain in the horizontal plane.

For very tall *Type A Transmitting Antennas* the propagation velocity within the *Antenna* may be lower than that of free space thus reducing the wavelength within the *Antenna*. This difference in propagation velocity occurs due to the *Antenna* having a finite thickness and may result in a difference between the physical height and the **Electrical Height**, however for the *Type A Transmitting Antenna* no distinction is made for the impact of this effect.

To obtain efficient radiation from the *Type A Transmitting Antenna*, an Earth system (e.g., a number of radial wires) may be used on poorly conducting ground. The vertical radiation pattern is significantly affected by the ground constants (e.g., *Transmitting Antenna's Ground Conductivity*) as well as other physical parameters (e.g., **Electrical Height**).

Used for MF Broadcasting.

- ◇ A *Type A Transmitting Antenna* is identified in the same way as its generic type (*Antenna*) i.e., *Antenna's Geographical Coordinates* and additionally for a *Type A Transmitting Antenna* either by its **Physical Height** or its **Electrical Height**.

- **Physical Height**

RDD ref: 0536

The distance from the base to the top of the *Type A Transmitting Antenna*.

LF/MF Broadcasting Regions 1 and 3 only.

Format: Integer (in the range 10 to 300) in metres.

- **Electrical Height**

RDD ref: 0382

The physical height of the *Type A Transmitting Antenna* above the level of the ground, measured as a portion of a wavelength and expressed in degrees. The height of the *Type A Transmitting Antenna* is determined at the *Signal Configuration's Operational Frequency*. The **Electrical Height** for a *Type A Transmitting Antenna* is "G" in the diagram of a simple *Tower* (see Fig. 1).

MF Broadcasting Region 2 only.

Format: Decimal (in the range 50.0 to 250.0) to 1 decimal place in degrees.

3.13 *Type B Transmitting Antenna*

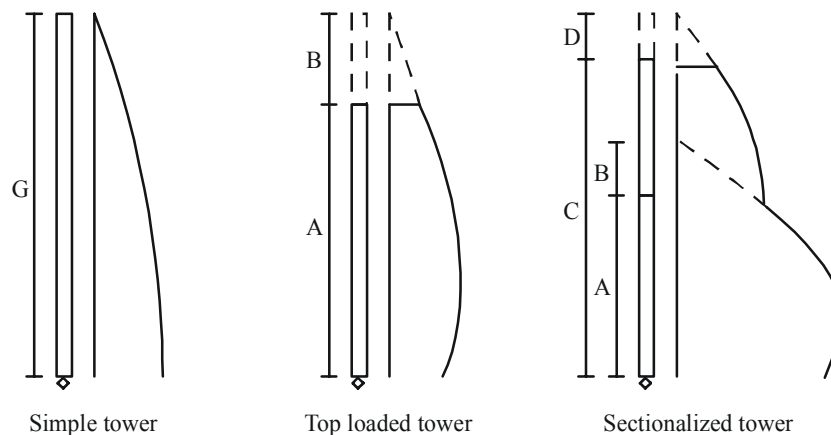
RDD ref: 0381

A *Type B Transmitting Antenna* is a type of *Transmitting Antenna* that is of complex construction (e.g., multiple *Towers*) which may, or may not, have a uniform gain in the horizontal plane.

A *Type B Transmitting Antenna* may consist of one or more *Towers*. The construction of the individual *Towers* may comprise a simple vertical *Tower*, a *Top Loaded Tower* or a *Sectionalized Tower* which may also have top loading. A single *Top Loaded Tower* or a *Sectionalized Tower* may be used to provide an omnidirectional pattern, either because of space limitations or to improve the radiation characteristics from those of a simple vertical *Antenna*.

Used for MF Broadcasting.

FIGURE 1
Current distribution in the tower



1413-01

In Fig. 1 to the right of each **Tower** is a diagram showing the current distribution in the **Tower**; it is assumed to be sinusoidal. To the left of each **Tower** is the labelling for the various dimensions. The letters correspond to the values used in the formulas in Appendices 3 and 4 to Annex 2 of the Final Acts of the Regional Administrative MF Broadcasting Conference (Region 2), Rio de Janeiro, 1981. The solid lines show the actual construction, while the dotted lines show apparent values, based on the assumed sinusoidal current distribution.

The value shown as **G** is the **Electrical Height** of a simple vertical **Tower** (e.g., **Type A Transmitting Antenna**). For this type of **Tower**, the physical height and the apparent electrical height (based on the assumed sinusoidal current distribution) are equal. Generally, there is no need to distinguish between them; in fact, use of the term “apparent” leads to confusion because it implies a difference between them.

For the **Top-Loaded Tower**: **A** is the physical height of the **Tower**; **B** is the difference between the apparent electrical height (based on the assumed sinusoidal current distribution) and the actual (physical) height of the **Tower**, **A**. In other words, the apparent electrical height of the **Tower** is **A + B**.

For the **Sectionalized Tower**: **A** is the physical height of the lower section of the **Tower**; **B** is the difference between the apparent height of the lower section of the **Tower** and the actual height of the lower section of the **Tower**; **C** is the physical height of the entire **Tower** (both lower and upper sections); **D** is the difference between the apparent height of the entire **Tower** and the actual height of the entire **Tower**. In other words, the apparent electrical height of the lower section of the **Tower** is **A + B**, and the apparent electrical height of the entire **Tower** is **C + D**. Note that this is the general case where the **Sectionalized Tower** is itself top-loaded. If the **Sectionalized Tower** is not top loaded, then **D** is zero.

◇ A **Type B Transmitting Antenna** is identified in the same way as its generic type (**Antenna**), i.e., **Antenna's Geographical Coordinates**.

A **Type B Transmitting Antenna** must have its radiation pattern modified by the use of one or more **Antenna Radiation Pattern Augmentations**
(This relationship only applies when the **Pattern Type** is M)

RDD ref: 0384

A **Type B Transmitting Antenna** may consist of one or more **Towers**

RDD ref: 0385

- **Pattern Type**

RDD ref: 0383

An agreed set of characters used to identify the type of **Type B Transmitting Antenna** gain pattern.

Format: 1 character.

Code	Meaning
T	Theoretical pattern: calculated using the information on the <i>Tower</i> location, the phase of the electric field and the field strength radiated by each <i>Tower</i> . A theoretical pattern may be omnidirectional or directional.
E	Expanded pattern: produced by the quadrature addition of the theoretical pattern field strength in a specific direction and the field strength required to allow for inaccuracies in <i>Antenna</i> feeding and terrain conditions. The resulting combined field strength is known as the expanded quadrature factor or the normal quadrature factor and is one of the methods used to map the theoretical radiation pattern to the actual radiation pattern produced by the <i>Antenna</i> .
M	Augmented (a modified expanded) pattern: an expanded pattern that has been modified by one or more <i>Antenna Radiation Pattern Augmentations</i> . Augmentation may also be used to map the theoretical radiation pattern to the actual radiation pattern produced by the <i>Antenna</i> .

- Special Quadrature Factor**

RDD ref: 0359

The value of field strength produced by the quadrature addition of the theoretical pattern field strength in the specified direction and a compensating field strength required to allow for inaccuracies in ***Antenna*** feeding and terrain conditions. The **Special Quadrature Factor** is used to replace the field strength known as the expanded pattern quadrature factor for both expanded radiation patterns and augmented radiation patterns, when the expanded pattern quadrature factor cannot compensate for inaccuracies in ***Antenna*** feeding and terrain conditions and which may result in instability in the radiated pattern. The **Special Quadrature Factor** is measured at 1 km from the ***Antenna's Geographical Coordinates***.

The expanded pattern quadrature factor is calculated from the standardized quadrature factor in the horizontal plane (see RJ81 Annex 2, Appendix 3 § 2.7) for the antenna pattern. The modification of an expanded antenna pattern (i.e., augmentation) does not automatically require a change in the value of the expanded pattern quadrature factor for the resulting augmented pattern.

Format: Decimal (in the range 0.01 to 10.00) to 2 decimal places in mV/m.

- Horizontal Gain Pattern**

RDD ref: 0507

The pattern of the ***Type B Transmitting Antenna*** gain measured in the horizontal plane for equally spaced azimuths around the ***Antenna's Geographical Coordinates***. The gain reference antenna code applies to the ***Transmitting Antenna*** gain and the ***Signal Configuration*** radiated power. The same gain reference antenna must apply to both.

Format: A complex format comprised of:

- a) 36 vectors defined by:

Gain Value (RDD ref: 0507a): the value of gain at the specified ***Azimuth***; Decimal (in the range –5.0 to 50.0) to 1 decimal place in dB and

Azimuth (RDD ref: 0507b): the angle of the direction of the **Gain Value**, measured in the horizontal plane, from True North in a clockwise direction; Integer (in the range 0 to 350 in multiples of 10) in degrees.

and

- b) Gain reference antenna code.

- Vertical Gain Pattern**

RDD ref: 0502

The pattern of the ***Type B Transmitting Antenna*** gain values measured in the vertical plane containing the direction of the ***Transmitting Antennas Maximum Gain***. The gain values are measured for equally spaced elevation angles with the ***Transmitting Antenna's*** direction of **Maximum Gain** equal to zero degrees elevation angle. Depending on the operational circumstances the elevation angle may include negative angles. The gain may be considered for a specified polarization. The gain reference antenna code applies to

the *Transmitting Antenna* gain and the *Signal Configuration* radiated power. The same gain reference antenna must apply to both.

Format: A complex format comprised of:

- a) up to 19 vectors defined by:

Gain Value (RDD ref: 0502a): the value of gain at the specified **Elevation Angle**; Decimal (in the range –5.0 to 60.0) to 1 decimal place in dB and

Elevation Angle (RDD ref: 0502b): the angle of the direction of the **Gain Value**, measured in the vertical plane between the direction of the **Gain Value** and the horizontal plane; Integer (in the range –90 to 90 in multiples of 10) in degrees.

and

- b) Gain Reference Antenna Code.

• **Hemispherical Gain Pattern**

RDD ref: 0508

The pattern of the *Type B Transmitting Antenna* gain values measured in the vertical plane at equally spaced azimuths, for each of nine elevation angles, around the *Antenna's Geographical Coordinates*. The gain may be considered for a specified polarization. The **Horizontal Gain Pattern** provides the gain values at zero degrees elevation angle. The gain reference antenna code applies to the *Transmitting Antenna* gain and the *Signal Configuration* radiated power. The same gain reference antenna must apply to both.

Format: A complex format comprised of:

- a) up to 36 vectors repeated for each one of 9 Elevation Angles.

Elevation Angle (RDD ref: 0508c): the angle measured in the vertical plane between the direction of the **Gain Value** and the horizontal plane; Integer (in the range 10 to 90 in multiples of 10) in degrees; and,

Gain Value (RDD ref: 0508a): the value of gain at the specified **Azimuth** and **Elevation Angle**; Decimal (in the range –5.0 to 60.0) to 1 decimal place in dB and

Azimuth (RDD ref: 0508b): the angle of the direction of the **Gain Value**, measured in the horizontal plane from True North in a clockwise direction; Integer (in the range 0 to 350 in multiples of 10) in degrees

and

- b) Gain reference antenna code.

3.14 *Tower*

RDD ref: 0389

A physical support for the radiating elements which form part of a *Type B Transmitting Antenna*. A *Tower* may be of standard construction and known simply as a *Tower* or it may also be one of the following types: a *Sectionalized Tower*, or a *Top Loaded Tower*.

For frequencies below HF a number of *Towers*, perhaps supporting several radiating elements, are often used to form a single *Antenna*. The *Tower* may simply be a support for the radiating elements, or it may form part, if not all of, the radiating element itself.

For MF assignments in Region 2; *Tower* 1 as identified by the **Tower Identification Number** is considered to be the reference point for other notified parameters i.e., the **Electrical Spacing**, the **Angular Orientation**, the **Field Phase Difference** and the **Field Strength Ratio**.

Used for MF Broadcasting.

- ◇ A *Tower* is identified by its **Identification Number** and the *Type B Transmitting Antenna* of which it forms part.

A *Tower* must form a part of a single *Type B Transmitting Antenna*

RDD ref: 0398

- **Identification Number**

RDD ref: 0396

The number identifying the *Tower* under consideration.

Format: Integer (in the range 1 to 12).

- **Structure Code**

RDD ref: 0397

The code used to identify the electrical characteristics of the *Tower* structure.

Format: 1 character (in the numeric range 0 to 2).

Code	Meaning
0	a Tower (simple vertical)
1	a Top Loaded Tower
2	a Sectionalized Tower

- **Angular Orientation**

RDD ref: 0390

The angle measured at the point of location of the reference *Tower* (*Tower* 1 as identified by the **Identification Number**) in a clockwise direction in the horizontal plane from True North to the direction of the *Tower* under consideration.

Format: Decimal (in the range 0.00 to 359.99) to 2 decimal places in degrees.

- **Electrical Spacing**

RDD ref: 0392

The distance between to the *Tower* under consideration and the reference *Tower* (*Tower* 1 as identified by the **Identification Number**) measured in wavelengths at the *Signal Configuration's Operational Frequency*.

Format: Decimal (in the range 40.00 to 1 200.00) to 2 decimal places in degrees.

- **Electrical Height**

RDD ref: 0394

The physical height of the *Tower* (see Fig. 1) above the level of the ground as a portion of a wavelength and expressed in degrees. The height of the *Tower* is determined at the *Signal Configuration's Operational Frequency*.

Format: Decimal (in the range 50.0 to 250.0) to 1 decimal place in degrees.

- **Field Phase Difference**

RDD ref: 0393

The phase angle, measured at the respective *Towers*, between the field radiated from the *Tower* under consideration and the field radiated from the reference *Tower* (*Tower* 1 as identified by the **Identification Number**). A positive phase difference means the field leads the reference *Tower* field and a negative phase angle means that it lags the reference *Tower* field.

Format: Decimal (in the range –359.99 to 359.99) to 2 decimal places in degrees.

- **Field Strength Ratio**

RDD ref: 0395

The ratio measured at the respective *Towers* of the field strength from the *Tower* under consideration and the field strength from the reference *Tower* (*Tower* 1 as identified by the **Identification Number**).

Format: Decimal (in the range 0.0000 to 10.0000) to 4 decimal places.

3.15 *Sectionalized Tower*

RDD ref: 0375

A *Sectionalized Tower* is a type of *Tower* that is constructed with electrically isolated sections each of which is fed independently.

Constructing the *Tower* in electrically isolated sections increases the radiation resistance of the *Sectionalized Tower's* lower section, reducing the propagation velocity within the *Antenna* to less than the value of free space and shortening the wavelength within the lower section of the *Sectionalized Tower* by an equivalent

amount. Hence the lower section of the *Sectionalized Tower* appears to the transmitter to be longer than its actual physical height. The upper section of a *Sectionalized Tower* may itself be top loaded. For a *Sectionalized Tower* that is not top loaded the **Height Difference** is zero.

Used for MF Broadcasting.

- ◇ A *Sectionalized Tower* is identified in the same way as its generic type (*Tower*) i.e. *Tower Identification Number* and the *Type B Transmitting Antenna* of which it forms part and additionally by its **Lower Section Height Difference**, its **Lower Section Electrical Height** and its **Height Difference**.

- **Lower Section Height Difference**

RDD ref: 0376

The difference between the apparent electrical height (based on current distribution) of the lower section and the **Lower Section Electrical Height** (i.e., the physical height of the lower section). The **Lower Section Height Difference** is measured as a portion of wavelength at the *Signal Configuration's Operational Frequency* and expressed in degrees. The **Lower Section Height Difference** for a *Type B Transmitting Antenna* is "B" in the diagram of a *Sectionalized Tower* (see Fig. 1).

Format: Decimal (in the range 0.0 to 180.0) to 1 decimal place in degrees.

- **Lower Section Electrical Height**

RDD ref: 0377

The physical height in wavelength of the lower section of the *Sectionalized Tower*, above the level of the ground. The **Lower Section Electrical Height** is measured as a portion of wavelength at the *Signal Configuration's Operational Frequency* and expressed in degrees. The **Lower Section Electrical Height** for a *Type B Transmitting Antenna* is "A" in the diagram of a *Sectionalized Tower* (see Fig. 1).

Format: Decimal (in the range 50.0 to 250.0) to 1 decimal place in degrees.

- **Height Difference**

RDD ref: 0379

The difference between the apparent electrical height, based on current distribution, of the total *Sectionalized Tower* and the **Tower Electrical Height** (i.e., the physical height of the complete *Sectionalized Tower*). The **Height Difference** is measured as a portion of wavelength at the *Signal Configuration's Operational Frequency* and expressed in degrees (see Fig. 1). The **Height Difference** for a *Type B Transmitting Antenna* is "D" in the diagram of a *Sectionalized Tower*. For a *Sectionalized Tower* that is itself not top loaded this value is zero.

Format: Decimal (in the range 0.0 to 30.0) to 1 decimal place in degrees.

3.16 *Top Loaded Tower*

RDD ref: 0386

A *Top Loaded Tower* is a type of *Tower* with a physical height of less than a half wavelength which has had its radiation resistance increased by the use of top-loading (e.g., a horizontal section at the top of the antenna). One of the effects of top-loading is to reduce the propagation velocity within the *Antenna* to less than the value of free space and this shortens the wavelength within the *Antenna* by an equivalent amount. Hence the *Antenna* appears to the transmitter to be longer than its actual physical height.

Used for MF Broadcasting.

- ◇ A *Top Loaded Tower* is identified in the same way as its generic type (*Tower*) i.e. *Tower Identification Number* and the *Type B Transmitting Antenna* of which it forms part and additionally by its **Height Difference**.

- **Height Difference**

RDD ref: 0388

The difference between the apparent electrical height based on current distribution of the total top loaded tower and the **Tower Electrical Height** (i.e., the physical height of the complete *Top Loaded Tower*). The **Height Difference** is measured as a portion of wavelength at the *Signal Configuration's Operational Frequency* and expressed in degrees. The **Height Difference** for a *Type B Fixed Transmitting Antenna* is "B" in the diagram of *Top Loaded Tower* (see Fig. 1). If this value is zero then the *Tower* is not *Top Loaded*.

Format: Decimal (in the range 10.0 to 180.0) to 1 decimal place in degrees.

3.17 Antenna Radiation Pattern Augmentation**RDD ref: 0354**

An *Antenna Radiation Pattern Augmentation* forms part of a *Type B Transmitting Antenna* radiation pattern where the pattern has been augmented (modification of an expanded pattern). A single *Type B Transmitting Antenna* pattern can have one or more than one augmentation or “patch”.

The purpose of augmentation is to modify an expanded pattern between two azimuth angles. Augmentation may be positive (resulting in a higher level of radiation than an expanded pattern) or negative (resulting in a lower level of radiation than an expanded pattern). However, in no case shall the augmentation be so negative that the field strength represented by the augmented radiation pattern is less than the field strength produced by the theoretical radiation pattern. Augmentation may be used for the intended modification of the existing radiation pattern to increase the coverage area or to decrease interference into neighbouring radio systems. It may also be used to more accurately define the existing radiation pattern when inaccuracies in *Antenna* feeding and terrain conditions have caused the field strength in a particular area to deviate from the previously predicted pattern.

Spans of individual augmentations may overlap. That is an augmentation may itself be modified by a subsequent augmentation. To ensure that the calculations are consistently made, the augmentations are calculated in increasing order of central azimuth of augmentation starting at True North. If several augmentations have the same **Central Azimuth**, then the largest **Total Span** is handled first. If more than one augmentation has the same **Central Azimuth** and the same **Total Span**, then they are considered in ascending order of their effect on the radiation pattern.

Used only where *Type B Transmitting Antenna's Pattern Type* = “M”.

Used for MF Broadcasting.

- ◇ An *Antenna Radiation Pattern Augmentation* is identified by its **Serial Number** and the *Type B Transmitting Antenna* whose pattern it has modified.

An *Antenna Radiation Pattern Augmentation* must modify the radiation pattern for a single *Type B Transmitting Antenna*

RDD ref: 0054

- **Serial Number**

RDD ref: 0357

The number identifying the *Antenna Radiation Pattern Augmentation*.

Format: Integer (in the range 1 to 99).

- **Central Azimuth**

RDD ref: 0356

The angle of the centre of the augmentation (i.e., the centre of the **Total Span**) measured, from True North in a clockwise direction in the horizontal plane.

Format: Decimal (in the range 0.00 to 359.99) to 2 decimal places in degrees.

- **Total Span**

RDD ref: 0358

The angular range of the augmentation pattern.

Format: Decimal (in the range 0.0 to 359.9) to 1 decimal place in degrees.

- **Central Azimuth Field Strength**

RDD ref: 0355

The value of wanted field strength at the **Central Azimuth** of augmentation measured at 1 km from the *Antenna Geographical Coordinates*. This value should always be equal to, or greater than, the value from the theoretical pattern.

Format: Decimal (in the range 0.0 to 9 999.9) to 1 decimal place in mV/m.

3.18 Antenna Reference Pattern**RDD ref: 0638**

A description of an *Antenna's* horizontal and vertical gain patterns recorded with the BR as a reference for reuse on many notifications.

- ◇ An *Antenna Reference Pattern* is identified by its **Code**.

An **Antenna Reference Pattern** may describe the off-axis radiation characteristics of one or more **Directional Transmitting Antennas**

RDD ref: 0639

- **Code**

RDD ref: 0641

The code identifying a standard description of **Antenna** off-axis radiation characteristics.

Format: Up to 10 characters.

- **Description**

RDD ref: 0642

The description of an **Antenna's** off-axis radiation characteristics.

Format: a full horizontal gain pattern and, if appropriate, vertical gain pattern expressed as:

Antenna Gain Equation (RDD ref: 0642a): one or more mathematical expression(s) that define the gain characteristics of the antenna e.g., Radio Relay systems 1-40 GHz in Recommendation ITU-R F.699-2; Equation;

or

Antenna Gain Polar Diagram (RDD ref: 0642b): the graphical representation in polar form of an **Antenna's** gain against off-axis angle; Diagram;

or

ITU-R Antenna Characteristic Code (RDD ref: 0642c): a code identifying a standard description of antenna characteristics, e.g., in Recommendations ITU-R BS.705-1 and ITU-R BS.1195; Up to 10 characters;

or

a set of 36 vectors consisting of:

Gain Value (RDD ref: 0642d): the value of gain at the specified **Off-axis Angle**; Decimal (in the range -5.0 to 50.0) to 1 decimal place in dB; and

Off-axis Angle (RDD ref: 0642e): the angle of the direction of the **Gain Value**, measured in the specified plane, from the direction of maximum gain in a clockwise direction; Integer (in the range 0 to 350 in multiples of 10) in degrees.

3.19 **Operational Sector**

RDD ref: 0630

An **Operational Sector** is the area of the Earth's surface swept by a **Directional Transmitting Antenna's Azimuth Of Maximum Gain** either through the antenna being physically rotated or by the electrical sweeping of its array of radiating elements.

◇ An **Operational Sector** is identified by its **Start Azimuth**, its **Stop Azimuth** and additionally by the **Directional Transmitting Antenna** whose direction of maximum gain that sweeps across it.

An **Operational Sector** must identify an area of the Earth's surface swept by a single **Directional Transmitting Antenna**.

RDD ref: 0631

- **Start Azimuth**

RDD ref: 0509

The angle of the direction of the **Transmitting Antenna's Maximum Gain** at the left hand edge of the **Operational Sector** swept by the rotational antenna beam, measured in the horizontal plane from True North in a clockwise direction.

Format: Decimal (in the range 0.0 to 359.9) to 1 decimal place in degrees.

- **Finish Azimuth**

RDD ref: 0510

The angle of the direction of the **Transmitting Antenna's Maximum Gain** at the right hand edge of the **Operational Sector** swept by the rotational antenna beam, measured in the horizontal plane from True North in a clockwise direction.

Format: Decimal (in the range 0.1 to 360.0) to 1 decimal place in degrees.

TIMING DATA

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	Name	RDD ref: 0531
	Code	RDD ref: 0632
3.21	<i>Season Of Operation</i>	RDD ref: 0246
	Code	RDD ref: 0247
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3.22	<i>Regular Operation Period</i>	RDD ref: 0306
	Start Time	RDD ref: 0307
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	Daily Volume	RDD ref: 0467
3.23	<i>Traffic Characteristic</i>	RDD ref: 0464
	Start Peak Hours	RDD ref: 0465
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3.20 Day Of Operation**RDD ref: 0498**

A 24-hour period from midnight to midnight when the **Signal Configuration** is emitted. The **Day Of Operation** is required when the **Signal Configuration** is not broadcast on each day of the week.

Used in HF broadcasting bands only.

◇ A **Day Of Operation** is identified by its **Name**.

A **Day Of Operation** may be the transmission period for one or more **Signal Configurations**.

RDD ref: 0499

- **Name**

RDD ref: 0531

The name of the **Day Of Operation**.

Format: Up to 9 Characters (i.e.: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday or Sunday).

- **Code**

RDD ref: 0632

The code representing the **Day Of Operation**.

Format: 1 character.

Code	Meaning
1	Sunday
2	Monday
3	Tuesday
4	Wednesday
5	Thursday
6	Friday
7	Saturday

3.21 Season Of Operation**RDD ref: 0246**

Note: The **Season Of Operation** was deleted at WRC-97 however it is still required for HFBC and it is therefore proposed that these data items should be included in the notification requirements in RR Appendix 4.

A period of time during a year in which a HF Broadcasting station is expected to transmit the notified **Signal Configuration** to its identified service zone.

Administrations shall normally submit their projected broadcasting schedules in the relevant frequency bands to the BR twice a year. If an **Administration** considers it necessary to take account of propagation changes during the schedule period, it is recommended, for reasons of spectrum efficiency, that such requirements should be implemented in May and September.

A **Start Date** and **Stop Date** within a schedule period may be used to cater for requirements that have different dates to the **Season Of Operation** for example: special events, clock changes on different dates not coincident with the **Season Of Operation** schedule period.

Administrations may include in their schedules for assignments up to one year in advance of their use.

◇ A **Season Of Operation** is identified by its **Code**.

A **Season Of Operation** may be the emission period for one or more **Signal Configurations** **RDD ref: 0248**

- **Code**

RDD ref: 0247

The code used to identify the **Season Of Operation** and the year of planned operation. A new **Season Of Operation** shall start at 0100 UTC.

The two main *Seasons Of Operation* are from March to October (*Season Of Operation A*) and from October to March (*Season Of Operation B*).

Format: Up to 3 characters.

Code	Meaning
AYY	Last Sunday of March to last Sunday of October and the last two digits of the year
BYY	Last Sunday of October to last Sunday of March and the last two digits of the year

• **Start Date** RDD ref: 0538

The date within the *Season Of Operation* on which the *Signal Configuration* commences operation.

Format: Date.

• **Stop Date** RDD ref: 0539

The date within the *Season Of Operation* on which the *Signal Configuration* ends operation.

Format: Date.

3.22 Regular Operation Period RDD ref: 0306

A time period during a continuous 24 hour period (up to and including 24 hours per 24 hour period), when a specific *Signal Configuration* is usually emitted. The time period is measured using Coordinated Universal Time (UTC).

If the *Signal Configuration* has more than one *Regular Operation Period* in any 24 hour period, then each *Regular Operation Period* must not overlap.

◇ A *Regular Operation Period* is identified by its **Start Time** and the *Signal Configuration* for which it defines the operating time.

A *Regular Operation Period* must be the operating time for a single *Signal Configuration* (*Regular Operation Periods* paired with the same *Signal Configuration* may not overlap) RDD ref: 0309

A *Regular Operation Period* may be further defined by one or more *Traffic Characteristics* RDD ref: 0469

• **Start Time** RDD ref: 0307

The time of day measured in UTC at which the transmission of the *Signal Configuration* usually commences.

Where a **Start Time** is the same time (or later time of day) as the **Stop Time**, then the **Stop Time** is considered to be on the next calendar day, immediately following the **Start Time**.

Format: Time.

• **Stop Time** RDD ref: 0308

The time of day measured in UTC at which the transmission of the *Signal Configuration* usually ends.

Where a **Stop Time** is the same time (or earlier time of day) as the **Start Time**, then the **Stop Time** is considered to be on the next calendar day, immediately following the **Start Time**.

• **Daily Volume** RDD ref: 0467

The estimated daily volume of traffic during the *Regular Operation Period*. The **Daily Volume** and the *Traffic Characteristics* are used as part of the examination process to determine if a new allotment can be agreed.

RR Appendix 25 only.

Format: Integer (in the range 0 to 999) in minutes.

3.23 Traffic Characteristic**RDD ref: 0464**

The peak traffic loading in the channel (as identified by the *Signal Configuration Channel Number*) for the proposed allotment in RR Appendix 25 Plan during the *Regular Operation Period*.

- ◇ A *Traffic Characteristic* is identified by its **Start Peak Hours** and the *Regular Operation Period* for which it defines the peak hours of traffic loading.

HF Coast Stations - RR Appendix 25 only.

A *Traffic Characteristic* must further define a single *Regular Operation Period*

RDD ref: 0468

- **Start Peak Hours**

RDD ref: 0465

The time of day measured in UTC at which the peak hours of operation of the *Signal Configuration* usually commences.

Format: Time.

- **Stop Peak Hours**

RDD ref: 0466

The time of day measured in UTC at which the peak hours of operation of the *Signal Configuration* usually ends.

Format: Time.

EMISSION DATA

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3.24 Colour System**RDD ref: 0077**

A method for encoding the colour information of a visual image into an electromagnetic waveform for television broadcast. The **Colour System** is associated with the **Television System**.

◇ A **Colour System** is identified by its **Code**.

Broadcasting - Television only.

A **Colour System** may be used by one or more **Signal Configurations**

RDD ref: 0081

A **Colour System** may be available to one or more **Television Systems**

RDD ref: 0080

- Code**

RDD ref: 0078

The code used to identify a **Colour System**.

Format: Up to 5 characters.

Code	Meaning
NTSC	Abbreviation for National Television Standards Committee standard. The North American standard (525-line interlaced raster-scanned video) for the generation, transmission, and reception of television signals. The picture information is transmitted in vestigial-sideband AM and sound information is transmitted in FM. In addition to North America, the NTSC standard is used in Central America, a number of South American countries, and some Asian countries, including Japan.
PAL	Acronym for Phase Alternation by Line. A television signal standard (625 lines, 50 Hz, 220 V primary power) used in the United Kingdom, much of the rest of western Europe, several South American countries, some Middle East and Asian countries, several African countries, Australia, New Zealand, and other Pacific island countries.
SECAM	Acronym for Système Électronique Couleur Avec Mémoire. A television signal standard (625 lines, 50 Hz, 220 V primary power) used in France, eastern European countries, the former USSR, and some African countries.

3.25 Class Of Station**RDD ref: 0276**

A classification of a station by the **Radiocommunication Service** in which it operates and its mode of operation, content of signal or other characteristic considered significant to the notification and or coordination process. Sometimes the classification only gives the generic **Radiocommunication Service**.

◇ **Class Of Station** is identified by its **Code**.

A **Class Of Station** may classify the operation of one or more **Signal Configurations**

RDD ref: 0279

A **Class Of Station** must identify one or more **Radiocommunication Services**

RDD ref: 0280

- Code**

RDD ref: 0277

The code used to identify a **Class Of Station**.

A list of **Classes of Station** is contained in Appendix 5 to the RDD.

Format: 2 characters.

- Name**

RDD ref: 0278

The name of the **Class Of Station**.

Format: Text.

3.26 Protection Mask**RDD ref: 0226**

An agreed set of limits that define the protection that can be afforded to *Signal Configurations* operating within a *Radiocommunication Service*.

◇ A *Protection Mask* is identified by its **Description**.

A *Protection Mask* may provide protection limits for one or more *Signal Configurations*

RDD ref: 0463

A *Protection Mask* must be defined for a single *Radiocommunication Service*

RDD ref: 0580

- **Description**

RDD ref: 0228

Text describing the *Protection Mask*.

Format: Text.

- **Shape**

RDD ref: 0231

The outline of the *Protection Mask*. The *Protection Mask's Shape* may be two or three dimensional.

Format: Diagram.

- **Minimum Protected Field Strength**

RDD ref: 0229

The minimum value of field strength at the boundary of the **Protection Mask** that can be protected and still permit the desired reception quality, under specified receiving conditions, in the presence of natural and man made noise and interference, either in an existing situation or as determined by agreements or frequency plans.

Format: Decimal (in the range 10.0 to 30.0) to 1 decimal place in dBμV/m.

- **Protection Margin**

RDD ref: 0230

The difference between the **Signal To Interference Ratio** and the **Protection Ratio** at the boundary of the *Protection Mask*.

Format: Decimal (in the range 5.0 to 25.0) to 1 decimal place in dB.

- **Signal To Interference Ratio**

RDD ref: 0227

The ratio of the wanted-to-unwanted signal power at the boundary of the *Protection Mask*.

Format: Decimal (in the range 10.0 to 25.0) to 1 decimal place in dB.

- **Protection Ratio**

RDD ref: 0232

The minimum value of the wanted-to-unwanted signal ratio required at the input of a receiver, located at the boundary of the *Protection Mask* and determined under specified conditions, that is necessary so that a specified reception quality of the wanted signal is achieved at the receiver output.

Format: Decimal (in the range 5.0 to 30.0) to 1 decimal place in dB.

3.27 Radiocommunication Service**RDD ref: 0241**

A service involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes. *Radiocommunication Services* are a categorization of the different types of use as defined in the Radio Regulations. The purpose of the categorization of *Radiocommunication Services* is to enable effective management of the radio spectrum.

Examples: Fixed Service, Mobile Service, Standard Frequency and Time Signal Service, Safety Service.

A full list of *Radiocommunication Services* can be found in Appendix 4 to the RDD.

◇ A **Radiocommunication Service** is identified by its **Name**.

A **Radiocommunication Service** must be qualified by one or more **Classes Of Station**

RDD ref: 0245

A **Radiocommunication Service** may include one or more other **Radiocommunication Services**

RDD ref: 0581

A **Radiocommunication Service** may be protected by one or more **Protection Masks**

RDD ref: 0582

- **Name**

RDD ref: 0243

The name of the **Radiocommunication Service** and assigned by the ITU through the RR.

Radiodetermination is defined in the RR, but not used directly in RR Article 5 (Table of Frequency Allocations). Instead, Radiolocation and Radionavigation are used, as subsets of Radiodetermination.

Format: Text.

- **Code**

RDD ref: 0604

It is proposed that a code is developed.

Note: Various contributions for a coding of the **Radiocommunication Services** have been submitted to Radiocommunication Study Group 1 by administrations. Appendix 4 to the RDD, in addition to the full list of **Radiocommunication Services** contains a similar proposal for coding.

3.28 **Signal Configuration**

RDD ref: 0140

The characteristics that describe the modulation, and operation of a radio wave, that is carrying intelligible information to provide a **Radiocommunication Service** and emitted or intended to be received by a specific **Antenna**.

◇ A **Signal Configuration** is identified by its **Operational Frequency**, its **Class Of Emission Code** and its **Necessary Bandwidth** and additionally for: fixed stations - the **Transmitting Antenna** it is emitted by; or mobile stations - the **Receiving Antenna** at which it is intended to be received ; or mobile stations - the **Signal Configuration's Three Dimensional Roaming Zone** (or **Two Dimensional Roaming Zone**) in which it is transmitted.

A **Signal Configuration** must be notified by a single **Administration**

RDD ref: 0261

A **Signal Configuration** may use a single **Colour System**

RDD ref: 0067

A **Signal Configuration** may require one or more **Coordination Agreements**

RDD ref: 0255

A **Signal Configuration** may have correspondence relating to interference matters addressed to a single **Correspondence Address**

RDD ref: 0260

A **Signal Configuration** may have correspondence relating to planning the HFBC Tentative Schedule addressed to a single **Correspondence Address**

RDD ref: 0633

A **Signal Configuration** may be transmitted to one or more **Receiving Antennas** (A **Signal Configuration** emitted from mobile stations are assumed at any instant in time to be received at a single **Receiving Antenna**.)

RDD ref: 0195

A **Signal Configuration** may be emitted by a single **Transmitting Antenna**

RDD ref: 0139

A **Signal Configuration** must be the subject of one or more **Terrestrial Service Notices**

RDD ref: 0257

A **Signal Configuration** may be the responsibility of a single **Operator**

RDD ref: 0259

A **Signal Configuration** may have its protection limits defined by one or more **Protection Masks**

RDD ref: 0462

A **Signal Configuration** may be emitted in one or more **Season Of Operation** RDD ref: 0252

A **Signal Configuration** must belong to a single **Class Of Station** RDD ref: 0263

A **Signal Configuration** may use a single **Television System** RDD ref: 0068

A **Signal Configuration** may be operating during one or more **Regular Operation Periods** RDD ref: 0254

A **Signal Configuration** may be emitted on one or more **Days Of Operation** RDD ref: 0541

• **Operational Frequency** RDD ref: 0345

The centre frequency of the band occupied by the **Signal Configuration**.

Format: Frequency.

• **Frequency Offset** RDD ref: 0652

The displacement of the **Operational Frequency** from its stated value for a digital broadcasting signal.

Format: Decimal (in the range –166.000 to 166.000) to 3 decimal place in kHz.

• **Reference (Carrier) Frequency** RDD ref: 0348

A frequency having a fixed and specified position with respect to the **Operational frequency**, required for unambiguous description of the frequency band occupied by the emission, especially in the case of asymmetric modulation envelope. For the purpose of notification, and where the emission contains a carrier, the reference frequency coincides with the carrier frequency, i.e., the radio frequency on which the information is modulated. Normally the **Reference (Carrier) Frequency** and **Operational Frequency** are the same value however, if the modulation envelope is asymmetric then the **Reference (Carrier) Frequency** and **Operational Frequency** values will be different.

Format: Frequency.

• **Frequency Category Code** RDD ref: 0145

The code representing a classification of the frequency status between neighbouring countries who have predefined agreement for the sharing of frequencies in their border areas.

Vienna Agreement Countries only.

Format: 1 character (in the numeric range 1 to 5).

Code	Meaning
1	Preferential frequency.
2	Frequencies requiring coordination.
3	Frequency belonging to a geographical network.
4	Frequencies intended for a planned radiocommunication network.
5	Shared frequencies.

• **Pre-emphasis P-P Frequency Deviation** RDD ref: 0485

For a FM television signal the peak to peak frequency deviation produced by a 1 V peak to peak video signal at 0 dB relative deviation (the cross over frequency) in the pre-emphasis characteristic. Pre-emphasis is applied to television signals to reduce the high level low frequency components present in an FM television signal and which inhibit interchangeability with the modulators and demodulators used for FDM telephony. (See Recommendations ITU-R F.276-2 and ITU-R F.405-1).

Format: Decimal (in the range 0.0 to 15.0) to 1 decimal place in MHz.

- **Pre-emphasis RMS Frequency Deviation**

RDD ref: 0572

For a FDM telephony channel the rms deviation in frequency per channel produced by a 800 Hz test tone of 1 mW power at the 0 dB relative deviation (the cross over frequency) in the pre-emphasis characteristic. The rms frequency deviation is determined for a specific number of multiplexed channels.

In FDM telephony signals the noise level in the top channels is higher than in the bottom channels. Pre-emphasis allows a more even distribution of the signal to noise ratio across the FDM baseband. (See Recommendations ITU-R F.275-3, ITU-R F.404-2 and ITU-R S.464-2).

Format: Decimal (in the range 20.0 to 300.0) to 1 decimal place in kHz.

- **Sound Carrier Nominal Frequency**

RDD ref: 0481

The centre frequency of the band occupied by the sound carrier prior to a frequency offset being applied to the sound carrier.

Format: Decimal (in the range 40.0 to 999.9) to 1 decimal place in MHz.

- **Sound Carrier Frequency Offset Code**

RDD ref: 0482

The code indicating the displacement of the **Sound Carrier Nominal Frequency** in a television broadcast signal and expressed as multiples of 1/12 of the line frequency. A frequency offset is applied to the sound carrier to reduce the interference from the sound signal onto the vision signal. (For a list of the codes refer to the table under **Vision Carrier Frequency Offset Code**). If the **Frequency Offset Stability Indicator** is “Normal” or “Precision”, the value of the **Sound Carrier Frequency Offset Code** is equal to the value of the **Vision Carrier Frequency Offset Code**.

Format: Up to 4 characters.

- **Sound Carrier Frequency Offset**

RDD ref: 0551

The frequency displacement of the **Sound Carrier Nominal Frequency** in a broadcasting signal. In the case of television a frequency offset is applied to the sound carrier to reduce the interference from the sound signal onto the vision signal. If the **Frequency Offset Stability Indicator** is “Normal” or “Precision”, the value of the **Sound Carrier Frequency Offset** is equal to the value of the **Vision Carrier Frequency Offset**.

Format: Decimal (in the range –500.000 to 500.000) to 3 decimal places in kHz.

- **Vision Carrier Nominal Frequency**

RDD ref: 0064

The centre frequency of the band occupied by the vision carrier prior to a frequency offset being applied to the vision carrier.

Format: Decimal (in the range 40.0 to 999.9) to 1 decimal place in MHz.

- **Vision Carrier Frequency Offset Code**

RDD ref: 0065

The code indicating the displacement of the **Vision Carrier Nominal Frequency** in a television broadcast signal and expressed as multiples of 1/12 of the line frequency. A frequency offset is applied to reduce interference between co-channel signals.

Format: Up to 4 characters.

Code	Meaning	Code	Meaning
0	0		
+1	+1/12	−1	−1/12
+2	+2/12	−2	−2/12
+3	+3/12	−3	−3/12
+4	+4/12	−4	−4/12
+5	+5/12	−5	−5/12
+6	+6/12	−6	−6/12
+7	+7/12	−7	−7/12
+8	+8/12	−8	−8/12
+9	+9/12	−9	−9/12
+10	+10/12	−10	−10/12
+11	+11/12	−11	−11/12
+12	+12/12	−12	−12/12
+13	+13/12	−13	−13/12
+14	+14/12	−14	−14/12
+15	+15/12	−15	−15/12
+16	+16/12	−16	−16/12
+17	+17/12	−17	−17/12
+18	+18/12	−18	−18/12
+19	+19/12	−19	−19/12
+20	+20/12	−20	−20/12
~	~	~	~
+100	+100/12	−100	−100/12
+101	+101/12	−101	−101/12
~	~	~	~
+399	+399/12	−399	−399/12

- **Vision Carrier Frequency Offset**

RDD ref: 0552

The displacement of the **Vision Carrier Nominal Frequency** in a television broadcast signal. For analogue television a frequency offset is applied to reduce interference between co-channel signals.

Format: Decimal (in the range −500.000 to 500.000) to 3 decimal place in kHz.

- **Frequency Offset Stability Indicator**

RDD ref: 0553

An indicator used to identify the stability of the frequency offset.

Format: Up to 9 Characters.

Code	Meaning
Relaxed	Relaxed frequency stability.
Normal	Normal frequency stability.
Precision	Precision frequency stability.

- **FM Transmission System Code**

RDD ref: 0165

The code identifying the type of the FM radio transmission and the maximum frequency deviation used.

FM broadcasting only.

Format: 1 character (in the numeric range 1 to 5).

Code	Meaning
1	Monophonic (maximum frequency deviation ± 75 kHz).
2	Monophonic (maximum frequency deviation ± 50 kHz).
3	Stereophonic, polar modulation system (maximum frequency deviation ± 50 kHz).
4	Stereophonic, pilot-tone system (maximum frequency deviation ± 75 kHz).
5	Stereophonic, pilot-tone system (maximum frequency deviation ± 50 kHz).

• **HF Transmission System Code**

RDD ref: 0512

The code identifying the type of modulation used and the value of attenuation in the peak carrier power.

HFBC (RR Article 12) only.

Format: 1 character.

Code	Meaning
D	Double sideband: No reduction in carrier power
T	Single sideband with the carrier power reduced by 6 dB
S	Single sideband with the carrier power reduced by 12 dB
N	Digital

• **Channel Number**

RDD ref: 0495

The number of the channel is to be used for the operation of the *Signal Configuration*.

In RR Appendix 25, the **Channel Number** defines the **Operational Frequency** and the **Reference (Carrier) Frequency** through the technical provisions of the Plan. The **Channel Number** may optionally be provided for Plans other than RR Appendix 25, in addition to the required basic characteristics.

Format: Integer (in the range 401 to 2 509).

• **Channel Occupation Indicator**

RDD ref: 0350

An indicator used to identify if the emission described by the *Signal Configuration* is continuous.

Vienna Agreement Countries only.

Format: True or False.

• **Adjacent Channel Protection Ratio**

RDD ref: 0120

The difference between the wanted *Signal Configuration* power and the power from an interfering *Signal Configuration* in the adjacent channel. These figures are only valid when the same level of compression is applied to the wanted and unwanted *Signal Configurations*. When two *Signal Configurations* operating in adjacent channels use different bandwidths, or different degrees of compression, the higher of the two corresponding protection ratios shall be used, unless the two *Administrations* concerned agree to use the ratio corresponding to the interfering signal.

LF/MF Broadcasting only.

Format: 1 character.

Code	Meaning
A	9 dB when a limited degree of modulation compression is applied at the transmitter input and when the bandwidth of the audio-frequency signal is of the order of 10 kHz.
B	7 dB when a high degree of modulation compression (at least 10 dB greater than for Code A) is applied by means of an automatic device and when the bandwidth of the audio-frequency signal is of the order of 10 kHz.
C	5 dB when a limited degree of modulation compression is applied at the transmitter input and when the bandwidth of the audio-frequency signal is of the order of 4.5 kHz.
D	0 dB when a high degree of modulation compression is applied by means of an automatic device and when the bandwidth of the audio-frequency signal is of the order of 10 kHz.

• **Necessary Bandwidth**

RDD ref: 0157

For a given **Class Of Emission Code**, the width of the frequency band which is just sufficient to ensure the transmission of the information at the rate and with the quality required under specified conditions.

Format:

a) Integer (in the range 001 to 999) in kHz.

or

b) 4 Character Code.

The necessary bandwidth, is expressed by three digits and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth. The first character shall be neither zero nor K, M or G.

between 0.001 and 999 Hz the units shall be expressed in Hz (letter H);

between 1.00 and 999 kHz the units shall be expressed in kHz (letter K);

between 1.00 and 999 MHz the units shall be expressed in MHz (letter M);

between 1.00 and 999 GHz the units shall be expressed in GHz (letter G).

Examples:

400 Hz = 400H

2.4 kHz = 2K40

12.5 kHz = 12K5

180.4 kHz = 180K

180.7 kHz = 181K

1.25 MHz = 1M25

2 MHz = 2M00

10 MHz = 10M0

202 MHz = 202M

• **Class Of Emission Code**

RDD ref: 0351

The set of five codes used to describe the type of modulation and information format of the **Signal Configuration**. The first three codes are mandatory. The **Class Of Emission Codes** are contained in RR Appendix 1.

Format: Up to 5 characters.

• **Nature Of Service Code**

RDD ref: 0156

The code indicating the purpose for performing the **Radiocommunication Service** identified in **Class Of Station** as defined in the Radio Regulations. For some **Classes of Station** and frequency bands the **Nature Of Service Code** sets limitations on specific characteristics of the emission (e.g., **Signal Configuration's Transmitter Output Power**). It may also be limited to a specific "purpose". See Section 2 for information on detailed conditions.

Format: 2 characters.

A list of **Nature of Service Codes** is contained In Appendix 13 to the RDD.

- **Synchronized Network Identification Code**

RDD ref: 0535

A group of characters which uniquely identify that the transmitter belongs to a specific synchronized network.

Used by the Broadcasting Services.

Format: Up to 20 characters.

- **Call Sign**

RDD ref: 0347

A group of characters which uniquely identify a particular radio station. RR Article 19 outlines the procedure to be followed in the assignment of **Call Signs**.

Format: Up to 10 characters.

- **Station Identification**

RDD ref: 0150

Information transmitted by the radio station to aid identification of the source of its emission. All transmissions shall be capable of being identified either by identification signals or by other means (RR No. 19.1).

The **Signal Configuration** is identified by a Maritime Mobile Service identity or by other recognized means of identification which may be one or more of the following: name of station, location of station, operating agency, official registration mark, flight identification number, selective call number or signal, selective call identification number or signal, characteristic signal, characteristic of the **Signal Configuration** or other clearly distinguishing features readily recognized internationally (RR No. 19.16).

Format: Up to 20 characters.

- **RR Conformity Indicator**

RDD ref: 0161

An indicator if the notification is being submitted in compliance with RR No. 4.4. i.e., “Administrations of the Member States shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations in this Chapter or the other provisions of these Regulations, except on the express condition that such a station, when using such a frequency assignment, shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and these Regulations.”

Format: True or False.

- **Class Of Operation Code**

RDD ref: 0494

The code for indicating the notifying *Administration's* intended level of usage and the purpose for the **Signal Configuration**. For assignments in the Fixed Service in frequency bands between 3 000 kHz and 27 500 kHz.

Used in the HF bands.

Format: 1 character.

Code	Meaning
A	For regular operational use which is not provided by another satisfactory means of telecommunication.
B	For use as a standby to some other means of telecommunication.
C	For occasional use on a reserve basis and not requiring internationally recognized protection from harmful interference.

Note: This data item is to be suppressed following completion of the work described in Resolution 21 (WRC-95) but not later than 1 April 2007.

- **Date Of Bringing Into Use**

RDD ref: 0141

The date the **Signal Configuration** is brought into operational use.

Format: Date.

- **Period Of Validity**

RDD ref: 0144

The number of years the notifying *Administration* expects the operational use of the *Signal Configuration* will continue to be required. The period begins on the *Signal Configuration's Date of Bringing Into Use*.

Format: Integer (in the range 1 to 30) in years.

- **Language Of Service**

RDD ref: 0636

The language used for the radio broadcast service carried by the *Signal Configuration*.

HFBC (RR Article 12) only.

Format: Up to 10 characters.

Examples: English, Portuguese, Urdu.

- **Local Operation Period Code**

RDD ref: 0183

The code identifying the part of a 24 hour day during which a *Signal Configuration* may be emitted. The parts of a day are based on local daylight hours, night hours.

In some frequency bands daylight and night operation have a significant impact on the operation and even use of particular frequencies e.g., MF Broadcasting Region 2 and LF/MF Broadcasting Region 1.

Format: 2 characters.

Code	Meaning
HJ	Local daylight hours.
HN	Local night-time hours.

- **Power Measurement Method Code**

RDD ref: 0159

The code indicating the method to be used when measuring the **Maximum Radiated Power** and the **Transmitter Output Power**. The power designation to be used for each **Class Of Emission Code** is listed in Appendix 14 to the RDD.

Format: 1 character.

Code	Meaning
X	Peak envelope power: the average power supplied to the Antenna by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.
Y	Mean power: the average power supplied to the Antenna by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.
Z	Carrier power: the average power supplied to the Antenna by a transmitter during one radio frequency cycle taken under the condition of no modulation.

- **Transmitter Output Power**

RDD ref: 0166

The power available at the output terminals of the transmitter. The **Transmitter Output Power** is measured using the method indicated by the **Power Measurement Method Code**.

Format: Decimal (in the range –40.0 to 70.0) to 1 decimal place in dBW.

- **Antenna Input Power**

RDD ref: 0554

The power available at the input terminals to the *Antenna*. The **Antenna Input Power** is the **Transmitter Output Power** minus the transmission line losses and is measured using the method indicated by the **Power Measurement Method Code**.

LF/MF and HF Broadcasting only.

Format: Decimal (in the range 0.01 to 5 000.00) to 2 decimal places in kW.

• **Maximum Radiated Power**

RDD ref: 0155

The product of the maximum power (including for adaptive systems the full range of power control) supplied to the *Antenna* and the *Transmitting Antenna's Maximum Gain*. The radiated power is determined using the method indicated by the **Power Measurement Method Code**.

Whether the power is Effective Radiated Power (e.r.p.), Equivalent Isotropically Radiated Power (e.i.r.p.) or Effective Monopole Radiated Power (e.m.r.p.) is determined by the type of reference *Antenna* (e.g., dipole) used to determine the relative value of *Antenna* gain, this is described by the Gain Reference Antenna Code. The Gain Reference Antenna Code applies to *Transmitting Antenna* gain and *Signal Configuration* radiated power. The same Gain Reference Antenna must apply to both.

Format: A complex format comprised of:

- a) Decimal (in the range –30.0 and 99.0) to 1 decimal place in dBW
- and
- b) Gain Reference Antenna Code.
- or
- c) Decimal (in the range 0.01 to 2 000.00) to 2 decimal places in dB(kW)
- and
- d) Gain Reference Antenna Code.

• **Power Control Range**

RDD ref: 0570

The extent by which the **Transmitter Output Power** can be increased to raise the radiated power above the nominal value to the **Maximum Radiated Power** (**Power Control Range = Maximum Radiated Power – Transmitter Output Power – Transmitting Antenna's Maximum Gain**). Power control is used to offset additional propagation losses caused, for example, by rain scatter.

Format: Decimal (in the range 10.0 to 20.0) to 1 decimal place in dB.

• **Maximum Horizontally Polarized Radiated Power**

RDD ref: 0149

The product of the power supplied to the *Antenna* and the *Transmitting Antenna's Maximum Gain* for the horizontally polarized component. The Gain Reference Antenna Code applies to *Transmitting Antenna* gain and *Signal Configuration* radiated power. The same Gain Reference Antenna must apply to both.

VHF Broadcasting only.

Format: A complex format comprised of:

- a) Decimal (in the range 0 to 70.0) to 1 decimal place in dBW
- and
- b) Gain Reference Antenna Code.

• **Maximum Vertically Polarized Radiated Power**

RDD ref: 0170

The product of the power supplied to the *Antenna* and the *Transmitting Antenna's Maximum Gain* for the vertically polarized component. The Gain Reference Antenna Code applies to *Transmitting Antenna* gain and *Signal Configuration* radiated power. The same Gain Reference Antenna must apply to both.

VHF Broadcasting only.

Format: A complex format comprised of:

- a) Decimal (in the range 0.0 to 70.0) to 1 decimal place in dBW
- and
- b) Gain Reference Antenna Code.

• **Total Radiated Power**

RDD ref: 0163

The sum of the **Maximum Vertically Polarized Radiated Power** and the **Maximum Horizontally Polarized Radiated Power**. The Gain Reference Antenna Code applies to *Transmitting Antenna* gain and *Signal Configuration* radiated power. The same Gain Reference Antenna must apply to both.

Format: A complex format comprised of:

a) Decimal (in the range 0.0 to 73.0) to 1 decimal place in dBW

and

b) Gain Reference Antenna Code.

Note: *In future the Total Radiated Power need not be recorded as it can be calculated from the Maximum Vertically Polarized Radiated Power and the Maximum Horizontally Polarized Radiated Power.*

• **RMS Radiation**

RDD ref: 0471

The total RMS field strength of the theoretical antenna pattern. It is the product of the RMS value of the characteristic field strength in mV/m, in the horizontal plane, produced by a 1 kW transmitter at a distance of 1 km and the square root of the power.

Used for MF Broadcasting Region 2.

Format: Decimal (in the range 0.00 to 9 999.99) to 2 decimal places in mV/m.

• **Vision To Sound Power Ratio**

RDD ref: 0066

The ratio of the vision signal's Peak Envelope Power to the primary sound signal's mean power.

Analogue television broadcasting only.

Format: Integer (in the range 5 to 23) in dB.

• **Maximum Power Density Over 4 kHz**

RDD ref: 0154

The maximum power density at the output of the transmitter for each carrier type and averaged over the worst 4 kHz for carriers below 15 GHz.

Format: Decimal (in the range –170.0 to 30.0) to 1 decimal place in dB(W/Hz).

• **Maximum Power Density Over 1 MHz**

RDD ref: 0571

The maximum power density at the output of the transmitter for each carrier type averaged over the worst 1 MHz for carriers above 15 GHz.

Format: Decimal (in the range –200.0 to 20.0) to 1 decimal place in dB(W/Hz).

• **Energy Dispersal Description**

RDD ref: 0484

A textual description of the energy dispersal systems characteristics. Typically this would include the frequency deviation, the sweep frequency and the shape of the waveform added to the baseband signal prior to the FM modulator to prevent high levels of energy concentration on the **Reference (Carrier) Frequency** during periods of no, or small levels of modulation signal.

When no modulation or a very small modulation signal is applied, the energy concentrates at the **Reference (Carrier) Frequency** and interference can be caused to other terrestrial and satellite systems. Also multiple carrier intermodulation products become excessive in the types of amplifiers that are commonly used. In order to reduce these effects and to comply with Recommendations ITU-R S.446 and ITU-R S.524, a low-frequency waveform (e.g., triangular) is added to the baseband signal. The level of the triangular wave is set between the following limits:

- lower limit: controls the maximum carrier energy per 4 kHz to a level 2 dB above (1.58 times) the maximum energy density at full telephone channel load;
- upper limit: determined by distortion noise in the channel and interference to the adjacent channel. It usually makes the carrier energy per 4 kHz equal to the maximum energy density at full telephone channel load.

Format: Text.

• **Horizontal Radiation Pattern** **RDD ref: 0274**

The pattern of the *Signal Configuration's* radiated power values measured in the horizontal plane, at equally spaced azimuths around the *Antenna's Geographical Coordinates*.

Format: A complex format comprised of:

- a) 36 vectors defined by

Radiated Power Value (RDD ref: 0274a): radiated power at the specified **Azimuth**; Decimal (in the range 0.0 to 99.0) to 1 decimal place in dBW

and

Azimuth (RDD ref: 0274b): the angle in the direction of the **Radiated Power Value**, measured in the horizontal plane from True North in a clockwise direction; Integer (in the range 0 to 350 in multiples of 10) in degrees.

and

- b) Gain Reference Antenna Code.

• **Vertical Radiation Pattern** **RDD ref: 0275**

The pattern of the *Signal Configuration's* radiated power values measured in the vertical plane, containing the direction of the *Transmitting Antenna's Maximum Gain* at equally spaced elevation angles at the *Antenna's Geographical Coordinates*.

Format: A complex format comprised of:

- a) Up to 19 vectors defined by

Radiated Power Value (RDD ref: 0275a): radiated power at the specified **Elevation Angle**; Decimal (in the range 0.0 to 99.0) to 1 decimal place in dBW

and

Elevation Angle (RDD ref: 0275b): the angle measured in the vertical plane between the direction of the **Radiated Power Value** and the horizontal plane; Integer (in the range -90 to 90 in multiples of 10) in degrees.

and

- b) Gain Reference Antenna Code.

• **Three Dimensional Roaming Zone** **RDD ref: 0194**

The area in which the mobile or transportable station is intended to be located during transmission.

Format: A compound structure presented as the value of the properties of a *Three Dimensional Zone*.

• **Two Dimensional Roaming Zone** **RDD ref: 0544**

The area in which the mobile or transportable station is intended to be located during transmission.

Format: A compound structure presented as the value of the properties of either:

or one or more *Aeronautical Zones*,

or one or more *Circular Zones*,

or one or more *Geographical Areas*,

or one or more *Maritime Zones*,

or one or more *Segment Zones*,

or between 3 and 6 *Zone Boundary Coordinates*.

• **Three Dimensional Service Zone** **RDD ref: 0545**

The area where a *Signal Configuration* is intended to be received by receiving stations and within which protection from harmful interference would be offered.

Format: A compound structure presented as the values of the properties of a *Three Dimensional Zone*.

- **Two Dimensional Service Zone**

RDD ref: 0546

The area where a *Signal Configuration* is intended to be received by receiving stations and within which protection from harmful interference would be offered.

Format: A compound structure presented as the values of the properties of either:

- or one or more *Aeronautical Zones*,
- or one or more *CIRAF Zones*,
- or one or more *Circular Zones*,
- or one or more *Geographical Areas*,
- or one or more *Maritime Zones*,
- or one or more *Segment Zones*,
- or between 3 and 6 *Zone Boundary Coordinates*.

- **Maximum Length Of Circuit**

RDD ref: 0446

The maximum geographical distance over which the *Signal Configuration* is intended to provide service.

Format: Integer (in the range 0 to 20 000) in km.

- **Station Coverage Code**

RDD ref: 0360

The code indicating the nature of the service area covered by the *Signal Configuration* in accordance with items 1.10, 1.11 and 1.12 of Section 1 of Annex 2 to the RJ81 Regional Agreement.

Format: 1 character.

Code	Meaning
A	a station intended to provide coverage over extensive primary and secondary service areas.
B	a station intended to provide coverage over one or more population centres and the contiguous rural areas located in its primary service areas.
C	a station intended to provide coverage over a city or town and the contiguous suburban areas located in its primary service area.

3.29 *Television System*

RDD ref: 0281

A description of the parameters that define the format, or type of system, used for encoding a visual image and an audible sound, into an electromagnetic waveform that forms a television broadcast signal. For further information see Recommendation ITU-R BT.470.

◇ A *Television System* is identified by its **Code**

Broadcasting Television only.

A *Television System* may be designed to use a single *Colour System*

RDD ref: 0301

A *Television System* may be used by one or more *Signal Configurations*

RDD ref: 0300

- **Code**

RDD ref: 0283

The code used to identify the type of *Television System* (see Appendix 9 to the RDD). Once the information represented by the **Code** has been internationally agreed all of the other parameters in the *Television System* are known and can be identified by providing the **Code**.

Format: Up to 2 characters.

ZONE DATA

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3.30 Three Dimensional Zone

RDD ref: 0001

Three dimensional shape used to describe a *Signal Configuration's Three Dimensional Service Zone* or *Three Dimensional Roaming Zone*.

A *Three Dimensional Zone* is described by a **Maximum Operating Height** and a **Two Dimensional Zone** defined by either an, *Aeronautical Zone*, a *Circular Zone*, a *Geographical Area*, a *Maritime Zone*, a *Segment Zone*, or between 3 and 6 *Zone Boundary Coordinates*.

◇ A *Three Dimensional Zone* is identified by its **Maximum Operating Height**, **Minimum Operating Height** and its **Two Dimensional Zone**.

- **Maximum Operating Height**

RDD ref: 0003

The altitude above mean sea level, indicating the highest point of the *Three Dimensional Zone* and below which the operator of the radio system can expect to receive protection from harmful interference.

Format: Integer (in the range 0 to 60 000) in feet.

- **Minimum Operating Height**

RDD ref: 0004

The altitude above mean sea level, indicating the lowest point of the *Three Dimensional Zone* and above which the operator of the radio system can expect to receive protection from harmful interference. For many radio systems the **Minimum Operating Height** will be ground level but for some systems, e.g., public aeronautical mobile the minimum operating height may be 10 000 to 15 000 feet.

Format: Integer (in the range 0 to 60 000) in feet.

- **Altitude Radius Reduction**

RDD ref: 0083

The amount by which the horizontal distance between the vertical sides of the *Three Dimensional Zone* are reduced for an increase in altitude. Due to the curvature of the Earth the sides of the *Three Dimensional Zone* will naturally diverge with increasing altitude. The degree of divergence is dependent on the size of the base of the *Three Dimensional Zone*. **Altitude Radius Reduction** may be used to counteract this natural divergence, or it may be used to reduce the interference between neighbouring *Three Dimensional Zones* caused by the increase in the line of sight distance with altitude.

Altitude Radius Reduction is a ratio in metres per foot where the horizontal distance is measured in metres and the altitude is measured in feet. These parameters are used because the radio systems that use *Three Dimensional Zones* are primarily aeronautical and the international standard is measured in feet. For aircraft altitude in feet is also a safety of life issue.

Format: Integer (in the range 0 to 10) in metres per foot.

- **Two Dimensional Zone**

RDD ref: 0527

A part of the Earth's surface describing the shape of the base of the *Three Dimensional Zone*.

Format: A compound structure presented as the values of the properties of either:

- one or more *Segment Zones*,
- or one or more *Aeronautical Zones*,
- or one or more *Circular Zones*,
- or one or more *Geographical Areas*,
- or one or more *Maritime Zones*,
- or between 3 and 6 *Zone Boundary Coordinates*.

3.31 Aeronautical Zone

RDD ref: 0032

An ITU pre-defined zone applicable to the Aeronautical Mobile (R) Service in the bands governed by RR Appendix 27, which identifies a specific geographical area.

◇ An *Aeronautical Zone* is identified by its **Code**.

- **Description**

RDD ref: 0601

Text which describes the boundaries of the Major Air Route Areas, Regional and Domestic Air Route Areas and the VOLMET Allotment and Reception Areas. See provisions 27/80 to 27/185I of RR Appendix 27.

Format: Text.

- **Code**

RDD ref: 0033

The code used to identify a pre-defined *Aeronautical Zone*.

The full list is contained in Appendix 8 to the RDD.

The only *Aeronautical Zones* that will be used after 15 December 1997 are those described in RR Appendix 27.

Format: Up to 9 characters.

3.32 *CIRAF Zone*

RDD ref: 0366

A pre-defined zone applicable to the Broadcasting Service in the HF bands which identifies a specific geographical area. While some *CIRAF Zones* may be divided into quadrants, the following *CIRAF Zones* are not divided into quadrants: 1-5, 17, 19-26, 67, 69-75.

◇ A *CIRAF Zone* is identified by its **Zone Number**.

- **Quadrant Code**

RDD ref: 0367

The code that identifies a quadrant of a *CIRAF Zone*. For example, the North West quadrant of *CIRAF Zone* 14 would be identified as 14NW.

Format: Up to 4 characters.

- **Zone Number**

RDD ref: 0368

The number that identifies the appropriate *CIRAF Zone*.

The full list is contained in Appendix 8 to the RDD.

Format: Integer (in the range 1 to 99).

3.33 *Circular Zone*

RDD ref: 0069

A circular geographical area. This area is described using the **Centre Geographical Coordinates** and a **Radius**.

◇ A *Circular Zone* is identified by its **Centre Geographical Coordinates** and **Radius**.

- **Centre Geographical Coordinates**

RDD ref: 0070

The point on the Earth's surface where the centre of the *Circular Zone* lies.

Format: Long/Lat in degrees and minutes.

- **Radius**

RDD ref: 0071

The Great Circle distance between the **Centre Geographical Coordinates** and the circumference of the *Circular Zone*.

Format: Integer (in the range 1 to 20 000) in km.

3.34 *Geographical Area*

RDD ref: 0173

An area of the Earth's surface whose borders are recorded by the ITU for radiocommunication purposes. The use of a country name, or of a geographical area by the ITU does not imply the expression of any opinion

whatsoever on the part of the Union concerning the sovereignty or the legal status of any country, territory or geographical region.

Many **Geographical Areas** are countries for example, “Poland” and “Hungary” or formed from contiguous areas of one country, e.g., “The 48 contiguous States of the United States of America”, others, e.g., “Antarctic” are not formed from countries.

◇ A **Geographical Area** is identified by its **Code**.

A **Geographical Area** may be an area of operation for one or more **Operators** **RDD ref: 0540**

A **Geographical Area** may be a valid area for one or more **Correspondence Addresses** **RDD ref: 0018**

A **Geographical Area** may be the location for one or more **Sites** **RDD ref: 0176**

• **Code** **RDD ref: 0174**

The code used to identify a **Geographical Area** as assigned by the ITU. All new codes are assigned by the ITU in conformity with ISO three character coding. Two additional characters may be used for the sub-division of certain **Geographical Areas** in the notification of typical stations.

Format: Up to 5 characters.

The codes are defined in Appendix 3 to the RDD.

• **Name** **RDD ref: 0175**

The name by which a **Geographical Area** is known at the ITU.

A full list is contained in Appendix 3 to the RDD.

Format: Text.

The names are defined in Appendix 3 to the RDD.

• **Radiocommunication Region Code** **RDD ref: 0653**

An indication of the ITU Region where the **Geographical Area** is located. For the allocation of frequencies the Earth's surface has been divided into three Regions. The complete definition of the three Radiocommunication Regions can be found in Article 5 to the Radio Regulations. A list of **Geographical Areas** and their corresponding **Radiocommunication Region Code** are contained in Appendix 3 to the RDD.

Format: 1 character.

Code	Meaning
1	Region 1
2	Region 2
3	Region 3

3.35 Maritime Zone **RDD ref: 0185**

An ITU pre-defined zone applicable to the Maritime Mobile Service, only in the bands below 28 000 kHz that identifies a specific geographical area.

◇ A **Maritime Zone** is identified by its **Code**.

• **Description** **RDD ref: 0186**

Text that describes the boundaries and location of a **Maritime Zone**.

Format: Text.

- **Code** **RDD ref: 0187**

The code used to identify a *Maritime Zone*.

The full list is contained in Appendix 8 to the RDD.

Format: 5 characters.

3.36 *Segment Zone* **RDD ref: 0451**

An area of the Earth's surface defined by two azimuth values and two radii. The radii describe the **Start Radius** and **Finish Radius** of the *Segment Zone*. The *Segment Zone* may be used to define the reception zone for a sky wave and may form part of a *CIRAF Zone*, in which case both the **Start Radius** and **Finish Radius** will have non zero values; or it may be used to indicate the coverage area for a ground wave, in which case the **Start Radius** will always be zero.

- ◇ A *Segment Zone* is identified by its **Start Azimuth**, its **Finish Azimuth**, its **Finish Radius** and the *Transmitting Antenna's Geographical Coordinates*.

- **Start Azimuth** **RDD ref: 0452**

The angle of the left hand edge of the *Segment Zone* measured, in the horizontal plane, from True North in a clockwise direction.

Format: Decimal (in the range between 0.0 to 359.9) to 1 decimal place in degrees.

- **Finish Azimuth** **RDD ref: 0453**

The angle of the right hand edge of the *Segment Zone* measured, in the horizontal plane, from True North in a clockwise direction.

Format: Decimal (in the range between 0.1 to 360.0) to 1 decimal place in degrees.

- **Start Radius** **RDD ref: 0454**

The Great Circle distance from the *Transmitting Antenna's Geographical Coordinates* to the start of the *Segment Zone*.

Format: Integer (in the range 0 to 20 000) in metres.

- **Finish Radius** **RDD ref: 0475**

The Great Circle distance from the *Transmitting Antenna's Geographical Coordinates* to the end of the *Segment Zone*.

Format: Integer (in the range 0 to 20 000) in metres.

3.37 *Zone Boundary Coordinate* **RDD ref: 0328**

A point on the Earth's surface that along with between 2 and 5 other points, connected using arcs of Great Circles, which define a geographical area.

- ◇ A *Zone Boundary Coordinate* is identified by its **Geographical Coordinates** and the zone it is used to define.

- **Geographical Coordinates** **RDD ref: 0329**

A point on the Earth's surface.

Format: Long/Lat in degrees, minutes and seconds.

- **Sequence Number** **RDD ref: 0511**

The number used to identify the order in which the *Zone Boundary Coordinate* must be connected together.

Format: Integer (in the range 1 to 6).

3.38 *Maritime HF Allotment Area***RDD ref: 0576**

An ITU pre-defined zone, applicable to the Maritime Mobile Service in the HF bands governed by RR Appendix 25. It comprises part of a geographical area, in which a *Site* may be located.

◇ A *Maritime HF Allotment Area* is identified by its **Code**.

A *Maritime HF Allotment Area* may be the location for one or more *Sites*

RDD ref: 0637

- **Description**

RDD ref: 0577

Text which describes the boundaries of a *Maritime HF Allotment Area* in the Maritime Mobile Service.

Format: Text.

- **Code**

RDD ref: 0578

The code used to identify a pre-defined *Maritime HF Allotment Area* in the Maritime Mobile Service.

A full list is contained in Appendix 8 to the RDD.

Format: Up to 6 characters.

SECTION 4

SPACE ADVANCE PUBLICATION, NOTIFICATION AND COORDINATION DATA

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4.1 Advance Publication of Geostationary Space Stations

This table shows the information that must be supplied for the advance publication of geostationary space stations and space networks together with the specific conditions under which it is required by the Radio Regulations.

The table applies to all geostationary space stations and space networks with the exception of those used for the Broadcasting Satellite Service which are notified in accordance with the procedures contained in RR Appendices 30/30A and those used in the FSS which are notified in accordance with the procedures contained in RR Appendix 30B.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S011	For each <i>Space Service Notice</i> provide the • Code of the <i>Administration</i> notifying the <i>Space Station</i>	Up to 3 Char.	M	
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf a submission is made for the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if an <i>Intergovernmental Satellite Organization</i> is responsible for the <i>Space Station</i> .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S301	• Purpose Code	1 Char.	M	Always RR No. 9.1.
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	Always RR No. 9.1.
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	• Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S519	• BR IFIC Date For Last Advance Publication	Date.	BR	
S520	• BR IFIC Number For Last Advance Publication	Int. in range 1 to 9999.	BR	
S768	• Special Section Reference For Last Advance Publication	Up to 8 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S". The special section reference under which the <i>Space Services Notice</i> is published, e.g. API/A/.
S606	• Special Section Number For Last Advance Publication	4 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S".
S067	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the • BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S". Provided by BR the if <i>Space Service Notice's Intended Action Code</i> ="A".
S069	• Name	Up to 20 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
S072	For the <i>Geostationary Orbital Position</i> that is the subject of the <i>Intended Action</i> provide the • Nominal Longitude	Dec. in range -180.00 to 180.00 in degrees.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each Frequency Range defining the spectrum limits of a Beam that is the subject of an Intended Action provide the			
S247	• Lower Limit	Frequency.	M	
S248	• Upper Limit	Frequency.	M	
S115	• Emission/Reception Indicator of the Beam that has its valid operational frequency limits described by the Frequency Range .	1 Char.	M	
	For the Assignment Coordination Group (ACG) that is the subject of the Intended Action provide the following information, including only one of the options from C or D .			
S186	• BR Identification Code	10 Char.	R	Mandatory if Space Service Notice's Intended Action Code ="M" or "S". Provided by BR if Space Service Notice's Intended Action Code ="A".
S718	• Date Of Bringing Into Use For Geostationary Operation	Date.	M	
S188	• Period Of Validity	Int. in range 1 to 30 in years.	M	
S052/ S617	• The Codes for each Class Of Station/Nature Of Service Pair used to classify the operation of the ACG	2 Char. for each Code.	M	
	Option C : if the Intended Action is for a Receiving Space Station ACG provide the			
S384	• Uplink Service Area	A compound structure presented in one of the ways described in Section 5.	M	Only the list of countries or geographic designators or a narrative description of the service area is required.
	Option D : if the Intended Action is for a Transmitting Space Station ACG provide the			
S276	• Downlink Service Area	A compound structure presented in one of the ways described in Section 5.	M	Only the list of countries or geographic designators or a narrative description of the service area is required.

4.2 Advance Publication of Non-Geostationary Space Stations (Under Sub-Section IB to RR Article 9)

This table shows the information that must be supplied for the advance publication of non-geostationary space stations and space networks that are subject to the procedures contained in Sub-Section IB to RR Article 9. It also shows the specific conditions under which it is required by the Radio Regulations.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each Space Service Notice provide the			
S011	• Code of the Administration notifying the Space Station	Up to 3 Char.	M	
S034	• Code of the Intergovernmental Satellite Organization on whose behalf a submission is made for the Space Station	Up to 3 Char.	R	Mandatory if an Intergovernmental Satellite Organization is responsible for the Space Station .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S301	• Purpose Code	1 Char.	M	Always RR No. 9.1.
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999	BR	
S304	• Code of each Provision the Space Service Notice is notified under	Up to 12 Char.	M	Always RR No. 9.1.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	• Code of each <i>Intended Action included</i> with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S519	• BR IFIC Date For Last Advance Publication	Date.	BR	
S520	• BR IFIC Number For Last Advance Publication	Int. in range 1 to 9999.	BR	
S768	• Special Section Reference For Last Advance Publication	Up to 8 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S". The special section reference under which the <i>Space Services Notice</i> is published, e.g. API/A/.
S606	• Special Section Number For Last Advance Publication	4 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S".
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S069	• Name	Up to 20 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
	For the <i>Non-geostationary Orbit</i> that is the subject of the <i>Intended Action</i> provide the			
S084	• Reference Body Code	1 Char.	M	
	For each <i>Frequency Range</i> defining the spectrum limits of a <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S247	• Lower Limit	Frequency.	M	
S248	• Upper Limit	Frequency.	M	
S115	• Emission/Reception Indicator of the <i>Beam</i> that has its valid operational frequency limits described by the <i>Frequency Range</i> .	1 Char.	M	
	For the <i>Assignment Coordination Group (ACG)</i> that is the subject of the <i>Intended Action</i> provide the following information, including only one of the options from C or D .			
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S187	• Date Of Bringing Into Use For Non-geostationary Operation	Date.	M	
S188	• Period Of Validity	Int. in range 1 to 30 in years.	M	
S052/ S617	• The Codes for each <i>Class Of Station/Nature Of Service Pair</i> used to classify the operation of the <i>ACG</i>	2 Char. for each Code.	M	
	• Option C: if the <i>Intended Action</i> is for a <i>Receiving Space Station ACG</i>			
S384	• Uplink Service Area	A compound structure presented in one of the ways described in section 5.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S276	- Option D: if the <i>Intended Action</i> is for a <i>Transmitting Space Station ACG</i> - Downlink Service Area	A compound structure presented in one of the ways described in section 5.	M	

4.3 Advance Publication of Non-Geostationary Space Stations (Under Sub-Section IA to RR Article 9)

This table shows the information that must be supplied for the advance publication of non-geostationary space stations and space networks that are subject to the procedures contained in Subsection IA to RR Article 9. It also shows the specific conditions under which it is required by the Radio Regulations.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S011	For each <i>Space Service Notice</i> provide the Code of the <i>Administration</i> notifying the <i>Space Station</i>	Up to 3 Char.	M	
S034	Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf a submission is made for the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if an <i>Intergovernmental Satellite Organization</i> is responsible for the <i>Space Station</i> .
S295	Administration Notice Code	Up to 20 Char.	O	
S296	Date Sent	Date.	O	
S297	BR Identification Code	10 Char.	BR	
S298	BR Date Received	Date.	BR	
S301	Purpose Code	1 Char.	M	
S337	Intended Action Code	1 Char.	M	
S767	Special Section Reference For Publication	Up to 8 Char.	M	
S605	Special Section Number For Publication	4 Char.	BR	
S299	BR IFIC Part For Publication	1 Char.	BR	
S302	BR IFIC Date For Publication	Date.	BR	
S303	BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	Always RR No. 9.1.
S307	Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S519	BR IFIC Date For Last Advance Publication	Date.	BR	
S520	BR IFIC Number For Last Advance Publication	Int. in range 1 to 999.	BR	
S768	Special Section Reference For Last Advance Publication	Up to 8 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". The special section reference under which the <i>Space Services Notice</i> is published, e.g. API/A/.
S606	Special Section Number For Last Advance Publication	4 Char.	R	Mandatory as described for RDD S768.
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S069	Name	Up to 20 Char.	M	
S086	Total Number Of Non-geostationary Orbits	Int. in range 1 to 99.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S835	• Maximum Number Of Satellites Transmitting Simultaneously Into The Northern Hemisphere	Int. in range 1 to 5.	R	Mandatory for a <i>Space Station</i> operating in the FSS and transmitting in the band 3 400-4 200 MHz .
S836	• Maximum Number Of Satellites Transmitting Simultaneously Into The Southern Hemisphere	Int. in range 1 to 5.	R	Mandatory as described for RDD S835.
S029	• Code of the <i>Operator</i> providing the operational control of the <i>Space Station</i>	3 Char. in numeric range 001 to 999.	M	
S021	• Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Space Station</i>	Up to 2 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
	For each <i>Non-geostationary Orbit</i> that is the subject of the <i>Intended Action</i> provide the			
S717	• Notified Identification Code	2 Char.	M	
S084	• Reference Body Code	1 Char.	M	
S087	• Number Of Satellites In Orbit	Int. in range 1 to 99.	M	
S096	• Inclination Angle	Dec. in range 0.00 to 179.99 in degrees.	M	
S098	• Apogee Altitude	Int. in range 500 to 99 999 999 in km.	M	
S099	• Perigee Altitude	Int. in range 500 to 99 999 999 in km.	M	
S103	• Satellite Period	Hrs and Mins.	M	
	For each <i>Non-geostationary Satellite Position</i> of a <i>Non-geostationary Orbit</i> provide the			
S225	• Notified Identification Code	2 Char.	R	Mandatory for <i>Space Stations</i> where any <i>Beam</i> is not common to every <i>Non-geostationary Satellite Position</i> of a <i>Non-geostationary Orbit</i> .
S106	• Initial Phase Angle	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory as described for RDD S225.
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	• Designation	Up to 8 Char.	M	
S118	• Steerable Indicator	True or False.	M	
S115	• Emission/Reception Indicator	1 Char.	M	
S124	• Maximum Co-polar Gain	Dec. in range 0.0 to 50.0 in dBi.	M	
S122	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in Section 5.	M	
	For each <i>Non-geostationary Orbit</i> that uses the transmission characteristics defined by the <i>Beam</i> provide the			
S717	• Notified Identification Code	2 Char.	M	
	For each <i>Non-geostationary Satellite Position</i> contained in the <i>Non-geostationary Orbit</i> that uses the transmission characteristics defined by the <i>Beam</i> provide the			
S225	• Notified Identification Code	2 Char.	R	Mandatory for each <i>Non-geostationary Satellite Position</i> using the <i>Beam</i> , if the <i>Beam</i> is not common to every <i>Non-geostationary Satellite Position</i> in the <i>Non-geostationary Orbit</i> .
	For each <i>Frequency Range</i> defining the spectrum limits of the <i>Beam</i> provide the			
S247	• Lower Limit	Frequency.	M	
S248	• Upper Limit	Frequency.	M	
	For the <i>Assignment Coordination Group (ACG)</i> that is the subject of the <i>Intended Action</i> provide the following information, including only one of the options from C , D , E or F			
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S187	• Date Of Bringing Into Use For Non-geostationary Operation	Date.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S188	• Period Of Validity	Int. in range 1 to 30 in years.	M	
S189	• Polarization Code	Up to 2 Char.	M	
S364	• Polarization Linear Angle	Int. in range 0 to 359 in degrees.	R	Mandatory if the Polarization Code = "L".
S196	• Baseband Lower Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	O	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S197	• Baseband Upper Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	O	As described for RDD S196.
S640	• Type of Modulation	Text.	O	
S641	• Type of Amplitude Modulation	Text.	O	
S642	• Interference Study Information	Text.	O	
S199	• Multiplex Type (Video/Sound)	Text.	O	For a carrier frequency modulated by a television signal.
S327	• TV System and Colour Standard Description	Text.	O	
S204	• Digital Signal Transmitted Bit Rate	Dec. in range 0.0 to 9 999 999.9 in kbit/s.	O	
S205	• Digital Signal Number Of Phases	Int. in range 1 to 10.	O	
S201	• Pre-emphasis P-P Frequency Deviation	Dec. in range 5.0 to 15.0 in MHz.	O	For a carrier frequency modulated by a television signal.
S326	• Pre-emphasis RMS Frequency Deviation	Dec. in range 20.0 to 300.0 in kHz.	O	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S202	• Pre-emphasis Characteristics	Diagram.	O	For a carrier frequency modulated by a television signal.
S200	• Energy Dispersal Frequency Deviation	Dec. in range 0.1 to 4.0 in MHz.	O	For a frequency modulated carrier.
S324	• Energy Dispersal Sweep Frequency	Int. in range 10 to 2 000 in Hz.	O	As described for RDD S200.
S325	• Energy Dispersal Waveform	Text.	O	As described for RDD S200.
S857	• Energy Dispersal Description	Text	O	For carriers not using frequency modulation.
S855	• Non-conformity Indicator	True or False	O	Only if RDD S723 or RDD S716 is supplied and is to be filed under RR No. 4.4
S052/ S617	• The Codes for each Class Of Station/Nature Of Service Pair used to classify the operation of the ACG	2 Char for each Code.	M	
S723	• Value of each ACG Frequency contained in the ACG	Frequency.	O	Only if RDD S716 is not supplied.
S716	• Carrier Frequency of each ACG Frequency contained in the ACG	Frequency.	O	Only for asymmetric or composite modulation where the Carrier Frequency is different from RDD S723.

Option C: if the Intended Action is for a Receiving Space Station ACG				
S116	• Designation of the Beam receiving the ACG	Up to 8 Char.	M	
S671	• Notified Identifying Code of each Associated Earth Station Antenna transmitting the ACG	Up to 20 Char.	M	
S192	• Receiving System Noise Temperature	Int. in range 300 to 6 000 in Kelvins.	M	
S384	• Uplink Service Area	A compound structure presented in one of the ways described in section 5.	M	

Option D: if the Intended Action is for a Transmitting Space Station ACG				
S116	• Designation of the Beam transmitting the ACG	Up to 8 Char.	M	
S671	• Notified Identifying Code of each Associated Earth Station Antenna receiving the ACG	Up to 20 Char.	M	
S276	• Downlink Service Area	A compound structure presented in one of the ways described in section 5.	M	

Option E: if the Intended Action is for a Transmitting Space Station Space To Space ACG				
S116	• Designation of the Beam transmitting the ACG	Up to 8 Char.	M	
S652	• Maximum Radiated Power	Dec. in range 0.0 to 60.0 dBW.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Associated Space Station Position</i> receiving the <i>ACG</i> , provide the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S507	• Anticipated Nominal Longitude	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> is aimed at a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
	Option F: if the <i>Intended Action</i> is for a <i>Receiving Space Station Space To Space ACG</i>			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
S653	• Maximum Radiated Power	Dec. in range 0.0 to 60.0 dBW.	M	The maximum radiated power of the associated <i>Space Station</i> .
	For each <i>Associated Space Station Position</i> transmitting the <i>ACG</i> , provide the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S507	• Anticipated Nominal Longitude	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> originates from a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	O	
S334	• Necessary Bandwidth Code	4 Char.	O	
S263	• Total Peak Envelope Power	Dec. in range –10.0 to 40.0 in dBW.	O	Provided the Maximum Peak Envelope Power Per Carrier is not supplied.
S264	• Maximum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	O	Provided the Total Peak Envelope Power is not supplied.
S265	• Minimum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	O	
S267	• Maximum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the Maximum Power Density Averaged Over 4 kHz is not supplied.
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the Maximum Power Density Per Carrier Averaged Over 4 kHz is not supplied.
S268	• Minimum Power Density Per Carrier Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	O	
S336	• Maximum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the Maximum Power Density Averaged Over 1 MHz is not supplied.
S335	• Maximum Power Density - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the Maximum Power Density Per Carrier Averaged Over 1 MHz is not supplied.
S371	• Minimum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	O	
S856	• Carrier To Noise Objective	Dec. in range –10.0 to 25.0 in dB.	O	
	For each <i>Associated Earth Station Antenna</i> that is the subject of the <i>Intended Action</i> provide the			
S671	• Notified Identifying Code	Up to 20 Char.	M	
S559	• Typical/Specific Indicator	1 Char.	M	
S673	• Geographical Coordinates	Long/Lat (dms).	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.
S763	• Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvins.	R	Mandatory for a receiving <i>Associated Earth Station Antenna</i> .
S676	• Maximum Gain	Dec. in range 0.00 to 70.00 in dBi.	M	
S677	• Beamwidth	Dec. in range 0.00 to 100.00 in degrees.	O	
S678	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
S052/ S617	• Codes for each <i>Class Of Station/Nature Of Service Pair</i> of the <i>Associated Earth Station Antenna</i>	2 Char. for each Code.	M	
S041	• Code of the <i>Geographical Area</i> that is the location for the <i>Associated Earth Station Antenna</i>	Up to 3 Char.	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.

4.4 Notification/Coordination of Geostationary Space Stations

This table shows the information that must be supplied for the notification and coordination of geostationary space stations and space networks together with the specific conditions under which it is required by the Radio Regulations and applicable Plans.

This table is applicable to all geostationary space stations and space networks, including space operation functions under Article 2A of RR Appendices 30 and 30A only. All other submissions relating to geostationary space stations and space networks for the BSS and FSS Plans (RR Appendices 30/30A/30B) are covered in Tables 4.8, 4.9 and 4.10.

NOTE 1 – For FSS assignments of GSO networks in the frequency bands listed in the table below, with respect to other networks in the FSS operating co-directionally, the coordination arc method applies. See RR Appendix 5.

Frequency Band	Orbital Separation
3 400-4 200 MHz, 5 725-5 850 MHz (Region 1), 5 850-6 725 MHz and 7 025-7 075 MHz.	$\pm 10^\circ$
10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz (Region 2), 12.2-12.5 GHz (Region 3), 12.5-12.75 GHz (Regions 1 and 3), 12.7-12.75 GHz (Region 2) and 13.75-14.5 GHz.	$\pm 9^\circ$
Any band above 17.3 GHz.	$\pm 8^\circ$

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S011	For each <i>Space Service Notice</i> provide the • Code of the <i>Administration</i> notifying the <i>Space Station</i>	Up to 3 Char.	M	
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf a submission is made for the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if an <i>Intergovernmental Satellite Organization</i> is responsible for the <i>Space Station</i> .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S300	• Occurrence Code	1 Char.	R	Mandatory for RR Article 11 only.
S301	• Purpose Code	1 Char.	M	
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	• Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S768	• Special Section Reference For Last Advance Publication	Up to 8 Char.	M	The special section reference under which the <i>Space Services Notice</i> is published, e.g. API/A/.
S606	• Special Section Number For Last Advance Publication	4 Char.	M	
S521	• BR IFIC Date For Last Coordination	Date.	R	Mandatory if notification. If coordination, it is provided by the BR.
S522	• BR IFIC Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory if notification. If coordination, it is provided by the BR.
S769	• Special Section Reference For Last Coordination	Up to 8 Char.	R	Mandatory if the provisions of RR Nos. 9.7 to 9.14 and 9.21 or Article 6 of RR Appendix 30B apply.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S607	• Special Section Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory as described for RDD S769.
S775	• BR IFIC Part For Last Notification	1 Char.	BR	
S523	• BR IFIC Date For Last Notification	Date.	BR	
S524	• BR IFIC Number For Last Notification	Int. in range 1 to 9999.	BR	
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S069	• Name	Up to 20 Char.	M	
S830	• Power Density Compliance Indicator	True or False.	R	Mandatory for FSS networks in the frequency bands listed in RR Table 22-2 and under the conditions specified in RR Article 22.
S842	• Power Density Compliance Indicator In Band 1 164-1 215 MHz	True or False.	R	Mandatory for RNSS operating in the band 1 164-1 215 MHz.
S851	• Operational Characteristics Compliance Indicator	True or False.	R	Mandatory for FSS networks in the band 14-14.5 GHz with <i>Associated Earth Station Antenna</i> operating in the Aeronautical-Mobile Satellite Service.
S792	• Calculated Aggregate Power Density In Band 5 030-5 150 MHz	Dec. in the range -150.0 to -124.5 in dB(W/(m ² · 150 kHz)).	R	Mandatory for RNSS operating in the band 5 010-5 030 MHz.
S843	• Calculated Aggregate Power Density In Band 4 990-5 000 MHz	Dec. in the range -200.0 to -171.0 in dB(W/(m ² · 10 MHz)).	R	Mandatory for RNSS operating in the band 5 010-5 030 MHz.
S844	• Calculated Mean Power Density In Band 35.5-36 GHz	Dec. in the range -100.0 to -73.3 in dB(W/(m ² · 500 MHz)).	R	Mandatory for Earth exploration-Satellite Service (active) or Space Research Service (active) operating in the band 15.43-15.63 GHz.
S848	• Calculated Aggregate Power Density In Band 42.5-43.5 GHz	Dec. in the range -160.0 to -137 in dB(W/(m ² · 1 GHz)).	R	Mandatory for FSS or BSS operating in the band 41.5-42.5 GHz, if RDD S850 = "S".
S849	• Calculated Aggregate Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz	Dec. in the range -180.0 to -116.0 in dB(W/(m ² · 500 kHz)).	R	Mandatory for FSS or BSS operating in the band 41.5-42.5 GHz. The pfd limit depends on whether RDD S850 = "S" or "V".
S850	• Type of Radio astronomy Station In Band 42.5-43.5 GHz	1 Char.	R	Mandatory as described for RDD S848. Either "S" or "V".
S029	• Code of the <i>Operator</i> providing the operational control of the <i>Space Station</i>	3 Char. in numeric range 001 to 999.	M	
S021	• Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Space Station</i>	Up to 2 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
	For the <i>Geostationary Orbital Position</i> that is the subject of the <i>Intended Action</i> provide the			
S072	• Nominal Longitude	Dec. in range -180.00 to 180.00 in degrees.	M	Modification of the Nominal Longitude by more than ±6° from that given in the first API submitted on the network requires a new API.
S074	• Longitude Tolerance Easterly Limit	Dec. in range 0.10 to 1.00 in degrees.	M	
S075	• Longitude Tolerance Westerly Limit	Dec. in range 0.10 to 1.00 in degrees.	M	
S076	• Inclination Excursion	Dec. in range 0.10 to 5.00 in degrees.	M	
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	• Designation	Up to 8 Char.	M	
S118	• Steerable Indicator	True or False.	M	
S115	• Emission/Reception Indicator	1 Char.	M	
S120	• Pointing Accuracy	Dec. in range 0.10 to 5.00 in degrees.	M	
S124	• Maximum Co-polar Gain	Dec. in range 0.0 to 50.0 in dBi.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S122	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory for Space to Space <i>Beams</i> .
S369	• Effective Co-polar Gain Contour	Diagram.	R	Mandatory for Space to Earth <i>Beams</i> (transmission or reception).
S125	• Gain Versus GSO Diagram	A compound structure presented in one of the ways described in section 5.	R	Mandatory if the <i>Beam</i> is operating in a band with both a space to Earth and Earth to space frequency allocation.
S333	• Value of each <i>Beam Frequency</i> used by the <i>Beam</i>	Frequency.	M	
	For the <i>Assignment Coordination Group (ACG)</i> that is the subject of the <i>Intended Action</i> provide the following information, including only one of the options from C, D, E or F .			
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S718	• Date Of Bringing Into Use For Geostationary Operation	Date.	M	
S188	• Period Of Validity	Int. in range 1 to 30 in years.	M	
S190	• Bandwidth	Int. in range 50 to 99 999 999 in kHz.	M	
S189	• Polarization Code	Up to 2 Char.	M	
S364	• Polarization Linear Angle	Int. in range 0 to 359 in degrees.	R	Mandatory if the <i>Polarization Code</i> = "L".
S196	• Baseband Lower Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	C	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S197	• Baseband Upper Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	C	As described for RDD S196.
S640	• Type Of Modulation	Text.	C	
S641	• Type Of Amplitude Modulation	Text.	C	
S642	• Interference Study Information	Text.	C	
S199	• Multiplex Type (Video/Sound)	Text.	C	For a carrier frequency modulated by a television signal.
S327	• TV System and Colour Standard Description	Text.	C	
S204	• Digital Signal Transmitted Bit Rate	Dec. in range 0.0 to 9 999 999.9 in kBit/s.	C	
S205	• Digital Signal Number Of Phases	Int. in range 1 to 10.	C	
S201	• Pre-emphasis P-P Frequency Deviation	Dec. in range 5.0 to 15.0 in MHz.	C	For a carrier frequency modulated by a television signal.
S326	• Pre-emphasis RMS Frequency Deviation	Dec. in range 20.0 to 300.0 in kHz.	C	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S202	• Pre-emphasis Characteristics	Diagram.	C	For a carrier frequency modulated by a television signal.
S200	• Energy Dispersal Frequency Deviation	Dec. in range 0.1 to 4.0 in MHz.	C	For a frequency modulated carrier.
S324	• Energy Dispersal Sweep Frequency	Int. in range 10 to 2 000 in Hz.	C	As described for RDD S200.
S325	• Energy Dispersal Waveform	Text.	C	As described for RDD S200.
S857	• Energy Dispersal Description	Text	C	For carriers not using frequency modulation.
S855	• Non-conformity Indicator	True or False	R	Mandatory if RDD S723 is to be filed under RR No. 4.4.
S052/ S617	• The Codes for each <i>Class Of Station/Nature Of Service Pair</i> used to classify the operation of the <i>ACG</i>	2 Char for each Code.	M	
S723	• Value of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	M	
S716	• Carrier Frequency of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	C	Only for asymmetric or composite modulation where the <i>Carrier Frequency</i> is different from RDD S723.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	Option C: if the <i>Intended Action</i> is for a <i>Receiving Space Station ACG</i>			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of each <i>Associated Earth Station Antenna</i> transmitting the <i>ACG</i>	Up to 20 Char.	M	
S192	• Receiving System Noise Temperature	Int. in range 300 to 6 000 in Kelvins.	M	
S384	• Uplink Service Area	A compound structure presented in one of the ways described in section 5.	M	
S600	• Maximum Aggregate Power	Dec. in range 0.0 to 40 in dBW.	C	
S646	• Aggregate Bandwidth	Int. in the range 50 to 99 999 999 in kHz.	C	
S765	• AB Transponder Bandwidth Indicator	True or False.	C	
	Option D: if the <i>Intended Action</i> is for a <i>Transmitting Space Station ACG</i>			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of each <i>Associated Earth Station Antenna</i> receiving the <i>ACG</i>	Up to 20 Char.	M	
S193	• Maximum Total Peak Envelope Power Per Transponder	Dec. in range –10.0 to 30.0 in dBW.	M	
S249	• Transponder Bandwidth Indicator	True or False.	M	
S276	• Downlink Service Area	A compound structure presented in one of the ways described in section 5.	M	
	Option E, if the <i>Intended Action</i> is for a <i>Transmitting Space Station Space To Space ACG</i>			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S776	• Maximum Total Peak Envelope Power Per Transponder	Dec. in range –10.0 to 30.0 in dBW.	M	
S777	• Transponder Bandwidth Indicator	True or False.	M	
	For each <i>Associated Space Station Position</i> receiving the <i>ACG</i> , provide the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S072	• Nominal Longitude of the <i>Geostationary Orbital Position</i> that is the location of the <i>Space Station</i>	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> is aimed at a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
S116	• Designation of the <i>Beam</i> that belongs to the <i>Space Station</i>	Up to 8 Char.	M	The receiving <i>Beam</i> belonging to the <i>Space Station</i> that represents the <i>Associated Space Station Position</i> .
	Option F, if the <i>Intended Action</i> is for a <i>Receiving Space Station Space To Space ACG</i>			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
	For each <i>Associated Space Station Position</i> receiving the <i>ACG</i> , provide the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S072	• Nominal Longitude of the <i>Geostationary Orbital Position</i> that is the location of the <i>Space Station</i>	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> originates from a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
S116	• Designation of the <i>Beam</i> that belongs to the <i>Space Station</i>	Up to 8 Char.	M	The transmitting <i>Beam</i> belonging to the <i>Space Station</i> that represents the <i>Associated Space Station Position</i> .
	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	M	
S334	• Necessary Bandwidth Code	4 Char.	M	
S263	• Total Peak Envelope Power	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory if the <i>Assignment Coordination Group</i> does not contain individual carriers e.g. spread spectrum.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S264	• Maximum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory if the <i>Assignment Coordination Group</i> contains individual carriers.
S265	• Minimum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory unless the Reason For Absence Of Minimum Power is provided.
S267	• Maximum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the Maximum Peak Envelope Power Per Carrier is supplied.
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the Total Peak Envelope Power is supplied.
S268	• Minimum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the Reason For Absence Of Minimum Power Density is provided.
S336	• Maximum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the Maximum Peak Envelope Power Per Carrier is supplied.
S335	• Maximum Power Density - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the Total Peak Envelope Power is supplied.
S371	• Minimum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the Reason For Absence Of Minimum Power Density is provided.
S856	• Carrier To Noise Objective	Dec. in range –10.0 to 25.0 in dB.	R	Mandatory unless the Reason For Absence Of C/N is provided.
S269	• Reason For Absence Of Minimum Power	Text.	R	Mandatory if the Minimum Peak Envelope Power Per Carrier is not provided.
S372	• Reason For Absence Of Minimum Power Density	Text.	R	Mandatory if the minimum power density is not provided.
S373	• Reason For Absence Of C/N	Text.	R	Mandatory if the Carrier To Noise Objective is not provided.

	For each <i>Coordination Agreement</i> sought or reached with respect to the <i>ACG</i> provide the following			
S275	• Status Code	Up to 6 Char.	BR	
S304	• Code of the <i>Provision</i> under which the <i>Coordination Agreement</i> is sought or reached	Up to 12 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is in a band subject to coordination and/or agreement procedures.

	For the <i>Administration</i> that is party to the <i>Coordination Agreement</i> provide the			
S011	• Code	Up to 3 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is in a band subject to coordination and/or agreement procedures
S034	• Code of the Intergovernmental Satellite Organization on whose behalf the Administration has notified.	Up to 3 Char	R	Mandatory as described for RDD S304 if an <i>Intergovernmental Satellite Organization</i> is affected by operation of any of the <i>Space Station's Assignment Coordination Groups</i> .

	For the <i>Beam Frequency Strap</i> that is the subject of the <i>Intended Action</i> provide the			
S610	• Notified Identification Code	Up to 8 Char.	O	Providing the Class of Station Code is not ED, EK or ER, for simple frequency changing transponders in all services – see Note 1 at the head of this table.

	Uplink aspect			
S333	• Value of the <i>Beam Frequency</i>	Frequency.	O	As described for RDD S610.
S116	• Designation of the <i>Beam</i> containing the <i>Beam Frequency</i>	Up to 8 Char.	O	Mandatory as described for RDD S610.

	Downlink aspect			
S333	• Value of the <i>Beam Frequency</i>	Frequency.	O	As described for RDD S610.
S116	• Designation of the <i>Beam</i> containing the <i>Beam Frequency</i>	Up to 8 Char.	O	As described for RDD S610.

	For the <i>Strap Characteristic Set</i> that is the subject of the <i>Intended Action</i> provide the			
S671	• Notified Identifying Code of the <i>Associated Earth Station Antenna</i> that has its satellite link interference characteristics described by the <i>Strap Characteristic Set</i>	Up to 20 Char.	O	Providing the Class of Station Code is not ED, EK or ER, for simple frequency changing transponders in all services – see Note 1 at the head of this table.
S610	• Notified Identification Code for each <i>Beam Frequency Strap</i> that has its satellite link interference characteristics described by the <i>Strap Characteristic Set</i>	Up to 8 Char.	O	As described for RDD S671.
S286	• ESLNT For Highest Ratio Of Transmission Gain To ESLNT	Int. in range 20 to 9 999 999 in Kelvins.	O	As described for RDD S671.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S287	• ESLNT Lowest Value	Int. in range 20 to 9 999 999 in Kelvins.	O	As described for RDD S671.
S288	• Transmission Gain For Highest Ratio Of Transmission Gain To ESLNT	Dec. in range –100.0 to 20.0 in dB.	O	As described for RDD S671.
S289	• Transmission Gain For Lowest ESLNT	Dec. in range –100.0 to 20.0 in dB.	O	As described for RDD S671.
	For each <i>Associated Earth Station Antenna</i> that is the subject of the <i>Intended Action</i> provide the			
S671	• Notified Identifying Code	Up to 20 Char.	M	
S559	• Typical/Specific Indicator	1 Char.	M	
S673	• Geographical Coordinates	Long/Lat (dms).	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.
S676	• Maximum Gain	Dec. in range 0.00 to 70.00 in dBi.	M	
S677	• Beamwidth	Dec. in range 0.00 to 100.0 in degrees.	M	
S165	• Diameter	Dec. in range 1.2 to 10.0 in metres.	R	Mandatory for a transmitting FSS <i>Associated Earth Station Antenna</i> in the band 13.75-14 GHz (minimum Diameter 1.2 m - see RR No. 5.502).
S763	• Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvins.	R	Mandatory for a receiving <i>Associated Earth Station Antenna</i> .
S678	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
S052/ S617	• Codes for each <i>Class Of Station/Nature Of Service Pair</i> of the <i>Associated Earth Station Antenna</i>	2 Char. for each Code.	M	
S041	• Code of the <i>Geographical Area</i> that is the location for the <i>Associated Earth Station Antenna</i>	Up to 3 Char.	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.

4.5 Notification/Coordination of Non-Geostationary Space Stations (Subject to Section II RR Article 9)

This table shows the information that must be supplied for the notification and coordination of non-geostationary space stations and space networks that are subject to the provisions of Section II RR Article 9. It also shows the specific conditions under which it is required by the Radio Regulations.

For FSS systems subject to the provisions of RR Nos. 22.5C, 22.5D or 22.5F, the application of Masks and the subsequent determination of epfd values by the BR will be used to determine if the non-geostationary satellite network meets the epfd limits in RR Article 22.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Space Service Notice</i> provide the			
S011	• Code of the <i>Administration</i> notifying the <i>Space Station</i>	Up to 3 Char.	M	
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf a submission is made for the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if an <i>Intergovernmental Satellite Organization</i> is responsible for the <i>Space Station</i> .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S300	• Occurrence Code	1 Char.	R	Mandatory for RR Article 11 only.
S301	• Purpose Code	1 Char.	M	
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	• Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S768	• Special Section Reference For Last Advance Publication	Up to 8 Char.	M	The special section reference under which the <i>Space Services Notice</i> is published, e.g. RR No 9.11A.
S606	• Special Section Number For Last Advance Publication	4 Char.	M	
S521	• BR IFIC Date For Last Coordination	Date.	R	Mandatory if notification. If coordination, it is provided by the BR.
S522	• BR IFIC Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory if notification. If coordination, it is provided by the BR.
S769	• Special Section Reference For Last Coordination	Up to 8 Char.	R	Mandatory if the provisions of RR No. 9.6 apply. The special section reference under which the <i>Space Services Notice</i> is published, e.g. RR No. 9.11A.
S607	• Special Section Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory if notification.
S775	• BR IFIC Part For Last Notification	1 Char.	BR	
S523	• BR IFIC Date For Last Notification	Date.	BR	
S524	• BR IFIC Number For Last Notification	Int. in range 1 to 9 999.	BR	
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S069	• Name	Up to 20 Char	M	
S086	• Total Number Of Non-geostationary Orbits	Int. in range 1 to 99.	M	
S780	• Minimum Altitude	Int. in range 700 to 36 000 in km.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S781	• Repeating Ground Track Indicator	True or False.	R	Mandatory as described for RDD S780.
S782	• Period Of Repeating Ground Track	Int. in range 36 000 to 180 000 000 in seconds.	R	Mandatory as described for RDD S780 and if RDD S781 = "True".
S835	• Maximum Number Of Satellites Transmitting Simultaneously Into The Northern Hemisphere	Int. in range 1 to 5.	R	Mandatory for a <i>Space Station</i> operating in the FSS and transmitting in the band 3 400-4 200 MHz.
S836	• Maximum Number Of Satellites Transmitting Simultaneously Into The Southern Hemisphere	Int. in range 1 to 5.	R	Mandatory as described for RDD S835.
S783	• Maximum Number Of Satellites Receiving Simultaneously From Any Single Cell	Int. in range 1 to 5.	R	Mandatory as described for RDD S780.
S784	• Average Number Of Associated Earth Stations Transmitting With Overlapping Frequencies	Int. in range 1 to 100 000.	R	Mandatory as described for RDD S780.
S785	• Co-frequency Cell Separation	Int. in range 400 to 1 000 in kms.	R	Mandatory as described for RDD S780.
S786	• Mitigation Technique Code	1 Char.	R	Mandatory as described for RDD S780. Either "W", "C", "S" or "U".
S787	• Mitigation Technique Angle Alpha	Dec. in range 5.00 to 20.00 in degrees.	R	Mandatory as described for RDD S780 if the Mitigation Technique Code = "W" or "C".
S788	• Mitigation Technique Angle X	Dec. in range 0.00 to 10.00 in degrees.	R	Mandatory as described for RDD S780 if the Mitigation Technique Code = "S".
S837	• Mitigation Technique Description	Text.	R	Mandatory as described for RDD S780 if the Mitigation Technique Code = "U".
S789	• Reference Date	Date.	R	Mandatory as described for RDD S780.
S790	• Reference Time	Time.	R	Mandatory as described for RDD S780.
S791	• EPFD _{DOWN} Compliance Indicator	True or False.	R	Mandatory as described for RDD S780.
S842	• Power Density Compliance Indicator In Band 1 164-1 215 MHz	True or False.	R	Mandatory for RNSS operating in the band 1 164-1 215 MHz.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S851	• Operational Characteristics Compliance Indicator	True or False.	R	Mandatory for FSS networks in the band 14-14.5 GHz with <i>Associated Earth Station Antenna</i> operating in the Aeronautical-Mobile Satellite Service
S792	• Calculated Aggregate Power Density In Band 5 030-5 150 MHz	Dec. in the range –150.0 to –124.5 in dB(W/(m ² · 150 kHz)).	R	Mandatory for RNSS operating in the band 5 010-5 030 MHz.
S868	• Calculated Equivalent Power Density In Band 4 990-5 000 MHz	Dec. in the range –270.0 to –245.0 in dB(W/(m ² · 10 MHz)).	R	Mandatory for RNSS operating in the band 5 010-5 030 MHz.
S796	• Calculated Aggregate Power Density In Band 15.35-15.4 GHz	Dec. in the range –200.0 to –156.0 in dB(W/(m ² · 50 MHz)).	R	Mandatory for FSS in the band 15.43-15.63 GHz.
S844	• Calculated Mean Power Density In Band 35.5-36 GHz	Dec. in the range –100.0 to –73.3 in dB(W/(m ² · 500 MHz)).	R	Mandatory for Earth exploration-Satellite Service (active) or Space Research Service (active) operating in the band 15.43-15.63 GHz.
S845	• Calculated Equivalent Power Density In Band 42.5-43.5 GHz	Dec. in the range –250.0 to –230.0 in dB(W/(m ² · 1 GHz)).	R	Mandatory for FSS or BSS operating in the band 41.5-42.5 GHz, if RDD S850 = “S”.
S846	• Calculated Equivalent Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz	Dec. in the range –270.0 to –209.0 in dB(W/(m ² · 500 kHz)).	R	Mandatory for FSS or BSS operating in the band 41.5-42.5 GHz. The pfd limit depends on whether RDD S850 = “S” or “V”.
S850	• Type of Radio astronomy Station In Band 42.5-43.5 GHz	1 Char.	R	Mandatory as described for RDD S846. Either “S” or “V”.
S029	• Code of the <i>Operator</i> providing the operational control of the <i>Space Station</i>	3 Char. in numeric range 001 to 999.	M	
S021	• Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Space Station</i>	Up to 2 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
	For each <i>Latitude Range Category</i> limiting the number of non-geostationary satellites transmitting to any given point for the <i>Space Station</i> provide the			
S797	• Start Latitude	Int. in range –90 to 89 in degrees.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S798	• End Latitude	Int. in range –89 to 90 in degrees.	R	Mandatory as described for RDD S797.
S799	• Maximum Number Of Satellites	Int. in range 2 to 10.	R	Mandatory as described for RDD S797.
	For each <i>PFD Mask</i> that is subject of the <i>Intended Action</i> provide the			
S800	• BR Identification Code	10 Char.	BR	
S801	• Notified Identification Code	Up to 20 Char.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S802	• Pattern Type	1 Char.	R	Mandatory as described for RDD S801. One of “A”, “X” or “E”.
S803	• Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory as described for RDD S801.
S804	• Lowest Usable Frequency	Frequency.	R	Mandatory as described for RDD S801.
S829	• Highest Usable Frequency	Frequency.	R	Mandatory as described for RDD S801.
	For each <i>Earth To Space e.i.r.p. Mask</i> that is subject of the <i>Intended Action</i> provide the			
S805	• BR Identification Code	10 Char.	BR	
S806	• Notified Identification Code	Up to 20 Char.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S807	• Pattern	A Radiation Pattern as described in section 5.	R	Mandatory as described for RDD S806.
S808	• Associated Earth Station Planned Minimum Elevation Angle	Dec. in range 0.0 to 10.0 in degrees.	R	Mandatory as described for RDD S806.
S809	• Associated Earth Station Planned Minimum Beam Axis To GSO Arc Separation Angle	Dec. in range 5.0 to 20.0 in degrees.	R	Mandatory as described for RDD S806.
S810	• Lowest Usable Frequency	Frequency.	R	Mandatory as described for RDD S806.
S811	• Highest Usable Frequency	Frequency.	R	Mandatory as described for RDD S806.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Space To Earth e.i.r.p. Mask</i> that is subject of the <i>Intended Action</i> provide the			
S812	• BR Identification Code	10 Char.	BR	
S814	• Notified Identification Code	Up to 20 Char.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S815	• Pattern	A Radiation Pattern as described in section 5.	R	Mandatory as described for RDD S814.
S816	• Lowest Usable Frequency	Frequency.	R	Mandatory as described for RDD S814.
S817	• Highest Usable Frequency	Frequency.	R	Mandatory as described for RDD S814.
	For each <i>Non-geostationary Orbit</i> that is the subject of the <i>Intended Action</i> provide the			
S717	• Notified Identification Code	2 Char.	M	
S084	• Reference Body Code	1 Char.	M	
S087	• Number Of Satellites In Orbit	Int. in range 1 to 99.	M	
S096	• Inclination Angle	Dec. in range 0.00 to 179.99 in degrees.	M	
S097	• Right Ascension Of The Ascending Node	Dec. in range 0.00 to 359.99 in degrees.	M	
S221	• Initial Longitude Of The Ascending Node	Dec. in range -180.00 to 180.00 in degrees.	R	Mandatory for FSS systems subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S222	• Longitudinal Tolerance Of The Ascending Node	Dec. in range 0.10 to 0.50 in degrees.	R	Mandatory as described for RDD S221.
S223	• Precession Rate Indicator	True or False.	R	Mandatory as described for RDD S221.
S224	• Administration's Selected Precession Rate Per Day	Dec. in range 0.01 to 0.50 in degrees.	R	Mandatory as described for RDD S221 if the Precession Rate Indicator is "True".
S098	• Apogee Altitude	Int. in range 500 to 99 999 999 in km.	M	
S099	• Perigee Altitude	Int. in range 500 to 99 999 999 in km.	M	
S100	• Perigee Argument	Dec. in range 0.0 to 359.9 in degrees.	M	
S103	• Satellite Period	Hrs and Mins.	M	
	For each <i>Non-Geostationary Satellite Position</i> of a <i>Non-geostationary Orbit</i> provide the			
S225	• Notified Identification Code	2 Char.	M	
S106	• Initial Phase Angle	Dec. in range 0.0 to 359.9 in degrees.	M	
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	• Designation	Up to 8 Char.	M	
S118	• Steerable Indicator	True or False.	M	
S115	• Emission/Reception Indicator	1 Char.	M	
S121	• Orientation Angle Alpha	Dec. in range 0.0 to 359.9 in degrees.	M	
S368	• Orientation Angle Beta	Dec. in range 0.0 to 90.0 in degrees.	M	
S124	• Maximum Co-polar Gain	Dec. in range 0.0 to 50.0 in dBi.	M	
S122	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
S126	• Gain Versus Elevation Angle Diagram	Diagram.	M	
S127	• Spreading Loss Versus Elevation Angle	Either as an equation or diagram.	M	
S601	• Maximum Beam Peak EIRP - 4 kHz	Dec in range -30.0 to 10.0 in dB(W/4 kHz).	R	Mandatory for a transmitting <i>Beam</i> .
S602	• Maximum Beam Peak EIRP - 1 MHz	Dec in range -10.0 to 30.0 in dB(W/1 MHz).	R	Mandatory for a transmitting <i>Beam</i> .
S603	• Average Beam Peak EIRP - 4 kHz	Dec in range -30.0 to 10.0 in dB(W/4 kHz).	R	Mandatory for a transmitting <i>Beam</i> .
S604	• Average Beam Peak EIRP - 1 MHz	Dec in range -10.0 to 30.0 in dB(W/1 MHz).	R	Mandatory for a transmitting <i>Beam</i> .
S728	• Calculated Peak PFD	Dec in range -140.0 to -180.0 in dB(W/(m ² · 4 kHz)).	R	Mandatory for the FSS in the band 6 700-7 075 MHz.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each Non-geostationary Orbit that uses the transmission characteristics defined by the Beam provide the			
S717	• Notified Identification Code	2 Char.	M	
	For each Non-geostationary Satellite Position contained in the Non-geostationary Orbit that uses the transmission characteristics defined by the Beam provide the			
S225	• Notified Identification Code	2 Char.	R	Mandatory for each Non-geostationary Satellite Position using the Beam , if the Beam is not common to every Non-geostationary Satellite Position in the Non-geostationary Orbit .
	For the Assignment Coordination Group (ACG) that is the subject of the Intended Action provide the following information, including only one of the options from C, D, E or F.			
S186	• BR Identification Code	10 Char.	R	Mandatory if Space Service Notice's Intended Action Code = "M" or "S". Provided by BR if Space Service Notice's Intended Action Code = "A".
S187	• Date Of Bringing Into Use For Non-geostationary Operation	Date.	M	
S188	• Period Of Validity	Int. in range 1 to 30 in years.	M	
S190	• Bandwidth	Int. in range 50 to 99 999 999 in kHz.	M	
S189	• Polarization Code	Up to 2 Char.	M	
S364	• Polarization Linear Angle	Int. in range 0 to 359 in degrees.	R	Mandatory if the Polarization Code = "L".
S195	• Spectrum Mask	Diagram.	M	
S196	• Baseband Lower Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	C	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S197	• Baseband Upper Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	C	As described for RDD S196.
S640	• Type Of Modulation	Text.	M	
S641	• Type Of Amplitude Modulation	Text.	C	
S642	• Interference Study Information	Text.	C	
S199	• Multiplex Type (Video/Sound)	Text.	C	For a carrier frequency modulated by a television signal.
S327	• TV System And Colour Standard Description	Text.	C	
S204	• Digital Signal Transmitted Bit Rate	Dec. in range 0.0 to 9 999 999.9 in kBit/s.	C	
S205	• Digital Signal Number Of Phases	Int. in range 1 to 10.	C	
S201	• Pre-emphasis P-P Frequency Deviation	Dec. in range 5.0 to 15.0 in MHz.	C	For a carrier frequency modulated by a television signal.
S326	• Pre-emphasis RMS Frequency Deviation	Dec. in range 20.0 to 300.0 in kHz.	C	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S202	• Pre-emphasis Characteristics	Diagram.	C	For a carrier frequency modulated by a television signal.
S200	• Energy Dispersal Frequency Deviation	Dec. in range 0.1 to 4.0 in MHz.	C	For a frequency modulated carrier.
S324	• Energy Dispersal Sweep Frequency	Int. in range 10 to 2 000 in Hz.	C	As described for RDD S200.
S325	• Energy Dispersal Waveform	Text.	C	As described for RDD S200.
S857	• Energy Dispersal Description	Text.	C	For carriers not using frequency modulation.
S855	• Non-conformity Indicator	True or False	R	Mandatory if RDD S723 is to be filed under RR No. 4.4.
S052/ S617	• The Codes for each Class Of Station/Nature Of Service Pair used to classify the operation of the ACG	2 Char for each Code.	M	
S723	• Value of each ACG Frequency contained in the ACG	Frequency.	M	
S716	• Carrier Frequency of each ACG Frequency contained in the ACG	Frequency.	C	Only for asymmetric or composite modulation where the Carrier Frequency is different from RDD S723.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	Option C: if the <i>Intended Action</i> is for a <i>Receiving Space Station ACG</i>			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of each <i>Associated Earth Station Antenna</i> transmitting the <i>ACG</i>	Up to 20 Char.	M	
S806	• Notified Identification Code of the <i>Earth To Space EIRP Mask</i> that defines the spectral radiation constraint for the receiving <i>ACG</i>	Up to 20 Char.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S192	• Receiving System Noise Temperature	Int. in range 300 to 6 000 in Kelvins.	M	
S329	• Multiple Access Indicator	1 Char.	M	
S384	• Uplink Service Area	A compound structure presented in one of the ways described in section 5.	M	
S600	• Maximum Aggregate Power	Dec. in range 0.0 to 40.0 in dBW.	C	
S646	• Aggregate Bandwidth	Int. in the range 50 to 9 999 9999 in kHz.	C	
S765	• AB Transponder Bandwidth Indicator	True or False.	C	
	Option D: if the <i>Intended Action</i> is for a <i>Transmitting Space Station ACG</i>			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of the each <i>Associated Earth Station Antenna</i> receiving the <i>ACG</i>	Up to 20 Char.	M	
S801	• Notified Identification Code of the <i>PFD Mask</i> that defines the spectral radiation constraint for the transmitting <i>ACG</i>	Up to 20 Char.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S814	• Notified Identification Code of the <i>Space To Earth EIRP Mask</i> that defines the spectral radiation constraint for the transmitting <i>ACG</i>	Up to 20 Char.	R	Mandatory for FSS systems in frequency bands subject to the Provisions of RR Nos. 22.5C, 22.5D or 22.5F.
S193	• Maximum Total Peak Envelope Power Per Transponder	Dec. in range –10.0 to 30.0 in dBW.	M	
S249	• Transponder Bandwidth Indicator	True or False.	M	
S276	• Downlink Service Area	A compound structure presented in one of the ways described in section 5.	M	
S214	• Affected Area	Diagram.	R	Mandatory for <i>Space Stations</i> in the Mobile Satellite Service.
	Option E: if the <i>Intended Action</i> is for a <i>Transmitting Space Station Space To Space ACG</i>			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S776	• Maximum Total Peak Envelope Power Per Transponder	Dec. in range –10.0 to 30.0 in dBW.	M	
S777	• Transponder Bandwidth Indicator	True or False.	M	
	For each <i>Associated Space Station Position</i> receiving the <i>ACG</i> , provide the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S072	• Nominal Longitude of the <i>Geostationary Orbital Position</i> that is the location of the <i>Space Station</i>	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> is aimed at a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
S116	• Designation of the <i>Beam</i> that belongs to the <i>Space Station</i>	Up to 8 Char.	M	The receiving <i>Beam</i> belonging to the <i>Space Station</i> that represents the <i>Associated Space Station Position</i> .
	Option F: if the <i>Intended Action</i> is for a <i>Receiving Space Station Space To Space ACG</i>			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
	For each <i>Associated Space Station Position</i> transmitting the <i>ACG</i> , provide the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S072	• Nominal Longitude of the <i>Geostationary Orbital Position</i> that is the location of the <i>Space Station</i>	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> originates from a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
S116	• Designation of the <i>Beam</i> that belongs to the <i>Space Station</i>	Up to 8 Char.	M	The transmitting <i>Beam</i> belonging to the <i>Space Station</i> that represents the <i>Associated Space Station Position</i> .

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	M	
S334	• Necessary Bandwidth Code	4 Char.	M	
S263	• Total Peak Envelope Power	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory if the <i>Assignment Coordination Group</i> does not contain individual carriers e.g. spread spectrum.
S264	• Maximum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory if the <i>Assignment Coordination Group</i> contains individual carriers.
S265	• Minimum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory unless the <i>Reason For Absence Of Minimum Power</i> is provided.
S267	• Maximum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the <i>Maximum Peak Envelope Power Per Carrier</i> is supplied.
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the <i>Total Peak Envelope Power</i> is supplied.
S268	• Minimum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the <i>Reason For Absence Of Minimum Power Density</i> is provided.
S336	• Maximum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the <i>Maximum Peak Envelope Power Per Carrier</i> is supplied.
S335	• Maximum Power Density - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the <i>Total Peak Envelope Power</i> is supplied.
S371	• Minimum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the <i>Reason For Absence Of Minimum Power Density</i> is provided.
S856	• Carrier To Noise Objective	Dec. in range –10.0 to 25.0 in dB.	R	Mandatory unless the <i>Reason For Absence Of C/N</i> is provided.
S269	• Reason For Absence Of Minimum Power	Text.	R	Mandatory unless the <i>Minimum Peak Envelope Power Per Carrier</i> is provided.
S372	• Reason For Absence Of Minimum Power Density	Text.	R	Mandatory unless the minimum power density is provided.
S373	• Reason For Absence Of C/N	Text.	R	Mandatory unless the <i>Carrier To Noise Objective</i> is provided.
	For each <i>Coordination Agreement</i> sought or reached with respect to the <i>ACG</i> provide the following			
S275	• Status Code	Up to 6 Char.	BR	
S304	• Code of the <i>Provision</i> under which the <i>Coordination Agreement</i> is sought or reached	Up to 12 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is in a band subject to coordination and/or agreement procedures.
	For the <i>Administration</i> that is party to the <i>Coordination Agreement</i> provide the			
S011	• Code	Up to 3 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is in a band subject to coordination and/or agreement procedures
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf the <i>Administration</i> has notified.	Up to 3 Char	R	Mandatory as described for RDD S304 if an <i>Intergovernmental Satellite Organization</i> is affected by operation of any of the <i>Space Station's Assignment Coordination Groups</i> .
	For each <i>Associated Earth Station Antenna</i> that is the subject of the <i>Intended Action</i> provide the			
S671	• Notified Identifying Code	Up to 20 Char.	M	
S359	• Typical/Specific Indicator	1 Char.	M	
S673	• Geographical Coordinates	Long/Lat (dms).	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.
S763	• Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvins.	R	Mandatory for a receiving <i>Associated Earth Station Antenna</i> .
S676	• Maximum Gain	Dec. in range 0.00 to 70.00 in dBi.	M	
S165	• Diameter	Dec. in range 1.2 to 10.0 in metres.	R	Mandatory for a transmitting FSS <i>Associated Earth Station Antenna</i> in the band 13.75-14 GHz (minimum <i>Diameter</i> 4.5 m – see RR No. 5.502).
S677	• Beamwidth	Dec. in range 0.00 to 100.0 in degrees.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S678	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
S052/ S617	• Codes for each <i>Class Of Station/Nature Of Service Pair</i> of the <i>Associated Earth Station Antenna</i>	2 Char. for each Code.	M	
S041	• Code of the <i>Geographical Area</i> that is the location for the <i>Associated Earth Station Antenna</i>	Up to 3 Char.	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.

4.6 Notification/Coordination of Non-Geostationary Space Stations (Not Subject to Section II RR Article 9)

This table shows the information that must be supplied for the notification and coordination of non-geostationary space stations and space networks that are not subject to the provisions of RR No. 9.11A. It also shows the specific conditions under which it is required by the Radio Regulations.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S011	For each <i>Space Service Notice</i> provide the • Code of the <i>Administration</i> notifying the <i>Space Station</i>	Up to 3 Char.	M	
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf a submission is made for the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if an <i>Intergovernmental Satellite Organization</i> is responsible for the <i>Space Station</i> .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S300	• Occurrence Code	1 Char.	R	Mandatory for RR Article 11 only.
S301	• Purpose Code	1 Char.	M	
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	• Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S768	• Special Section Reference For Last Advance Publication	Up to 8 Char.	M	The special section reference under which the <i>Space Services Notice</i> is published, e.g. API/A/.
S606	• Special Section Number For Last Advance Publication	4 Char.	M	
S521	• BR IFIC Date For Last Coordination	Date.	R	Mandatory if notification. If coordination, it is provided by the BR.
S522	• BR IFIC Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory if notification. If coordination, it is provided by the BR.
S769	• Special Section Reference For Last Coordination	Up to 8 Char.	R	Mandatory if the provisions of RR No. 9.21 apply.
S607	• Special Section Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory if the provisions of RR No. 9.21 apply.
S775	• BR IFIC Part For Last Notification	1 Char.	BR	
S523	• BR IFIC Date For Last Notification	Date.	BR	
S524	• BR IFIC Number For Last Notification	Int. in range 1 to 9999.	BR	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S069	• Name	Up to 20 Char.	M	
S086	• Total Number Of Non-geostationary Orbits	Int. in range 1 to 99.	M	
S835	• Maximum Number Of Satellites Transmitting Simultaneously Into The Northern Hemisphere	Int. in range 1 to 5.	R	Mandatory for a <i>Space Station</i> operating in the FSS and transmitting in the band 3 400-4 200 MHz.
S836	• Maximum Number Of Satellites Transmitting Simultaneously Into The Southern Hemisphere	Int. in range 1 to 5.	R	Mandatory as described for RDD S835.
S029	• Code of the <i>Operator</i> providing the operational control of the <i>Space Station</i>	3 Char. in numeric range 001 to 999.	M	
S021	• Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Space Station</i>	Up to 2 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
	For each <i>Non-geostationary Orbit</i> that is the subject of the <i>Intended Action</i> provide the			
S717	• Notified Identification Code	2 Char.	M	
S084	• Reference Body Code	1 Char.	M	
S087	• Number Of Satellites In Orbit	Int. in range 1 to 99.	M	
S096	• Inclination Angle	Dec. in range 0.00 to 179.99 in degrees.	M	
S098	• Apogee Altitude	Int. in range 500 to 99 999 999 in km.	M	
S099	• Perigee Altitude	Int. in range 500 to 99 999 999 in km.	M	
S103	• Satellite Period	Hrs and Mins.	M	
	For each <i>Non-Geostationary Satellite Position</i> of a <i>Non-geostationary Orbit</i> provide the			
S225	• Notified Identification Code	2 Char.	R	Mandatory for <i>Space Stations</i> where any <i>Beam</i> is not common to every <i>Non-geostationary Satellite Position</i> of a <i>Non-geostationary Orbit</i> .
S106	• Initial Phase Angle	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory as described for RDD S225.
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	• Designation	Up to 8 Char.	M	
S118	• Steerable Indicator	True or False.	M	
S115	• Emission/Reception Indicator	1 Char.	M	
S124	• Maximum Co-polar Gain	Dec. in range 0.0 to 50.0 in dBi.	M	
S122	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
	For each <i>Non-geostationary Orbit</i> that uses the transmission characteristics defined by the <i>Beam</i> provide the			
S717	• Notified Identification Code	2 Char.	M	
	For each <i>Non-geostationary Satellite Position</i> contained in the <i>Non-geostationary Orbit</i> that uses the transmission characteristics defined by the <i>Beam</i> provide the			
S225	• Notified Identification Code	2 Char.	R	Mandatory for each <i>Non-geostationary Satellite Position</i> using the <i>Beam</i> , if the <i>Beam</i> is not common to every <i>Non-geostationary Satellite Position</i> in the <i>Non-geostationary Orbit</i> .

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For the <i>Assignment Coordination Group (ACG)</i> that is the subject of the <i>Intended Action</i> provide the following information, including only one of the options from C, D, E or F.			
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S187	• Date Of Bringing Into Use For Non-geostationary Operation	Date.	M	
S188	• Period Of Validity	Int. in range 1 to 30 in years.	M	
S190	• Bandwidth	Int. in range 50 to 99 999 999 in kHz.	M	
S189	• Polarization Code	Up to 2 Char.	M	
S364	• Polarization Linear Angle	Int. in range 0 to 359 in degrees.	R	Mandatory if the Polarization Code = "L".
S196	• Baseband Lower Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	C	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S197	• Baseband Upper Frequency Limit	Dec. in range 0.000 to 9 999 999.999 in kHz.	C	As described for RDD S196.
S640	• Type Of Modulation	Text.	C	
S641	• Type Of Amplitude Modulation	Text.	C	
S642	• Interference Study Information	Text.	C	
S199	• Multiplex Type (Video/Sound)	Text.	C	For a carrier frequency modulated by a television signal.
S327	• TV System and Colour Standard Description	Text.	C	
S204	• Digital Signal Transmitted Bit Rate	Dec. in range 0.0 to 9 999 999.9 in kBit/s.	C	
S205	• Digital Signal Number Of Phases	Int. in range 1 to 10.	C	
S201	• Pre-emphasis P-P Frequency Deviation	Dec. in range 5.0 to 15.0 in MHz.	C	For a carrier frequency modulated by a television signal.
S326	• Pre-emphasis RMS Frequency Deviation	Dec. in range 20.0 to 300.0 in kHz.	C	For a carrier frequency modulated by FDM/FM telephony baseband or a signal that can be represented by a multichannel telephony baseband.
S202	• Pre-emphasis Characteristics	Diagram.	C	For a carrier frequency modulated by a television signal.
S200	• Energy Dispersal Frequency Deviation	Dec. in range 0.1 to 4.0 in MHz.	C	For a frequency modulated carrier.
S324	• Energy Dispersal Sweep Frequency	Int. in range 10 to 2 000 in Hz.	C	As described for RDD S200.
S325	• Energy Dispersal Waveform	Text.	C	As described for RDD S200.
S857	• Energy Dispersal Description	Text.	C	For carriers not using frequency modulation.
S855	• Non-conformity Indicator	True or False.	R	Mandatory if RDD S723 is to be filed under RR No. 4.4.
S052/ S617	• The Codes for each <i>Class Of Station/Nature Of Service Pair</i> used to classify the operation of the <i>ACG</i>	2 Char for each Code.	M	
S723	• Value of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	M	
S716	• Carrier Frequency of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	C	Only for asymmetric or composite modulation where the Carrier Frequency is different from RDD S723.
----- Option C: if the <i>Intended Action</i> is for a <i>Receiving Space Station ACG</i>				
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of each <i>Associated Earth Station Antenna</i> transmitting the <i>ACG</i>	Up to 20 Char.	M	
S192	• Receiving System Noise Temperature	Int. in range 300 to 6 000 in Kelvins.	M	
S384	• Uplink Service Area	A compound structure presented in one of the ways described in section 5.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For the <i>Assignment Coordination Group (ACG)</i> that is the subject of the <i>Intended Action</i> provide the following information, including only one of the options from C, D, E or F.			
S646	• Aggregate Bandwidth	Int. in the range 50 to 99 999 999 in kHz.	C	Required if the <i>Assignment Coordination Group</i> is in a band subject to agreement procedures.
S765	• AB Transponder Bandwidth Indicator	True or False.	C	Required if the <i>Assignment Coordination Group</i> is in a band subject to agreement procedures.
	Option D: if the <i>Intended Action</i> is for a <i>Transmitting Space Station ACG</i>			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of the each <i>Associated Earth Station Antenna</i> receiving the <i>ACG</i>	Up to 20 Char.	M	
S193	• Maximum Total Peak Envelope Power Per Transponder	Dec. in range –10.0 to 30.0 in dBW.	M	
S249	• Transponder Bandwidth Indicator	True or False.	M	
S276	• Downlink Service Area	A compound structure presented in one of the ways described in section 5.	M	
	Option E: if the <i>Intended Action</i> is for a <i>Transmitting Space Station Space To Space ACG</i>			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S776	• Maximum Total Peak Envelope Power Per Transponder	Dec. in range –10.0 to 30.0 in dBW.	M	
S777	• Transponder Bandwidth Indicator	True or False.	M	
	For each <i>Associated Space Station Position</i> receiving the <i>ACG</i> , provide either the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S072	• Nominal Longitude of the <i>Geostationary Orbital Position</i> that is the location of the <i>Space Station</i>	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> is aimed at a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
S116	• Designation of the <i>Beam</i> that belongs to the <i>Space Station</i>	Up to 8 Char.	M	The receiving <i>Beam</i> belonging to the <i>Space Station</i> that represents the <i>Associated Space Station Position</i> .
	Option F: if the <i>Intended Action</i> is for a <i>Receiving Space Station Space To Space ACG</i>			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
	For each <i>Associated Space Station Position</i> transmitting the <i>ACG</i> , provide either the			
S069	• Name of the <i>Space Station</i> that represents the <i>Associated Space Station Position</i>	10 Char.	M	
S072	• Nominal Longitude of the <i>Geostationary Orbital Position</i> that is the location of the <i>Space Station</i>	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> originates from a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
S116	• Designation of the <i>Beam</i> that belongs to the <i>Space Station</i>	Up to 8 Char.	M	The transmitting <i>Beam</i> belonging to the <i>Space Station</i> that represents the <i>Associated Space Station Position</i> .
	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	M	
S334	• Necessary Bandwidth Code	4 Char.	M	
S263	• Total Peak Envelope Power	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory if the <i>Assignment Coordination Group</i> does not contain individual carriers e.g. spread spectrum.
S264	• Maximum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory if the <i>Assignment Coordination Group</i> contains individual carriers.
S265	• Minimum Peak Envelope Power Per Carrier	Dec. in range –10.0 to 40.0 in dBW.	R	Mandatory unless the Reason For Absence Of Minimum Power is provided.
S267	• Maximum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the Maximum Peak Envelope Power Per Carrier is supplied.
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the Total Peak Envelope Power is supplied.
S268	• Minimum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the Reason For Absence Of Minimum Power Density is provided.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S336	• Maximum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the Maximum Peak Envelope Power Per Carrier is supplied.
S335	• Maximum Power Density - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the Total Peak Envelope Power is supplied.
S371	• Minimum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the Reason For Absence Of Minimum Power Density is provided.
S856	• Carrier To Noise Objective	Dec. in range –10.0 to 25.0 in dB.	R	Mandatory unless the Reason For Absence Of C/N is provided.
S269	• Reason For Absence Of Minimum Power	Text.	R	Mandatory unless the Minimum Peak Envelope Power Per Carrier is provided.
S372	• Reason For Absence Of Minimum Power Density	Text.	R	Mandatory unless the minimum power density is provided.
S373	• Reason For Absence Of C/N	Text.	R	Mandatory unless the Carrier To Noise Objective is provided.
	For each Coordination Agreement sought or reached with respect to the ACG provide the following			
S275	• Status Code	Up to 6 Char.	BR	
S304	• Code of the Provision under which the Coordination Agreement is sought or reached	Up to 12 Char.	R	Mandatory for notification or if the Assignment Coordination Group is subject to agreement procedures.
	For the Administration that is party to the Coordination Agreement provide the			
S011	• Code	Up to 3 Char.	R	Mandatory for notification or if the Assignment Coordination Group is in a band subject to coordination and/or agreement procedures.
S034	• Code of the Intergovernmental Satellite Organization on whose behalf the Administration has notified.	Up to 3 Char.	R	Mandatory as described for RDD S304 if an Intergovernmental Satellite Organization is affected by operation of any of the Space Station's Assignment Coordination Groups .
	For each Associated Earth Station Antenna that is the subject of the Intended Action provide the			
S671	• Notified Identifying Code	Up to 20 Char.	M	
S559	• Typical/Specific Indicator	1 Char.	M	
S673	• Geographical Coordinates	Lat/Long (dms).	R	Mandatory if the Associated Earth Station Antenna is not a typical antenna.
S676	• Maximum Gain	Dec. in range 0.00 to 70.00 in dBi.	M	
S677	• Beamwidth	Dec. in range 0.00 to 100.00 in degrees.	M	
S678	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
S763	• Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvins.	R	Mandatory for a receiving Associated Earth Station Antenna .
S052/ S617	• Codes for each Class Of Station/Nature Of Service Pair of the Associated Earth Station Antenna	2 Char. for each Code.	M	
S041	• Code of the Geographical Area that is the location for the Associated Earth Station Antenna	Up to 3 Char.	R	Mandatory if the Associated Earth Station Antenna is not a typical antenna.

4.7 Notification/Coordination of an Earth Station Including Notification under RR Appendices 30A and 30B

This table shows the information that must be supplied for the notification and coordination of earth stations together with the specific conditions under which it is required by the Radio Regulations and applicable Plans.

The table is applicable to all earth stations including those in the BSS Planned Bands that are subject to the procedures contained in RR Appendix 30A and in the FSS Planned Bands which are subject to the procedures contained in RR Appendix 30B.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Space Service Notice</i> provide the			
S011	Code of the <i>Administration</i> notifying the Earth Station	Up to 3 Char.	M	
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S300	• Occurrence Code	1 Char.	R	Mandatory for RR Article 1.1 only.
S301	• Purpose Code	1 Char.	M	
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 999.	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	• Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = S and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S768	• Special Section Reference For Last Advance Publication	Up to 8 Char.	M	The special section reference under which the <i>Space Services Notice</i> is published, e.g. AR11/A.
S606	• Special Section Number For Last Advance Publication	4 Char.	M	
S769	• Special Section Reference For Last Coordination	Up to 8 Char.	R	Mandatory if the relevant provisions of Nos. 9.6 or Articles 5 or 7 of RR Appendix 30A, or Article 6 of RR Appendix 30B apply. For notification of an earth station the special section reference under which the <i>Space Services Notice</i> is published has to be provided, except in the case of RR No. 9.7A where the reference to the earth station is provided.
S607	• Special Section Number For Last Coordination	Int. in range 1 to 999.	R	Mandatory as described for RDD S769.
S775	• BR IFIC Part For Last Notification	1 Char.	BR	
S523	• BR IFIC Date For Last Notification	Date.	BR	
S524	• BR IFIC Number For Last Notification	Int. in range 1 to 999.	BR	
	For the <i>Earth Station Antenna</i> that is the subject of the <i>Space Service Notice</i> provide the			
S148	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S149	• Notified Identification Code	Up to 20 Char.	M	
S157	• Typical/Specific Indicator	1 Char.	M	
S159	• Geographical Coordinates	Long/Lat (dms).	R	Mandatory if the <i>Earth Station Antenna</i> is a specific antenna.
S839	• Altitude Above Mean Sea Level	Int. in range -1 000 to 9 848 in metres.	R	Mandatory for notification if the <i>Earth Station Antenna</i> is a specific antenna but, only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S163	• Maximum Gain	Dec. in range 0.0 to 70.0 dBi.	M	
S164	• Beamwidth	Dec. in range 0.00 to 10.00 in degrees.	R	Mandatory for notification but, only mandatory for coordination not subject to the provisions of RR No. 9.7A.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S840	• Diameter	Dec. in range 1.2 to 10.0 in metres.	R	Mandatory for notification if the FSS <i>Earth Station Antenna</i> is a specific antenna in the band 13.75-14 GHz (see RR No. 5.502) but only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S167	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	For a receiving <i>Earth Station Antenna</i> subject to the provisions of RR No. 9.7A the reference radiation pattern is to be provided.
S169	• Operational Sector Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	R	Mandatory for notification if the <i>Earth Station Antenna</i> is a specific antenna operating to an associated <i>Space Station</i> in the geostationary orbit but, only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S170	• Operational Sector End Azimuth	Dec. in range 0.1 to 360.0 in degrees.	R	Mandatory as described for RDD S169.
S168	• Planned Minimum Elevation Angle	Dec. in range 0.0 to 90.0 in degrees.	R	Mandatory as described for RDD S169.
S150	• Minimum Elevation Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory if the associated <i>Space Station</i> is in a non-geostationary orbit.
S171	• Horizon Elevation Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory for notification if the <i>Earth Station Antenna</i> is a specific antenna but, only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S144	Horizon Distance Pattern	A compound structure presented in one of the ways described in section 5.	O	
S616	• Associated Space Station Longitude	Dec. in range –180.00 to 180.00 in degrees.	R	Mandatory if the <i>Beam</i> originates from a <i>Space Station</i> in a <i>Geostationary Orbital Position</i> .
S841	• Power Density Compliance Indicator	True or False.	R	Mandatory for a specific FSS <i>Earth Station Antenna</i> transmitting to a geostationary <i>Space Station</i> in the frequency band 13.75-14 GHz if RDD S840 is less than 4.5 m.
S069	• Name of the <i>Space Station</i> that is associated with the <i>Earth Station Antenna</i>	Up to 20 Char.	M	
S029	• Code of the <i>Operator</i> providing the operational control of the <i>Earth Station Antenna</i>	3 Char. in numeric range 001 to 999.	M	
S021	• Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Earth Station Antenna</i>	Up to 2 Char.	M	
S041	• Code of the <i>Geographical Area</i> that is the location for the <i>Earth Station Antenna</i>	Up to 3 Char.	R	Mandatory if the <i>Earth Station Antenna</i> is a specific antenna.
	For each <i>Coordination Contour</i> that identifies the <i>Earth Station Antenna</i> 's requirement for coordination provide the			
S759	• Frequency Band	2 Dec. Nos. in the range 100.0 to 105 000.0 in MHz.	R	Mandatory for notification.
S758	• Purpose	Text.	R	Mandatory as described for RDD S759.
S173	• Propagation Mode 1 Contour	Diagram.	R	Mandatory as described for RDD S759 if a Predetermined Distance Contour is not provided.
S322	• Propagation Mode 2 Contour	Diagram.	R	Mandatory as described for RDD S759 for <i>Earth Station Antenna</i> operating to a geostationary <i>Space Station</i> or non-tracking directional <i>Earth Station Antenna</i> operating to a non-geostationary <i>Space Station</i> .
S323	• Predetermined Distance Contour	Diagram.	R	Mandatory as described for RDD S759 for mobile <i>Earth Station Antenna</i> subject to the provisions of Table 10 in Annex 7 of RR Appendix 7.
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	• Designation	Up to 8 Char.	M	
S115	• Emission/Reception Indicator	1 Char.	R	Mandatory for notification, but only mandatory for coordination not subject to the provisions of RR No. 9.7A.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For the <i>Assignment Coordination Group (ACG)</i> that is the subject of the <i>Intended Action</i> provide the following information, including only one of the options from A, B .			
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S187	• Date Of Bringing Into Use For Non-geostationary Operation	Date.	R	Mandatory if the associated <i>Space Station</i> is in a non-geostationary orbit.
S718	• Date Of Bringing Into Use For Geostationary Operation	Date.	R	Mandatory if the associated <i>Space Station</i> is in a geostationary orbit.
S190	• Bandwidth	Int. in range 50 to 99 999 999 in kHz.	M	
S189	Polarization Code	Up to 2 Char.	R	Mandatory for notification, but only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S364	• Polarization Linear Angle	Int. in range 0 to 359 in degrees.	R	Mandatory if the Polarization Code = "L" for notification, but only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S855	• Non-conformity Indicator	True or False.	R	Mandatory if RDD S723 is to be filed under RR No. 4.4.
S052/ S617	• The Codes for each <i>Class Of Station/Nature Of Service Pair</i> used to classify the operation of the <i>ACG</i>	2 Char for each Code.	M	
S723	• Value of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	M	
S716	• Carrier Frequency of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	C	Only for asymmetric or composite modulation where the Carrier Frequency is different from RDD S723.

	Option A: if the <i>Intended Action</i> is for a <i>Transmitting Earth Station ACG</i>			
S771	• Maximum Aggregate Power	Dec. in range 0.0 to 40.0 in dBW.	C	Not required for coordination subject to the provisions of RR Nos. 9.15, 9.17 or 9.17A.
S770	• Aggregate Bandwidth	Int. in the range 50 to 99 999 999 in kHz.	C	Not required for coordination subject to the provisions of RR Nos. 9.15, 9.17 or 9.17A.
S736	• (AB) Transponder Bandwidth Indicator	True or False.	C	Not required for coordination subject to the provisions of RR Nos. 9.15, 9.17 or 9.17A.
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	

	Option B: if the <i>Intended Action</i> is for a <i>Receiving Earth Station ACG</i>			
S764	• Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvins.	M	
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	

	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	M	
S334	• Necessary Bandwidth Code	4 Char.	M	
S263	• Total Peak Envelope Power	Dec. in range -10.0 to 40.0 in dBW.	R	Mandatory for notification, but only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S264	• Maximum Peak Envelope Power Per Carrier	Dec. in range -10.0 to 40.0 in dBW.	C	
S265	• Minimum Peak Envelope Power Per Carrier	Dec. in range -10.0 to 40.0 in dBW.	R	Mandatory unless the Reason For Absence Of Minimum Power is provided and only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S267	• Maximum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range -120.0 to 0.0 in dB(W/Hz).	O	In frequency bands below 15 GHz if the Maximum Peak Envelope Power Per Carrier is supplied.
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range -120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands below 15 GHz if the Total Peak Envelope Power is supplied, but only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S268	• Minimum Power Density Per Carrier - Averaged Over 4 kHz	Dec. in range -120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the Reason For Absence Of Minimum Power Density is provided and only mandatory for coordination not subject to the provisions of RR No. 9.7A.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S336	• Maximum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	O	In frequency bands above 15 GHz if the Maximum Peak Envelope Power Per Carrier is supplied.
S335	• Maximum Power Density - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory in frequency bands above 15 GHz if the Total Peak Envelope Power is supplied, but only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S371	• Minimum Power Density Per Carrier - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory unless the Reason For Absence Of Minimum Power Density is provided and only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S856	• Carrier To Noise Objective	Dec. in range –10.0 to 25.0 in dB.	R	Mandatory unless the Reason For Absence Of C/N is provided and only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S269	• Reason For Absence Of Minimum Power	Text.	R	Mandatory unless the Minimum Peak Envelope Power Per Carrier is provided and only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S372	• Reason For Absence Of Minimum Power Density	Text.	R	Mandatory unless the minimum power density is provided and only mandatory for coordination not subject to the provisions of RR No. 9.7A.
S373	• Reason For Absence Of C/N	Text.	R	Mandatory unless the Carrier To Noise Objective is provided and only mandatory for coordination not subject to the provisions of RR No. 9.7A.
	For each Coordination Agreement sought or reached with respect to the ACG provide the following			
S275	• Status Code	Up to 6 Char.	BR	
S304	• Code of the Provision that is party to the Coordination Agreement	Up to 12 Char.	R	Mandatory for notification or if the Assignment Coordination Group is in a band subject to coordination and/or agreement procedures, but only mandatory for coordination not subject to the provisions of RR No. 9.7A.
	For the Administration under which the Coordination Agreement is sought or reached provide the			
S011	• Code	Up to 3 Char.	R	Mandatory for notification or if the Assignment Coordination Group is in a band subject to coordination and/or agreement procedures
S034	• Code of the Intergovernmental Satellite Organization on whose behalf the Administration has notified.	Up to 3 Char.	R	Mandatory as described for RDD S304 if an Intergovernmental Satellite Organization is affected by operation of any of the Space Station's Assignment Coordination Groups .

4.8 Notification/Coordination and Plan Modification of Space Stations in the BSS Under RR Appendix 30

This table shows the information that must be supplied for the notification coordination and plan modification of geostationary **Space Station** downlinks that are subject to the procedures contained in RR Appendix 30 together with the specific conditions under which it is required by the Radio Regulations and the Plans.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each Space Service Notice provide the			
S011	• Code of the Administration notifying the Space Station	Up to 3 Char.	M	
S034	• Code of the Intergovernmental Satellite Organization on whose behalf a submission is made for the Space Station	Up to 3 Char.	R	Mandatory if an Intergovernmental Satellite Organization is responsible for the Space Station .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S300	• Occurrence Code	1 Char.	R	Mandatory for RR Article 11 only.
S301	• Purpose Code	1 Char.	M	
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999	M	
S360	• Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S521	• BR IFIC Date For Last Coordination	Date.	R	Mandatory if notification. If coordination, it is provided by the BR.
S522	• BR IFIC Number For Last Coordination	Int. in range 1 to 9999	R	Mandatory if notification. If coordination, it is provided by the BR.
S769	• Special Section Reference For Last Coordination	Up to 8 Char.	R	Mandatory if the provisions of Article 4 of RR Appendix 30 apply.
S607	• Special Section Number For Last Coordination	Int. in range 1 to 9999	R	Mandatory as described for RDD S769.
S775	• BR IFIC Part For Last Notification	1 Char.	BR	
S523	• BR IFIC Date For Last Notification	Date.	BR	
S524	• BR IFIC Number For Last Notification	Int. in range 1 to 9999	BR	
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> ="A".
S069	• Name	Up to 20 Char.	M	
S029	• Code of the <i>Operator</i> providing the operational control of the <i>Space Station</i>	3 Char. in numeric range 001 to 999	M	
S021	• Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Space Station</i>	Up to 2 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
S712	• Notified Identifying Code of each <i>Exclusive Operational Group</i> that applies to the <i>Space Station</i>	Up to 10 Char.	R	Mandatory if <i>Exclusive Operational Groups</i> have been specified for the <i>Space Station</i> .
	For the <i>Geostationary Orbital Position</i> that is the subject of the <i>Intended Action</i> provide the			
S072	• Nominal Longitude	Dec. in range -180.00 to 180.00 in degrees.	M	
S074	• Longitude Tolerance Easterly Limit	Dec. in range 0.00 to 0.10 in degrees.	M	
S075	• Longitude Tolerance Westerly Limit	Dec. in range 0.00 to 0.10 in degrees.	M	
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	• Designation	Up to 8 Char.	M	
S118	• Steerable Indicator	True or False.	M	
S119	• Boresight Geographical Coordinates	Lat/Long (dms).	M	
S120	• Pointing Accuracy	Dec. in range 0.00 to 0.10 in degrees.	R	Mandatory for elliptical <i>Beams</i> .
S124	• Maximum Co-polar Gain	Dec. in range 0.0 to 50.0 in dBi.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S621	• Maximum Cross-polar Gain	Dec. in range 0.0 to 40.0 in dBi.	R	Mandatory for non-elliptical <i>Beams</i> if an Effective Boresight Area is not a single point.
S122	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory for elliptical <i>Beams</i> .
S123	• Cross-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory for elliptical <i>Beams</i> .
S369	• Effective Co-polar Gain Contour	Diagram.	R	Mandatory for non-elliptical <i>Beams</i> .
S370	• Effective Cross-polar Gain Contour	Diagram.	R	Mandatory for non-elliptical <i>Beams</i> .
S314	If an <i>Elliptical Beam</i> provide the:			
S130	• Major Axis Beamwidth	Dec. in range 0.60 to 8.69 in degrees.	M	For Region 2: 0.8 to 8.69 degrees.
S131	• Minor Axis Beamwidth	Dec. in range 0.60 to 8.69 in degrees.	M	For Region 2: 0.8 to 8.69 degrees.
S132	• Major Axis Orientation	Dec. in range 0.0 to 179.9 in degrees.	M	
S133	• Rotational Accuracy	Dec. in range -1.00 to 1.00 in degrees.	M	
	For the <i>Transmitting Space Station ACG</i> that is the subject of the <i>Intended Action</i> provide the following information			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of each type of <i>Associated Earth Station Antenna</i> receiving the <i>ACG</i>	Up to 20 Char.	M	
S276	• Downlink Service Area	A compound structure presented in one of the ways described in section 5.	M	
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S718	• Date Of Bringing Into Use For Geostationary Operation	Date.	M	
S190	• Bandwidth	Int. in range 50 to 99 999 999 in kHz.	M	
S189	• Polarization Code	Up to 2 Char.	M	Note: see § 3.2 of Annex 5 to Appendix 30 of the Radio Regulations.
S364	• Polarization Linear Angle	Int. in range 0 to 359 in degrees.	R	Mandatory if the Polarization Code = "L".
S198	• Baseband Composition	Text.	M	For analogue carriers
S640	• Type Of Modulation	Text.	M	
S199	• Multiplex Type (Video/Sound)	Text.	R	Mandatory if multiplexing of the vision and sound applies. For a carrier frequency modulated by a television signal.
S203	• Sound Broadcasting Characteristics	Text.	M	For analogue carriers
S327	• TV System And Colour Standard Description	Text.	M	
S201	• Pre-emphasis P-P Frequency Deviation	Dec. in range 5.0 to 15.0 in MHz.	M	For a carrier frequency modulated by a television signal.
S202	• Pre-emphasis Characteristics	Diagram.	M	As described for RDD S201.
S200	• Energy Dispersal Frequency Deviation	Dec. in range 0.1 to 4.0 in MHz.	M	For a frequency modulated carrier.
S324	• Energy Dispersal Sweep Frequency	Int. in range 10 to 2 000 in Hz.	M	As described for RDD S200.
S325	• Energy Dispersal Waveform	Text.	M	As described for RDD S200.
S857	• Energy Dispersal Description	Text	R	Mandatory if energy dispersal used and the carrier is not frequency modulated.
S091	Start Time	Time in range 0000 to 2359.	M	
S092	Stop Time	Time in range 0001 to 2400.	M	
S052/ S617	• The Codes for each <i>Class Of Station/Nature Of Service Pair</i> used to classify the operation of the <i>ACG</i>	2 Char for each code.	M	Note: FSS operation permitted in Region 2. The <i>Nature Of Service Code</i> is not required.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S723	• Value of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	M	
S719	• Channel Number of each <i>ACG Frequency</i> contained in the <i>ACG</i> .	Int. in the range 1 to 40.	M	
S712	• Notified <i>Identifying Code</i> of the <i>Exclusive Operational Group</i> of which the <i>Assignment Coordination Group</i> is a member	Up to 10 Char.	R	Mandatory if the <i>Assignment Coordination Group</i> is a member of an <i>Exclusive Operational Group</i> .
	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	M	
S334	• Necessary Bandwidth Code	4 Char.	M	
S263	• Total Peak Envelope Power	Dec. in range –10.0 to 40.0 in dBW.	M	
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	M	
S618	• Maximum Power Density Over the Necessary Bandwidth	Dec. in range –120.0 to 0.0 in dB(W/Hz).	M	
	For each <i>Coordination Agreement</i> sought or reached with respect to the <i>ACG</i> provide the following			
S275	• Status Code	Up to 6 Char.	BR	
S304	• Code of the <i>Provision</i> under which the <i>Coordination Agreement</i> is sought or reached	Up to 12 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is subject to agreement procedures.
	For the <i>Administration</i> that is party to the <i>Coordination Agreement</i> provide the			
S011	• Code	Up to 3 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is in a band subject to coordination and/or agreement procedures.
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf the <i>Administration</i> has notified.	Up to 3 Char.	R	Mandatory as described for RDD S304 if an <i>Intergovernmental Satellite Organization</i> is affected by operation of any of the <i>Space Station's Assignment Coordination Groups</i> .
	For the <i>ACG Frequency Strap</i> that is the subject of the <i>Intended Action</i> provide the			
S774	• Notified Identification Code	Up to 4 Char.	R	Mandatory in Region 2.
	Uplink aspect			
S723	• Value of the <i>ACG Frequency</i>	Frequency.	R	Mandatory if the <i>Space Service Notice</i> is for a <i>Space Station</i> in Region 2.
S186	• BR Identification Code of the <i>ACG</i> the <i>ACG Frequency</i> is for	10 Char.	R	Mandatory if the <i>Space Service Notice</i> is for a <i>Space Station</i> in Region 2.
	Downlink aspect			
S723	• Value of the <i>ACG Frequency</i>	Frequency.	R	Mandatory if the <i>Space Service Notice</i> is for a <i>Space Station</i> in Region 2.
S186	• BR Identification Code of the <i>ACG</i> the <i>ACG Frequency</i> is for	10 Char.	R	Mandatory if the <i>Space Service Notice</i> is for a <i>Space Station</i> in Region 2.
	For each <i>Associated Earth Station Antenna</i> that is the subject of the <i>Intended Action</i> provide the			
S676	• Maximum Gain	Dec. in range 20.00 to 50.00 in dBi.	M	
S677	• Beamwidth	Dec. in range 0.00 to 10.00 in degrees.	M	
S650	• Equivalent Antenna Diameter	Dec. in range 2.5 to 10.0 in metres.	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a parabolic antenna.
S678	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
S321	• Cross-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	

4.9 Notification/Coordination and Plan Modification of Feeder Links in the BSS Under RR Appendix 30A

This table shows the information that must be supplied for the notification, coordination and plan modification of geostationary *Space Station* Feeder Links (Uplink) in the BSS that are subject to the procedures contained in RR Appendix 30A together with the specific conditions under which it is required by the Radio Regulations and the Plans. For notification of the Feeder Link earth station see Table in § 4.7.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S011	For each <i>Space Service Notice</i> provide the Code of the <i>Administration</i> notifying the <i>Space Station</i>	Up to 3 Char.	M	
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf a submission is made for the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if an <i>Intergovernmental Satellite Organization</i> is responsible for the <i>Space Station</i> .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S300	• Occurrence Code	1 Char.	R	Mandatory for RR Article 11 only.
S301	• Purpose Code	1 Char.	M	
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	4 Char.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	• Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	Mandatory if the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S521	• BR IFIC Date For Last Coordination	Date.	R	Mandatory if notification. If coordination, it is provided by the BR.
S522	• BR IFIC Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory if notification. If coordination, it is provided by the BR.
S769	• Special Section Reference For Last Coordination	Up to 8 Char.	R	Mandatory if the provisions of Article 4 of RR Appendix 30A apply.
S607	• Special Section Number For Last Coordination	Int. in range 1 to 9999.	R	Mandatory as described for RDD S769.
S775	• BR IFIC Part For Last Notification	1 Char.	BR	
S523	• BR IFIC Date For Last Notification	Date.	BR	
S524	• BR IFIC Number For Last Notification	Int. in range 1 to 9999.	BR	
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S069	• Name	Text.	M	
S029	• Code of the <i>Operator</i> providing the operational control of the <i>Space Station</i>	3 Char. in numeric range 001 to 999.	M	
S021	• Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Space Station</i>	Up to 2 Char.	M	
S011	• Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S712	• Notified Identifying Code of each <i>Exclusive Operational Group</i> that applies to the <i>Space Station</i>	Up to 10 Char.	R	Mandatory if the <i>Exclusive Operational Groups</i> have been specified for the <i>Space Station</i> .
	For the <i>Geostationary Orbital Position</i> that is the subject of the <i>Intended Action</i> provide the			
S072	• Nominal Longitude	Dec. in range –180.00 to 180.00 in degrees.	M	
S074	• Longitude Tolerance Easterly Limit	Dec. in range 0.00 to 0.10 in degrees.	M	
S075	• Longitude Tolerance Westerly Limit	Dec. in range 0.00 to 0.10 in degrees.	M	
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	• Designation	Up to 8 Char.	M	
S118	• Steerable Indicator	True or False.	M	
S119	• Boresight Geographical Coordinates	Lat/Long (dms).	M	
S120	• Pointing Accuracy	Dec. in range 0.00 to 0.10 in degrees.	R	Mandatory for elliptical <i>Beams</i> .
S124	• Maximum Co-polar Gain	Dec. in range 0.0 to 50.0 in dBi.	M	
S621	• Maximum Cross-polar Gain	Dec. in range 0.0 to 40.0 in dBi.	R	Mandatory for non-elliptical <i>Beams</i> if an Effective Boresight Area is not a single point.
S122	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory for elliptical <i>Beams</i> .
S123	• Cross-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory for elliptical <i>Beams</i> .
S369	• Effective Co-polar Gain Contour	Diagram.	R	Mandatory for non-elliptical <i>Beams</i> .
S370	• Effective Cross-polar Gain Contour	Diagram.	R	Mandatory for non-elliptical <i>Beams</i> .
S125	• Gain Versus GSO Diagram	A compound structure presented in one of the ways described in Section 5.	R	Mandatory if the <i>Beam</i> is operating in a band with both a space to Earth and Earth to space frequency allocation.
S314	If an <i>Elliptical Beam</i> provide the:			
S130	• Major Axis Beamwidth	Dec. in range 0.60 to 8.69 in degrees.	M	
S131	• Minor Axis Beamwidth	Dec. in range 0.60 to 8.69 in degrees.	M	
S132	• Major Axis Orientation	Dec. in range 0.0 to 179.9 in degrees.	M	
S133	• Rotational Accuracy	Dec. in range –1.00 to 1.00 in degrees.	M	
	For the <i>Receiving Space Station ACG</i> that is the subject of the <i>Intended Action</i> provide the following information.			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of each <i>Associated Earth Station Antenna</i> transmitting the <i>ACG</i>	Up to 20 Char.	M	
S192	• Receiving System Noise Temperature	Int. in range 300 to 6 000 in Kelvins.	M	
S330	• Earth Station Power Control Range	Dec in range 0.0 to 10.0 in dB.	R	Mandatory if power control is used.
S331	• Space Station Automatic Gain Control Range	Dec in range 0.0 to 15.0 in dB.	M	
S384	• Uplink Service Area	A compound structure presented in one of the ways described in section 5.	M	
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S718	• Date Of Bringing Into Use For Geostationary Operation	Date.	M	
S190	• Bandwidth	Int. in range 50 to 99 999 999 in kHz.	M	
S189	• Polarization Code	Up to 2 Char.	M	Note: see § 3.2 of Annex 5 to RR Appendix 30.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S364	• Polarization Linear Angle	Int. in range 0 to 359 in degrees.	R	Mandatory if the Polarization Code = "L".
S198	• Baseband Composition	Text.	M	For analogue carriers.
S640	• Type of Modulation	Text.	M	
S199	• Multiplex Type (Video/Sound)	Text.	R	Mandatory if multiplexing of vision and sound applies. For a carrier frequency modulated by a television signal.
S203	• Sound Broadcasting Characteristics	Text.	M	For analogue carriers.
S327	• TV System And Colour Standard Description	Text.	M	
S201	• Pre-emphasis P-P Frequency Deviation	Dec. in range 5.0 to 15.0 in MHz.	M	For a carrier frequency modulated by a television signal.
S202	• Pre-emphasis Characteristics	Diagram.	M	As described for RDD S201.
S200	• Energy Dispersal Frequency Deviation	Dec. in range 0.1 to 4.0 in MHz.	M	For a frequency modulated carrier.
S324	• Energy Dispersal Sweep Frequency	Int. in range 10 to 2 000 in Hz.	M	As described for RDD S200.
S325	• Energy Dispersal Waveform	Text.	M	As described for RDD S200.
S857	• Energy Dispersal Description	Text	R	Mandatory if energy dispersal used and the carrier is not frequency modulated.
S091	• Start Time	Time in range 0000 to 2359.	M	
S092	• Stop Time	Time in range 0001 to 2400.	M	
S052/ S617	• The Codes for each <i>Class Of Station/Nature Of Service Pair</i> used to classify the operation of the <i>ACG</i>	2 Char for each Code.	M	The <i>Nature Of Service Code</i> is not required.
S723	• Value of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	M	
S719	• Channel Number of each <i>ACG Frequency</i> contained in the <i>ACG</i> .	Int. in the range 1 to 40.	M	
S712	• Notified Identifying Code of the <i>Exclusive Operational Group</i> of which the <i>Assignment Coordination Group</i> is a member	Up to 10 Char.	R	Mandatory if the <i>Assignment Coordination Group</i> is a member of an <i>Exclusive Operational Group</i> .
	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	M	
S334	• Necessary Bandwidth Code	4 Char.	M	
S263	• Total Peak Envelope Power	Dec. in range –10.0 to 40.0 in dBW.	M	NOTE – The value shall include the maximum range of power control.
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory if the Uplink is in the frequency band 14.5 to 14.8 GHz. NOTE – The value shall include the maximum range of power control.
S335	• Maximum Power Density - Averaged Over 1 MHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory if the Uplink is in the frequency band 17.3 to 18.1 GHz. NOTE – The value shall include the maximum range of power control.
S618	• Maximum Power Density Over the Necessary Bandwidth	Dec. in range –120.0 to 0.0 in dB(W/Hz).	R	Mandatory if the Uplink is in the frequency band 17.3-18.1 GHz.
	For each <i>Coordination Agreement</i> sought or reached with respect to the <i>ACG</i> provide the following			
S275	• Status Code	Up to 6 Char.	BR	
S304	• Code of the <i>Provision</i> under which the <i>Coordination Agreement</i> is sought or reached	Up to 12 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is subject to agreement procedures.
	• For the <i>Administration</i> that is party to the <i>Coordination Agreement</i> provide the			
S011	• Code	Up to 3 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is in a band subject to coordination and/or agreement procedures
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf the <i>Administration</i> has notified	Up to 3 Char.	R	Mandatory as described for RDD S304 if an <i>Intergovernmental Satellite Organization</i> is affected by operation of any of the <i>Space Station's Assignment Coordination Groups</i> .

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For the <i>ACG Frequency Strap</i> that is the subject of the <i>Intended Action</i> provide the			
S774	• Notified Identification Code	Up to 4 Char.	R	Mandatory in Region 2.
	Uplink aspect			
S723	• Value of the <i>ACG Frequency</i>	Frequency.	R	Mandatory if the <i>Space Station</i> is in Region 2.
S186	• BR Identification Code of the <i>ACG</i> the <i>ACG Frequency</i> is for	10 Char.	R	Mandatory if the <i>Space Station</i> is in Region 2.
	Downlink aspect			
S723	• Value of the <i>ACG Frequency</i>	Frequency.	R	Mandatory if the <i>Space Station</i> is in Region 2.
S186	• BR Identification Code of the <i>ACG</i> the <i>ACG Frequency</i> is for	10 Char.	R	Mandatory if the <i>Space Station</i> is in Region 2.
	For each <i>Associated Earth Station Antenna</i> that is the subject of the <i>Intended Action</i> provide the			
S671	• Notified Identifying Code	Up to 20 Char.	M	
S559	• Typical/Specific Indicator	1 Char.	M	
S673	• Geographical Coordinates	Long/ Lat (dms).	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.
S676	• Maximum Gain	Dec. in range 0.00 to 70.00 in dBi.	M	
S677	• Beamwidth	Dec. in range 0.00 to 10.00 in degrees.	M	
S165	• Diameter	Dec. in range 1.2 to 10.0 in metres.	M	
S678	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	M	
S041	• Code of the <i>Geographical Area</i> that is the location for the <i>Associated Earth Station Antenna</i>	Up to 3 Char.	R	Mandatory if the <i>Associated Earth Station Antenna</i> is not a typical antenna.

4.10 Notification/Coordination and Plan Modification of Space Stations in the FSS Under RR Appendix 30B

This table shows the information that must be supplied for plan modification, coordination and notification of geostationary space stations and space networks in the Fixed Satellite Planned Bands that are subject to the procedures contained in RR Appendix 30B together with the specific conditions under which it is required by the Radio Regulations and the Plans. For notification of the Earth station see Table in § 4.7.

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Space Service Notice</i> provide the			
S011	• Code of the <i>Administration</i> notifying the <i>Space Station</i>	Up to 3 Char.	M	
S034	• Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf a submission is made for the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if an <i>Intergovernmental Satellite Organization</i> is responsible for the <i>Space Station</i> .
S295	• Administration Notice Code	Up to 20 Char.	O	
S296	• Date Sent	Date.	O	
S297	• BR Identification Code	10 Char.	BR	
S298	• BR Date Received	Date.	BR	
S300	• Occurrence Code	1 Char.	R	Mandatory for RR Article 11 only.
S301	• Purpose Code	1 Char.	M	
S337	• Intended Action Code	1 Char.	M	
S767	• Special Section Reference For Publication	Up to 8 Char.	M	
S605	• Special Section Number For Publication	Int. in range 1 to 9999.	BR	
S299	• BR IFIC Part For Publication	1 Char.	BR	
S302	• BR IFIC Date For Publication	Date.	BR	
S303	• BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	• Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	
S307	• Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S360	Code of each <i>Intended Action</i> included with the <i>Space Service Notice</i>	1 Char.	M	Mandatory if the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			
S521	BR IFIC Date For Last Coordination	Date.	R	Mandatory if notification. If coordination, it is provided by the BR.
S522	BR IFIC Number For Last Coordination	Int. in range 1 to 9999	R	Mandatory if notification. If coordination, it is provided by the BR.
S769	Special Section Reference For Last Coordination	Up to 8 Char.	R	Mandatory if the provisions of Article 6 of RR Appendix 30B apply.
S607	Special Section Number For Last Coordination	Int. in range 1 to 9999	R	Mandatory as described for RDD S769.
S775	BR IFIC Part For Last Notification	1 Char.	BR	
S523	BR IFIC Date For Last Notification	Date.	BR	
S524	BR IFIC Number For Last Notification	Int. in range 1 to 9999	BR	
	For the <i>Space Station</i> that is the subject of the <i>Space Service Notice</i> provide the			
S067	BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> ="M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> ="A"
S069	Name	Up to 20 Char.	M	
S070	Subregional System Indicator	True or False.	M	
S029	Code of the <i>Operator</i> providing the operational control of the <i>Space Station</i>	3 Char. in numeric range 001 to 999	R	Mandatory for notification under Article 8 of RR Appendix 30B.
S021	Code of the <i>Correspondence Address</i> where interference issues should be addressed to regarding the <i>Space Station</i>	Up to 2 Char.	R	Mandatory for notification under Article 8 of RR Appendix 30B.
S011	Code of each <i>Administration</i> with a participating interest in the <i>Space Station</i>	Up to 3 Char.	R	Mandatory if more than one <i>Administration</i> has a participating interest in the <i>Space Station</i> .
S712	Notified Identifying Code of each <i>Exclusive Operational Group</i> that applies to the <i>Space Station</i>	Up to 10 Char.	R	Mandatory if <i>Exclusive Operational Groups</i> have been specified for the <i>Space Station</i> .
	If the Subregional System Indicator is "True" provide for each participating <i>Administration</i> the:			The <i>Space Station</i> is a subregional system.
S116	Designation of the <i>Beam</i> that is to be suspended as a consequence of the filing of the <i>Space Station</i>.	Up to 8 Char.	R	Mandatory if the <i>Space Station</i> is part of a subregional system.
	For the <i>Geostationary Orbital Position</i> that is the subject of the <i>Intended Action</i> provide the			
S072	Nominal Longitude	Dec. in range -180.00 to 180.00 in degrees.	M	
S074	Longitude Tolerance Easterly Limit	Dec. in range 0.00 to 1.00 in degrees.	M	
S075	Longitude Tolerance Westerly Limit	Dec. in range 0.00 to 1.00 in degrees.	M	
S076	Inclination Excursion	Dec. in range 0.00 to 5.00 in degrees.	M	
S079	Service Arc Easterly Limit	Int. in range -180 to 180 in degrees.	R	Mandatory if the assignment is not in the allotment plan.
S080	Service Arc Westerly Limit	Int. in range -180 to 180 in degrees.	R	Mandatory if the assignment is not in the allotment plan.
	For each <i>Beam</i> that is the subject of an <i>Intended Action</i> provide the			
S116	Designation	Up to 8 Char.	M	
S118	Steerable Indicator	True or False.	M	
S115	Emission/Reception Indicator	1 Char.	M	
S119	Boresight Geographical Coordinates	Long/lat (dms).	M	
S120	Pointing Accuracy	Dec. in range 0.00 to 0.10 in degrees.	R	Mandatory for elliptical <i>Beams</i> .
S124	Maximum Co-polar Gain	Dec. in range 0.0 to 50.0 in dBi.	M	

RDD Ref:	Data Item Name	Data Format	Use	Conditions of Use
S122	• Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5.	R	Mandatory for elliptical <i>Beams</i> .
S369	• Effective Co-polar Gain Contour	Diagram.	R	Mandatory for non-elliptical <i>Beams</i> .
S314	If an <i>Elliptical Beam</i> provide the			
S130	• Major Axis Beamwidth	Dec. in range 0.60 to 8.69 in degrees.	M	C Band: 1.6 to 8.69 degrees.
S131	• Minor Axis Beamwidth	Dec. in range 0.60 to 8.69 in degrees.	M	C Band: 1.6 to 8.69 degrees.
S132	• Major Axis Orientation	Dec. in range 0.0 to 179.9 in degrees.	M	
S133	• Rotational Accuracy	Dec. in range –1.00 to 1.00 in degrees.	M	
	For each <i>Frequency Range</i> defining the spectrum limits of a <i>Beam</i> provide the	.		
S247	• Lower Limit	Frequency.	R	Mandatory for Plan implementation under Article 6 of RR Appendix 30B.
S248	• Upper Limit	Frequency.	R	Mandatory as described for RDD S247.
	For the <i>Assignment Coordination Group (ACG)</i> that is the subject of the <i>Intended Action</i> provide the following information, including only one of the options from C or D			
S186	• BR Identification Code	10 Char.	R	Mandatory if <i>Space Service Notice's Intended Action Code</i> = "M" or "S". Provided by BR if <i>Space Service Notice's Intended Action Code</i> = "A".
S718	• Date Of Bringing Into Use For Geostationary Operation	Date.	M	
S190	• Bandwidth	Int. in range 50 to 99 999 999 in kHz.	R	Mandatory for notification under Article 8 of RR Appendix 30B.
S250	• Peak To Average Power Ratio Upper Frequency Limit	Frequency.	M	
S723	• Value of each <i>ACG Frequency</i> contained in the <i>ACG</i>	Frequency.	R	Mandatory for notification under Article 8 of RR Appendix 30B.
S712	• Notified Identifying Code of the <i>Exclusive Operational Group</i> of which the <i>Assignment Coordination Group</i> is a member	Up to 10 Char.	R	Mandatory if the <i>Assignment Coordination Group</i> is a member of an <i>Exclusive Operational Group</i> .
	Option C: if the <i>Intended Action</i> is for a <i>Receiving Space Station ACG</i>			
S116	• Designation of the <i>Beam</i> receiving the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of each <i>Associated Earth Station Antenna</i> transmitting the <i>ACG</i>	Up to 20 Char.	M	
S384	• Uplink Service Area	A compound structure presented in one of the ways described in section 5.	M	
S192	• Receiving System Noise Temperature	Int. in range 300 to 6 000 in Kelvins.	M	
	Option D: if the <i>Intended Action</i> is for a <i>Transmitting Space Station ACG</i>			
S116	• Designation of the <i>Beam</i> transmitting the <i>ACG</i>	Up to 8 Char.	M	
S671	• Notified Identifying Code of the each <i>Associated Earth Station Antenna</i> receiving the <i>ACG</i>	Up to 20 Char.	M	
S276	• Downlink Service Area	A compound structure presented in one of the ways described in section 5.	M	
	For each <i>Emission Characteristic Set</i> that further defines the <i>Assignment Coordination Group</i> provide the			
S262	• Class Of Emission Code	Up to 5 Char.	R	Mandatory for notification under Article 8 of RR Appendix 30B.
S334	• Necessary Bandwidth Code	4 Char.	R	Mandatory as described for RDD S262.
S266	• Maximum Power Density - Averaged Over 4 kHz	Dec. in range –120.0 to 0.0 in dB(W/Hz).	M	
S618	• Maximum Power Density Over the Necessary Bandwidth	Dec. in range –120.0 to 0.0 in dB(W/Hz).	M	

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
S210	Required Protection Ratio (Minimum <i>C/I</i>)	Dec. in range 8.0 to 25.9 in dB.	R	Mandatory if the minimum <i>C/I</i> is less than 26 dB or less than 23 dB for submissions received by the Bureau as of 5 July 2003.
	For each <i>Coordination Agreement</i> sought or reached with respect to the <i>ACG</i> provide the following			
S275	Status Code	Up to 6 Char.	BR	
S304	Code of the <i>Provision</i> under which the <i>Coordination Agreement</i> is sought or reached	Up to 12 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is subject to agreement procedures.
	For the <i>Administration</i> that is party to the <i>Coordination Agreement</i>			
S011	Code	Up to 3 Char.	R	Mandatory for notification or if the <i>Assignment Coordination Group</i> is in a band subject to coordination and/or agreement procedures
S034	Code of the <i>Intergovernmental Satellite Organization</i> on whose behalf the <i>Administration</i> has notified	Up to 3 Char.	R	Mandatory as described for RDD S304 if an <i>Intergovernmental Satellite Organization</i> is affected by operation of any of the <i>Space Station's Assignment Coordination Groups</i> .
	For each <i>Associated Earth Station Antenna</i> that is the subject of the <i>Intended Action</i> provide the			
S676	Maximum Gain	Dec. in range 0.0 to 70.00 in dBi.	M	
S763	Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvins.	R	Mandatory for a receiving <i>Associated Earth Station Antenna</i> .
S677	Beamwidth	Dec. in range 0.0 to 100.00 in degrees.	M	
S678	Co-polar Gain Pattern	A compound structure presented in one of the ways described in section 5	M	

4.11 Notification of Radio Astronomy Earth Stations

This table shows the information that must be supplied for the notification of radio astronomy stations in the radio astronomy service together with the specific conditions under which it is required by the Radio Regulations.

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
	For each <i>Space Service Notice</i> provide the			
S011	Code of the <i>Administration</i> notifying the Earth Station	Up to 3 Char.	M	
S295	Administration Notice Code	Up to 20 Char.	O	
S296	Date Sent	Date.	O	
S297	BR Identification Code	10 Char.	BR	
S298	BR Date Received	Date.	BR	
S300	Occurrence Code	1 Char.	R	Mandatory for RR Article 11 only.
S301	Purpose Code	1 Char.	M	
S337	Intended Action Code	1 Char.	M	
S299	BR IFIC Part For Publication	1 Char.	BR	
S302	BR IFIC Date For Publication	Date.	BR	
S303	BR IFIC Number For Publication	Int. in range 1 to 9999.	BR	
S304	Code of each <i>Provision</i> the <i>Space Service Notice</i> is notified under	Up to 12 Char.	M	
S307	Identifier of each <i>Notice Attachment</i> which supplements the <i>Space Service Notice</i>	Int. in range 1 to 999.	M	
S360	Code of each Intended Action included with the Space Service Notice	1 Char.	M	If the <i>Space Service Notice's Intended Action Code</i> = "A" all <i>Intended Actions' Codes</i> = "A". Similarly, if the <i>Space Service Notice's Intended Action Code</i> = "S" all <i>Intended Actions' Codes</i> = "S" and do not need to be notified as such. If the <i>Space Service Notice's Intended Action Code</i> = "M", <i>Intended Actions' Codes</i> can be "A", "M" or "S".
	Where the <i>Intended Action</i> refers to an <i>Assignment Coordination Group</i> also provide the			

RDD Ref.	Data Item Name	Data Format	Use	Conditions of Use
S775	• BR IFIC Part For Last Notification	Date.	BR	
S523	• BR IFIC Date For Last Notification	Date.	BR	
S524	• BR IFIC Number For Last Notification	Int. in range 1 to 9999.	BR	
	For the Earth Station Antenna that is the subject of the Space Service Notice provide the			
S148	• BR Identification Code	10 Char	R	Mandatory if the Space Services Notice's Intended Action Code = "A".
S149	• Notified Identification Code	Up to 20 Char.	M	
S159	• Geographical Coordinates	Long/ Lat (dms).	M	
S852	• Radio astronomy Antenna Type Description	Text.	M	
S853	• Radio astronomy Antenna Dimensional Description	Text.	M	
S854	• Radio astronomy Antenna Effective Area Description	Text.	M	
S169	• Operational Sector Start Azimuth	Dec. in range 0.0 to 359.9 in degrees.	M	
S170	• Operational Sector End Azimuth	Dec. in range 0.1 to 360.0 in degrees.	M	
S168	• Planned Minimum Elevation Angle	Dec. in range 0.0 to 90.0 in degrees.	M	
S381	• Planned Maximum Elevation Angle	Dec. in range 0.1 to 90.0 in degrees.	M	
S029	• Code of the Operator providing the operational control of the Earth Station Antenna	3 Char. in numeric range 001 to 999.	M	
S021	• Code of the Correspondence Address where interference issues should be addressed to regarding the Earth Station Antenna	Up to 2 Char.	M	
S041	• Code of the Geographical Area that is the location for the Earth Station Antenna	Up to 3 Char.	M	
	For the Receiving Earth Station's ACG that is the subject of the Intended Action provide the following information.			
S374	• Bandwidth of Frequency Band Observed	Int. in range 50 to 99 999 999 in kHz.	M	
S332	• Receiver Sensitivity Indicator	1 Char.	M	Either "A" or "B".
S858	• Observation Type	1 Char.	M	Either "S" or "V".
S256	• Centre Of The Frequency Band Observed	Frequency.	M	
S859	• Planned Minimum Elevation Angle	Dec. in range 0.0 to 90.0.	M	
S186	• BR Identification Code	10 Char.	R	Mandatory if Space Service Notice's Intended Action Code ="M" or "S". Provided by BR if Space Service Notice's Intended Action Code ="A".
S187	• Date Of Bringing Into Use For Non-geostationary Operation	Date.	M	
S764	• Receiving System Noise Temperature	Int. in range 20 to 6 000 in Kelvins.	M	
S855	• Non-conformity Indicator	True or False.	R	Mandatory if RDD S723 is to be filed under RR No. 4.4 .
S052/ S617	• The Codes for each Class Of Station/Nature Of Service Pair used to classify the operation of the ACG	2 Char for each Code.	M	

SECTION 5

DESCRIPTION OF SPACE DATA ITEMS

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5.0 Introduction

This Section contains the description of data items required for advance publication, notification and coordination of frequency assignments to space service stations. Provided for each data item are a description, an optional further explanation, the units of measurement and the maximum range of values covering all radio systems described in Section 4.

Each data item is part of a “data group” in the RDD. Each data group may have several data items. If the reader is uncertain in which group a particular data item appears, it is listed by both name and RDD reference number in Section 10.

To make finding information easier, this section has been divided into a number of topics (e.g., Beam Data). Each topic contains a number of data groups with its own table of contents, showing the data groups and the individual data items, referenced by page and RDD reference number.

To further simplify usage, all data items within each data group that relate to the same type of information are collated (e.g., **Boresight Geographical Coordinates**, **Effective Boresight Area**).

5.0.1 Section 5 Structure and Usage

All topics within Section 5 are similarly structured with the data group name being followed by the RDD reference number, the data group definition, the unique identifier statement (see example below), relationships to associated data groups, and its data items and their formats. It is important to understand this structure in order to obtain information accurately from this section.

More detailed information concerning the structure of Section 5 is shown in the example below. For the purposes of explanation, § 5.1 of the RDD has been copied below. This paragraph contains the *Administration* data group along with some of the data items pertinent to an *Administration*.

Example:

5.1 *Administration*

RDD ref: S001

A governmental department, or service, of a Member State of the ITU responsible for discharging the obligations undertaken in the Constitution, the Convention and the Regulations of the ITU.

In the case of notification of a satellite network, the notifying *Administration* addresses may be complemented by the address of an *Intergovernmental Satellite Organization* (Intelsat, Interspoutnik, etc.).

◇ An *Administration* is identified by its **Code**

An *Administration* may nominate one or more *Sites*

RDD ref: S388

An *Administration* may be responsible for the notification of assignments from one or more *Geographical Areas*

RDD ref: S864

An *Administration* may be party to one or more *Coordination Agreements*

RDD ref: S002

An *Administration* may notify one or more *Space Stations*

RDD ref: S389

An *Administration* may submit one or more *Correspondence Addresses*

RDD ref: S006

An *Administration* may have joint notification interest in one or more *Space Stations*

RDD ref: S007

An *Administration* may be responsible for notifying on behalf of one or more *Intergovernmental Satellite Organizations*

RDD ref: S009

• **Code**

RDD ref: S011

The code used to identify an *Administration*.

A list of *Administration Codes* can be found in Appendix 1 to the RDD.

Recordings in the Master Register which do not result from a notification, such as allotments and frequencies for common use which are entered by the BR in accordance with the provisions of the Radio Regulations, are indicated by the symbol “ITU” in this column. This symbol now stands for the Radiocommunication Bureau (formerly International Frequency Registration Board).

Format: Up to 3 characters.

• **Name** **RDD ref: S012**

The name of the Member State.

Format: Text.

• **Official Postal Address** **RDD ref: S014**

The postal address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text.

• **Official Telex Address** **RDD ref: S015**

The telex address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text.

• **Official Facsimile Address** **RDD ref: S401**

The facsimile address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an *Official Facsimile Address* may be acceptable providing there is independent or automatic confirmation of origin of the fax. However, in some countries facsimile transmissions do not have the same legal status as telex transmissions.

Format: Text.

• **Official E-mail Address** **RDD ref: S402**

The e-mail address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an *Official E-mail Address* may be acceptable providing there is independent or automatic confirmation of origin of the e-mail. However, in some countries e-mail transmissions do not have the same legal status as telex transmissions.

Format: Text.

• **ITU Language Code** **RDD ref: S013**

An indication of an ITU language, chosen by the *Administration* for communication of notification data with the ITU.

Format: 1 character.

Code	Meaning
E	English
F	French
S	Spanish

In the above example:

Administration represents the data group name. All data group names in the RDD are presented in italics and bold typeface.

RDD ref: S001 represents the RDD reference number. All RDD reference numbers are presented in bold typeface.

Immediately below the data group name is the data group definition. This is presented in normal typeface and serves to uniquely define the data group.

Immediately below the data group definition is the data group's unique identifier statement. This unique identifier statement is indicated by the "diamond" and it provides information on a fundamental aspect of any data group, the identification of a particular occurrence of that data group e.g., which *Administration* is submitting the notice. If it is not possible to identify a particular occurrence of a data group then it is not possible to determine what other characteristics it may possess. As such the identification statement describes how to determine individual occurrences of a data group. In this example, this identification statement states: An *Administration* is identified by its **Code**. This means that by knowing only the *Administration's Code*, the *Administration* itself could be identified.

Below the unique identifier statement any associations to other data groups are described. These associations are called relationships. The data group will have an association with other data groups. Sometimes this association may be to a single occurrence of an associated data group, and other times it may be to many occurrences of an associated data group. The relationships provide the description of the type of association between the two groups. The full relationship text contains the name of both the data group and the associated data group, together with the description of the association or relationship between them. The full relationship text is presented in a standardized format, e.g., "An *Administration* may nominate one or more *Sites*;" "An *Administration* may be party to one or more *Coordination Agreements*." These examples demonstrate that *Administration* is related to both *Site* and *Coordination Agreements*. Each associated data group has its own RDD reference number. In addition, each relationship has two ends. From the latter example, one end is *Administration* and the other is *Coordination Agreements*. Each end of the relationship possesses its own RDD reference number for the purpose of identification.

Below the relationships are listed the data items belonging to each data group. Data items are individual pieces of data that form a part of each data group. Each data item is presented as bullets and the name is in title case and bold typeface. In this example, the data items associated with *Administration* are: **Code**; **Name**; **Official Postal Address**; **Official Telex Address**; **Official Facsimile Address**; **Official E-mail Address**; and **ITU Language Code**. The full data item name is read as *Administration's Code* or *Administration's Official Postal Address*.

By convention, if reference is made to a data item within the same data group, only the short data item name (e.g., **Code**) is used. If reference is made to a data item of another data group the full name is used.

Each data item is identified by an RDD reference number, a definition and a format statement. The format statement describes the format in which the data must be presented, the size of the field, and, in most cases its possible level of accuracy. In this example, the format statement for **Code** indicates that "Up to 3 characters" are permissible for supplying information concerning an *Administration's Code*.

All other data groups within Section 5 of the RDD are structured in the same manner.

5.0.2 Notes

Note: Indented and italicized notes appear in this Section to draw attention to specific issues arising during the revision of the RDD. It is expected that these notes will be removed from a later version of the RDD.

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5.2	<i>Correspondence Address</i>	RDD ref: S016 170
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5.4	<i>Intergovernmental Satellite Organization</i>	RDD ref: S031 171
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5.7	<i>Class Of Station</i>	RDD ref: S048 173
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5.8	<i>Class Of Station Nature Of Service Pair</i>	RDD ref: S580 174
5.9	<i>Nature Of Service</i>	RDD ref: S614 174
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5.1 Administration**RDD ref: S001**

A governmental department, or service, of a Member State of the ITU responsible for discharging the obligations undertaken in the Constitution, the Convention and the Regulations of the ITU.

In the case of notification of a satellite network, the notifying administration addresses may be complemented by the address of an *Intergovernmental Satellite Organization* (Intelsat, Interspoutnik, etc.).

◇ An *Administration* is identified by its **Code**

An *Administration* may nominate one or more *Sites*

RDD ref: S388

An *Administration* may be responsible for the notification of assignments from one or more *Geographical Areas*

RDD ref: S864

An *Administration* may be party to one or more *Coordination Agreements*

RDD ref: S002

An *Administration* may notify one or more *Space Stations*

RDD ref: S389

An *Administration* may submit one or more *Correspondence Addresses*

RDD ref: S006

An *Administration* may have joint notification interest in one or more *Space Stations*

RDD ref: S007

An *Administration* may be responsible for notifying on behalf of one or more *Intergovernmental Satellite Organizations*

RDD ref: S009

- **Code**

RDD ref: S011

The code used to identify an *Administration*.

A list of *Administration Codes* can be found in Appendix 1 to the RDD.

Recordings in the Master Register which do not result from a notification, such as allotments and frequencies for common use which are entered by the BR in accordance with the provisions of the Radio Regulations, are indicated by the symbol “ITU” in this column. This symbol now stands for the Radiocommunication Bureau (formerly International Frequency Registration Board).

Format: Up to 3 characters.

- **Name**

RDD ref: S012

The name of the Member State.

Format: Text.

- **Official Postal Address**

RDD ref: S014

The postal address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text.

- **Official Telex Address**

RDD ref: S015

The telex address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

Format: Text.

- **Official Facsimile Address**

RDD ref: S401

The facsimile address officially nominated by the *Administration* for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an **Official Facsimile Address** may be acceptable providing there is independent or automatic confirmation of origin of the fax. However, in some countries facsimile transmissions do not have the same legal status as telex transmissions.

Format: Text.

- **Official E-mail Address**

RDD ref: S402

The e-mail address officially nominated by the **Administration** for the receipt of correspondence relating to radiocommunication matters.

For the transmission of notification data the use of an **Official E-mail Address** may be acceptable providing there is independent or automatic confirmation of origin of the e-mail. However, in some countries e-mail transmissions do not have the same legal status as telex transmissions.

Format: Text.

- **ITU Language Code**

RDD ref: S013

An indication of an ITU language, chosen by the **Administration** for communication of notification data with the ITU.

Format: 1 character.

Code	Meaning
E	English
F	French
S	Spanish

5.2 **Correspondence Address**

RDD ref: S016

For a specific **Geographical Area**, an alternative address to that of the “Official” address of an **Administration** where communication should be sent (when requested by the notifying **Administration**) on matters regarding interference, quality of emissions and questions referring to the notification of a specific satellite system.

◇ **Correspondence Address** is identified by its **Code** and the notifying **Administration** by which it has been nominated.

A **Correspondence Address** must be nominated by a single **Administration**

RDD ref: S017

A **Correspondence Address** may be used for one or more **Space Stations**

RDD ref: S018

A **Correspondence Address** may be used for one or more **Earth Station Antennas**

RDD ref: S019

A **Correspondence Address** must have validity in one or more **Geographical Areas**

RDD ref: S020

- **Code**

RDD ref: S021

A code allocated by the BR to uniquely identify a **Correspondence Address** of an **Administration**.

Currently the **Code** used by the BR for identifying the **Correspondence Address** has been implemented in a manner that makes it specific to a single **Geographical Area**. Hence if the same address is valid for two **Geographical Areas**, it is likely they will be identified by a different **Code**. This difference in **Code** applies even if the two **Geographical Areas** are the responsibility (under the Convention of the ITU and the Regulations) of the same **Administration** and the address is that of the notifying **Administration**.

Format: Up to 2 characters.

- **Postal Address**

RDD ref: S022

The postal address nominated by the notifying **Administration** as the address to which correspondence relating to radiocommunication matters concerning a specific **Space Service Notice** should be sent.

Format: Text.

- **Telex Address** **RDD ref: S023**

The telex address nominated by the notifying *Administration* as the address to which correspondence relating to radiocommunication matters concerning a specific *Space Service Notice* should be sent.

Format: Text.

- **Facsimile Address** **RDD ref: S390**

The facsimile address nominated by the notifying *Administration* as the address to which correspondence relating to radiocommunication matters concerning a specific *Space Service Notice* should be sent.

Format: Number.

- **E-mail Address** **RDD ref: S403**

The e-mail address nominated by the notifying *Administration* as the address to which correspondence relating to radiocommunication matters concerning a specific *Space Service Notice* should be sent.

Format: Text.

5.3 *Operator* **RDD ref: S024**

An organization responsible for the operation of radio systems in a specific *Geographical Area*. The **Code** used by the BR for identifying the *Operator* is specific to the *Geographical Area*. Hence, if the same organization appears in two or more *Geographical Areas*, each occurrence is treated as a different organization and each is likely to be identified by a different **Code**.

◇ An *Operator* is identified by its **Code** and the *Geographical Area* within which it operates.

An *Operator* must operate within a single *Geographical Area* **RDD ref: S025**

An *Operator* may be responsible for the operation of one or more *Space Stations* **RDD ref: S026**

An *Operator* may be responsible for the operation of one or more
Earth Station Antennas **RDD ref: S027**

- **Code** **RDD ref: S029**

The code used to identify an *Operator*. The **Code** is assigned to the *Operator* by the BR.

Format: 3 characters (in the numeric range 001 to 999).

- **Name** **RDD ref: S030**

The name of the *Operator*, as submitted by the *Administration*.

Format: Text.

5.4 *Intergovernmental Satellite Organization* **RDD ref: S031**

An ITU registered intergovernmental organization formed from a group of *Administrations* to provide regional or global space station (satellite) based radiocommunication systems.

When notifying a network the notifying *Administration* may be complemented by a symbol indicating the *Intergovernmental Satellite Organization* (e.g., Intelsat, Intersputnik, etc.) operating the network, to which communication should be sent on technical and operational matters of the stations or networks.

◇ An *Intergovernmental Satellite Organization* is identified by its **Code**.

An *Intergovernmental Satellite Organization* may be the operator of one or more *Space Stations*

RDD ref: S032

An *Intergovernmental Satellite Organization* may be the operator of one or more *Earth Station Antennas*

RDD ref: S377

An *Intergovernmental Satellite Organization* must have all its satellite systems notified by a single *Administration*

RDD ref: S033

An *Intergovernmental Satellite Organization* may have submitted on their behalf one or more *Space Service Notices*

RDD ref: S772

- **Code**

RDD ref: S034

The code allocated by the ITU for identifying an *Intergovernmental Satellite Organization*.

A list of *Intergovernmental Satellite Organization Codes* are contained in Appendix 2 to the RDD.

Format: Up to 3 characters.

- **Name**

RDD ref: S035

Name of the *Intergovernmental Satellite Organization* operating the satellite network, as submitted by the *Administration*.

Format: Text.

- **Address**

RDD ref: S762

Address of the *Intergovernmental Satellite Organization* operating the satellite network, as submitted by the *Administration*.

Format: Text

5.5 *Geographical Area*

RDD ref: S036

An area of the Earth's surface whose borders are recorded by the ITU for radiocommunication purposes. The use of a country name, or of a geographical area by the ITU does not imply the expression of any opinion whatsoever on the part of the Union concerning the sovereignty or the legal status of any country, territory or geographical region.

Geographical Areas are countries for example, "Poland", and "Hungary", or formed from areas of one country e.g., "The 48 contiguous States of the United States of America"; others e.g., the "Antarctic", are not countries.

◇ A *Geographical Area* is identified by its **Code**.

A *Geographical Area* may be an area of operation for one or more *Operators*

RDD ref: S037

A *Geographical Area* may be the location for one or more *Sites*

RDD ref: S038

A *Geographical Area* may be valid for one or more *Correspondence Addresses*

RDD ref: S039

A *Geographical Area* must be the responsibility of a single *Administration*

RDD ref: S865

A *Geographical Area* may be the location for one or more *Earth Station Antenna*

RDD ref: S862

A *Geographical Area* may be the location for one or more *Associated Earth Station Antenna*

RDD ref: S863

- **Code**

RDD ref: S041

The code used to identify a *Geographical Area*, as assigned by the ITU. All new codes are assigned by the ITU in conformity with ISO three character coding.

Format: Up to 3 characters.

The codes are defined in Appendix 3 to the RDD.

- **Name**

RDD ref: S042

The name by which a *Geographical Area* is known at the ITU.

The names are defined in Appendix 3 to the RDD.

Format: Text.

- **Radiocommunication Region Code**

RDD ref: S043

An indication of the ITU Region where the *Geographical Area* is located. For the allocation of frequencies, the Earth's surface has been divided into three Regions. The complete definition of the three Radiocommunication Regions can be found in RR Article 5. A list of *Geographical Areas* and their corresponding **Radiocommunication Region Codes** are listed in Appendix 3 to the RDD.

Format: 1 character.

Code	Meaning
1	Region 1
2	Region 2
3	Region 3

5.6 *Radiocommunication Service*

RDD ref: S044

A service involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes. *Radiocommunication Services* are a categorization of the different types of use as defined in the Radio Regulations. The purpose of the categorization of *Radiocommunication Services* is to enable effective management of the radio spectrum.

A full list of *Radiocommunication Services* can be found in Appendix 4 to the RDD.

◇ A *Radiocommunication Service* is identified by its **Name**.

A *Radiocommunication Service* must be qualified by one or more *Classes Of Station*

RDD ref: S046

A *Radiocommunication Service* may include one or more other *Radiocommunication Services*

RDD ref: S405

- **Name**

RDD ref: S047

The name of the *Radiocommunication Service* as assigned by the ITU through the RR.

Radiodetermination is defined in the RR, but not used directly in RR Article 5 (Table of Frequency Allocations). Instead, Radiolocation and Radionavigation are used, as subsets of Radiodetermination.

Format: Text.

- **Code**

RDD ref: S404

It is proposed that a code is developed.

Note: Various contributions for a coding of the *Radiocommunication Services* have been submitted to Radiocommunication Study Group 1 by Administrations. Appendix 4 to the RDD, in addition to the full list of *Radiocommunication Services*, contains a similar proposal for coding.

5.7 *Class Of Station*

RDD ref: S048

A classification of a station by the *Radiocommunication Service* in which it operates and its mode of operation, content of signal or other characteristic considered significant to the notification and or coordination process. Sometimes the classification only gives the generic *Radiocommunication Service*.

◇ A *Class Of Station* is identified by its **Code**.

A *Class Of Station* may be the subject of one or more *Class Of Station Nature Of Service Pairs*

RDD ref: S700

A *Class Of Station* must identify a single *Radiocommunication Service*

RDD ref: S051

- **Code**

RDD ref: S052

The code used to identify a *Class Of Station*.

Format: 2 characters.

A list of *Classes Of Station* is contained in Appendix 5 to the RDD.

- **Name**

RDD ref: S054

The name of the *Class Of Station*.

Format: Text.

5.8 *Class Of Station Nature Of Service Pair*

RDD ref: S580

A valid combination of a single *Nature Of Service* and a single *Class Of Station*. It is a valid combination if the BR recognizes its use in classifying either an *Assignment Coordination Group* or an *Associated Earth Station Antenna*.

◇ A *Class Of Station Nature Of Service Pair* is identified by the *Class Of Station Code* and the *Nature Of Service Code* for which it is a valid pairing.

A *Class Of Station Nature Of Service Pair* may further define the operational limitations of one or more *Assignment Coordination Groups*

RDD ref: S375

A *Class Of Station Nature Of Service Pair* may further define the operational limitations of one or more *Associated Earth Station Antennas*

RDD ref: S742

A *Class Of Station Nature Of Service Pair* must be a valid pairing for a single *Nature Of Service*

RDD ref: S701

A *Class Of Station Nature Of Service Pair* must be a valid pairing for a single *Class Of Station*

RDD ref: S702

5.9 *Nature Of Service*

RDD ref: S614

A classification of a service or other characteristic considered significant to the notification and or coordination process.

◇ A *Nature Of Service* is identified by its **Code**.

A *Nature Of Service* may be the subject of one or more *Class Of Station Nature Of Service Pairs*

RDD ref: S622

- **Code**

RDD ref: S617

The code used to identify a *Nature Of Service*.

Format: 2 characters.

A list of the *Nature Of Services* is contained in Appendix 13 to the RDD.

- **Name**

RDD ref: S734

The name of the *Nature Of Service*, as assigned by the BR.

Format: Text.

SPACE STATION DATA

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5.10 *Space Station*

RDD ref: S055

The combined aspects of either a single spacecraft, or more than one spacecraft that are recognized by its/their notifying *Administration* as the space components of the same satellite-based radiocommunication system(s). If the *Space Station* is comprised of multiple satellites, then the *Beams* each satellite transmits and receives must be common to every satellite. If the *Beams* are not common to every satellite then the satellites are considered by the BR to be part of a different space network. A space network is the full Earth-to-space and space-to-Earth path (comprising the *Space Station* and its (*Associated*) *Earth Station Antenna*) where the space component may comprise many inter-satellite links.

Where a *Space Station* of a GSO network, or all the *Space Stations* in a constellation of a NGSO network are not under the operational control of either an *Operator* or an *Intergovernmental Satellite Organization*, then the notifying *Administration* is considered to be responsible for its operational control.

A *Space Station* and the *Earth Station Antenna* may be considered as the two principal subjects of the notification of a satellite network for the purposes of this document.

◇ A *Space Station* is identified by the *Administration* that notified it and its *Name*.

A *Space Station* must be notified by a single *Administration* RDD ref: S393

A *Space Station* must be the subject of one or more *Space Service Notices* RDD ref: S057

A *Space Station* must emit or receive one or more *Beams* RDD ref: S058

A *Space Station* may be under the operational control of a single *Intergovernmental Satellite Organization* RDD ref: S315

A *Space Station* may be under the operational control of a single *Operator* RDD ref: S060

A *Space Station* may be of “participating interest” to one or more *Administrations* RDD ref: S061

A *Space Station* may have interference issues addressed to a single *Correspondence Address* RDD ref: S062

A *Space Station* may be communicating with one or more *Earth Station Antennas* RDD ref: S065

One and only one of the following two relationships must apply:

A *Space Station* must have its astrodynamics defined as one or more *Non-geostationary Orbits* RDD ref: S442

A *Space Station* must be located at a single *Geostationary Orbital Position* RDD ref: S444

A *Space Station* may be the subject of one or more *Associated Space Station Positions* RDD ref: S738

A *Space Station* may be associated with one or more *Associated Earth Station Antennas* RDD ref: S714

A *Space Station* may be the subject of one or more *Exclusive Operational Groups* RDD ref: S779

A *Space Station* may have its EPFD_{DOWN} values determined by using one or more *PFD Masks* RDD ref: S681

A *Space Station* may have its EPFD_{UP} values determined by using one or more *Earth To Space EIRP Masks* RDD ref: S683

A *Space Station* may have its EPFD_{IS} values determined by using one or more *Space To Earth EIRP Masks* RDD ref: S822

A *Space Station* may be the reason for the suspension of allocations represented by one or more *Beams* RDD ref: S688

A *Space Station* may have its maximum number of non-geostationary satellites that can transmit with overlapping frequencies to any given point limited by one or more *Latitude Range Categories* RDD ref: S825

- **BR Identification Code**

RDD ref: S067

A code used to uniquely identify the *Space Station* allocated by the BR. The code is not assigned to the *Space Station* until after the BR receive the notice which first “adds” the *Space Station*. Thus, it is not possible for an *Administration* to refer to this code until after the *Space Station’s* first notification has been processed by the BR, although the BR has the means to identify this code for any previously notified *Space Station*.

The BR uses a coding system to uniquely identify *Space Service Notices*. The *Space Service Notice* transaction number which first includes details of the *Space Station* (i.e., when the *Space Station’s* **Intended Action Code** = “A”) is used as the **BR Identification Code**.

Format: 10 characters.

Note: *Currently the BR Identification Code only records the last three numbers of the year of receipt preceded by a zero. It is considered essential to show year in full. The RDD defines format as 10 characters as above.*

- **Notified Identification Code**

RDD ref: S068

An *Administration’s* code used to identify the space station. The **Notified Identification Code** may be used by an *Administration* to uniquely identify a *Space Station*, prior to the BR issuing an international identifier, for the *Administration’s* own purposes and to aid its data management.

Format: Up to 20 characters.

- **Name**

RDD ref: S069

The name of the *Space Station* assigned by the *Administration*.

Format: Up to 20 characters.

- **Subregional System Indicator**

RDD ref: S070

An indicator used to identify if the *Space Station* is part of a subregional radiocommunication system.

Used for the Fixed Satellite Service plan.

Format: True or False.

- **Total Number Of Non-geostationary Orbits**

RDD ref: S086

The number of orbital planes in which all the satellites that comprise the non-geostationary *Space Station* have their orbits.

Format: Integer (in the range 1 to 99).

- **Minimum Altitude**

RDD ref: S780

The lowest altitude above the surface of the Earth at which a non-geostationary *Space Station* may transmit. For the determination of *PFD Masks*, *Earth To Space EIRP Masks* and *Space To Earth EIRP Masks* an Earth radius of 6 378.145 km has been assumed.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Integer (in the range 700 to 36 000) in km.

- **Repeating Ground Track Indicator**

RDD ref: S781

An indicator used to identify if the non-geostationary *Space Station* uses station keeping to maintain a repeating ground track for its satellites.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22)

Format: True or False

- **Period Of Repeating Ground Track**

RDD ref: S782

The time taken for all the satellites of the non-geostationary *Space Station* in their respective *Non-geostationary Orbits* to move from a specific position around the *Non-geostationary Orbits*' reference body and then return to that position for the first time, within the constraints of station keeping i.e., such that all satellites are in the same location with respect to the *Non-geostationary Orbits*' reference body and each other.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Integer (in the range 36 000 to 180 000 000) in seconds.

- **Maximum Number Of Satellites Transmitting Simultaneously Into The Northern Hemisphere**

RDD ref: S835

The maximum number of satellites (N_N) within the non-geostationary *Space Station* that may simultaneously transmit, on a co-frequency basis, to any point on the Earth's surface in the Northern Hemisphere.

Non-geostationary FSS systems only in the frequency band 3 400-4 200 MHz.

Format: Integer (in the range 1 to 5).

- **Maximum Number Of Satellites Transmitting Simultaneously Into The Southern Hemisphere**

RDD ref: S836

The maximum number of satellites (N_S) within the non-geostationary *Space Station* that may simultaneously transmit, on a co-frequency basis, to any point on the Earth's surface in the Southern Hemisphere.

Non-geostationary FSS systems only in the frequency band 3 400-4 200 MHz.

Format: Integer (in the range 1 to 5).

- **Maximum Number Of Satellites Receiving Simultaneously From Any Single Cell**

RDD ref: S783

The maximum number of satellites within the non-geostationary *Space Station* that may receive at the same time when a frequency overlap exists in all of the respective transmissions from *Associated Earth Station Antennas* located in any one of the *Space Station's* operating cells. Where an operating cell is an area on the Earth's surface that may be fixed relative to the Earth, or fixed relative to the satellite but, moving relative to the Earth.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Integer (in the range 1 to 5).

- **Average Number Of Associated Earth Stations Transmitting With Overlapping Frequencies**

RDD ref: S784

The mean average number of the *Space Station's Associated Earth Station Antennas* per km² that can transmit simultaneously when there is a frequency overlap in all of their respective transmissions.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Integer (in the range 1 to 100 000).

- **Co-frequency Cell Separation**

RDD ref: S785

The mean average of the distance between two cells of the *Space Station* operating in the same frequency range and with the same polarization for all pairs of such cells. The **Co-frequency Cell Separation** is measured between the centres of the respective cells. Where an operating cell is an area on the Earth's surface that may be fixed relative to the Earth, or fixed relative to the satellite but moving relative to the Earth.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Integer (in the range 400 to 1 000) in kilometres.

- Mitigation Technique Code**

RDD ref: S786

A categorization of the method of interference reduction used by the non-geostationary *Space Station* to avoid interference into geostationary space networks.

The mitigation technique utilizes a non-operational zone on the ground within the field of view from a *Non-geostationary Satellite Position*. This non-operational zone on the Earth's surface moves as a function of the sub-satellite point of the *Non-geostationary Satellite Position*. The mitigation technique employed by the *Space Station* is used in the determination of the *Space Station's PFD Mask(s)* hence, if the definition of the *PFD Mask* uses an Earth-based reference (i.e., the topographic angle α) or, the non-geostationary satellite-based reference (X), then the same reference method should be used for the non-geostationary *Space Station's* mitigation technique (i.e., both use α or, both use X) – see definition of formats for *PFD Mask*. Alternatively, the mitigation technique employed by the *Space Station* may be partly, or completely, user defined.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: 1 Character.

Code	Description
W	Cell-wide observance of a non-operating zone: a non-geostationary satellite's <i>Beam</i> is switched off if the separation angle, measured on the Earth's surface, between this non-geostationary satellite and the geostationary arc at any point of the non-geostationary Space Station's cell is less than the value of Mitigation Technique Angle Alpha .
C	Cell-centre observance of a non-operating zone: a non-geostationary satellite's <i>Beam</i> is switched off when the separation angle, measured at the centre of a cell, between the non-geostationary satellite and the geostationary arc is less than the value of Mitigation Technique Angle Alpha .
S	A satellite based reference: a non-geostationary satellite's <i>Beam</i> is switched off when a satellite-based reference angle (X°) is less than the value of Mitigation Technique Angle X . The reference angle X° is the angle, measured at the non-geostationary satellite, between a line projected from the geostationary arc through the non-geostationary satellite to the ground and a line from the non-geostationary satellite to the edge of the non-geostationary satellite's <i>Beam</i> .
U	User defined, see Mitigation Technique Description .

- Mitigation Technique Angle Alpha**

RDD ref: S787

The value for the angle measured at a point on the surface of the Earth, between a line to the non-geostationary satellite and a line to the geostationary arc, at or below which the non-geostationary satellite's transmission is switched off (see § 2.2 of Part C to Recommendation ITU-R S.1503).

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Decimal (in the range 5.00 to 20.00) to 2 decimal places in degrees.

- Mitigation Technique Angle X**

RDD ref: S788

The value for the angle measured at the non-geostationary satellite, between a line projected from the geostationary orbit through the non-geostationary satellite to the Earth's surface and a line from the non-

geostationary satellite to the edge of the non-geostationary satellite's **Beam**, at or below which the non-geostationary satellite's transmission is switched off (see § 2.2 of Part C to Recommendation ITU-R S.1503).

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Decimal (in the range 5.00 to 25.00) to 2 decimal places in degrees.

- **Mitigation Technique Description** **RDD ref: S837**

The detailed textual description of the mitigation technique used by the non-geostationary **Space Station** to avoid interference into geostationary space networks.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Text.

- **Reference Date** **RDD ref: S789**

A date common to every component satellite in the **Space Station** used to enable the **Non-geostationary Orbit's Initial Longitude Of The Ascending Node**, a geocentric-based reference, to be converted to or from the **Non-geostationary Orbit's Right Ascension Of The Ascending Node**, a celestial reference. The **Reference Date** is always used with the **Reference Time**.

Format: Date.

- **Reference Time** **RDD ref: S790**

A time common to every component satellite in the **Space Station** used to enable the **Non-geostationary Orbit's Initial Longitude Of The Ascending Node**, a geocentric-based reference, to be converted to or from the **Non-geostationary Orbit's Right Ascension Of The Ascending Node**, a celestial reference. The **Reference Time** is always used with the **Reference Date**.

Format: Time (in the range 0000 and 2359).

- **EPFD_{DOWN} Compliance Indicator** **RDD ref: S791**

An indicator used to identify if the non-geostationary **Space Station's** Earth-to-space radiation will meet the requirements of the additional operational EPFD_{DOWN} limits prescribed in RR No. 22.5I (WRC-2000) and listed in RR Table 22-4A1 (see RR Article 22).

Non-geostationary FSS systems only in the frequency bands 10.7-11.7 GHz (in all Regions), 11.7-12.2 GHz (Region 2), 12.2-12.5 GHz (Region 3), and 12.5-12.75 GHz (Regions 1 and 3).

Format: True or False.

- **Power Density Compliance Indicator** **RDD ref: S830**

An indicator used to identify if a geostationary **Space Station's** transmitting **Associated Earth Station Antennas** will meet the off-axis power density limits prescribed in RR Nos. 22.26 to 22.28 or 22.32 under the conditions specified in RR Nos. 22.30, 22.31 and 22.34 to 22.39.

Format: True or False.

- **Power Density Compliance Indicator In Band 1 164-1 215 MHz** **RDD ref: S842**

An indicator used to identify if a transmitting **Space Station** will meet the single entry off-axis power density limit of $-129 \text{ dB(W/m}^2\text{)}$ in any 1 MHz band produced at the Earth's surface under free space conditions.

Radionavigation-Satellite Service only in the frequency band 1 164-1 215 MHz.

Format: True or False.

- **Operational Characteristics Compliance Indicator**

RDD ref: S851

An indicator used to identify if the off-axis performance of an aircraft earth station, that is in operation with the *Space Station*, complies with the characteristics published by the Bureau for that *Space Station's* specific or typical transmitting *Associated Earth Station Antennas*.

FSS communicating with Aeronautical Mobile-Satellite Service only in the frequency band 14-14.5 GHz.

Format: True or False.

- **Calculated Aggregate Power Density In Band 5 030-5 150 MHz**

RDD ref: S792

The maximum calculated value of the *Space Station's* total power flux-density averaged over 150 kHz produced at any point on the Earth's surface, for all angles of arrival, in the frequency band 5 030-5 150 MHz by all the *Space Station's* space-to-Earth *Beams* operating in the frequency range 5 010-5 030 MHz. This maximum value must meet the off-axis power density limit of $-124.5 \text{ dB(W/m}^2\text{)}$ in any 150 kHz band in order to protect microwave landing systems (see RR No. 5.443B for further information).

Radionavigation-Satellite Service only in the frequency band 5 010-5 030 MHz.

Format: Decimal (in the range -150.0 to -124.5) in $\text{dB(W/(m}^2 \cdot 150 \text{ kHz))}$.

- **Calculated Aggregate Power Density In Band 4 990-5 000 MHz**

RDD ref: S843

The maximum calculated value of the *Space Station's* total power flux-density averaged over 10 MHz produced at any radio astronomy observatory site on the Earth's surface, for more than 2% of the time, in the frequency band 4 990-5 000 MHz by a geostationary *Space Station's* space-to-Earth *Beams* operating in the frequency range 5 010-5 030 MHz. This maximum value must meet the off-axis power density limit of $-171 \text{ dB(W/m}^2\text{)}$ in the 4 990-5 000 MHz band, see Resolution 741 (WRC-03) for further information.

Radionavigation-Satellite Service geostationary systems only in the frequency band 5 010-5 030 MHz.

Format: Decimal (in the range -200.0 to -171.0) in $\text{dB(W/(m}^2 \cdot 10 \text{ MHz))}$.

- **Calculated Equivalent Power Density In Band 4 990-5 000 MHz**

RDD ref: S868

The maximum calculated value of the *Space Station's* total equivalent power flux-density averaged over 10 MHz produced at any radio astronomy observatory site on the Earth's surface, for more than 2% of the time, in the frequency band 4 990-5 000 MHz by all the non-geostationary *Space Station's* space-to-Earth *Beams* operating in the frequency range 5 010-5 030 MHz. This maximum value must meet the off-axis power density limit of $-245 \text{ dB(W/m}^2\text{)}$ in the 4 990-5 000 MHz band see Resolution 741 (WRC-03) for further information.

Radionavigation-Satellite Service non-geostationary systems only in the frequency band 5 010-5 030 MHz.

Format: Decimal (in the range -270.0 to -245.0) in $\text{dB(W/(m}^2 \cdot 10 \text{ MHz))}$.

- **Calculated Aggregate Power Density In Band 15.35-15.4 GHz**

RDD ref: S796

The maximum calculated value of the non-geostationary *Space Station's* total power flux-density averaged over 50 MHz produced at any radio astronomy observatory site on the Earth's surface, for more than 2% of the time, in the frequency band 15.35-15.4 GHz by all the non-geostationary *Space Station's* space-to-Earth *Beams* operating in the frequency range 15.43-15.63 GHz. The maximum value must meet the off-axis power density limit of $-156 \text{ dB(W/m}^2\text{)}$ in the 15.35-15.4 GHz band (see RR No. 5.511A for further information).

Fixed-Satellite Service non-geostationary systems only in the frequency band 15.43-15.63 GHz.

Format: Decimal (in the range -200.0 to -156.0) in $\text{dB(W/(m}^2 \cdot 50 \text{ MHz))}$.

- **Calculated Mean Power Density In Band 35.5-36 GHz**

RDD ref: S844

The maximum calculated value of a *Space Station's* mean power flux-density averaged over 500 MHz produced at the Earth's surface in the frequency band 35.5-36 GHz by a *Space Station's* space-to-Earth *Beams* for any off-axis-angle greater than 0.8 degrees. The maximum value must meet the off-axis power density limit of $-73.3 \text{ dB(W/m}^2\text{)}$ in the 35.5-36 GHz band (see RR No. 5.549A for further information).

Earth Exploration-Satellite Service (active) or Space Research Service (active) only in the frequency band 15.43-15.63 GHz.

Format: Decimal (in the range -100.0 to -73.3) in $\text{dB(W/(m}^2 \cdot 500 \text{ MHz))}$.

• **Calculated Equivalent Power Density In Band 42.5-43.5 GHz** **RDD ref: S845**

The maximum calculated value of the *Space Station's* total equivalent power flux-density averaged over 1 GHz produced on the Earth's surface, for more than 2% of the time, at the site of any radio astronomy station notified to the Bureau as a single dish telescope, in the frequency band 42.5-43.5 GHz by all the *Space Station's* space-to-Earth *Beams* operating in the frequency range 42.0-42.5 GHz. This maximum value must meet the off-axis power density limit of $-230 \text{ dB(W/m}^2)$ in the band 42.5-43.5 GHz (see RR No. 5.551H for further information).

FSS and BSS non-geostationary systems only in the frequency band 42-42.5 GHz.

Format: Decimal (in the range -250.0 to -230.0) in $\text{dB(W/(m}^2 \cdot 1 \text{ GHz))}$.

• **Calculated Equivalent Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz** **RDD ref: S846**

The maximum calculated value of the *Space Station's* total equivalent power flux-density averaged over 500 kHz produced on the Earth's surface, for more than 2% of the time, at the site of any radio astronomy station notified to the Bureau in the frequency band 42.5-43.5 GHz by all the *Space Station's* space-to-Earth *Beams* operating in the frequency range 42.0-42.5 GHz. This maximum value depends on whether the radio astronomy station is used as a single dish telescope or for very long baseline interferometry. (see RR No. 5.551H for further information).

FSS and BSS non-geostationary systems only in the frequency band 42-42.5 GHz.

Format: Decimal (in the range -270.0 to -209.0) in $\text{dB(W/(m}^2 \cdot 500 \text{ kHz))}$.

• **Calculated Aggregate Power Density In Band 42.5-43.5 GHz** **RDD ref: S848**

The maximum calculated value of the *Space Station's* total power flux-density averaged over 1 GHz produced on the Earth's surface, for more than 2% of the time, at the site of any radio astronomy station notified to the Bureau as a single dish telescope, in the frequency band 42.5-43.5 GHz by all the *Space Station's* space-to-Earth *Beams* operating in the frequency range 42.0-42.5 GHz. This maximum value must meet the off-axis power density limit of $-137 \text{ dB(W/m}^2)$ in the band 42.5-43.5 GHz (see RR No. 5.551I for further information).

FSS and BSS geostationary systems only in the frequency band 42-42.5 GHz.

Format: Decimal (in the range -160.0 to -137.0) in $\text{dB(W/(m}^2 \cdot 1 \text{ GHz))}$.

• **Calculated Aggregate Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz** **RDD ref: S849**

The maximum calculated value of the *Space Station's* total power flux-density averaged over 500 kHz produced on the Earth's surface, for more than 2% of the time, at the site of any radio astronomy station notified to the Bureau in the frequency band 42.5-43.5 GHz by all the *Space Station's* space-to-Earth *Beams* operating in the frequency range 42.0-42.5 GHz. This maximum value depends on whether the radio astronomy station is used as a single dish telescope or for very long baseline interferometry. (see RR No. 5.551I for further information).

FSS and BSS geostationary systems only in the frequency band 42-42.5 GHz.

Format: Decimal (in the range -180.0 to -116.0) in $\text{dB(W/(m}^2 \cdot 500 \text{ kHz))}$.

• **Type of Radio astronomy Station In Band 42.5-43.5 GHz** **RDD ref: S850**

An indicator for identifying the type of observations recorded by the Bureau for the radio astronomy station subject to the *Space Station's* total power flux-density in the frequency band 42.5-43.5 GHz.

Format: 1 character.

Code	Meaning
S	Either spectral-line observations operated from a single dish telescope, or continuum observations operated from single dish telescopes or closely connected array of telescopes.
V	Very long baseline interferometry (VLBI) operated from different <i>Earth Station Antenna</i> located at a considerable distance from each other and which may not be located in the same <i>Geographical Area</i> .

5.11 Geostationary Orbital Position

RDD ref: S071

A point on a circular and direct orbit that lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; so the satellite remains in approximately the same position relative to an observer on the Earth.

Forces acting on the satellite will make it oscillate around its nominal position in the North-South and East-West directions. As it is impossible to keep the satellite absolutely stationary, the degree of oscillation is limited to a station-keeping window in the North-South and East-West directions. This North-South movement is known as **Inclination Excursion** and the East-West movement is known as "longitudinal tolerance".

A satellite revolving around a body other than the Earth is categorized as a *Space Station* with a *Non-geostationary Orbit*.

◇ A *Geostationary Orbital Position* is identified by its **Nominal Longitude** and the *Space Station* for which it is a location.

A *Geostationary Orbital Position* must be the subject of one or more *Intended Actions* RDD ref: S483

A *Geostationary Orbital Position* must be the location of a single *Space Station* RDD ref: S445

• **Nominal Longitude** RDD ref: S072

The angular distance East from the Standard Meridian, i.e., that of Greenwich, England, to the meridian of the point on the equator above which it is planned to locate the *Space Station*. During the lifetime of the *Space Station* it will deviate from its **Nominal Longitude** by a tolerance determined by the **Inclination Excursion** and the "longitudinal tolerance".

Format: Decimal (in the range –180.0 to 180.00) to 2 decimal places in degrees.

• **Preferred Longitude** RDD ref: S073

The angular distance from the Standard Meridian, i.e., that of Greenwich, England, to the meridian of the point on the equator above which it is planned to locate the *Space Station*. During the design stage this longitude is nominated by the notifying *Administration* as the most desired orbital position for the satellite.

RR Appendix 30B only.

Format: Decimal (in the range –180.00 to 180.00) to 2 decimal places in degrees.

• **Longitude Tolerance Easterly Limit** RDD ref: S074

The declared maximum angular deviation in the position of the *Space Station*, relative to its **Nominal Longitude**, in an Easterly direction throughout the lifetime of the *Space Station*. The longitudinal tolerance may not be symmetrical around the **Nominal Longitude**.

In the RR Appendices 30, 30A and 30B longitudinal tolerance and **Inclination Excursion** are jointly referred to as station keeping accuracy.

Format: Decimal (in the range 0.00 to 1.00) to 2 decimal places in degrees.

- **Longitude Tolerance Westerly Limit**

RDD ref: S075

The declared maximum angular deviation in the position of the *Space Station*, relative to its **Nominal Longitude**, in a Westerly direction throughout the lifetime of the *Space Station*. The longitudinal tolerance may not be symmetrical around the **Nominal Longitude**.

In the RR Appendices 30, 30A and 30B longitudinal tolerance and **Inclination Excursion** are jointly referred to as station keeping accuracy.

Format: Decimal (in the range 0.00 to 1.00) to 2 decimal places in degrees.

- **Inclination Excursion**

RDD ref: S076

The maximum permitted angular deviation in the position of the *Space Station*, relative to the Earth's equatorial plane, in the North-South direction, throughout the lifetime of the *Space Station*.

In the RR Appendices 30, 30A and 30B longitudinal tolerance and **Inclination Excursion** are combined and are called station keeping accuracy.

Format: Decimal (in the range 0.00 to 5.00) to 2 decimal places in degrees.

- **Service Arc Easterly Limit**

RDD ref: S079

The longitude of the furthest point to the East of the geostationary satellite orbit from which the *Space Station* can provide the required service to its *Associated Earth Station Antennas* in the *Assignment Coordination Groups*' service area(s).

The East and West longitudes that define the service arc, delineate a portion of the geostationary-satellite orbit within which a *Space Station* can provide the required service to its *Associated Earth Station Antennas* in the *Assignment Coordination Groups*' service area(s).

Format: Integer (in the range –180 to 180) in degrees.

- **Service Arc Westerly Limit**

RDD ref: S080

The longitude of the furthest point to the West of the geostationary satellite orbit from which the *Space Station* can provide the required service to its *Associated Earth Station Antennas* in the *Assignment Coordination Groups*' service area(s).

The East and West longitudes that define the service arc, delineate a portion of the geostationary satellite orbit within which a *Space Station* can provide the required service to its *Associated Earth Station Antennas* in the *Assignment Coordination Groups*' service area(s).

Format: Integer (in the range –180 to 180) in degrees.

5.12 *Non-geostationary Orbit*

RDD ref: S093

The set of characteristics that describe the path around a reference body, relative to a specified frame of reference, described by the centre of mass of a satellite or other object in space that is subjected primarily to natural forces, mainly the force of gravity. There may be one or more satellites from the same *Space Station* in a single *Non-geostationary Orbit*.

The choice of a coordinate system used for the specified frame of reference may be affected by several factors and particularly the reference body. The geometry of the non-geostationary orbit is illustrated in Fig. 2. For notification of satellites orbiting the Earth the coordinate system is based on the "geocentric-equatorial coordinate system". In this system (with the exception of the determination of EPFD values – see below) the X and Y coordinates are in the equatorial plane with the X axis pointing in the direction of the Constellation of Aries (Vernal point). The Z axis points in the direction of the North Pole and the origin of the coordinates is at the Earth's centre. The coordinate system is static and does not rotate with the Earth but it does include precession of the equinoxes which arises from the variation in the Earth's rotational axis with time.

For the determination of EPFD values, the celestial frame of reference is not used and instead a geocentric frame of reference is preferred. In this case the X axis is in the direction of the Standard Meridian (i.e., that of Greenwich, England) and hence the coordinate system rotates with the Earth.

To make both approaches compatible the choice of the reference instant of time (*Space Station's Reference Date and Reference Time*) establishes the connection between these reference frames.

The following data item definitions are based on the Earth being the reference body.

- ◇ A *Non-geostationary Orbit* is identified by its **Inclination Angle, Right Ascension Of The Ascending Node, Perigee Altitude, Perigee Argument** and the *Non-geostationary Space Station* for which it indicates the astrodynamics.

A *Non-geostationary Orbit* must be the subject of one or more *Intended Actions* RDD ref: S485

A *Non-geostationary Orbit* must indicate the astrodynamics details of a single *Space Station* RDD ref: S094

A *Non-geostationary Orbit* must contain one or more *Non-geostationary Satellite Positions* RDD ref: S095

A *Non-geostationary Orbit* must use transmission characteristics defined by one or more *Beams* RDD ref: S866

- **Notified Identification Code** RDD ref: S717

A code supplied by the notifying *Administration* to identify the particular *Non-geostationary Orbit*.

Format: 2 Characters (in the numeric range 01 to 99).

- **Reference Body Code** RDD ref: S084

The indication of the attracting celestial body which primarily determines the *Non-geostationary Orbit*.

Format: 1 character.

Code	Meaning
T	for Earth (Terra)
L	for Moon (Lunar)
M	for Mars
J	for Jupiter
V	for Venus
S	for Sun

- **Number Of Satellites In Orbit** RDD ref: S087

The total number of satellites from the same *Space Station* in the *Non-geostationary Orbit*.

Format: Integer (in the range 1 to 99).

- **Inclination Angle** RDD ref: S096

The angle i at the ascending node between the normal to the line of nodes in the equatorial plane (directed towards the East) and the normal to the line of nodes in the orbital plane (directed in the direction of the satellite's velocity). See Fig. 2.

Format: Decimal (in the range 0.00 to 179.99) to 2 decimal places in degrees.

Examples: The inclination angle of a polar orbit is 90.00°. The inclination is less than 90° if the satellite's direction of movement at the ascending node inclines to the East, and greater than 90° if it inclines to the West.

- **Right Ascension Of The Ascending Node**

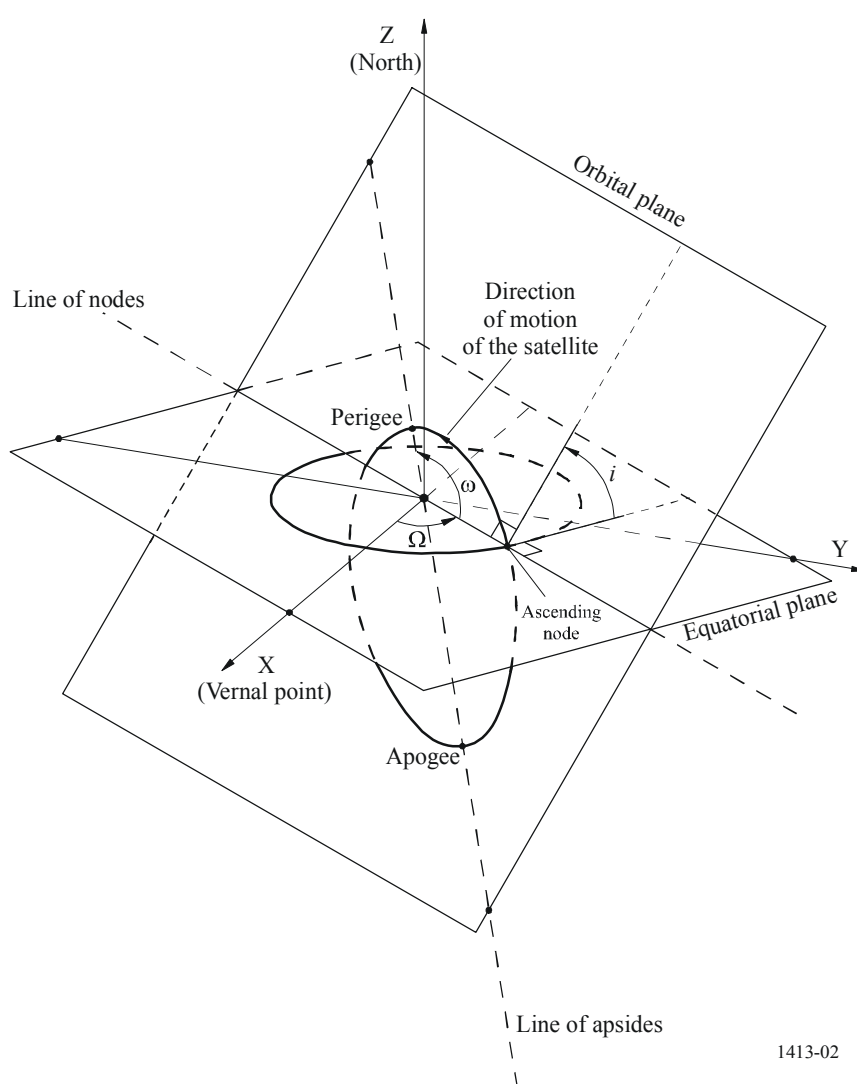
RDD ref: S097

The angle (Ω) of the direction of the ascending node measured, in the equatorial plane, from the Vernal equinox (X axis) in an anti-clockwise direction when viewed from above the equatorial plane. The intersection of the orbital and equatorial planes is known as the line of nodes and the point at which the satellite orbit makes a South to North crossing of the Earth's equatorial plane is called the ascending node.

The Ascending Node is the point where the satellite crosses the equatorial plane in a South to North direction.

Format: Decimal (in the range 0.00 to 359.99) to 2 decimal places in degrees.

FIGURE 2
Non-geostationary orbital parameters



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- **Initial Longitude Of The Ascending Node**

RDD ref: S221

The angle of the direction of the ascending node measured, at a reference instant of time, in the equatorial plane from the Standard Meridian (i.e., that of Greenwich, England) in an anti-clockwise direction when viewed from above the equatorial plane. The intersection of the orbital and equatorial planes is known as the line of nodes and the point at which the satellite orbit makes a South to North crossing of the Earth's equatorial plane is called the ascending node.

The value of the longitude of the ascending node changes over time due to rotation of the Earth. For non-geostationary *Space Stations* station keeping may be used to ensure a satellite returns to its **Initial Longitude Of The Ascending Node** over a set time period. However, even with station keeping the impact of orbit perturbations will cause the longitude of the ascending node to deviate from its nominal value within a tolerance indicated by the **Longitudinal Tolerance Of The Ascending Node**.

The *Space Station's* longitude of the ascending node value(s) are used in the determination of the *Space Station's* EPFD values.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Decimal (in the range –180.00 to 180.00) to 2 decimal places in degrees.

- **Longitudinal Tolerance Of The Ascending Node** **RDD ref: S222**

The maximum permitted variation in the value of the *Non-geostationary Orbit's* longitude of the ascending node from the nominal value (i.e., the **Initial Longitude Of The Ascending Node**) that is maintained over a period of time by the use of station keeping.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Decimal (in the range 0.10 to 0.50) to 2 decimal places in degrees.

- **Precession Rate Indicator** **RDD ref: S223**

An indicator used to identify if the notifying *Administration* has decided to use a specific precession rate per day for the *Non-geostationary Orbit* instead of the value calculated using the parameters in ITU-R S.1503.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: True or False.

- **Administration's Selected Precession Rate Per Day** **RDD ref: S224**

The speed at which the *Non-geostationary Orbit's* longitude of the ascending node deviates from its initial value, in any sidereal day, measured in an anti-clockwise direction when viewed from above the equatorial plane. Due to the impact of orbit perturbations, the *Non-geostationary Orbit's* longitude of the ascending node will process around the reference body and the notifying *Administration* may select a specific precession rate to be used in the determination of EPFD values, instead of the value calculated using the parameters in Recommendation ITU-R S.1503.

Non-geostationary FSS systems only in the frequency bands listed in RR Tables 22-1, 22-2 and 22-3 (see RR Article 22).

Format: Integer (in the range 0.01 to 0.50) in degrees/day.

- **Apogee Altitude** **RDD ref: S098**

The longest distance from a point on the *Non-geostationary Orbit* to the sub-satellite point on the Earth's surface. For the purpose of this measurement, the Earth is considered to be a spherical body with no height variation and a nominal radius of 6 378 km. The sub satellite point is the point on a line between the apogee and the Earth's centre where it passes through the Earth's surface.

The term "apogee" is commonly used when the Earth is the reference body and may vary if a different reference body is used e.g., "aphelion" when the reference body is the sun. A more generic term that may also be used is "apoapsis".

Format: Integer (in the range 500 to 99 999 999) in km.

- **Perigee Altitude** **RDD ref: S099**

The shortest distance from a point on the *Non-geostationary Orbit* to the sub-satellite point on the Earth's surface. For the purpose of this measurement, the Earth is considered to be a spherical body with no height

variation and a nominal radius of 6 378 km. The sub satellite point is the point on a line between perigee and the Earth's centre where it passes through the Earth's surface.

The term "perigee" is commonly used when the Earth is the reference body and may vary if a different reference body is used e.g., "perihelion" when the reference body is the sun. A more generic term that may also be used is "periapsis".

Format: Integer (in the range 500 to 99 999 999) in km.

• **Perigee Argument** **RDD ref: S100**

The angle (ω) of the direction of the perigee measured, in the plane of the *Non-geostationary Orbit*, from the point at which the satellite makes a South-to-North crossing of the Earth's equatorial plane (ascending node) in the direction of the satellite's motion.

Format: Decimal (in the range 0.0 to 359.9) to 1 decimal place in degrees.

• **Eccentricity** **RDD ref: S101**

The ratio of the distance between the foci of the elliptical orbit and the length of its major axis. This parameter is a constant for a specific *Non-geostationary Orbit* and defines its shape. A circular orbit is a special case of an ellipse when the eccentricity equals zero.

Format: Decimal (in the range 0.00 to 0.90) to 2 decimal places.

• **Semi Major Axis** **RDD ref: S102**

One half of the distance from the apogee to the perigee. This parameter is a constant for a specific *Non-geostationary Orbit* and defines its **Satellite Period**.

The distance between apogee and perigee is not the summation of the apogee and perigee altitudes.

Format: Integer (in the range 6 900 to 49 999 999) in km.

• **Satellite Period** **RDD ref: S103**

The time elapsing between two consecutive passages of a satellite through the same point on its *Non-geostationary Orbit*.

Format: A complex format comprising of

Integer (in the range 1 to 1 000) in hours and

Integer (in the range 0 to 59) in minutes.

5.13 Non-geostationary Satellite Position **RDD ref: S104**

The identification and location of a satellite in a specific *Non-geostationary Orbit* determined at the same reference instant of time for every *Non-geostationary Satellite Position* in every *Non-geostationary Orbit* of the same *Space Station*.

◇ A *Non-geostationary Satellite Position* is identified by its **Initial Phase Angle** and the *Non-geostationary Orbit* within which it is located.

A *Non-geostationary Satellite Position* must be located in a single
Non-geostationary Orbit

RDD ref: S105

A *Non-geostationary Satellite Position* may have its worst-case PFD envelope
described by one or more *PFD Masks*

RDD ref: S744

A *Non-geostationary Satellite Position* may have its worst-case off-axis EIRP
values described with respect to the geostationary orbit by one or more
Space To Earth EIRP Masks

RDD ref: S745

- **Notified Identification Code**

RDD ref: S225

A code, supplied by the notifying *Administration*, to identify the particular *Non-geostationary Satellite Position* in the *Non-geostationary Orbit*.

Format: 2 Characters (in the numeric range 01 to 99).

- **Initial Phase Angle**

RDD ref: S106

The angle of the direction of the satellite at a reference instant in time measured, in the satellite's orbital plane, from the ascending node (point at which the satellite orbit makes a South to North crossing of the Earth's equatorial plane using the Celestial reference frame) in the direction of motion of the satellite in the orbit.

Format: Decimal (in the range 0.0 to 359.9) to 1 decimal place in degrees.

5.14 *Exclusive Operational Group*

RDD ref: S729

An *Exclusive Operational Group* identifies *Assignment Coordination Groups* not intended to be used simultaneously.

It implies that no interference would be considered between *Assignment Coordination Groups* belonging to the same *Exclusive Operational Group*.

The interferences created by *Assignment Coordination Groups* belonging to the same *Exclusive Operational Group* will not be aggregated. It is only the worst case of interference for each *ACG Frequency* that will be considered for coordination purposes.

The Region 2 Satellite Broadcasting Plan permits the operation of one or more configurations if their aggregate interference does not exceed the worst case of interference considered for coordination purposes.

The *Exclusive Operational Group* is specific to a single *Space Station* even though its membership may include *Assignment Coordination Groups* from other *Space Stations*. Thus, an *Exclusive Operational Group* is notified from the perspective of one *Space Station*, indicating that only the notifying *Administration* enters into the undertaking to conform with the operational constraint.

◇ An *Exclusive Operational Group* is identified by its **Notified Identifying Code** and the *Space Station* to which it belongs.

An *Exclusive Operational Group* must apply to a single *Space Station*

RDD ref: S704

An *Exclusive Operational Group* must consist of one or more *Assignment Coordination Groups*

RDD ref: S730

- **Notified Identifying Code**

RDD ref: S712

A code provided by the notifying *Administration* in order to assist with the identification of *Exclusive Operational Groups*.

Format: Up to 10 characters.

MASK DATA

		Page
5.15	<i>Latitude Range Category</i>	RDD ref: S818 192
	Start Latitude	RDD ref: S797 192
	End Latitude	RDD ref: S798 192
	Maximum Number Of Satellites	RDD ref: S799 192
5.16	<i>PFD Mask</i>	RDD ref: S820 192
	BR Identification Code	RDD ref: S800 193
	Notified Identification Code	RDD ref: S801 193
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5.17	<i>Earth To Space EIRP Mask</i>	RDD ref: S824 196
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	Highest Usable Frequency	RDD ref: S811 198
5.18	<i>Space To Earth EIRP Mask</i>	RDD ref: S831 198
	BR Identification Code	RDD ref: S812 199
	Notified Identification Code	RDD ref: S814 199
	Pattern	RDD ref: S815 199
	Lowest Usable Frequency	RDD ref: S816 200
	Highest Usable Frequency	RDD ref: S817 200

5.15 Latitude Range Category**RDD ref: S818**

A section of the Earth's surface delineated by two lines parallel to the equator and within which only a specified maximum number of the non-geostationary *Space Station's* satellites may simultaneously transmit with overlapping frequencies to any given location.

The *Latitude Range Category* is used with the *PFD Masks* to determine the *Space Station's* equivalent power flux-density (EPFD_{DOWN}) values.

NOTE 1 – Every point on the Earth's surface must belong to a single *Latitude Range Category*.

NOTE 2 – The number of non-geostationary satellites visible at any instant in time to any given location within the *Latitude Range Category* may be greater than or, less than, the **Maximum Number Of Satellites**.

◇ A *Latitude Range Category* is identified by its **Start Latitude** and the *Space Station* to which it is associated.

A *Latitude Range Category* must limit the maximum number of non-geostationary satellites that can simultaneously transmit with overlapping frequencies to any given point within its defined latitude range for a single *Space Station*

RDD ref: S819

- **Start Latitude**

RDD ref: S797

The most southerly latitude of the *Latitude Range Category*

Format: Integer (in the range –90 to +89) in degrees.

- **End Latitude**

RDD ref: S798

The most northerly latitude of the *Latitude Range Category*.

Format: Integer (in the range –89 to +90) in degrees.

- **Maximum Number Of Satellites**

RDD ref: S799

The maximum number of the non-geostationary *Space Station's* satellites that may transmit simultaneously when there is a frequency overlap in all of their respective transmissions to any location in the *Latitude Range Category*, at any instant in time.

Format: Integer (in the range 2 to 10).

5.16 PFD Mask**RDD ref: S820**

A *PFD Mask* describes the pattern of the maximum power flux-density radiated in the reference bandwidth (see RR Article 22) by a single non-geostationary satellite and incident on any point at the surface of the Earth. The *PFD Mask* is defined in three dimensions and is developed for all conditions and for all methods of modulation, including all variations of resource allocation and switching strategy used at different periods of the *Space Station's* lifetime. The implementation of the *PFD Mask* explicitly accounts for both co-polarization and cross-polarization for like types of polarization (i.e., circular-to-circular or linear-to-linear).

The *PFD Mask* is used in the determination of the downlink equivalent power flux-density (EPFD_{DOWN}) levels, at any point on the Earth's surface visible from the geostationary-satellite orbit, produced by emissions of all the satellites of a non-geostationary *Space Station* subject to provision RR No. 22.5C. RR No. 22.5C (WRC-2000) prescribes the EPFD_{DOWN} limits in RR Tables 22-1A to 22-1D in the associated frequency bands, for a given reference bandwidth and a percentage of time, that must not be exceeded by the non-geostationary *Space Station* at any point on the Earth's surface visible from the geostationary-satellite orbit. A *Space Station's PFD Mask(s)* comprise the cumulative PFD from all the non-geostationary satellite's co-frequency *Beams* and is only applicable for non-geostationary FSS systems that are subject to provision RR No. 22.5C.

- ◇ A **PFD Mask** is identified by its **Notified Identification Code** and the *Space Station* to which it is associated.

A **PFD Mask** must define a worst-case PFD envelope for one or more
Non-geostationary Satellite Positions

RDD ref: S684

A **PFD Mask** must be associated with a single *Space Station*

RDD ref: S682

A **PFD Mask** must define the overall spectral radiation constraint for
one or more *Transmitting Space Station ACGs*

RDD ref: S685

A **PFD Mask** must be the subject of one or more *Intended Actions*.

RDD ref: S686

- **BR Identification Code**

RDD ref: S800

A code used to uniquely identify the **PFD Mask** allocated by the BR. The code is not assigned to the **PFD Mask** until after the BR receives the notice which first “adds” the **PFD Mask**. Thus it is not possible for an *Administration* to refer to the code until after the **PFD Mask**’s first notification has been processed by the BR, although the BR has the means to identify this code for any previously notified **PFD Mask**.

Format: 10 characters

- **Notified Identification Code**

RDD ref: S801

An *Administration*’s code used to uniquely identify the **PFD Mask**. The **Notified Identification Code** may be used by an *Administration* to uniquely identify a **PFD Mask**, prior to the BR issuing an international identifier, for its own purpose and to aid its data management.

The first character in the **Notified Identification Code** is a “P” to indicate a “**PFD Mask**”.

Format: Up to 20 characters

- **Pattern Type**

RDD ref: S802

An indicator used to identify which format option is used to represent the **Pattern**.

Format: 1 character.

Code	Meaning
A	The Pattern uses a definition of the PFD values based on a reference angle (α) on the Earth’s surface.
X	The Pattern uses a definition of the PFD values based on a reference angle (X) at the non-geostationary satellite.
E	The Pattern uses a definition of the PFD values based on azimuth and elevation angles at the non-geostationary satellite with respect to any point on the surface of the Earth.

- **Pattern**

RDD ref: S803

The definition of the maximum power flux-density generated by a non-geostationary satellite, at any point in its orbit, as seen from any point on the surface of the Earth. The PFD value is determined by aggregating the radiation from all the non-geostationary satellite’s space-to-Earth transmitting co-frequency *Beams* for both co-polarization and cross-polarization. The PFD value is based on a point on the Earth’s surface and the relative position of the non-geostationary satellite.

The **PFD Mask** may be defined as a set of values dependent on three variables according to one of the following options:

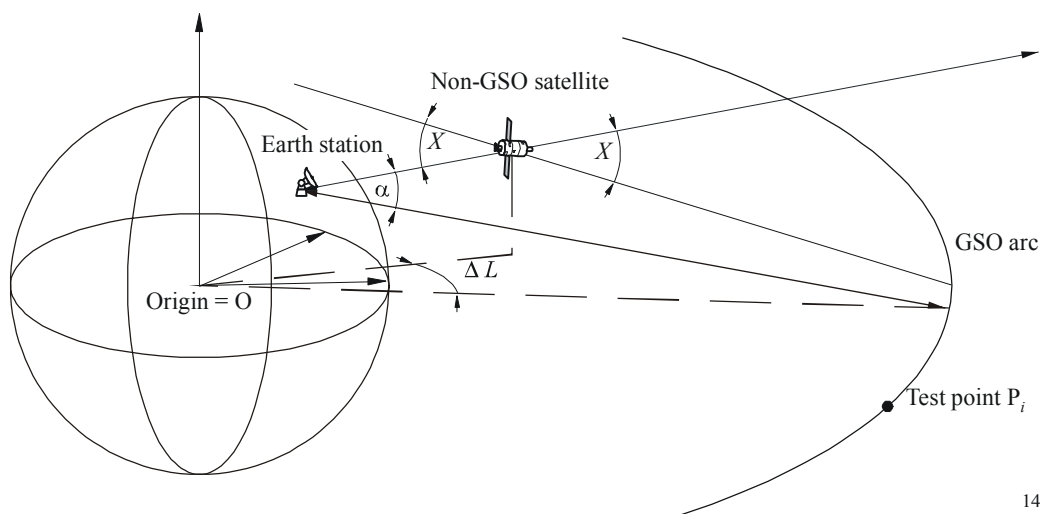
Option 1: (see Fig. 3)

- The latitude of the non-geostationary satellite's sub-satellite point.
- The separation angle α_i between the non-geostationary satellite and the geostationary arc as seen from any point on the surface of the Earth, where α is the minimum topocentric angle ($\alpha = \min \alpha_i$) measured from the point on the surface of the Earth between the interfering non-geostationary satellite and a test point on the geostationary arc.
- The difference in longitude (ΔL) between the non-geostationary satellite's sub-satellite point and the point on the geostationary arc where the angle α is minimized.

Option 2: (see Fig. 3)

- The latitude of the non-geostationary satellite's sub-satellite point.
- The separation angle X_i between a line projected from the geostationary arc through the non-geostationary satellite and a line from the non-geostationary satellite to any point on the surface of the Earth, where X is the minimum angle ($X = \min X_i$) measured at the non-geostationary satellite between the line from the point on the Earth's surface to the interfering non-geostationary satellite and the line through the non-geostationary satellite from a test point on the geostationary arc.
- The difference in longitude (ΔL) between the non-geostationary satellite's sub-satellite point and the point on the geostationary arc where the angle X is minimized.

FIGURE 3



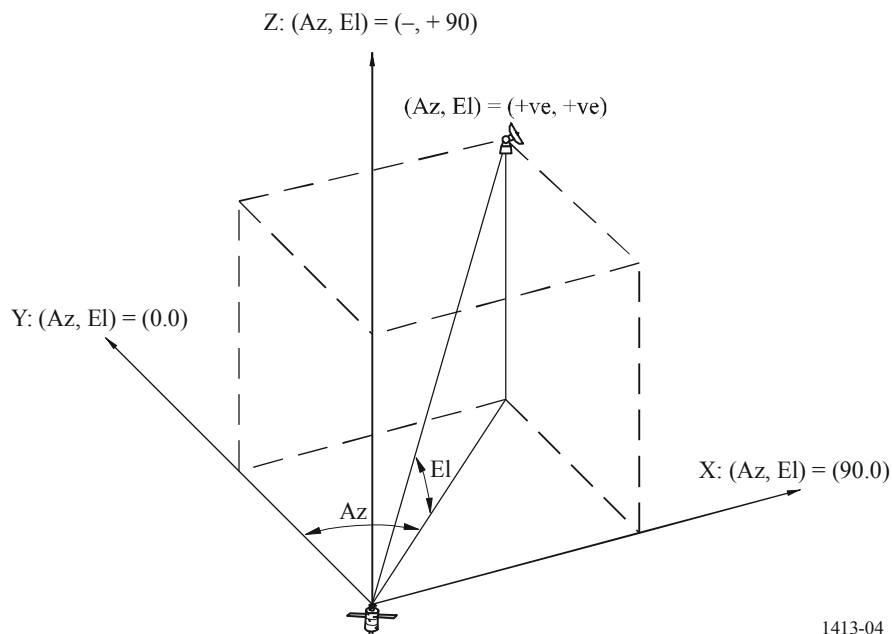
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Option 3: (see Fig. 4)

- The latitude of the non-geostationary satellite's sub-satellite point,
- The relative azimuth. The angle in the plane of a great circle at the latitude of the sub-satellite point (XY plane) measured at the non-geostationary satellite between a line from the centre of the Earth to the non-geostationary satellite and the projection, onto the XY plane and perpendicular to it, of a line from the non-geostationary satellite to a point on the surface of the Earth. (NOTE: this data item should not be mistaken for geographical azimuth).

- The elevation angle. The angle measured at the non-geostationary satellite in a plane perpendicular to the XY plane between the XY plane and a line from the non-geostationary satellite to the point on the surface of the Earth.

FIGURE 4



1413-04

It should be noted that direction of the Cartesian X, Y, Z vectors in this diagram are:

- X: +ve in the East direction from the non-GSO satellite
- Y: towards the centre of the Earth from the non-GSO satellite
- Z: +ve towards the North direction from the non-GSO satellite.

NOTE 1 – If the definition of the **PFD Mask** uses an Earth based reference (i.e., the topographic angle α) or the non-geostationary satellite based reference (X) then the same reference method should be used for the non-geostationary **Space Station** mitigation technique (i.e., both use α or both use X).

Format: One of the following formats:

Option 1

Latitude j	α	L	PFD value
	α_i	L_k	$\text{PFD}_{nj}(i,k)$
	...	...	...

Option 2

Latitude j	(X)	L	PFD value
	(X_i)	L_k	$\text{PFD}_{nj}(i,k)$
	...	...	...

or, Option 3

Latitude j	Az	E1	PFD value
	Az_i	$E1_k$	$\text{PFD}_{nj}(i,k)$
	...	...	...

1413-001

• **Lowest Usable Frequency** **RDD ref: S804**

The lowest frequency for which the *PFD Mask* is valid.

Format: Frequency.

• **Highest Usable Frequency** **RDD ref: S829**

The highest frequency for which the *PFD Mask* is valid.

Format: Frequency.

5.17 Earth To Space EIRP Mask **RDD ref: S824**

An *Earth To Space EIRP Mask* describes the pattern of the maximum EIRP, radiated in the reference bandwidth (see RR Article 22) by an *Associated Earth Station Antenna*, as a function of the off-axis angle from the *Associated Earth Station Antenna's* main beam axis and incident on any point in the geostationary-satellite orbit. An *Earth To Space EIRP Mask* is developed for all conditions and for all methods of modulation, including all variations of resource allocation and switching strategy used at different periods of the *Space Station's* lifetime. The *Earth To Space EIRP Mask* is developed for a given polarization and for an *Associated Earth Station Antenna* with a rotationally symmetric off-axis pattern.

The *Earth To Space EIRP Mask* may be applicable for more than one type of *Associated Earth Station Antenna* but, in this case, each type of *Associated Earth Station Antenna* covered by the *Earth To Space EIRP Mask* must have an off-axis performance that is equal to, or better than, the off-axis performance of the *Associated Earth Station Antenna* used to develop the *Earth To Space EIRP Mask*.

The ***Earth To Space EIRP Mask*** is used in the determination of the uplink equivalent power flux-density (EPFD_{UP}) levels produced at any point in the geostationary-satellite orbit by all ***Associated Earth Station Antennas*** transmitting to a non-geostationary ***Space Station*** subject to the provision RR No. 22.5D. RR No. 22.5D (WRC-2000) prescribes the EPFD_{UP} limits in RR Table 22-2 for the associated frequency bands, for a given reference bandwidth and percentage of time, that must not be exceeded at any point in the geostationary satellite orbit. The ***Earth To Space EIRP Mask*** is only applicable for an ***Associated Earth Station Antenna*** in a non-geostationary FSS system that is subject to the provision of RR No. 22.5D.

- ◇ An ***Earth To Space EIRP Mask*** is identified by its **Notified Identification Code** and the ***Space Station*** with which it is associated.

An ***Earth To Space EIRP Mask*** must describe the worst case off-axis EIRP values with respect to the geostationary orbit for one or more ***Associated Earth Station Antenna***

RDD ref: S826

An ***Earth To Space EIRP Mask*** must be used in determining the EPFD values for a single ***Space Station***

RDD ref: S821

An ***Earth To Space EIRP Mask*** must define the overall spectral radiation constraint for one or more ***Receiving Space Station ACGs***

RDD ref: S827

An ***Earth To Space EIRP Mask*** must be the subject of one or more ***Intended Actions***

RDD ref: S828

- **BR Identification Code**

RDD ref: S805

A code used to uniquely identify the ***Earth To Space EIRP Mask*** allocated by the BR. The code is not assigned to the ***Earth To Space EIRP Mask*** until after the BR receives the notice which first “adds” the ***Earth To Space EIRP Mask***. Thus it is not possible for an ***Administration*** to refer to the code until after the ***Earth To Space EIRP Mask*** first notification has been processed by the BR, although the BR has the means to identify this code for any previously notified ***Earth To Space EIRP Mask***.

Format: 10 characters.

- **Notified Identification Code**

RDD ref: S806

An ***Administration***’s code to uniquely identify the ***Earth To Space EIRP Mask***. The **Notified Identification Code** may be used by an ***Administration*** to uniquely identify a ***Earth To Space EIRP Mask***, prior to the BR issuing an international identifier, for its own purpose and to aid its data management.

The first character in the **Notified Identification Code** is an “E” to indicate an “***Earth To Space EIRP Mask***”.

Format: Up to 20 characters.

- **Pattern**

RDD ref: S807

The definition of the maximum EIRP radiated in the reference bandwidth as a function of the ***Associated Earth Station Antenna***’s off-axis angle from the main beam axis. The Earth-to-space EIRP may be defined according to the following equation (see Recommendation ITU-R S.1503).

$$ES\_EIRP(\theta) = G(\theta) + P$$

where:

ES_EIRP: equivalent isotropic radiated power in the reference bandwidth (dB(W/BW_{ref}))

θ: separation angle between the non-geostationary satellite and a geostationary ***Space Station*** measured at the earth station operating with the non-geostationary ***Space Station*** (degrees).

G(θ): earth station directional antenna gain (dBi)

P: maximum power delivered to the antenna, in the reference bandwidth (dB(W/BW_{ref}))

BW_{ref}: reference bandwidth (kHz).

Format: a set of vectors consisting of:

EIRP Value (RDD ref: S815a): the value of EIRP at the specified **Off-axis Angle**; Decimal (in the range –10.0 to 50.0) to 1 decimal place in dBW; and,

Off-axis Angle (RDD ref: S815b): the appropriately spaced angular value, measured in the specified plane from the direction of the antenna's main beam axis; Integer (in the range 0 to 90), in degrees.

- **Associated Earth Station Planned Minimum Elevation Angle** **RDD ref: S808**

The intended minimum operating angle of elevation, for the type of transmitting *Associated Earth Station Antenna* used to develop the *Earth To Space EIRP Mask*, measured in the vertical plane between the direction of the *Associated Earth Station Antenna's Maximum Gain* and the horizontal plane.

Format: Decimal (in the range 0.0 to 10.0) to 1 decimal place in degrees.

- **Associated Earth Station Planned Minimum Beam Axis To GSO Arc Separation Angle** **RDD ref: S809**

For the type of transmitting *Associated Earth Station Antenna* used to develop the *Earth To Space EIRP Mask*, the smallest separation angle that can exist between the geostationary arc and the direction of the *Associated Earth Station Antenna's Maximum Gain*, at which it is intended the *Associated Earth Station Antenna* can still transmit to the non-geostationary *Space Station*.

Format: Decimal (in the range 5.0 to 20.0) to 1 decimal place in degrees.

- **Lowest Usable Frequency** **RDD ref: S810**

The lowest frequency for which the *Earth To Space EIRP Mask* is valid.

Format: Frequency.

- **Highest Usable Frequency** **RDD ref: S811**

The highest frequency for which the *Earth To Space EIRP Mask* is valid.

Format: Frequency.

5.18 *Space To Earth EIRP Mask* **RDD ref: S831**

A *Space To Earth EIRP Mask* describes the pattern of the maximum EIRP, radiated in the reference bandwidth by a single non-geostationary satellite, as a function of the off-axis angle from the satellite's sub-satellite point and incident on any point in the geostationary-satellite orbit. The *Space To Earth EIRP Mask* is developed for all conditions and for all methods of modulation, including all variations of resource allocation and switching strategy used at different periods of the *Space Station's* lifetime. The implementation of the *Space To Earth EIRP Mask* explicitly accounts for both co-polarization and cross-polarization for like types of polarization (i.e., circular-to-circular or linear-to-linear).

The *Space To Earth EIRP Mask* is used in the determination of the inter-satellite equivalent power flux-density (EPFD_{IS}) levels produced at any point in the geostationary-satellite orbit by all the satellites of a non-geostationary *Space Station* subject to the provision RR No. 22.5F. RR No. 22.5F (WRC-2000) prescribes the EPFD_{IS} limits (in RR Table 22-3) in the associated frequency bands, for a given reference bandwidth and a percentage of time that must not be exceeded by the non-geostationary *Space Station* at any point in the geostationary satellite orbit. A *Space Station's Space To Earth EIRP Mask(s)* comprise the cumulative EIRP from all the non-geostationary satellite's co-frequency space-to-Earth *Beams* and is only applicable for non-geostationary FSS systems that are subject to the provision RR No. 22.5F.

NOTE 1 – The *Space To Earth EIRP Mask* only applies to interference between a non-geostationary *Space Station's* downlink and a geostationary *Space Station's* uplink. It does not apply to inter-satellite interference that could arise between a non-geostationary *Transmitting Space Station Space To Space ACG* and a geostationary *Receiving Space Station Space To Space ACG*.

- ◇ A *Space To Earth EIRP Mask* is identified by its **Notified Identification Code** and the *Space Station* to which it is associated.

A *Space To Earth EIRP Mask* must define the worst-case off-axis EIRP values with respect to the geostationary orbit for one or more *Non-geostationary Satellite Position*

RDD ref: S832

A *Space To Earth EIRP Mask* must be associated with a single *Space Station*

RDD ref: S823

A *Space To Earth EIRP Mask* must define the overall spectral radiation constraint for one or more *Transmitting Space Station ACGs*

RDD ref: S833

A *Space To Earth EIRP Mask* must be the subject of one or more *Intended Actions*

RDD ref: S834

- **BR Identification Code**

RDD ref: S812

A code used to uniquely identify the *Space To Earth EIRP Mask* allocated by the BR. The code is not assigned to the *Space To Earth EIRP Mask* until after the BR receives the notice which first “adds” the *Space To Earth EIRP Mask*. Thus it is not possible for an *Administration* to refer to the code until after the *Space To Earth EIRP Mask*’s first notification has been processed by the BR, although the BR has the means to identify this code for any previously notified *Space To Earth EIRP Mask*.

Format: 10 characters.

- **Notified Identification Code**

RDD ref: S814

An *Administration*’s code to uniquely identify a *Space To Earth EIRP Mask*. The **Notified Identification Code** may be used by an *Administration* to uniquely identify a *Space To Earth EIRP Mask*, prior to the BR issuing an international identifier, for its own purpose and to aid its data management.

The first character in the **Notified Identification Code** is an “S” to indicate a “*Space To Earth EIRP Mask*”.

Format: Up to 20 characters.

- **Pattern**

RDD ref: S815

The definition of the maximum EIRP radiated in the reference bandwidth radiated by a non-geostationary satellite as a function of the off-axis angle from the satellite’s sub-satellite point. The space-to-Earth EIRP may be defined according to the following equation (see Recommendation ITU-R S.1503).

$$SS\_EIRP(\theta) = G(\theta) + P$$

where:

SS_EIRP: equivalent isotropic radiated power in the reference bandwidth (dB(W/BW_{ref}));

θ: separation angle between the sub-satellite point of the non-geostationary satellite and the pointing direction of a geostationary *Space Station* measured at the non-geostationary satellite (degrees);

G(θ): *Space Station* antenna gain pattern (dBi) corresponding to the aggregation of all beams;

P: maximum power, in the reference bandwidth (dB(W/BW_{ref}));

BW_{ref}: reference bandwidth (kHz).

Format: a set of vectors consisting of:

EIRP Value (RDD ref: S815a): the value of EIRP at the specified **Off-axis Angle**; Decimal (in the range –10.0 to 50.0) to 1 decimal place in dBW; and,

Off-axis Angle (RDD ref: S815b): the appropriately spaced angular value, measured in the specified plane from the direction of the sub-satellite point; Integer (in the range 0 to 90), in degrees.

- **Lowest Usable Frequency**

RDD ref: S816

The lowest frequency for which the *Space To Earth EIRP Mask* is valid.

Format: Frequency

- **Highest Usable Frequency**

RDD ref: S817

The highest frequency for which the *Space To Earth EIRP Mask* is valid.

Format: Frequency

BEAM DATA

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5.19 Beam

RDD ref: S107

The set of general characteristics that describe the shape and direction of the solid angle within which the *Space Station's* antenna can emit or receive energy. A *Beam* may be pointing at the Earth, or towards another satellite which may or may not be part of the same *Space Station*. The shape of the *Beam* is determined in a plane normal to the *Beam* axis.

The *Beam* is a common method used for describing a *Space Station's* antenna performance.

A *Beam* may optionally be an *Elliptical Beam*.

◇ A *Beam* is identified by its *Designation* and the *Space Station* to which it belongs.

One and only one of the following six relationships must apply:

A *Beam* may describe the properties of satellite antennas to radiate energy that is characterized by one or more *Transmitting Space Station ACGs* (This relationship is only applicable if the **Emission/Reception Indicator** has the value "E") RDD ref: S108

A *Beam* may describe the properties of satellite antennas to radiate energy that is characterized by one or more *Receiving Earth Station ACGs* (This relationship is only applicable if the **Emission/Reception Indicator** has the value "E") RDD ref: S446

A *Beam* may describe the properties of satellite antennas to receive energy that is characterized by one or more *Receiving Space Station ACGs* (This relationship is only applicable if the **Emission/Reception Indicator** has the value "R") RDD ref: S109

A *Beam* may describe the properties of satellite antennas to receive energy that is characterized by one or more *Transmitting Earth Station ACGs* (This relationship is only applicable if the **Emission/Reception Indicator** has the value "R") RDD ref: S447

A *Beam* may describe the properties of satellite antennas to radiate energy that is characterized by one or more *Transmitting Space Station Space To Space ACGs* (This relationship is only applicable if the **Emission/Reception Indicator** has the value "E") RDD ref: S110

A *Beam* may describe the properties of satellite antennas to receive energy that is characterized by one or more *Receiving Space Station Space To Space ACGs* (This relationship is only applicable if the **Emission/Reception Indicator** has the value "R") RDD ref: S111

A *Beam* must belong to a single *Space Station* RDD ref: S112

A *Beam* must be the subject of one or more *Intended Actions* RDD ref: S113

A *Beam* may contain one or more *Beam Frequencies* RDD ref: S449

A *Beam* must define the transmission characteristics used in a single *Non-geostationary Orbit* RDD ref: S867

A *Beam* may operate in one or more *Frequency Ranges* RDD ref: S064

A *Beam* may be suspended as a consequence of the filing of a single *Space Station* RDD ref: S746

• **Designation** RDD ref: S116

A name/code/designation submitted by the notifying *Administration* that is unique within the *Space Station* to which it belongs.

Format: Up to 8 characters.

- **Emission/Reception Indicator**

RDD ref: S115

An indicator identifying if the *Beam* is intended for reception or emission.

Format: 1 character.

Code	Meaning
E	if used for emission.
R	if used for reception.

- **Steerable Indicator**

RDD ref: S118

An indicator used to identify if the *Beam* is intended to be reconfigured or redirected.

Format: True or False.

- **Boresight Geographical Coordinates**

RDD ref: S119

The geographical position of the nominal intersection of the antenna beam axis with the Earth.

The **Boresight Geographical Coordinates** can also be provided for non-planned *Space Stations*.

Format: Longitude/Latitude in degrees, minutes and seconds.

- **Effective Boresight Area**

RDD ref: S363

An area of the Earth's surface within which the boresight of the *Beam* is intended to be pointed. This area may be formed from non-contiguous sections. For non-steerable *Elliptical Beams* the **Effective Boresight Area** may be a single point.

Format: Diagram.

- **Pointing Accuracy**

RDD ref: S120

The maximum permitted angular deviation of the *Beam* axis from the **Boresight Geographical Coordinates**.

Geostationary *Space Stations* only.

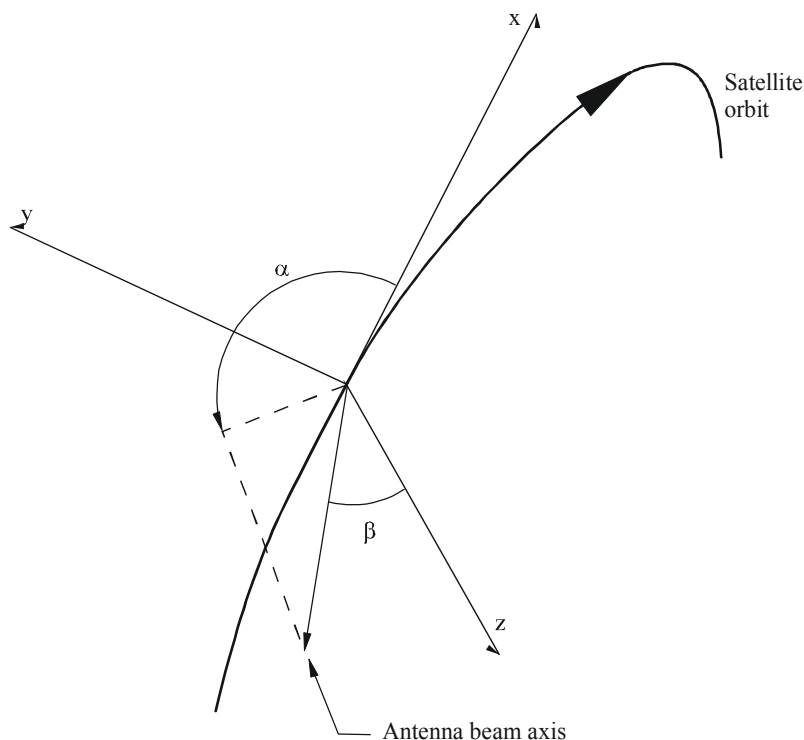
Format: Decimal (in the range 0.00 to 5.00) to 2 decimal places in degrees.

- **Orientation Angle Alpha**

RDD ref: S121

The angle of the projection of the *Beam* axis onto the XY reference plane, measured from the X axis in an anticlockwise direction when looking in the direction of the Earth from the satellite, see Fig. 5.

FIGURE 5
Orientation angles



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Two angles (alpha and beta) are required to identify the direction in which the non-geostationary satellite **Beam** axis is pointing. These angles are based on the orientation of the **Beam's** axis with respect to a three dimensional rectangular reference coordinate system, where the x-axis (roll axis) is in the direction of the satellite orbit, the y-axis (pitch axis) is at the same altitude as the x-axis and at right angles to it and the z-axis (yaw axis) is at right angles to both and in the direction of the centre of the Earth. Angle beta is the angle between the antenna **Beam** axis and the z-axis ($0^\circ \leq \text{beta} < 90^\circ$). When $\text{beta} = 0^\circ$, the **Beam** axis is pointing directly at the centre of the Earth and the value of angle alpha is meaningless. Therefore for the submission of data, the Bureau have adopted the convention that when angle $\text{beta} = 0^\circ$ then angle $\text{alpha} = 0^\circ$. If the orientation cannot be described by use of the angles alpha and beta, give the relevant information in an attachment.

Format: Decimal (in the range 0.0 to 359.9) to 1 decimal place in degrees.

- Orientation Angle Beta**

RDD ref: S368

The modulus of the angle between the **Beam** axis and the Z reference axis when looking in the direction of the Earth from the satellite, see Fig. 5.

Two angles (alpha and beta) are required to identify the direction in which the non-geostationary satellite **Beam** axis is pointing. These angles are based on the orientation of the antenna **Beam's** axis with respect to a three dimensional rectangular reference coordinate system, where the x-axis (roll axis) is in the direction of the satellite orbit, the y-axis (pitch axis) is at the same altitude as the x-axis and at right angles to it and the z-axis (yaw axis) is at right angles to both and in the direction of the centre of the Earth. Angle alpha is the angle in the x-y plane between the x-axis and the projection of the antenna **Beam** axis on that plane ($0^\circ \leq \text{alpha} < 360^\circ$). When $\text{beta} = 0^\circ$, the **Beam** axis is pointing directly at the centre of the Earth and the value of angle alpha is meaningless. Therefore for the submission of data, the Bureau have adopted the convention that when angle $\text{beta} = 0^\circ$ then angle $\text{alpha} = 0^\circ$. If the orientation cannot be described by use of the angles alpha and beta, give the relevant information in an attachment.

Format: Decimal (in the range 0.0 to 90.0) to 1 decimal place in degrees.

- **Maximum Co-polar Gain**

RDD ref: S124

The ratio of the power required at the input of a loss-free isotropic antenna to the power supplied to the input of the antenna to produce, in the direction of maximum radiation, the same field strength for the co-polar component, or the same power flux-density at the same distance

If the **Effective Boresight Area** is identical with the global service area, the **Maximum Co-polar Gain** is applicable to all points on the Earth's visible surface.

Format: Decimal (in the range 0.0 to 70.0) to 1 decimal place in dBi.

- **Maximum Cross-polar Gain**

RDD ref: S621

The ratio of the power required at the input of a loss-free isotropic antenna to the power supplied to the input of the antenna to produce, in the direction of maximum radiation, the same field strength for the cross-polar component, or the same power flux-density at the same distance.

Format: Decimal (in the range 0.0 to 40.0) to 1 decimal place in dBi.

- **Co-polar Gain Pattern**

RDD ref: S122

The variation of the antenna gain with the direction of radiation (in 3-dimensions) when the field strength is measured with an antenna having the same polarization as the transmitting antenna. Whenever practicable a table of the values should also be provided to allow radiation pattern to be plotted.

A basic distinction in presenting this data should be made regarding the maximum gain and the side-lobe performance. For high gain antennas sufficient data (say in steps of 0.1°) should be provided for off-axis angles less than 1°, whereas for off-axis angles greater than 50° the gain pattern is rather flat, and much less resolution could suffice. For low gain antennas less data is necessary about 1 degree, and more data may be needed for the region of off-axis angle greater than 40°.

In general, the gain pattern is assumed to be rotationally symmetrical and should be an envelope of peaks for all 360° in a plane containing the direction of maximum gain (axis of the antenna); however, some antennas are designed with nulls in predetermined directions in order to reduce interference and this should also be indicated with sufficient clarity and identification of the plane. If available, indicate the actual measured gain pattern (relative to isotropic), rather than the reference gain pattern. For rotationally non-symmetrical patterns, the diagram should be presented for the most important directions, such as that of the geostationary satellite orbit.

Format: For any relevant plane containing the direction of maximum gain (axis of the antenna), the 2 dimensional pattern can be expressed as:

- a) A Gain Pattern Angular Diagram; the graphical representation of the gain as a function of the off-axis angle.

or

- b) A set of vectors consisting of:
- **Gain Value (RDD ref: S122a)**: the value of gain at the specified **Off-axis Angle**; Decimal (in the range –20.0 to 50.0) to 1 decimal place in dB; and,
 - **Off-axis Angle (RDD ref: S122b)**: the appropriately spaced angular value, measured in the specified plane from the direction of maximum gain in a clockwise direction; Integer (in the range 0 to 359), in degrees.

or

- c) A Gain Pattern Equation; if the gain pattern can be described by the following expression:
 $G = a - b \log_{10}(\phi)$.

or

- d) An ITU-R Gain Pattern Code.

- **Cross-polar Gain Pattern**

RDD ref: S123

The variation of the antenna gain with the direction of radiation (in 3 dimensions), when the field-strength is measured with an antenna having a polarization orthogonal to that of the transmitting antenna. The **Cross-Polar Gain Pattern** may also be provided by a non-standard mathematical expression.

Format: for any relevant off-axis angle the appropriate pattern can be expressed as:

- a) A Gain Pattern Angular Diagram; the graphical representation of the cross-polar gain as a function of the off-axis angle.

or

- b) A Gain Pattern Equation.

or

- c) An ITU-R Gain Pattern Code.

- **Effective Co-polar Gain Contour**

RDD ref: S369

A set of lines of equal co-polar gain produced by moving the boresight of a **Beam** along the limits of the **Effective Boresight Area**, plotted on a map of the Earth's surface. These gain values are usually expressed as attenuations (in dB) from the **Maximum Co-polar Gain**. Whenever practicable a table of the values should also be provided.

The gain contours should take account of the antenna pointing error (**Geostationary Orbit** longitudinal tolerance, **Geostationary Orbit Inclination Excursion** and **Beam Pointing Accuracy**) so that the worst-case interference situation may be identified. If the antenna pointing error is not included this should be specified.

If the maximum antenna gain varies by less than 2 dB over the whole visible part of the Earth the **Beam Effective Co-polar Gain Contour** can be replaced by a statement to this effect.

If the **Effective Boresight Area** is identical with the global, or nearly global service area, no contours need be provided. The **Beam's Maximum Co-polar Gain** will be applicable to all points on the Earth's visible surface.

If the **Effective Boresight Area** is less than the global or nearly global service area the effective antenna gain contours must be provided.

An example where effective antenna gain contours would be required is for space-to-Earth transmissions in the bands between 11.7 and 12.75 GHz where the allocations to services in the Table of Frequency Allocations (RR Article 5) differ from Region to Region, this implying, in consequence, that the service area of a steerable beam would be limited to the visible part of the Region concerned.

The **Effective Co-polar Gain Contour** may be provided in electronic format; see ITU-R Circular Letters CR/65 and CR/58 for further information.

Format: Diagram.

- **Effective Cross-polar Gain Contour**

RDD ref: S370

A set of lines of equal cross-polar gain produced by moving the boresight of a **Beam** along the limits of the **Effective Boresight Area**, plotted on a map of the Earth's surface. These values are usually expressed as attenuations (in dB from the **Maximum Cross-polar Gain**. Whenever practicable a table of the values should also be provided.

The gain contours should take account of the antenna pointing error (**Geostationary Orbit** longitudinal tolerance, **Geostationary Orbit Inclination Excursion** and **Beam Pointing Accuracy**) so that the worst-case interference situation may be identified. If the antenna pointing error is not included this should be specified.

If the maximum antenna gain varies by less than 2 dB over the whole visible part of the Earth the **Beam Effective Cross-polar Gain Contour** can be replaced by a statement to this effect.

If the **Effective Boresight Area** is identical with the global, or nearly global service area, no contours need be provided. The **Beam's Maximum Cross-polar Gain** will be applicable to all points on the Earth's visible surface.

If the **Effective Boresight Area** is less than the global or nearly global service area the effective antenna gain contours must be provided.

An example where effective antenna gain contours would be required is for space-to-Earth transmissions in the bands between 11.7 and 12.75 GHz where the allocations to services in the Table of Frequency Allocations (RR Article 5) differ from Region to Region, this implying, in consequence, that the service area of a steerable beam would be limited to the visible part of the Region concerned.

The **Effective Cross-polar Gain Contour** may be provided in electronic format; see ITU-R Circular Letters CR/65 and CR/58 for further information.

Format: Diagram.

• **Gain Versus GSO Diagram** **RDD ref: S125**

The pattern of the **Beam's** off-axis gain in the equatorial plane at different longitudes around the geostationary orbit in directions not obstructed by the Earth.

This information is used if the assignments associated with this **Beam** are to a **Space Station** on board a geostationary satellite and in a frequency band allocated for bi-directional use (i.e., Earth-to-space and space-to-Earth).

Format:

- a) A set of vectors consisting of:
 - **Gain Value (RDD ref: S125a)**: the value of gain at the specified **Longitude**; Decimal (in the range –20.0 to 50.0) to 1 decimal place in dB; and,
 - **Longitude (RDD ref: S125b)**: the equally spaced angular value, measured in the equatorial plane; Integer (in the range 0 to 359), in degrees.

or

- b) Gain Angular Diagram; the graphical representation of the gain against **Longitude**.

• **Gain Versus Elevation Angle Diagram** **RDD ref: S126**

Satellite antenna gain $G(\Theta_e)$ as a function of elevation angle at a fixed point on the Earth.

Format:

- a) A set of vectors consisting of:
 - **Gain Value (RDD ref: S126a)**: the value of gain at the specified **Elevation Angle**; Decimal (in the range –20.0 to 50.0) to 1 decimal place in dB; and,
 - **Elevation Angle (RDD ref: S126b)**: the appropriately spaced angular value, measured in the vertical plane from the direction of maximum gain in an upward direction; Integer (in the range –10 to 90), in degrees.

or

- b) Gain Angular Diagram; the graphical representation of the gain against **Elevation Angle**.

• **Spreading Loss Versus Elevation Angle** **RDD ref: S127**

Spreading loss as a function of elevation angle at a fixed point on the Earth.

Format:

- a) A set of vectors consisting of:
 - **Spreading Loss Value (RDD ref: S127a)**: the value of spreading loss at the specified **Elevation Angle**; Decimal (in the range –127.0 to –163.0) to 1 decimal place in dB/m²; and,

- **Elevation Angle (RDD ref: S127b)**: the appropriately spaced angular value, measured in the vertical plane from the direction of maximum gain in the upward direction; Integer (in the range –20 to 90), in degrees.

or

b) Gain Angular Diagram; the graphical representation of the spreading loss against **Elevation Angle**.

- **Maximum Beam Peak EIRP – 4 kHz** **RDD ref: S601**

The maximum equivalent isotropically radiated peak envelope power in the **Beam** averaged over 4 kHz.

Format: Decimal (in the range –30.0 to 10.0) to 1 decimal place in dB(W/4 kHz).

- **Maximum Beam Peak EIRP – 1 MHz** **RDD ref: S602**

The maximum equivalent isotropically radiated peak envelope power in the **Beam** averaged over 1 MHz.

Format: Decimal (in the range –10.0 to 30.0) to 1 decimal place in dB(W/1 MHz).

- **Average Beam Peak EIRP – 4 kHz** **RDD ref: S603**

The average equivalent isotropically radiated peak envelope power in the **Beam** averaged over 4 kHz.

Format: Decimal (in the range –10.0 to 30.0) to 1 decimal place in dB(W/4 kHz).

- **Average Beam Peak EIRP – 1 MHz** **RDD ref: S604**

The average equivalent isotropically radiated peak envelope power in the **Beam** averaged over 1 MHz.

Format: Decimal (in the range –30.0 to 10.0) to 1 decimal place in dB(W/1 MHz).

- **Calculated Peak PFD** **RDD ref: S728**

The **Beam's** maximum aggregate power flux-density produced in any 4 kHz band at the geostationary-satellite orbit and within $\pm 5^\circ$ of inclination around the geostationary satellite orbit by a non-geostationary satellite system. Applicable only in the frequency band 6 700-7 075 MHz.

Format: Decimal (in the range –10.0 to 30.0) to 1 decimal place in dB(W/(m² · 4 kHz)).

5.20 *Elliptical Beam*

RDD ref: S314

An **Elliptical Beam** is a type of **Beam** whose cross section normal to the **Beam** axis is elliptical.

NOTE 1 – A circular **Beam** is a special case of **Elliptical Beam** where the major and minor axes are equal. By convention the major axis orientation and rotational accuracy are then equal to 0°.

- ◇ A **Elliptical Beam** is identified in the same way as its generic type (**Beam**) i.e., **Beam's Designation** and the **Space Station** to which it belongs.

- **Major Axis Beamwidth** **RDD ref: S130**

The angular width of the main lobe of radiation measured in the plane of the **Elliptical Beam's** major axis, within which the off-axis gain does not fall more than 3 dB below the value of the **Beam's Maximum Co-polar Gain**.

RR Appendices 30, 30A and 30B only.

Format: Decimal (in the range 0.60 to 8.69) to 2 decimal places in degrees.

- **Minor Axis Beamwidth** **RDD ref: S131**

The angular width of the main lobe of radiation measured in the plane of the **Elliptical Beam's** minor axis, within which the off-axis gain does not fall more than 3 dB below the value of the **Beam's Maximum Co-polar Gain**.

RR Appendices 30, 30A and 30B only.

Format: Decimal (in the range 0.60 to 8.69) to 2 decimal places in degrees.

- **Major Axis Orientation**

RDD ref: S132

The angle of the major axis of the *Elliptical Beam* main lobe of radiation measured in the plane normal to the *Beam* axis from a line parallel to the Earth's equatorial plane in an anticlockwise direction.

RR Appendices 30, 30A and 30B only.

Format: Decimal (in the range 0.0 to 179.9) to 1 decimal place in degrees.

- **Rotational Accuracy**

RDD ref: S133

The maximum permitted angular deviation in the *Elliptical Beam* major axis from the **Major Axis Orientation**.

RR Appendices 30, 30A and 30B only.

Format: Decimal (in the range –1.00 to 1.00) to 2 decimal places in degrees.

EARTH STATION ANTENNA DATA

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5.21 Site

RDD ref: S376

A name used for the purpose of conveying the general position of an *Earth Station Antenna* without having to refer to the **Geographical Coordinates**.

NOTE 1 – *Site* is not currently used with the framework of the ITU's coordination and notification procedures for space systems. However, due to confusion over the term "name" that is associated with both *Earth Station Antennas*' and *Associated Earth Station Antennas*' **Notified Identification Code** as well as the reference used by some administrations for their location (e.g. *Site Name*), the definitions associated with the term "*Site*" have been retained to clarify the application of the relevant terms.

◇ A *Site* is identified by its **Name** and the *Administration* by which it has been submitted.

A *Site* must be submitted by a single *Administration* RDD ref: S407

A *Site* may be the location for one or more *Earth Station Antennas* RDD ref: S408

A *Site* may be the location for one or more *Associated Earth Station Antennas* RDD ref: S703

A *Site* must be located within a single *Geographical Area* RDD ref: S409

• **Name** RDD ref: S380

The name by which the *Site* is known, e.g., the locality in which the *Site* is situated, as provided by the submitting *Administration*. Appendix 7 to the RDD contains the list of standard abbreviations used to compress the *Site* names to 30 characters when the names are longer.

The name may consist of one or more words and may be structured similar to an address, i.e., comprised of a number of "locations" where each location represents an area smaller than and within its successor.

Format: Up to 20 characters.

5.22 Earth Station Antenna

RDD ref: S151

A device used for radiating, or receiving, electromagnetic waves. An *Earth Station Antenna* may consist of a single element, or an array of elements that are linked physically, or electronically, to form a single gain pattern.

◇ An *Earth Station Antenna* is identified by its **Notified Identification Code** and its **Geographical Coordinates** for those *Earth Station Antenna* whose **Typical/Specific Indicator** = "S".

An *Earth Station Antenna* may be under the operational control of a single *Operator* RDD ref: S142

An *Earth Station Antenna* may be under the operational control of a single *Intergovernmental Satellite Organization* RDD ref: S346

An *Earth Station Antenna* may have interference issues addressed to a single *Correspondence Address* RDD ref: S143

An *Earth Station Antenna* may form a space network with a single *Space Station* RDD ref: S145

An *Earth Station Antenna* must be the subject of one or more *Space Service Notices* RDD ref: S147

An *Earth Station Antenna* may be the point of reception for one or more *Receiving Earth Station ACGs* RDD ref: S152

An *Earth Station Antenna* may be the emitting source of one or more *Transmitting Earth Station ACGs* RDD ref: S153

An *Earth Station Antenna* must be located at a single *Site* RDD ref: S154
(This relationship is only applicable if the **Typical/Specific Indicator** has the value "S".)

An *Earth Station Antenna* must be located in a single *Geographical Area* RDD ref: S860
(This relationship is only applicable if the **Typical/Specific Indicator** has the value "S".)

An *Earth Station Antenna* may have its requirement for coordination determined by one or more *Coordination Contours*

RDD ref: S748

- **BR Identification Code**

RDD ref: S148

A code used to uniquely identify the *Earth Station Antenna* allocated by the BR. The code is not assigned to the *Earth Station Antenna* until after the BR receives the notice which first “adds” the *Earth Station Antenna*. Thus, it is not possible for an *Administration* to refer to this code until after the *Earth Station Antenna*’s first notification has been processed by the BR, although the BR has the means to identify this code for any previously notified *Earth Station Antenna*.

The BR uses a coding system to uniquely identify *Space Service Notices*. The *Space Service Notice* transaction number which first includes details of the *Earth Station Antenna* (i.e., when the *Earth Station Antenna*’s **Intended Action Code** = “A”) is used as the **BR Identification Code**.

Format: 10 characters.

Note: Currently the **BR Identification Code** only records the last three numbers of the year of receipt preceded by a zero. It is considered essential to show the year in full. The RDD defines format as 10 characters as above.

- **Notified Identification Code**

RDD ref: S149

An *Administration*’s code used to identify the *Earth Station Antenna*.

This is considered as being useful before the BR has given an international identifier.

Format: Up to 20 characters.

- **Typical/Specific Indicator**

RDD ref: S157

An indicator identifying if the *Earth Station Antenna* has a fixed location that can be defined by a set of **Geographical Coordinates**.

Format: 1 character.

Code	Meaning
S	if the <i>Space Service Notice</i> concerns a specific <i>Earth Station Antenna</i> .
T	if the <i>Space Service Notice</i> concerns a typical <i>Earth Station Antenna</i> .

- **Geographical Coordinates**

RDD ref: S159

The geographical position of the physical centre of the *Earth Station Antenna*. If the coordination area of the *Earth Station Antenna* overlaps the territory of another *Administration*, the accuracy required is to six seconds.

Format: Long/Lat in degrees, minutes and seconds.

- **Altitude Above Mean Sea Level**

RDD ref: S839

The altitude of the physical centre of the *Earth Station Antenna* above mean sea level. The altitude is measured at the **Geographical Coordinates** and may be positive or negative (i.e. it may be above or below sea level).

Format: Integer (in the range –1 000 to 9 848) in metres.

- **Maximum Gain**

RDD ref: S163

The ratio of the power required at the input of a loss-free isotropic antenna isolated in space (reference antenna) to the power supplied to the input of the *Earth Station Antenna* to produce, in the direction of maximum radiation, the same field strength, or the same power flux-density at the same distance. The gain may be considered for a specific polarization.

Format: Decimal (in the range 0.00 to 70.00) to 2 decimal places in dBi.

- **Beamwidth** **RDD ref: S164**

The angular width of the main lobe of radiation, measured in the plane containing the direction of the **Maximum Gain**, within which the off-axis gain does not fall more than 3 dB below the value of the **Maximum Gain**. This definition assumes the radiation pattern is not shaped and if the antenna **Beamwidth** is non-symmetrical it should be described by the use of a complete gain pattern.

Format: Decimal (in the range 0.00 to 10.00) to 2 decimal places in degrees.

- **Diameter** **RDD ref: S840**

The diameter of the *Earth Station Antenna*.

FSS only in the frequency band 13.75-14 GHz.

Format: Decimal (in the range 1.2 to 10.0) to 1 decimal place in metres.

- **Radio Astronomy Antenna Type Description** **RDD ref: S852**

The textual description of the *Earth Station Antenna's* type.

Format: Text.

- **Radio Astronomy Antenna Dimensional Description** **RDD ref: S853**

The textual description of the *Earth Station Antenna's* dimensions.

Format: Text.

- **Radio Astronomy Antenna Effective Area Description** **RDD ref: S854**

The textual description of the *Earth Station Antenna's* effective area.

Format: Text.

- **Co-polar Gain Pattern** **RDD ref: S167**

The variation of the antenna gain with the direction of radiation (3 dimensional), when the field-strength is measured with an antenna having the same polarization as the transmitting antenna.

A basic distinction in presenting this data should be made regarding the maximum antenna gain and the side-lobe performance. For high gain antennas sufficient data (say in steps of 0.1°) should be provided for off-axis angles less than 1°, whereas for off-axis angles greater than 50° the radiation pattern is rather flat, and much lower resolution could suffice. For low gain antennas less data is necessary around 1°, and more data may be needed for the region of off-axis angle greater than 40°.

In general, the gain pattern is assumed to be rotationally symmetrical and should be an envelope of peaks for all 360° in a plane; however, some antennas are designed with nulls in predetermined directions in order to reduce interference and this should also be indicated with sufficient clarity and identification of the plane. If available, indicate the actual measured gain pattern (relative to isotropic), rather than the reference gain pattern. For rotationally non-symmetrical patterns, the diagram should be presented for the most important directions, such as that of the geostationary satellite orbit.

Format: For any relevant plane containing the direction of maximum gain (axis of the antenna) the two dimensional pattern can be expressed as:

- a) A Gain Pattern Angular Diagram; the graphical representation of the gain as a function of the off-axis angle

or

- b) A set of vectors consisting of:
 - **Gain Value (RDD ref: S167a)**: the value of gain at the specified **Off-axis Angle**; Decimal (in the range –20.0 to 50.0) to 1 decimal place in dB; and,

- **Off-axis Angle (RDD ref: S167b)**: the appropriately spaced angular value, measured in the specified plane from the direction of maximum gain in a clockwise direction; Integer (in the range 0 to 359), in degrees.

or

- c) A Gain Pattern Equation

if the gain pattern can be described by the set of following expressions:

$$G = G_{\max} \text{ for } \text{PHI} < 1^\circ$$

$$G = a - b * \text{LOG}_{10}(\text{PHI}) \text{ for } 1^\circ \leq \text{PHI} \leq \text{phi1}$$

$$G = \text{MAX} (\text{MIN} (G(\text{phi1}), c - d * \text{LOG}_{10}(\text{PHI})), -10) \text{ for } \text{PHI} > \text{phi1}.$$

or

- d) An ITU-R Gain Pattern Code.

- **Operational Sector Start Azimuth**

RDD ref: S169

The angle of the direction of **Maximum Gain** at the left hand edge of the sector swept by the *Earth Station Antenna* main lobe axis, measured in the horizontal plane from True North in a clockwise direction.

In the case of a geostationary satellite network, this angle is to be calculated for the *Geostationary Orbital Position Nominal Longitude*, taking into account the tolerances. Allowance should also be made for the operation of the associated *Space Station* in an inclined orbit.

Format: Decimal (in the range 0.0 to 359.9) to 1 decimal place in degrees.

- **Operational Sector End Azimuth**

RDD ref: S170

The angle of the direction of **Maximum Gain** at the right hand edge of the sector swept by the *Earth Station Antenna* main lobe axis, measured in the horizontal plane from True North in a clockwise direction.

In the case of a geostationary satellite network, this angle is to be calculated for the *Geostationary Orbital Position Nominal Longitude*, taking into account the tolerances. Allowance should also be made for the operation of the associated *Space Station* in an inclined orbit.

Format: Decimal (in the range 0.1 to 360.0) to 1 decimal place in degrees.

- **Minimum Elevation Pattern**

RDD ref: S150

The pattern of the *Earth Station Antenna's* intended minimum operating angle of elevation, measured in the vertical plane, for the maximum value of radiation on each azimuth around the *Earth Station Antenna's Geographical Coordinates*.

NOTE 1 – For an *Earth Station Antenna* operating with associated non-geostationary *Space Stations*, the antenna gain of the *Earth Station Antenna* in the direction of the horizon may vary as a function of time.

Earth Station Antenna operating to associated non-geostationary *Space Stations* only.

Format: a full **Minimum Elevation Pattern** presented in one of the following ways:

- a) A Minimum Elevation Diagram (**RDD ref: S150a**): the graphical representation of the intended minimum operating elevation angle against azimuth

or

- b) A set of 360 vectors consisting of:

- **Minimum Elevation Angle (RDD ref: S150b)**: the angle measured in the vertical plane between the direction of **Maximum Gain** and the horizontal plane at the specified **Azimuth** in the upward direction; Decimal (in the range –20.0 to 90.0) to 1 decimal place in degrees; and,
- **Azimuth (RDD ref: S150c)**: the value, measured in the horizontal plane from True North in a clockwise direction; Integer (in the range 0 to 359) in multiples of 1 in degrees.

• **Planned Minimum Elevation Angle** **RDD ref: S168**

The intended minimum operating angle of elevation of the *Earth Station Antenna* measured in the vertical plane between the direction of **Maximum Gain** and the horizontal plane. Due to variations in an associated geostationary *Space Station's* station keeping parameters, allowance should be made for the operation of the associated geostationary *Space Station* in an inclined orbit.

Format: Decimal (in the range 0.0 to 90.0) to 1 decimal place in degrees.

• **Planned Maximum Elevation Angle** **RDD ref: S381**

The intended maximum operating angle of elevation of the radio astronomy *Earth Station Antenna* between the direction of **Maximum Gain** and the horizontal plane.

Format: Decimal (in the range 0.0 to 90.0) to 1 decimal place in degrees.

• **Horizon Elevation Pattern** **RDD ref: S171**

The pattern of the *Earth Station Antenna* horizon elevation, measured in the vertical plane, around the *Earth Station Antenna's* Geographical Coordinates.

Format: a full **Horizon Elevation Pattern** presented in one of the following ways:

- a) A Horizon Elevation Diagram (**RDD ref: S171a**): the graphical representation of the Horizon elevation angle against azimuth

or

- b) A set of 360 vectors consisting of:
- **Horizon Elevation Angle (RDD ref: S171b)**: the angle measured in the vertical plane between the direction of the ray that grazes the visible physical horizon and the horizontal plane at the specified **Azimuth** in the upward direction; Decimal (in the range –20.0 to 90.0) to 1 decimal place in degrees; and,
 - **Azimuth (RDD ref: S171c)**: the value, measured in the horizontal plane from True North in a clockwise direction; Integer in the range 0 to 359 in multiples of 1 in degrees.

• **Horizon Distance Pattern** **RDD ref: S144**

The pattern of the *Earth Station Antenna* horizon distance, measured in the horizontal plane, around the *Earth Station Antenna's* Geographical Coordinates.

The distance to the horizon from the *Earth Station Antenna's* is used in determining the total site shielding attenuation (see RR Appendix 7 and Recommendation ITU-R SM.1448).

Format: a full **Horizon Distance Pattern** presented in one of the following ways:

- a) A Horizon Distance Diagram (**RDD ref: S144a**): the graphical representation of the horizon distance against azimuth

or

- b) A set of 360 vectors consisting of:
- **Horizon Distance (RDD ref: S144b)**: the distance measured in the horizontal plane between the *Earth Station Antenna's* Geographical Coordinates and the visible physical horizon at the specified **Azimuth**; Decimal (in the range 0.0 to 5.0) to 1 decimal place in km; and,
 - **Azimuth (RDD ref: S144c)**: the value, measured in the horizontal plane from True North in a clockwise direction; Integer (in the range 0 to 359) in multiples of 1 in degrees.

• **Associated Space Station Longitude** **RDD ref: S616**

The angular distance from the Standard Meridian, i.e., that of Greenwich, England, to the meridian of the point on the equator above which it is anticipated that the geostationary *Space Station* (to which the *Earth Station Antenna* is associated) is or will be located.

Format: Decimal (in the range –180.00 to 180.00) to 2 decimal places in degrees.

- **Power Density Compliance Indicator**

RDD ref: S841

An indicator used to identify if a specific *Earth Station Antenna* transmitting to a geostationary *Space Station* will meet the single entry off-axis power flux density limits prescribed in RR No. 5.502.

Format: True or False.

5.23 *Associated Earth Station Antenna*

RDD ref: S493

The anticipated source of, or target for a *Space Station* transmission.

- ◇ An *Associated Earth Station Antenna* is identified by its **Notified Identifying Code** and the *Space Station* to which it belongs.

An *Associated Earth Station Antenna* must be the subject of one or more *Intended Actions*

RDD ref: S741

An *Associated Earth Station Antenna* must be located within a single *Site*

RDD ref: S707

(This relationship is only applicable if the Typical/Specific Indicator has the value “S”).

An *Associated Earth Station Antenna* must be located in a single *Geographical Area*

RDD ref: S861

(This relationship is only applicable if the Typical/Specific Indicator has the value “S”).

An *Associated Earth Station Antenna* may be classified by one or more

Classes of Station Nature Of Service Pairs

RDD ref: S626

One and only one of the following two relationships must apply:

An *Associated Earth Station Antenna* must be the point of reception for one or more *Transmitting Space Station ACG*

RDD ref: S623

An *Associated Earth Station Antenna* must be the transmitting source for one or more *Receiving Space Station ACG*

RDD ref: S740

An *Associated Earth Station Antenna* must belong to a single *Space Station*

RDD ref: S737

An *Associated Earth Station Antenna* may have its satellite link interference characteristics described by one or more *Strap Characteristic Sets*

RDD ref: S778

An *Associated Earth Station Antenna* may have its worst-case off-axis EIRP values described with respect to the geostationary orbit by one or more *Earth To Space EIRP Masks*

RDD ref: S749

- **Notified Identifying Code**

RDD ref: S671

National unique identifier for the *Associated Earth Station Antenna*.

Format: Up to 20 characters.

- **Typical/Specific Indicator**

RDD ref: S559

An indicator identifying if the *Associated Earth Station Antenna* has a specific fixed location that is defined by its **Geographical Coordinates**.

Format: 1 character.

Code	Meaning
S	if the <i>Associated Earth Station Antenna</i> is a specific antenna.
T	if the <i>Associated Earth Station Antenna</i> is a typical antenna.

- **Geographical Coordinates** **RDD ref: S673**

The geographical position of the physical centre of the *Associated Earth Station Antenna*. If the coordination area of the *Associated Earth Station Antenna* overlaps the territory of another *Administration*, the precision required is to six seconds.

Format: Long/Lat in degrees, minutes and seconds.

- **Receiving System Noise Temperature** **RDD ref: S763**

The temperature above absolute zero that is equivalent to the noise associated with the receiving system. The noise temperature is the lowest total value arising from the antenna's environment, the receiving antenna and from within the receiving system.

For radio waves the Earth is considered to be a "grey" body and for an *Associated Earth Station Antenna* the side lobe performance and elevation angle may both be significant factors in the level of environmental noise (ITU-R Satellite Communications Handbook).

For *Associated Earth Station Antennas* the **Receiving System Noise Temperature** is determined under clear sky conditions and at the *Associated Earth Station Antenna's Planned Minimum Elevation Angle*, excluding tolerances for geostationary satellite operation.

Format: Integer (in the range 20 to 6 000) in Kelvins.

- **Maximum Gain** **RDD ref: S676**

The ratio of the power required at the input of a loss-free isotropic antenna isolated in space (reference antenna) to the power supplied to the input of the *Associated Earth Station Antenna* to produce, in the direction of maximum radiation, the same field strength, or the same power flux-density at the same distance. The gain may be considered for a specified polarization.

Format: Decimal (in the range 0.00 to 70.00) to 2 decimal places in dBi.

- **Beamwidth** **RDD ref: S677**

The angular width of the main lobe of radiation, measured in the plane containing the direction of the **Maximum Gain**, within which the off-axis gain does not fall more than 3 dB below the value of the **Maximum Gain**. This definition assumes the radiation pattern is not shaped and if the antenna **Beamwidth** is non-symmetrical it should be described by the use of a complete gain pattern.

Format: Decimal (in the range 0.00 to 100.00) to 2 decimal places in degrees.

- **Diameter** **RDD ref: S165**

The diameter of the feeder link *Associated Earth Station Antenna*.

When used in relation to operations in the BSS, it should be noted the feeder link Plan is based on a 5 m antenna for the 17.3-18.1 GHz band and 6 m antenna for the 14.5-14.8 GHz band. If the *Associated Earth Station Antenna* diameter is below these figures it must conform to specific off-axis limits defined in § 3.5.3 of Annex 3 to RR Appendix 30A.

Format: Decimal (in the range 1.2 to 10.0) to 1 decimal place in metres.

- **Equivalent Antenna Diameter** **RDD ref: S650**

The diameter of a parabolic antenna that has the same off-axis performance at the same operating frequency as the receiving *Associated Earth Station Antenna*. This parameter is used when the receiving *Associated Earth Station Antenna* is not a standard parabolic antenna for example a flat plate antenna.

Broadcasting Satellite Service only.

Format: Decimal (in the range 2.5 to 10.0) to 1 decimal place in metres.

- **Co-polar Gain Pattern** **RDD ref: S678**

The variation of the antenna gain with the direction of radiation (3 dimensional), when the field-strength is measured with an antenna having the same polarization as the transmitting antenna.

A basic distinction in presenting this data should be made regarding the maximum antenna gain and the side-lobe performance. For high gain antennas sufficient data (say in steps of 0.1°) should be provided for off-axis angles less than 1° , whereas for off-axis angles greater than 50° the radiation pattern is rather flat, and much lower resolution could suffice. For low gain antennas less data is necessary around 1° , and more data may be needed for the region of off-axis angle greater than 40° .

In general, the gain pattern is assumed to be rotationally symmetrical and should be an envelope of peaks for all 360° in a plane; however, some antennas are designed with nulls in predetermined directions in order to reduce interference and this should also be indicated with sufficient clarity and identification of the plane. If available, indicate the actual measured gain pattern (relative to isotropic), rather than the reference gain pattern. For rotationally non-symmetrical patterns, the diagram should be presented for the most important directions, such as that of the geostationary-satellite orbit.

Format: For any relevant plane containing the direction of maximum gain (axis of the antenna) the two dimensional pattern can be expressed as:

- a) A Gain Pattern Angular Diagram; the graphical representation of the gain as a function of the off-axis angle

or

- b) A set of vectors consisting of:
- **Gain Value (RDD ref: S678a)**: the value of gain at the specified **Off-axis Angle**; Decimal (in the range -20.0 to 50.0) to 1 decimal place in dB; and,
 - **Off-axis Angle (RDD ref: S678b)**: the appropriately spaced angular value, measured in the specified plane from the direction of maximum gain in a clockwise direction; Integer (in the range 0 to 359), in degrees.

or

- c) A Gain Pattern Equation

if the gain pattern can be described by the set of following expressions.

$$G = G_{\max} \text{ for } \text{PHI} < 1^\circ$$

$$G = a - b * \text{LOG}_{10}(\text{PHI}) \text{ for } 1^\circ \leq \text{PHI} \leq \text{phi1}$$

$$G = \text{MAX} (\text{MIN} (G(\text{phi1}), c - d * \text{LOG}_{10}(\text{PHI})), -10) \text{ for } \text{PHI} > \text{phi1}.$$

or

- d) An ITU-R Gain Pattern Code.

• **Cross-polar Gain Pattern**

RDD ref: S321

The variation of the antenna gain with the direction of radiation (3 dimensional), when the field-strength is measured with an antenna having a polarization orthogonal to that of the transmitting antenna.

Format: For any relevant plane containing the direction of maximum gain (axis of the antenna) the two dimensional pattern can be expressed as:

- a) A Gain Pattern Angular Diagram; the graphical representation of the cross-polar gain as a function of the off-axis angle

or

- b) A set of vectors consisting of:
- **Gain Value (RDD ref: S321a)**: the value of gain at the specified **Off-axis Angle**; Decimal (in the range -20.0 to 50.0) to 1 decimal place in dB; and,
 - **Off-axis Angle (RDD ref: S321b)**: the appropriately spaced angular value, measured in the specified plane from the direction of maximum gain in a clockwise direction; Integer (in the range 0 to 359), in degrees

or

c) A Gain Pattern Equation

if the gain pattern can be described by the set of following expressions:

$$G = G_{\max} \text{ for } \text{PHI} < 1^\circ$$

$$G = a - b * \text{LOG}_{10}(\text{PHI}) \text{ for } 1^\circ \leq \text{PHI} \leq \text{phi1}$$

$$G = \text{MAX}(\text{MIN}(G(\text{phi1}), c - d * \text{LOG}_{10}(\text{PHI})), -10) \text{ for } \text{PHI} > \text{phi1}$$

or

d) An ITU-R Gain Pattern Code.

5.24 Coordination Contour

RDD ref: S756

The **Coordination Contour** contains the area around a transmitting or receiving **Earth Station Antenna** sharing the same **Frequency Band** as terrestrial stations, or, in the case of a **Frequency Band** with a bidirectional allocation to space services (space-to-Earth and Earth-to-space), the area around a transmitting **Earth Station Antenna** sharing the same **Frequency Band** as a receiving **Earth Station**. This is the area within which the permissible level of interference may be exceeded, and if it includes a part of the territory of another **Administration**, coordination is required. The coordination area is based on the worst-case sharing considerations, interference paths and operational constraints within the frequency range 100 MHz to 105 GHz. Hence, the coordination area is determined with respect to terrestrial stations (or – for a transmitting earth station in a **Frequency Band** with a bidirectional space allocation – with respect to receiving earth stations operating in the same **Frequency Band**) using assumptions that would yield the largest coordination distances. As the coordinating **Administration** cannot know the operational characteristics for stations in the territory of another **Administration**, the calculations are performed against a set of tabulated parameters (see RR Appendix 7 (WRC-2000)), for the unknown terrestrial stations (or receiving earth stations), that have been agreed as representative of the worst-case sharing considerations.

Calculations are performed separately for great circle propagation mechanisms (propagation mode (1)) and, if required by the sharing scenario (see § 1.4 of RR Appendix 7 (WRC-2000)), for scattering from hydrometeors (propagation mode (2)). The **Coordination Contour** is then determined using the greater of the two distances predicted by the propagation mode (1) and propagation mode (2) calculations for each azimuth around either the coordinating **Earth Station Antenna** or, for some sharing scenarios, the service area in which the **Earth Station Antenna** is located. For the development of the **Coordination Contour**, the **Propagation Mode (1) Contour** and the **Propagation Mode (2) Contour** are normally contained on the same plot using the same azimuth values. In addition, for some services and **Frequency Bands** the coordination distance is not calculated, but based on a predetermined coordination distance. Hence, the coordination area is determined by one of the following methods:

- calculating, in all directions of azimuth from the earth station, the coordination distances and then drawing to scale the resulting contour on an appropriate map; or
- extending the service area in all directions by the calculated coordination distance(s); or
- for some services and **Frequency Bands**, extending the service area in all directions by a predetermined coordination distance.

For **Earth Station Antennas** in bidirectionally allocated **Frequency Bands**, the **Coordination Contours** with respect to other **Earth Station Antennas** are only produced for a transmitting **Earth Station Antenna** (see § 1.4.4 of RR Appendix 7 (WRC-2000) and ITU-R Circular Letter CR/150).

The sharing scenarios in § 1.4 of RR Appendix 7 (WRC-2000) and the various procedures of RR Appendix 7 are based on different assumptions e.g., sharing considerations, interference paths, operational constraints. Hence, if the extent of an **Earth Station Antenna's** operations cover more than one of the sharing scenarios in § 1.4 of RR Appendix 7 (WRC-2000) then a separate **Coordination Contour** is produced for each sharing scenario with each drawn on a separate map (see § 1.6 of RR Appendix 7 (WRC-2000)). Separate **Coordination Contours** may also be required within a sharing scenario; for example, a coordinating **Earth Station Antenna** operating in a bidirectionally allocated **Frequency Band** that is also allocated to terrestrial services will have two separate coordination areas:

- a **Coordination Contour** for determining those administrations with terrestrial services that may be affected by the operation of the coordinating (transmitting or receiving) **Earth Station Antenna**; and
- a **Coordination Contour** for determining those administrations with receiving **Earth Station Antennas** that may be affected by the operation of the coordinating (transmitting) **Earth Station Antenna**.

In the 2nd indent of the above example, if the **Frequency Band** permits reception from both geostationary and non-geostationary **Space Stations** then separate **Coordination Contours** will be required for each case.

Similarly, separate **Coordination Contours** are produced, vis-à-vis terrestrial services, if the coordinating **Earth Station Antenna** both transmits and receives in **Frequency Bands** shared with terrestrial services.

Guidance on the construction of **Coordination Contours**, and their component contours, are provided in § 1.6 of RR Appendix 7 with detailed examples in Recommendation ITU-R SM.1448.

To facilitate bilateral discussion it can be useful to calculate additional contours, defining smaller areas, that are based on less conservative assumptions than those used for the calculation of the **Coordination Contour** (see Recommendation ITU-R SM.1448). However, while this allows the use of less conservative assumptions with regard to the interference path and operational constraints to be taken into consideration, earth stations may transmit or receive a variety of classes of emissions and the earth station parameters to be used in the determination of the **Coordination Contour**, and any supplementary or auxiliary contours, are those which lead to the greatest distances for each **Earth Station Antenna** and each allocated frequency band which the coordinating **Earth Station Antenna** shares with other radiocommunication systems.

- ◇ A **Coordination Contour** is identified by its **Frequency Band**, its **Purpose** and the **Earth Station Antenna** for which it identifies the requirement for coordination.

A **Coordination Contour** must identify the requirement for coordination within a specific frequency range for a single **Earth Station Antenna**

RDD ref: S757

- **Frequency Band**

RDD ref: S759

The specific range of frequencies for which the **Coordination Contour** has been calculated.

Format: a pair of decimal numbers (in the range 100.0 to 105 000.0) to 1 decimal place in MHz.

- **Purpose**

RDD ref: S758

A brief description of the sharing scenario and application covered by the **Coordination Contour** including the transmission/reception condition.

Format: Text.

- **Propagation Mode (1) Contour**

RDD ref: S173

The line on the Earth's surface around an **Earth Station Antenna's Geographical Coordinates**, determined under clear sky conditions, that delineates part or all of the **Coordination Contour** and within which coordination is needed between the notifying **Administration** and other **Administrations** operating radiocommunication systems in the same **Frequency Band**. The minimum distance for the **Propagation Mode (1) Contour** is frequency and latitude dependent (see § 4.2 of RR Appendix 7). The maximum distance is radio-climatic zone dependent below 60 GHz and frequency dependent above 60 GHz (see § 4.3 of RR Appendix 7).

For some Services the **Propagation Mode (1) Contour** may be determined from a single calculated distance that is applicable to all azimuths around the service area.

Format: Diagram.

- **Propagation Mode (2) Contour**

RDD ref: S322

The line on the Earth's surface around a point along the slant path between the *Earth Station Antenna's Geographical Coordinates* and the point at which the beam reaches the rain height (see § 5 of RR Appendix 7), determined under rain scatter conditions, that delineates part or all of the *Coordination Contour* and within which coordination is needed between the notifying *Administration* and other *Administrations* operating radiocommunication systems in the same frequency range.

Propagation Mode (2) Contours only need to be determined for an *Earth Station Antenna* operating to geostationary *Space Stations* or for a non-tracking directional *Earth Station Antenna* operating to non-geostationary *Space Stations*. The calculations for the **Propagation Mode (2) Contour** are only performed in the frequency range 1 000 MHz to 40.5 GHz. Outside this frequency range, rain scatter interference can be neglected and the **Propagation Mode (2) Contour** is set to the minimum distance. The minimum distance for the **Propagation Mode (2) Contour** is frequency and latitude dependent (see § 4.2 of RR Appendix 7). The maximum distance is latitude dependent (see § 2 of Annex 2 to RR Appendix 7).

Format: Diagram.

- **Predetermined Distance Contour**

RDD ref: S323

The line on the Earth's surface determined by extending the periphery of the specified service area, within which the *Earth Station Antenna* operates, by an appropriate predetermined coordination distance (see § 1.4.6, § 1.4.7 and in Annex 7 (Table 10) of RR Appendix 7) that delineates part or all of the *Coordination Contour* and within which coordination is needed between the notifying *Administration* and other *Administrations* operating radiocommunication systems in the same **Frequency Band**. For some services the specified service area may be a single point (i.e., operation at a single fixed location – the *Earth Station Antenna's Geographic Coordinates*).

Predetermined distances are determined from information listed in Table 10, Annex 7 of RR Appendix 7 (WRC-2000), and do not require the application of the propagation calculations in Annexes 1 and 2 of RR Appendix 7.

Mobile *Earth Station Antenna* and aeronautical mobile *Earth Station Antenna* only.

Format: Diagram.

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5.25 Assignment Coordination Group (ACG)

RDD ref: S174

An *Assignment Coordination Group (ACG)* exists to define the set of common properties of a set of *ACG Frequencies* applicable to a number of *Emission Characteristics Sets* for the purpose of facilitating coordination. During the detailed coordination process there may be changes required which result in the need to reconfigure *ACG Frequencies* and *Emission Characteristics Sets* to form a new set of *Assignment Coordination Groups*. Thus, the formation of *Assignment Coordination Groups* is, to some extent, arbitrary. This enables the *Assignment Coordination Groups* to be created for a specific purpose, e.g., as a member of an *Exclusive Operational Group* comprised of appropriate sets of *ACG Frequencies* and *Emission Characteristics Sets*.

For a transmitting *Space Station*, the maximum bandwidth of the transponder and the **Maximum Total Peak Envelope Power Per Transponder** characterize the maximum technical availability of a transponder. More *ACG Frequencies* may be coordinated for use in the *Assignment Coordination Group* than can operate simultaneously within the *ACG Bandwidth* or within the power limitations set by the **Maximum Total Peak Envelope Power Per Transponder** which limits the power available for individual carriers. These two parameters determine the mixture of emissions and number of carriers that can be used at any one time and hence set the envelope for the operational limits of the different *Assignment Coordination Groups* emitted or received at the *Space Station*.

For a transmitting earth station, the **Aggregate Bandwidth** and the **Maximum Aggregate Power** characterize the technical availability of an Earth station and set the envelope for the operational limits of the different *Assignment Coordination Groups* transmitting into a single transponder at any one time from the earth station.

An *Assignment Coordination Group* may be either one of the following types, an *Earth To Space ACG*, a *Space To Earth ACG* or a *Space To Space ACG*.

◇ An *Assignment Coordination Group* is identified by its **BR Identification Code**.

An *Assignment Coordination Group* may have its characteristics further defined by one or more *Emission Characteristic Sets*

RDD ref: S731

An *Assignment Coordination Group* must be the subject of one or more *ACG Intended Actions*

RDD ref: S452

An *Assignment Coordination Group* may be the subject of one or more *Coordination Agreements*

RDD ref: S177

An *Assignment Coordination Group* may contain one or more *ACG Frequencies*

RDD ref: S453

An *Assignment Coordination Group* must be classified by a single *Class Of Station Nature Of Service Pair*

RDD ref: S382

An *Assignment Coordination Group* may be a member of one or more *Exclusive Operational Groups*

RDD ref: S732

An *Assignment Coordination Group* may be found under BR procedures to require coordination with one or more other *Assignment Coordination Groups*

RDD ref: S180

- **BR Identification Code**

RDD ref: S186

A code used to uniquely identify the *Assignment Coordination Group* allocated by the BR. The code is not assigned to the *Assignment Coordination Group* until after the BR receives the notice that first “adds” the *Assignment Coordination Group*. Thus, it is not possible for an *Administration* to refer to this code until after the *Assignment Coordination Group*’s first notification has been processed by the BR, although the BR has the means to identify this code for any previously notified *Assignment Coordination Group*.

The BR uses a coding system to uniquely identify *Space Service Notices*. The *Space Service Notice* transaction number that first includes details of the *Assignment Coordination Group* (i.e., when the *Assignment Coordination Group*’s **Intended Action Code** = A) is used as the **BR Identification Code**.

Format: 10 characters.

Note: *Currently the BR Identification Code only records the last three numbers of the year of receipt preceded by a zero. It is considered essential to show year in full. The RDD defines format as 10 characters as above.*

- **Date Of Bringing Into Use For Non-geostationary Operation** **RDD ref: S187**

The date the *Assignment Coordination Group* might be brought into operational use to, or from, a non-geostationary *Space Station*. Although there may be variations in the operational date for individual frequency assignments due to coordination requirements, in practice the **Date of Bringing Into Use** is generally based on the operational date for the majority of frequencies in the *Assignment Coordination Group*.

Format: Date.

- **Date Of Bringing Into Use For Geostationary Operation** **RDD ref: S718**

The date the *Assignment Coordination Group* might be brought into regular operational use to, or from, a geostationary *Space Station*. Although there may be variations in the operational date for individual frequency assignments due to coordination requirements, in practice the **Date of Bringing Into Use** is generally based on the operational date for the majority of frequencies in the *Assignment Coordination Group*.

Pending further studies by ITU-R on the applicability of the term “regular operation” to non-geostationary *Space Stations*, the condition of regular operation is limited to geostationary *Space Stations*.

Format: Date.

- **Period Of Validity** **RDD ref: S188**

The number of years the notifying *Administration* expect the operational use of the *Space Station* frequency assignment will continue to be required. The period begins on the date the frequency assignment comes into service.

Format: Integer (in the range 1 to 30) in years.

- **Bandwidth** **RDD ref: S190**

The width of the frequency band that contains the *Assignment Coordination Group* and within which the individual *ACG Frequencies* can operate at any one time.

The **Bandwidth** equals the necessary bandwidth of the *Assignment Coordination Group* plus twice the absolute value of the frequency tolerance.

Where non-geostationary *Space Stations* are concerned, the **Bandwidth** includes twice the maximum Doppler shift that may occur in relation to any point of the Earth’s surface. The **Bandwidth** should in no case exceed the bandwidth of a single satellite transponder.

Format: Integer (in the range 50 to 99 999 999) in kHz.

- **Polarization Code** **RDD ref: S189**

The code for representing the angular relationship between the plane of the electric field vector and the equatorial plane. The angular relationship is observed counter-clockwise in any fixed plane normal to the *Beam* axis, from the equatorial plane to the electric field vector of the waves, as seen from the satellite.

NOTE 1 – In the case of RR Appendices 30 and 30A, see § 3.2 of Annex 5 to RR Appendix 30 .

Format: Up to 2 characters.

Code	Meaning
CL	Left hand circular or indirect: the electric field vector rotates anti-clockwise.
CR	Right hand circular or direct: the electric field vector rotates clockwise.
D	Dual: when substantially equal-amplitude vertically and horizontally polarized components are radiated with-out particular control of the phase relation between them. Typically, the vertically and horizontally polarized sources may be displaced one from the other so that the resultant polarization varies between circular and slant, according to azimuth angle.
H	Horizontal linear: the electric field vector is in a plane parallel to the equatorial plane.
L	Linear: the electric field vector remains in the direction specified by the Polarization Linear Angle .
M	Mixed: the collective term applied when both vertical and horizontal components are radiated, embracing slant, circular and dual polarization.
SL	Left hand slant: the electric field vector is in the plane rotated 45° anti-clockwise from the vertical plane.
SR	Right hand slant: the electric field vector is in the plane rotated 45° clockwise from the vertical plane.
V	Vertical linear: the electric field vector is in the plane normal to the equatorial plane.

• **Polarization Linear Angle** **RDD ref: S364**

The angle measured in an anti-clockwise direction, in a plane normal to the beam axis, between the direction of the electric field and a line parallel to the equatorial plane as seen from the satellite.

Format: Integer (in the range 0 to 359) in degrees.

• **Spectrum Mask** **RDD ref: S195**

The pattern showing the distribution of the signal power across the **Bandwidth**.

Format: Diagram.

• **Baseband Lower Frequency Limit** **RDD ref: S196**

The lowest frequency of the baseband used to modulate the carrier frequencies applicable to the *Assignment Coordination Group*. This is only meaningful if the baseband either corresponds to a multichannel telephony baseband or a signal that can be represented by a multichannel telephony baseband.

Format: Decimal (in the range 0.000 to 9 999 999.999) to 3 decimal places in kHz.

• **Baseband Upper Frequency Limit** **RDD ref: S197**

The highest frequency of the baseband used to modulate the carrier frequencies applicable to the *Assignment Coordination Group*. This is only meaningful if the baseband either corresponds to a multichannel telephony baseband or a signal that can be represented by a multichannel telephony baseband.

Format: Decimal (in the range 0.000 to 9 999 999.999) to 3 decimal places in kHz.

• **Baseband Composition** **RDD ref: S198**

The textual description of the type and format of the individual components within the signal modulating the carrier frequencies applicable to the *Assignment Coordination Group*.

RR Appendices 30 and 30A only.

Format: Text.

- **Multiplex Type (Video/Sound)**

RDD ref: S199

A textual description of the form of multiplexing used to combine the video and sound components into a single baseband signal.

Used for the Broadcasting Satellite Service.

Format: Text.

- **Sound Broadcasting Characteristics**

RDD ref: S203

The textual description of the type and format of the sound components of a BSS channel.

RR Appendices 30 and 30A only.

Format: Text.

- **TV System And Colour Standard Description**

RDD ref: S327

A textual description of the parameters that define the format, or type of system, used for encoding a visual image and an audible sound, into an electromagnetic waveform that forms a television broadcast signal. The **TV System And Colour Standard Description** may include the television system code contained in Recommendation ITU-R BT.470.

Format: Text.

- **Digital Signal Transmitted Bit Rate**

RDD ref: S204

The digitized information rate with error correction for each carrier.

Format: Decimal (in the range 0.0 to 9 999 999.9) to 1 decimal place in kbit/s.

- **Digital Signal Number Of Phases**

RDD ref: S205

The number of phase states used by the modulation encoding system.

Format: Integer (in the range 1 to 10).

- **Pre-emphasis P-P Frequency Deviation**

RDD ref: S201

For a FM television signal the peak to peak frequency deviation produced by a 1 V peak to peak video signal at 0 dB relative deviation (the cross over frequency) in the **Pre-emphasis Characteristics**. Pre-emphasis is applied to television signals to reduce the high level low frequency components present in an FM television signal and which inhibit inter-changeability with the modulators and demodulators used for FDM telephony. (See Recommendations ITU-R F.276 and ITU-R F.405).

Format: Decimal (in the range 5.0 to 15.0) to 1 decimal place in MHz.

- **Pre-emphasis RMS Frequency Deviation**

RDD ref: S326

For a FDM telephony channel the r.m.s. deviation in frequency per channel produced by a 800 Hz test tone of 1 mW power at the 0 dB relative deviation (the cross over frequency) in the **Pre-emphasis Characteristics**. The r.m.s. frequency deviation is determined for a specific number of multiplexed channels.

In FDM telephony signals the noise level in the top channels is higher than in the bottom channels. Pre-emphasis allows a more even distribution of the signal to noise ratio across the FDM baseband. (See Recommendations ITU-R F.275, ITU-R F.404 and ITU-R S.464).

Format: Decimal (in the range 20.0 to 300.0) to 1 decimal place in kHz.

- **Pre-emphasis Characteristics**

RDD ref: S202

The reference to the characteristics of the filter used to reduce the level of the low frequency components with respect to the high frequency components of the baseband signal.

Format: Diagram.

• **Energy Dispersal Frequency Deviation** **RDD ref: S200**

The peak-to-peak deviation in the carrier frequencies applicable to the *Assignment Coordination Group* resulting from the application of the **Energy Dispersal Waveform**. The **Energy Dispersal Waveform** is added to the baseband signal prior to the modulator to prevent high levels of energy concentration on the carrier frequency during periods of no, or small levels of modulation signal.

When no modulation or a very small modulation signal is applied, the energy concentrates at the carrier frequency and interference can be caused to other terrestrial and satellite systems. Also multiple carrier intermodulation products become excessive in the types of amplifiers that are commonly used. In order to reduce these effects and to comply with Recommendations ITU-R S.446 and ITU-R S.524, a low-frequency waveform (e.g., triangular) is added to the baseband signal. The value of the **Energy Dispersal Waveform** is set between the following limits:

- lower limit: controls the maximum carrier energy per 4 kHz to a level 2 dB above (1.58 times) the maximum energy density at full telephone channel load;
- upper limit: determined by distortion noise in the channel and interference to the adjacent channel. It usually makes the carrier energy per 4 kHz equal to the maximum energy density at full telephone channel load.

Format: Decimal (in the range 0.1 to 4.0) to 1 decimal place in MHz.

• **Energy Dispersal Sweep Frequency** **RDD ref: S324**

The frequency of the **Energy Dispersal Waveform** added to the baseband signal prior to the modulator to prevent high levels of energy concentration on the carrier frequency during periods of no, or small levels of modulation signal. For television systems the frequency of the **Energy Dispersal Waveform** has to be synchronized to the television system field frequency.

See **Energy Dispersal Frequency Deviation** for more information on energy dispersal.

Format: Integer (in the range 10 to 2 000) in Hz.

• **Energy Dispersal Waveform** **RDD ref: S325**

The textual description of the shape of the waveform added to the baseband signal prior to the modulator to prevent high levels of energy concentration on the carrier frequency during periods of no, or small levels of modulation signal.

See **Energy Dispersal Frequency Deviation** for more information on energy dispersal.

Format: Text.

• **Energy Dispersal Description** **RDD ref: S857**

A textual description of the form of energy dispersal used for those cases where the *Assignment Coordination Group* is not using frequency modulation.

Format: Text.

• **Start Time** **RDD ref: S091**

The time of day measured in UTC at which the transmission/reception to/from the *Space Station*, or *Associated Earth Station Antenna* usually commences.

Where a **Start Time** is the same time (or later time of day) as the **Stop Time**, then the **Stop Time** is considered to be on the next calendar day, immediately following the **Start Time**.

Format: Time (in the range 0000 and 2 359).

• **Stop Time** **RDD ref: S092**

The time of day measured in UTC at which the transmission/reception to/from the *Space Station*, or *Associated Earth Station Antenna* usually ends.

Where a **Stop Time** is the same time (or earlier time of day) as the **Start Time**, then the **Stop Time** is considered to be on the next calendar day, immediately following the **Start Time**.

Format: Time (in the range 0001 and 2400).

- **Interference Study Information**

RDD ref: S642

A description of any additional relevant information required for conduction of a detailed interference study.

Format: Text.

- **Peak To Average Power Ratio Upper Frequency Limit**

RDD ref: S250

The frequency below which carrier frequencies with a ratio of peak to average power density of less than 5 dB are located. The peak power density is taken as an average over the worst 4 kHz and the average power density is taken over the necessary bandwidth of the modulated carrier.

In the RR Appendix 30B plan there is a concept of macro-segmentation of proposed frequency assignments. The upper 60% of each allotment band is used for carriers where the ratio of peak to average power density is greater than 5 dB and these are known as high density carriers. The lower 40% of each allotment band is used for carriers where the ratio of peak to average power density is less than 5 dB and these are known as low density carriers.

RR Appendix 30B only.

Format: Frequency.

- **Type Of Amplitude Modulation**

RDD ref: S641

A description of the form of amplitude modulation that provides more detailed information than can be provided by the *Emission Characteristic Set's Class Of Emission*.

Format: Text.

- **Type Of Modulation**

RDD ref: S640

A description of the form of modulation that provides more detailed information than can be provided by the *Emission Characteristic Set's Class Of Emission*.

Format: Text.

5.26 **Transmitting Earth Station ACG**

RDD ref: S215

A **Transmitting Earth Station ACG** is a type of *Assignment Coordination Group* whose transmission source is Earth based and whose reception point is based in space.

◇ A **Transmitting Earth Station ACG** is identified by its common properties inherited from its generic type (*Assignment Coordination Group*) i.e., *Assignment Coordination Group's BR Identification Code*.

A **Transmitting Earth Station ACG** must describe the emission characteristic for a single *Earth Station Antenna*

RDD ref: S216

A **Transmitting Earth Station ACG** must characterize the energy received within a single *Beam*

RDD ref: S217

- **Aggregate Bandwidth (AB)**

RDD ref: S770

The width of the frequency band, at the transmitting *Earth Station Antenna*, that contains the carriers (*ACG Frequencies*) in the *Assignment Coordination Group's Bandwidth*.

Format: Integer (in the range 50 to 99 999 999) in kHz.

- **Maximum Aggregate Power**

RDD ref: S771

The maximum value of the peak envelope power supplied to the input of the *Earth Station Antenna* in the *Assignment Coordination Group's Bandwidth*.

Format: Decimal (in the range 0.0 to 40.0) to 1 decimal place in dBW.

- **(AB) Transponder Bandwidth Indicator** **RDD ref: S736**

An indicator identifying if the **Aggregate Bandwidth** is equal to the transponder bandwidth.

Format: True or False.

5.27 *Receiving Earth Station ACG* **RDD ref: S218**

A *Receiving Earth Station ACG* is a type of *Assignment Coordination Group* whose transmission source is based in space and whose reception source is Earth based.

- ◇ A *Receiving Earth Station ACG* is identified by its common properties inherited from its generic type (*Assignment Coordination Group*) i.e., *Assignment Coordination Group's BR Identification Code*.

A *Receiving Earth Station ACG* must describe the reception characteristic for one or more *Earth Station Antennas*

RDD ref: S219

A *Receiving Earth Station ACG* must characterize the energy radiated within a single *Beam*

RDD ref: S220

- **Bandwidth Of The Frequency Band Observed** **RDD ref: S374**

The width of the frequency range of the *Receiving Earth Station ACG* and within which the emissions observed by the radio astronomy station occur.

Format: Integer (in the range 50 to 99 999 999) in kHz.

- **Receiving System Noise Temperature** **RDD ref: S764**

The temperature above absolute zero which is equivalent to the noise associated with the receiving system. The noise temperature is the lowest total value arising from the antenna's environment, the receiving antenna and from within the receiving system.

For radio waves the Earth is considered to be a "grey" body and for *Earth Station Antenna* the side lobe performance and elevation angle may both be significant factors in the level of environmental noise.

For an *Earth Station Antenna* the **Receiving System Noise Temperature** is determined under clear sky conditions and at the *Earth Station Antenna's Planned Minimum Elevation Angle*, excluding tolerances for geostationary satellite operation.

Format: Integer (in the range 20 to 6 000) in Kelvins.

- **Receiver Sensitivity Indicator** **RDD ref: S332**

An indicator for identifying the sensitivity of the radio astronomy station's receiver in the **Bandwidth Of The Frequency Band Observed**.

This is referred to as "Class of Observations" in the RR Appendix 4 form.

Format: 1 character.

Code	Meaning
A	The sensitivity of the receiving equipment is not a primary factor in the observations.
B	Advanced low-noise receivers using the best techniques are required if the observations are to be made.

- **Observation Type** **RDD ref: S858**

An indicator for identifying the *Receiving Earth Station ACG's* type of observations.

Format: 1 character.

Code	Meaning
S	Either spectral-line observations operated from a single dish telescope, or continuum observations operated from single dish telescopes or closely connected array of telescopes.
V	Very long baseline interferometry (VLBI) operated from different <i>Earth Station Antennas</i> located at a considerable distance from each other and which may not be located in the same <i>Geographical Area</i> .

• **Centre Of The Frequency Band Observed** **RDD ref: S256**

The frequency at the centre of the frequency range containing the emissions observed by the radio astronomy station.

Format: Frequency.

• **Planned Minimum Elevation Angle** **RDD ref: S859**

The intended minimum operating angle of elevation measured at the **Centre Of The Frequency Band Observed** in the vertical plane between the direction of *Earth Station Antenna's Maximum Gain* and the horizontal plane.

Format: Decimal (in the range 0.0 to 90.0) to 1 decimal place in degrees.

5.28 Receiving Space Station ACG **RDD ref: S456**

A *Receiving Space Station ACG* is a type of *Assignment Coordination Group* whose transmission source is Earth based and whose reception point is based in space.

A *Receiving Space Station ACG* is used when providing information with respect to a *Space Station's* transmitting *Associated Earth Station Antenna*.

◇ A *Receiving Space Station ACG* is identified by its common properties inherited from its generic type (*Assignment Coordination Group*) i.e., *Assignment Coordination Group's BR Identification Code*.

A *Receiving Space Station ACG* must describe the emission characteristic for one or more *Associated Earth Station Antennas*

RDD ref: S457

A *Receiving Space Station ACG* must characterize the energy received by a satellite antenna within a single *Beam*

RDD ref: S458

A *Receiving Space Station ACG* may have to conform to the spectral radiation limits set by a single *Earth To Space EIRP Mask*

RDD ref: S750

• **Space Station Automatic Gain Control Range** **RDD ref: S331**

The amount by which the *Space Station* transponder gain can be increased to maintain a constant signal level at the transponder output.

For Regions 1 and 3 see § 3.10 of Annex 3 to RR Appendix 30A. For Region 2 see § 4.9 of Annex 3 to RR Appendix 30A.

Broadcasting Satellite Service only.

Format: Decimal (in the range 0.0 to 15.0) to 1 decimal place in dB.

• **Receiving System Noise Temperature** **RDD ref: S192**

The temperature above absolute zero that is equivalent to the noise associated with the *Space Station's* receiving system. The noise temperature is the lowest total value arising from the Antenna's environment, the receiving antenna and from within the receiving system.

For radio waves the Earth is considered to be a "grey" body and for *Space Station* antenna it will determine the lower limit for any antenna pointing at the Earth.

Format: Integer (in the range 300 to 6 000) in Kelvins.

- **Uplink Service Area**

RDD ref: S384

The area on the surface of the Earth in which the *Administration* responsible for the service may be able to position transmitting *Associated Earth Station Antenna* for the purpose of providing Earth-to-space transmissions.

The actual location of any *Earth Station Antenna*, either typical or specific, will only be determined following coordination with any other affected services or *Administrations*.

The **Uplink Service Area** is distinct from the *Space Station* receiving *Beam* area. The *Space Station* receiving *Beam* area is the area delineated by the intersection of the half-power beam of the *Space Station* receiving antenna with the surface of the Earth and this may include many **Uplink Service Areas**.

The service area may be provided in electronic format; see ITU-R Circular Letters CR/58 and CR/65.

Format: a compound structure presented in one of the following forms:

a) one or more **Geographical Area Codes**

or

b) a **Geographical Area Radiocommunication Region Code**.

or

c) three to twenty Test Points using Lat/Long in degrees, minutes and seconds and either

1) a Diagram; or,

2) an **Uplink Service Area** defined by a minimum elevation angles;

or

d) a narrative description of the **Uplink Service Area**; Up to 20 characters.

- **Multiple Access Indicator**

RDD ref: S329

An indicator identifying the method used for sharing access to the *Space Station* transponder. Multiple access allows several transmitting stations to share the same space station transponder simultaneously.

Format: 1 character.

Code	Meaning
F	FDMA: Frequency Division Multiple Access; each transmitting station has its own assigned frequency within the ACG Bandwidth .
T	TDMA: Time Division Multiple Access; all transmitting station use the full ACG Bandwidth and share access on a time basis.
C	CDMA: Code Division Multiple Access; all transmitting station use the full ACG Bandwidth simultaneously and share access by using a code and spread spectrum techniques.

- **Earth Station Power Control Range**

RDD ref: S330

The amount by which the *Associated Earth Station Antenna* transmitting power may be increased above the **Total Transmitting Power** to allow for rain fading. The extent to which the power may be increased depends on the level of rain fade and whether adjacent channels are cross-polarized. For Regions 1 and 3 see § 3.11 of Annex 3 to RR Appendix 30A which contains the required calculation method. For Region 2 see § 4.10 of Annex 3 to RR Appendix 30A.

RR Appendix 30A only.

Format: Decimal (in the range 0.0 to 10.0) to 1 decimal place in dB.

• **Aggregate Bandwidth** **RDD ref: S646**

The width of the frequency band, at the transmitting *Associated Earth Station Antenna*, that contains the carriers (*ACG Frequencies*) in the *ACG Bandwidth*.

The **Aggregate Bandwidth** should in no case exceed the bandwidth of a single satellite transponder.

Format: Integer (in the range 50 to 99 999 999) in kHz.

• **Maximum Aggregate Power** **RDD ref: S600**

The maximum value of the peak envelope power supplied to the input of the *Associated Earth Station Antenna* in the *ACG Bandwidth*.

Format: Decimal (in the range 0.0 to 40.0) to 1 decimal place in dBW.

• **(AB) Transponder Bandwidth Indicator** **RDD ref: S765**

An indicator identifying if the **Aggregate Bandwidth** is equal to the transponder bandwidth.

Format: True or False.

5.29 Transmitting Space Station ACG **RDD ref: S463**

A *Transmitting Space Station ACG* is a type of *Assignment Coordination Group* whose transmission source is based in space and whose reception source is Earth based.

A *Transmitting Space Station ACG* is used when providing information with respect to a *Space Station's* receiving *Associated Earth Station Antenna*.

◇ A *Transmitting Space Station ACG* is identified by its common properties inherited from its generic type (*Assignment Coordination Group*) i.e., *Assignment Coordination Group's* **BR Identification Code**.

A *Transmitting Space Station ACG* may describe the reception characteristic for one or more *Associated Earth Station Antennas* **RDD ref: S464**

A *Transmitting Space Station ACG* must characterize the energy radiated by satellite antenna within a single *Beam* **RDD ref: S465**

A *Transmitting Space Station ACG* may have to conform to the spectral radiation limits set by a single *PFD Mask* **RDD ref: S751**

A *Transmitting Space Station ACG* may have to conform the *spectral* radiation limits set by a single *Space To Earth EIRP Mask* **RDD ref: S752**

• **Downlink Service Area** **RDD ref: S276**

The area on the surface of the Earth in which the *Administration* responsible for the service has the right to demand that the agreed protection conditions be provided for the reception of the space-to-Earth signal.

The **Downlink Service Area** is distinct from the coverage area. Coverage area is the area on the surface of the Earth delineated by a contour of a constant given value of power flux-density which would permit the wanted quality of reception in the absence of interference.

The area delineated by the intersection of the half-power beam of the **Space Station** transmitting antenna with the surface of the Earth is the **Space Station** transmitting **Beam** area.

The **Downlink Service Area** may be provided in electronic format; see ITU-R Circular Letters CR/58 and CR/65 for further information.

Format: a compound structure presented in one of the following forms:

a) one or more *Geographical Area Codes*

or

b) a *Geographical Area Radiocommunication Region Code*

or

- c) three to twenty Test Points using Lat/Long in degrees, minutes and seconds for each test point and either
 - 1) a Diagram; or
 - 2) **Downlink Service Area** defined by a minimum elevation angle

or

- d) a narrative description of the **Downlink Service Area**; Up to 20 characters.

- **Affected Area**

RDD ref: S214

The maximum area of the Earth's surface which can be seen from the satellites of a non-geostationary *Space Station* when they are operating. The **Affected Area** encloses the active sub-satellite area (see Recommendation ITU-R M.1187).

Format: Diagram.

- **Maximum Total Peak Envelope Power Per Transponder**

RDD ref: S193

The maximum value of the peak envelope power available for supply to the input of the antenna in the *Assignment Coordination Group's Bandwidth* (consisting of different combinations of the *ACG Assignments*) for the *Transmitting Space Station ACG* at any one time.

If the **Bandwidth** is equal to the transponder bandwidth the **Maximum Total Peak Envelope Power Per Transponder** corresponds to the maximum saturated peak envelope power.

In the case of individual carriers the **Maximum Total Peak Envelope Power Per Transponder** represents an upper limit on the maximum power available, that will not be exceeded by the summation of the individual emissions in the *Assignment Coordination Group's Bandwidth* at any one time.

Format: Decimal (in the range –10.0 to 30.0) to 1 decimal place in dBW.

- **Transponder Bandwidth Indicator**

RDD ref: S249

An indicator identifying if the *Assignment Coordination Group's Bandwidth* for the *Transmitting Space Station ACG* is equal to the bandwidth of the transponder.

Format: True or false.

5.30 *Transmitting Space Station Space To Space ACG*

RDD ref: S472

A *Transmitting Space Station Space To Space ACG* is a type of *Assignment Coordination Group* whose transmission and reception sources are both based in space.

- ◇ A *Transmitting Space Station Space To Space ACG* is identified by its common properties inherited from its generic type (*Assignment Coordination Group*) i.e., *Assignment Coordination Group's BR Identification Code*.

A *Transmitting Space Station Space To Space ACG* must characterize the energy radiated by a satellite antenna within a single *Beam*

RDD ref: S473

A *Transmitting Space Station Space To Space ACG* must have its beam associations described by one or more *Associated Space Station Positions*

RDD ref: S527

- **Maximum Radiated Power**

RDD ref: S652

The maximum isotropic radiated power produced by the transmitting *Space Station*.

Format: Decimal (in the range 0.0 to 60.0) to 1 decimal place in dBW.

- **Maximum Total Peak Envelope Power Per Transponder**

RDD ref: S776

The maximum value of the peak envelope power available for supply to the input of the antenna in the *Assignment Coordination Group's Bandwidth* (consisting of different combinations of the *ACG Assignments*) for the *Transmitting Space Station Space To Space ACG* at any one time.

If the **Bandwidth** is equal to the transponder bandwidth the **Maximum Total Peak Envelope Power Per Transponder** corresponds to the maximum saturated peak envelope power.

In the case of individual carriers the **Maximum Total Peak Envelope Power Per Transponder** represents an upper limit on the maximum power available and that will not be exceeded by the summation of the individual emissions in the **Assignment Coordination Group's Bandwidth** at any one time.

Format: Decimal (in the range –10.0 to 30.0) to 1 decimal place in dBW.

- **Transponder Bandwidth Indicator**

RDD ref: S777

An indicator identifying if the **Bandwidth** for the *Transmitting Space Station's Space to Space ACG* is equal to the bandwidth of the transponder.

Format: True or False.

5.31 *Receiving Space Station Space To Space ACG*

RDD ref: S476

A *Receiving Space Station Space To Space ACG* is a type of *Assignment Coordination Group* whose transmission and reception sources are both based in space.

- ◇ A *Receiving Space Station Space To Space ACG* is identified by its common properties inherited from its generic type (*Assignment Coordination Group*) i.e., *Assignment Coordination Group's BR Identification Code*.

A *Receiving Space Station Space To Space ACG* must characterize the energy received by a satellite antenna within a single *Beam*

RDD ref: S478

A *Receiving Space Station Space To Space ACG* must have its beam associations described by one or more *Associated Space Station Positions*

RDD ref: S526

- **Maximum Radiated Power**

RDD ref: S653

The maximum isotropic radiated power produced by the transmitting associated *Space Station*.

Format: Decimal (in the range 0.0 to 60.0) to 1 decimal place in dBW.

5.32 *Emission Characteristic Set*

RDD ref: S733

A set of emission characteristics that are applicable to all frequencies in the *Assignment Coordination Group* for which it has been defined. An *Assignment Coordination Group* may contain a number of frequencies with different modulation schemes each of which may have its own *Emission Characteristic Set*.

The specific data items for this data group that are applicable depend on the type of *Assignment Coordination Group* to which the *Emission Characteristic Set* is related. In the following table an X indicates if the data item is applicable to the *Emission Characteristic Set* for each of the types of *Assignment Coordination Group*.

Data Item Name	RDD ref.	Tx Earth Station	Rx Earth Station	Tx Space Station	Rx Space Station	Tx Space-to-Space Station	Rx Space-to-Space Station
Class Of Emission Code	S262	X	X	X	X	X	X
Necessary Bandwidth Code	S334	X	X	X	X	X	X
Total Peak Envelope Power	S263	X		X	X	X	X

Data Item Name	RDD ref.	Tx Earth Station	Rx Earth Station	Tx Space Station	Rx Space Station	Tx Space-to-Space Station	Rx Space-to-Space Station
Maximum Peak Envelope Power Per Carrier	S264	X		X	X	X	X
Minimum Peak Envelope Power Per Carrier	S265	X		X	X	X	X
Maximum Power Density Per Carrier Averaged Over 4 kHz	S267	X		X	X	X	X
Maximum Power Density Averaged Over 4 kHz	S266	X		X	X	X	X
Minimum Power Density Per Carrier Averaged Over 4 kHz	S268	X		X	X	X	X
Maximum Power Density Per Carrier Averaged Over 1 MHz	S336	X		X	X	X	X
Maximum Power Density Averaged Over 1 MHz	S335	X		X	X	X	X
Maximum Power Density Per Carrier Averaged Over 1 MHz	S371	X		X	X	X	X
Maximum Power Density Averaged Over The Necessary Bandwidth	S618	X ⁽¹⁾		X ⁽¹⁾	X ⁽¹⁾		
Required Protection Ratio (Minimum C/I)	S210		X ⁽²⁾	X ⁽²⁾			
Carrier To Noise Objective	S856		X	X	X		X
Reason For Absence Of C/N	S373		X	X	X		X
Reason For Absence Of Minimum Power	S269	X		X	X	X	X
Reason For Absence Of Minimum Power Density	S372	X		X	X	X	X

⁽¹⁾ BSS Plans RR Appendices 30, 30A and FSS Plan RR Appendix 30B,

⁽²⁾ RR Appendix 30B.

For maximum peak power and power density values, supply information contained in one of the two options outlined below. Option A applies when individual carriers are used in the **Assignment Coordination Group**; Option B applies when there are no individual carriers (i.e., spread spectrum).

Option A:

Maximum Peak Envelope Power Per Carrier

Maximum Power Density Per Carrier Averaged Over 4 kHz

Maximum Power Density Per Carrier Averaged Over 1 MHz

Option B:

Total Peak Envelope Power

Maximum Power Density Averaged Over 4 kHz

Maximum Power Density Averaged Over 1 MHz

- ◇ An *Emission Characteristic Set* is identified by all of the following data items that are applicable for a specific modulation characteristic and the spectral power density of the *Assignment Coordination Group* frequencies it defines.

An *Emission Characteristic Set* must further define a single
Assignment Coordination Group

RDD ref: S760

- **Class Of Emission Code**

RDD ref: S262

The code used to describe the type of modulation and information applicable to the frequencies in the *Emission Characteristic Set*. Although there may be small variations in the **Class Of Emission Code** for individual frequency assignments (i.e., the last two characters) the first three characters are mandatory and will describe the basic modulation characteristics of all frequencies in the *Emission Characteristic Set*.

Format: Up to 5 characters as described in RR Appendix 1.

- **Necessary Bandwidth Code**

RDD ref: S334

For a given **Class Of Emission Code**, the width of the frequency band which is just sufficient to ensure the transmission of the information at the rate and with the quality required under specified conditions.

The necessary bandwidth, is expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth. The first character shall be neither zero nor K, M or G.

Format: 4 characters.

between 0.001 and 999 Hz shall be expressed in Hz (letter H);

between 1.00 and 999 kHz shall be expressed in kHz (letter K);

between 1.00 and 999 MHz shall be expressed in MHz (letter M);

between 1.00 and 999 GHz shall be expressed in GHz (letter G).

Examples:

400 Hz = 400H

2.4 kHz = 2K40

12.5 kHz = 12K5

180.4 kHz = 180K

180.7 kHz = 181K

1.25 MHz = 1M25

2 MHz = 2M00

10 MHz = 10M0

202 MHz = 202M

- **Total Peak Envelope Power**

RDD ref: S263

The total peak envelope power supplied to the input of the antenna in the *Assignment Coordination Group's Bandwidth*. (Option B.)

This method of power measurement is used for the case where there are no individual carriers in the *ACG Bandwidth* (e.g., Spread Spectrum).

Format: Decimal (in the range –10.0 to 40.0) to 1 decimal place in dBW.

- **Maximum Peak Envelope Power Per Carrier**

RDD ref: S264

The maximum value of the peak envelope power supplied to the input of the antenna for an individual *ACG Frequency*. (Option A.)

Format: Decimal (in the range –10.0 to 40.0) to 1 decimal place in dBW.

- **Minimum Peak Envelope Power Per Carrier** **RDD ref: S265**

The minimum value of the peak envelope power supplied to the input of the for an individual *ACG Frequency*.

Format: Decimal (in the range –10.0 to 40.0) to 1 decimal place in dBW.

- **Maximum Power Density Per Carrier Averaged Over 4 kHz** **RDD ref: S267**

The maximum power density in the worst 4 kHz supplied to the input of the antenna for an individual *ACG Frequency* averaged over 4 kHz. (Option A.)

The 4 kHz reference bandwidth is used for carrier frequencies less than 15 GHz. If the necessary bandwidth is less than 4 kHz (i.e., narrow-band carriers) the peak power should be averaged over 4 kHz.

Format: Decimal (in the range –120.0 to 0.0) to 1 decimal place in dB(W/Hz).

- **Maximum Power Density Averaged Over 4 kHz** **RDD ref: S266**

The maximum power density in the worst 4 kHz in the *Assignment Coordination Group's Bandwidth* supplied to the input of the antenna averaged over 4 kHz. (Option B.)

The 4 kHz reference bandwidth is used for carrier frequencies less than 15 GHz. This method of power measurement is used for the case where there are no individual carriers (e.g., Spread Spectrum).

Format: Decimal (in the range –120.0 to 0.0) to 1 decimal place in dB(W/Hz).

- **Minimum Power Density Per Carrier Averaged Over 4 kHz** **RDD ref: S268**

The minimum power density in the worst 4 kHz supplied to the input of the antenna of an individual *ACG Frequency* averaged over 4 kHz.

The 4 kHz reference bandwidth is used for carrier frequencies less than 15 GHz. If the necessary bandwidth is less than 4 kHz (i.e., narrow-band carriers) the peak power should be averaged over 4 kHz.

Format: Decimal (in the range –120.0 to 0.0) to 1 decimal place in dB(W/Hz).

- **Maximum Power Density Per Carrier Averaged Over 1 MHz** **RDD ref: S336**

The maximum power density in the worst 1 MHz supplied to the input of the antenna of an individual *ACG Frequency* averaged over 1 MHz. (Option A.)

The 1 MHz reference bandwidth is used for carrier frequencies greater than 15 GHz. If the necessary bandwidth is less than 1 MHz the peak power should be averaged over 1 MHz. If the values of maximum power density are being provided for individual carriers, they should be of this type.

Format: Decimal (in the range –120.0 to 0.0) to 1 decimal place in dB(W/Hz).

- **Maximum Power Density Averaged Over 1 MHz** **RDD ref: S335**

The maximum power density in the worst 1 MHz in the *Assignment Coordination Group's Bandwidth* supplied to the input of the antenna averaged over 1 MHz. (Option B.)

The 1 MHz reference bandwidth is used for carrier frequencies greater than 15 GHz. This method of power measurement is used for the case where there are no individual carriers (e.g., Spread Spectrum).

Format: Decimal (in the range –120.0 to 0.0) to 1 decimal place in dB(W/Hz).

- **Minimum Power Density Per Carrier Averaged Over 1 MHz** **RDD ref: S371**

The minimum value power density over the worst 1 MHz supplied to the input of the antenna of an individual *ACG Frequency* averaged over 1 MHz.

The 1 MHz reference bandwidth is used for carrier frequencies greater than 15 GHz. If the necessary bandwidth is less than 1 MHz the peak power should be averaged over 1 MHz.

Format: Decimal (in the range –120.0 to 0.0) to 1 decimal place in dB(W/Hz).

- **Maximum Power Density Averaged Over The Necessary Bandwidth** **RDD ref: S618**

The maximum signal power level averaged over the necessary bandwidth.

Format: Decimal (in the range –120.0 to 0.0) to 1 decimal place in dB(W/Hz).

- **Required Protection Ratio (Minimum *C/I*)** **RDD ref: S210**

The minimum aggregate *C/I* ratio that is acceptable to the notifying *Administration*, if the *C/I* ratio is less than 26 dB, or 23 dB for submissions received by the Bureau as of 5 July 2003.

The *C/I* ratio is to be expressed in terms of the power averaged over the necessary bandwidth of the modulated wanted and interfering signals, assuming both the desired carrier and interfering signals have equivalent bandwidths and modulation types.

Format: Decimal (in the range 8.0 to 25.9) to 1 decimal place in dB.

- **Carrier To Noise Objective** **RDD ref: S856**

The greater of either the *C/N* (dB) required to meet the performance of the link under clear sky conditions or the *C/N* (dB) required to meet the short-time objectives of the link inclusive of the necessary margins.

The Carrier To Noise Objective applies to the *Earth Station Antenna to Space Station* path or the *Space Station to Earth Station Antenna* path or the *Space Station to Space Station* path.

Format: Decimal (in the range –10.0 to 25.0) to 1 decimal place in dB.

- **Reason For Absence Of Minimum Power** **RDD ref: S269**

The textual explanation for an omission of minimum peak power, e.g., the signal power is constant in the *ACG Bandwidth*.

Format: Text.

- **Reason For Absence Of Minimum Power Density** **RDD ref: S372**

The textual explanation for an omission of minimum power density e.g., the signal power is constant in the *ACG Bandwidth*.

Format: Text.

- **Reason For Absence Of *C/N*** **RDD ref: S373**

The textual explanation for an omission of the *Carrier To Noise Objective*, e.g., it is not applicable to the type of emission.

Format: Text.

5.33 *Frequency Range* **RDD ref: S244**

A contiguous range of frequencies of the *Beam*.

◇ A *Frequency Range* is identified by its **Lower Limit** and the *Beam* with which it is associated.

A *Frequency Range* must describe the valid operational frequency limits for a single *Beam*

RDD ref: S245

- **Lower Limit** **RDD ref: S247**

The lowest frequency in the *Frequency Range*.

Format: Frequency.

- **Upper Limit**

RDD ref: S248

The highest frequency in the *Frequency Range*.

Format: Frequency.

5.34 *Beam Frequency*

RDD ref: S251

The individual frequencies that are contained within a *Beam*.

◇ A *Beam Frequency* is identified by its **Value** and the *Beam* with which it is associated.

A *Beam Frequency* may represent the frequency used by a connection between space and Earth for one or more *Beam Frequency Straps*

RDD ref: S252

A *Beam Frequency* may represent the frequency used by a connection between Earth and space for one or more *Beam Frequency Straps*

RDD ref: S253

A *Beam Frequency* must define a frequency used by a single *Beam*

RDD ref: S480

A *Beam Frequency* must be the subject of one or more *Intended Actions*

RDD ref: S743

- **Value**

RDD ref: S333

The centre frequency of the band occupied by the RF modulated signal.

Format: Frequency.

- **Carrier Frequency**

RDD ref: S257

The radio frequency on which the information is modulated. Normally the **Carrier Frequency** and **Assigned Frequency** are the same value however, if the modulation envelope is asymmetric then the **Carrier Frequency** and **Assigned Frequency** values will be different. The **Carrier Frequency** is only used for coordination purposes.

Format: Frequency.

5.35 *Coordination Agreement*

RDD ref: S271

An agreement between two *Administrations* regarding the operation of a particular *Assignment Coordination Group* and its maximum acceptable field strength at named test points under specified conditions. The named test points may be part of a designated contour, or a geographic or national boundary. A *Coordination Agreement* is required for each *Administration* that is adversely affected by the operation of the *Assignment Coordination Group*.

◇ A *Coordination Agreement* is identified by the *Assignment Coordination Group* for which it is in respect of the *Administration* with which it has been agreed and the *Provision* of which it is in respect.

A *Coordination Agreement* must be in respect of a single *Assignment Coordination Group*

RDD ref: S272

A *Coordination Agreement* must be in respect of a single *Provision*

RDD ref: S710

A *Coordination Agreement* must be reached with a single *Administration*

RDD ref: S273

- **Status Code**

RDD ref: S275

An indication of the position of the coordination or agreement, as follows.

Format: Up to 6 characters.

Code	Meaning
COORD	Coordination requested by notifying <i>Administration</i>
AFFECT	An <i>Administration</i> has been identified as potentially being affected by the <i>Assignment</i>

	<i>Coordination Group</i>
REFUSE	Agreement on the <i>Assignment Coordination Group</i> has been refused by an <i>Administration</i>
AGREED	Agreement on the <i>Assignment Coordination Group</i> has been given by both <i>Administrations</i>

5.36 ***ACG Frequency***

RDD ref: S531

The allocation of planned operational frequencies to a specific ***Assignment Coordination Group***. This allocation has to be individually specified in order to define specific strapping arrangements.

- ◇ An ***ACG Frequency*** can be identified by its **Value**, and the ***Assignment Coordination Group*** in which it is used.

An ***ACG Frequency*** must be the subject of a single ***Assignment Coordination Group***

RDD ref: S501

An ***ACG Frequency*** may be either the space-to-Earth component in by one or more ***ACG Frequency Straps***

RDD ref: S705

An ***ACG Frequency*** may be either the Earth-to-space component in by one or more ***ACG Frequency Straps***

RDD ref: S706

- **Value**

RDD ref: S723

The centre frequency of the band occupied by the RF modulated signal.

Format: Frequency.

- **Carrier Frequency**

RDD ref: S716

The radio frequency on which the information is modulated. Normally the **Carrier Frequency** and **Assigned Frequency** are the same value however, if the modulation envelope is asymmetric then the **Carrier Frequency** and **Assigned Frequency** values will be different. The **Carrier Frequency** is only used for coordination purposes.

Format: Frequency.

- **Channel Number**

RDD ref: S719

The number of the channel corresponding to the ***ACG Frequency Value***, within the Broadcasting Satellite Service Plan, which the notifying ***Administration*** is proposing to use.

Format: Integer (in the range 1 to 40).

- **Non-conformity Indicator**

RDD ref: S855

An indicator used to identify if the ***ACG Frequency Value*** is to be notified under RR No. 4.4 .

Format: True or False.

5.37 ***Associated Space Station Position***

RDD ref: S533

The source or target of a space to space communication. This can be the position of a ***Beam*** which has already been, or may subsequently be, notified separately.

- ◇ An ***Associated Space Station Position*** can be identified by:

- 1) either the ***Transmitting Space Station Space To Space ACG*** or the ***Receiving Space Station Space To Space ACG***.

And

- 2) either its **Anticipated Nominal Longitude** or the ***Space Station*** by which it is represented.

One and only one of the following two relationships must apply:

An ***Associated Space Station Position*** must be a source of the transmission to one or more ***Receiving Space Station Space to Space ACGs***

RDD ref: S505

An *Associated Space Station Position* must be a target of the transmission from one or more *Transmitting Space Station Space To Space ACGs*

RDD ref: S506

An *Associated Space Station Position* may be represented by a single *Space Station*

RDD ref: S517

- **Anticipated Nominal Longitude**

RDD ref: S507

The angular distance East from the Standard Meridian, i.e., that of Greenwich, England, to the meridian of the point on the equator above which the *Space Station* of the associated *Beam* is positioned. The angle is measured in degrees from 0° to 180° East or West of the Standard Meridian, when the angle is West of the Standard Meridian it is recorded as a negative value. During the lifetime of the *Space Station* it will deviate from its **Nominal Longitude** by a tolerance determined by the **Inclination Excursion** and the longitudinal tolerance.

Format: Decimal (in the range –180.00 to 180.00) to 2 decimal places in degrees.

STRAPPING DATA

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5.38	<i>Beam Frequency Strap</i>.....	RDD ref: S632
	Notified Identification Code	RDD ref: S610
5.39	<i>Strap Characteristic Set</i>	RDD ref: S282
	ESLNT For Highest Ratio Of Transmission Gain To ESLNT	RDD ref: S286
	ESLNT Lowest Value	RDD ref: S287
	Transmission Gain For Highest Ratio Of Transmission Gain to ESLNT	RDD ref: S288
	Transmission Gain For Lowest ESLNT	RDD ref: S289
	National Code	RDD ref: S715
5.40	<i>ACG Frequency Strap</i>.....	RDD ref: S532
	Notified Identification Code	RDD ref: S774

5.38 Beam Frequency Strap

RDD ref: S632

A connection between two different *Beam Frequencies*. One *Beam Frequency* must define the frequency used by an emitting *Beam* the other must define the frequency used by a receiving *Beam*. Thus it describes the means by which transmit and receive *Associated Earth Station Antennas* may be connected in terms of specific *Beam Frequencies*.

A *Beam Frequency Strap* is a connection, within a satellite station, between an up-link and a down-link assignment pertaining to receiving and emitting satellite beams.

- ◇ A *Beam Frequency Strap* is identified by both the Earth-to-space and space-to-Earth *Beam Frequencies* it provides a connection between.

A *Beam Frequency Strap* must be the subject of one or more *Intended Actions* RDD ref: S489

A *Beam Frequency Strap* must represent the connection between space and Earth for a single *Beam Frequency* RDD ref: S278

A *Beam Frequency Strap* must represent the connection between Earth and space for a single *Beam Frequency* RDD ref: S279

A *Beam Frequency Strap* must have its satellite link interference characteristics described by one or more *Strap Characteristic Sets* RDD ref: S280
(Each of these *Strap Characteristics Sets* must belong to a different *Associated Earth Station Antenna*.)

- **Notified Identification Code** RDD ref: S610

A national code used to identify the *Beam Frequency Strap*.

Format: Up to 8 characters.

5.39 Strap Characteristic Set

RDD ref: S282

The set of properties that may be applicable to a number of *Beam Frequency Straps* of the same *Associated Earth Station Antenna*.

These properties are concerned with equivalent satellite link noise temperature (ESLNT) i.e., the noise temperature referred to the output of the receiving *Associated Earth Station Antenna* corresponding to the radio frequency noise power which produces the total observed noise at the output of the satellite link excluding noise due to interference coming from satellite links using other satellites and from terrestrial systems (RR No. 1.174).

- ◇ A *Strap Characteristic Set* is identified by its **National Code**, and the *Associated Earth Station Antenna* for which it is valid.

A *Strap Characteristic Set* must be the subject of one or more *Intended Actions* RDD ref: S490

A *Strap Characteristic Set* must characterize one or more *Beam Frequency Straps* RDD ref: S283

A *Strap Characteristic Set* must be valid for use with a single *Associated Earth Station Antenna* RDD ref: S391

- **ESLNT For Highest Ratio Of Transmission Gain To ESLNT** RDD ref: S286

The value of ESLNT that corresponds to the highest ratio between the transmission gain and ESLNT for the full *Associated Earth Station Antenna/Space Station/Associated Earth Station Antenna* path.

Format: Integer (in the range 20 to 9 999 999) in Kelvins.

- **ESLNT Lowest Value**

RDD ref: S287

The lowest value of ESLNT for the full *Associated Earth Station Antenna/Space Station/Associated Earth Station Antenna* path. The **ESLNT Lowest Value** is determined for the nominal angle of *Associated Earth Station Antenna* elevation angle.

Format: Integer (in the range 20 to 9 999 999) in Kelvins.

- **Transmission Gain For Highest Ratio Of Transmission Gain To ESLNT**

RDD ref: S288

The value of transmission gain used in determining the **ESLNT For Highest Ratio Of Transmission Gain To ESLNT**.

Format: Decimal (in the range –100.0 to 20.0) to 1 decimal place in dB.

- **Transmission Gain For Lowest ESLNT**

RDD ref: S289

The value of transmission gain associated with the **ESLNT Lowest Value**.

Format: Decimal (in the range –100.0 to 20.0) to 1 decimal place in dB.

- **National Code**

RDD ref: S715

The code used to assist in the identification of the *Strap Characteristic Set* provided by the notifying *Administration*.

Format: Up to 20 characters.

5.40 *ACG Frequency Strap*

RDD ref: S532

A connection between two different *ACG Frequencies*. One *ACG Frequency* must define the frequency used by an emitting *Beam*. The other must define the frequency used by a receiving *Beam*. Thus, it describes the means by which transmitting and receiving *Associated Earth Station Antennas* may be connected in terms of specific *ACG Frequencies*.

◇ An *ACG Frequency Strap* is identified by both the Earth-to-space and space-to-Earth *ACG Frequencies* it provides a connection between.

An *ACG Frequency Strap* must be notified by one or more *Intended Actions*

RDD ref: S488

An *ACG Frequency Strap* must have an Earth-to-space component defined as a single *ACG Frequency*

RDD ref: S502

An *ACG Frequency Strap* must have a space-to-Earth component defined as a single *ACG Frequency*

RDD ref: S503

- **Notified Identification Code**

RDD ref: S774

A national Code used to identify the *ACG Frequency Strap*.

Format: Up to 4 characters.

NOTICE DATA

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5.41 Space Service Notice**RDD ref: S290**

A request by an *Administration* made to the Radiocommunication Bureau (BR), to register for notification and coordination the details of a specific existing or proposed *Space Station* or Earth Station in the Master International Frequency Register (MIFR).

Each *Space Service Notice* received by the BR is given a unique identification code that includes the date the *Space Service Notice* is received by the BR and the **BR Identification Code**.

◇ A *Space Service Notice* is identified by its **BR Identification Code**.

A *Space Service Notice* may be supplemented by one or more *Notice Attachments*

RDD ref: S293

One and only one of the following two must apply:

A *Space Service Notice* must be submitted in respect of a single *Space Station*

RDD ref: S353

A *Space Service Notice* must be submitted in *respect* of a single
Earth Station Antenna

RDD ref: S739

A *Space Service Notice* may be submitted on behalf of a single
Intergovernmental Satellite Organization

RDD ref: S773

A *Space Service Notice* must be submitted according to the requirements of one
or more *Provisions*

RDD ref: S711

A *Space Service Notice* may include one or more *Intended Actions*

RDD ref: S378

- **Administration Notice Code**

RDD ref: S295

A national identification code which may be used by an *Administration* to uniquely identify a *Space Service Notice* for its own purposes to aid its data management.

Format: Up to 20 characters.

- **Date Sent**

RDD ref: S296

The date on which the *Administration* sent the *Space Service Notice* to the BR.

Format: Date.

- **BR Identification Code**

RDD ref: S297

A code used to uniquely identify the *Space Service Notice* allocated by the BR. The code is not assigned to the *Space Service Notice* until after the BR receives it. Thus, it is not possible for an *Administration* to refer to this code until after the *Space Service Notice*'s has been processed by the BR.

Format: A compound format comprised of:

a) 4 characters representing the year in which the *Space Service Notice* is received by the BR;

followed by:

b) 6 characters starting at 000001 and subsequently allocated sequentially within the year of receipt of the *Space Service Notice* by the BR.

Note: Currently the **BR Identification Code** only records the last three numbers of the year of receipt preceded by a zero. It is considered essential to show year in full. The RDD defines format as 10 characters as above.

- **BR Date Received**

RDD ref: S298

The date on which the *Space Service Notice* is received by the BR and as recorded by the BR. This date may determine the seniority accorded to a specific *Space Service Notice* and the date from which it must be taken into consideration, as a potential entry in the MIFR, by all subsequent *Space Station Notices*.

Format: Date.

• **Occurrence Code**

RDD ref: S300

A code indicating that the particular information is being submitted under the RR Article 11 for the first time on a space network. The space network may itself be new or it may have several occurrence codes, each one for a particular set of information that has been submitted.

Format: 1 character.

Code	Meaning
F	first notification (any notification other than resubmission)
R	resubmission of a notice under RR No. 11.41 after its return by the BR with an unfavourable finding with respect to coordination or the probability of harmful interference

• **Purpose Code**

RDD ref: S301

Code indicating the purpose of the *Space Service Notice*:

In this context, “existing *Space Station*” is taken to mean either:

- a satellite network for which a Special Section CR/C, (AR11/C, RES33/C or RES46/C these Special Section references remain for networks previously published) has already been published, if the notice form is forwarded under RR No. 9.7 or RR No. 9.11A (request for coordination); or
- a satellite network for which a Special Section CR/C, (AR14/C the Special Section reference remains for networks previously published) has already been published, if the notice form is submitted under RR No. 9.21; or
- a satellite network for which the relevant details are already recorded in the Master International Frequency Register if the notice form is submitted under RR No. 11.2.

In this context, “existing *Earth Station Antenna*” is taken to mean either:

- an *Earth Station Antenna* for which details of the request for coordination were submitted under RR Nos. 9.17, 9.17A, 9.18, 9.31 or 9.11A; or
- an *Earth Station Antenna* for which a Special Section CR/C, has already been published, if the notice form is submitted under RR No. 9.21; or
- an *Earth Station Antenna* for which the relevant details are already recorded in the Master International Frequency Register if the notice form is submitted under RR No. 11.2.

Format: 1 character.

Code	Meaning
A	advance publication RR No. 9.1
C	coordination, according to e.g. RR Nos. 9.7 to 9.14, 9.17, 9.17A and 9.18
N	notification, according to RR No. 11.2
E	agreement, according to RR No. 9.21
H	assistance of the BR for RR Nos. 7.6, 9.7, 9.17, 9.17A, 9.18 and 9.21
R	request for coordination according to RR No. 9.11A
U	due diligence Resolution 49 (Rev.WRC-2000)

• **Intended Action Code**

RDD ref: S337

The reason why the *Administration* sent the *Space Service Notice* to the BR. There are four valid intended actions.

Action to be taken at the satellite network level:

In the case of modification or suppression provide the **BR Identification Code** of the satellite network to be modified or suppressed.

Format: 1 character.

Code	Meaning
A	add a new <i>Space Station</i> or <i>Earth Station Antenna</i> ;
M	modify an existing <i>Space Station</i> or <i>Earth Station Antenna</i> ;
S	suppress an existing <i>Space Station</i> or <i>Earth Station Antenna</i> ;

• **Special Section Reference For Publication** **RDD ref: S767**

Reference to the Special Section under which information on the *Space Station* or *Earth Station Antenna* has been published.

Format: Up to 12 characters.

• **Special Section Number For Publication** **RDD ref: S605**

The Special Section number the *Space Station* or *Earth Station Antenna* will appear in the BR IFIC.

Format: 4 characters.

• **BR IFIC Part For Publication** **RDD ref: S299**

The part of the BR IFIC where the *Space Service Notice* is published.

Format: 1 character.

• **BR IFIC Date For Publication** **RDD ref: S302**

Date of publication of the *Space Service Notice* in Part 1S of the BR IFIC.

Format: Date.

• **BR IFIC Number For Publication** **RDD ref: S303**

The number of the BR IFIC in which the information pertaining to the *Space Service Notice* has been published.

Format: Integer (in the range 1 to 9 999).

5.42 Notice Attachment **RDD ref: S305**

A set of information supplied separately and in addition to the Notice form.

◇ A *Notice Attachment* is identified by its **Identifier** and the *Space Service Notice* it accompanies.

A *Notice Attachment* must accompany a single *Space Service Notice* **RDD ref: S306**

• **Identifier** **RDD ref: S307**

Identifier of the *Notice Attachment*, as assigned by the *Administration*.

Format: Integer (in the range 1 to 999).

• **Description** **RDD ref: S308**

A description of the *Notice Attachment*.

Format: Text.

• **Type** **RDD ref: S309**

The form in which the information is supplied.

Format: 1 character.

Code	Meaning
P	on paper
G	electronic file accepted by ITU BR's Graphical Interference Management System (GIMS)
F	file (DOS)
T	tabular

5.43 Intended Action

RDD ref: S357

The method of indicating changes required to the components of either an *Earth Station Antenna* or a *Space Station*.

- ◇ An *Intended Action* is identified by its **Code**, the identifiers of both the *Space Service Notice* it applies to, and the object it refers to i.e., either a *Beam*, *Beam Frequency*, *Beam Frequency Strap*, *Strap Characteristic Set*, *Associated Earth Station Antenna*, *ACG Frequency Strap*, *Geostationary Orbital Position*, *Non-geostationary Orbit*, *PFD Mask*, *Space To Earth EIRP Mask* or an *Earth To Space EIRP Mask*.

An *Intended Action* must apply to a single *Space Service Notice*

RDD ref: S358

One and only one of the following eleven relationships must apply:

An *Intended Action* must refer to a single *Geostationary Orbital Position*

RDD ref: S720

An *Intended Action* must refer to a single *Non-geostationary Orbit*

RDD ref: S721

An *Intended Action* must refer to a single *Beam*

RDD ref: S722

An *Intended Action* must refer to a single *Beam Frequency*

RDD ref: S724

An *Intended Action* must refer to a single *Beam Frequency Strap*

RDD ref: S727

An *Intended Action* must refer to a single *Strap Characteristic Set*

RDD ref: S292

An *Intended Action* must refer to a single *Associated Earth Station Antenna*

RDD ref: S725

An *Intended Action* must refer to a single *ACG Frequency Strap*

RDD ref: S726

An *Intended Action* must refer to a single *PFD Mask*

RDD ref: S753

An *Intended Action* must refer to a single *Space To Earth EIRP Mask*

RDD ref: S754

An *Intended Action* must refer to a single *Earth To Space EIRP Mask*

RDD ref: S755

- **Code**

RDD ref: S360

The *Administration's* purpose for submitting the proposed change to:

Geostationary Orbital Position

Non-Geostationary Orbit

Beam

Beam Frequency

Beam Frequency Strap

Strap Characteristics Set

Associated Earth Station Antenna

ACG Assignment Strap

Assignment Coordination Group

PFD Mask

Space To Earth EIRP Mask

Earth To Space EIRP Mask

Format: 1 character.

Code	Meaning
A	add a new <i>Assignment Coordination Group, Beam, Beam Frequency, Beam Frequency Strap, Strap Characteristic Set, Associated Earth Station Antenna, ACG Frequency Strap, Geostationary Orbital Position, Non-geostationary Orbit, PFD Mask, Space To Earth EIRP Mask</i> or an <i>Earth To Space EIRP Mask</i> ;
M	modify an existing <i>Assignment Coordination Group, Beam, Beam Frequency, Beam Frequency Strap, Strap Characteristic Set, Associated Earth Station Antenna, ACG Frequency Strap, Geostationary Orbital Position</i> or a <i>Non-geostationary Orbit</i> .
	NOTE 1 – The option to modify existing data does not apply in the case of masks, i.e., <i>PFD Mask, Space To Earth EIRP Mask</i> or an <i>Earth To Space EIRP Mask</i> cannot be modified;
S	suppress an existing <i>Assignment Coordination Group, Beam, Beam Frequency, Beam Frequency Strap, Strap Characteristic Set, Associated Earth Station Antenna, ACG Frequency Strap, Geostationary Orbital Position, Non-geostationary Orbit, PFD Mask, Space To Earth EIRP Mask</i> or an <i>Earth To Space EIRP Mask</i> .

5.44 ACG Intended Action

RDD ref: S536

An *ACG Intended Action* is a type of intended action specific to an *Assignment Coordination Group*.

- ◇ An *ACG Intended Action* is identified by its common properties inherited from its generic type *Intended Action*, i.e., by its **Code** and the identifier of the *Space Service Notice* it applies, and the identifier of the *Assignment Coordination Group* to which it refers.

An *ACG Intended Action* must be in respect of a single
Assignment Coordination Group

RDD ref: S518

- **BR IFIC Date For Last Advance Publication**

RDD ref: S519

The BR IFIC date of the last appearance of the *Assignment Coordination Group* under advance notification in the BR IFIC.

Format: Date.

- **BR IFIC Number For Last Advance Publication**

RDD ref: S520

The BR IFIC number of the last appearance of the *Assignment Coordination Group* under advance notification in the BR IFIC.

Format: Integer (in the range 1 to 9 999).

- **Special Section Reference For Advance Publication**

RDD ref: S768

Reference to the RR Special Section under which information on the *Assignment Coordination Group* is published.

Format: Up to 12 characters.

- **Special Section Number For Last Advance Publication**

RDD ref: S606

The Special Section number of the last appearance of the *Assignment Coordination Group* under advance notification in the BR IFIC.

Format: 4 characters.

- **BR IFIC Date For Last Coordination**

RDD ref: S521

The BR IFIC date of the last appearance of the *Assignment Coordination Group* under coordination in the BR IFIC.

Format: Date.

- **BR IFIC Number For Last Coordination** **RDD ref: S522**

The BR IFIC number of the last appearance of the *Assignment Coordination Group* under coordination in the BR IFIC.

Format: Integer (in the range 1 to 9 999).

- **Special Section Reference For Last Coordination** **RDD ref: S769**

Reference to the RR Special Section under which information on the *Assignment Coordination Group* is published.

Format: Up to 8 characters.

- **Special Section Number For Last Coordination** **RDD ref: S607**

The Special Section number of the last appearance of the *Assignment Coordination Group* under coordination in the BR IFIC.

Format: 4 characters.

- **BR IFIC Part For Last Notification** **RDD ref: S775**

The part of the BR IFIC in which the *Assignment Coordination Group* under notification last appeared in the BR IFIC.

Format: 1 character.

- **BR IFIC Date For Last Notification** **RDD ref: S523**

The BR IFIC date of the last appearance of the *Assignment Coordination Group* under notification in the BR IFIC.

Format: Date.

- **BR IFIC Number For Last Notification** **RDD ref: S524**

The BR IFIC number of the last appearance of the *Assignment Coordination Group* under notification in the BR IFIC.

Format: Integer (in the range 1 to 9 999).

5.45 Provision **RDD ref: S615**

The regulatory provisions under which notification or coordination has been requested or successfully completed, or agreement sought or reached.

That coordination under RR No. 9.7 is required only if the *Space Station* concerned belongs to a geostationary satellite network.

◇ A *Provision* may be identified by its **Code**.

A *Provision* may determine the requirements for one or more *Coordination Agreements* **RDD ref: S708**

A *Provision* may determine the requirements for one or more *Space Service Notices* **RDD ref: S709**

- **Code** **RDD ref: S304**

The means of identifying the regulatory provision under which the *Space Service Notice* or *Coordination Agreement* is required.

Whenever there is a requirement to complete more than one form of coordination in accordance with RR No. 9.30 (requests for coordination which are to be sent directly to the BR), the requests shall be appropriately identified by reference to RR Nos. 9.7 to 9.14 and 9.21 (agreement) and they shall as far as possible be sent to the BR and, where appropriate, shall be published simultaneously (see RR No. 9.23)

Format: Up to 12 characters.

SECTION 6

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6.0 Introduction

Contemporary computer environments store data internally in formats different from those that they present to the users. The presentation format may be differently defined even for different users of the same computer. It is therefore easy to implement different presentation standards through the software. The real need for establishing a common standard of data presentation may concern only the passing of information to another party. Although the information passed to another party may not take into account the recipient's cultural background and convention, it is wise to adopt some common standards. In multi-cultural environments this common standard should be based on the prevailing "business" tradition or on an international standard. It is the policy of the ITU to conform with ISO standards wherever possible to do so.

The submitted information should follow first of all, the Radio Regulations if they define such standards, and secondly, ITU conventions – if widespread and firmly established – or ISO standards. For electronic submission of data, an explicit format (definition) is required. However, some minimal common standards should be adopted to avoid misunderstanding. For example, the use of Latin non-accented characters is a well-established practice within the ITU community as well as the use of decimal digits for representing numbers and positional representation of decimal fractions by using a decimal separator. The RDD assumes that these can be regarded as non-disputable standards. The form of a decimal separator is irrelevant from this point of view, as well as the format in which the date is written, provided it unambiguously represents a particular day in the framework of the Gregorian calendar. The RDD does not impose any particular standards on presentation of simple data except the above-mentioned assumptions. However, in the radiocommunication society there is a need to use some complex structure for information exchange (e.g., geographical coordinates, radiation patterns, etc.). These should be defined unambiguously.

All data, simple and complex, must of course have some presentation format in the RDD itself. The presentation format chosen by the RDD can be seen in the supplied examples of data items.

This section lists standard formats of data presentation. A standard format is prescribed by a "data format" statement at the end of the definition of each data item in Sections 3 and 5.

It is recognized that sometimes the accuracy of data obtainable is less than that required. In this case, the data should be communicated with the precision corresponding to the obtainable data.

6.1 Character

An elementary symbol of any of the ITU's officially recognized languages, including letters, digits, punctuation marks etc, but limited to those characters represented in the ASCII (7-bit) Character Set, which is fully defined in the ITU-T Recommendations.

A data item defined as format "character" may be in one of the following forms:

- a fixed field size of specified length (in the form "Format: *n* characters" where *n* is the field size);
- a variable field size of specified maximum length (in the form "Format: Up to *n* characters" where *n* is the maximum field size).

6.2 Date

A unique identification of a specific day based on the Gregorian calendar. When all-numeric form is required this is a compound format consisting of 3 components:

- 1) The sequential number of the year, always represented as four digits.
- 2) The sequential number of month of the year, always represented as two digits using a leading 0 where necessary.
- 3) The sequential number of the day of the month, always represented as two digits using a leading 0 where necessary.

Note: *Currently the BR Identification Code only records the last two numbers of the year of receipt preceded by a zero. It is considered essential to show the year in full. The RDD defines format as 10 characters as above.*

E.g., in the RDD 19601026 represents the 26th day of October 1960.

6.3 Decimal

A sequence of decimal digits, using a decimal separator. The decimal separator in the form of a dot is used for the examples given in the RDD. For decimal data the RDD defines the permissible range of values and the number of decimal places to be supplied;

e.g., decimal in the range –179.9 to 180.0 to one decimal place.

6.4 Diagram

A pictorial representation of information.

6.5 Equation

A mathematical formula or set of formulas used for calculating a set of values.

6.6 Frequency

A frequency within the radio spectrum.

This is represented as a compound format consisting of 2 components provided in the sequence stated:

- A decimal number with up to 5 decimal places expressing frequency value in kHz, MHz or GHz according to the following rule:
 - in kHz for frequencies up to 28 000.0 kHz inclusive;
 - in MHz for frequencies above 28 000.0 kHz to 10 500.0 MHz inclusive;
 - in GHz for frequencies above 10 500.0 MHz.
- A single character code, which depicts how many hertz each unit of the number represents, consisting of only the following values:

Code Meaning

k	kilohertz, 10^3 hertz (kHz)
M	megahertz, 10^6 hertz (MHz)
G	gigahertz, 10^9 hertz (GHz)

e.g., 1.23k; 28.0001M

6.7 Longitude/Latitude

The geographical coordinates are longitude and latitude (Long/Lat), which identify the position of a point on the Earth's surface (and any point above the Earth's surface that is directly above that point). It may be stated to various levels of precision, depending on the accuracy required when identifying the particular geographical coordinates.

It is recognized that the ISO recommend the use of Lat/Long rather than Long/Lat. However, it is considered that it would cause too great a level of confusion within the ITU to alter its convention to conform to ISO standards, immediately, and that it is likely to take several years for the decision to adopt the ISO standard by a future Conference. The RDD therefore in this initial version retains the existing format.

6.7.1 Meridian

A meridian is an imaginary circle, a Great Circle, passing through the North Pole, South Pole and a point of any place on the Earth's surface i.e., a circle of constant longitude, passing through a given place and the terrestrial poles.

6.7.2 Longitude

The angular distance East or West from the Standard Meridian, i.e., that of Greenwich England, to the meridian of the point measured in degrees from 0° to 180° East or West of the Standard Meridian.

6.7.3 Latitude

The measure of an angle between two imaginary lines originating at the Earth's centre, one drawn to the point on the Earth's surface, and the other drawn to the intersection of the point's meridian with the Earth's equator. It is measured from 0° to 90°, North or South of the Earth's equator.

6.7.4 Long/Lat in degrees

A data format representing the format of data recorded to represent the coordinates of a position on the Earth's surface in terms of the point's longitude and latitude. The precision of this data format is to whole degrees.

e.g., 27 degrees West, 12 degrees North is represented as 027W12N.

6.7.5 Long/Lat in degrees and minutes

A data format representing the format of data recorded to represent the coordinates of a position on the Earth's surface in terms of the point's longitude and latitude. The precision of this data type is to whole minutes of a degree.

e.g., 130 degrees 59 minutes East, 3 degrees 3 minutes North is represented as 130E59N0303.

6.7.6 Long/Lat in degrees, minutes and seconds

A data type representing the format of data recorded to represent the coordinates of a position on the Earth's surface in terms of the point's longitude and latitude. The precision of this data type is to whole seconds of a degree.

e.g., 112 degrees 16 minutes, 23 seconds West, 13 degrees 46 minutes 3 seconds South is represented as 112W162313S4603.

6.8 Integer

A whole number (positive or negative) including zero, i.e., a multiple of 1.

e.g., -3; 0; 46.

6.9 Text

A field consisting only of characters but with a variable number of them where the maximum field length cannot be determined.

6.10 Time

Time is expressed using 4 digits in the form HHMM.

NOTE 1 – Where the data item represents the end of a time period, midnight shall be represented as 2400. However, where midnight represents the start of a time period, it shall be represented as 0000.

e.g., 2359; 0000; 0727.

6.11 True or False

An indicator expressing whether the condition of data item TRUE or FALSE.

SECTION 7

DIAGRAMS

	Page
7.0 Introduction	260
7.1 Terrestrial Service Diagram – Section 3 Data Elements	263
7.2 Space Service Diagram – Section 5 Data Elements	264

7.0 Introduction

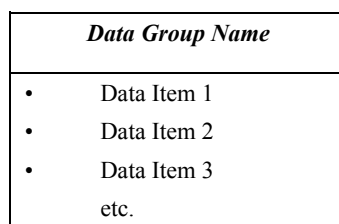
This section contains graphical representations of the data structures defined in Sections 3 and 5. Thus, it includes two diagrams

- 1) Section 3 data elements, and
- 2) Section 5 data elements.

These diagrams are provided as a pictorial reference to the RDD's data elements (data groups, data items and relationships) defined in Sections 3 and 5.

The diagrams show an overview of the relational structure of the RDD's data elements. From the diagrams it is possible to see the data items that belong to a specific data group and all the other data groups to which that specific data group is related. This enables the reader to migrate through the structure from one data group to another via relationships. The diagram cannot, of course, represent the full details, which would have to be looked up in the other relevant sections of the RDD should more detail be required. The diagram is intended to provide a framework by which the reader may easily recall the relational structure without the need to refer to the detailed relationship names, etc. in Sections 3 and 5.

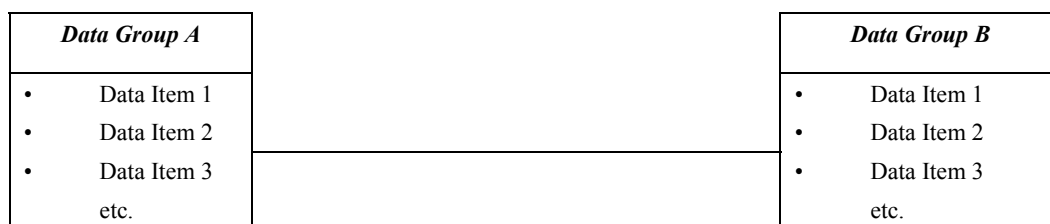
Each data group is represented as a single box, e.g.:



The data group name is presented in the top section of the box.

The data group's data items are listed in the bottom section of the box. Long data item names may wrap onto the next line. The “•” symbol is used to denote the start of each data item.

Relationships are represented by linking the boxes of two data groups with a line, e.g.:



Relationships are represented as dashed lines if they cross data group boxes.

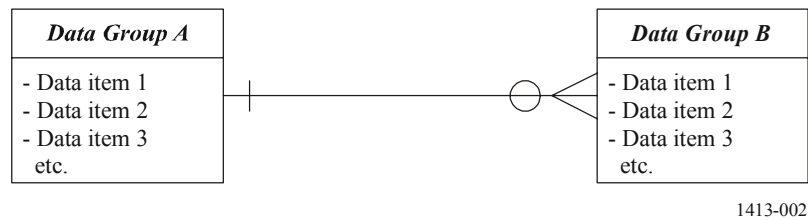
The line represents the relationship from the perspective of both data groups and encompasses some of the properties of that relationship, e.g.:

The relationship:

A ***Data Group A*** may <relationship name 'a'> one or more ***Data Group Bs***

A ***Data Group B*** must <relationship name 'b'> a single ***Data Group A***

Would be represented as:



The first part of relationship is represented as indicated below:

A **Data Group A** may < relationship name 'a' > one or more **Data Group Bs**



The optional nature of the relationship is shown by the small circle as a: 

The multiplicity nature of the relationship is shown by the splitting of the relationship line into three separate lines as indicated in the drawing: 

1413-003

The second part of relationship is represented as indicated below:

A **Data Group B** must < relationship name 'a' > a single **Data Group A**



The mandatory nature of the relationship is shown by a bar across the relationship line as a: 

The singular nature of the relationship is shown as a solid line at the point the relationship meets the data group box: 

1413-004

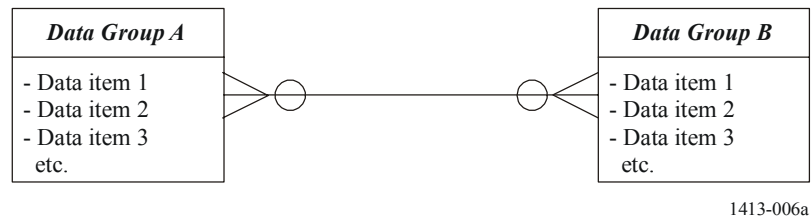
Every relationship can be represented by a permutation of the symbols described above, e.g.:

– The relationship:

A **Data Group A** may <relationship name 'a'> one or more **Data Group Bs**

A **Data Group B** must <relationship name 'b'> a single **Data Group A**

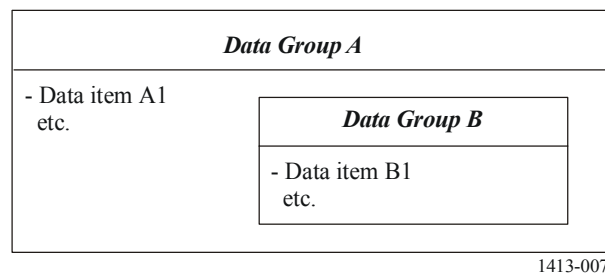
Would be represented as:



- The relationship:
 A **Data Group A** must <relationship name 'a'> a single **Data Group B**
 A **Data Group B** must <relationship name 'b'> one or more **Data Group As**
 Would be represented as:

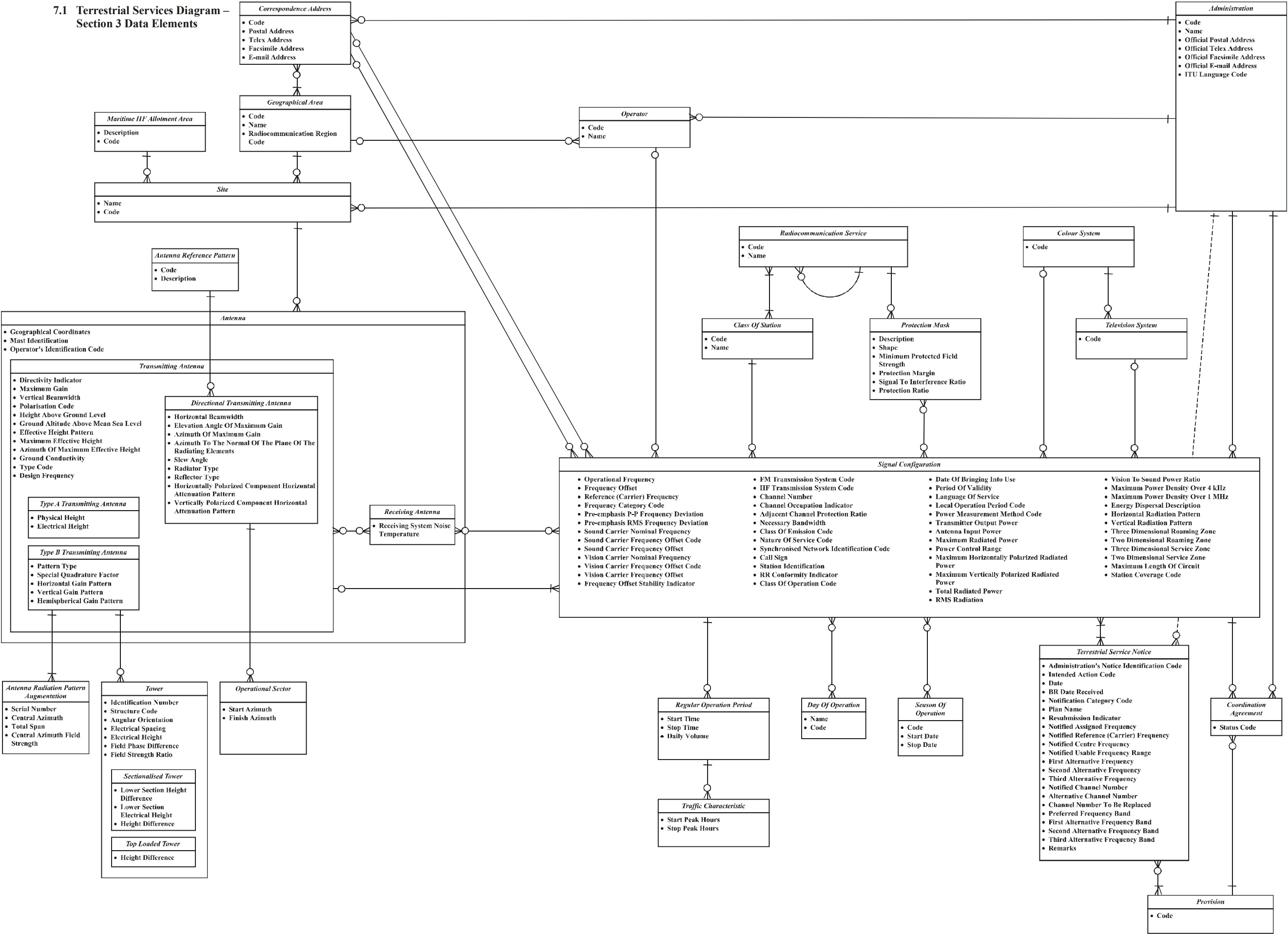


Where a data group is a “type of” or a sub-category of another data group it is shown within the box of this “other” data group; e.g., if **Data Group B** is a type of **Data Group A**, they would be shown below:

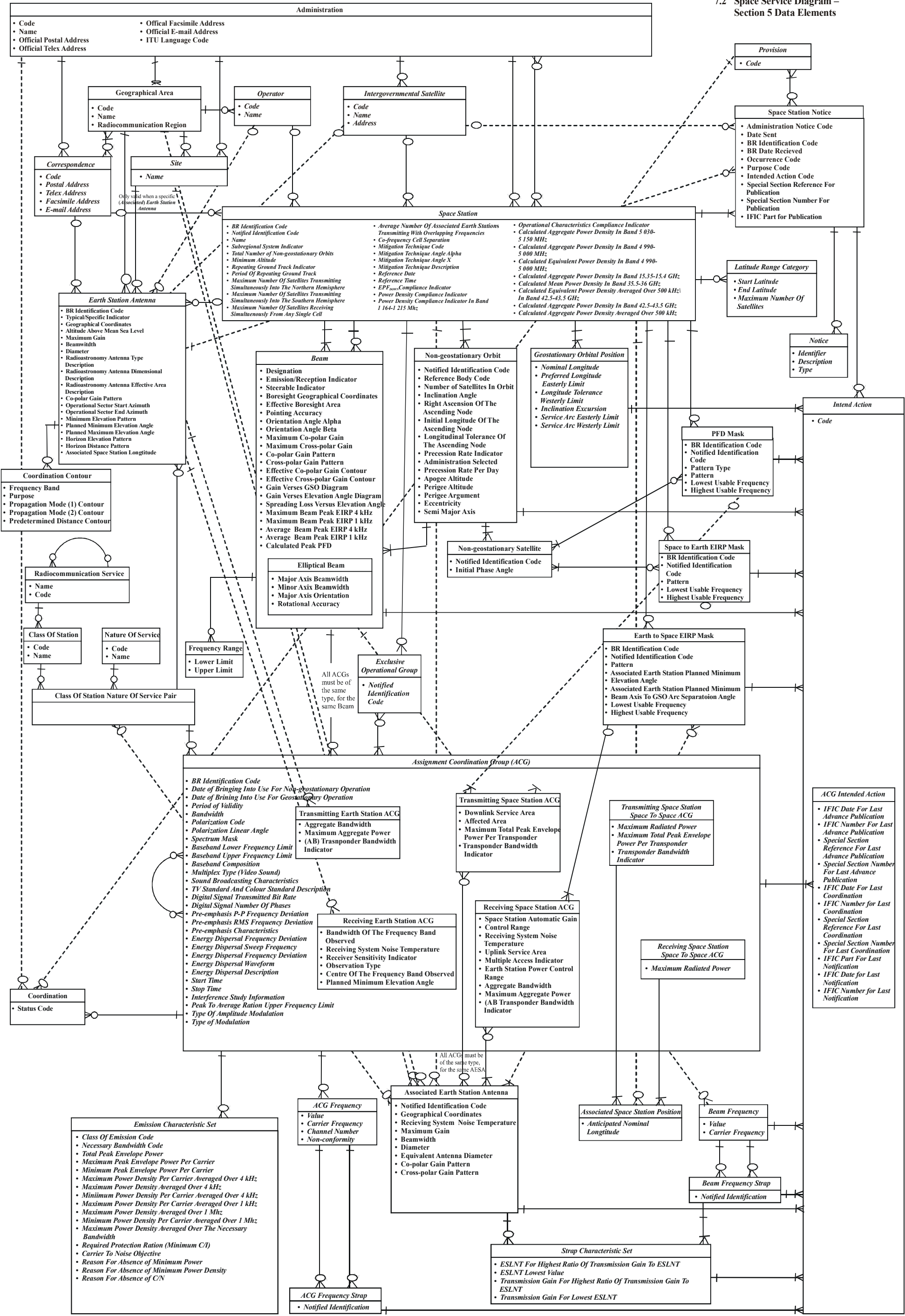


Examples of this type of construction are an “**Antenna**” in the terrestrial sections and a “**Beam**” in the space sections.

7.1 Terrestrial Services Diagram –
Section 3 Data Elements



7.2 Space Service Diagram –
Section 5 Data Elements



SECTION 8

CROSS-REFERENCE TABLES BETWEEN RR APPENDIX 4 AND THE RDD

	Page
8.0 Introduction	266
8.1 Table of characteristics to be submitted for stations in the terrestrial services	267
8.2 Table of characteristics to be submitted for space and radio astronomy services	281

8.0 Introduction

This section provides a cross-reference between the data items described in the RDD and the notification data listed in RR Appendix 4; it is required because:

- RR Appendix 4 may show multiple data items under a single reference; e.g.,
Terrestrial services:
 1E Vision carrier frequency offset code
 1E Sound carrier frequency offset code
Space services:
 C8a2 Maximum power density averaged over 4 kHz for each carrier type
 C8a2 Maximum power density averaged over 1 MHz for each carrier type
- there are a number of differences between the data required by the notice forms and the data listed in RR Appendix 4 that need to be individually identified e.g.,
Terrestrial services:
 8BV Maximum vertically polarized radiated power is shown as mandatory in RR Appendix 4 but only applies in the case of vertical or mixed polarization.

Hence, RR Appendix 4 compound data items are divided into the individual sub-items to more accurately define their application. To assist identification of the individual sub-items, each sub-item retains the RR Appendix 4 code (e.g. Item 1E) of the compound data item.

The presentation used is based on the tables contained in Annexes 1B and 2 of RR Appendix 4 with the RR Appendix 4 data separated out into its individual elements. A series of footnotes are provided to Tables 1 and 2 explaining any differences in the indicated requirements of the RDD and RR Appendix 4 including the relevant footnotes to the tables in Annexes 1B and 2 to RR Appendix 4. Data items found in the RDD but not listed in RR Appendix 4 are clearly identified by the statement “Not in Ap. 4”.

This Section of the RDD is divided into terrestrial and space systems. For terrestrial the listing of data is very similar to that found in Annex 1B to RR Appendix 4. For space there are differences arising in part from the structure of RR Appendix 4, i.e. in the RDD a data item’s optionality is indicated by using a code for mandatory or required in specific circumstances, whereas in Annex 2 of RR Appendix 4, this optionality is built into the textual description and structure of the table or provided through the use of footnotes.

Key to the symbols used in Tables 1 and 2

X	Mandatory information
+	Mandatory under the conditions specified in column 2
O	Optional information
C	Mandatory if used as a basis to effect coordination with another administration

Reading Table 2

The rules used to link the sign with the text are based on the Table column headings covering specific procedures and specific services.

- 1 If any data item has a condition attached to it, then it has a “+”.

A.6.c	if agreement has been reached, the related provision code (see the Preface)	+

- 2 Data items grouped under a common subheading that limits the range of procedures, services or frequency bands have an “X” as the conditional nature is shown in the sub-heading title.

A.4.b.5	For space stations operating in a frequency band subject to the provisions of RR Nos. 9.11A, 9.12 or 9.12A, the data elements to characterize properly the orbital statistics of non-geostationary-satellite systems:	
A.4.b.5.a	the right ascension of the ascending node (Ω_j) for the j -th orbital plane, measured counter-clockwise in the equatorial plane from the direction of the vernal equinox to the point where the satellite makes its South-to-North crossing of the equatorial plane ($0^\circ \leq \Omega_j < 360^\circ$)	X

8.1 Table of characteristics to be submitted for stations in the terrestrial services

Table 1 provides a cross-reference between the RDD reference numbers and the RR Appendix 4 item numbers. The notification data for terrestrial systems is presented in the style of RR Appendix 4 but with a number of modifications in format. For terrestrial data the principle modification in format is the merging of the columns for different *Classes Of Station* under Notices T12 and T13.

TABLE 1

Characteristics to be submitted for stations in the terrestrial services

NOTICE TYPE				T01	T02	T03	T04	T11	T12	T13	T14	T15	T16	T17	AR 12	
RDD Section 2				2.1	2.2	2.3	2.4	2.12	2.6, 2.8, 2.9, 2.11, 2.14, 2.15	2.7, 2.10, 2.13, 2.16	2.20	2.17	2.18	2.19	2.5	
RR Ap 4 Item No.	RDD ref :	Class of Station Codes →		BC	BT	BC	BC	FX	AL, BC ¹ , FA, FB, FC, FD, FG, FL, FP, LR, NL, OE, RN, SM, SS	AM, MA, ML, MO, MR, MS, NR, OD, RM, SA	AL ² , FA ³ , FB ³ , FC ² , FD ² , FG ² , FL, FP, FX ³ , LR, NL ² , OE, RN, SM, SS	FC ⁴	AL ⁵ , FC ⁵	FA, FB, FC ² , FD ² , FG ² , FL, FP, FX	BC	RDD ref :
RDD Data Item Name	Ap. 4 Data Item Name															
B	0011	Notifying administration code	Notifying administration	X	X	X	X	X	X	X	X	X	X	X	X	0011
SYNC	0535	Synchronized network identification code	Synchronized network			+	+									0535
1A	0217	Notified assigned frequency	Assigned frequency	X	X	X	X	X	X	X	X		X	⁺⁶	⁸	0217
Not in Ap. 4	0612	Notified centre frequency												⁺⁷		0612
1AA	0615	Notified usable frequency range	Usable frequency range											X		0615
1B	0611	Notified reference (carrier) frequency	Reference frequency					+	+	+	+		+	+	X ⁸	0611
1C	0622	Preferred frequency band	Preferred band (MHz)						⁹			⁺¹⁰			^{+11, 51}	0622
1E	0065	Vision carrier frequency offset code	Frequency offset, in terms of the line frequency		⁺¹²											0065
1E	0482	Sound carrier frequency offset code	Frequency offset, in terms of the line frequency		⁺¹²											0482
1E1	0552	Vision carrier frequency offset	Frequency offset (kHz)		⁺¹²											0552
1E1	0551	Sound carrier frequency offset	Frequency offset (kHz)		⁺¹²											0551
1G	0616	1st alternative frequency	Alternative frequency												O ⁵¹	0616

TABLE 1 (continued)

NOTICE TYPE				T01	T02	T03	T04	T11	T12	T13	T14	T15	T16	T17	AR 12	
RDD Section 2				2.1	2.2	2.3	2.4	2.12	2.6, 2.8, 2.9, 2.11, 2.14, 2.15	2.7, 2.10, 2.13, 2.16	2.20	2.17	2.18	2.19	2.5	
RR Ap 4 Item No.	RDD ref :	Class of Station Codes →		BC	BT	BC	BC	FX	AL, BC ¹ , FA, FB, FC, FD, FG, FL, FP, LR, NL, OE, RN, SM, SS	AM, MA, ML, MO, MR, MS, NR, OD, RM, SA	AL ² , FA ³ , FB ³ , FC ² , FD ² , FG ² , FL, FP, FX ³ , LR, NL ² , OE, RN, SM, SS	FC ⁴	AL ⁵ , FC ⁵	FA, FB, FC ² , FD ² , FG ² , FL, FP, FX	BC	RDD ref :
1X	0619	Notified Channel number	Channel number proposed or allotted channel									⁺ ¹⁰	O			0619
1Y	0620	Alternative channel number	Channel number of the alternative proposed channel									O				0620
1Z	0621	Channel number to be replaced	Channel number of channel to be replaced									+				0621
2C	0141	Date of bringing into use	Date of bringing into use	+	+	+	+	X	X	X	X	X		X		0141
3A	0347	Call sign	Call sign	O	O	O	O	+	+					+	¹⁴	0347
3A	0150	Station identification	Station identification	O	O	O	O	+	+					+	¹⁴	0150
4A	0267	Transmitting antenna site name	Name of the location of the transmitting station	X	X	X	X	X	X			+	X	X	⁺ ¹⁵	0267
Not in Ap 4	0628	Transmitting antenna site code													⁺ ¹⁶	0628
4B	0174	Transmitting antenna geographical area code	Country or geographical area	X	X	X	X	X	X				X	X		0174
4C	0037	Transmitting antenna geographical coordinate	Geographical coordinates	X ¹⁸	X ¹⁸	X ¹⁸	X ¹⁸	X ¹⁸	X ¹⁸	¹⁸	¹⁸	⁺ ¹⁸	X ¹⁸	X ¹⁸	⁺ ^{15, 18}	0037
4C	0070	Circular zone centre geographical coordinate	Geographical coordinates							⁺ ⁵²	⁺ ¹⁷					0070
4D	0071	Circular zone radius	Radius of the circular area							⁺ ⁵²	⁺ ¹⁷					0071
4E	0174	Geographical area code	Country symbol or standard defined area							⁺ ¹⁷	⁺ ¹⁷					0174
4E	0187	Maritime zone code	Country symbol or standard defined area							⁺ ¹⁷						0187

TABLE 1 (continued)

NOTICE TYPE				T01	T02	T03	T04	T11	T12	T13	T14	T15	T16	T17	AR 12	
RDD Section 2				2.1	2.2	2.3	2.4	2.12	2.6, 2.8, 2.9, 2.11, 2.14, 2.15	2.7, 2.10, 2.13, 2.16	2.20	2.17	2.18	2.19	2.5	
RR Ap 4 Item No.	RDD ref :	Class of Station Codes →		BC	BT	BC	BC	FX	AL, BC ¹ , FA, FB, FC, FD, FG, FL, FP, LR, NL, OE, RN, SM, SS	AM, MA, ML, MO, MR, MS, NR, OD, RM, SA	AL ² , FA ³ , FB ³ , FC ² , FD ² , FG ² , FL, FP, FX ³ , LR, NL ² , OE, RN, SM, SS	FC ⁴	AL ⁵ , FC ⁵	FA, FB, FC ² , FD ² , FG ² , FL, FP, FX	BC	RDD ref :
RDD Data Item Name	Ap. 4 Data Item Name															
4E	0578	Maritime HF Allotment area code	Country symbol or standard defined area									X ¹⁹				0578
4G	0124	Ground conductivity	Ground conductivity			X										0124
5A	0267	Receiving antenna site name	Name of the location of the receiving station					+ ²⁰		X				+ ²⁰		0267
5B	0174	Receiving antenna geographical area code	Country or geographical area					+ ²⁰		X				+ ²⁰		0174
5C	0037	Receiving antenna geographical coordinate	Geographical coordinates					+ ²⁰		X				+ ²⁰		0037
5C	0329	Zone boundary coordinates	Geographical coordinates					+ ²⁰	+ ⁵⁴	55				+ ²¹		0329
5D	0033	Aeronautical zone code	Area of the receiving station(s)						+ ^{22, 57}					+ ⁵⁶		0033
5D	0367	Ciraf zone quadrant code	Area of the receiving station(s)						23					23	+ ^{23, 53}	0367
5D	0368	Ciraf zone number	Area of the receiving station(s)						23					23	X ²³	0368
5D	0174	Geographical area code	Area of the receiving station(s)						+ ^{22, 57}					+ ⁵⁶		0174
5D	0187	Maritime zone code	Area of the receiving station(s)						+ ^{22, 57}			X ²³		+ ⁵⁶		0187
5E	0070	Circular zone centre geographical coordinate	Longitude and latitude of the centre of the circular receiving area						+ ²²				X	+ ⁵⁶		0070
5F	0071	Circular zone radius	Nominal radius of the circular receiving area						+ ²²				X	+ ⁵⁶		0071
5G	0446	Maximum length of circuit	Maximum length of circuit					O	O			O		O		0446

TABLE 1 (continued)

NOTICE TYPE				T01	T02	T03	T04	T11	T12	T13	T14	T15	T16	T17	AR 12	
RDD Section 2				2.1	2.2	2.3	2.4	2.12	2.6, 2.8, 2.9, 2.11, 2.14, 2.15	2.7, 2.10, 2.13, 2.16	2.20	2.17	2.18	2.19	2.5	
RR Ap 4 Item No.	RDD ref :	Class of Station Codes →		BC	BT	BC	BC	FX	AL, BC ¹ , FA, FB, FC, FD, FG, FL, FP, LR, NL, OE, RN, SM, SS	AM, MA, ML, MO, MR, MS, NR, OD, RM, SA	AL ² , FA ³ , FB ³ , FC ² , FD ² , FG ² , FL, FP, FX ³ , LR, NL ² , OE, RN, SM, SS	FC ⁴	AL ⁵ , FC ⁵	FA, FB, FC ² , FD ² , FG ² , FL, FP, FX	BC	RDD ref :
		RDD Data Item Name	Ap. 4 Data Item Name													
6A	0277	Class of station code	Class of station					X	X	X	X	X	X	X		0277
6B	0156	Nature of service code	Nature of service					X	X	X	X	X	X	X		0156
7A	0351	Class of emission code	Class of emission, and description of transmission	24		24	25	X	X	X	X	X	X	X		0351
7A	0157	Necessary bandwidth	Necessary bandwidth	X ²⁴		X ²⁴	X ²⁵	X	X	X	X	X	X	X		0157
7A1	0553	Frequency offset stability indicator	Frequency stability		+ ²⁶											0553
7AA	0512	HF transmission system code	Type of modulation												X	0512
7B	0494	Class of operation code	Class of operation of the assignment					+ ⁵⁸						+ ⁵⁸		0494
7B	0360	Station coverage code	Class of operation of the assignment				X ⁵⁸									0360
7B1	0120	Adjacent channel protection ratio	Adjacent channel protection ratio			X										0120
7C1	0283	Television system code	Television system		X											0283
7C2	0078	Colour system code	Colour system		+ ²⁷											0078
7D	0165	FM transmission system code	Transmission system	+												0165
7E	0572	Pre-emphasis RMS frequency deviation	Frequency deviation					C ²⁸								0572

TABLE 1 (continued)

NOTICE TYPE				T01	T02	T03	T04	T11	T12	T13	T14	T15	T16	T17	AR 12	
RDD Section 2				2.1	2.2	2.3	2.4	2.12	2.6, 2.8, 2.9, 2.11, 2.14, 2.15	2.7, 2.10, 2.13, 2.16	2.20	2.17	2.18	2.19	2.5	
RR Ap 4 Item No.	RDD ref :	Class of Station Codes →		BC	BT	BC	BC	FX	AL, BC ¹ , FA, FB, FC, FD, FG, FL, FP, LR, NL, OE, RN, SM, SS	AM, MA, ML, MO, MR, MS, NR, OD, RM, SA	AL ² , FA ³ , FB ³ , FC ² , FD ² , FG ² , FL, FP, FX ³ , LR, NL ² , OE, RN, SM, SS	FC ⁴	AL ⁵ , FC ⁵	FA, FB, FC ² , FD ² , FG ² , FL, FP, FX	BC	RDD ref :
RDD Data Item Name	Ap. 4 Data Item Name															
7E	0485	Pre-emphasis PP frequency deviation	Frequency deviation					C ²⁸								0485
7F	0484	Energy dispersal description	Energy dispersal					C ²⁸								0484
8	0159	Power measurement method code	Power (dBW)					+ ²⁹	+ ²⁹	+ ²⁹	+ ²⁹	X		X		0159
8A	0166	Transmitter output power	Power delivered to the antenna					+ ³¹	+ ⁵⁹	+ ³¹	+ ³¹	X ³⁰		X ³⁰		0166
8A	0554	Transmitting antenna input power	Power delivered to the antenna			X ³⁰	X ³⁰								X ³⁰	0554
8AB	0154	Maximum power density over 4 kHz	Maximum power density (dB(W/Hz))					C ²⁸								0154
8AB	0571	Maximum power density over 1 MHz	Maximum power density (dB(W/Hz))					C ²⁸								0571
8B	0155	Maximum radiated power	Radiated power (dBW)					+ ³¹	+ ³¹	+ ³¹	+ ³¹			+		0155
8BA	0570	Power control range	Range of power control											+ ³²		0570
8BH	0149	Maximum horizontally polarized radiated power	Maximum effective radiated power (dBW) – horizontal	+ ³³	+ ³³											0149
8BV	0170	Maximum vertically polarized radiated power	Maximum effective radiated power (dBW) – vertical	+ ³⁴	+ ³⁴											0170
8D	0066	Vision to sound power ratio	Vision/sound power ratio		+ ²⁷											0066
9	0122	Transmitting antenna directivity indicator	Directivity of the antenna	X	X			X	X			X		X		0122
9A	0108	Azimuth of maximum gain	Azimuth of maximum radiation					+	+			+		+	X	0108

TABLE 1 (continued)

[illegible]

TABLE 1 (continued)

[illegible]

TABLE 1 (continued)

[illegible]

TABLE 1 (continued)

[illegible]

TABLE 1 (end)

NOTICE TYPE				T01	T02	T03	T04	T11	T12	T13	T14	T15	T16	T17	AR 12	
RDD Section 2				2.1	2.2	2.3	2.4	2.12	2.6, 2.8, 2.9, 2.11, 2.14, 2.15	2.7, 2.10, 2.13, 2.16	2.20	2.17	2.18	2.19	2.5	
RR Ap 4 Item No.	RDD ref :	Class of Station Codes →		BC	BT	BC	BC	FX	AL, BC ¹ , FA, FB, FC, FD, FG, FL, FP, LR, NL, OE, RN, SM, SS	AM, MA, ML, MO, MR, MS, NR, OD, RM, SA	AL ² , FA ³ , FB ³ , FC ² , FD ² , FG ² , FL, FP, FX ³ , LR, NL ² , OE, RN, SM, SS	FC ⁴	AL ⁵ , FC ⁵	FA, FB, FC ² , FD ² , FG ² , FL, FP, FX	BC	RDD ref :
		RDD Data Item Name	Ap. 4 Data Item Name													
Not in Ap. 4	0247	Season of operation code													X ⁴⁴	0247
10CA	0538	Season in operation start date	Start date												+	0538
10CB	0539	Season in operation stop date	Stop date												+	0539
10CC	0632	Day of operation code	Days of operation												X ⁴⁵	0632
10D	0465	Traffic characteristics start peak hours	Estimated peak hours of traffic									X				0465
10D	0466	Traffic characteristics stop peak hours	Estimated peak hours of traffic									X				0466
10E	0467	Regular operation period daily volume	Estimated daily volume of traffic									X				0467
11	0011	Administration code with which coordination has been obtained	Coordination with other administrations	O	O	O	O	+ ⁴⁶	+ ⁴⁶	O	O	+ ⁴⁸	O	O		0011
12A	0219	Operator code	Operating administration or agency	O	O	O	O	O	O	O	O			O	O ⁴⁹	0219
12B	0094	Correspondence address code for the notification	Postal and telegraphic addresses of the administration responsible for the station	+	+	+	+	X	X	X	X	X ⁵⁰		X	X ⁵⁰	0094

X: MANDATORY C: THIS INFORMATION MAY BE FURNISHED WHEN THE PARAMETERS ARE USED AS A BASIS FOR EFFECTING COORDINATION WITH ANOTHER ADMINISTRATION +: REQUIRED IN SPECIFIC CASES O: OPTIONAL

Notes to Table 1 (Variations from RR Appendix 4)

- 1 Modification: currently listed in RR Appendix 4 with the footnote “Outside the planned LF/MF bands, the HF bands that are governed by Article 12 and the VHF/UHF bands (up to 960 MHz)”: this footnote is incorrect, RR Article 12 only covers HF broadcasting in the planned bands. HF broadcasting outside of the planned bands including tropical broadcasting are covered by notice type T12.
- 2 RR Appendix 4, footnote: “In the non-planned bands”.
- 3 RR Appendix 4, footnote: “Outside the bands governed by the GE85M and GE89 Regional Agreements”.
- 4 RR Appendix 4, footnote: “In the bands governed by Appendix 25”.
- 5 RR Appendix 4, footnote: “In the bands governed by the GE85 Regional Agreement”.
- 6 Modification: currently shown as mandatory in RR Appendix 4: this data item has been divided into two components the Notified Assigned Frequency and the Notified Centre Frequency. The Notified Assigned Frequency is only mandatory for frequency adaptive systems where each frequency in the usable frequency range is notified separately (see footnote 7).
- 7 Addition: currently not listed separately in RR Appendix 4: this data item (Notified Centre Frequency) is used for frequency adaptive systems where the usable frequency range is notified and the individual operational frequencies are not specifically identified.
- 8 Modification: for HFBC RR Appendix 4 indicates that the Notified Assigned Frequency is mandatory however, in application of the RR Article 12 procedures the data actually supplied is the Notified Reference (Carrier) Frequency.
- 9 Deletion: currently listed in RR Appendix 4 as required in specific cases, the requirement for the Preferred Frequency Band is limited to RR Appendix 25 and HFBC – see FXM submission guidelines.
- 10 Explanation: currently listed in RR Appendix 4 with the symbol meaning “one of the items” and the footnote “1C or 1X”: this presentation is equivalent to the requirements of RR Appendix 4.
- 11 Modification: currently listed in RR Appendix 4 as “optional” this data item is mandatory if the assistance of the BR is requested under RR No. 7.6.
- 12 Modification: currently listed in RR Appendix 4 with the symbol meaning “one of the items” and the footnotes “1E or 1E1” and “For analogue television only if the frequency stability is normal or precision”. The second footnote “For analogue television only if the frequency stability is normal or precision” is incorrect, the data is required if a frequency offset applies to the vision carrier irrespective of the type of frequency stability used. In addition the Sound Carrier Frequency Offset (Code) is required if the value of this offset is different from that of the vision carrier and this occurs if the type of frequency offset stability is equal to the “relaxed” option.
- 13 Not used.
- 14 Modification: for HFBC RR Appendix 4 indicates that the Call Sign/Station Identification is optional however, in application of the RR Article 12 procedures this data is not required as part of the process for establishing the HFBC Broadcasting Schedule.
- 15 Modification: for HFBC RR Appendix 4 indicates that the Transmitting Antenna Site Name and Transmitting Antenna Geographical Coordinates are mandatory however, in application of the RR Article 12 procedures, this data is only mandatory for a new site and is then stored as a code. The code is then supplied for subsequent planning rounds.
- 16 Addition: for HFBC the Transmitting Antenna Site Name and Transmitting Antenna Geographical Coordinates are supplied in the form of a code – see footnote¹⁵.

Explanation: currently listed in RR Appendix 4 with the symbol meaning “one of the items” and the footnote “(4C and 4D) or (4E)”: noting table note (18) for RR Ap 4 Item No. 4C, this presentation is equivalent to the requirements of RR Appendix 4.

Explanation: currently listed in RR Appendix 4 as “4C – Geographical Coordinates” and listed as either mandatory, or required in specific cases, for all notice types: this RR Ap 4 Item No. contains two different data items “Transmitting Antenna Geographical Coordinates” and “Circular Zone Centre Geographical Coordinates”. The “Transmitting Antenna Geographical Coordinates” only apply to Notices T01, T02, T03, T04, T11, T12, T15, T16, T17 and AR12.

Explanation: currently listed in RR Appendix 4 as “4E – *Country symbol or standard defined area*” and listed as mandatory for Notice T16: this RR Appendix 4 Item No. contains three different data items “Geographical Area Code”, “Maritime Zone Code” and “Maritime HF Allotment Area Code” and only the “Maritime HF Allotment Area Code” applies to Notice T16.

Explanation: currently listed in RR Appendix 4 as mandatory with the footnote “(5A, 5B and 5C) or (minimum three sets of 5C)”. The statement “or (minimum three sets of 5C)” indicates that data items 5A and 5B are not mandatory but “required in specific cases”, it also indicates that data item 5C (*Geographical coordinates*) is a compound data element containing “Receiving antenna geographical coordinates” – a specific location – and “Zone Boundary Coordinates” – identification of an area. This presentation is equivalent to the requirements of RR Appendix 4.

Explanation: currently listed in Appendix 4 to the Radio Regulations as “mandatory” with the footnote “(5A, 5B and 5C) or (minimum three sets of 5C)” for Class of Station Code FX and as “one of the items” with the footnote “(Minimum three sets of 5C) or (5D) or (5E and 5F)” for Class of Station Codes FA, FB, FC², FD², FG², FL, and FP. Noting note²⁰ and that RR Appendix 4 item 5C is a compound data element: for Class of Station Code FX either the “Receiving antenna geographical coordinates” or the “Zone Boundary Coordinates” can be used; for the other Class of Station Codes only the “Zone Boundary Coordinates” can be used.

Explanation: currently listed in RR Appendix 4 with the symbol meaning “one of the items” and the footnote “(Minimum three sets of 5C) or (5D) or (5E and 5F)”: noting note⁵⁴ with regard to RR Appendix 4 Item No. 5C, this presentation is equivalent to the requirements of RR Appendix 4.

Explanation: currently listed in RR Appendix 4 as “5D – *Area of the receiving station(s)*” and listed as mandatory for Notices T16 and AR12 or “one of the items” for Notices T12 and T17: this RR Appendix 4 Item No. contains five different data items “Aeronautical zone code”, “Ciraf quadrant code”, “Ciraf zone number”, “Geographical area code” and “Maritime zone code”, the “Maritime zone code” only applies to Notice T16 and the “Ciraf quadrant code” and “Ciraf zone numbers” only apply to Notice AR12.

Explanation: currently listed in RR Appendix 4 with the footnote “The necessary bandwidth only”. The separation of the data elements means this presentation is equivalent to the requirements of RR Appendix 4.

Modification: currently listed in RR Appendix 4 as “optional” however for RARC Rio-81 the necessary bandwidth is a mandatory requirement.

Modification: currently listed in RR Appendix 4 with the footnote “For analogue television only if the frequency stability is normal or precision” however this footnote is incorrect as the stability of the frequency offset is also required for the “relaxed” option.

Modification: currently listed in RR Appendix 4 with the footnote “For analogue television only if the frequency stability is normal or precision” however, the footnote should read “For analogue television only” as the requirement for this data is not related to the type of frequency offset.

Explanation: currently listed in RR Appendix 4 with the footnote “This information may be furnished for stations in the fixed service when the parameters are used as a basis for effecting coordination with another administration”. The code “C” is the method used in Annex 2B to RR Appendix 4 to represent this footnote and hence this presentation is equivalent to the requirements of RR Appendix 4.

Modification: currently listed in RR Appendix 4 as mandatory, this data is only required if the Transmitter Output Power is supplied.

Explanation: currently listed in RR Appendix 4 as “8A – *Power delivered to the antenna*” and listed as mandatory for Notices T03, T04, T15, T17 and AR12: this RR Appendix 4 Item No. contains two different data items “Transmitter output power” and “Transmitting antenna input power”: only the “Transmitter output power” applies to Notices T15 and T17; and only the “Transmitting antenna input power” applies to Notices T03, T04, and AR12.

Explanation: currently listed in RR Appendix 4 with the symbol meaning “one of the items”, this presentation is equivalent to the requirements of RR Appendix 4.

Modification: currently listed in RR Appendix 4 as optional, this data is mandatory if the Maximum Radiated Power is not supplied.

Modification: currently shown as mandatory in RR Appendix 4: this data item is not required if the polarization is vertical.

Modification: currently shown as mandatory in RR Appendix 4: this data item is not required if the polarization is horizontal.

Addition: currently not listed in RR Appendix 4: this data item is mandatory in frequency bands shared with space services.

Modification: currently shown as “required in specific cases” in RR Appendix 4: this data item is mandatory for Notice T02.

Deletion: currently shown as mandatory in RR Appendix 4: this data item is not required for Notice T03 as it does not provide the physical height of the antenna, particularly in those cases where the antenna is mounted on a structure e.g., a building – see note³⁸.

Addition: currently not listed in RR Appendix 4: the physical height is required for the Type A Transmitting Antenna.

Modification: currently shown as “required in specific cases” in RR Appendix 4: the maximum gain is mandatory for Notice T15 as the radiated power is not required.

Modification: currently shown as “required in specific cases” in RR Appendix 4: the requirement for the Transmitting antenna vertical gain pattern is only optional. The actual requirement is for a hemispherical gain pattern (3 Dimensional, providing the gain in all angles of elevation as well as all angles of azimuth) but this is recognized as being difficult to supply and instead, for night-time operation, the BR recommend that a vertical gain pattern is submitted for the azimuth of maximum radiation.

Addition: currently not listed in RR Appendix 4: the Transmitting antenna design frequency is a mandatory requirement for the HFBC of RR Article 12 procedures.

Explanation: currently listed in RR Appendix 4 as “10B – *Regular hours (UTC) of operation of the frequency assignment*” and listed as mandatory for Notices T03, T04, T11, T12, T13, T14, T15, T16 and T17 and required in specific cases for Notices T01 and T02: this RR Appendix 4 Item No. contains two different data items the “Regular operation period” and “Local operation period code”: the “Regular operation period” is a mandatory requirement only for Notices T11, T12, T13, T14, T15, T16 and T17 and required in specific cases for Notices T01 and T02. For Notices T03 and T04 the “Local operation period code” is the mandatory requirement and the “Regular operation period” is only optional.

Addition: currently not listed in RR Appendix 4: however, the Regular operation period is a mandatory requirement for the HFBC (RR Article 12) procedures.

Addition: currently not listed in RR Appendix 4: however, the Season in operation code is a mandatory part of the data requested in the electronic submission file for the HFBC (RR Article 12) procedures.

Modification: currently shown as “Required in specific cases” in RR Appendix 4: however, the Days of operation is a mandatory requirement for the HFBC (RR Article 12) procedures.

Modification: currently shown as “Optional” in RR Appendix 4: however, notification of the Administration’s code with which coordination has been obtained is a mandatory requirement in bands shared with space services if coordination is necessary and agreement obtained.

Not used.

Modification: currently shown as “Optional” in RR Appendix 4: however, notification of the Administration’s code with which coordination has been obtained is a mandatory requirement in the RR Appendix 25 procedures if coordination is necessary and agreement obtained.

Modification: currently shown as “Required in specific cases” in RR Appendix 4: however, the Operator’s Code is only an optional requirement for the HFBC (RR Article 12) procedures.

Addition: currently not listed in RR Appendix 4: however, the Correspondence address code for the notification is a mandatory requirement for Notice T15 and the HFBC (RR Article 12) procedures.

Explanation: for HFBC (RR Article 12) up to three alternative frequencies or bands can be submitted.

Explanation: for class of station code “RM” the Circular zone centre geographical coordinate and Circular zone radius are mandatory but for other classes of station under notice type T13 the RR Appendix 4 footnote “(4C and 4D) or (4E)” applies. Noting note¹⁸ for RR Appendix 4 Item No. 4C, this presentation is equivalent to the requirements of RR Appendix 4.

Modification: currently shown as “mandatory” in RR Appendix 4 for the HFBC (RR Article 12) procedures – see table note²³: the Ciraf Zone quadrant code only applies to specific Ciraf Zones that are divided into quadrants.

Explanation: currently listed in RR Appendix 4 as “5C – Geographical Coordinates” and listed as “one of the items”: this RR Appendix 4 Item No. contains two different data items “Receiving Antenna Geographical Coordinates” and “Zone Boundary Coordinates”, the “Receiving Antenna Geographical Coordinates” do not apply to Notice T12.

Explanation: currently listed in RR Appendix 4 as “5C – Geographical Coordinates” and listed as mandatory: this RR Appendix 4 Item No. contains two different data items “Receiving Antenna Geographical Coordinates” and “Zone Boundary Coordinates”, the “Zone Boundary Coordinates” do not apply to Notice T13.

Explanation: for Class of Station Code FX, RR Appendix 4, Item Nos. 5D, 5E and 5F do not apply: for Class of Station Codes FA, FB, FC², FD², FG², FL, and FP listed in RR Appendix 4 as “one of the items” with the footnote “Minimum three sets of 5C or 5D or 5E and 5F”.

Explanation: in RR Appendix 4, Item No. 5D does not apply to Class of Station Code NL.

Explanation: currently listed in RR Appendix 4 as “7B – Class of operation of the assignment” and listed as mandatory for Notice T04 and required in specific cases for Notices T11 and T17: this RR Appendix 4 Item No. contains two different data items “Station coverage code” and “Class of operation code”, the “Station coverage code” only applies to Notice T04 and the “Class of operation code” applies to Notices T11 and T17.

Explanation: mandatory for Class of Station Codes FD, FG and SM: for other Classes of Station currently listed in RR Appendix 4 with the symbol meaning “one of the items”: this presentation is equivalent to the requirements of RR Appendix 4.

8.2 Table of characteristics to be submitted for space and radio astronomy services

Table 2 provides a cross-reference between the RDD reference numbers and the RR Appendix 4 item numbers.

TABLE 2

Characteristics to be submitted for stations in the space and radio astronomy services

RR Appendix 4 Item	RDD reference number	RR Appendix 4 Data Description <i>A- GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION</i>	Advance publication of a geostationary-satellite network	Advance publication of a non-geostationary-satellite network subject to coordination under Section II of Article 9	Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix	Radio astronomy
A.1		IDENTITY OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION										A.1	
A.1.a	S069	the identity of the satellite network	X	X	X	X	X		X	X	X	A.1.a	
A.1.b	S116	the beam identification In the case of RR Appendix 30 or 30A, for modification, suppression or notification of Plan assignments In the case of RR Appendix 30B, for a network derived from the Allotment Plan							+	+	+	A.1.b	
A.1.e		Identity of the earth station or radio astronomy station:										A.1.e	
A.1.e.1	S157	the type of earth station (specific or typical)						X				A.1.e.1	
A.1.e.2	S149	the name of the station						X				A.1.e.2	X
A.1.e.3		For a specific earth station or radio astronomy station:										A.1.e.3	
A.1.e.3.a	S041	the country or geographical area in which the station is located, using the symbols from the Preface						X				A.1.e.3.a	X
A.1.e.3.b	S159	the geographical coordinates of each transmitting or receiving antenna site constituting the station (longitude and latitude in degrees and minutes) For a specific earth station, seconds are to be provided if the coordination area of the earth station overlaps the territory of another administration						X				A.1.e.3.b	X
A.1.f		Administration and intergovernmental organization symbol:										A.1.f	
A.1.f.1	S011	the symbol of the notifying administration (see the Preface)	X	X	X	X	X	X	X	X	X	A.1.f.1	X
A.1.f.2	S011	if the notice is submitted on behalf of a group of administrations, the symbols of each of the administrations in the group, submitting the information on the satellite network (see the Preface)	+	+	+	+	+		+	+	+	A.1.f.2	
A.1.f.3	S034	if the notice is submitted on behalf of an intergovernmental satellite organization, the symbol of that organization (see the Preface)	+	+	+	+	+		+	+	+	A.1.f.3	
A.1.g		Subregional systems:										A.1.g	
A.1.g.1	S070	an indicator showing whether the network is part of a subregional system									X	A.1.g.1	
A.1.g.2	S116	for each participating administration, if applicable, the part of its national allotment proposed to be used to form the subregional system									+	A.1.g.2	

RR Appendix 4 Item	RDD reference number	RR Appendix 4 Data Description <i>A- GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION</i>	Advance publication of a geostationary- satellite network	Advance publication of a non-geostationary- satellite network subject to coordination under Section II of Article 9	Advance publication of a non-geostationary- satellite network not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non- geostationary-satellite network	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed- satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix	Radio astronomy
A.2		DATE OF BRINGING INTO USE										A.2	
A.2.a	S187	for non-geostationary operation, the date (actual or foreseen, as appropriate) of bringing the frequency assignment (new or modified) into use The date of bringing into use denotes the date at which the frequency assignment is brought into regular operation* to provide the published radiocommunication service with the technical parameters within the technical characteristics notified to the Bureau Whenever the assignment is changed in any of its basic characteristics (except in the case of a change under A.1.a, the date to be given shall be that of the latest change (actual or foreseen, as appropriate) * Pending further studies by ITU-R on the applicability of the term “regular operation” to non-geostationary satellite networks, the condition of regular operation shall be limited to geostationary satellite networks ⁷		X	X		X	+ ⁸				A.2.a	
A.2.a	S718	for geostationary operation, the date (actual or foreseen, as appropriate) of bringing the frequency assignment (new or modified) into use The date of bringing into use denotes the date at which the frequency assignment is brought into regular operation* to provide the published radiocommunication service with the technical parameters within the technical characteristics notified to the Bureau Whenever the assignment is changed in any of its basic characteristics (except in the case of a change under A.1.a, the date to be given shall be that of the latest change (actual or foreseen, as appropriate) ⁷	X			X		+ ⁸	X	X	X	A.2.a	
A.2.b	S188	for a space station, the period of validity of the frequency assignments (see Resolution 4 (Rev. WRC-03))	X	X	X	X	X					A.2.b	
A.2.c	S187	the date (actual or foreseen, as appropriate) on which reception of the frequency band begins or on which any of the basic characteristics are modified										A.2.c	X
A.3		OPERATING ADMINISTRATION OR AGENCY										A.3	
A.3.a	S029	the symbol for the operating administration or agency (see the Preface) that is in operational control of the space station, earth station or radio astronomy station In the case of RR Appendix 30B, required only for notification under Article 8			X	X	X	X	X	X	+	A.3.a	X

[illegible]

RR Appendix 4 Item	RDD reference number	RR Appendix 4 Data Description <i>A- GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION</i>	Advance publication of a geostationary-satellite network	Advance publication of a non-geostationary-satellite network subject to coordination under Section II of Article 9	Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix	Radio astronomy
A.4.b.4.a	S096	the angle of inclination (i_j) of the orbital plane with respect to the Earth's equatorial plane ($0^\circ \leq i_j < 180^\circ$)			X		X					A.4.b.4.a	
A.4.b.4.b	S087	the number of satellites in the orbital plane			X		X					A.4.b.4.b	
A.4.b.4.c	S103	the period			X		X					A.4.b.4.c	
A.4.b.4.d	S098	the altitude, in kilometres, of the apogee of the space station			X		X					A.4.b.4.d	
A.4.b.4.e	S099	the altitude, in kilometres, of the perigee of the space station			X		X					A.4.b.4.e	
A.4.b.5		For space stations operating in a frequency band subject to the provisions of RR Nos. 9.11A, 9.12 or 9.12A, the data elements to characterize properly the orbital statistics of the non-geostationary-satellite system:										A.4.b.5	
A.4.b.5.a	S097	the right ascension of the ascending node (Ω_j) for the j -th orbital plane, measured counter-clockwise in the equatorial plane from the direction of the vernal equinox to the point where the satellite makes its South-to-North crossing of the equatorial plane ($0^\circ \leq \Omega_j < 360^\circ$)					X					A.4.b.5.a	
A.4.b.5.b	S106	the initial phase angle (ω_i) of the i -th satellite in its orbital plane at reference time $t = 0$, measured from the point of the ascending node ($0^\circ \leq \omega_i < 360^\circ$)			5		X ⁵					A.4.b.5.b	
A.4.b.5.c	S100	the argument of perigee (ω_p), measured in the orbital plane, in the direction of motion, from the ascending node to the perigee ($0^\circ \leq \omega_p < 360^\circ$)					X					A.4.b.5.c	
A.4.b.6		For space stations operating in a frequency band subject to Nos. 22.5C, 22.5D or 22.5F, the data elements to characterize properly the orbital operation of the non-geostationary-satellite system:										A.4.b.6	
A.4.b.6.a		For each range of latitudes:										A.4.b.6.a	
A.4.b.6.a.1	S799	the maximum number of non-geostationary satellites transmitting with overlapping frequencies to a given location					X					A.4.b.6.a.1	
A.4.b.6.a.2	S797	the associated start of the latitude range					X					A.4.b.6.a.2	
A.4.b.6.a.3	S798	the associated end of the latitude range					X					A.4.b.6.a.3	
A.4.b.6.b	S780	the minimum altitude of the space station above the surface of the Earth at which any satellite transmits					X					A.4.b.6.b	
A.4.b.6.c	S781	an indicator showing whether the space station uses station-keeping to maintain a repeating ground track					X					A.4.b.6.c	

RR Appendix 4 Item	RDD reference number	RR Appendix 4 Data Description <i>A- GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION</i>	Advance publication of a geostationary-satellite network	Advance publication of a non-geostationary-satellite network subject to coordination under Section II of Article 9	Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix	Radio astronomy
A.4.b.6.d	S782	if the space station uses station-keeping to maintain a repeating ground track, the time in seconds that it takes for the constellation to return to its starting position, i.e. such that all satellites are in the same location with respect to the Earth and each other					+					A.4.b.6.d	
A.4.b.6.e	S223	an indicator showing whether the space station should be modelled with a specific precession rate of the ascending node of the orbit instead of the J2 term					X					A.4.b.6.e	
A.4.b.6.f	S224	if the space station is to be modelled with a specific precession rate of the ascending node of the orbit instead of the J2 term, the precession rate in degrees/day, measured counter-clockwise in the equatorial plane					+					A.4.b.6.f	
A.4.b.6.g	S221	the longitude of the ascending node (θ_j) for the j-th orbital plane, measured counter-clockwise in the equatorial plane from the Greenwich meridian to the point where the satellite orbit makes its South-to-North crossing of the equatorial plane ($0^\circ \leq \theta_j < 360^\circ$) <i>Note</i> – For the evaluation of epfd a reference to a point on the Earth is used and hence the “longitude of the ascending node” is required. All satellites in the constellation must use the same reference time					X					A.4.b.6.g	
A.4.b.6.h	S789	the date (day:month:year) at which the satellite is at the location defined by the longitude of the ascending node (θ_j), (see Note under A.4.b.6.g)					X					A.4.b.6.h	
A.4.b.6.i	S790	the time (hours:minutes) at which the satellite is at the location defined by the longitude of the ascending node (θ_j), (see Note under A.4.b.6.g)					X					A.4.b.6.i	
A.4.b.6.j	S222	the longitudinal tolerance of the longitude of the ascending node					X					A.4.b.6.j	
A.4.b.7		For space stations operating in a frequency band subject to RR Nos. 22.5C, 22.5D or 22.5F, the data elements to characterize properly the performance of the non-geostationary-satellite system:										A.4.b.7	
A.4.b.7.a	S783	the maximum number of non-geostationary satellites receiving simultaneously with overlapping frequencies from the associated earth stations within a given cell					X					A.4.b.7.a	
A.4.b.7.b	S784	the average number of associated earth stations with overlapping frequencies per square kilometre within a cell					X					A.4.b.7.b	
A.4.b.7.c	S785	the average distance, in kilometres, between co-frequency cells					X					A.4.b.7.c	
A.4.b.7.d		For the exclusion zone about the geostationary-satellite orbit:										A.4.b.7.d	
A.4.b.7.d.1	S786	the type of zone (based on topocentric angle, satellite-based angle or other method for establishing the exclusion zone)					X					A.4.b.7.d.1	

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A.4.b.7.d.2	S787	if the zone is based on a topocentric angle, the width of the zone, in degrees					+					A.4.b.7.d.2	
A.4.b.7.d.2	S788	if the zone is based on a satellite-based angle, the width of the zone, in degrees					+					A.4.b.7.d.2	
A.4.b.7.d.3	S837	if an alternative method is used for establishing the exclusion zone, a detailed description of the avoidance mechanism					+					A.4.b.7.d.3	
A.4.c		For an earth station:										A.4.c	
A.4.c.1	S069	the identity of the associated space station(s) with which communication is to be established						X				A.4.c.1	
A.4.c.2	S616	if communication is to be established with a geostationary space station, its orbital position						+				A.4.c.2	
A.5		COORDINATIONS										A.5	
A.5.a.1	S011	the symbol of any administration (see the Preface) with which coordination has been successfully effected Required only in the case of notification				+	+	+ ¹				A.5.a.1	
A.5.a.2	S034	the symbol of any intergovernmental organization (see the Preface) with which coordination has been successfully effected Required only in the case of notification				+	+	+ ¹				A.5.a.2	
A.5.b.1	S011	the symbol of any administration (see the Preface) with which coordination has been sought but not completed				O	O	O				A.5.b.1	
A.5.b.2	S034	the symbol of any intergovernmental organization (see the Preface) with which coordination has been sought but not completed				O	O					A.5.b.2	
A.5.c	S304	the related provision code (see the Preface) under which coordination has been sought or completed if either A.5.a.1 (and A.5.a.2) or A.5.b.1 (and A.5.b.2) has been supplied				+	+	+ ¹				A.5.c	
A.6		AGREEMENTS										A.6	
A.6.a	S011	if appropriate, the symbol of any administration or administration representing a group of administrations (see the Preface) with which agreement has been reached, including where the agreement is to exceed the limits prescribed in these Regulations				+	+	+ ¹	+	+	+	A.6.a	
A.6.b	S034	if appropriate, the symbol of any intergovernmental organization (see the Preface) with which agreement has been reached, including where the agreement is to exceed the limits prescribed in these Regulations				+	+	+ ¹	+	+	+	A.6.b	
A.6.c	S304	if agreement has been reached, the related provision code (see the Preface)				+	+	+ ¹	+	+	+	A.6.c	

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A.10		EARTH STATION COORDINATION AREA DIAGRAMS										A.10	
A.10.a	S173	for clear sky, the diagrams shall be drawn to an appropriate scale, indicating, for both transmission and reception, the location of the earth station and its associated coordination areas, or the coordination area related to the service area in which it is intended to operate the mobile earth station Earth station coordination area diagrams are required only for notification						+				A.10.a	
A.10.a	S322	for rain scatter, the diagrams shall be drawn to an appropriate scale, indicating, for both transmission and reception, the location of the earth station and its associated coordination areas, or the coordination area related to the service area in which it is intended to operate the mobile earth station Earth station coordination area diagrams are required only for notification						+				A.10.a	
A.11		REGULAR HOURS OF OPERATION										A.11	
A.11.a	S091	the start time UTC							X	X		A.11.a	
A.11.b	S092	the stop time UTC							X	X		A.11.b	
A.12	S330	RANGE OF AUTOMATIC GAIN CONTROL, in dB								X		A.12	
A.13		REFERENCES TO THE PUBLISHED SPECIAL SECTIONS OF THE BUREAU'S INTERNATIONAL FREQUENCY INFORMATION CIRCULAR (see the Preface)										A.13	
A.13.a	S768	the reference of the advance publication information in accordance with RR No. 9.1				X	X	X				A.13.a	
A.13.a	S606	the number of the advance publication information in accordance with RR No. 9.1				X	X	X				A.13.a	
A.13.b	S769	the reference of the coordination request in accordance with RR No. 9.6 In the case of notification of an earth station, the reference to the Special Section of the associated satellite network has to be provided In the case of notification of an earth station coordinated under No. 9.7A, the coordination Special Section number of this earth station has to be provided				X	X	X				A.13.b	

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A.13.b	S607	the number of the coordination request in accordance with RR No. 9.6 In the case of notification of an earth station, the reference to the Special Section of the associated satellite network has to be provided In the case of notification of an earth station coordinated under RR No. 9.7A, the coordination Special Section number of this earth station has to be provided				X	X	X				A.13.b	
A.13.c	S769	the reference and number of the information in accordance with Article 4 of Appendix 30							X			A.13.c	
A.13.c	S607	the reference and number of the information in accordance with Article 4 of Appendix 30							X			A.13.c	
A.13.d	S769	the reference and number of the information in accordance with Article 4 of Appendix 30A								X		A.13.d	
A.13.d	S607	the reference and number of the information in accordance with Article 4 of Appendix 30A								X		A.13.d	
A.13.e	S769	the reference and number of the information in accordance with Article 6 of Appendix 30B						X			X	A.13.e	
A.13.e	S607	the reference and number of the information in accordance with Article 6 of Appendix 30B						X			X	A.13.e	
A.14		FOR STATIONS OPERATING IN A FREQUENCY BAND SUBJECT TO Nos. 22.5C, 22.5D OR 22.5F: SPECTRUM MASKS										A.14	
A.14.a		For each e.i.r.p. mask used by the non-geostationary space station:										A.14.a	
A.14.a.1	S814	the mask identification code					X					A.14.a.1	
A.14.a.2	S816	the lowest frequency for which the mask is valid					X					A.14.a.2	
A.14.a.3	S817	the highest frequency for which the mask is valid					X					A.14.a.3	
A.14.a.4	S815	the mask pattern defined in terms of the power in the reference bandwidth for a series of off-axis angles with respect to a specified reference point					X					A.14.a.4	
A.14.b		For each associated earth station e.i.r.p. mask:										A.14.b	
A.14.b.1	S806	the mask identification code					X					A.14.b.1	
A.14.b.2	S810	the lowest frequency for which the mask is valid					X					A.14.b.2	
A.14.b.3	S811	the highest frequency for which the mask is valid					X					A.14.b.3	
A.14.b.4	S808	the minimum elevation angle at which any associated earth station can transmit to a non-geostationary satellite					X					A.14.b.4	

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A.14.b.5	S809	the minimum separation angle between the geostationary-satellite orbit arc and the associated earth station main beam-axis at which the associated earth station can transmit towards a non-geostationary satellite					X					A.14.b.5	
A.14.b.6	S807	the mask pattern defined in terms of the power in the reference bandwidth for a series of off-axis angles with respect to a specified reference point					X					A.14.b.6	
A.14.c		For each pfd mask used by the non-geostationary space station: <i>Note</i> – The space station pfd mask is defined by the maximum power flux-density generated by any space station in the interfering non-geostationary-satellite system as seen from any point on the surface of the Earth										A.14.c	
A.14.c.1	S801	the mask identification code					X					A.14.c.1	
A.14.c.2	S804	the lowest frequency for which the mask is valid					X					A.14.c.2	
A.14.c.3	S829	the highest frequency for which the mask is valid					X					A.14.c.3	
A.14.c.4	S802	the type of mask					X					A.14.c.4	
A.14.c.5	S803	the mask pattern of the power flux-density defined in three dimensions					X					A.14.c.5	
A.15		COMMITMENT REGARDING COMPLIANCE WITH ADDITIONAL OPERATIONAL EQUIVALENT POWER FLUX DENSITY, $epfd_{\downarrow}$ LIMITS										A.15	
A.15.a	S791	a commitment that the filed for system will meet the additional operational $epfd_{\downarrow}$ limits that are specified in Table 22-4A1 under RR No. 22.51 Required only for non-geostationary-satellite systems operating in the fixed-satellite service in the bands 10.7-11.7 GHz (in all Regions), 11.7-12.2 GHz (Region 2), 12.2-12.5 GHz (Region 3), and 12.5-12.75 GHz (Regions 1 and 3)					+					A.15.a	
A.16		COMMITMENT REGARDING COMPLIANCE WITH OFF-AXIS POWER LIMITATIONS OR POWER FLUX-DENSITY, pfd, LIMITS										A.16	
A.16.a	S830	a commitment that the associated earth stations operating with a geostationary-satellite network in the fixed-satellite service meet the off-axis power limitations given in RR Nos. 22.26 to 22.28 or 22.32 (as appropriate) under the conditions specified in RR Nos. 22.30, 22.31 and 22.34 to 22.39 Required only where the earth stations are subject to those power limitations				+						A.16.a	

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A.16.b	S841	a commitment by administrations that the filed system will meet the single entry power flux-density limits that are specified in RR No. 5.502 Required only for specific earth station antennas less than 4.5 m in diameter operating with geostationary space stations in the fixed-satellite service in the band 13.75-14 GHz						+				A.16.b	
A.17		COMPLIANCE WITH POWER FLUX-DENSITY, pfd, LIMITS										A.17	
A.17.a	S842	a commitment of compliance with per-satellite power-flux density level produced at the Earth's surface of $-129 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ in any 1 MHz band under free space propagation conditions Required only for satellite systems operating in the radionavigation-satellite service in the band 1 164-1 215 MHz				+	+					A.17.a	
A.17.b.1	S843	the calculated aggregate power flux-density produced at the Earth's surface by any geostationary radionavigation-satellite system in the band 4 990-5 000 MHz in a 10 MHz bandwidth, as defined in <i>resolves 1</i> of Resolution 741 (WRC-03) Required only for geostationary satellite systems operating in the radionavigation-satellite service in the band 5 010-5 030 MHz				+						A.17.b.1	
A.17.b.2	S792	the calculated aggregate power flux-density produced at the Earth's surface by all space stations within any radionavigation-satellite service system in the band 5 030-5 150 MHz in a 150 kHz bandwidth, as defined in RR No. 5.443B Required only for satellite systems operating in the radionavigation-satellite service in the band 5 010-5 030 MHz				+	+					A.17.b.2	
A.17.b.3	S794	the equivalent power flux-density produced at the Earth's surface by all space stations within any non-geostationary radionavigation-satellite service system in the band 4 990-5 000 MHz in a 10 MHz bandwidth, as defined in <i>resolves 2</i> of Resolution 741 (WRC-03) Required only for non-geostationary satellite systems operating in the radionavigation-satellite service in the band 5 010-5 030 MHz					+					A.17.b.3	
A.17.c	S796	the aggregate power flux-density produced at the Earth's surface in the band 15.35-15.4 GHz, as defined in RR No. 5.511A Required only for non-geostationary-satellite systems operating in the fixed-satellite service (feeder links) in the band 15.43-15.63 GHz (space-to-Earth)					+					A.17.c	

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A.17.d	S844	the mean power flux-density produced at the Earth's surface by any spaceborne sensor, as defined in RR No. 5.549A Required only for satellite systems operating in the Earth exploration-satellite service (active) or space research service (active) in the band 35.5-36 GHz				+	+					A.17.d	
A.17.e.1	S845	the calculated equivalent power flux-density/1 GHz produced at the single telescope site of a radio astronomy station in the band 42.5-43.5 GHz, as defined in RR No. 5.551H Required only for non-geostationary-satellite systems operating in the fixed-satellite service and broadcasting-satellite service in the band 42-42.5 GHz ⁷					+					A.17.e.1	
A.17.e.1	S846	the calculated equivalent power flux-density/500 kHz produced at the site of a radio astronomy station in the band 42.5-43.5 GHz, as defined in RR No. 5.551H Required only for non-geostationary-satellite systems operating in the fixed-satellite service and broadcasting-satellite service in the band 42-42.5 GHz ⁷					+					A.17.e.1	
A.17.e.2	S848	the calculated power flux-density/1 GHz produced at the single telescope site of a radio astronomy station in the band 42.5-43.5 GHz, as defined in RR No. 5.551I Required only for geostationary-satellite systems operating in the fixed-satellite service and broadcasting-satellite service in the band 42-42.5 GHz ⁷				+						A.17.e.2	
A.17.e.2	S849	the calculated power flux-density/500 kHz produced at the site of a radio astronomy station in the band 42.5-43.5 GHz, as defined in RR No. 5.551I Required only for geostationary-satellite systems operating in the fixed-satellite service and broadcasting-satellite service in the band 42-42.5 GHz ⁷				+						A.17.e.2	

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Not in AP4	S850	the type of radio astronomy station in the band 42.5-43.5 GHz, as defined in RR No. 5.551I Required for geostationary and non-geostationary-satellite systems operating in the fixed-satellite service and broadcasting-satellite service in the band 42-42.5 GHz ³				+	+					A.17.e.2	
A.18		COMPLIANCE WITH NOTIFICATION OF AIRCRAFT EARTH STATION(S)										A.18	
A.18.a	S851	a commitment that the characteristics of the aircraft earth station (AES) in the aeronautical mobile-satellite service are within the characteristics of the specific and/or typical earth station published by the Bureau for the space station to which the AES is associated Required only for the band 14-14.5 GHz, when an aircraft earth station in the aeronautical mobile-satellite service communicates with a space station in the fixed-satellite service				+	+					A.18.a	

[illegible]

RR Appendix 4 Item	RDD reference number	RR Appendix 4 Data Description <i>B – CHARACTERISTICS TO BE PROVIDED FOR EACH SATELLITE ANTENNA BEAM OR EACH EARTH STATION OR RADIO ASTRONOMY ANTENNA</i>	Advance publication of a geostationary-satellite network	Advance publication of a non-geostationary-satellite network subject to coordination under Section II of Article 9	Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix	Radio astronomy
B.3.b.1	S369	the co-polar antenna gain contours plotted on a map of the Earth's surface, preferably in a radial projection from the satellite onto a plane perpendicular to the axis from the centre of the Earth to the satellite The space station antenna gain contours shall be drawn as isolines of the isotropic gain, at least for – 2, – 4, – 6, – 10 and – 20 dB and at 10 dB intervals thereafter, as necessary, relative to the maximum antenna gain, when any of these contours is located either totally or partially anywhere within the limit of visibility of the Earth from the given geostationary satellite Whenever possible, the gain contours of the space station antenna should also be provided in a numerical format (e.g. equation or table) Where a steerable beam (see RR No. 1.191) is used, if the effective boresight area (see RR No. 1.175) is less than the global service area, the contours are the result of moving the boresight of the steerable beam around the limit defined by the effective boresight area and are to be provided as described above but shall also include the 0 dB relative gain isoline The antenna gain contours shall include the effects of the planned inclination excursion, longitudinal tolerance and the planned pointing accuracy of the antenna In the case of RR Appendix 30, 30A or 30B, only required for non-elliptical beams				+			+	+	+	B.3.b.1	
B.3.b.2	S370	if a non-elliptical beam, the cross-polar gain contours shall be provided as defined under B.3.b.1							+	+		B.3.b.2	
B.3.c		Antenna radiation patterns:										B.3.c	
B.3.c.1	S122	the co-polar antenna radiation pattern, in the case of: – non-geostationary space stations – geostationary or non-geostationary space stations where the antenna radiation beam is directed towards another satellite – elliptical antenna beams for RR Appendix 30, 30A or 30B			X	+	X		+	+	+	B.3.c.1	
B.3.c.2	S123	if an elliptical beam, the cross-polar antenna radiation pattern							+	+		B.3.c.2	

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B.3.d	S120	the pointing accuracy of the antenna In the case of RR Appendix 30, 30A or 30B, required only for elliptical beams				X			+	+	+	B.3.d	
B.3.e	S125	if the space station is operating in a band allocated in the Earth-to-space direction and in the space-to-Earth direction, the gain of the antenna in the direction of those parts of the geostationary-satellite orbit which are not obstructed by the Earth				+				+		B.3.e	
B.3.f		For a space station submitted in accordance with RR Appendix 30, 30A or 30B:										B.3.f	
B.3.f.1	S119	the boresight or aim point of the antenna beam (longitude and latitude)							X	X	X	B.3.f.1	
B.3.f.2		For each elliptical beam:										B.3.f.2	
B.3.f.2.a	S133	the rotational accuracy, in degrees							X	X	X	B.3.f.2.a	
B.3.f.2.b	S132	the major axis orientation, in degrees, anticlockwise from the Equator							X	X	X	B.3.f.2.b	
B.3.f.2.c	S130	the major axis, in degrees, at the half-power beamwidth							X	X	X	B.3.f.2.c	
B.3.f.2.d	S131	the minor axis, in degrees, at the half-power beamwidth							X	X	X	B.3.f.2.d	
B.4		ADDITIONAL CHARACTERISTICS FOR NON-GEOSTATIONARY SPACE STATION ANTENNA										B.4	
B.4.a.1	S717	the reference number of each orbital plane in which the space station antenna characteristics are used			X		X					B.4.a.1	
B.4.a.2	S225	if the antenna characteristics of a space station are not common to every satellite in the specified orbital plane, the reference number of each satellite in the specified orbital plane, on which the space station antenna characteristics are used			+ ⁵		+ ⁵					B.4.a.2	
B.4.b		For a space station submitted in accordance with RR Nos. 9.11A, 9.12 or 9.12A:										B.4.b	
B.4.b.1		For the orientation angles of the satellite transmitting and receiving antenna beams:										B.4.b.1	
B.4.b.1.a	S121	the orientation angle alpha, in degrees, (see most recent version of Recommendation ITU-R SM.1413)					X					B.4.b.1.a	
B.4.b.1.b	S368	the orientation angle beta, in degrees, (see most recent version of Recommendation ITU-R SM.1413)					X					B.4.b.1.b	
B.4.b.2	S126	the satellite antenna gain G(θ _e) as a function of elevation angle (θ _e) at a fixed point on the Earth					X					B.4.b.2	

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C.1		FREQUENCY RANGE										C.1	
C.1.a	S247	the lower limit of the frequency range within which the carriers and the bandwidth of the emission will be located for each Earth-to-space or space-to-Earth service area, or for each space-to-space relay	X	X	X						X	C.1.a	
C.1.b	S248	the upper limit of the frequency range within which the carriers and the bandwidth of the emission will be located for each Earth-to-space or space-to-Earth service area, or for each space-to-space relay	X	X	X						X	C.1.b	
C.2		ASSIGNED FREQUENCY (FREQUENCIES)										C.2	
C.2.a.1	S333	the beam assigned frequency (frequencies), as defined in RR No. 1.148 - in kHz up to 28 000 kHz inclusive - in MHz above 28 000 kHz to 10 500 MHz inclusive - in GHz above 10 500 MHz If the basic characteristics are identical, with the exception of the assigned frequency, a list of frequency assignments may be provided ⁷				X						C.2.a.1	
C.2.a.1	S723	the assignment coordination group assigned frequency (frequencies), as defined in RR No. 1.148 - in kHz up to 28 000 kHz inclusive - in MHz above 28 000 kHz to 10 500 MHz inclusive - in GHz above 10 500 MHz If the basic characteristics are identical, with the exception of the assigned frequency, a list of frequency assignments may be provided In the case of Appendix 30B , required only for notification under Article 8 ⁷				X	X	X	X	X	+	C.2.a.1	
C.2.a.2	S719	the channel number							X	X		C.2.a.2	
C.2.b	S256	the centre of the frequency band observed - in kHz up to 28 000 kHz inclusive - in MHz above 28 000 kHz to 10 500 MHz inclusive - in GHz above 10 500 MHz										C.2.b	X
C.2.c	S855	if the frequency assignment is to be filed under RR No. 4.4 , an indication to that effect			4	+	+	+				C.2.c	+

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C.3		ASSIGNED FREQUENCY BAND										C.3	
C.3.a	S190	the bandwidth of the assigned frequency band, in kHz (see RR No. 1.147) In the case of RR Appendix 30B, required only for notification under Article 8				X	X	X	X	X	+	C.3.a	
C.3.b	S374	the bandwidth of the frequency band, in kHz, observed by the station										C.3.b	X
C.4		CLASS OF STATION AND NATURE OF SERVICE										C.4	
C.4.a	S052	the class of station, using the symbols from the Preface	X	X	X	X	X	X	X	X		C.4.a	X
C.4.b	S617	the nature of service performed, using the symbols from the Preface	X	X	X	X	X	X				C.4.b	X
C.5		RECEIVING SYSTEM NOISE TEMPERATURE										C.5	
C.5.a	S192	the lowest total receiving system noise temperature, in Kelvins, referred to the output of the receiving antenna of the space station			X	X	X			X	X	C.5.a	
C.5.b	S764	the lowest total receiving system noise temperature, in Kelvins, referred to the output of the receiving antenna of the earth station under clear-sky conditions This value shall be indicated for the nominal value of the angle of elevation when the associated transmitting station is onboard a geostationary satellite and, in other cases, for the minimum value of the angle of elevation						X				C.5.b	
C.5.c	S764	the overall receiving system noise temperature, in Kelvins, referred to the output of the receiving antenna										C.5.c	X
C.6		POLARIZATION										C.6	
C.6.a	S189	the type of polarization (see the Preface) In the case of circular polarization, this includes the sense of polarization (see RR Nos. 1.154 and 1.155) In the case of a space station submitted in accordance with RR Appendix 30 or 30A, see § 3.2 of Annex 5 to RR Appendix 30			X	X	X	+ ¹	X	X		C.6.a	
C.6.b	S364	if linear polarization is used, the angle, in degrees, measured counter-clockwise in a plane normal to the beam axis from the equatorial plane to the electric vector of the waves as seen from the satellite In the case of a space station submitted in accordance with RR Appendix 30 or 30A, see § 3.2 of Annex 5 to RR Appendix 30			+	+	+	+ ¹	+	+		C.6.b	
C.7		NECESSARY BANDWIDTH AND CLASS OF EMISSION (in accordance with RR Article 2 and RR Appendix 1)										C.7	

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C.7.a	S262	the class of emission: for each carrier In the case of RR Appendix 30B, required only for notification under Article 8 ⁷			O	X	X	X	X	X	+	C.7.a	
C.7.a	S334	the necessary bandwidth: for each carrier In the case of RR Appendix 30B, required only for notification under Article 8 ⁷			O	X	X	X	X	X	+	C.7.a	
C.7.b	S716	the carrier frequency or frequencies of the emission(s)			O	C	C	C				C.7.b	
C.8		POWER CHARACTERISTICS OF THE TRANSMISSION										C.8	
C.8.a		For the case where individual carriers can be identified:										C.8.a	
C.8.a.1	S264	the maximum value of the peak envelope power, in dBW, supplied to the input of the antenna for each carrier type Required if C.8.b.1 is not provided			O	+	+	C				C.8.a.1	
C.8.a.2	S267	the maximum power density, averaged over the worst 4 kHz for carriers below 15 GHz, in dB(W/Hz), supplied to the input of the antenna for each carrier type ² Required if C.8.b.2 is not provided ⁷			+	+	+	O				C.8.a.2	
C.8.a.2	S336	the maximum power density, averaged over the worst 1 MHz for carriers above 15 GHz, in dB(W/Hz), supplied to the input of the antenna for each carrier type ² Required if C.8.b.2 is not provided ⁷			+	+	+	O				C.8.a.2	
C.8.b		For the case where it is not appropriate to identify individual carriers:										C.8.b	
C.8.b.1	S263	the total peak envelope power, in dBW, supplied to the input of the antenna For coordination or notification of an Appendix 30A earth station the values shall include the maximum range of power control Required if C.8.a.1 is not provided			O	+	+	+ ¹	X	X		C.8.b.1	

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C.8.b.2	S266	the maximum power density, averaged over the worst 4 kHz for carriers below 15 GHz, in dB(W/Hz), supplied to the input of the antenna ² For coordination or notification of an Appendix 30A earth station the values shall include the maximum range of power control Required if C.8.a.2 is not provided ⁷			+	+	+	+ ¹	X	+	X	C.8.b.2	
C.8.b.2	S335	the maximum power density, averaged over the worst 1 MHz for carriers above 15 GHz, in dB(W/Hz), supplied to the input of the antenna ² For coordination or notification of an RR Appendix 30A earth station the values shall include the maximum range of power control Required if C.8.a.2 is not provided ⁷			+	+	+	+ ¹		+		C.8.b.2	
C.8.c.1	S265	the minimum value of the peak envelope power, in dBW, supplied to the input of the antenna for each carrier type If not provided, the reason for absence under C.8.c.2			O	+	+	+ ¹				C.8.c.1	
C.8.c.2	S269	if C.8.c.1 is not provided, the reason for absence of the minimum value of the peak envelope power				+	+	+ ¹				C.8.c.2	
C.8.c.3	S268	the minimum power density, averaged over the worst 4 kHz for carriers below 15 GHz, in dB(W/Hz), supplied to the input of the antenna for each carrier type ² If not provided, the reason for absence under C.8.c.4 ⁷			O	+	+	+ ¹				C.8.c.3	
C.8.c.3	S371	the minimum power density, averaged over the worst 1 MHz for carriers above 15 GHz, in dB(W/Hz), supplied to the input of the antenna for each carrier type ² If not provided, the reason for absence under C.8.c.4 ⁷			O	+	+	+ ¹				C.8.c.3	
C.8.c.4	S372	if C.8.c.3 is not provided, the reason for absence of the minimum power density				+	+	+ ¹				C.8.c.4	

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C.8.f.2	S653	the associated space station's nominal equivalent isotropically radiated power(s) (e.i.r.p.) on the beam axis Required only for a space-to-space link			+							C.8.f.2	
C.8.g.1	S600	the maximum aggregate power, in dBW, of all carriers (per transponder, if applicable) supplied to the input of the transmitting antenna of the associated earth station ⁷				C	C					C.8.g.1	
C.8.g.1	S771	the maximum aggregate power, in dBW, of all carriers (per transponder, if applicable) supplied to the input of the transmitting antenna of the earth station Not required for coordination of a specific earth station under RR Nos. 9.15, 9.17 or 9.17A ⁷						C				C.8.g.1	
C.8.g.2	S646	the aggregate bandwidth of all carriers (per transponder, if applicable) supplied to the input of the transmitting antenna of the associated earth station ⁷				C	C					C.8.g.2	
C.8.g.2	S770	the aggregate bandwidth of all carriers (per transponder, if applicable) supplied to the input of the transmitting antenna of the earth station Not required for coordination of a specific earth station under RR Nos. 9.15, 9.17 or 9.17A ⁷						C				C.8.g.2	
C.8.g.3	S765	an indicator showing whether the bandwidth of the transponder corresponds to the aggregate bandwidth of all carriers (per transponder, if applicable) supplied to the input of the transmitting antenna of the associated earth station ⁷				C	C					C.8.g.3	
C.8.g.3	S736	an indicator showing whether the bandwidth of the transponder corresponds to the aggregate bandwidth of all carriers (per transponder, if applicable) supplied to the input of the transmitting antenna of the earth station Not required for coordination of a specific earth station under RR Nos. 9.15, 9.17 or 9.17A ⁷						C				C.8.g.3	
C.8.h	S618	the maximum power density per Hz supplied to the input of the antenna, in dB(W/Hz), averaged over the necessary bandwidth In the case of RR Appendix 30A, required only in the band 17.3-18.1 GHz							X	+	X	C.8.h	
C.8.i	S330	If power control is used, the range of power control, in dB, above the transmitting power indicated under C.8.b.1								+		C.8.i	

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C.8.j	S250	the frequency below which signals whose peak-to-average ratio is less than 5 dB will be located									X	C.8.j	
C.9		INFORMATION ON MODULATION CHARACTERISTICS										C.9	
C.9.a		For each carrier, according to the nature of the signal modulating the carrier:										C.9.a	
C.9.a.1	S640	the type of modulation In the case of a non-geostationary space station required only for RR Nos. 9.11A, 9.12 or 9.12A			O	C	+		X	X		C.9.a.1	
C.9.a.2		For a carrier frequency modulated by a frequency-division multichannel telephony baseband (FDM/FM) or by a signal that can be represented by a multichannel telephony baseband:										C.9.a.2	
C.9.a.2.a	S196	the lowest frequency of the baseband			O	C	C					C.9.a.2.a	
C.9.a.2.b	S197	the highest frequency of the baseband			O	C	C					C.9.a.2.b	
C.9.a.2.c	S326	the r.m.s. frequency deviation of the pre-emphasized signal for a test tone as a function of baseband frequency			O	C	C					C.9.a.2.c	
C.9.a.3		For a carrier frequency modulated by a television signal:										C.9.a.3	
C.9.a.3.a	S201	the peak-to-peak frequency deviation of the pre-emphasized signal			O	C	C		X	X		C.9.a.3.a	
C.9.a.3.b	S202	the pre-emphasis characteristic			O	C	C		X	X		C.9.a.3.b	
C.9.a.3.c	S199	if applicable, the characteristics of the multiplexing of the video signal with the sound signal(s) or other signals			O	C	C		+	+		C.9.a.3.c	
C.9.a.4		For a carrier phase-shift modulated by a digital signal:										C.9.a.4	
C.9.a.4.a	S204	the bit rate			O	C	C					C.9.a.4.a	
C.9.a.4.b	S205	the number of phases			O	C	C					C.9.a.4.b	
C.9.a.5		For an amplitude modulated carrier (including single sideband):										C.9.a.5	
C.9.a.5.a	S640	the nature of the modulating signal, as precisely as possible			O	C	C					C.9.a.5.a	
C.9.a.5.b	S641	the kind of amplitude modulation used			O	C	C					C.9.a.5.b	
C.9.a.6		For a frequency modulated carrier:										C.9.a.6	
C.9.a.6.a	S200	the peak-to-peak frequency deviation, in MHz, of the energy dispersal waveform			O	C	C		X	X		C.9.a.6.a	
C.9.a.6.b	S324	the sweep frequency, in kHz, of the energy dispersal waveform			O	C	C		X	X		C.9.a.6.b	
C.9.a.6.c	S325	the energy dispersal waveform			O	C	C		X	X		C.9.a.6.c	
C.9.a.7	S857	if other forms of modulation than frequency modulation, are being used, the type of energy dispersal			O	C	C		+	+		C.9.a.7	

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C.9.a.8	S642	for all other types of modulation, such particulars as may be useful for an interference study			O	C	C					C.9.a.8	
C.9.a.9	S327	the TV standard			O	C	C		X	X		C.9.a.9	
C.9.b		For analogue carriers:										C.9.b	
C.9.b.1	S203	the sound-broadcasting characteristics							X	X		C.9.b.1	
C.9.b.2	S198	the composition of the baseband							X	X		C.9.b.2	
C.9.c		For a non-geostationary space station submitted in accordance with Nos. 9.11A, 9.12 or 9.12A:										C.9.c	
C.9.c.1	S329	the type of multiple access					X					C.9.c.1	
C.9.c.2	S195	the spectrum mask					X					C.9.c.2	
C.9.d		For stations operating in a frequency band subject to RR Nos. 22.5C, 22.5D or 22.5F:										C.9.d	
C.9.d.1	S801	the type of mask ⁷					X					C.9.d.1	
C.9.d.1	S814	the type of mask ⁷					X					C.9.d.1	
C.9.d.1	S806	the type of mask ⁷					X					C.9.d.1	
C.9.d.2	S801	the pfd mask identification code					X					C.9.d.2	
C.9.d.3	S814	the space station's e.i.r.p. mask identification code					X					C.9.d.3	
C.9.d.4	S806	the associated earth station's e.i.r.p. mask identification code					X					C.9.d.4	
C.10		TYPE AND IDENTITY OF THE ASSOCIATED STATION(S) (the associated station may be another space station, a typical earth station of the network or a specific earth station)										C.10	
C.10.a		For an associated space station:										C.10.a	
C.10.a.1	S069	the identity of the station			X	X	X					C.10.a.1	
C.10.a.2	S507	if the associated space station is in the geostationary orbit, its nominal longitude ⁷			+							C.10.a.2	
C.10.a.2	S072	if the associated space station is in the geostationary orbit, its nominal longitude ⁷				+	+					C.10.a.2	
C.10.b		For an associated earth station:										C.10.b	
C.10.b.1	S671	the name of the station			X	X	X			X		C.10.b.1	
C.10.b.2	S559	the type of station (specific or typical)			X	X	X					C.10.b.2	
C.10.c		For a specific associated earth station:										C.10.c	
C.10.c.1	S673	the geographical coordinates of the antenna site			X	X	X			X		C.10.c.1	

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C.10.c.2	S041	the country or geographical area in which the earth station is located, using the symbols from the Preface			X	X	X			X		C.10.c.2	
C.10.d		For an associated earth station (whether specific or typical):										C.10.d	
C.10.d.1	S052	the class of station, using the symbols from the Preface			X	X	X					C.10.d.1	
C.10.d.2	S617	the nature of service performed, using the symbols from the Preface			X	X	X					C.10.d.2	
C.10.d.3	S676	the isotropic gain, in dBi, of the antenna in the direction of maximum radiation (see RR No. 1.160)			X	X	X		X	X	X	C.10.d.3	
C.10.d.4	S677	the beamwidth, in degrees, between the half-power points (described in detail if not symmetrical)			O	X	X		X	X	X	C.10.d.4	
C.10.d.5.a	S678	either the measured co-polar radiation pattern of the antenna or the co-polar reference radiation pattern			X	X	X		X	X	X	C.10.d.5.a	
C.10.d.5.b	S321	either the measured cross-polar radiation pattern of the antenna or the cross-polar reference radiation pattern							X	X		C.10.d.5.b	
C.10.d.6	S763	if the associated station is a receiving earth station, the lowest total receiving system noise temperature, in Kelvins, referred to the output of the receiving antenna of the earth station under clear-sky conditions			+	+	+				+	C.10.d.6	
C.10.d.7	S165	the antenna diameter, in metres In cases other than RR Appendix 30A, to be provided only for fixed-satellite service networks operating in the frequency band 13.75-14 GHz				+	+			X		C.10.d.7	
C.10.d.8	S650	the equivalent antenna diameter (i.e. the diameter, in metres, of a parabolic antenna with the same off-axis performance as the receiving associated earth station antenna)							X			C.10.d.8	
C.11		SERVICE AREA(S)										C.11	
C.11.a	S384	the service area or areas of the satellite beam on the Earth, when the associated transmitting stations are earth stations For a space station submitted in accordance with RR Appendix 30A or 30B, the service area identified by a set of a maximum of twenty test points and by a service area contour on the surface of the Earth or defined by a minimum elevation angle For advance publication of satellite networks subject to coordination, only a list of countries and geographical areas, using the symbols from the Preface, or a narrative description of the service area shall be supplied ⁷	X	X	X	X	X			X	X	C.11.a	

[illegible]

RR Appendix 4 Item	RDD reference number	RR Appendix 4 Data Description <i>C - CHARACTERISTICS TO BE PROVIDED FOR EACH GROUP OF FREQUENCY ASSIGNMENTS FOR A SATELLITE ANTENNA BEAM OR AN EARTH STATION OR RADIO ASTRONOMY ANTENNA</i>	Advance publication of a geostationary-satellite network	Advance publication of a non-geostationary-satellite network subject to coordination under Section II of Article 9	Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix	Radio astronomy
C.13.b	S858	the type of radio astronomy station in the frequency band shown under C.3.b - Single-dish, "S", telescope used for spectral-line or continuum observations using single-dishes or closely connected arrays - Very long baseline interferometry (VLBI), "V", station used only for VLBI observations										C.13.b	X
C.13.c	S859	the minimum elevation angle θ_{min} at which the radio astronomy station conducts single-dish or VLBI observations in the frequency band										C.13.c	X
C.14		Not used										C.14	
C.15		DESCRIPTION OF THE GROUP(S) REQUIRED IN THE CASE OF NON-SIMULTANEOUS EMISSIONS										C.15	
C.15.a	S712	if part of an exclusive operation group, the group identification code For non-plan services, this data may be provided by administrations that so desire but only when simple frequency-changing transponders are used on the space station onboard a geostationary satellite							+	+	+	C.15.a	
D.1		CONNECTION BETWEEN EARTH-TO-SPACE AND SPACE-TO-EARTH FREQUENCIES IN THE NETWORK										D.1	
D.1.a	S610	the <i>connection</i> between uplink and downlink beam frequency assignments in each transponder for each intended combination of receiving and transmitting beams ⁷				O						D.1.a	
D.1.a	S774	the connection between uplink and downlink assignment coordination group frequency assignments in each transponder for each intended combination of receiving and transmitting beams In the case of RR Appendix 30 or 30A, required only in Region 2 ⁷							+	+		D.1.a	

RR Appendix 4 Item	RDD reference number	RR Appendix 4 Data Description <i>D - OVERALL LINK CHARACTERISTICS</i>	Advance publication of a geostationary-satellite network	Advance publication of a non-geostationary-satellite network subject to coordination under Section II of Article 9	Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix	Radio astronomy
D.2		TRANSMISSION GAINS AND ASSOCIATED EQUIVALENT SATELLITE LINK NOISE TEMPERATURES										D.2	
D.2.a		For each entry under D.1.a:										D.2.a	
D.2.a.1	S287	the lowest equivalent satellite link noise temperature These values shall be indicated for the nominal value of the angle of elevation				O						D.2.a.1	
D.2.a.2	S289	the associated transmission gain of the lowest equivalent satellite link noise temperature These values shall be indicated for the nominal value of the angle of elevation The transmission gain is evaluated from the output of the receiving antenna of the space station to the output of the receiving antenna of the earth station				O						D.2.a.2	
D.2.b.1	S286	the values of associated equivalent satellite link noise temperature that correspond to the highest ratio of transmission gain to equivalent satellite link noise temperature				O						D.2.b.1	
D.2.b.2	S288	the values of transmission gain that correspond to the highest ratio of transmission gain to equivalent satellite link noise temperature				O						D.2.b.2	

Notes to Table 2 (variations from RR Appendix 4)

1 RR Appendix 4 footnote “Not required for coordination under No. 9.7A”

2 RR Appendix 4 footnote “The most recent version of Recommendation ITU-R SF.675 should be used to the extent applicable in calculating the maximum power density per Hz. For carriers below 15 GHz, the power density is averaged over the worst 4 kHz band. For carriers at or above 15 GHz, the power density is averaged over the worst 1 MHz band. In the case of assignments with a bandwidth less than the stated averaging bandwidth, the maximum density is calculated as if the assignment occupied the averaging bandwidth”.

3 Addition: the limits on the values of pfd/500 kHz required by data items A.17.e.1 and A.17.e.2 are different depending on whether the radio astronomy station is operating as a single dish telescope or as part of a very long baseline interferometer, therefore the type of radio astronomy station has to be linked with the pfd value.

4 Modification: currently shown as required if the frequency assignment is to be supplied under RR No. 4.4, however at the API stage there is no information on the frequency assignments only the frequency range and therefore this information is not applicable.

5 Explanation: at WRC-03 the requirement was added to identify which satellites in an orbit use a particular beam and this was applied for all non-geostationary satellite networks. However, for this information to be collected for non-geostationary satellite networks not subject to coordination under Section II of RR Article 9 further information, like the initial phase angle (A.4.b.5), would be required if any beam was not common to every non-geostationary satellite in a specific non-geostationary orbit. It also should be considered if the data is only necessary at the notification stage.

6 Modification: shown in RR Appendix 4 as mandatory, however, the co-polar antenna gain contour is only mandatory for transmitting and receiving space to Earth beams. For space to space beams the information on the co-polar radiation pattern is required (B.3.c.1 – RDD data item S122).

7 Explanation: shown in RR Appendix 4 as a single data item, in the RDD they are sub-divided into separate elements. The indication of the data item requirement resulting sub-division from sub-division in the RDD is identical to the requirements stated in RR Appendix 4. The sub-division in the RDD does not indicate any inaccuracy on the part of RR Appendix 4, it is simply that the mechanism used within the RDD to arrive at a precise definition of the data requires consideration of the data structure, which may vary for different types of operation e.g. space to Earth and inter-satellite. In addition, RR Appendix 4 legitimately identifies the high level data requirement, but for supplying the data further information would be necessary. Examples of this process of sub-division are the power densities under C.8.a., C.8.b and C.8.c (see footnote²), where RR Appendix 4 describes the requirement for the power density, but in practice the reference bandwidth is dependent on the assigned frequency. The RDD incorporates the reference bandwidth within the definition of the data item and therefore shows two separate data items, one for a reference bandwidth of 4 kHz and one for a reference bandwidth of 1 MHz.

8 Explanation: either S187 or S718 for non-geostationary operation or geostationary operation as appropriate.

SECTION 9

APPENDICES TO SECTIONS 1 TO 8 OF THE RDD

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9.1 Appendix 1: Codes Designating Notifying Administrations

Note 1: The presence of any given code designating a country with respect to a frequency assignment to a station is without prejudice to any question of territorial status which may be involved.

Note 2: Some codes do not designate an ITU Member, and cover international frequency assignments which are not notified by any country.

Code	Name of the administration (ITU Member State)
AFG	Afghanistan
AFS	South Africa (Republic of)
AGL	Angola (Republic of)
ALB	Albania (Republic of)
ALG	Algeria (People's Democratic Republic of)
AND	Andorra (Principality of)
ARG	Argentine Republic
ARM	Armenia (Republic of)
ARS	Saudi Arabia (Kingdom of)
ATG	Antigua and Barbuda
AUS	Australia
AUT	Austria
AZE	Azerbaijani Republic
B	Brazil (Federative Republic of)
BAH	Bahamas (Commonwealth of the)
BDI	Burundi (Republic of)
BEL	Belgium
BEN	Benin (Republic of)
BFA	Burkina Faso
BGD	Bangladesh (People's Republic of)
BHR	Bahrain (Kingdom of)
BIH	Bosnia and Herzegovina
BLR	Belarus (Republic of)
BLZ	Belize
BOL	Bolivia (Republic of)
BOT	Botswana (Republic of)
BRB	Barbados
BRM	Myanmar (Union of)
BRU	Brunei Darussalam
BTN	Bhutan (Kingdom of)
BUL	Bulgaria (Republic of)
CAF	Central African Republic
CAN	Canada
CBG	Cambodia (Kingdom of)
CHL	Chile
CHN	China (People's Republic of)
CLM	Colombia (Republic of)

Code	Name of the administration (ITU Member State)
CLN	Sri Lanka (Democratic Socialist Republic of)
CME	Cameroon (Republic of)
COD	Congo (Democratic Republic of the)
COG	Congo (Republic of the)
COM	Comoros (Union of the)
CPV	Cape Verde (Republic of)
CTI	Côte d'Ivoire (Republic of)
CTR	Costa Rica
CUB	Cuba
CVA	Vatican City State
CYP	Cyprus (Republic of)
CZE	Czech Republic
D	Germany (Federal Republic of)
DJI	Djibouti (Republic of)
DMA	Dominica (Commonwealth of)
DNK	Denmark
DOM	Dominican Republic
E	Spain
EGY	Egypt (Arab Republic of)
EQA	Ecuador
ERI	Eritrea
EST	Estonia (Republic of)
ETH	Ethiopia (Federal Democratic Republic of)
F	France
FIN	Finland
FJI	Fiji (Republic of)
FSM	Micronesia (Federated States of)
G	United Kingdom of Great Britain and Northern Ireland
GAB	Gabonese Republic
GEO	Georgia
GHA	Ghana
GMB	Gambia (Republic of the)
GNB	Guinea-Bissau (Republic of)
GNE	Equatorial Guinea (Republic of)
GRC	Greece
GRD	Grenada
GTM	Guatemala (Republic of)
GUI	Guinea (Republic of)
GUY	Guyana
HND	Honduras (Republic of)
HNG	Hungary (Republic of)
HOL	Netherlands (Kingdom of the)
HRV	Croatia (Republic of)
HTI	Haiti (Republic of)
I	Italy
IND	India (Republic of)
INS	Indonesia (Republic of)

Code	Name of the administration (ITU Member State)
IRL	Ireland
IRN	Iran (Islamic Republic of)
IRQ	Iraq (Republic of)
ISL	Iceland
ISR	Israel (State of)
ITU	This symbol indicates recordings in the Master Register which do not result from a notification, such as allotments and frequencies for common use, which are entered by the BR in accord. with the relevant provisions of the RR. It is also used in some cases in frequency plans for entries in respect of the requirements conference concerned.
J	Japan
JMC	Jamaica
JOR	Jordan (Hashemite Kingdom of)
KAZ	Kazakhstan (Republic of)
KEN	Kenya (Republic of)
KGZ	Kyrgyz Republic
KIR	Kiribati (Republic of)
KOR	Korea (Republic of)
KRE	Democratic People's Republic of Korea
KWT	Kuwait (State of)
LAO	Lao People's Democratic Republic
LBN	Lebanon
LBR	Liberia (Republic of)
LBY	Libya (Socialist People's Libyan Arab Jamahiriya)
LCA	Saint Lucia
LIE	Liechtenstein (Principality of)
LSO	Lesotho (Kingdom of)
LTU	Lithuania (Republic of)
LUX	Luxembourg
LVA	Latvia (Republic of)
MAU	Mauritius (Republic of)
MCO	Monaco (Principality of)
MDA	Moldova (Republic of)
MDG	Madagascar (Republic of)
MEX	Mexico
MHL	Marshall Islands (Republic of the)
MKD	The former Yugoslav Republic of Macedonia
MLA	Malaysia
MLD	Maldives (Republic of)
MLI	Mali (Republic of)
MLT	Malta
MNG	Mongolia
MOZ	Mozambique (Republic of)
MRC	Morocco (Kingdom of)
MTN	Mauritania (Islamic Republic of)
MWI	Malawi
NCG	Nicaragua
NGR	Niger (Republic of the)

Code	Name of the administration (ITU Member State)
NIG	Nigeria (Federal Republic of)
NMB	Namibia (Republic of)
NOR	Norway
NPL	Nepal
NRU	Nauru (Republic of)
NZL	New Zealand
OMA	Oman (Sultanate of)
ONC	Stations of the “United Nations Military Observer Group in India and Pakistan”.
ONJ	Stations of the “United Nations Truce Supervision Organization in areas between the Armistice Demarcation Lines at Jerusalem”.
ONU	United Nations
PAK	Pakistan (Islamic Republic of)
PHL	Philippines (Republic of the)
PNG	Papua New Guinea
PNR	Panama (Republic of)
POL	Poland (Republic of)
POR	Portugal
PRG	Paraguay (Republic of)
PRU	Peru
QAT	Qatar (State of)
ROU	Romania
RRW	Rwandese Republic
RUS	Russian Federation
S	Sweden
SDN	Sudan (Republic of the)
SEN	Senegal (Republic of)
SEY	Seychelles (Republic of)
SLM	Solomon Islands
SLV	El Salvador (Republic of)
SMO	Samoa (Independent State of)
SMR	San Marino (Republic of)
SNG	Singapore (Republic of)
SOM	Somali Democratic Republic
SRL	Sierra Leone
STP	Sao Tome and Principe (Democratic Republic of)
SUI	Switzerland (Confederation of)
SUR	Suriname (Republic of)
SVK	Slovak Republic
SVN	Slovenia (Republic of)
SWZ	Swaziland (Kingdom of)
SYR	Syrian Arab Republic
TCD	Chad (Republic of)
TGO	Togolese Republic

Code	Name of the administration (ITU Member State)
THA	Thailand
TJK	Tajikistan (Republic of)
TKM	Turkmenistan
TON	Tonga (Kingdom of)
TRD	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TUV	Tuvalu
TZA	Tanzania (United Republic of)
UAE	United Arab Emirates
UGA	Uganda (Republic of)
UKR	Ukraine
URG	Uruguay (Eastern Republic of)
URS	In column B (notifying administration) only against assignments notified by the Administration of ex-USSR
USA	United States of America
UZB	Uzbekistan (Republic of)
VCT	Saint Vincent and the Grenadines
VEN	Venezuela (Bolivarian Republic of)
VTN	Viet Nam (Socialist Republic of)
VUT	Vanuatu (Republic of)
YEM	Yemen (Republic of)
YUG	Serbia and Montenegro
ZMB	Zambia (Republic of)
ZWE	Zimbabwe (Republic of)

9.2 Appendix 2: List Of Intergovernmental Satellite Organizations

Code	Intergovernmental Satellite Organization	Notifying Administration
ARB	ARABSAT	ARS
ASA	ASETA	VEN
ESA	EUROPEAN SPACE AGENCY	F
EUT	EUTELSAT	F
GLS	GALILEO	F
IK	INTERSPOUTNIK	BLR
IK	INTERSPOUTNIK	CUB
INM ¹⁾	INMARSAT	G
IT ²⁾	INTELSAT	USA
NOT	NOTELSAT	S
RAS	RASCOM	CTI

¹⁾ Symbol used up to 15.04.1999 see WIC 2379 25.05.1999.

²⁾ Symbol used up to 18.07.2001 see IFIC 2450 07.08.2001.

9.3 Appendix 3: Codes Designating Geographical Areas

Note: The codes have a geographical significance only. The presence of any given code designating a country or a geographical area with respect to a frequency assignment to a station is without prejudice to any question of territorial status which may be involved.

Code	Radiocommunication Region	Notifying Administration	Name of the geographical area
AAA*	Shared throughout the world.		
AAB	Shared by several countries, but in a restricted area of the world.		
MMM	This code is used to indicate the use of the frequency assignment for inter-ship communications.		
MWM	This code is used to indicate either a coordination that is required, or one that has been obtained, on a worldwide basis.		
ABW	2	HOL	Aruba
AFG	3	AFG	Afghanistan
AFS	1	AFS	South Africa (Republic of)
AGL	1	AGL	Angola (Republic of)
AIA	2	G	Anguilla
ALB	1	ALB	Albania (Republic of)
ALG	1	ALG	Algeria (People's Democratic Republic of)
ALS	2	USA	Alaska (State of)
AMS	3	F	Saint Paul and Amsterdam Islands
AND	1	AND	Andorra (Principality of)
AOE	1	MRC**	Western Sahara
ARG	2	ARG	Argentine Republic
ARM	1	ARM	Armenia (Republic of)
ARS	1	ARS	Saudi Arabia (Kingdom of)
ASC	1	G	Ascension Island
ATA	Antarctic		
ATG	2	ATG	Antigua and Barbuda
ATN	2	HOL	Netherlands Antilles
AUS	3	AUS	Australia
AUT	1	AUT	Austria
AZE	1	AZE	Azerbaijani Republic
AZR	1	POR	Azores
B	2	B	Brazil (Federative Republic of)
BAH	2	BAH	Bahamas (Commonwealth of the)
BDI	1	BDI	Burundi (Republic of)
BEL	1	BEL	Belgium
BEN	1	BEN	Benin (Republic of)
BER	2	G	Bermuda
BFA	1	BFA	Burkina Faso
BGD	3	BGD	Bangladesh (People's Republic of)
BHR	1	BHR	Bahrain (Kingdom of)
BIH	1	BIH	Bosnia and Herzegovina
BIO	3	G	Chagos Islands (Indian Ocean)
BLR	1	BLR	Belarus (Republic of)

* Used by all administrations.

** Under certain conditions.

Code	Radiocommunication Region	Notifying Administration	Name of the geographical area
BLZ	2	BLZ	Belize
BOL	2	BOL	Bolivia (Republic of)
BOT	1	BOT	Botswana (Republic of)
BRB	2	BRB	Barbados
BRM	3	BRM	Myanmar (Union of)
BRU	3	BRU	Brunei Darussalam
BTN	3	BTN	Bhutan (Kingdom of)
BUL	1	BUL	Bulgaria (Republic of)
CAF	1	CAF	Central African Republic
CAN	2	CAN	Canada
CAR	3	USA	Caroline Islands
CBG	3	CBG	Cambodia (Kingdom of)
CHL	2	CHL	Chile
CHN	3	CHN	China (People's Republic of)
CHR	3	AUS	Christmas Island (Indian Ocean)
CKH	3	NZL	Cook Islands
CLM	2	CLM	Colombia (Republic of)
CLN	3	CLN	Sri Lanka (Democratic Socialist Republic of)
CME	1	CME	Cameroon (Republic of)
CNR	1	E	Canary Islands
COD	1	COD	Democratic Republic of the Congo
COG	1	COG	Congo (Republic of the)
COM	1	COM	Comoros (Union of the)
CPV	1	CPV	Cape Verde (Republic of)
CRO	1	F	Crozet Archipelago
CTI	1	CTI	Côte d'Ivoire (Republic of)
CTR	2	CTR	Costa Rica
CUB	2	CUB	Cuba
CVA	1	CVA	Vatican City State
CYM	2	G	Cayman Islands
CYP	1	CYP	Cyprus (Republic of)
CZE	1	CZE	Czech Republic
D	1	D	Germany (Federal Republic of)
DGA	3	G	Diego Garcia
DJI	1	DJI	Djibouti (Republic of)
DMA	2	DMA	Dominica (Commonwealth of)
DNK	1	DNK	Denmark
DOM	2	DOM	Dominican Republic
E	1	E	Spain
EGY	1	EGY	Egypt (Arab Republic of)
EQA	2	EQA	Ecuador
ERI	1	ERI	Eritrea
EST	1	EST	Estonia (Republic of)
ETH	1	ETH	Ethiopia (Federal Democratic Republic of)
F	1	F	France
FIN	1	FIN	Finland
FJI	3	FJI	Fiji (Republic of)
FLK	2	G	Falkland Islands (Malvinas)
FSM	3	FSM	Micronesia (Federated States of)
G	1	G	United Kingdom of Great Britain and Northern Ireland

Code	Radiocommunication Region	Notifying Administration	Name of the geographical area
GAB	1	GAB	Gabonese Republic
GCA	1	G	United Kingdom (Non-metropolitan) – Region 1
GCC	3	G	United Kingdom – Region 3
GDL	2	F	Guadeloupe (French Department of)
GEO	1	GEO	Georgia
GHA	1	GHA	Ghana
GIB	1	G	Gibraltar
GMB	1	GMB	Gambia (Republic of the)
GNB	1	GNB	Guinea-Bissau (Republic of)
GNE	1	GNE	Equatorial Guinea (Republic of)
GRC	1	GRC	Greece
GRD	2	GRD	Grenada
GRL	2	DNK	Greenland
GTM	2	GTM	Guatemala (Republic of)
GUF	2	F	Guiana (French Department of)
GUI	1	GUI	Guinea (Republic of)
GUM	3	USA	Guam
GUY	2	GUY	Guyana
HKG	3	CHN	Hongkong (Special Administrative Region on China)
HND	2	HND	Honduras (Republic of)
HNG	1	HNG	Hungary (Republic of)
HOL	1	HOL	Netherlands (Kingdom of the)
HRV	1	HRV	Croatia (Republic of)
HTI	2	HTI	Haiti (Republic of)
HWA	3	USA	Hawaii (State of)
I	1	I	Italy
ICO	3	AUS	Cocos (Keeling) Islands
IND	3	IND	India (Republic of)
INS	3	INS	Indonesia (Republic of)
IRL	1	IRL	Ireland
IRN	3	IRN	Iran (Islamic Republic of)
IRQ	1	IRQ	Iraq (Republic of)
ISL	1	ISL	Iceland
ISR	1	ISR	Israel (State of)
J	3	J	Japan
JMC	2	JMC	Jamaica
JON	2	USA	Johnston Island
JOR	1	JOR	Jordan (Hashemite Kingdom of)
KAZ	1	KAZ	Kazakhstan (Republic of)
KEN	1	KEN	Kenya (Republic of)
KER	3	F	Kerguelen Islands
KGZ	1	KGZ	Kyrgyz Republic
KIR	3	KIR	Kiribati (Republic of)
KOR	3	KOR	Korea (Republic of)
KRE	3	KRE	Democratic People's Republic of Korea
KWT	1	KWT	Kuwait (State of)
LAO	3	LAO	Lao People's Democratic Republic
LBN	1	LBN	Lebanon
LBR	1	LBR	Liberia (Republic of)
LBY	1	LBY	Libya (Socialist People's Libyan Arab Jamahiriya)

Code	Radiocommunication Region	Notifying Administration	Name of the geographical area
LCA	2	LCA	Saint Lucia
LIE	1	LIE	Liechtenstein (Principality of)
LSO	1	LSO	Lesotho (Kingdom of)
LTU	1	LTU	Lithuania (Republic of)
LUX	1	LUX	Luxembourg
LVA	1	LVA	Latvia (Republic of)
MAC	3	POR	Macao (Special Administrative Region of China)
MAU	1	MAU	Mauritius (Republic of)
MCO	1	MCO	Monaco (Principality of)
MDA	1	MDA	Moldova (Republic of)
MDG	1	MDG	Madagascar (Republic of)
MDR	1	POR	Madeira
MDW	2	USA	Midway Islands
MEX	2	MEX	Mexico
MHL	3	USA	Marshall Islands (Republic of the)
MKD	1	MKD	The Former Yugoslav Republic of Macedonia
MLA	3	MLA	Malaysia
MLD	3	MLD	Maldives (Republic of)
MLI	1	MLI	Mali (Republic of)
MLT	1	MLT	Malta
MNG	1	MNG	Mongolia
MOZ	1	MOZ	Mozambique (Republic of)
MRA	3	USA	Northern Mariana Islands (Commonwealth of the)
MRC	1	MRC	Morocco (Kingdom of)
MRN	1	AFS	Marion Island
MRT	2	F	Martinique (French Department of)
MSR	2	G	Montserrat
MTN	1	MTN	Mauritania (Islamic Republic of)
MWI	1	MWI	Malawi
MYT	1	F	Mayotte (Territorial Collectivity of)
NCG	2	NCG	Nicaragua
NCL	3	F	New Caledonia
NFK	3	AUS	Norfolk Island
NGR	1	NGR	Niger (Republic of the)
NIG	1	NIG	Nigeria (Federal Republic of)
NIU	3	NZL	Niue
NMB	1	NMB	Namibia (Republic of)
NOR	1	NOR	Norway
NPL	3	NPL	Nepal
NRU	3	NRU	Nauru (Republic of)
NZL	3	NZL	New Zealand
OCE	3	F	French Polynesia
OMA	1	OMA	Oman (Sultanate of)
PAK	3	PAK	Pakistan (Islamic Republic of)
PAQ	2	CHL	Easter Island
PHL	3	PHL	Philippines (Republic of the)
PHX	3	KIR/USA	Phoenix Islands
PLM	3	USA	Palmyra Islands
PLW	3	PLW	Palau (Republic of)
PNG	3	PNG	Papua New Guinea

Code	Radiocommunication Region	Notifying Administration	Name of the geographical area
PNR	2	PNR	Panama (Republic of)
POL	1	POL	Poland (Republic of)
POR	1	POR	Portugal
PRG	2	PRG	Paraguay (Republic of)
PRU	2	PRU	Peru
PTC	3	G	Pitcairn Island
PTR	2	USA	Puerto Rico
QAT	1	QAT	Qatar (State of)
REU	1	F	Reunion (French Department of)
RG1	1		Region 1
RG2	2		Region 2
RG3	3		Region 3
ROD	3	MAU	Rodrigue
ROU	1	ROU	Romania
RRW	1	RRW	Rwandese Republic
RUS	1	RUS	Russian Federation
S	1	S	Sweden
SCN	2	SCN	Saint Kitts and Nevis
SDN	1	SDN	Sudan (Republic of the)
SEN	1	SEN	Senegal (Republic of)
SEY	1	SEY	Seychelles (Republic of)
SHN	1	G	Saint Helena
SLM	3	SLM	Solomon Islands
SLV	2	SLV	El Salvador (Republic of)
SMA	3	USA	American Samoa
SMO	3	SMO	Samoa (Independent State of)
SMR	1	SMR	San Marino (Republic of)
SNG	3	SNG	Singapore (Republic of)
SOM	1	SOM	Somali Democratic Republic
SPM	2	F	Saint Pierre and Miquelon (Territorial Collectivity of)
SRL	1	SRL	Sierra Leone
STP	1	STP	Sao Tome and Principe (Democratic Republic of)
SUI	1	SUI	Switzerland (Confederation of)
SUR	2	SUR	Suriname (Republic of)
SVK	1	SVK	Slovak Republic
SVN	1	SVN	Slovenia (Republic of)
SWN	2	HND	Swan Islands
SWZ	1	SWZ	Swaziland (Kingdom of)
SYR	1	SYR	Syrian Arab Republic
TCA	2	G	Turks and Caicos Islands
TCD	1	TCD	Chad (Republic of)
TGO	1	TGO	Togolese Republic
THA	3	THA	Thailand
TJK	1	TJK	Tajikistan (Republic of)
TKL	3	NZL	Tokelau
TKM	1	TKM	Turkmenistan
TMP	3	INS	Democratic Republic of Timor-Leste
TON	3	TON	Tonga (Kingdom of)

Code	Radiocommunication Region	Notifying Administration	Name of the geographical area
TRC	1	G	Tristan da Cunha
TRD	2	TRD	Trinidad and Tobago
TUN	1	TUN	Tunisia
TUR	1	TUR	Turkey
TUV	3	TUV	Tuvalu
TZA	1	TZA	Tanzania (United Republic of)
UAE	1	UAE	United Arab Emirates
UGA	1	UGA	Uganda (Republic of)
UKR	1	UKR	Ukraine
URG	2	URG	Uruguay (Eastern Republic of)
URS	1	URS	Only against assignments notified by the Administration of ex-USSR.
USA	2	USA	The 48 contiguous States of the United States of America (excluding the States of Alaska and Hawaii)
UZB	1	UZB	Uzbekistan (Republic of)
VCT	2	VCT	Saint Vincent and the Grenadines
VEN	2	VEN	Venezuela (Bolivarian Republic of)
VIR	2	USA	United States Virgin Islands
VRG	2	G	British Virgin Islands
VTN	3	VTN	Viet Nam (Socialist Republic of)
VUT	3	VUT	Vanuatu (Republic of)
WAK	3	USA	Wake Island
WAL	3	F	Wallis and Futuna Islands
YEM	1	YEM	Yemen (Republic of)
YUG	1	YUG	Serbia and Montenegro
ZMB	1	ZMB	Zambia (Republic of)
ZWE	1	ZWE	Zimbabwe (Republic of)

9.4 Appendix 4: Radiocommunication Services

The Radiocommunication Services are defined in the RR, Chapter I, Article 1 (Terms and definitions).

The Radiodetermination Service while defined in the RR, is not used directly in RR Article 5 (Table of Frequency Allocations). Instead, Radiolocation and Radionavigation are used, as subsets of the Radiodetermination Service.

This table of Radiocommunication Services may not be needed, if the *Class Of Station* defines unambiguously the Radiocommunication Service to which a station pertains. However, for the purpose of checking the conformity of a frequency assignment with RR Article 5, there may be merits in giving directly the radiocommunication service at the assignment level, rather than indirectly through the *Class Of Station* of the two ends of a link.

9.4.1 Table of radiocommunication terrestrial services

Code	Name of the radiocommunication service
B	Broadcasting
D	Radiodetermination
DL	Radiolocation
DN	Radionavigation

Code	Name of the radiocommunication service
DNA	Aeronautical radionavigation
DNM	Maritime radionavigation
F	Fixed
H	Standard frequency and time signal
M	Mobile
MT	Land mobile
MM	Maritime mobile
MA	Aeronautical mobile
MAR	Aeronautical mobile (R)
MAO	Aeronautical mobile (OR)
MX	Mobile except aeronautical mobile
MXO	Mobile except aeronautical mobile (OR)
MXR	Mobile except aeronautical mobile (R)
W	Meteorological aids
Z	Amateur

9.4.2 Table of radiocommunication space services

Code	Name of the radiocommunication service
SA	Radio astronomy
SB	Broadcasting-satellite
SD	Radiodetermination-satellite
SDL	Radiolocation-satellite
SDN	Radionavigation-satellite
SDNA	Aeronautical radionavigation-satellite
SDNM	Maritime radionavigation-satellite
SF	Fixed-satellite
SH	Standard frequency and time signal-satellite
SI	Inter-satellite
SM	Mobile-satellite
SMT	Land mobile-satellite
SMM	Maritime mobile-satellite
SMA	Aeronautical mobile-satellite
SMAR	Aeronautical mobile-satellite (R)
SMAO	Aeronautical mobile-satellite (OR)
SMX	Mobile-satellite, except Aeronautical mobile-satellite

Code	Name of the radiocommunication service
SMXO	Mobile-satellite, except Aeronautical mobile-satellite (OR)
SMXR	Mobile-satellite, except Aeronautical mobile-satellite (R)
SO	Space operation
SR	Space research
SW	Meteorological-satellite
SX	Earth exploration-satellite
SZ	Amateur-satellite

The Aeronautical radionavigation-satellite Service (SDNA) and the Maritime radionavigation-satellite Service (SDNM) do not appear in the Table of Frequency Allocations (RR Article 5), although corresponding Classes Of Stations exist in the Preface to the BR IFIC, Table 6A1, as EO, for a space station in the aeronautical radionavigation-satellite service; TO, for a mobile earth station in the aeronautical radionavigation-satellite service; TZ, for a fixed earth station in the aeronautical radionavigation-satellite service; EQ, for a space station in the maritime radionavigation-satellite service; TQ, for a mobile earth station in the maritime radionavigation-satellite service; TX, for a fixed earth station in the maritime radionavigation-satellite service.

Suffixes

The following suffixes may complement the codes defined in the above Table:

- T Earth-to-space
- S space-to-Earth
- I space-to-space
- P passive
- A active
- D deep space

Example: SR-DT means: space research (deep space) (Earth-to-space).

9.5 Appendix 5: Table Of Classes Of Station

9.5.1 Classes of station for the terrestrial services

Class of station code	Name of the class of station	Code of service as in RR Appendix 4
AL	Land station in the aeronautical radionavigation service	DNA
AM	Mobile station in the aeronautical radionavigation service	DNA
AT	Amateur station	Z
BC	Broadcasting station, sound	B
BT	Broadcasting station, television	B
FA	Aeronautical station, i.e. land station in the aeronautical mobile service	MA
FB	Base station, i.e. land station in the land mobile service	MT
FC	Coast station, i.e. land station in the maritime mobile service	MM

Class of station code	Name of the class of station	Code of service as in RR Appendix 4
FD	Aeronautical station in the aeronautical mobile (R) service	MAR
FG	Aeronautical station in the aeronautical mobile (OR) service	MAO
FL	Land station, i.e. station in the mobile service not intended to be used while in motion	M
FP	Port station, i.e. coast station in the port operations service, part of the maritime mobile service	MM
FX	Fixed station, i.e. station in the fixed service	F
LR	Radiolocation land station, i.e. station in the radiolocation service not intended to be used while in motion	DL
MA	Aircraft station, i.e. mobile station in the aeronautical mobile service	MA
ML	Land mobile station, i.e. mobile station in the land mobile service	MT
MO	Mobile station, i.e. station in the mobile service intended to be used while in motion or during halts at unspecified points	M
MR	Radiolocation mobile station, i.e. station in the radiolocation service intended to be used while in motion or during halts at unspecified points	DL
MS	Ship station, i.e. mobile station in the maritime mobile service	MM
NL	Maritime radionavigation land station	DNM
NR	Radionavigation mobile station, i.e. station in the radionavigation service intended to be used while in motion or during halts at unspecified points	DN
OD	Oceanographic data station	W
OE	Oceanographic data interrogation station	W
PL*	Combination of two or more classes of station (limited to collective entries made under the terms of RR No. 20.5)	–
RM	Maritime radionavigation mobile station	DNM
RN	Radionavigation land station, i.e. station in the radionavigation service not intended to be used while in motion	DN
SA	Mobile station in the meteorological aids service. For example: Radiosonde, i.e. automatic radio transmitter usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data	W
SM	Meteorological aids base station	W
SS	Standard frequency and time signal station	H
Not defined	Radiodetermination station, i.e. station in the radiodetermination service	D
Not defined	Radio Direction-Finding station, i.e. radiodetermination station using radio direction-finding	D
Not defined	Primary Radar, i.e. radiodetermination system based on the comparison of reference signals with radio signals reflected from the position to be determined	D

* No further entries should be made of this type.

Class of station code	Name of the class of station	Code of service as in RR Appendix 4
Not defined	Secondary Radar, i.e. radiodetermination system based on the comparison of reference signals with radio signals retransmitted from the position to be determined	D
Not defined	Radar Beacon (racon), i.e. transmitter-receiver which, when triggered by a radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information	D
Not defined	Radiobeacon station, i.e. station in the radionavigation service the emissions of which are intended to enable a mobile station to determine its bearing or direction in relation to the radiobeacon station	DN
Not defined	Marker beacon, i.e. transmitter in the aeronautical radionavigation service which radiates vertically a distinctive pattern for providing position information to aircraft	DNA
Not defined	Aircraft radio altimeter, used to determine the height of the aircraft above the Earth's surface	DNA
Not defined	Emergency position-indicating radiobeacon (EPIRB) station, i.e. station in the mobile service the emissions of which are intended to facilitate search and rescue operations	M
Not defined	On-board communication station, i.e. mobile station in the maritime mobile service	MM

9.5.2 Classes of station for the space services

Class of station code	Name of the class of station	Code of service as in RR Appendix 4
EA	Space station in the amateur-satellite service	SZ
EB	Space station in the broadcasting-satellite service (sound broadcasting)	SB
EC	Space station in the fixed-satellite service	SF
ED	Space telecommand space station	SO
EE	Space station in the standard frequency-satellite service	SH
EF	Space station in the radiodetermination-satellite service	SD
EG	Space station in the maritime mobile-satellite service	SMM
EH	Space research space station	SR
EI	Space station in the mobile-satellite service	SM
EJ	Space station in the aeronautical mobile-satellite service	SMA
EK	Space tracking space station	SO
EM	Space station in the meteorological-satellite service	SW
EN	Space station in the radionavigation-satellite service	SDN
EO	Space station in the aeronautical radionavigation-satellite service	SDNA
EQ	Space station in the maritime radionavigation-satellite service	SDNM

Class of station code	Name of the class of station	Code of service as in RR Appendix 4
EV	Space station in the broadcasting-satellite service (television)	SB
ER	Space telemetering space station	SO
ES	Space station in the inter-satellite service	SI
ET	Space station in the space operation service	SO
EU	Space station in the land mobile-satellite service	SMT
EW	Space station in the Earth exploration-satellite service	SX
EY	Space station in the time signal-satellite service	SH
RA	Radio astronomy station	SA
TA	Space operation earth station in the amateur-satellite service	SZ
TB	Aeronautical earth station, providing a feeder link for the aeronautical mobile-satellite service	SF
TC	Earth station in the fixed-satellite service	SF
TD	Space telecommand earth station in the space operation service	SO
TE	Mobile earth station; i.e. earth station in the mobile-satellite service the emissions of which are intended to facilitate search and rescue operations (Satellite EPIRB)	SM
TF	Fixed earth station in the radiodetermination-satellite service	SD
TG	Ship earth station, i.e. mobile earth station in the maritime mobile-satellite service	SMM
TH	Earth station in the space research service	SR
TI	Coast earth station, providing a feeder link for the maritime mobile-satellite service	SF
TJ	Aircraft earth station, i.e. mobile earth station (aircraft) in the aeronautical mobile-satellite service	SMA
TK	Space tracking earth station in the space operation service	SO
TL	Mobile earth station in the radiodetermination-satellite service	SD
TM	Earth station in the meteorological-satellite service	SW
TN	Fixed earth station in the radionavigation-satellite service	SDN
TO	Mobile earth station in the aeronautical radionavigation-satellite service	SDNA
TQ	Mobile earth station in the maritime radionavigation-satellite service	SDNM
TR	Space telemetering earth station in the space operation service	SO
TT	Earth station in the space operation service	SO
TU	Land mobile earth station, i.e. mobile earth station in the land mobile-satellite service	SMT
TW	Earth station in the Earth exploration-satellite service	SX
TX	Fixed earth station in the maritime radionavigation-satellite service	SDNM
TY	Base earth station, providing a feeder link for the land mobile-satellite service	SF
TZ	Fixed earth station in the aeronautical radionavigation-satellite service	SDNA
VA	Land earth station, providing a feeder link for the mobile-satellite service	SF

Class of station code	Name of the class of station	Code of service as in RR Appendix 4
UA	Mobile earth station, i.e. earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points	SM
UB	Earth station in the broadcasting-satellite service (sound broadcasting)	SB
UD**	Space telecommand mobile earth station in the space operation service	SO
UE	Earth station in the standard frequency-satellite service	SH
UH**	Mobile earth station in the space research service	SR
UK**	Space tracking mobile earth station in the space operation service	SO
UM	Mobile earth station in the meteorological-satellite service	SW
UN**	Mobile earth station in the radionavigation-satellite service	SDN
UR**	Space telemetering mobile earth station in the space operation service	SO
UT**	Mobile earth station in the space operation service	SO
UV	Earth station in the broadcasting-satellite service (television)	SB
UW**	Mobile earth station in the Earth exploration-satellite service	SX
UY	Earth station in the time signal-satellite service	SH

** Symbols UD, UH, UK, UN, UR, UT and UW should be used when notifying, according to the provisions of RR No. A.11.2 (Orb-88) or RR No. A.13.3 (Orb-88), an earth station in the Earth exploration-satellite service, the space research service or the space operation service intended to be used while in motion or during halts at unspecified points.

9.6 Appendix 6: Antenna Patterns

9.6.1 Space Stations Antenna Patterns

Antenna pattern code	Description
AP7 or AP8	This is used for both uplink and downlink associated earth station antennas. It is based on Annex 3 of RR Appendix 7 and Annex III of RR Appendix 8.
REC-465	This is used for both uplinks and downlinks for analyses under RR Appendix 30B. It is based on Recommendation ITU-R S.465. However, that Recommendation does not describe a complete pattern, so the algorithm has been expanded to describe a complete pattern using the same pattern as above, and described in RR Appendix 7 or RR Appendix 8, in the undefined areas.
REC-580	This is used for both uplinks and downlinks for analyses under RR Appendix 30B. It is based on Recommendation ITU-R S.580.
REC-694	Recommendation ITU-R M.694 "Reference radiation pattern for ship earth station antennas"
REC-1213	Recommendation ITU-R BO.1213, Reference receiving associated earth station antenna pattern for replanning purposes of the WARC-77 BSS plans for Regions 1 and 3.
29-25LOG(FI)	Represents a reference radiation pattern similar to that in Recommendation ITU-R S.465 with side lobe radiation reduced by 3 dB.
27-25LOG(FI)	As above with side lobe radiation reduced by 5 dB.

Antenna pattern code	Description
N-25LOG(FI)	Represents a generic radiation pattern of the same type and allows for values of N other than those listed above.
ND	Quasi-omnidirectional radiation pattern with maximum isotropic gain stated in the appropriate field.
R13TSS	Gain (dBi) of the WARC-77 transmitting space station antenna. This pattern is based on Fig. 9 and § 3.13.3 in Annex 5 of RR Appendix 30 . The co-polar formula is Curve A in Fig. 9, and the cross-polar formula is curve B in Fig. 9. In both the co-polar and cross-polar situations, Curve C in Fig. 9 is the minimum gain.
R13RSS	Gain (dBi) of the receiving space station antenna. This pattern is based on Fig. B in § 3.7.3 of Annex 3 of RR Appendix 30A . The co-polar formula is Curve A in Fig. B, and the cross-polar formula is Curve B in Fig. B.
R123SS	Gain (dBi) of the RARC-83 simple ellipse space station antenna. This pattern is based on: – Figure 10 and § 3.13.3 in Annex 5 of RR Appendix 30 for RARC-83 satellite transmitting antennas. – Figure 7 and § 4.6.3 in Annex 3 of RR Appendix 30A for RARC-83 satellite receiving antennas. – Figure 1 and § 1.7.2 in Annex 1 of RR Appendix 30B for the FSS Allotment Plans. In all cases, the co-polar formula is Curve A, and the cross-polar formula is Curve B. In both the co-polar and cross-polar situations, Curve C is the minimum gain.
R123FR	Gain (dBi) of the RARC-83 , WARC-88 , WRC-97 space station fast roll-off antenna. This pattern is based on: – Figures 11A, 11B in § 3 of RR Appendix 30 and – Figure C in § 3 of RR Appendix 30A.
MODRSS	Gain (dBi) of the receiving space station antenna. It is an implementation of Recommendation ITU-R BO.1296 and has been included at WRC-97 in RR Appendix 30A as Fig. B in § 3 of Annex 3.
MOD13FRTSS	WRC-2000 transmitting space station improved fast roll-off antenna patterns for Regions 1 and 3. Implementation of Recommendation ITU-R BO.1445 . Included at WRC-2000 in RR Appendix 30 as Curves A, B and C of Fig. 13 of § 3.13.3 of Annex 5. The co-polar formula is Curve A in Fig. 13, and the cross-polar formula is Curve B in Fig. 13. In both the co-polar and cross-polar situations, Curve C in Fig. B is the minimum gain.
<i>Note: In addition, and mainly in the framework of RR Appendices 30, 30A or 30B, some administrations have used the following antenna codes</i>	
BIFROST-SS	BIFROST Space Station (transmitting and receiving) antenna pattern (RR Appendix 30B). Based on Fig. 9 and § 3.13.3 in Annex 5 of RR Appendix 30 .
EUTELSAT1	EUTELSAT antenna pattern TYPE 1.

9.6.2 Earth stations antenna patterns

Antenna pattern code	Description
AP7 or AP8	This is used for both uplink and downlink Earth Station antennas. It is based on Annex 3 of Appendix 7 and Annex III of RR Appendix 8.
REC-465	This is used for both uplinks and downlinks for analyses under RR Appendix 30B. It is based on Recommendation ITU-R S.465. However, that Recommendation does not describe a complete pattern, so the algorithm has been expanded to describe a complete pattern using the same pattern as above, and described in RR Appendix 7 or RR Appendix 8, in the undefined areas.
REC-580	This is used for both uplinks and downlinks for analyses under RR Appendix 30B. It is based on Recommendation ITU-R S.580.
REC-694	Recommendation ITU-R M.694 “Reference radiation pattern for ship earth station antennas”
REC-1213	Recommendation ITU-R BO.1213, Reference receiving earth station antenna pattern for replanning purposes of the WARC-77 BSS plans for Regions 1 and 3.
29-25LOG(FI)	Represents a reference radiation pattern similar to that in Recommendation ITU-R S.465 with side lobe radiation reduced by 3 dB.
27-25LOG(FI)	As above with side lobe radiation reduced by 5 dB.
N-25LOG(FI)	Represents a generic radiation pattern of the same type and allows for values of N other than those listed above.
MODTES	Gain (dBi) of the transmitting earth station antenna. It is an implementation of Rec. ITU-R BO.1295 and has been included at WRC-97 in RR Appendix 30A as Fig. A in § 3 of Annex 3.
R2TES	Gain (dBi) of the RARC-83 transmitting earth station antenna. This pattern is based on Fig. 6 and § 4.4.2 of Annex 3 of RR Appendix 30A. This has been expanded to provide a value when ϕ is less than 0.1° .
R2RES	Gain (dBi) of the RARC-83 receiving earth station antenna. It is based on a fixed value for the 3 dB beamwidth of 1.7° . This pattern is based on Fig. 8 and § 3.7.2 in Annex 5 of RR Appendix 30. The co-polar formula is Curve A in Fig. 8, and the cross-polar formula is Curve B in Fig. 8.
R13TES	This is used for earth station antennas for uplinks in Region 1 and 3. It is based on Fig. A and § 3.5.3 in Annex 3 of RR Appendix 30A.
R13RES	Gain (dBi) of the WARC-77 receiving earth station antenna. It is based on a fixed value for the 3 dB beamwidth of 2° . The pattern is based on Fig. 7 and § 3.7.2 in Annex 5 of RR Appendix 30. The co-polar formula is Curve A in Fig. 7, and the cross-polar formula is Curve B in Fig. 7. Individual reception is always used, rather than community reception.
MODRES	It is an implementation for planning purposes of the antenna pattern described in Recommendation ITU-R BO.1213 and identical to REC-1213 above. It has been included as Fig. 7bis of § 3 of RR Appendix 30.

Antenna pattern code	Description
AP30B	This is used for both uplinks and downlinks for analyses under RR Appendix 30B when no other antenna pattern is specified. It is based on Table 1 of § A of Annex 1 of RR Appendix 30B . It has been enhanced to deal with the situation when D/λ is less than 100.
ND	Quasi-omnidirectional radiation pattern with maximum isotropic gain stated in the appropriate field.
<i>Note: In addition, and mainly in the framework of RR Appendices 30, 30A or 30B, some administrations have used the following antenna codes</i>	
DBL-TYP1	This earth station (5 m) antenna pattern is used for uplinks for analyses under RR Appendix 30A .
DBL-TYP2	This earth station (2.5 m) antenna pattern is used for uplinks for analyses under RR Appendix 30A .
BIFROST-RES	Gain (dBi) of BIFROST earth station receiving antenna (1 m antenna, 70% antenna efficiency – used for RR Appendix 30B).
BIFROST-TES1	Gain (dBi) of BIFROST earth station transmitting terminal type 1 antenna (3 m antenna, 70% antenna efficiency – used for RR Appendix 30B).
BIFROST-TES2	Gain (dBi) of BIFROST earth station transmitting terminal type 2 antenna (1 m antenna, 70% antenna efficiency – used for RR Appendix 30B).
DBLTVROI0001	This earth station antenna pattern is used for downlinks for analyses under RR Appendix 30 . The precise pattern is created by the specification of the maximum gain and antenna diameter. The pattern is for individual reception. See the pattern DBLTVROC0001 for community reception.
DBLTVROC0001	This earth station antenna pattern is used for downlinks for analyses under RR Appendix 30 . This pattern is for community reception. See the pattern DBLTVROI0001 for individual reception.
MIX1	This earth station antenna pattern, which is valid only when D/λ is ≥ 100 , is used for both uplinks and downlinks for analyses under RR Appendix 30B . However, the complete pattern is not described, so the algorithm has been expanded to describe a complete pattern using the same pattern as Appendix 30B in the undefined areas.
MIX2	This earth station antenna pattern is used for both uplinks and downlinks for analyses under RR Appendix 30B .

9.7 Appendix 7: Standard Abbreviations For Site Names Compression

In certain instances, the name of the site may be followed by the abbreviated name of the State or province in which the site is located. An abbreviation can be used to signify a description either in a singular or a plural sense.

Abbreviation	Meaning
B	
B	Baie, Bay, Bukhta
BCH	Beach
BK	Bank
BM	Baggermolen
BO	Boundary
BRDG	Bridge
BT	Butte
BY	Buoy, Bouée, Boya
C	
C	Cabo, Cap, Cape, Capo
CD	Ciudad
CHR	Church
CK	Creek
CL	Central
CLLG	College
CNT	Center, Centre
CO	Country
COL	Colonia
COM	frequency for Common use in accordance with RR1220
CP	Camp, Campo
CRY	Cannery
CTG	Cottage
CY	City
D	
DEP	Depot
DM	Dam
DPT	Department, Département, Departamento, Bezirk
DTO	Destacamento
E	
E	East, Eastern, Est, Este
EN	Estación
ES	Estancia
ESTO	Establecimiento
ET	Estate
F	
FAR	Farol
FDA	Fazenda
FDO	Fundo
FLD	Field

Abbreviation	Meaning
FLS	Falls
FT	Fort, Forte, Fuerte
FTR	Fire Tower
G	
GF	Gulf
GOV	Gobernador, Governador
GR	Grand, Grande
GRAL	General
GRD	Guard
GT	Great
GVN	Gavan
H	
HD	Head
HAD	Hacienda
HLL	Hill
HPTL	Hospital
HR	Harbour
HTS	Heights
HVN	Haven
HWAY	Highway
I	
I	Ile, Ilha, Isla, Island, Isle (and plural)
J	
JN	Junction
L	
L	Lac, Lago, Lake (and plural)
LG	Lagoon
LKT	Lookout
LNG	Lodging
LR	Lower
LSTN	Light station
M	
MON	Monument
MT	Mont, Monte, Mount (and plural)
MTN	Mountain (and plural)
MUN	Municipality
N	
N	New, Nouveau, Nouvelle, Nova, Nove, Novo, Nueva, Nuevo
NMON	National Monument
NO	Nord, Norte, North, Northern
NPK	National Park
NRF	National Refuge

Abbreviation	Meaning
NTL	National
O	
OFC	Oficina
OSTR	Ostrov
P	
PK	Peak
PLA	Platform
PMPSTN	Pump station
PNT	Point, Pointe, Ponta, Punta
PR	Prince, Prins, Prinz
PRD	Presidencia, Presidente
PRJ	Project
PRK	Park
PRS	Princess, Princesse
PS	Pass
PT	Port, Porto, Puerto
R	
RCH	Ranch
RCK	Rock
RD	Road (and plural)
RG	Range
RGR	Ranger
RK	Rudnik
RPS	Rapids
RPTR	Repeater
RSVD	Reserve, Reservation
RV	River
RVSD	Riverside

Abbreviation	Meaning
S	
S	Saint, Sainte, San, Sankt, Santa, Santo, Sao, Svata, Svaty, etc.
SD	Sound
SHL	Shoal (and plural)
SO	Sud, South, Southern, Sur
SPR	Springs
SQ	Square
STN	Station
STR	Détroit, Strait, Estrecho
STRM	Stream
SVZ	Sovkhoz
T	
TP	Township
TR	Tower
TRP	Trap
U	
UP	Upper
V	
V	Vila, Villa, Ville
VLG	Village
VLV	Valley
W	
W	West, Western, Oeste, Ouest
Z	
ZVD	Zavod

9.8 Appendix 8: Standard Defined Areas

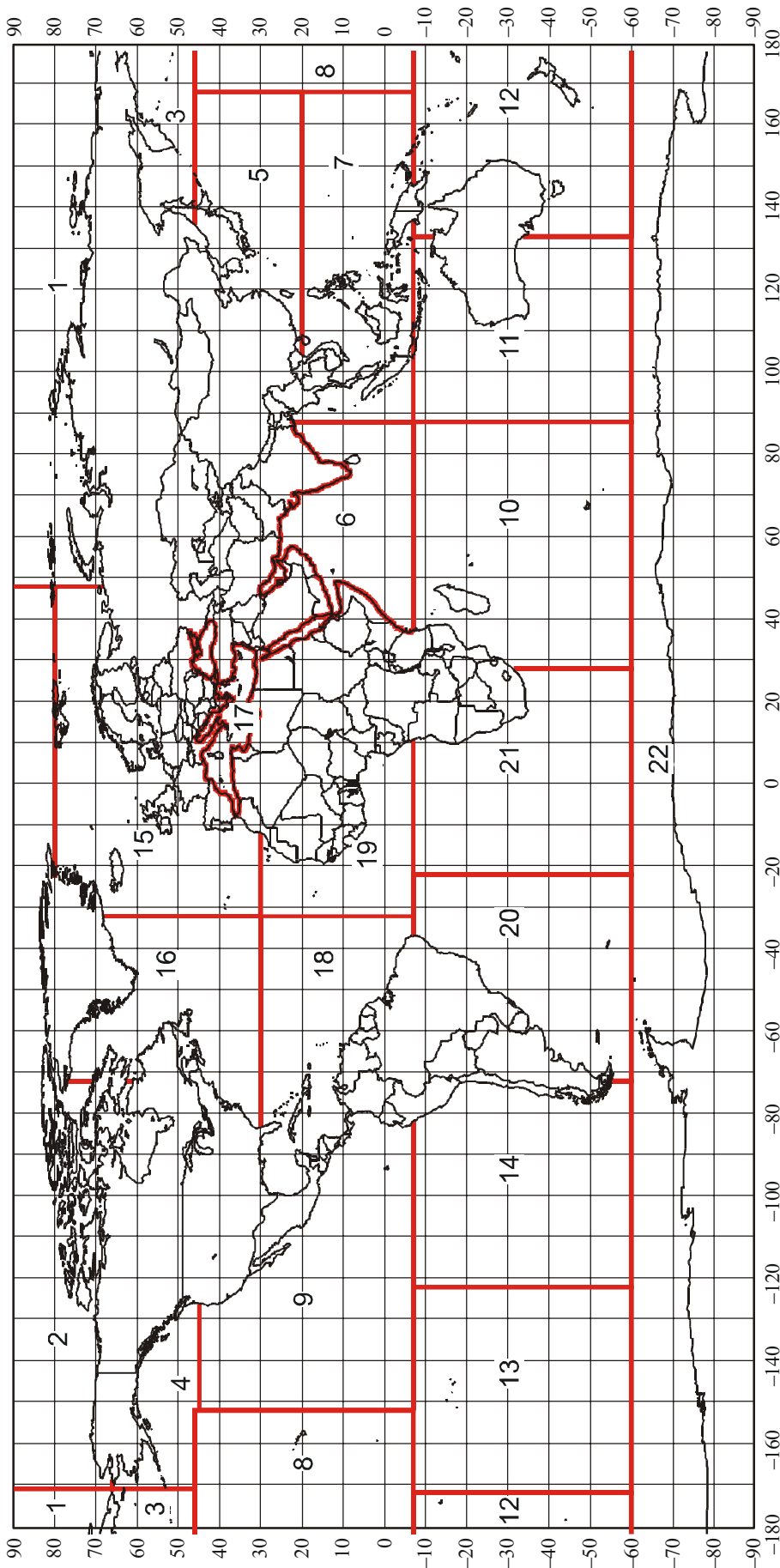
The following codes are either defined in standard references (e.g. MWARA, RDARA in Appendix 27 Aer2) or defined by the BR in consultation with the administration concerned whenever required. In accordance with the RR, an area where a transmitting mobile or transportable station or a receiving station may be located has to be well defined and sufficiently small to make it easy to forecast the conditions of use of the frequency assignment from the propagation point of view.

9.8.1 Zones defined by a geographical area

The codes are listed in Appendix 2.

9.8.2 Standard maritime zones

Maritime zones are shown in the map in figure below. On the notice forms, the code designating a maritime zone has to be preceded by the symbol MAR without an intervening space; e.g. MAR01, MAR02, MAR22.



Carte des Zones Maritimes - Map of Maritime Zones - Mapa de las Zonas Marítimas

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.

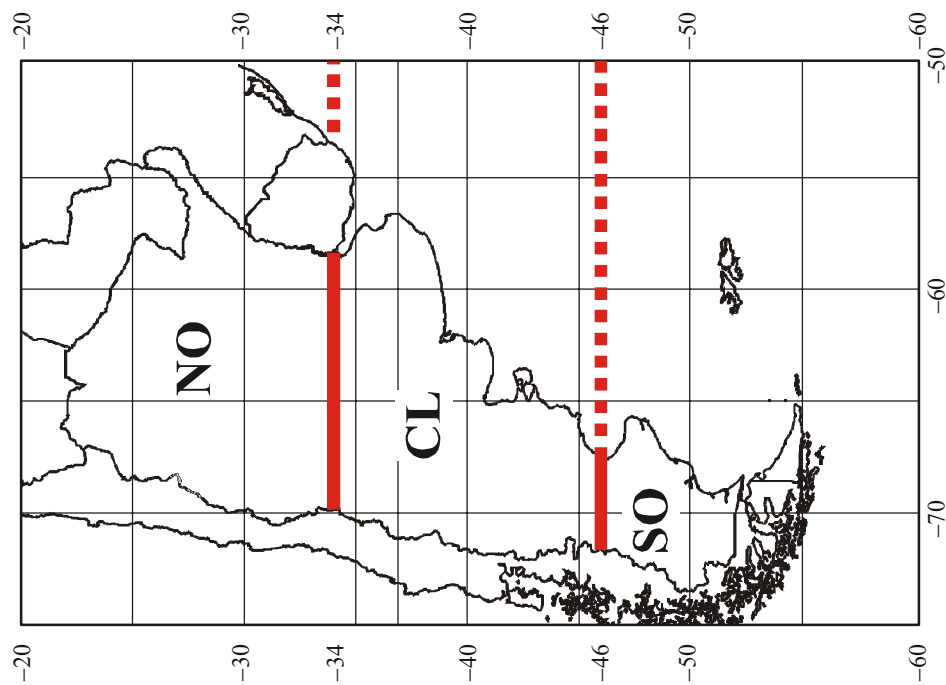
9.8.3 Allotment areas as defined in RR Appendix 25

The Frequency Allotment Plan in RR Appendix 25 contains zones comprising only a part of certain countries; in the entries appearing in List I as representing these allotments (see Section II, Chapter 2, § 3), these zones are represented by the following symbols in Column 4E of the IFL:

Code	Country part	Definition
ARG NO	for ARG North	includes that part of the territory of ARG limited on the south by a line that extends from the western border along parallel 34° S to the coastline including all coast stations of ARG lying to the north of this parallel.
ARG CL	for ARG Central	includes that part of the territory of ARG limited on the south by a line that extends from the western border along parallel 46° S to the coastline and on the north by a line that extends from the western border along parallel 34° S to the coastline including all coast stations of ARG lying between these parallels.
ARG SO	for ARG South	includes that part of the territory of ARG limited on the north by a line that extends from the western border along parallel 46° S to the coastline including all coast stations of ARG lying to the south of this parallel.
AUS E	for AUS East	includes that part of the territory of AUS limited on the west by a line that extends from the northern coastline along meridian 135° E of Greenwich to the southern coastline including all coast stations of AUS lying to the east of this meridian.
AUS W	for AUS West	includes that part of the territory of AUS limited on the east by a line that extends from the northern coastline along meridian 135° E of Greenwich to the southern coastline including all coast stations of AUS lying to the west of this meridian.
CAN CL	for CAN Central	includes that part of the territory of CAN limited on the west by a line that extends from parallel 65° N along meridian 120° W of Greenwich to the southern border, on the east by a line that extends from parallel 65° N along meridian 75° W to the southern border, and on the north by a line that extends from meridian 120° W along parallel 65° N to meridian 75° W including all coast stations of CAN lying to the south of these lines.
CAN E	for CAN East	includes that part of the territory of CAN limited on the west by a line that extends from parallel 63° N along meridian 75° W to the southern border and on the north by a line that extends from meridian 75° W along parallel 63° N to the eastern coastline including all coast stations of CAN lying to the south east of these lines.
CAN NO	for CAN North	includes that part of the territory of CAN limited on the south by a line that extends from the western border along parallel 65° N to its intersection with meridian 75° W, thence along meridian 75° W to its intersection with parallel 63° N, thence along parallel 63° N to the eastern coastline including all coast stations of CAN lying to the north of these lines.
CAN W	for CAN West	includes that part of the territory of CAN limited on the north by a line that extends from the western border along parallel 65° N to its intersection with meridian 120° W and on the east by a line that extends from the parallel 65° N along meridian 120° W of Greenwich to the southern border including all coast stations of CAN lying to the west of meridian 120° W and to the south of parallel 65° N.

Code	Country part	Definition
CHL CL	for CHL Central	includes that part of the territory of CHL limited on the south by a line that extends from the eastern border along parallel 40° S to the coastline and on the north by a line that extends from the eastern border along parallel 30° S to the coastline including all coast stations of CHL lying between these parallels.
CHL NO	for CHL North	includes that part of the territory of CHL limited on the south by a line that extends from the eastern border along parallel 30° S to the coastline including all coast stations of CHL lying to the north of this parallel.
CHL SO	for CHL South	includes that part of the territory of CHL limited on the north by a line that extends from the eastern border along parallel 40° S to the coastline including all coast stations of CHL lying to the south of this parallel.
D1	for D West	includes that part of the territory of Germany limited on the north east by a line that extends from the northern coastline along meridian 10° 55' of east longitude to the parallel 50° 19' N and a line that extends from 10° 55' of east longitude along parallel 50° 19' of north latitude to the eastern border including all coast stations of D lying to the south west of these lines.
D2	for D East	includes that part of the territory of Germany limited on the west by a line that extends from the northern coastline along meridian 10° 55' of east longitude to the parallel 50° 19' N and on the south by a line that extends from 10° 55' of east longitude along parallel 50° 19' of north latitude to the eastern border including all coast stations of D lying to the north east of these lines.
IND E	for IND East	includes that part of the territory of IND limited on the west by a line that extends from the northern border along 77° 30' of east longitude to the southern coastline including all coast stations of IND lying to the east of this longitude.
IND W	for IND West	includes that part of the territory of IND limited on the east by a line that extends from the northern border along 77° 30' of east longitude to the southern coastline including all coast stations of IND lying to the west of this longitude.
MEX E	for MEX East	includes that part of the territory of MEX limited on the west by a line joining the points intersection of the northern border with meridian 110° W; 100° W/20° N; and intersection of the southern border with meridian 92° W including all coast stations of MEX lying to the east of this line.
MEX W	for MEX West	includes that part of the territory of MEX limited on the east by a line joining the points intersection of the northern border with meridian 110° W; 100° W/20° N; and intersection of the southern border with meridian 92° W including all coast stations of MEX lying to the west of this line.
RUS AN	for RUS Northern Asia	includes that part of the territory of RUS limited on the west by a line that extends from the northern coastline along meridian 50° E of Greenwich to the parallel 60° N, thence along parallel 60° N to its intersection with meridian 130° E, thence along a line joining the points 130° E/60° N and 165° E/northern coastline including all coast stations of RUS lying to the north of these lines.

Code	Country part	Definition
RUS AS	for RUS Southern Asia	includes that part of the territory of RUS limited on the north by a line that extends from meridian 50° E along parallel 60° N to its intersection with meridian 130° E; on the west by a line joining the points 50° E/ 60° N and 45° E/50° N, thence along meridian 45° E to the southern border; and on the east by a line that extends from parallel 60° N along meridian 130° E to its intersection with the southern border including all coast stations of RUS lying to the south of these lines.
RUS EO	for RUS Far East	includes that part of the territory of RUS limited on the west by a line that extends from the northern coastline along a line joining the points 165° E/northern coastline and 130° E/60° N, thence along meridian 130° E to the southern border including all coast stations of RUS lying to the east of these lines.
RUS NW	for RUS North West	includes that part of the territory of RUS limited on the east by a line that extends from the northern coastline along meridian 50° E of Greenwich to the parallel 60° N and on the south by a line that extends from the western coastline along parallel 60° N to its intersection with meridian 50° E including all coast stations of RUS lying to the north of these lines.
RUS SW	for RUS South West	includes that part of the territory of RUS limited on the north by a line that extends from the western coastline along parallel 60° N to its intersection with meridian 50° E and on the east by a line that extends from parallel 60° N joining the points 50° E/60° N and 45° E/50° N, thence along meridian 45° E to the southern border including all coast stations of RUS lying to the south west of these lines, but excluding the stations situated in RUS W.
RUS W	for RUS West	includes that part of the territory of RUS which is the geographical area representing the “Kaliningrad Region”.
USA CL	for USA Central	includes that part of the territory of USA limited on the west by a line that extends from the northern border along meridian 110° W of Greenwich to the parallel 35° N, thence along parallel 35° N to its intersection with meridian 85° W, thence along the line joining the points 85° W/35° N and 75° W/42° N, thence along meridian 75° W to the northern border including all coast stations of USA lying to the north of these lines.
USA E	for USA East	includes that part of the territory of USA limited on the west by a line that extends from the eastern coastline along parallel 31° N to its intersection with meridian 85° W of Greenwich, thence along meridian 85° W to the parallel 35° N, thence along the line joining the points 85° W/35° N and 75° W/42° N, thence along meridian 75° W to the northern border including all coast stations of USA lying to the east of these lines.
USA W	for USA West	includes that part of the territory of USA limited on the east by a line that extends from the northern border along meridian 110° W of Greenwich to the southern border including all coast stations of USA lying to the west of this meridian.
USA SO	for USA South	includes that part of the territory of USA limited on the west by a line that extends from the southern border along meridian 110° W of Greenwich to the parallel 35° N, thence along parallel 35° N to its intersection with meridian 85° W, thence along meridian 85° W to its intersection with parallel 31° N, thence along parallel 31° N to the eastern coastline including all coast stations of USA lying to the south of these lines.

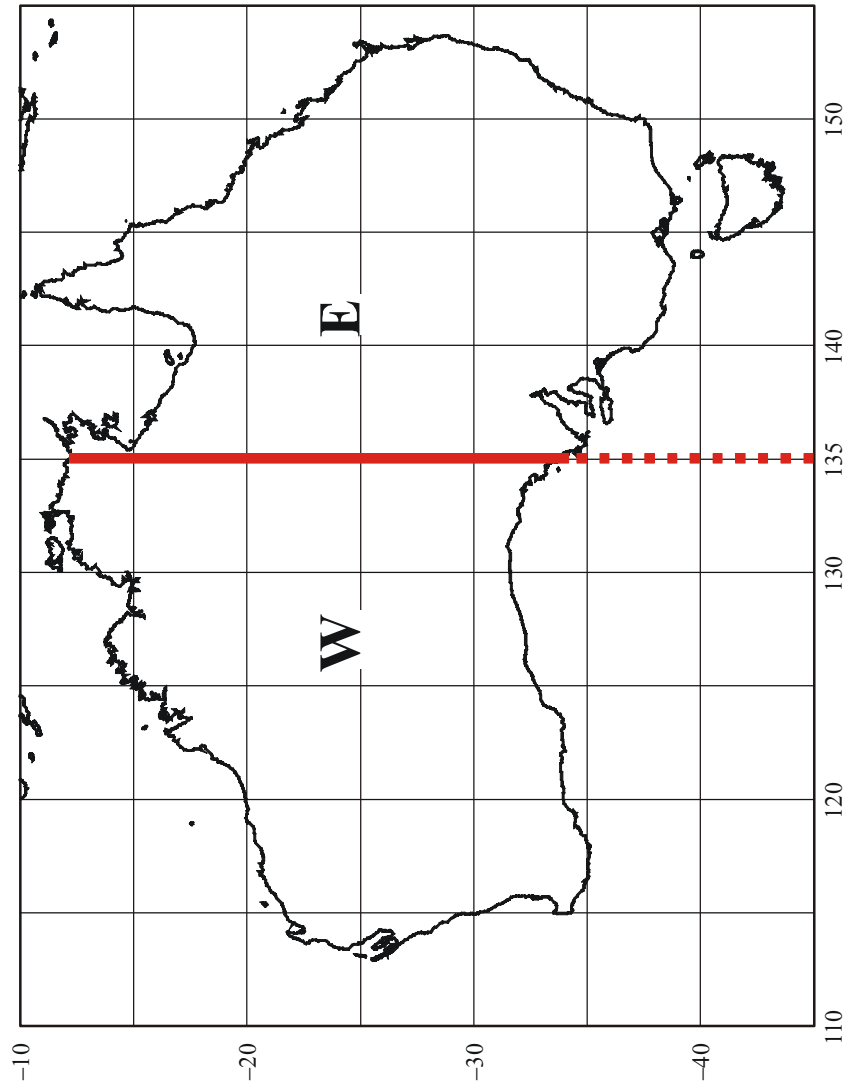


Carte des Zones d'Allotissement ARG - Map of Allotment Areas ARG - Mapa de las Zonas de Adjudicación ARG

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.

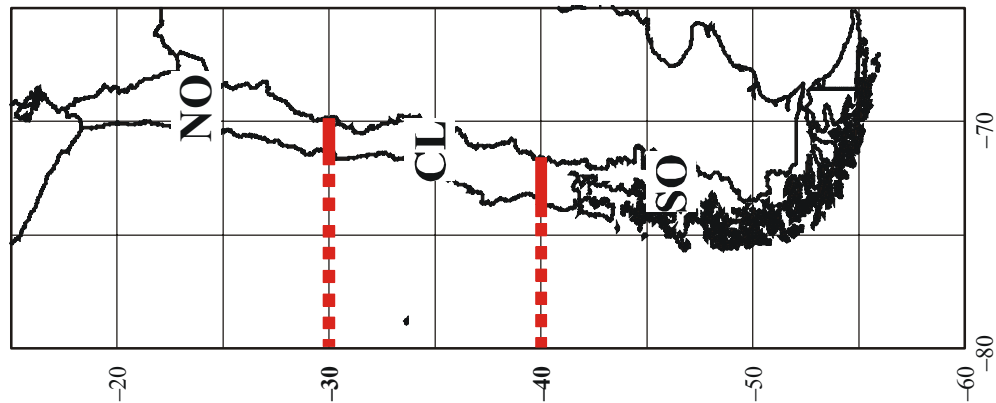


Carte des Zones d'Allotissement AUS - Map of Allotment Areas AUS - Mapa de las Zonas de Adjudicación AUS

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.

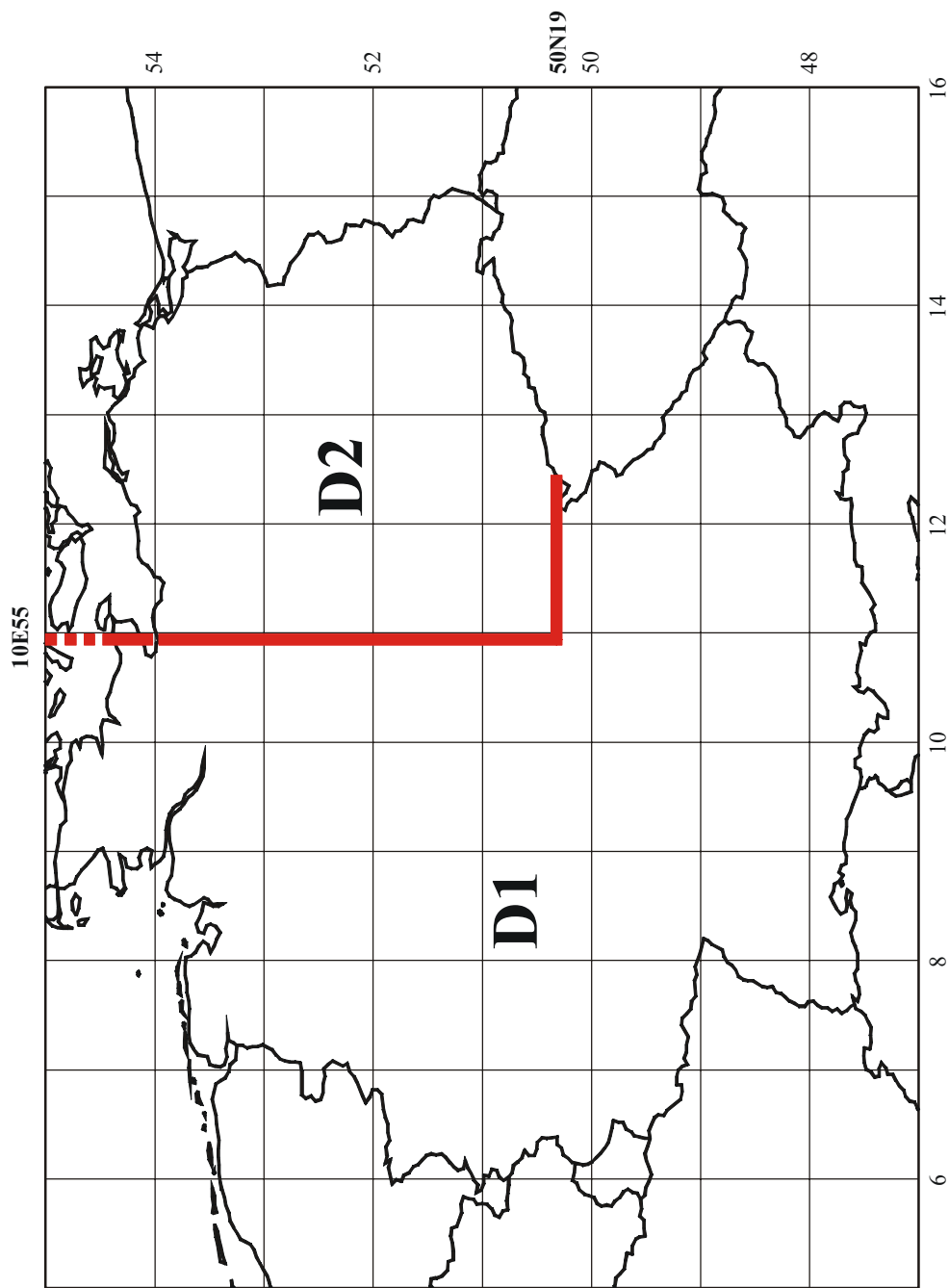


Carte des Zones d'Allotissement CHL - Map of Allotment Areas CHL - Mapa de las Zonas de Adjudicación CHL

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

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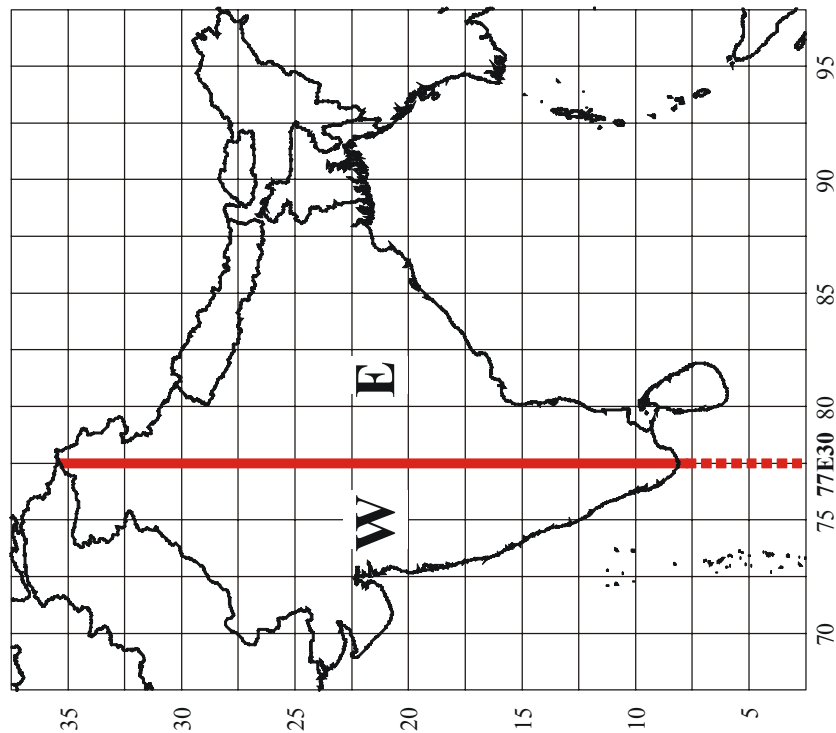


Carte des Zones d'Allotissement D - Map of Allotment Areas D - Mapa de las Zonas de Adjudicación D

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.

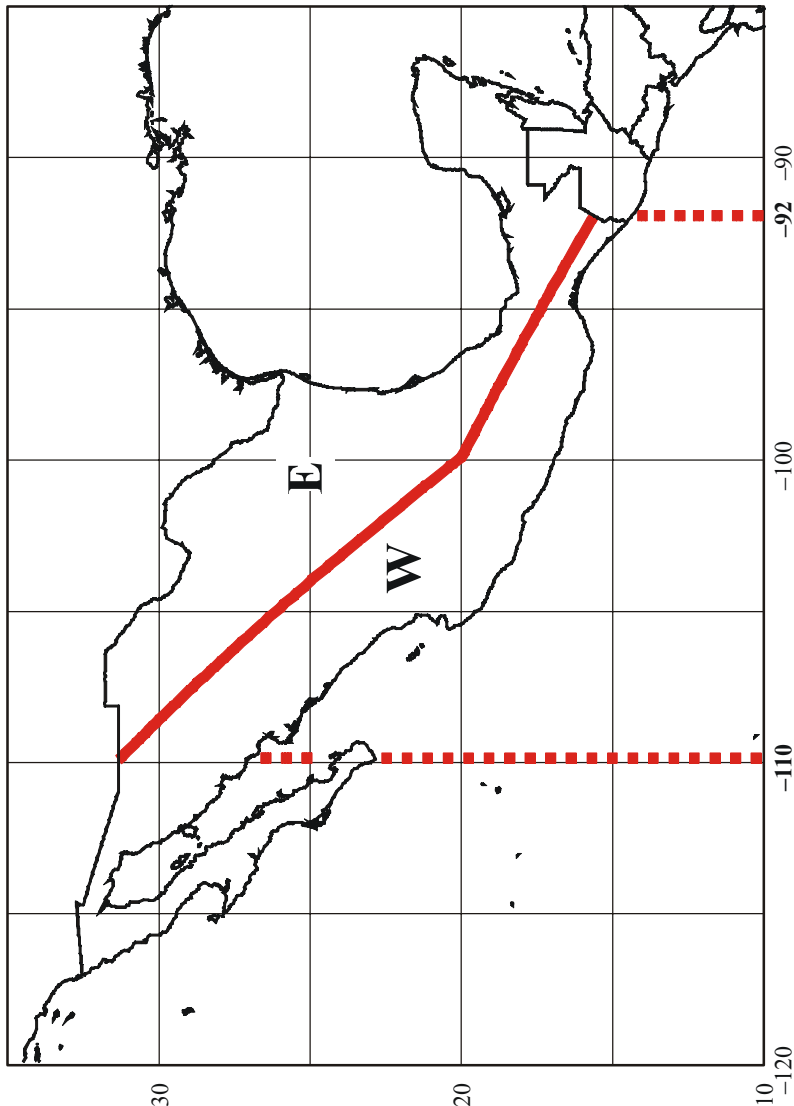


Carte des Zones d'Allotissement IND - Map of Allotment Areas IND - Mapa de las Zonas de Adjudicación IND

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.



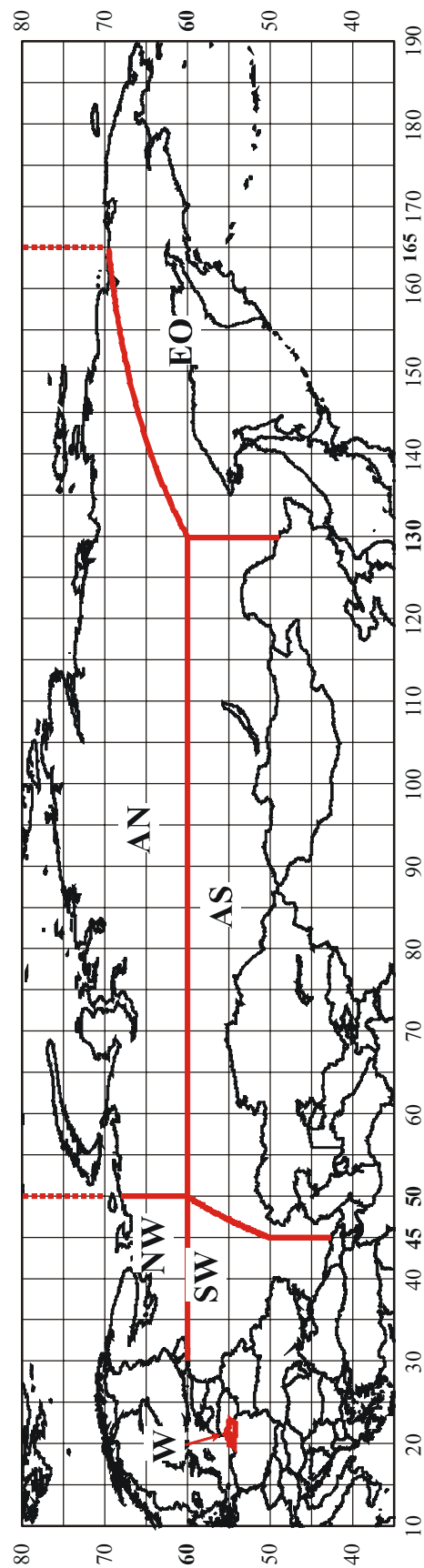
Carte des Zones d'Allotissement MEX - Map of Allotment Areas MEX - Mapa de las Zonas de Adjudicación MEX

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.

1413-Mex

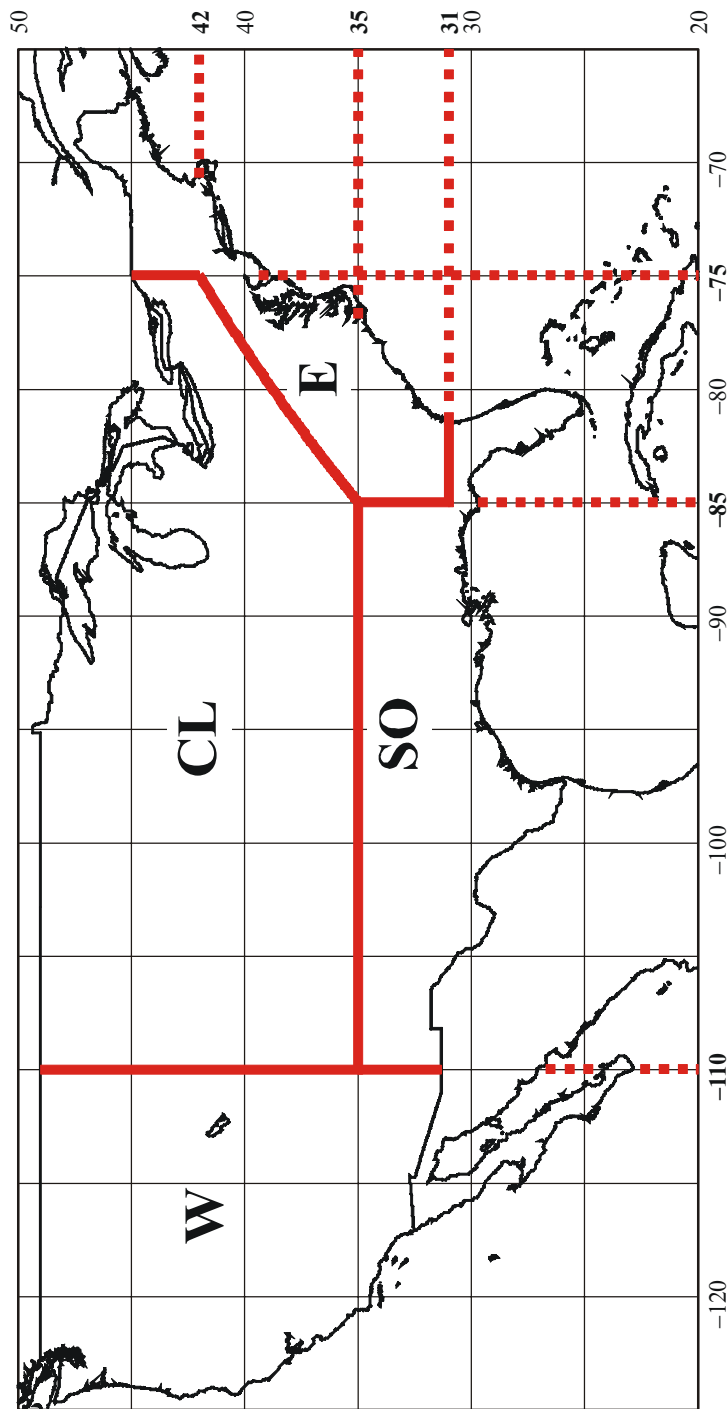


Carte des Zones d'Allotissement RUS - Map of Allotment Areas RUS - Mapa de las Zonas de Adjudicación RUS

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.



Carte des Zones d'Allotissement USA - Map of Allotment Areas USA - Mapa de las Zonas de Adjudicación USA

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quant au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.

9.8.4 Aeronautical zones defined in RR Appendix 26

The allotment areas appearing in RR Appendix 26 are defined by the symbol of the geographical areas, the meaning of which is given in the Table “Areas” of Section IV of the Preface to BR IFIC for terrestrial services. The meaning of the following symbol, which does not appear in this Preface, is given below:

CG7 CUB (Guantanamo) (7), as defined in RR Appendix 26, Geneva 1959; (7) means “USA stations”.

9.8.5 Aeronautical zones defined in RR Appendix 27

In Part II, Section 1, Articles 1 to 4 of RR Appendix 27 Aer2, Geneva, 1979, are defined the Aeronautical Zones for the purpose of the Frequency Allotment Plan for the Aeronautical Mobile (R) Service in the exclusive bands between 2 850 kHz and 22 000 kHz contained in this Appendix.

When notifying frequency allotments or assignments in these Aeronautical Zones, administrations should precede an MWARA Area with symbol M, an RDARA or RDARA Sub-Area with symbol R, a VOLMET Area with symbol V and a Worldwide Area with symbol W in the table below which lists these aeronautical zones and the manner in which they are to be indicated.

Symbol	MWARA	Description of the major world air route areas
MAFI	MWARA – AFI	AFRICA
MCAR	MWARA – CAR	CARIBBEAN
MCEP	MWARA – CEP	CENTRAL EAST PACIFIC
MCWP	MWARA – CWP	CENTRAL WEST PACIFIC
MEA	MWARA – EA	EAST ASIA
MEUR	MWARA – EUR	EUROPE
MINO	MWARA – INO	INDIAN OCEAN
MMID	MWARA – MID	MIDDLE EAST
MNAT	MWARA – NAT	NORTH ATLANTIC
MNCA	MWARA – NCA	NORTH CENTRAL ASIA
MNP	MWARA – NP	NORTH PACIFIC
MSAM	MWARA – SAM	SOUTH AMERICA
MSAT	MWARA – SAT	SOUTH ATLANTIC
MSEA	MWARA – SEA	SOUTH EAST ASIA
MSP	MWARA – SP	SOUTH PACIFIC

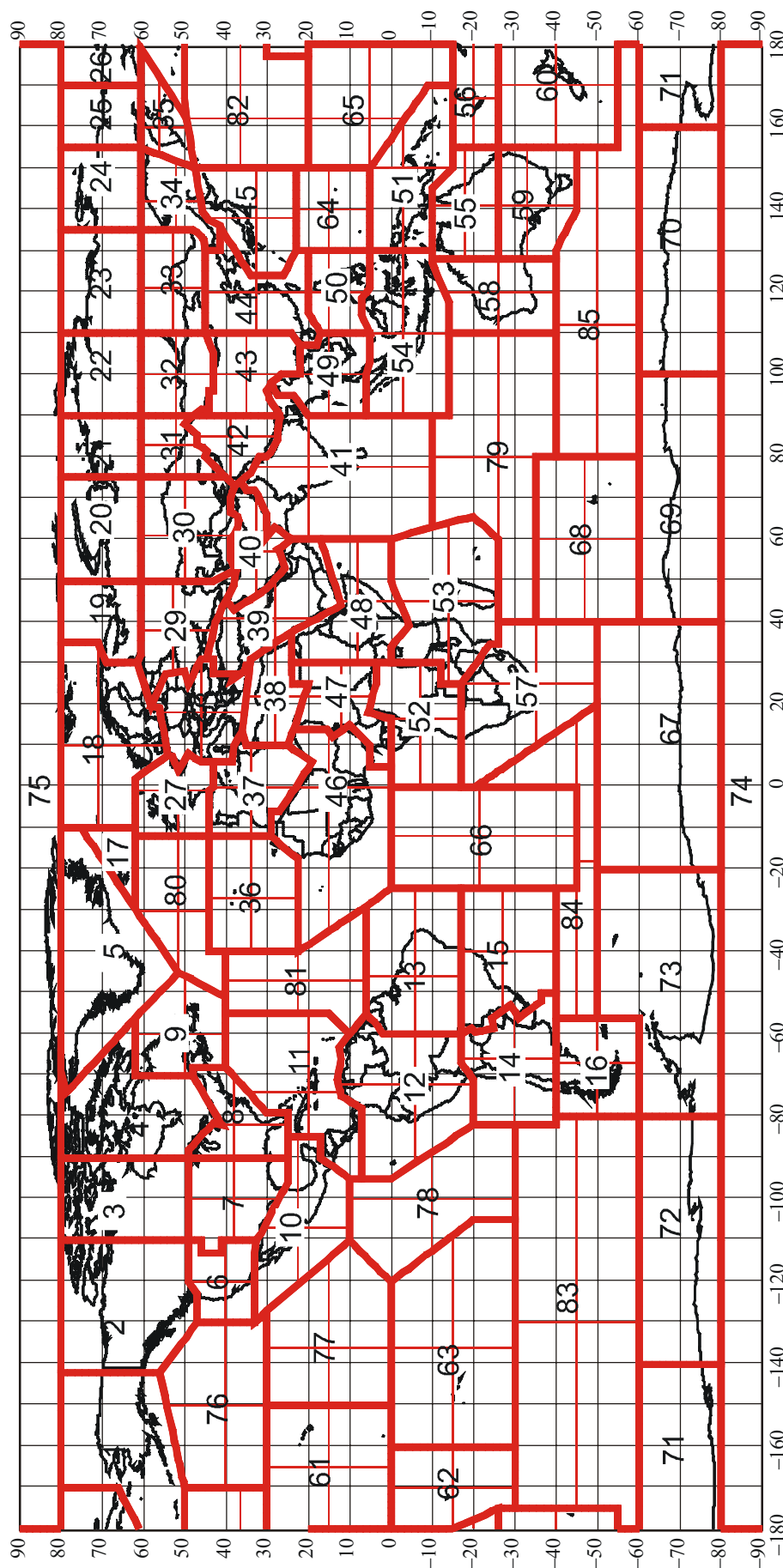
Regional and Domestic Air Route Areas						
Symbol	RDARA	Description		Symbol	RDARA	Description
R1	RDARA-1	Area 1		R10B		Sub-Area 10B
R1A		Sub-Area 1A		R10C		Sub-Area 10C
R1B		Sub-Area 1B		R10D		Sub-Area 10D
R1C		Sub-Area 1C		R10E		Sub-Area 10E
R1D		Sub-Area 1D		R10F		Sub-Area 10F
R1E		Sub-Area 1E		R11	RDARA-11	Area 11
R2	RDARA-2	Area 2		R11A		Sub-Area 11A
R2A		Sub-Area 2A		R11B		Sub-Area 11B
R2B		Sub-Area 2B		R11C		Sub-Area 11C
R2C		Sub-Area 2C		R12	RDARA-12	Area 12
R3	RDARA-3	Area 3		R12A		Sub-Area 12A
R3A		Sub-Area 3A		R12B		Sub-Area 12B
R3B		Sub-Area 3B		R12C		Sub-Area 12C
R3C		Sub-Area 3C		R12D		Sub-Area 12D
R4	RDARA-4	Area 4		R12E		Sub-Area 12E
R4A		Sub-Area 4A		R12F		Sub-Area 12F
R4B		Sub-Area 4B		R12G		Sub-Area 12G
R5	RDARA-5	Area 5		R12H		Sub-Area 12H
R5A		Sub-Area 5A		R12I		Sub-Area 12I
R5B		Sub-Area 5B		R12J		Sub-Area 12J
R5C		Sub-Area 5C		R13	RDARA-13	Area 13
R5D		Sub-Area 5D		R13A		Sub-Area 13A
R6	RDARA-6	Area 6		R13B		Sub-Area 13B
R6A		Sub-Area 6A		R13C		Sub-Area 13C
R6B		Sub-Area 6B		R13D		Sub-Area 13D
R6C		Sub-Area 6C		R13E		Sub-Area 13E
R6D		Sub-Area 6D		R13F		Sub-Area 13F
R6E		Sub-Area 6E		R13G		Sub-Area 13G
R6F		Sub-Area 6F		R13H		Sub-Area 13H
R6G		Sub-Area 6G		R13I		Sub-Area 13I
R7	RDARA-7	Area 7		R13J		Sub-Area 13J
R7A		Sub-Area 7A		R13K		Sub-Area 13K
R7B		Sub-Area 7B		R13L		Sub-Area 13L
R7C		Sub-Area 7C		R13M		Sub-Area 13M
R7D		Sub-Area 7D		R13N		Sub-Area 13N
R7E		Sub-Area 7E		R14	RDARA-14	Area 14
R7F		Sub-Area 7F		R14A		Sub-Area 14A
R8	RDARA-8	Area 8		R14B		Sub-Area 14B
R9	RDARA-9	Area 9		R14C		Sub-Area 14C
R9B		Sub-Area 9B		R14D		Sub-Area 14D
R9C		Sub-Area 9C		R14E		Sub-Area 14E
R9D		Sub-Area 9D		R14F		Sub-Area 14F
R10	RDARA-10	Area 10		R14G		Sub-Area 14G
R10A		Sub-Area 10A				

Symbol	VOLMET	Description of the VOLMET Allotment Areas and VOLMET Reception Areas
VAFI	AFI-MET	AFRICA-INDIAN OCEAN
VCAR	CAR-MET	CARIBBEAN
VEUR	EUR-MET	EUROPE
VMID	MID-MET	MIDDLE-EAST
VNAT	NAT-MET	NORTH ATLANTIC
VNCA	NCA-MET	NORTH CENTRAL ASIA
VPAC	PAC-MET	PACIFIC
VSAM	SAM-MET	SOUTH AMERICA
VSEA	SEA-MET	SOUTH EAST ASIA

Symbol	Description of the worldwide allotment areas
WI	The boundaries of this allotment area comprise those of RDARAs 1, 2 and 3
WII	The boundaries of this allotment area comprise those of RDARAs 10, 11, 12A, 12B, 12C and 12D
WIII	The boundaries of this allotment area comprise those of RDARAs 6, 8, 9 and 14
WIV	The boundaries of this allotment area comprise those of RDARAs 12E, 12J and 13
WV	The boundaries of this allotment area comprise those of RDARAs 4, 5 and 7

9.8.6 Broadcasting zones defined in RR Appendix 1

The broadcasting zones known as CIRAF Zones which appear in the Annex to RR Appendix 1 are shown in the figure below. When any of these zones is used for indicating a standard geographical area, it has to be preceded by the symbol C without an intervening space; e.g. C01, C02, C74.



Carte des Zones de Radiodiffusion (CIRAF) - Map of Broadcasting (CIRAF) Zones - Mapa de las Zonas de Radiodifusión (CIRAF)

L'inscription d'une zone géographique sur cette carte ainsi que le tracé de frontières n'impliquent, de la part de l'UIT, aucune prise de position quand au statut politique de ces zones géographiques, ni aucune reconnaissance officielle de ces frontières. Cette carte donne les limites des zones uniquement pour les besoins des radiocommunications du service approprié.

The mention of the name of a geographical area on this map, as well as the tracing of borders, do not imply, on the part of ITU, any position with respect to the political status of such a geographical area, or official recognition of these borders. The map delineates the areas only for the purpose of radiocommunications in the relevant service.

La inscripción de una zona geográfica en este mapa así como el trazado de fronteras en los mapas no implican que la UIT tome posición en cuanto al estatus político de estas zonas geográficas ni el reconocimiento por su parte de esas fronteras. Los límites de las zonas se representan en el mapa únicamente a los efectos de la radiocomunicaciones del servicio apropiado.

1413-ciraf

9.9 Appendix 9: TV Systems

Television system (symbol)	Number of lines	Field frequency (Hz)	Video bandwidth (MHz)	Channel bandwidth (MHz)	Difference between vision carrier and sound carrier (MHz)	Width of the main sideband (MHz)	Width of the vestigial sideband (MHz)	Type of vision modulation	Polarity of vision modulation	Type of sound modulation	Frequency deviation (kHz)	Ratio of effective radiated power vision/sound ST61	Ratio of effective radiated power vision/sound ITU-R
A	405	50	3		−3.5	3	0.75	C3F	Pos.	A3E	/	4/1	4/1
B	625	50	5	7	+5.5	5	0.75	C3F	Neg.	F3E	±50	5/1	10/1 - 20/1
C	625	50	5	7	+5.5	5	0.75	C3F	Pos.	A3E	/	4/1	4/1
D	625	50	6	8	+6.5	6	0.75	C3F	Neg.	F3E	±50	5/1	5/1 - 10/1
E	819	50	10	14	±11.15	10	2	C3F	Pos.	A3E	/	4/1	10/1
F	819	50											
G	625	50	5	8	+5.5	5	0.75	C3F	Neg.	F3E	±50	5/1	10/1 - 20/1
H	625	50	5	8	+5.5	5	1.25	C3F	Neg.	F3E	±50	5/1	5/1 - 10/1
I	625	50	5.5	8	+5.9996	5.5	1.25	C3F	Neg.	F3E	±50	5/1	5/1
K	625	50	6	8	+6.5	6	0.75	C3F	Neg.	F3E	±50	5/1	5/1 - 10/1
K1*	625	50	6	8	+6.5	6	1.25	C3F	Neg.	F3E	±50	2/1 - 5/1	10/1
L	625	50	6	8	+6.5	6	1.25	C3F	Pos.	A3E	/	8/1	10/1
M	525	60	4.2	6	+4.5	4.2	0.75	C3F	Neg.	F3E	±25	2/1 - 1.43/1	5/1 - 10/1
N	625	50	4.2	6	+4.5	4.2	0.75	C3F	Neg.	F3E	±25		5/1 - 10/1

* NOTE – In this case, the colour system is always SECAM.

9.10 Appendix 10: Symbols Used For Coordination And Agreement

9.10.1 Symbols used for coordination and agreement of terrestrial notices

Symbol	Description
6.7	The notifying administration has informed the BR of the successful completion of the coordination or agreement procedures in accordance with the provision of the RR applicable to this assignment. When this remark is completed by symbols indicating one or more administrations, the coordination/agreement statement refers to the administration(s) designated by the symbol under “Adm”. This also includes coordination required under RR No. 9.21
AP25/1.4	Coordination successfully completed in accordance with paragraph 25/1.4 of RR Appendix 25
422A	Coordination required in accordance with § 4.2.2 a) of GE84
422B	Coordination required in accordance with § 4.2.2 b) of GE84
422C	Coordination required in accordance with § 4.2.2 c) of GE84
422D	Coordination required in accordance with § 4.2.2 d) of GE84
422E	Coordination required in accordance with § 4.2.2 e) of GE84
422F	Coordination required in accordance with § 4.2.2 f) of GE84
Res. 4	Coordination required in accordance with Resolution 4 of GE84
ST61} GE75} RJ81} RJ88} GE84} GE89} GE85}	This frequency assignment to which the relevant Agreement is applicable has been successfully coordinated with the Administration indicated under “Adm”
4.2.2	Coordination required in accordance with § 4.2.2 of GE89
4.2.3	Coordination required in accordance with § 4.2.3 of GE89
4.2.4	Coordination required in accordance with § 4.2.4 of GE89
4.4.1	§ 4.4.1 of GE89 applies to this assignment
4.2.5	Coordination required in accordance with § 4.2.5 of RJ81
4.3.2.1.2	Coordination required in accordance with § 4.3.2.1.2 of GE75
4.3.2.2	Coordination required in accordance with § 4.3.2.2 of GE75
COORD	This assignment has been coordinated with the administration(s) indicated under “Adm”
COORDINATED	The notifying Administration has informed the BR of the successful coordination required under a Regional Agreement indicated under “Provision”
REFUSED	This assignment has been refused to be coordinated by an affected Administration, indicated under “Adm”
NOT COORDINATED	Coordination required for this assignment has not yet been completed by Administration(s) indicated under “Adm” or operation on non-interference basis
DEROGATION	This assignment has been notified in accordance with the provision RR No. 4.4 with respect to the Administration(s) indicated under “Adm”, as appropriate. In the case of a transmitting station, the notifying administration has undertaken to use this frequency assignment on the basis of non-interference to stations of the administration whose symbol appears. In the case of a receiving earth station, the notifying administration has undertaken to accept the interference to this assignment resulting from the existing or future terrestrial station assignments of the administration whose symbol appears

9.10.2 Symbols used for coordination and agreement of space notices

9.10.2.1 Symbol in provision column currently in use

Symbol used in provision column	Description
N/9.7 N/9.7A N/9.7B N/9.15 N/9.17 N/9.17A	The administration responsible for this entry asked the BR to seek coordination under the provisions of the RR indicated in this remark with the administration of the country whose name is designated by the symbol in the “adm” column of the coordination Table A5/A6, and this administration has not answered within the time limits specified. Consequently, the provisions of RR No. 9.47 or RR No. 9.48 are applicable for the administration whose symbol is indicated in this remark.
AP5#6A/9.--- AP5#6B/9.--- AP5#6C/9.---	The Finding was formulated on the understanding that, according to the provisions of RR Appendix 5 § 6 <i>a</i>), 6 <i>b</i>) and/or 6 <i>c</i>) no coordination under RR No. 9.--- was required
AP5#6D1/9.---	The notifying administration has informed the BR that, for the present assignment to a receiving station, it accepts the interference resulting from the frequency assignments which should have been the subject of a coordination agreement under RR No. 9.--- . When this remark is followed by symbols indicating one or more administrations, the interference acceptance statement refers to the administration of the country whose symbol is inserted in the “adm” column of the coordination Table A5/A6.
AP5#6E1 AP5#6E2 AP5#6F AP5#6G	The Finding was formulated on the understanding that, according to the provisions of § 6 <i>e</i>) (i), 6 <i>e</i>) (ii), 6 <i>f</i>) or 6 <i>g</i>) of RR Appendix 5 , no coordination under RR Nos. 9.15 to 9.19 was required.
AP5#6E3	The notifying administration has informed the BR that, for the present assignment to a receiving earth station, it accepts the interference resulting from the existing or future terrestrial station assignments or assignments to earth stations operating the opposite direction of transmission. When this remark is followed by symbols in the “adm” column of the coordination Table A5/A6 indicating one or more administrations, the interference acceptance statement refers to the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6.
9.7 9.7A 9.7B 9.11 9.12 9.12A 9.13 9.14 9.15 9.17 9.17A 9.21 AP30#7.1 AP30A#7.1 RS33#2.1 RS33#3 RS77 RS84 etc.	The notifying administration has informed the BR of the successful completion of the coordination or agreement procedures in accordance with the provision of the RR indicated in this remark. When this remark is followed by symbols in the “adm” column of the coordination Table A5/A6 indicating one or more administrations, the coordination/agreement statement refers to the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6.

Symbol used in provision column	Description
X/9.7 X/9.7A X/9.7B X/9.11 X/9.12 X/9.12A X/9.13 X/9.14 X/9.15 X/9.17 X/9.17A X/9.21 X/AP30#7.1 X/AP30A#7.1 X/RS33#2.1 X/RS33#3 X/RS77 X/RS84 etc.	In accordance with the provision of the RR indicated in this remark, coordination or agreement was required with the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6; however, the BR was not informed of the successful conclusion of this coordination/agreement. When the symbol XAA appears after this remark, it indicates a coordination or agreement on a worldwide basis.
Z/9.7 Z/9.12 Z/9.12A Z/9.13	Based on the assumption that the present earth station was taken into account in the RR Nos. 9.7, 9.12, 9.12A and 9.13 coordination of the corresponding satellite network with the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6, a favourable Finding was formulated with respect to examination of a frequency assignment to an earth station with respect to the application of RR Nos. 9.7, 9.12, 9.12A and 9.13 . Nevertheless, this Finding will be reviewed if, after the publication in Part II-S of the BR IFIC , an objection from the administration concerned has been received.
V/11.31.1	The use of this frequency assignment is subject to the application of the procedure of RR No. 9.21 . In the process of application of this procedure the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6 has formally objected to the proposed use. The BR has therefore concluded that the application of the procedure of RR No. 9.21 was not successfully completed with the administration concerned. A favourable Finding (13A1) was nevertheless formulated on the understanding that no harmful interference shall be caused to the services of or protection claimed from the administration concerned.
V/11.32A	The coordination required under RR Nos. 9.7, 9.7A, 9.7B, 9.11, 9.12, 9.12A, 9.13 or 9.14 of the space station assignment has not been effected with the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6 (unfavourable finding with respect to RR No. 11.32). Nevertheless, the Bureau’s finding for this assignment with respect to RR No. 11.32A is favourable.
V/11.33	The coordination required under RR Nos. 9.15, 9.16, 9.17, 9.17A or 9.18 of the space station assignment has not been effected with the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6 (unfavourable finding with respect to RR No. 11.32). Nevertheless, the Bureau’s finding for this assignment with respect to RR No. 11.33 is favourable.
11.41	This assignment has not been coordinated with the assignments of the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6. This assignment was nevertheless recorded in the MIFR subject to the application of the procedure of RR No. 11.41 . The assignments which are basis of the unfavourable findings are indicated in the Remark column.
AP30	This assignment is in conformity with RR Appendix 30 Plans or R1 and R3 List.
AP30A	This assignment is in conformity with RR Appendix 30A Plans or R1 and R3 List.
AP30B	This assignment is in conformity with RR Appendix 30B Plan.
X/AP30	This assignment is not in conformity with RR Appendix 30 Plans or R1 and R3 List.

Symbol used in provision column	Description
X/AP30A	This assignment is not in conformity with RR Appendix 30A Plans or R1 and R3 List.
X/AP30B	This assignment is not in conformity with RR Appendix 30B Plan.

9.10.2.2 Symbol in agreement status column currently in use

Symbol used in agreement status column	Description
O	Coordination or agreement has been obtained, or this assignment is inconformity with Plans/R1 and R3 Lists
X	Required Coordination or agreement has not been obtained, or this assignment is not in conformity with Plans/R1 and R3 Lists.
V	Required Coordination or agreement has not been obtained but a favourable finding is given.

9.10.2.3 Symbol in provision column used up to 31.12.1998

Symbol used in provision column	Description
N/RR1060 N/RR1107	The administration responsible for this entry asked the BR to seek coordination under the provisions of the RR indicated in this remark with the administration of the country whose name is designated by the symbol in the “adm” column of the coordination Table A5/A6 and this administration has not answered within the time limits specified. Consequently, the provisions of RR Nos. 1101-1103 or RR Nos. 1142-1144 are applicable for the administration whose symbol is indicated in this remark.
RR1066A RR1067 RR1068 RR1069	The Finding was formulated on the understanding that, according to the provisions of RR No. 1066A , RR No. 1067 , RR No. 1068 or RR No. 1069 no coordination under RR No. 1060 was required
RS46#2.5.8A RS46#2.5.8B	The Finding was formulated on the understanding that, according to § 2.5.8 <i>a</i>) or 2.5.8 <i>b</i>) of Resolution 46 (Rev.WRC-2000) , no coordination under § 2.1 or 2.2 of Resolution 46 (Rev.WRC-2000) was required.
RR1070	The notifying administration has informed the BR that, for the present assignment to a receiving station, it accepts the interference resulting from the frequency assignments which should have been the subject of a coordination agreement under RR No. 1060 . When this remark is followed by symbols indicating one or more administrations, the interference acceptance statement refers to the administration of the country whose symbol is inserted in the “adm” column of the coordination Table A5/A6.
RR1109 RR1110 RR1111	The Finding was formulated on the understanding that, according to the provisions of RR Nos. 1109 , 1110 or 1111 , no coordination under RR No. 1107 was required.
RS46#3.1.2 RS46#3.1.3 RS46#3.1.4 RS46#3.1.5	The Finding was formulated on the understanding that, according to the provisions of § 3.1.2, 3.1.3, 3.1.4, or 3.1.5 of Resolution 46 (Rev.WRC-2000) , no coordination under § 3.1 of Resolution 46 (Rev.WRC-2000) was required.

Symbol used in provision column	Description
RR1111A	The notifying administration has informed the BR that, for the present assignment to a receiving earth station, it accepts the interference resulting from the existing or future terrestrial station assignments. When this remark is followed by symbols in the “adm” column of the coordination Table A5/A6 indicating one or more administrations, the interference acceptance statement refers to the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6.
RR1060 RR1060.1 RR1107 RR1610 RS33#5.3B RS33#5.4C RS46#2.1 RS46#2.2 RS46#3.1 AP30#7.2.1 etc.	The notifying administration has informed the BR of the successful completion of the coordination or agreement procedures in accordance with the provision of the RR indicated in this remark. When this remark is followed by symbols in the “adm” column of the coordination Table A5/A6 indicating one or more administrations, the coordination/agreement statement refers to the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6.
X/RR1060 X/RR1060.1 X/RR1107 X/RR1610 X/RS33#5.3B X/RS33#5.4C X/RS46#2.1 X/RS46#2.2 X/RS46#3.1 X/AP30#7.2.1 etc.	In accordance with the provision of the RR indicated in this remark, coordination or agreement was required, however, the coordination was not initiated. When this remark is followed by symbols inserted in the “adm” column of the coordination Table A5/A6, in accordance with the provision of the RR indicated in this remark, coordination or agreement was required with those administrations, however, the BR was not informed of the successful conclusion of this coordination/agreement. When the symbol XAA appears after this remark, it indicates a coordination or agreement on a worldwide basis.
Z/RR1060 Z/RS46#2.1 Z/RS46#2.2	Based on the assumption that the present earth station was taken into account in the RR No. 1060 and § 2.1 and 2.2 of Resolution 46 (Rev.WRC-2000) coordination of the corresponding satellite network with the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6, a favourable Finding was formulated with respect to RR No. 1504. Nevertheless, this Finding will be reviewed if, after six months following the publication in Part II-S of the BR IFIC, an objection from the administration concerned has been received.
V/RR1060	The coordination required under RR No. 1060 of the space station assignment has not been effected with the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6 (unfavourable finding with respect to RR No. 1504). Nevertheless, the Bureau’s finding for this assignment with respect to RR No. 1506 is favourable.
RR1544	This assignment has not been coordinated with the administration of the country designated by the symbol inserted in the “adm” column of the coordination Table A5/A6. This assignment was nevertheless recorded in the MIFR subject to the application of the procedure of RR No. 1544.

9.11 Appendix 11: BR Favourable Or Unfavourable Findings**9.11.1 BR favourable or unfavourable findings regarding terrestrial notices****9.11.1.1 Findings regarding conformity with the RR (regulatory examination)**

Symbol	Description
FAVOURABLE	Finding favorable with respect to RR No. 11.31.
UNFAVOURABLE	Finding unfavorable with respect to RR No. 11.31.

9.11.1.2 Findings regarding conformity with the procedures relating to coordination

Symbol	Description
FAVOURABLE	Finding favorable with respect to RR No. 11.32, as applicable.
UNFAVOURABLE	Finding unfavorable with respect to RR No. 11.32, as applicable.

9.11.1.3 Findings regarding conformity with a Worldwide or Regional Plan

Symbol	Description
FAVOURABLE	Finding favorable with respect to RR No. 11.34, as applicable.
UNFAVOURABLE	Finding unfavorable with respect to RR No. 11.34, as applicable.

9.11.1.4 Findings regarding Technical Examination

Symbol	Description
FAVOURABLE	Finding favourable with respect to relevant provisions of the RR, or the appropriate Agreement, as indicated in the "Finding reference" below.
UNFAVOURABLE	Finding unfavourable with respect to relevant provisions of the RR, or the appropriate Agreement, as indicated in the "Finding reference" below.

9.11.2 BR favourable or unfavourable findings regarding space notices**9.11.2.1 Findings in sub-column 13A1 regarding conformity with the RR (regulatory examination)**

Symbol	Finding favourable with respect to	Use from	Use to
A	RR No. 1503		31.12.1998
A	RR No. 11.31	1.1.1999	
A	Paragraph 5.2.1 <i>a)</i> of RR Appendix 30	03.06.2000	
A	Former § 5.2.1 <i>a)</i> , 6.3.8 or 7.4.5.1 of RR Appendix 30 (WRC-97)		02.06.2000
A	Paragraph 5.2.1 <i>a)</i> of RR Appendix 30A	03.06.2000	
A	Paragraph 5.2 of RR Resolution 33 (Rev.WRC-97)		

Symbol	Finding unfavourable with respect to	Use from	Use to
N	RR No. 1503		31.12.1998
N	RR No. 11.31	1.1.1999	
N	Paragraph 5.2.1 <i>a)</i> of RR Appendix 30	03.06.2000	
N	Former § 5.2.1 <i>a)</i> , 6.3.8 or 7.4.5.1 of RR Appendix 30 (WRC-97)		02.06.2000
N	Paragraph 5.2.1 <i>a)</i> of RR Appendix 30A	03.06.2000	
N	Paragraph 5.2 of Resolution 33 (Rev.WRC-97)		

Symbol	Description	Use from	Use to
–	Not examined		

9.11.2.2 Findings in sub-column 13A2: Conformity with the procedures relating to coordination with other administrations or conformity with a Plan (world or regional)

Symbol	Finding favourable with respect to	Use from	Use to
A	RR Nos. 1504 and 1505 when both are applicable		31.12.1998
A	RR No. 1504 or No. 1505 when one of them only is applicable		31.12.1998
A	RR No. 11.32	1.1.1999	
A	RR No. 11.34	1.1.1999	
A	Former § 5.2.1 <i>b)</i> , 5.2.1 <i>c)</i> , 5.2.1 <i>d)</i> , 6.3.9 or 7.4.5.2 of RR Appendix 30 (WRC-97)		02.06.2000
A	Paragraphs 5.2.1 <i>b)</i> , 5.2.1 <i>c)</i> , 5.2.1 <i>d)</i> or 5.2.1 <i>e)</i> of RR Appendix 30	03.06.2000	
A	Former § 5.2.1 <i>b)</i> , or 5.2.1 <i>c)</i> and 5.2.1 <i>e)</i> , 5.2.1 <i>d)</i> , 6.6 or 7.7 of RR Appendix 30A (WRC-97)		02.06.2000
A	Paragraphs 5.2.1 <i>b)</i> , 5.2.1 <i>c)</i> , 5.2.1 <i>d)</i> or 5.2.1 <i>e)</i> , 6.6 or 7.8 of RR Appendix 30A	03.06.2000	
A	Paragraphs 5.3 and 5.4 of Resolution 33 (Rev.WRC-97)		

Symbol	Finding unfavourable with respect to	Use from	Use to
N	RR No. 1504 and/or RR No. 1505		31.12.1998
N	RR No. 11.32	1.1.1999	
N	RR No. 11.34	1.1.1999	
N	Paragraphs 5.3 or 5.4 of Resolution 33 (Rev.WRC-97)		
N	Former paragraphs 5.2.1 <i>b)</i> , 5.2.1 <i>c)</i> , 5.2.1 <i>d)</i> , 6.3.9 or 7.4.5.2 of Appendix 30 (WRC-97)		02.06.2000
N	Paragraphs 5.2.1 <i>b)</i> , 5.2.1 <i>c)</i> , 5.2.1 <i>d)</i> or 5.2.1 <i>e)</i> of RR Appendix 30	03.06.2000	
N	Former § 5.2.1 <i>b)</i> or 5.2.1 <i>c)</i> and 5.2.1 <i>e)</i> , 5.2.1 <i>d)</i> , 6.6 or 7.7 of RR Appendix 30A (WRC-97)		02.06.2000
N	Paragraphs 5.2.1 <i>b)</i> , 5.2.1 <i>c)</i> , 5.2.1 <i>d)</i> or 5.2.1 <i>e)</i> , 6.6 or 7.8 of RR Appendix 30A	03.06.2000	

Symbol	Description	Use from	Use to
–	Not examined		

9.11.2.3 Findings in sub-column 13A3 regarding Technical Examination

Symbol	Finding favourable with respect to	Use from	Use to
A	RR Nos. 1506 and 1509 when both are applicable		31.12.1998
A	RR Nos. 1506 or 1509 when one of them only is applicable		31.12.1998
A	RR Nos. 11.32A or 11.33 when one of them only is applicable	1.1.1999	
A	Paragraph 5.5 of Resolution 33 (Rev.WRC-97)		
A	Former § 6.3.10 or 7.4.5.3 of RR Appendix 30 (WRC-97)		02.06.2000

Symbol	Finding unfavourable with respect to	Use from	Use to
N	RR No. 1506 and/or RR No. 1509		31.12.1998
N	RR Nos. 11.32A or 11.33	1.1.1999	
N	Paragraph 5.5 of Resolution 33 (Rev.WRC-97)		
N	Former § 6.3.10 or 7.4.5.3 of RR Appendix 30 (WRC-97)		02.06.2000

Symbol	Description	Use from	Use to
–	Not examined		

9.11.2.4 Findings in sub-column 13A4 regarding Conformity with Resolution 49 (Rev.WRC-2000)

Symbol	Finding favourable with respect to	Use from	Use to
A	Paragraphs 11 and 13 of Annex 1 to Resolution 49 (Rev.WRC-2000)	22.11.1997	

Symbol	Finding unfavourable with respect to	Use from	Use to
N	Paragraphs 11 and 13 of Annex 1 to Resolution 49 (Rev.WRC-2000)	22.11.1997	

Symbol	Description	Use from	Use to
–	Not examined		

9.12 Appendix 12: BR Finding References, Remarks And Dates**9.12.1 BR Finding References, Remarks And Dates Regarding Terrestrial Notices****9.12.1.1 Finding Reference to a provision of the RR or an Appendix thereto, or a Resolution of a World Radio Communication Conference or a Regional Agreement**

Symbol	Description
GE75	This frequency assignment is either in conformity with the Plan adopted by the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975, or one for which the notifying administration has successfully applied the procedure prescribed in Article 4 of the Regional Agreement, Geneva, 1975. In relations between Contracting Members, all frequency assignments bearing this symbol are considered to have the same status, irrespective of the dates entered in the field "Date of Entry in the Master Register".

Symbol	Description
GE84	This frequency assignment is either in conformity with the Plan adopted by the Regional Administrative Conference for the Planning of VHF Sound Broadcasting (Region 1 and part of Region 3), Geneva, 1984, or one for which the procedure prescribed in Article 4 of the Regional Agreement, Geneva, 1984, has been carried out successfully.
GE89	This frequency assignment is either in conformity with the Plan adopted by the Regional Administrative Conference for the Planning of VHF/UHF Television Broadcasting in the African Broadcasting Area and Neighboring Countries, Geneva, 1989, or one for which the procedure prescribed in Article 4 of the Regional Agreement, Geneva, 1989, has been carried out successfully with the Administrations.
RJ81	This frequency assignment is either in conformity with the Plan adopted by the Regional Administrative MF Broadcasting Conference (Region 2), Rio de Janeiro, 1981, or one for which the procedure prescribed in Article 4 of the Regional Agreement, Rio de Janeiro, 1981, has been carried out successfully.
RJ88	This frequency assignment is in accordance with the provisions of the Regional Agreement for the Use of the Band 1 605-1 705 kHz in Region 2, Rio de Janeiro, 1988.
8.5	This frequency assignment is the subject of an unfavorable Finding with respect to RR No. 11.31. However, it is recorded in the Master Register in accordance with the provisions of RR No. 8.5, namely, if harmful interference is actually caused to any station whose assignment is in conformity with the RR, the station concerned must, on receipt of advice thereof, immediately eliminate this harmful interference.
S----	The provision of the RR indicated by the number following this symbol applies to the assignment.
ST61	This frequency assignment is either in accordance with the Plans adopted by the European VHF/UHF Broadcasting Conference, Stockholm, 1961, or one for which the procedure prescribed in Article 4 of the Regional Agreement, Stockholm, 1961, has been carried out successfully.
X/GE75	This frequency assignment is not in conformity with the Plan adopted by the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva, 1975, and the notifying administration has not successfully applied the procedure prescribed in Article 4 of the Regional Agreement, Geneva, 1975. Consequently, in accordance with the provisions of § 3.5.4 of Article 4 of the Regional Agreement, the recording of this assignment in the Master Register has been made subject to the condition that no harmful interference will be caused by this assignment to frequency assignments in conformity with the Agreement.
X/RJ81	This frequency assignment is not in conformity with the Plan adopted by the Regional Administrative MF Broadcasting Conference (Region 2), Rio de Janeiro, 1981, and the notifying administration has not successfully applied the procedure prescribed in Article 4 of the Regional Agreement, Rio de Janeiro, 1981. The notifying administration having resubmitted the frequency assignment and having insisted on its reconsideration, its recording in the Master Register has been made subject to the condition that no harmful interference will be caused to frequency assignments in conformity with the Agreement. (See § 5.4 of Article 5 of the Regional Agreement, Rio de Janeiro, 1981.)
X/----	This frequency assignment has been examined with respect to its conformity with a provision or Article of the RR or an Appendix thereto or with a Resolution or a Regional Agreement and an unfavorable Finding was formulated. The provision, Article, Appendix, Resolution or Regional Agreement concerned is indicated following this symbol.

Symbol	Description
AP27/60	In examining the frequency assignment notice corresponding to this assignment, it was noted that either the peak envelope power exceeds the power limit specified in No. 27/60 of RR Appendix 27, or the mean effective radiated power exceeds the limits specified in No. 27/61. However, a favorable Finding was formulated with respect to No. 27/65 where applicable, and the assignment was recorded in the Master Register with a favourable Finding with respect to RR Nos. 11.39A or 11.39B. The attention of the notifying administration has been drawn to the provisions of Nos. 27/62 to 27/64. Should the BR receive any complaint of harmful interference from an administration, which is using the frequency concerned in accordance with the relevant provisions of the Allotment Plan, it shall investigate the matter and, if necessary, the previous Finding will be reviewed.
GE85M	This frequency assignment is either in conformity with the Plan adopted by the Regional Administrative Conference for the Planning of the MF Maritime Mobile and Aeronautical Radionavigation Services (Region 1) (Geneva, 1985) or one for which the procedure prescribed in Article 4 or Article 6 of the Regional Agreement adopted by that Conference has been carried out successfully.
GE85N	This frequency assignment is either in conformity with the Plan adopted by the Regional Administrative Conference for the planning of the Maritime Radionavigation Service (Radiobeacons) in the European Maritime Area (Geneva, 1985), or one for which the procedure described in Article 4 of the Regional Agreement adopted by that Conference has been carried out successfully, or one for which a favorable Finding was formulated following the examinations referred to in Article 6 of the same Agreement.
RS21	This frequency assignment, which is subject to the provisions of Resolution 21 of WARC-92, has been received after 1 April 1992. The Findings given with respect to "Conformity with Radio Regulations" were formulated on the basis of the relevant provisions of the former Article 12 of the Radio Regulations in force at the time of its receipt. In accordance with <i>resolves</i> 2 of Resolution 21 (Rev.WRC-95), the respective Findings will be re-examined as of 1 April 2007.
X/AP26	This frequency assignment has no corresponding allotment in the Allotment Plan for the Aeronautical Mobile (OR) Service contained in RR Appendix 26. The Finding with respect to the conditions specified in Part III, Section II, § 4 <i>d</i>) is indicated in the field "Technical examination".
X/GE85M	This frequency assignment is not in conformity with the Plan adopted by the Regional Administrative Conference for the planning of the MF Maritime Mobile and Aeronautical Radionavigation Services (Region 1) (Geneva, 1985), and is one for which the consultation procedure prescribed in Article 4 of the Regional Agreement adopted by that Conference has not been applied or has not been carried out successfully. This assignment is not entitled to any protection in relation to assignments that are in conformity with the Plan and must not cause any harmful interference to any such assignments.
X/GE85N	This frequency assignment is not in conformity with the Plan adopted by the Regional Administrative Conference for the planning of the Maritime Radionavigation Service (Radiobeacons) in the European Maritime Area (Geneva, 1985), and is one for which the consultation procedure prescribed in Article 4 of the Regional Agreement adopted by that Conference has not been applied or has not been carried out successfully.

9.12.1.2 Remark concerning the Finding

Symbol	Description
H	This assignment shall be operated subject to not causing harmful interference to or claiming protection from the existing or planned assignments that conform with the relevant Plan indicated after the symbol X under Item 13B1 (finding reference) of this assignment, or the assignments of administrations for which no successfully completed coordination has been notified, and which are indicated under Item 11 (coordination information) after a reference to the relevant provisions.
Q	The favorable finding for this assignment, with respect to RR No. 11.32 was based on earth station information submitted to the Bureau under the provisions of RR No. 11.9 (after 31 December 1998) or under RR No. 1488 (before 1 January 1999). The finding may be reviewed if the BR receives a comment from another administration, within three years following the date of notification of this assignment, indicating that the concerned assignment was included in a coordination procedure initiated by this latter administration pursuant to RR Nos. 9.15, 9.17 (formerly 1107) and/or RR No. 9.17A in respect to its earth station, and was not agreed to, or was agreed with different technical characteristics.
R	In accordance with the provisions of the Table of Frequency Allocations to which reference is made in finding reference, the present assignment is to be operated subject to not causing harmful interference to stations of (a) particular service(s) in the whole Region or in certain countries.
S	The service indicated in class of station being secondary (RR No. 5.28), this assignment is not taken into account when examining, with respect to the provisions of RR Article 11, an assignment pertaining to a primary service.
V	In accordance with RR No. 23.8, this frequency assignment has a lower status with respect to the assignments to the broadcasting service within the Tropical Zone and within the bands listed in RR No. 23.6.
X	This assignment, which should have been transferred to another frequency in accordance with a transfer procedure decided by a Radiocommunication Conference, was not acted upon by the concerned Administration and hence has been retained in the Master Register without a date in date of recognition (Date of Entry in the Master Register) and for information only.
Y	Pursuant to the provisions referred to in Finding Reference, this assignment is not taken into account when examining frequency assignments in accordance with the provisions of RR Article 11. The present assignment has been recorded or retained in the Master Register for information only.

9.12.1.3 Finding Action: (Date relating to a review to be made)

Symbol	Description
A/....	This assignment is recorded in accordance with RR No. 11.47 on a provisional basis before it is put into use. If the notifying administration has not confirmed the putting into use by the date indicated following this symbol, the assignment will be deleted from the Master Register.
C/....	The use of this frequency assignment is authorized until the date indicated under this symbol.
D/....	The BR has been informed that the use of this assignment, which is suspended, will resume on the date indicated against this symbol. At that date, the situation will be reviewed.
F/....	In accordance with the provisions of the RR, which apply to the frequency band in which this assignment is situated (e.g. RR No. 11.41), this assignment will be reviewed on the date following this symbol.

9.12.2 BR Finding References, Remarks And Dates Regarding Space Notices**9.12.2.1 Finding Reference in Sub-Column 13B1 to a provision of the RR or an Appendix thereto, or a Resolution of a World Radiocommunication Conference or a Regional Agreement**

Code	Reference to a provision of the RR or an RR Appendix, or a Resolution of a World Radiocommunication Conference or a Regional Agreement	Use from	Use to
RR1560	This frequency assignment is the subject of an unfavourable Finding with respect to RR No. 1503 . In accordance with the provision RR No. 1560 , if harmful interference is actually caused to any station whose assignment is in conformity with the RR, the station concerned shall, on receipt of advice thereof, immediately eliminate this harmful interference.		31.12.1998
8.5	This frequency assignment is the subject of an unfavourable Finding with respect to RR No. 11.31 . In accordance with the provision RR No. 8.5 , if harmful interference is actually caused to any station whose assignment is in conformity with the RR, the station concerned shall, on receipt of advice thereof, immediately eliminate this harmful interference.	1.1.1999	
RR1544 RR1559	This frequency assignment to a space radiocommunication station has been recorded in the Master Register in accordance with the provisions of RR No. 1544 . If harmful interference is actually caused, in accordance with RR No. 1559 , to the reception of any space radiocommunication station whose frequency assignment has been recorded in the Master Register as a result of a favourable Finding with respect to RR Nos. 1503, 1504, 1505, 1506-1508 or 1509-1512 , as appropriate, the station using this frequency assignment shall, on receipt of advice thereof, immediately eliminate the harmful interference. The attention of the notifying administration has been drawn to these provisions.		31.12.1998
11.41	This frequency assignment has been recorded in the Master Register in accordance with the provisions of RR No. 11.41 . If harmful interference is actually caused, to any recorded assignment which was the basis of the unfavourable finding, the station using this frequency assignment shall, on receipt of advice thereof, immediately eliminate the harmful interference.	1.1.1999	
RR----	The provision of the RR indicated by the number following this symbol applies to the assignment or entry concerned.		31.12.1998
--.---	The provision of the RR indicated by the number following this symbol applies to the assignment or entry concerned.	1.1.1999	
RS4/1.1	The administration responsible for this assignment has not replied to the consultation of the Bureau under Resolution 4 (Rev.Orb-88) , § 1.1; in consequence the assignment in question is considered to be definitively discontinued.		
ART--	The RR Article indicated by the number following this symbol applies to the assignment or entry concerned.		
RS---	The Resolution of the RR indicated by the number following this symbol applies to the assignment or entry concerned.		

Code	Reference to a provision of the RR or an RR Appendix, or a Resolution of a World Radiocommunication Conference or a Regional Agreement	Use from	Use to
AP--	The Appendix of the RR indicated by the number following this symbol applies to the assignment or entry concerned.		
X/RR----	This frequency assignment has been examined with respect to its conformity with a provision or RR Article or an Appendix thereto or with a Resolution or a Regional Agreement and an unfavourable Finding was formulated. The provision or Article is indicated following this symbol.		31.12.1998
X/--.--	This frequency assignment has been examined with respect to its conformity with a provision or RR Article or an Appendix thereto or with a Resolution or a Regional Agreement and an unfavourable Finding was formulated. The provision or Article concerned is indicated following this symbol.	1.1.1999	
X/RS----	This frequency assignment has been examined with respect to its conformity with a provision or RR Article or an Appendix thereto or with a Resolution or a Regional Agreement and an unfavourable Finding was formulated. The Resolution concerned is indicated following this symbol.		
X/AP----	This frequency assignment has been examined with respect to its conformity with a provision or RR Article or an Appendix thereto or with a Resolution or a Regional Agreement and an unfavourable Finding was formulated. The Appendix concerned is indicated following this symbol.		

9.12.2.2 Remark in Sub-Column 13B2 concerning the Finding

Code	Remarks concerning Findings	Use from	Use to
H	The present assignment shall be operated subject to not causing harmful interference to or claiming protection from the assignments of administrations indicated in the “adm” column of the coordination Table A5/A6 after a reference to the relevant provisions of the RR.		
K	This frequency assignment to an inter-satellite link of a geostationary space station communicating with a non-geostationary space station is not taken into account by the BR in its examination under RR No. 11.32		
P	The favourable finding for this assignment, with respect to RR No. 11.32 only concerns its conformity with the coordination procedure under RR Nos. 9.15, 9.17 and 9.17A because the assignment of the associated space station has been recorded with an Unfavourable finding under RR No. 11.36 (Operated in accordance with RR No. 4.4). This assignment has no recognized status in the space network coordination context (RR Nos. 9.7, 9.9 (where applicable), 9.12 and 9.13).		

Code	Remarks concerning Findings	Use from	Use to
R	In accordance with the provisions of the Table of Frequency Allocations to which reference is made in Column 13B1, the present assignment may operate in a specific frequency band subject to not causing harmful interference to another service or to another station in the same service or to not claim protection from harmful interference caused by the other service or other station in the same service in the whole Region or in certain countries.		
S	The service indicated in Column C4a being secondary (RR No. 420) or subject to not causing harmful interference (RR No. 435), this assignment is not taken into account when examining, with respect to the provisions of former RR Article 13, an assignment pertaining to a primary service.		31.12.1998
S	The service indicated in Column C4a being secondary (RR No. 5.28) or subject to not causing harmful interference (RR No. 5.43), this assignment is not taken into account when examining, with respect to the provisions of RR Article 11, an assignment pertaining to a primary service.	1.1.1999	
T	This frequency assignment is not subject to the coordination procedure and is included in the CR/C publication for information only.	1.1.1999	
Y	Pursuant to the provisions referred to in Column 13B1, this assignment (or entry) is not taken into account when examining frequency assignments in accordance with the provisions of former RR Article 13. The present assignment has been recorded or retained in the Master Register for information only.		31.12.1998
Y	Pursuant to the provisions referred to in Column 13B1, this assignment (or entry) is not taken into account when examining frequency assignments in accordance with the provisions of RR Article 11. The present assignment has been recorded or retained in the Master Register for information only.	1.1.1999	

9.12.2.3 Finding in sub-column 13B3 – Date relating to a review to be made

Code	Type of date relating to a review to be made	Use from	Use to
A	This assignment is recorded in accordance with RR No. 1553 on a provisional basis before it is put into use. If the notifying administration has not confirmed the putting into use by the date indicated in the column “d_fdg_rev”, the assignment will be deleted.		31.12.1998
A	This assignment is recorded in accordance with RR No. 11.47 on a provisional basis before it is put into use. If the notifying administration has not confirmed the putting into use by the date indicated in the column “d_fdg_rev”, the assignment will be deleted.	1.1.1999	
C	The use of this frequency assignment is authorized until the date indicated in the column “d_fdg_rev”.		
D	The BR has been informed that use of this assignment, which was suspended, will resume on the date indicated in the column “d_fdg_rev”. At that date, the situation will be reviewed.		
F	In accordance with the provisions of the RR which apply to the frequency band in which this assignment is situated, this assignment will be reviewed on the date in the column “d_fdg_rev”.		

9.13 Appendix 13: Nature Of Service Codes

9.13.1 Table of Nature Of Service Codes for Terrestrial Services

Nature Of Service Code	Meaning of the Code
AS	Station using adaptive systems
AX	Fixed station used for transmission of aeronautical information (from 1 January 1999)
CO	Station open to official correspondence exclusively
CP	Station open to public correspondence
CR	Station open to limited public correspondence
CV	Station open exclusively to correspondence of a private agent
FS	Land station established solely for the safety of life
HP	Fixed station using high altitude platform
MX	Fixed station used for transmission of meteorological information
OT	Station open exclusively to operational traffic of the service concerned
PX	Fixed station used for press transmission
RC	Non-directional radiobeacon
RD	Directional radiobeacon
RG	Radio direction-finding station
RT	Revolving radiobeacon
ST	Fixed station using tropospheric scatter

9.13.2 Table of Nature Of Service Codes for Space Services

Nature Of Service Code	Meaning of the Code
CO	Station open to official correspondence exclusively
CP	Station open to public correspondence
CR	Station open to limited public correspondence
CV	Station open exclusively to correspondence of a private agent
OT	Station open exclusively to operational traffic of the service concerned

9.14 Appendix 14: Power Measurement Method Code For Each Class Of Emission

- X Peak envelope power: the average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.
- Y Mean power: the average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.
- Z Carrier power: the average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle taken under the condition of no modulation.

In this Table, the codes correspond to the 1st, 2nd and 3rd positions of the **Class of Emission Code** (see **RDD 0351**) which are equivalent to the 5th, 6th and 7th positions of Item 7A (designation of the emission) in RR Appendix 4.

No.	Code in Position 1	Code in Position 2	Code in Position 3	Type of Power	Remarks
1	N	0	N	Z	
2	A	1	any	X	
3	A	3	E	Z	For BC only
4	A	2, 3, 7, 8, 9, X	any	Y	Except case 3
5	B, C, J, R	any	any	X	
6	D, F, G, H	any	any	Y	
5	K, L, M, P, Q, V	any	any	X	
8	W	any	any	X	
9	X			X or Y	

SECTION 10

DATA ITEM REFERENCE INDEX

	Page
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10.0 Introduction

This section provides indexes to assist in identifying the page and paragraph number of definitions for specific data elements.

There are 4 indexes. Each index presents different information in one of two different forms, as described by the following table.

Index	Content	Sequence	Space/Terrestrial
10.1	Data groups, data items and relationships	RDD reference number	Terrestrial
10.2	Data groups & data items	Alphabetical order of the data group/data item name	Terrestrial
10.3	Data groups, data items & relationships	RDD reference number	Space
10.4	Data groups & data items	Alphabetical order of the data group/data item name	Space
10.5	RDD numbers deleted in revisions of Recommendation ITU-R SM.1413		

Note: Rows in tables 10.1 and 10.3 occur in the sequence of their RDD reference number. However, because some data elements have been cancelled in the process of developing the RDD, the sequence is not fully continuous.

These indexes also enable the identification of data element names from their RDD reference number and vice versa.

The “Data Type” column identifies the type of data element in each row i.e.: G = Data Group, I = Data Item, R = Relationship.

10.1 Terrestrial data elements in RDD reference number sequence

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
0001	118	3.30	G	Three Dimensional Zone	
0002					RDD reference number(s) not allocated
0003	118	3.30	I	Three Dimensional Zone	Maximum Operating Height
0004	118	3.30	I	Three Dimensional Zone	Minimum Operating Height
0005 to 0009					RDD reference number(s) not allocated
0010	70	3.1	G	Administration	
0011	70	3.1	I	Administration	Code
0012	70	3.1	I	Administration	Name
0013	70	3.1	I	Administration	Official Postal Address
0014	70	3.1	I	Administration	Official Telex Address
0013 to 0015					RDD reference number(s) not allocated
0016	70	3.1	R	Administration	An Administration may notify one or more Signal Configurations
0017	70	3.1	R	Administration	An Administration may be party to one or more Coordination Agreements
0018	120	3.34	R	Geographical Area	A Geographical Area may be a valid area for one or more Correspondence Addresses
0019 to 0031					RDD reference number(s) not allocated
0032	118	3.31	G	Aeronautical Zone	
0033	119	3.31	I	Aeronautical Zone	Code
0034					RDD reference number(s) not allocated
0035	82	3.8	G	Antenna	
0036					RDD reference number(s) not allocated
0037	83	3.8	I	Antenna	Geographical Coordinates
0038	83	3.8	I	Antenna	Mast Identification
0039	83	3.8	R	Antenna	An Antenna must be located at a single Site
0040	82	3.7	R	Site	A Site must be located within a single Geographical Area
0041 to 0053					RDD reference number(s) not allocated
0054	95	3.17	R	Antenna Radiation Pattern Augmentation	An Antenna Radiation Pattern Augmentation must modify the radiation pattern for a single Type B Transmitting Antenna
0055 to 0059					RDD reference number(s) not allocated
0060	88	3.11	I	Directional Transmitting Antenna	Vertically Polarized Component Horizontal Attenuation Pattern
0061 to 0063					RDD reference number(s) not allocated
0064	107	3.28	I	Signal Configuration	Vision Carrier Nominal Frequency
0065	107	3.28	I	Signal Configuration	Vision Carrier Frequency Offset Code
0066	114	3.28	I	Signal Configuration	Vision To Sound Power Ratio

0067	105	3.28	R	Signal Configuration	A Signal Configuration may use a single Colour System
0068	106	3.28	R	Signal Configuration	A Signal Configuration may use a single Television System
0069	119	3.33	G	Circular Zone	
0070	119	3.33	I	Circular Zone	Centre Geographical Coordinates
0071	119	3.33	I	Circular Zone	Radius
0072 to 0076					RDD reference number(s) not allocated
0077	103	3.24	G	Colour System	
0078	103	3.24	I	Colour System	Code
0079					RDD reference number(s) not allocated
0080	103	3.24	R	Colour System	A Colour System may be available to one or more Television Systems
0081	103	3.24	R	Colour System	A Colour System may be used by one or more Signal Configurations
0082					RDD reference number(s) not allocated
0083	118	3.30	I	Three Dimensional Zone	Altitude Radius Reduction
0084 to 0087					RDD reference number(s) not allocated
0088	71	3.2	G	Coordination Agreement	
0089					RDD reference number(s) not allocated
0090	71	3.2	I	Coordination Agreement	Status Code
0091	71	3.2	R	Coordination Agreement	A Coordination Agreement must be in respect of a single Signal Configuration
0092	71	3.2	R	Coordination Agreement	A Coordination Agreement must be reached with a single Administration
0093	71	3.3	G	Correspondence Address	
0094	72	3.3	I	Correspondence Address	Code
0095	72	3.3	I	Correspondence Address	Postal Address
0096	72	3.3	I	Correspondence Address	Telex Address
0097	72	3.3	R	Correspondence Address	A Correspondence Address must have validity in one or more Geographical Areas
0098	72	3.3	R	Correspondence Address	A Correspondence Address may be used for the notification of one or more Signal Configurations
0099 to 0106					RDD reference number(s) not allocated
0107	86	3.11	G	Directional Transmitting Antenna	
0108	87	3.11	I	Directional Transmitting Antenna	Azimuth Of Maximum Gain
0109	87	3.11	I	Directional Transmitting Antenna	Elevation Angle Of Maximum Gain
0110 to 0113					RDD reference number(s) not allocated
0114	83	3.9	G	Receiving Antenna	
0115 to 0116					RDD reference number(s) not allocated
0117	83	3.9	R	Receiving Antenna	A Receiving Antenna may receive a signal from one or more Transmitting Antennas
0118	83	3.9	R	Receiving Antenna	A Receiving Antenna may be the intended point of reception for one or more Signal Configurations
0119	83	3.10	G	Transmitting Antenna	
0120	109	3.28	I	Signal Configuration	Adjacent Channel Protection Ratio
0121	85	3.10	I	Transmitting Antenna	Ground Altitude Above Mean Sea Level
0122	84	3.10	I	Transmitting Antenna	Directivity Indicator
0123	85	3.10	I	Transmitting Antenna	Effective Height Pattern
0124	86	3.10	I	Transmitting Antenna	Ground Conductivity
0125	85	3.10	I	Transmitting Antenna	Height Above Ground Level
0126 to 0127					RDD reference number(s) not allocated
0128	85	3.10	I	Transmitting Antenna	Maximum Effective Height
0129	84	3.10	I	Transmitting Antenna	Maximum Gain
0130	83	3.8	I	Antenna	Operator's Identification Code
0131	84	3.10	I	Transmitting Antenna	Polarization Code
0132					RDD reference number(s) not allocated
0133	86	3.10	I	Transmitting Antenna	Type Code
0134 to 0135					RDD reference number(s) not allocated
0136	84	3.10	R	Transmitting Antenna	A Transmitting Antenna must emit signals described by one or more Signal Configurations
0137	84	3.10	R	Transmitting Antenna	A Transmitting Antenna may transmit a signal to one or more Receiving Antennas
0138					RDD reference number(s) not allocated
0139	105	3.28	R	Signal Configuration	A Signal Configuration may be emitted by a single Transmitting Antenna
0140	105	3.28	G	Signal Configuration	
0141	111	3.28	I	Signal Configuration	Date Of Bringing Into Use
0142 to 0143					RDD reference number(s) not allocated
0144	112	3.28	I	Signal Configuration	Period Of Validity
0145	106	3.28	I	Signal Configuration	Frequency Category Code
0146					RDD reference number(s) not allocated
0147	87	3.11	I	Directional Transmitting Antenna	Horizontal Beamwidth
0148					RDD reference number(s) not allocated
0149	113	3.28	I	Signal Configuration	Maximum Horizontally Polarized Radiated Power
0150	111	3.28	I	Signal Configuration	Station Identification
0151 to 0153					RDD reference number(s) not allocated
0154	114	3.28	I	Signal Configuration	Maximum Power Density Over 4 kHz
0155	113	3.28	I	Signal Configuration	Maximum Radiated Power
0156	110	3.28	I	Signal Configuration	Nature Of Service Code
0157	110	3.28	I	Signal Configuration	Necessary Bandwidth
0158					RDD reference number(s) not allocated
0159	112	3.28	I	Signal Configuration	Power Measurement Method Code
0160	83	3.9	I	Receiving Antenna	Receiving System Noise Temperature
0161	111	3.28	I	Signal Configuration	RR Conformity Indicator
0162					RDD reference number(s) not allocated
0163	114	3.28	I	Signal Configuration	Total Radiated Power
0164					RDD reference number(s) not allocated
0165	108	3.28	I	Signal Configuration	FM Transmission System Code
0166	112	3.28	I	Signal Configuration	Transmitter Output Power
0167					RDD reference number(s) not allocated
0168	84	3.10	I	Transmitting Antenna	Vertical Beamwidth
0169					RDD reference number(s) not allocated
0170	113	3.28	I	Signal Configuration	Maximum Vertically Polarized Radiated Power
0171 to 0172					RDD reference number(s) not allocated
0173	119	3.34	G	Geographical Area	
0174	120	3.34	I	Geographical Area	Code
0175	120	3.34	I	Geographical Area	Name
0176	120	3.34	R	Geographical Area	A Geographical Area may be the location for one or more Sites
0177 to 0182					RDD reference number(s) not allocated
0183	112	3.28	I	Signal Configuration	Local Operation Period Code
0184					RDD reference number(s) not allocated
0185	120	3.35	G	Maritime Zone	
0186	120	3.35	I	Maritime Zone	Description
0187	121	3.35	I	Maritime Zone	Code
0188 to 0193					RDD reference number(s) not allocated
0194	115	3.28	I	Signal Configuration	Three Dimensional Roaming Zone
0195	105	3.28	R	Signal Configuration	A Signal Configuration may be transmitted to one or more Receiving Antennas (A Signal Configuration emitted from mobile stations are assumed at any instant in time to be received

					at a single Receiving Antenna.)
0196 to 0199					RDD reference number(s) not allocated
0200	73	3.5	G	Terrestrial Service Notice	
0201	74	3.5	I	Terrestrial Service Notice	Administration Notice Identification Code
0202	75	3.5	I	Terrestrial Service Notice	BR Date Received
0203 to 0205					RDD reference number(s) not allocated
0206	74	3.5	I	Terrestrial Service Notice	Intended Action Code
0207					RDD reference number(s) not allocated
0208	73	3.5	R	Terrestrial Service Notice	A Terrestrial Service Notice must inform the BR of the actual or potential use of one or more Signal Configurations
0209	70	3.1	R	Administration	An Administration may submit one or more Terrestrial Service Notices
0210	72	3.3	R	Correspondence Address	A Correspondence Address may be used in planning the HFBC Tentative Schedule for one or more Signal Configurations
0211	73	3.5	R	Terrestrial Service Notice	A Terrestrial Service Notice must be submitted by a single Administration
0212	74	3.5	I	Terrestrial Service Notice	Date
0213					RDD reference number(s) not allocated
0214	75	3.5	I	Terrestrial Service Notice	Notification Category Code
0215	76	3.5	I	Terrestrial Service Notice	Plan Name
0216	76	3.5	I	Terrestrial Service Notice	Resubmission Indicator
0217	76	3.5	I	Terrestrial Service Notice	Notified Assigned Frequency
0218	72	3.4	G	Operator	
0219	73	3.4	I	Operator	Code
0220	73	3.4	I	Operator	Name
0221	73	3.4	R	Operator	An Operator may operate within a single Geographical Area
0222	73	3.4	R	Operator	An Operator may be responsible for the operation of one or more Signal Configurations
0223 to 0225					RDD reference number(s) not allocated
0226	104	3.26	G	Protection Mask	
0227	104	3.26	I	Protection Mask	Signal To Interference Ratio
0228	104	3.26	I	Protection Mask	Description
0229	104	3.26	I	Protection Mask	Minimum Protected Field Strength
0230	104	3.26	I	Protection Mask	Protection Margin
0231	104	3.26	I	Protection Mask	Shape
0232	104	3.26	I	Protection Mask	Protection Ratio
0233 to 0240					RDD reference number(s) not allocated
0241	104	3.27	G	Radiocommunication Service	
0242					RDD reference number(s) not allocated
0243	105	3.27	I	Radiocommunication Service	Name
0244					RDD reference number(s) not allocated
0245	105	3.27	R	Radiocommunication Service	A Radiocommunication Service must be qualified by one or more Classes Of Station
0246	98	3.21	G	Season Of Operation	
0247	98	3.21	I	Season Of Operation	Code
0248	98	3.21	R	Season Of Operation	A Season Of Operation may be the emission period for one or more Signal Configurations
0249 to 0251					RDD reference number(s) not allocated
0252	106	3.28	R	Signal Configuration	A Signal Configuration may be emitted in one or more Season Of Operation
0253					RDD reference number(s) not allocated
0254	106	3.28	R	Signal Configuration	A Signal Configuration may be operating during one or more Regular Operation Periods
0255	105	3.28	R	Signal Configuration	A Signal Configuration may require one or more Coordination Agreements
0256					RDD reference number(s) not allocated
0257	105	3.28	R	Signal Configuration	A Signal Configuration must be the subject of one or more Terrestrial Service Notices
0258					RDD reference number(s) not allocated
0259	105	3.28	R	Signal Configuration	A Signal Configuration may be the responsibility of a single Operator
0260	105	3.28	R	Signal Configuration	A Signal Configuration may have correspondence relating to interference matters addressed to a single Correspondence Address
0261	105	3.28	R	Signal Configuration	A Signal Configuration must be notified by a single Administration
0262					RDD reference number(s) not allocated
0263	106	3.28	R	Signal Configuration	A Signal Configuration must belong to a single Class Of Station
0264					RDD reference number(s) not allocated
0265	82	3.7	G	Site	
0266					RDD reference number(s) not allocated
0267	82	3.7	I	Site	Name
0268	82	3.7	R	Site	A Site may be the location for one or more Antennas
0269 to 0272					RDD reference number(s) not allocated
0273	88	3.11	I	Directional Transmitting Antenna	Horizontally Polarized Component Horizontal Attenuation Pattern
0274	115	3.28	I	Signal Configuration	Horizontal Radiation Pattern
0275	115	3.28	I	Signal Configuration	Vertical Radiation Pattern
0276	103	3.25	G	Class Of Station	
0277	103	3.25	I	Class Of Station	Code
0278	103	3.25	I	Class Of Station	Name
0279	103	3.25	R	Class Of Station	A Class Of Station may classify the operation of one or more Signal Configurations
0280	103	3.25	R	Class Of Station	A Class Of Station must identify one or more Radiocommunication Services
0281	116	3.29	G	Television System	
0282					RDD reference number(s) not allocated
0283	116	3.29	I	Television System	Code
0284 to 0299					RDD reference number(s) not allocated
0300	116	3.29	R	Television System	A Television System may be used by one or more Signal Configurations
0301	116	3.29	R	Television System	A Television System may be designed to use a single Colour System
0302 to 0305					RDD reference number(s) not allocated
0306	99	3.22	G	Regular Operation Period	
0307	99	3.22	I	Regular Operation Period	Start Time
0308	99	3.22	I	Regular Operation Period	Stop Time
0309	99	3.22	R	Regular Operation Period	A Regular Operation Period must be the operating time for a single Signal Configuration (Regular Operation Periods paired with the same Signal Configuration may not overlap)
0310 to 0327					RDD reference number(s) not allocated
0328	121	3.37	G	Zone Boundary Coordinate	
0329	121	3.37	I	Zone Boundary Coordinate	Geographical Coordinates
0330 to 0344					RDD reference number(s) not allocated
0345	106	3.28	I	Signal Configuration	Operational Frequency
0346					RDD reference number(s) not allocated
0347	111	3.28	I	Signal Configuration	Call Sign
0348	106	3.28	I	Signal Configuration	Reference (Carrier) Frequency
0349					RDD reference number(s) not allocated
0350	109	3.28	I	Signal Configuration	Channel Occupation Indicator
0351	110	3.28	I	Signal Configuration	Class Of Emission Code
0352 to 0353					RDD reference number(s) not allocated
0354	95	3.17	G	Antenna Radiation Pattern Augmentation	
0355	95	3.17	I	Antenna Radiation Pattern Augmentation	Central Azimuth Field Strength

0356	95	3.17	I	Antenna Radiation Pattern Augmentation	Central Azimuth
0357	95	3.17	I	Antenna Radiation Pattern Augmentation	Serial Number
0358	95	3.17	I	Antenna Radiation Pattern Augmentation	Total Span
0359	91	3.13	I	Type B Transmitting Antenna	Special Quadrature Factor
0360	116	3.28	I	Signal Configuration	Station Coverage Code
0361 to 0365					RDD reference number(s) not allocated
0366	119	3.32	G	CIRAF Zone	
0367	119	3.32	I	CIRAF Zone	Quadrant Code
0368	119	3.32	I	CIRAF Zone	Zone Number
0369 to 0374					RDD reference number(s) not allocated
0375	93	3.15	G	Sectionalized Tower	
0376	94	3.15	I	Sectionalized Tower	Lower Section Height Difference
0377	94	3.15	I	Sectionalized Tower	Lower Section Electrical Height
0378					RDD reference number(s) not allocated
0379	94	3.15	I	Sectionalized Tower	Height Difference
0380	89	3.12	G	Type A Transmitting Antenna	
0381	89	3.13	G	Type B Transmitting Antenna	
0382	89	3.12	I	Type A Transmitting Antenna	Electrical Height
0383	90	3.13	I	Type B Transmitting Antenna	Pattern Type
0384	90	3.13	R	Type B Transmitting Antenna	A Type B Transmitting Antenna must have its radiation pattern modified by the use of one or more Antenna Radiation Pattern Augmentations
0385	90	3.13	R	Type B Transmitting Antenna	A Type B Transmitting Antenna may consist of one or more Towers
0386	94	3.16	G	Top Loaded Tower	
0387					RDD reference number(s) not allocated
0388	94	3.16	I	Top Loaded Tower	Height Difference
0389	92	3.14	G	Tower	
0390	93	3.14	I	Tower	Angular Orientation
0391					RDD reference number(s) not allocated
0392	93	3.14	I	Tower	Electrical Spacing
0393	93	3.14	I	Tower	Field Phase Difference
0394	93	3.14	I	Tower	Electrical Height
0395	93	3.14	I	Tower	Field Strength Ratio
0396	93	3.14	I	Tower	Identification Number
0397	93	3.14	I	Tower	Structure Code
0398	92	3.14	R	Tower	A Tower must form a part of a single Type B Transmitting Antenna
0399 to 0445					RDD reference number(s) not allocated
0446	116	3.28	I	Signal Configuration	Maximum Length Of Circuit
0447 to 0450					RDD reference number(s) not allocated
0451	121	3.36	G	Segment Zone	
0452	121	3.36	I	Segment Zone	Start Azimuth
0453	121	3.36	I	Segment Zone	Finish Azimuth
0454	121	3.36	I	Segment Zone	Start Radius
0455 to 0461					RDD reference number(s) not allocated
0462	105	3.28	R	Signal Configuration	A Signal Configuration may have its protection limits defined by one or more Protection Masks
0463	104	3.26	R	Protection Mask	A Protection Mask may provide protection limits for one or more Signal Configurations
0464	100	3.23	G	Traffic Characteristic	
0465	100	3.23	I	Traffic Characteristic	Start Peak Hours
0466	100	3.23	I	Traffic Characteristic	Stop Peak Hours
0467	99	3.22	I	Regular Operation Period	Daily Volume
0468	100	3.23	R	Traffic Characteristic	A Traffic Characteristic must further define a single Regular Operation Period
0469	99	3.22	R	Regular Operation Period	A Regular Operation Period may be further defined by one or more Traffic Characteristics
0470					RDD reference number(s) not allocated
0471	114	3.28	I	Signal Configuration	RMS Radiation
0472 to 0474					RDD reference number(s) not allocated
0475	121	3.36	I	Segment Zone	Finish Radius
0476	87	3.11	I	Directional Transmitting Antenna	Radiator Type
0477	88	3.11	I	Directional Transmitting Antenna	Reflector Type
0478	86	3.10	I	Transmitting Antenna	Design Frequency
0479	87	3.11	I	Directional Transmitting Antenna	Azimuth To The Normal Of The Plane Of The Radiating Elements
0480	87	3.11	I	Directional Transmitting Antenna	Slew Angle
0481	107	3.28	I	Signal Configuration	Sound Carrier Nominal Frequency
0482	107	3.28	I	Signal Configuration	Sound Carrier Frequency Offset Code
0481 to 0483					RDD reference number(s) not allocated
0484	114	3.28	I	Signal Configuration	Energy Dispersal Description
0485	106	3.28	I	Signal Configuration	Pre-emphasis P-P Frequency Deviation
0486 to 0493					RDD reference number(s) not allocated
0494	111	3.28	I	Signal Configuration	Class Of Operation Code
0495	109	3.28	I	Signal Configuration	Channel Number
0496 to 0497					RDD reference number(s) not allocated
0498	98	3.20	G	Day Of Operation	
0499	98	3.20	R	Day Of Operation	A Day Of Operation may be the transmission period for one or more Signal Configurations.
0502	91	3.13	I	Type B Transmitting Antenna	Vertical Gain Pattern
0501 to 0506					RDD reference number(s) not allocated
0507	91	3.13	I	Type B Transmitting Antenna	Horizontal Gain Pattern
0508	92	3.13	I	Type B Transmitting Antenna	Hemispherical Gain Pattern
0509	96	3.19	I	Operational Sector	Start Azimuth
0510	96	3.19	I	Operational Sector	Finish Azimuth
0511	121	3.37	I	Zone Boundary Coordinate	Sequence Number
0512	109	3.28	I	Signal Configuration	HF Transmission System Code
0513 to 0526					RDD reference number(s) not allocated
0527	118	3.30	I	Three Dimensional Zone	Two Dimensional Zone
0528 to 0530					RDD reference number(s) not allocated
0531	98	3.20	I	Day Of Operation	Name
0532 to 0534					RDD reference number(s) not allocated
0535	111	3.28	I	Signal Configuration	Synchronized Network Identification Code
0536	89	3.12	I	Type A Transmitting Antenna	Physical Height
0537					RDD reference number(s) not allocated
0538	99	3.21	I	Season Of Operation	Start Date
0539	99	3.21	I	Season Of Operation	Stop Date
0540	120	3.34	R	Geographical Area	A Geographical Area may be an area of operation for one or more Operators
0541	106	3.28	R	Signal Configuration	A Signal Configuration may be emitted on one or more Days Of Operation
0542 to 0543					RDD reference number(s) not allocated
0544	115	3.28	I	Signal Configuration	Two Dimensional Roaming Zone
0545	115	3.28	I	Signal Configuration	Three Dimensional Service Zone
0546	116	3.28	I	Signal Configuration	Two Dimensional Service Zone
0547 to 0549					RDD reference number(s) not allocated

0550	85	3.10	I	Transmitting Antenna	Azimuth Of Maximum Effective Height
0551	107	3.28	I	Signal Configuration	Sound Carrier Frequency Offset
0552	108	3.28	I	Signal Configuration	Vision Carrier Frequency Offset
0553	108	3.28	I	Signal Configuration	Frequency Offset Stability Indicator
0554	112	3.28	I	Signal Configuration	Antenna Input Power
0556	70	3.1	R	Administration	An Administration may submit one or more Correspondence Addresses
0557	70	3.1	R	Administration	An Administration may inform the BR of the address of one or more Operators
0558					RDD reference number(s) not allocated
0559	70	3.1	R	Administration	An Administration may nominate one or more Sites
0560	70	3.1	I	Administration	Official Facsimile Address
0561	70	3.1	I	Administration	Official E-mail Address
0562	71	3.1	I	Administration	ITU Language Code
0563	72	3.3	R	Correspondence Address	A Correspondence Address must be nominated by a single Administration
0564	72	3.3	I	Correspondence Address	Facsimile Address
0565	72	3.3	I	Correspondence Address	E-mail Address
0566					RDD reference number(s) not allocated
0567	82	3.7	R	Site	A Site must be submitted by a single Administration
0568 to 0569					RDD reference number(s) not allocated
0570	113	3.28	I	Signal Configuration	Power Control Range
0571	114	3.28	I	Signal Configuration	Maximum Power Density Over 1 MHz
0572	107	3.28	I	Signal Configuration	Pre-emphasis RMS Frequency Deviation
0573 to 0575					RDD reference number(s) not allocated
0576	122	3.38	G	Maritime HF Allotment Area	
0577	122	3.38	I	Maritime HF Allotment Area	Description
0578	122	3.38	I	Maritime HF Allotment Area	Code
0579					RDD reference number(s) not allocated
0580	104	3.26	R	Protection Mask	A Protection Mask must be defined for a single Radiocommunication Service
0581	105	3.27	R	Radiocommunication Service	A Radiocommunication Service may include one or more other Radiocommunication Services
0582	105	3.27	R	Radiocommunication Service	A Radiocommunication Service may be protected by one or more Protection Masks
0583 to 0600					RDD reference number(s) not allocated
0601	119	3.31	I	Aeronautical Zone	Description
0602					RDD reference number(s) not allocated
0603	73	3.4	R	Operator	An Operator must have been registered with the BR by a single Administration
0604	105	3.27	I	Radiocommunication Service	Code
0605	79	3.6	G	Provision	
0606	79	3.6	R	Provision	A Provision may determine the requirements for one or more Coordination Agreements
0607	79	3.6	R	Provision	A Provision may determine the regulatory requirements for one or more Terrestrial Service Notices
0608	79	3.6	I	Provision	Code
0609	71	3.2	R	Coordination Agreement	A Coordination Agreement must be in respect of a single Provision
0610	73	3.5	R	Terrestrial Service Notice	A Terrestrial Service Notice must be submitted according to the requirements of one or more Provisions
0611	76	3.5	I	Terrestrial Service Notice	Notified Reference (Carrier) Frequency
0612	76	3.5	I	Terrestrial Service Notice	Notified Centre Frequency
0613 to 0614					RDD reference number(s) not allocated
0615	77	3.5	I	Terrestrial Service Notice	Notified Usable Frequency Range
0616	77	3.5	I	Terrestrial Service Notice	First Alternative Frequency
0617	77	3.5	I	Terrestrial Service Notice	Second Alternative Frequency
0618	77	3.5	I	Terrestrial Service Notice	Third Alternative Frequency
0619	77	3.5	I	Terrestrial Service Notice	Notified Channel Number
0620	77	3.5	I	Terrestrial Service Notice	Alternative Channel Number
0621	78	3.5	I	Terrestrial Service Notice	Channel Number To Be Replaced
0622	78	3.5	I	Terrestrial Service Notice	Preferred Frequency Band
0623	78	3.5	I	Terrestrial Service Notice	First Alternative Frequency Band
0624	78	3.5	I	Terrestrial Service Notice	Second Alternative Frequency Band
0625	78	3.5	I	Terrestrial Service Notice	Third Alternative Frequency Band
0626	78	3.5	I	Terrestrial Service Notice	Remarks
0627	82	3.7	R	Site	A Site must be located within a single Maritime HF Allotment Area
0628	82	3.7	I	Site	Code
0629	86	3.11	R	Directional Transmitting Antenna	A Directional Transmitting Antenna may sweep across one or more Operational Sectors
0630	96	3.19	G	Operational Sector	
0631	96	3.19	R	Operational Sector	An Operational Sector must identify an area of the Earth's surface swept by a single Directional Transmitting Antenna.
0632	98	3.20	I	Day Of Operation	Code
0633	105	3.28	R	Signal Configuration	A Signal Configuration may have correspondence relating to planning the HFBC Tentative Schedule addressed to a single Correspondence Address
0634 to 0635					RDD reference number(s) not allocated
0636	112	3.28	I	Signal Configuration	Language Of Service
0637	122	3.38	R	Maritime HF Allotment Area	A Maritime HF Allotment Area may be the location for one or more Sites
0638	95	3.18	G	Antenna Reference Pattern	
0639	96	3.18	R	Antenna Reference Pattern	An Antenna Reference Pattern may describe the off-axis radiation characteristics of one or more Directional Transmitting Antennas
0640	86	3.11	R	Directional Transmitting Antenna	A Directional Transmitting Antenna may have its off-axis radiation characteristics described by a single Antenna Reference Pattern
0641	96	3.18	I	Antenna Reference Pattern	Code
0642	96	3.18	I	Antenna Reference Pattern	Description
0643 to 0651					RDD reference number(s) not allocated
0652	106	3.28	I	Signal Configuration	Frequency Offset
0653	120	3.34	I	Geographical Area	Radiocommunication Region Code

10.2 Terrestrial data groups and data items in alphabetical sequence

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item
0010	70	3.1	G	Administration	
0032	118	3.31	G	Aeronautical Zone	
0035	82	3.8	G	Antenna	
0354	95	3.17	G	Antenna Radiation Pattern Augmentation	
0638	95	3.18	G	Antenna Reference Pattern	
0366	119	3.32	G	CIRAF Zone	
0069	119	3.33	G	Circular Zone	
0276	103	3.25	G	Class Of Station	
0077	103	3.24	G	Colour System	
0088	71	3.2	G	Coordination Agreement	
0093	71	3.3	G	Correspondence Address	
0498	98	3.20	G	Day Of Operation	
0107	86	3.11	G	Directional Transmitting Antenna	
0173	119	3.34	G	Geographical Area	
0576	122	3.38	G	Maritime HF Allotment Area	
0185	120	3.35	G	Maritime Zone	
0630	96	3.19	G	Operational Sector	
0218	72	3.4	G	Operator	
0226	104	3.26	G	Protection Mask	
0605	79	3.6	G	Provision	
0241	104	3.27	G	Radiocommunication Service	
0114	83	3.9	G	Receiving Antenna	
0306	99	3.22	G	Regular Operation Period	
0246	98	3.21	G	Season Of Operation	
0375	93	3.15	G	Sectionalized Tower	
0451	121	3.36	G	Segment Zone	
0140	105	3.28	G	Signal Configuration	
0265	82	3.7	G	Site	
0281	116	3.29	G	Television System	
0200	73	3.5	G	Terrestrial Service Notice	
0001	118	3.30	G	Three Dimensional Zone	
0386	94	3.16	G	Top Loaded Tower	
0389	92	3.14	G	Tower	
0464	100	3.23	G	Traffic Characteristic	
0119	83	3.10	G	Transmitting Antenna	
0380	89	3.12	G	Type A Transmitting Antenna	
0381	89	3.13	G	Type B Transmitting Antenna	
0328	121	3.37	G	Zone Boundary Coordinate	
0120	109	3.28	I	Signal Configuration	Adjacent Channel Protection Ratio
0201	74	3.5	I	Terrestrial Service Notice	Administration Notice Identification Code
0620	77	3.5	I	Terrestrial Service Notice	Alternative Channel Number
0083	118	3.30	I	Three Dimensional Zone	Altitude Radius Reduction
0390	93	3.14	I	Tower	Angular Orientation
0554	112	3.28	I	Signal Configuration	Antenna Input Power
0550	85	3.10	I	Transmitting Antenna	Azimuth Of Maximum Effective Height
0108	87	3.11	I	Directional Transmitting Antenna	Azimuth Of Maximum Gain
0479	87	3.11	I	Directional Transmitting Antenna	Azimuth To The Normal Of The Plane Of The Radiating Elements
0202	75	3.5	I	Terrestrial Service Notice	BR Date Received
0347	111	3.28	I	Signal Configuration	Call Sign
0356	95	3.17	I	Antenna Radiation Pattern Augmentation	Central Azimuth
0355	95	3.17	I	Antenna Radiation Pattern Augmentation	Central Azimuth Field Strength
0070	119	3.33	I	Circular Zone	Centre Geographical Coordinates
0495	109	3.28	I	Signal Configuration	Channel Number
0621	78	3.5	I	Terrestrial Service Notice	Channel Number To Be Replaced
0350	109	3.28	I	Signal Configuration	Channel Occupation Indicator
0351	110	3.28	I	Signal Configuration	Class Of Emission Code
0494	111	3.28	I	Signal Configuration	Class Of Operation Code
0011	70	3.1	I	Administration	Code
0033	119	3.31	I	Aeronautical Zone	Code
0641	96	3.18	I	Antenna Reference Pattern	Code
0277	103	3.25	I	Class Of Station	Code
0078	103	3.24	I	Colour System	Code
0094	72	3.3	I	Correspondence Address	Code
0632	98	3.20	I	Day Of Operation	Code
0174	120	3.34	I	Geographical Area	Code
0578	122	3.38	I	Maritime HF Allotment Area	Code
0187	121	3.35	I	Maritime Zone	Code
0219	73	3.4	I	Operator	Code
0608	79	3.6	I	Provision	Code
0604	105	3.27	I	Radiocommunication Service	Code
0247	98	3.21	I	Season Of Operation	Code
0628	82	3.7	I	Site	Code
0283	116	3.29	I	Television System	Code
0467	99	3.22	I	Regular Operation Period	Daily Volume
0212	74	3.5	I	Terrestrial Service Notice	Date
0141	111	3.28	I	Signal Configuration	Date Of Bringing Into Use
0601	119	3.31	I	Aeronautical Zone	Description
0642	96	3.18	I	Antenna Reference Pattern	Description
0577	122	3.38	I	Maritime HF Allotment Area	Description
0186	120	3.35	I	Maritime Zone	Description
0228	104	3.26	I	Protection Mask	Description
0478	86	3.10	I	Transmitting Antenna	Design Frequency
0122	84	3.10	I	Transmitting Antenna	Directivity Indicator
0123	85	3.10	I	Transmitting Antenna	Effective Height Pattern
0394	93	3.14	I	Tower	Electrical Height
0382	89	3.12	I	Type A Transmitting Antenna	Electrical Height
0392	93	3.14	I	Tower	Electrical Spacing
0109	87	3.11	I	Directional Transmitting Antenna	Elevation Angle Of Maximum Gain
0565	72	3.3	I	Correspondence Address	E-mail Address

0484	114	3.28	1	Signal Configuration	Energy Dispersal Description
0564	72	3.3	1	Correspondence Address	Facsimile Address
0393	93	3.14	1	Tower	Field Phase Difference
0395	93	3.14	1	Tower	Field Strength Ratio
0510	96	3.19	1	Operational Sector	Finish Azimuth
0453	121	3.36	1	Segment Zone	Finish Azimuth
0475	121	3.36	1	Segment Zone	Finish Radius
0616	77	3.5	1	Terrestrial Service Notice	First Alternative Frequency
0623	78	3.5	1	Terrestrial Service Notice	First Alternative Frequency Band
0165	108	3.28	1	Signal Configuration	FM Transmission System Code
0145	106	3.28	1	Signal Configuration	Frequency Category Code
0652	106	3.28	1	Signal Configuration	Frequency Offset
0553	108	3.28	1	Signal Configuration	Frequency Offset Stability Indicator
0037	83	3.8	1	Antenna	Geographical Coordinates
0329	121	3.37	1	Zone Boundary Coordinate	Geographical Coordinates
0121	85	3.10	1	Transmitting Antenna	Ground Altitude Above Mean Sea Level
0124	86	3.10	1	Transmitting Antenna	Ground Conductivity
0125	85	3.10	1	Transmitting Antenna	Height Above Ground Level
0379	94	3.15	1	Sectionalized Tower	Height Difference
0388	94	3.16	1	Top Loaded Tower	Height Difference
0508	92	3.13	1	Type B Transmitting Antenna	Hemispherical Gain Pattern
0512	109	3.28	1	Signal Configuration	HF Transmission System Code
0147	87	3.11	1	Directional Transmitting Antenna	Horizontal Beamwidth
0507	91	3.13	1	Type B Transmitting Antenna	Horizontal Gain Pattern
0274	115	3.28	1	Signal Configuration	Horizontal Radiation Pattern
0273	88	3.11	1	Directional Transmitting Antenna	Horizontally Polarized Component Horizontal Attenuation Pattern
0396	93	3.14	1	Tower	Identification Number
0206	74	3.5	1	Terrestrial Service Notice	Intended Action Code
0562	71	3.1	1	Administration	ITU Language Code
0636	112	3.28	1	Signal Configuration	Language Of Service
0183	112	3.28	1	Signal Configuration	Local Operation Period Code
0377	94	3.15	1	Sectionalized Tower	Lower Section Electrical Height
0376	94	3.15	1	Sectionalized Tower	Lower Section Height Difference
0038	83	3.8	1	Antenna	Mast Identification
0128	85	3.10	1	Transmitting Antenna	Maximum Effective Height
0129	84	3.10	1	Transmitting Antenna	Maximum Gain
0149	113	3.28	1	Signal Configuration	Maximum Horizontally Polarized Radiated Power
0446	116	3.28	1	Signal Configuration	Maximum Length Of Circuit
0003	118	3.30	1	Three Dimensional Zone	Maximum Operating Height
0571	114	3.28	1	Signal Configuration	Maximum Power Density Over 1 MHz
0154	114	3.28	1	Signal Configuration	Maximum Power Density Over 4 kHz
0155	113	3.28	1	Signal Configuration	Maximum Radiated Power
0170	113	3.28	1	Signal Configuration	Maximum Vertically Polarized Radiated Power
0004	118	3.30	1	Three Dimensional Zone	Minimum Operating Height
0229	104	3.26	1	Protection Mask	Minimum Protected Field Strength
0012	70	3.1	1	Administration	Name
0278	103	3.25	1	Class Of Station	Name
0531	98	3.20	1	Day Of Operation	Name
0175	120	3.34	1	Geographical Area	Name
0220	73	3.4	1	Operator	Name
0243	105	3.27	1	Radiocommunication Service	Name
0267	82	3.7	1	Site	Name
0156	110	3.28	1	Signal Configuration	Nature Of Service Code
0157	110	3.28	1	Signal Configuration	Necessary Bandwidth
0214	75	3.5	1	Terrestrial Service Notice	Notification Category Code
0217	76	3.5	1	Terrestrial Service Notice	Notified Assigned Frequency
0612	76	3.5	1	Terrestrial Service Notice	Notified Centre Frequency
0619	77	3.5	1	Terrestrial Service Notice	Notified Channel Number
0611	76	3.5	1	Terrestrial Service Notice	Notified Reference (Carrier) Frequency
0615	77	3.5	1	Terrestrial Service Notice	Notified Usable Frequency Range
0561	70	3.1	1	Administration	Official E-mail Address
0560	70	3.1	1	Administration	Official Facsimile Address
0013	70	3.1	1	Administration	Official Postal Address
0014	70	3.1	1	Administration	Official Telex Address
0345	106	3.28	1	Signal Configuration	Operational Frequency
0130	83	3.8	1	Antenna	Operator's Identification Code
0383	90	3.13	1	Type B Transmitting Antenna	Pattern Type
0144	112	3.28	1	Signal Configuration	Period Of Validity
0536	89	3.12	1	Type A Transmitting Antenna	Physical Height
0215	76	3.5	1	Terrestrial Service Notice	Plan Name
0131	84	3.10	1	Transmitting Antenna	Polarization Code
0095	72	3.3	1	Correspondence Address	Postal Address
0570	113	3.28	1	Signal Configuration	Power Control Range
0159	112	3.28	1	Signal Configuration	Power Measurement Method Code
0485	106	3.28	1	Signal Configuration	Pre-emphasis P-P Frequency Deviation
0572	107	3.28	1	Signal Configuration	Pre-emphasis RMS Frequency Deviation
0622	78	3.5	1	Terrestrial Service Notice	Preferred Frequency Band
0230	104	3.26	1	Protection Mask	Protection Margin
0232	104	3.26	1	Protection Mask	Protection Ratio
0367	119	3.32	1	CIRAF Zone	Quadrant Code
0476	87	3.11	1	Directional Transmitting Antenna	Radiator Type
0653	120	3.34	1	Geographical Area	Radiocommunication Region Code
0071	119	3.33	1	Circular Zone	Radius
0160	83	3.9	1	Receiving Antenna	Receiving System Noise Temperature
0348	106	3.28	1	Signal Configuration	Reference (Carrier) Frequency
0477	88	3.11	1	Directional Transmitting Antenna	Reflector Type
0626	78	3.5	1	Terrestrial Service Notice	Remarks
0216	76	3.5	1	Terrestrial Service Notice	Resubmission Indicator
0471	114	3.28	1	Signal Configuration	RMS Radiation
0161	111	3.28	1	Signal Configuration	RR Conformity Indicator
0617	77	3.5	1	Terrestrial Service Notice	Second Alternative Frequency
0624	78	3.5	1	Terrestrial Service Notice	Second Alternative Frequency Band
0511	121	3.37	1	Zone Boundary Coordinate	Sequence Number
0357	95	3.17	1	Antenna Radiation Pattern Augmentation	Serial Number
0231	104	3.26	1	Protection Mask	Shape
0227	104	3.26	1	Protection Mask	Signal To Interference Ratio

0480	87	3.11	1	Directional Transmitting Antenna	Slew Angle
0551	107	3.28	1	Signal Configuration	Sound Carrier Frequency Offset
0482	107	3.28	1	Signal Configuration	Sound Carrier Frequency Offset Code
0481	107	3.28	1	Signal Configuration	Sound Carrier Nominal Frequency
0359	91	3.13	1	Type B Transmitting Antenna	Special Quadrature Factor
0509	96	3.19	1	Operational Sector	Start Azimuth
0452	121	3.36	1	Segment Zone	Start Azimuth
0538	99	3.21	1	Season Of Operation	Start Date
0465	100	3.23	1	Traffic Characteristic	Start Peak Hours
0454	121	3.36	1	Segment Zone	Start Radius
0307	99	3.22	1	Regular Operation Period	Start Time
0360	116	3.28	1	Signal Configuration	Station Coverage Code
0150	111	3.28	1	Signal Configuration	Station Identification
0090	71	3.2	1	Coordination Agreement	Status Code
0539	99	3.21	1	Season Of Operation	Stop Date
0466	100	3.23	1	Traffic Characteristic	Stop Peak Hours
0308	99	3.22	1	Regular Operation Period	Stop Time
0397	93	3.14	1	Tower	Structure Code
0535	111	3.28	1	Signal Configuration	Synchronized Network Identification Code
0096	72	3.3	1	Correspondence Address	Telex Address
0618	77	3.5	1	Terrestrial Service Notice	Third Alternative Frequency
0625	78	3.5	1	Terrestrial Service Notice	Third Alternative Frequency Band
0194	115	3.28	1	Signal Configuration	Three Dimensional Roaming Zone
0545	115	3.28	1	Signal Configuration	Three Dimensional Service Zone
0163	114	3.28	1	Signal Configuration	Total Radiated Power
0358	95	3.17	1	Antenna Radiation Pattern Augmentation	Total Span
0166	112	3.28	1	Signal Configuration	Transmitter Output Power
0544	115	3.28	1	Signal Configuration	Two Dimensional Roaming Zone
0546	116	3.28	1	Signal Configuration	Two Dimensional Service Zone
0527	118	3.30	1	Three Dimensional Zone	Two Dimensional Zone
0133	86	3.10	1	Transmitting Antenna	Type Code
0168	84	3.10	1	Transmitting Antenna	Vertical Beamwidth
0502	91	3.13	1	Type B Transmitting Antenna	Vertical Gain Pattern
0275	115	3.28	1	Signal Configuration	Vertical Radiation Pattern
0060	88	3.11	1	Directional Transmitting Antenna	Vertically Polarized Component Horizontal Attenuation Pattern
0552	108	3.28	1	Signal Configuration	Vision Carrier Frequency Offset
0065	107	3.28	1	Signal Configuration	Vision Carrier Frequency Offset Code
0064	107	3.28	1	Signal Configuration	Vision Carrier Nominal Frequency
0066	114	3.28	1	Signal Configuration	Vision To Sound Power Ratio
0368	119	3.32	1	CIRAF Zone	Zone Number

10.3 Space data elements in RDD reference number sequence

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
S001	169	5.1	G	Administration	
S002	169	5.1	R	Administration	An Administration may be party to one or more Coordination Agreements
S003 to S005					RDD reference number(s) not allocated
S006	169	5.1	R	Administration	An Administration may submit one or more Correspondence Addresses
S007	169	5.1	R	Administration	An Administration may have joint notification interest in one or more Space Stations
S008					RDD reference number(s) not allocated
S009	169	5.1	R	Administration	An Administration may be responsible for notifying on behalf of one or more Intergovernmental Satellite Organizations
S010					RDD reference number(s) not allocated
S011	169	5.1	I	Administration	Code
S012	169	5.1	I	Administration	Name
S013	170	5.1	I	Administration	ITU Language Code
S014	169	5.1	I	Administration	Official Postal Address
S015	169	5.1	I	Administration	Official Telex Address
S016	170	5.2	G	Correspondence Address	
S017	170	5.2	R	Correspondence Address	A Correspondence Address must be nominated by a single Administration
S018	170	5.2	R	Correspondence Address	A Correspondence Address may be used for one or more Space Stations
S019	170	5.2	R	Correspondence Address	A Correspondence Address may be used for one or more Earth Station Antennas
S020	170	5.2	R	Correspondence Address	A Correspondence Address must have validity in one or more Geographical Areas
S021	170	5.2	I	Correspondence Address	Code
S022	170	5.2	I	Correspondence Address	Postal Address
S023	171	5.2	I	Correspondence Address	Telex Address
S024	171	5.3	G	Operator	
S025	171	5.3	R	Operator	An Operator must operate within a single Geographical Area
S026	171	5.3	R	Operator	An Operator may be responsible for the operation of one or more Space Stations
S027	171	5.3	R	Operator	An Operator may be responsible for the operation of one or more Earth Station Antennas
S028					RDD reference number(s) not allocated
S029	171	5.3	I	Operator	Code
S030	171	5.3	I	Operator	Name
S031	171	5.4	G	Intergovernmental Satellite Organization	
S032	172	5.4	R	Intergovernmental Satellite Organization	An Intergovernmental Satellite Organization may be the operator of one or more Space Stations
S033	172	5.4	R	Intergovernmental Satellite Organization	An Intergovernmental Satellite Organization must have all its satellite systems notified by a single Administration
S034	172	5.4	I	Intergovernmental Satellite Organization	Code
S035	172	5.4	I	Intergovernmental Satellite Organization	Name
S036	172	5.5	G	Geographical Area	
S037	172	5.5	R	Geographical Area	A Geographical Area may be an area of operation for one or more Operators
S038	172	5.5	R	Geographical Area	A Geographical Area may be the location for one or more Sites
S039	172	5.5	R	Geographical Area	A Geographical Area may be valid for one or more Correspondence Addresses
S040					RDD reference number(s) not allocated
S041	172	5.5	I	Geographical Area	Code
S042	173	5.5	I	Geographical Area	Name
S043	173	5.5	I	Geographical Area	Radiocommunication Region Code
S044	173	5.6	G	Radiocommunication Service	
S045					RDD reference number(s) not allocated
S046	173	5.6	R	Radiocommunication Service	A Radiocommunication Service must be qualified by one or more Classes Of Station
S047	173	5.6	I	Radiocommunication Service	Name
S048	173	5.7	G	Class Of Station	
S049 to S050					RDD reference number(s) not allocated
S051	174	5.7	R	Class Of Station	A Class Of Station must identify a single Radiocommunication Service
S052	174	5.7	I	Class Of Station	Code
S053					RDD reference number(s) not allocated
S054	174	5.7	I	Class Of Station	Name
S055	177	5.10	G	Space Station	
S056					RDD reference number(s) not allocated
S057	177	5.10	R	Space Station	A Space Station must be the subject of one or more Space Service Notices
S058	177	5.10	R	Space Station	A Space Station must emit or receive one or more Beams
S059					RDD reference number(s) not allocated
S060	177	5.10	R	Space Station	A Space Station may be under the operational control of a single Operator
S061	177	5.10	R	Space Station	A Space Station may be of "participating interest" to one or more Administrations
S062	177	5.10	R	Space Station	A Space Station may have interference issues addressed to a single Correspondence Address
S063					RDD reference number(s) not allocated
S064	202	5.19	R	Beam	A Beam may operate in one or more Frequency Ranges
S065	177	5.10	R	Space Station	A Space Station may be communicating with one or more Earth Station Antennas
S066					RDD reference number(s) not allocated
S067	178	5.10	I	Space Station	BR Identification Code
S068	178	5.10	I	Space Station	Notified Identification Code
S069	178	5.10	I	Space Station	Name
S070	178	5.10	I	Space Station	Subregional System Indicator
S071	184	5.11	G	Geostationary Orbital Position	
S072	184	5.11	I	Geostationary Orbital Position	Nominal Longitude
S073	184	5.11	I	Geostationary Orbital Position	Preferred Longitude
S074	184	5.11	I	Geostationary Orbital Position	Longitude Tolerance Easterly Limit
S075	185	5.11	I	Geostationary Orbital Position	Longitude Tolerance Westerly Limit
S076	185	5.11	I	Geostationary Orbital Position	Inclination Excursion
S077 to S078					RDD reference number(s) not allocated
S079	185	5.11	I	Geostationary Orbital Position	Service Arc Easterly Limit
S080	185	5.11	I	Geostationary Orbital Position	Service Arc Westerly Limit
S081 to S083					RDD reference number(s) not allocated
S084	186	5.12	I	Non-geostationary Orbit	Reference Body Code
S085					RDD reference number(s) not allocated
S086	178	5.10	I	Space Station	Total Number Of Non-geostationary Orbits
S087	186	5.12	I	Non-geostationary Orbit	Number Of Satellites In Orbit
S088 to S090					RDD reference number(s) not allocated
S091	229	5.25	I	Assignment Coordination Group (ACG)	Start Time
S092	229	5.25	I	Assignment Coordination Group (ACG)	Stop Time
S093	185	5.12	G	Non-geostationary Orbit	
S094	186	5.12	R	Non-geostationary Orbit	A Non-geostationary Orbit must indicate the astrodynamics details of a single Space Station
S095	186	5.12	R	Non-geostationary Orbit	A Non-geostationary Orbit must contain one or more Non-geostationary Satellite Positions
S096	186	5.12	I	Non-geostationary Orbit	Inclination Angle
S097	187	5.12	I	Non-geostationary Orbit	Right Ascension Of The Ascending Node

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
S098	188	5.12	I	Non-geostationary Orbit	Apogee Altitude
S099	188	5.12	I	Non-geostationary Orbit	Perigee Altitude
S100	189	5.12	I	Non-geostationary Orbit	Perigee Argument
S101	189	5.12	I	Non-geostationary Orbit	Eccentricity
S102	189	5.12	I	Non-geostationary Orbit	Semi Major Axis
S103	189	5.12	I	Non-geostationary Orbit	Satellite Period
S104	189	5.13	G	Non-geostationary Satellite Position	
S105	189	5.13	R	Non-geostationary Satellite Position	A Non-geostationary Satellite Position must be located in a single Non-geostationary Orbit
S106	190	5.13	I	Non-geostationary Satellite Position	Initial Phase Angle
S107	202	5.19	G	Beam	
S108	202	5.19	R	Beam	A Beam may describe the properties of satellite antennas to radiate energy that is characterized by one or more Transmitting Space Station ACGs
S109	202	5.19	R	Beam	A Beam may describe the properties of satellite antennas to receive energy that is characterized by one or more Receiving Space Station ACGs
S110	202	5.19	R	Beam	A Beam may describe the properties of satellite antennas to radiate energy that is characterized by one or more Transmitting Space Station Space To Space ACGs
S111	202	5.19	R	Beam	A Beam may describe the properties of satellite antennas to receive energy that is characterized by one or more Receiving Space Station Space To Space ACGs
S112	202	5.19	R	Beam	A Beam must belong to a single Space Station
S113	202	5.19	R	Beam	A Beam must be the subject of one or more Intended Actions
S114					RDD reference number(s) not allocated
S115	203	5.19	I	Beam	Emission/Reception Indicator
S116	202	5.19	I	Beam	Designation
S117					RDD reference number(s) not allocated
S118	203	5.19	I	Beam	Steerable Indicator
S119	203	5.19	I	Beam	Boresight Geographical Coordinates
S120	203	5.19	I	Beam	Pointing Accuracy
S121	203	5.19	I	Beam	Orientation Angle Alpha
S122	205	5.19	I	Beam	Co-polar Gain Pattern
S123	206	5.19	I	Beam	Cross-polar Gain Pattern
S124	205	5.19	I	Beam	Maximum Co-polar Gain
S125	207	5.19	I	Beam	Gain Versus GSO Diagram
S126	207	5.19	I	Beam	Gain Versus Elevation Angle Diagram
S127	207	5.19	I	Beam	Spreading Loss Versus Elevation Angle
S128 to S129					RDD reference number(s) not allocated
S130	208	5.20	I	Elliptical Beam	Major Axis Beamwidth
S131	208	5.20	I	Elliptical Beam	Minor Axis Beamwidth
S132	209	5.20	I	Elliptical Beam	Major Axis Orientation
S133	209	5.20	I	Elliptical Beam	Rotational Accuracy
S134 to S141					RDD reference number(s) not allocated
S142	211	5.22	R	Earth Station Antenna	An Earth Station Antenna may be under the operational control of a single Operator
S143	211	5.22	R	Earth Station Antenna	An Earth Station Antenna may have interference issues addressed to a single Correspondence Address
S144	215	5.22	I	Earth Station Antenna	Horizon Distance Pattern
S145	211	5.22	R	Earth Station Antenna	An Earth Station Antenna may form a space network with a single Space Station
S146					RDD reference number(s) not allocated
S147	211	5.22	R	Earth Station Antenna	An Earth Station Antenna must be the subject of one or more Space Service Notices
S148	212	5.22	I	Earth Station Antenna	BR Identification Code
S149	212	5.22	I	Earth Station Antenna	Notified Identification Code
S150	214	5.22	I	Earth Station Antenna	Minimum Elevation Pattern
S151	211	5.22	G	Earth Station Antenna	
S152	211	5.22	R	Earth Station Antenna	An Earth Station Antenna may be the point of reception for one or more Receiving Earth Station ACGs
S153	211	5.22	R	Earth Station Antenna	An Earth Station Antenna may be the emitting source of one or more Transmitting Earth Station ACGs
S154	211	5.22	R	Earth Station Antenna	An Earth Station Antenna must be located at a single Site
S155 to S156					RDD reference number(s) not allocated
S157	212	5.22	I	Earth Station Antenna	Typical/Specific Indicator
S008					RDD reference number(s) not allocated
S159	212	5.22	I	Earth Station Antenna	Geographical Coordinates
S160 to S162					RDD reference number(s) not allocated
S163	212	5.22	I	Earth Station Antenna	Maximum Gain
S164	213	5.22	I	Earth Station Antenna	Beamwidth
S165	217	5.23	I	Associated Earth Station Antenna	Diameter
S167	213	5.22	I	Earth Station Antenna	Co-polar Gain Pattern
S168	215	5.22	I	Earth Station Antenna	Planned Minimum Elevation Angle
S169	214	5.22	I	Earth Station Antenna	Operational Sector Start Azimuth
S170	214	5.22	I	Earth Station Antenna	Operational Sector End Azimuth
S171	215	5.22	I	Earth Station Antenna	Horizon Elevation Pattern
S172					RDD reference number(s) not allocated
S173	220	5.24	I	Coordination Contour	Propagation Mode (1) Contour
S174	225	5.25	G	Assignment Coordination Group (ACG)	
S175 to S176					RDD reference number(s) not allocated
S177	225	5.25	R	Assignment Coordination Group (ACG)	An Assignment Coordination Group may be the subject of one or more Coordination Agreements
S178 to S179					RDD reference number(s) not allocated
S180	225	5.25	R	Assignment Coordination Group (ACG)	An Assignment Coordination Group may be found under BR procedures to require coordination with one or more other Assignment Coordination Groups
S181 to S185					RDD reference number(s) not allocated
S186	225	5.25	I	Assignment Coordination Group (ACG)	BR Identification Code
S187	226	5.25	I	Assignment Coordination Group (ACG)	Date Of Bringing Into Use For Non-geostationary Operation
S188	226	5.25	I	Assignment Coordination Group (ACG)	Period Of Validity
S189	226	5.25	I	Assignment Coordination Group (ACG)	Polarization Code
S190	226	5.25	I	Assignment Coordination Group (ACG)	Bandwidth
S191					RDD reference number(s) not allocated
S192	232	5.28	I	Receiving Space Station ACG	Receiving System Noise Temperature
S193	235	5.29	I	Transmitting Space Station ACG	Maximum Total Peak Envelope Power Per Transponder
S194					RDD reference number(s) not allocated
S195	227	5.25	I	Assignment Coordination Group (ACG)	Spectrum Mask
S196	227	5.25	I	Assignment Coordination Group (ACG)	Baseband Lower Frequency Limit
S197	227	5.25	I	Assignment Coordination Group (ACG)	Baseband Upper Frequency Limit
S198	227	5.25	I	Assignment Coordination Group (ACG)	Baseband Composition
S199	228	5.25	I	Assignment Coordination Group (ACG)	Multiplex Type (Video/Sound)
S200	229	5.25	I	Assignment Coordination Group (ACG)	Energy Dispersal Frequency Deviation
S201	228	5.25	I	Assignment Coordination Group (ACG)	Pre-emphasis P-P Frequency Deviation
S202	228	5.25	I	Assignment Coordination Group (ACG)	Pre-emphasis Characteristics

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
S203	228	5.25	I	Assignment Coordination Group (ACG)	Sound Broadcasting Characteristics
S204	228	5.25	I	Assignment Coordination Group (ACG)	Digital Signal Transmitted Bit Rate
S205	228	5.25	I	Assignment Coordination Group (ACG)	Digital Signal Number Of Phases
S206 to S209					RDD reference number(s) not allocated
S210	240	5.32	I	Emission Characteristic Set	Required Protection Ratio (Minimum C/I)
S211 to S213					RDD reference number(s) not allocated
S214	235	5.29	I	Transmitting Space Station ACG	Affected Area
S215	230	5.26	G	Transmitting Earth Station ACG	
S216	230	5.26	R	Transmitting Earth Station ACG	A Transmitting Earth Station ACG must describe the emission characteristic for a single Earth Station Antenna
S217	230	5.26	R	Transmitting Earth Station ACG	A Transmitting Earth Station ACG must characterize the energy received within a single Beam
S218	231	5.27	G	Receiving Earth Station ACG	
S219	231	5.27	R	Receiving Earth Station ACG	A Receiving Earth Station ACG must describe the reception characteristic for one or more Earth Station Antennas
S220	231	5.27	R	Receiving Earth Station ACG	A Receiving Earth Station ACG must characterize the energy radiated within a single Beam
S221	187	5.12	I	Non-geostationary Orbit	Initial Longitude Of The Ascending Node
S222	188	5.12	I	Non-geostationary Orbit	Longitudinal Tolerance Of The Ascending Node
S223	188	5.12	I	Non-geostationary Orbit	Precession Rate Indicator
S224	188	5.12	I	Non-geostationary Orbit	Administration's Selected Precession Rate Per Day
S225	190	5.13	I	Non-geostationary Satellite Position	Notified Identification Code
S226 to S243					RDD reference number(s) not allocated
S244	240	5.33	G	Frequency Range	
S245	240	5.33	R	Frequency Range	A Frequency Range must describe the valid operational frequency limits for a single Beam
S246					RDD reference number(s) not allocated
S247	240	5.33	I	Frequency Range	Lower Limit
S248	241	5.33	I	Frequency Range	Upper Limit
S249	235	5.29	I	Transmitting Space Station ACG	Transponder Bandwidth Indicator
S250	230	5.25	I	Assignment Coordination Group (ACG)	Peak To Average Power Ratio Upper Frequency Limit
S251	241	5.34	G	Beam Frequency	
S252	241	5.34	R	Beam Frequency	A Beam Frequency may represent the frequency used by a connection between space and Earth for one or more Beam Frequency Straps
S253	241	5.34	R	Beam Frequency	A Beam Frequency may represent the frequency used by a connection between Earth and space for one or more Beam Frequency Straps
S256	232	5.27	I	Receiving Earth Station ACG	Centre Of The Frequency Band Observed
S257	241	5.34	I	Beam Frequency	Carrier Frequency
S258 to S261					RDD reference number(s) not allocated
S262	238	5.32	I	Emission Characteristic Set	Class Of Emission Code
S263	238	5.32	I	Emission Characteristic Set	Total Peak Envelope Power
S264	238	5.32	I	Emission Characteristic Set	Maximum Peak Envelope Power Per Carrier
S265	239	5.32	I	Emission Characteristic Set	Minimum Peak Envelope Power Per Carrier
S266	239	5.32	I	Emission Characteristic Set	Maximum Power Density Averaged Over 4 kHz
S267	239	5.32	I	Emission Characteristic Set	Maximum Power Density Per Carrier Averaged Over 4 kHz
S268	239	5.32	I	Emission Characteristic Set	Minimum Power Density Per Carrier Averaged Over 4 kHz
S269	240	5.32	I	Emission Characteristic Set	Reason For Absence Of Minimum Power
S270					RDD reference number(s) not allocated
S271	241	5.35	G	Coordination Agreement	
S272	241	5.35	R	Coordination Agreement	A Coordination Agreement must be in respect of a single Assignment Coordination Group
S273	241	5.35	R	Coordination Agreement	A Coordination Agreement must be reached with a single Administration
S274					RDD reference number(s) not allocated
S275	241	5.35	I	Coordination Agreement	Status Code
S276	234	5.29	I	Transmitting Space Station ACG	Downlink Service Area
S277					RDD reference number(s) not allocated
S278	245	5.38	R	Beam Frequency Strap	A Beam Frequency Strap must represent the connection between space and Earth for a single Beam Frequency
S279	245	5.38	R	Beam Frequency Strap	A Beam Frequency Strap must represent the connection between Earth and space for a single Beam Frequency
S280	245	5.38	R	Beam Frequency Strap	A Beam Frequency Strap must have its satellite link interference characteristics described by one or more Strap Characteristic Sets
S281					RDD reference number(s) not allocated
S282	245	5.39	G	Strap Characteristic Set	
S283	245	5.39	R	Strap Characteristic Set	A Strap Characteristic Set must characterize one or more Beam Frequency Straps
S284 to S285					RDD reference number(s) not allocated
S286	245	5.39	I	Strap Characteristic Set	ESLNT For Highest Ratio Of Transmission Gain To ESLNT
S287	246	5.39	I	Strap Characteristic Set	ESLNT Lowest Value
S288	246	5.39	I	Strap Characteristic Set	Transmission Gain For Highest Ratio Of Transmission Gain To ESLNT
S289	246	5.39	I	Strap Characteristic Set	Transmission Gain For Lowest ESLNT
S290	248	5.41	G	Space Service Notice	
S291					RDD reference number(s) not allocated
S292	251	5.43	R	Intended Action	An Intended Action must refer to a single Strap Characteristic Set
S293	248	5.41	R	Space Service Notice	A Space Service Notice may be supplemented by one or more Notice Attachments
S294					RDD reference number(s) not allocated
S295	248	5.41	I	Space Service Notice	Administration Notice Code
S296	248	5.41	I	Space Service Notice	Date Sent
S297	248	5.41	I	Space Service Notice	BR Identification Code
S298	248	5.41	I	Space Service Notice	BR Date Received
S299	250	5.41	I	Space Service Notice	BR IFIC Part For Publication
S300	249	5.41	I	Space Service Notice	Occurrence Code
S301	249	5.41	I	Space Service Notice	Purpose Code
S302	250	5.41	I	Space Service Notice	BR IFIC Date For Publication
S303	250	5.41	I	Space Service Notice	BR IFIC Number For Publication
S304	253	5.45	I	Provision	Code
S305	250	5.42	G	Notice Attachment	
S306	250	5.42	R	Notice Attachment	A Notice Attachment must accompany a single Space Service Notice
S307	250	5.42	I	Notice Attachment	Identifier
S308	250	5.42	I	Notice Attachment	Description
S309	250	5.42	I	Notice Attachment	Type
S310 to S313					RDD reference number(s) not allocated
S314	208	5.20	G	Elliptical Beam	
S315	177	5.10	R	Space Station	A Space Station may be under the operational control of a single Intergovernmental Satellite Organization
S316 to S320					RDD reference number(s) not allocated
S321	218	5.23	I	Associated Earth Station Antenna	Cross-polar Gain Pattern
S322	221	5.24	I	Coordination Contour	Propagation Mode (2) Contour
S323	221	5.24	I	Coordination Contour	Predetermined Distance Contour

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
S324	229	5.25	I	Assignment Coordination Group (ACG)	Energy Dispersal Sweep Frequency
S325	229	5.25	I	Assignment Coordination Group (ACG)	Energy Dispersal Waveform
S326	228	5.25	I	Assignment Coordination Group (ACG)	Pre-emphasis RMS Frequency Deviation
S327	228	5.25	I	Assignment Coordination Group (ACG)	TV System And Colour Standard Description
S328					RDD reference number(s) not allocated
S329	233	5.28	I	Receiving Space Station ACG	Multiple Access Indicator
S330	233	5.28	I	Receiving Space Station ACG	Earth Station Power Control Range
S331	232	5.28	I	Receiving Space Station ACG	Space Station Automatic Gain Control Range
S332	231	5.27	I	Receiving Earth Station ACG	Receiver Sensitivity Indicator
S333	241	5.34	I	Beam Frequency	Value
S334	238	5.32	I	Emission Characteristic Set	Necessary Bandwidth Code
S335	239	5.32	I	Emission Characteristic Set	Maximum Power Density Averaged Over 1 MHz
S336	239	5.32	I	Emission Characteristic Set	Maximum Power Density Per Carrier Averaged Over 1 MHz
S337	249	5.41	I	Space Service Notice	Intended Action Code
S338 to S345					RDD reference number(s) not allocated
S346	211	5.22	R	Earth Station Antenna	An Earth Station Antenna may be under the operational control of a single Intergovernmental Satellite Organization
S353	248	5.41	R	Space Service Notice	A Space Service Notice must be submitted in respect of a single Space Station
S354 to S356					RDD reference number(s) not allocated
S357	251	5.43	G	Intended Action	
S358	251	5.43	R	Intended Action	An Intended Action must apply to a single Space Service Notice
S359					RDD reference number(s) not allocated
S360	251	5.43	I	Intended Action	Code
S361 to S362					RDD reference number(s) not allocated
S363	203	5.19	I	Beam	Effective Boresight Area
S364	227	5.25	I	Assignment Coordination Group (ACG)	Polarization Linear Angle
S365 to S367					RDD reference number(s) not allocated
S368	204	5.19	I	Beam	Orientation Angle Beta
S369	206	5.19	I	Beam	Effective Co-polar Gain Contour
S370	206	5.19	I	Beam	Effective Cross-polar Gain Contour
S371	239	5.32	I	Emission Characteristic Set	Minimum Power Density Per Carrier Averaged Over 1 MHz
S372	240	5.32	I	Emission Characteristic Set	Reason For Absence Of Minimum Power Density
S373	240	5.32	I	Emission Characteristic Set	Reason For Absence Of C/N
S374	231	5.27	I	Receiving Earth Station ACG	Bandwidth Of The Frequency Band Observed
S375	174	5.8	R	Class Of Station Nature Of Service Pair	A Class Of Station Nature Of Service Pair may further define the operational limitations of one or more Assignment Coordination Groups
S376	211	5.21	G	Site	
S377	172	5.4	R	Intergovernmental Satellite Organization	An Intergovernmental Satellite Organization may be the operator of one or more Earth Station Antennas
S378	248	5.41	R	Space Service Notice	A Space Service Notice may include one or more Intended Actions
S379					RDD reference number(s) not allocated
S380	211	5.21	I	Site	Name
S381	215	5.22	I	Earth Station Antenna	Planned Maximum Elevation Angle
S382	225	5.25	R	Assignment Coordination Group (ACG)	An Assignment Coordination Group must be classified by a single Class Of Station Nature Of Service Pair
S383					RDD reference number(s) not allocated
S384	233	5.28	I	Receiving Space Station ACG	Uplink Service Area
S385 to S387					RDD reference number(s) not allocated
S388	169	5.1	R	Administration	An Administration may nominate one or more Sites
S389	169	5.1	R	Administration	An Administration may notify one or more Space Stations
S390	171	5.2	I	Correspondence Address	Facsimile Address
S391	245	5.39	R	Strap Characteristic Set	A Strap Characteristic Set must be valid for use with a single Associated Earth Station Antenna
S392					RDD reference number(s) not allocated
S393	177	5.10	R	Space Station	A Space Station must be notified by a single Administration
S401	169	5.1	I	Administration	Official Facsimile Address
S402	170	5.1	I	Administration	Official E-mail Address
S403	171	5.2	I	Correspondence Address	E-mail Address
S404	173	5.6	I	Radiocommunication Service	Code
S405	173	5.6	R	Radiocommunication Service	A Radiocommunication Service may include one or more other Radiocommunication Services
S407	211	5.21	R	Site	A Site must be submitted by a single Administration
S408	211	5.21	R	Site	A Site may be the location for one or more Earth Station Antennas
S409	211	5.21	R	Site	A Site must be located within a single Geographical Area
S410 to S441					RDD reference number(s) not allocated
S442	177	5.10	R	Space Station	A Space Station must have its astrodynamics defined as one or more Non-geostationary Orbits
S443					RDD reference number(s) not allocated
S444	177	5.10	R	Space Station	A Space Station must be located at a single Geostationary Orbital Position
S445	184	5.11	R	Geostationary Orbital Position	A Geostationary Orbital Position must be the location of a single Space Station
S446	202	5.19	R	Beam	A Beam may describe the properties of satellite antennas to radiate energy that is characterized by one or more Receiving Earth Station ACGs
S447	202	5.19	R	Beam	A Beam may describe the properties of satellite antennas to receive energy that is characterized by one or more Transmitting Earth Station ACGs
S448					RDD reference number(s) not allocated
S449	202	5.19	R	Beam	A Beam may contain one or more Beam Frequencies
S450 to S451					RDD reference number(s) not allocated
S452	225	5.25	R	Assignment Coordination Group (ACG)	An Assignment Coordination Group must be the subject of one or more ACG Intended Actions
S453	225	5.25	R	Assignment Coordination Group (ACG)	An Assignment Coordination Group may contain one or more ACG Frequencies
S454 to S455					RDD reference number(s) not allocated
S456	232	5.28	G	Receiving Space Station ACG	
S457	232	5.28	R	Receiving Space Station ACG	A Receiving Space Station ACG must describe the emission characteristic for one or more Associated Earth Station Antennas
S458	232	5.28	R	Receiving Space Station ACG	A Receiving Space Station ACG must characterize the energy received by a satellite antenna within a single Beam
S459 to S462					RDD reference number(s) not allocated
S463	234	5.29	G	Transmitting Space Station ACG	
S464	234	5.29	R	Transmitting Space Station ACG	A Transmitting Space Station ACG may describe the reception characteristic for one or more Associated Earth Station Antennas
S465	234	5.29	R	Transmitting Space Station ACG	A Transmitting Space Station ACG must characterize the energy radiated by satellite antenna within a single Beam
S466 to S471					RDD reference number(s) not allocated
S472	235	5.30	G	Transmitting Space Station Space To Space ACG	
S473	235	5.30	R	Transmitting Space Station Space To Space ACG	A Transmitting Space Station Space To Space ACG must characterize the energy radiated by a satellite antenna within a single Beam
S474 to S475					RDD reference number(s) not allocated
S476	236	5.31	G	Receiving Space Station Space To Space	

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
				ACG	
S008					RDD reference number(s) not allocated
S478	236	5.31	R	Receiving Space Station Space To Space ACG	A Receiving Space Station Space To Space ACG must characterize the energy received by a satellite antenna within a single Beam
S479					RDD reference number(s) not allocated
S480	241	5.34	R	Beam Frequency	A Beam Frequency must define a frequency used by a single Beam
S481 to S482					RDD reference number(s) not allocated
S483	184	5.11	R	Geostationary Orbital Position	A Geostationary Orbital Position must be the subject of one or more Intended Actions
S484					RDD reference number(s) not allocated
S485	186	5.12	R	Non-geostationary Orbit	A Non-geostationary Orbit must be the subject of one or more Intended Actions
S486 to S487					RDD reference number(s) not allocated
S488	246	5.40	R	ACG Frequency Strap	An ACG Frequency Strap must be notified by one or more Intended Actions
S489	245	5.38	R	Beam Frequency Strap	A Beam Frequency Strap must be the subject of one or more Intended Actions
S490	245	5.39	R	Strap Characteristic Set	A Strap Characteristic Set must be the subject of one or more Intended Actions
S491 to S492					RDD reference number(s) not allocated
S493	216	5.23	G	Associated Earth Station Antenna	
S494 to S501					RDD reference number(s) not allocated
S502	246	5.40	R	ACG Frequency Strap	An ACG Frequency Strap must have an Earth-to-space component defined as a single ACG Frequency
S503	246	5.40	R	ACG Frequency Strap	An ACG Frequency Strap must have a space-to-Earth component defined as a single ACG Frequency
S504 to S506					RDD reference number(s) not allocated
S507	243	5.37	I	Associated Space Station Position	Anticipated Nominal Longitude
S508 to S517					RDD reference number(s) not allocated
S518	252	5.44	R	ACG Intended Action	An ACG Intended Action must be in respect of a single Assignment Coordination Group
S519	252	5.44	I	ACG Intended Action	BR IFIC Date For Last Advance Publication
S520	252	5.44	I	ACG Intended Action	BR IFIC Number For Last Advance Publication
S521	252	5.44	I	ACG Intended Action	BR IFIC Date For Last Coordination
S522	253	5.44	I	ACG Intended Action	BR IFIC Number For Last Coordination
S523	253	5.44	I	ACG Intended Action	BR IFIC Date For Last Notification
S524	253	5.44	I	ACG Intended Action	BR IFIC Number For Last Notification
S525					RDD reference number(s) not allocated
S526	236	5.31	R	Receiving Space Station Space To Space ACG	A Receiving Space Station Space To Space ACG must have its beam associations described by one or more Associated Space Station Positions
S527	235	5.30	R	Transmitting Space Station Space To Space ACG	A Transmitting Space Station Space To Space ACG must have its beam associations described by one or more Associated Space Station Positions
S528 to S530					RDD reference number(s) not allocated
S531	242	5.36	G	ACG Frequency	
S532	246	5.40	G	ACG Frequency Strap	
S533	242	5.37	G	Associated Space Station Position	
S534 to S535					RDD reference number(s) not allocated
S536	252	5.44	G	ACG Intended Action	
S537 to S558					RDD reference number(s) not allocated
S559	216	5.23	I	Associated Earth Station Antenna	Typical/Specific Indicator
S560 to S579					RDD reference number(s) not allocated
S580	174	5.8	G	Class Of Station Nature Of Service Pair	
S581 to S599					RDD reference number(s) not allocated
S600	234	5.28	I	Receiving Space Station ACG	Maximum Aggregate Power
S601	208	5.19	I	Beam	Maximum Beam Peak EIRP – 4 kHz
S602	208	5.19	I	Beam	Maximum Beam Peak EIRP – 1 MHz
S603	208	5.19	I	Beam	Average Beam Peak EIRP – 4 kHz
S604	208	5.19	I	Beam	Average Beam Peak EIRP – 1 MHz
S605	250	5.41	I	Space Service Notice	Special Section Number For Publication
S606	252	5.44	I	ACG Intended Action	Special Section Number For Last Advance Publication
S607	253	5.44	I	ACG Intended Action	Special Section Number For Last Coordination
S608 to S609					RDD reference number(s) not allocated
S610	245	5.38	I	Beam Frequency Strap	Notified Identification Code
S611 to S613					RDD reference number(s) not allocated
S614	174	5.9	G	Nature Of Service	
S615	253	5.45	G	Provision	
S616	215	5.22	I	Earth Station Antenna	Associated Space Station Longitude
S617	174	5.9	I	Nature Of Service	Code
S618	240	5.32	I	Emission Characteristic Set	Maximum Power Density Averaged Over The Necessary Bandwidth
S619 to S620					RDD reference number(s) not allocated
S621	205	5.19	I	Beam	Maximum Cross-polar Gain
S622	174	5.9	R	Nature Of Service	A Nature Of Service may be the subject of one or more Class Of Station Nature Of Service Pairs
S623	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna must be the point of reception for one or more Transmitting Space Station ACG
S624 to S625					RDD reference number(s) not allocated
S626	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna may be classified by one or more Classes of Station Nature Of Service Pairs
S627 to S631					RDD reference number(s) not allocated
S632	245	5.38	G	Beam Frequency Strap	
S633 to S639					RDD reference number(s) not allocated
S640	230	5.25	I	Assignment Coordination Group (ACG)	Type Of Modulation
S641	230	5.25	I	Assignment Coordination Group (ACG)	Type Of Amplitude Modulation
S642	230	5.25	I	Assignment Coordination Group (ACG)	Interference Study Information
S643 to S645					RDD reference number(s) not allocated
S646	234	5.28	I	Receiving Space Station ACG	Aggregate Bandwidth
S008					RDD reference number(s) not allocated
S650	217	5.23	I	Associated Earth Station Antenna	Equivalent Antenna Diameter
S651					RDD reference number(s) not allocated
S652	235	5.30	I	Transmitting Space Station Space To Space ACG	Maximum Radiated Power
S653	236	5.31	I	Receiving Space Station Space To Space ACG	Maximum Radiated Power
S654 to S670					RDD reference number(s) not allocated
S671	216	5.23	I	Associated Earth Station Antenna	Notified Identifying Code
S672					RDD reference number(s) not allocated
S673	217	5.23	I	Associated Earth Station Antenna	Geographical Coordinates
S674 to S675					RDD reference number(s) not allocated
S676	217	5.23	I	Associated Earth Station Antenna	Maximum Gain
S677	217	5.23	I	Associated Earth Station Antenna	Beamwidth
S678	217	5.23	I	Associated Earth Station Antenna	Co-polar Gain Pattern
S679 to S680					RDD reference number(s) not allocated
S681	177	5.10	R	Space Station	A Space Station may have its EPFDDOWN values determined by using one or more PFD Masks

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
S682	193	5.16	R	PFD Mask	A PFD Mask must be associated with a single Space Station
S683	177	5.10	R	Space Station	A Space Station may have its EPFDUP values determined by using one or more Earth To Space EIRP Masks
S684	193	5.16	R	PFD Mask	A PFD Mask must define a worst-case PFD envelope for one or more Non-geostationary Satellite Positions
S685	193	5.16	R	PFD Mask	A PFD Mask must define the overall spectral radiation constraint for one or more Transmitting Space Station ACGs
S686	193	5.16	R	PFD Mask	A PFD Mask must be the subject of one or more Intended Actions.
S685 to S687					RDD reference number(s) not allocated
S688	177	5.10	R	Space Station	A Space Station may be the reason for the suspension of allocations represented by one or more Beams
S689 to S699					RDD reference number(s) not allocated
S700	174	5.7	R	Class Of Station	A Class Of Station may be the subject of one or more Class Of Station Nature Of Service Pairs
S701	174	5.8	R	Class Of Station Nature Of Service Pair	A Class Of Station Nature Of Service Pair must be a valid pairing for a single Nature Of Service
S702	174	5.8	R	Class Of Station Nature Of Service Pair	A Class Of Station Nature Of Service Pair must be a valid pairing for a single Class Of Station
S703	211	5.21	R	Site	A Site may be the location for one or more Associated Earth Station Antennas
S704	190	5.14	R	Exclusive Operational Group	An Exclusive Operational Group must apply to a single Space Station
S705 to S706					RDD reference number(s) not allocated
S707	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna must be located within a single Site
S708 to S709					RDD reference number(s) not allocated
S710	241	5.35	R	Coordination Agreement	A Coordination Agreement must be in respect of a single Provision
S711	248	5.41	R	Space Service Notice	A Space Service Notice must be submitted according to the requirements of one or more Provisions
S712	190	5.14	I	Exclusive Operational Group	Notified Identifying Code
S713					RDD reference number(s) not allocated
S714	177	5.10	R	Space Station	A Space Station may be associated with one or more Associated Earth Station Antennas
S715	246	5.39	I	Strap Characteristic Set	National Code
S716	242	5.36	I	ACG Frequency	Carrier Frequency
S717	186	5.12	I	Non-geostationary Orbit	Notified Identification Code
S718	226	5.25	I	Assignment Coordination Group (ACG)	Date Of Bringing Into Use For Geostationary Operation
S719	242	5.36	I	ACG Frequency	Channel Number
S720	251	5.43	R	Intended Action	An Intended Action must refer to a single Geostationary Orbital Position
S721	251	5.43	R	Intended Action	An Intended Action must refer to a single Non-geostationary Orbit
S722	251	5.43	R	Intended Action	An Intended Action must refer to a single Beam
S723	242	5.36	I	ACG Frequency	Value
S724	251	5.43	R	Intended Action	An Intended Action must refer to a single Beam Frequency
S725	251	5.43	R	Intended Action	An Intended Action must refer to a single Associated Earth Station Antenna
S726	251	5.43	R	Intended Action	An Intended Action must refer to a single ACG Frequency Strap
S727	251	5.43	R	Intended Action	An Intended Action must refer to a single Beam Frequency Strap
S728	208	5.19	I	Beam	Calculated Peak PFD
S729	190	5.14	G	Exclusive Operational Group	
S730	190	5.14	R	Exclusive Operational Group	An Exclusive Operational Group must consist of one or more Assignment Coordination Groups
S731	225	5.25	R	Assignment Coordination Group (ACG)	An Assignment Coordination Group may have its characteristics further defined by one or more Emission Characteristic Sets
S732	225	5.25	R	Assignment Coordination Group (ACG)	An Assignment Coordination Group may be a member of one or more Exclusive Operational Groups
S733	236	5.32	G	Emission Characteristic Set	
S734	174	5.9	I	Nature Of Service	Name
S735					RDD reference number(s) not allocated
S736	231	5.26	I	Transmitting Earth Station ACG	(AB) Transponder Bandwidth Indicator
S737	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna must belong to a single Space Station
S738	177	5.10	R	Space Station	A Space Station may be the subject of one or more Associated Space Station Positions
S739	248	5.41	R	Space Service Notice	A Space Service Notice must be submitted in respect of a single Earth Station Antenna
S740	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna must be the transmitting source for one or more Receiving Space Station ACG
S741	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna must be the subject of one or more Intended Actions
S742	174	5.8	R	Class Of Station Nature Of Service Pair	A Class Of Station Nature Of Service Pair may further define the operational limitations of one or more Associated Earth Station Antennas
S743	241	5.34	R	Beam Frequency	A Beam Frequency must be the subject of one or more Intended Actions
S744	189	5.13	R	Non-geostationary Satellite Position	A Non-geostationary Satellite Position may have its worst-case PFD envelope described by one or more PFD Masks
S745	189	5.13	R	Non-geostationary Satellite Position	A Non-geostationary Satellite Position may have its worst-case off-axis EIRP values described with respect to the geostationary orbit by one or more Space To Earth EIRP Masks
S746	202	5.19	R	Beam	A Beam may be suspended as a consequence of the filing of a single Space Station
S747					RDD reference number(s) not allocated
S748	212	5.22	R	Earth Station Antenna	An Earth Station Antenna may have its requirement for coordination determined by one or more Coordination Contours
S749	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna may have its worst-case off-axis EIRP values described with respect to the geostationary orbit by one or more Earth To Space EIRP Masks
S750	232	5.28	R	Receiving Space Station ACG	A Receiving Space Station ACG may have to conform to the spectral radiation limits set by a single Earth To Space EIRP Mask
S751	234	5.29	R	Transmitting Space Station ACG	A Transmitting Space Station ACG may have to conform to the spectral radiation limits set by a single PFD Mask
S752	234	5.29	R	Transmitting Space Station ACG	A Transmitting Space Station ACG may have to conform the spectral radiation limits set by a single Space To Earth EIRP Mask
S753	251	5.43	R	Intended Action	An Intended Action must refer to a single PFD Mask
S754	251	5.43	R	Intended Action	An Intended Action must refer to a single Space To Earth EIRP Mask
S755	251	5.43	R	Intended Action	An Intended Action must refer to a single Earth To Space EIRP Mask
S756	219	5.24	G	Coordination Contour	
S757	220	5.24	R	Coordination Contour	A Coordination Contour must identify the requirement for coordination within a specific frequency range for a single Earth Station Antenna
S758	220	5.24	I	Coordination Contour	Purpose
S759	220	5.24	I	Coordination Contour	Frequency Band
S760	238	5.32	R	Emission Characteristic Set	An Emission Characteristic Set must further define a single Assignment Coordination Group
S761					RDD reference number(s) not allocated
S762	172	5.4	I	Intergovernmental Satellite Organization	Address
S763	217	5.23	I	Associated Earth Station Antenna	Receiving System Noise Temperature
S764	231	5.27	I	Receiving Earth Station ACG	Receiving System Noise Temperature
S765	234	5.28	I	Receiving Space Station ACG	(AB) Transponder Bandwidth Indicator
S767	250	5.41	I	Space Service Notice	Special Section Reference For Publication
S768	252	5.44	I	ACG Intended Action	Special Section Reference For Advance Publication
S769	253	5.44	I	ACG Intended Action	Special Section Reference For Last Coordination
S770	230	5.26	I	Transmitting Earth Station ACG	Aggregate Bandwidth (AB)
S771	230	5.26	I	Transmitting Earth Station ACG	Maximum Aggregate Power
S772	172	5.4	R	Intergovernmental Satellite Organization	An Intergovernmental Satellite Organization may have submitted on their behalf one or more Space Service Notices

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
S773	248	5.41	R	Space Service Notice	A Space Service Notice may be submitted on behalf of a single Intergovernmental Satellite Organization
S774	246	5.40	I	ACG Frequency Strap	Notified Identification Code
S775	253	5.44	I	ACG Intended Action	BR IFIC Part For Last Notification
S776	235	5.30	I	Transmitting Space Station Space To Space ACG	Maximum Total Peak Envelope Power Per Transponder
S777	236	5.30	I	Transmitting Space Station Space To Space ACG	Transponder Bandwidth Indicator
S778	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna may have its satellite link interference characteristics described by one or more Strap Characteristic Sets
S779	177	5.10	R	Space Station	A Space Station may be the subject of one or more Exclusive Operational Groups
S780	178	5.10	I	Space Station	Minimum Altitude
S781	178	5.10	I	Space Station	Repeating Ground Track Indicator
S782	179	5.10	I	Space Station	Period Of Repeating Ground Track
S783	179	5.10	I	Space Station	Maximum Number Of Satellites Receiving Simultaneously From Any Single Cell
S784	179	5.10	I	Space Station	Average Number Of Associated Earth Stations Transmitting With Overlapping Frequencies
S785	179	5.10	I	Space Station	Co-frequency Cell Separation
S786	180	5.10	I	Space Station	Mitigation Technique Code
S787	180	5.10	I	Space Station	Mitigation Technique Angle Alpha
S788	180	5.10	I	Space Station	Mitigation Technique Angle X
S789	181	5.10	I	Space Station	Reference Date
S790	181	5.10	I	Space Station	Reference Time
S791	181	5.10	I	Space Station	EPFDDOWN Compliance Indicator
S792	182	5.10	I	Space Station	Calculated Aggregate Power Density In Band 5 030-5 150 MHz
S796	182	5.10	I	Space Station	Calculated Aggregate Power Density In Band 15.35-15.4 GHz
S797	192	5.15	I	Latitude Range Category	Start Latitude
S798	192	5.15	I	Latitude Range Category	End Latitude
S799	192	5.15	I	Latitude Range Category	Maximum Number Of Satellites
S800	193	5.16	I	PFD Mask	BR Identification Code
S801	193	5.16	I	PFD Mask	Notified Identification Code
S802	193	5.16	I	PFD Mask	Pattern Type
S803	193	5.16	I	PFD Mask	Pattern
S804	196	5.16	I	PFD Mask	Lowest Usable Frequency
S805	197	5.17	I	Earth To Space EIRP Mask	BR Identification Code
S806	197	5.17	I	Earth To Space EIRP Mask	Notified Identification Code
S807	197	5.17	I	Earth To Space EIRP Mask	Pattern
S808	198	5.17	I	Earth To Space EIRP Mask	Associated Earth Station Planned Minimum Elevation Angle
S809	198	5.17	I	Earth To Space EIRP Mask	Associated Earth Station Planned Minimum Beam Axis To GSO Arc Separation Angle
S810	198	5.17	I	Earth To Space EIRP Mask	Lowest Usable Frequency
S811	198	5.17	I	Earth To Space EIRP Mask	Highest Usable Frequency
S812	199	5.18	I	Space To Earth EIRP Mask	BR Identification Code
S814	199	5.18	I	Space To Earth EIRP Mask	Notified Identification Code
S815	199	5.18	I	Space To Earth EIRP Mask	Pattern
S816	200	5.18	I	Space To Earth EIRP Mask	Lowest Usable Frequency
S817	200	5.18	I	Space To Earth EIRP Mask	Highest Usable Frequency
S818	192	5.15	G	Latitude Range Category	
S819	192	5.15	R	Latitude Range Category	A Latitude Range Category must limit the maximum number of non-geostationary satellites that can simultaneously transmit with overlapping frequencies to any given point within its defined latitude range for a single Space Station
S820	192	5.16	G	PFD Mask	
S821	197	5.17	R	Earth To Space EIRP Mask	An Earth To Space EIRP Mask must be used in determining the EPFD values for a single Space Station
S822	177	5.10	R	Space Station	A Space Station may have its EPFDIS values determined by using one or more Space To Earth EIRP Masks
S823	199	5.18	R	Space To Earth EIRP Mask	A Space To Earth EIRP Mask must be associated with a single Space Station
S824	196	5.17	G	Earth To Space EIRP Mask	
S825	177	5.10	R	Space Station	A Space Station may have its maximum number of non-geostationary satellites that can transmit with overlapping frequencies to any given point limited by one or more Latitude Range Categories
S826	197	5.17	R	Earth To Space EIRP Mask	An Earth To Space EIRP Mask must describe the worst case off-axis EIRP values with respect to the geostationary orbit for one or more Associated Earth Station Antenna
S827	197	5.17	R	Earth To Space EIRP Mask	An Earth To Space EIRP Mask must define the overall spectral radiation constraint for one or more Receiving Space Station ACGs
S828	197	5.17	R	Earth To Space EIRP Mask	An Earth To Space EIRP Mask must be the subject of one or more Intended Actions
S829	196	5.16	I	PFD Mask	Highest Usable Frequency
S830	181	5.10	I	Space Station	Power Density Compliance Indicator
S831	198	5.18	G	Space To Earth EIRP Mask	
S832	199	5.18	R	Space To Earth EIRP Mask	A Space To Earth EIRP Mask must define the worst-case off-axis EIRP values with respect to the geostationary orbit for one or more Non-geostationary Satellite Position
S833	199	5.18	R	Space To Earth EIRP Mask	A Space To Earth EIRP Mask must define the overall spectral radiation constraint for one or more Transmitting Space Station ACGs
S834	199	5.18	R	Space To Earth EIRP Mask	A Space To Earth EIRP Mask must be the subject of one or more Intended Actions
S835	179	5.10	I	Space Station	Maximum Number Of Satellites Transmitting Simultaneously Into The Northern Hemisphere
S836	179	5.10	I	Space Station	Maximum Number Of Satellites Transmitting Simultaneously Into The Southern Hemisphere
S837	181	5.10	I	Space Station	Mitigation Technique Description
S838					RDD reference number(s) not allocated
S839	212	5.22	I	Earth Station Antenna	Altitude Above Mean Sea Level
S840	213	5.22	I	Earth Station Antenna	Diameter
S841	216	5.22	I	Earth Station Antenna	Power Density Compliance Indicator
S842	181	5.10	I	Space Station	Power Density Compliance Indicator In Band 1 164-1 215 MHz
S843	182	5.10	I	Space Station	Calculated Aggregate Power Density In Band 4 990-5 000 MHz
S844	182	5.10	I	Space Station	Calculated Mean Power Density In Band 35.5-36 GHz
S845	183	5.10	I	Space Station	Calculated Equivalent Power Density In Band 42.5-43.5 GHz
S846	183	5.10	I	Space Station	Calculated Equivalent Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz
S847					RDD reference number(s) not allocated
S848	183	5.10	I	Space Station	Calculated Aggregate Power Density In Band 42.5-43.5 GHz
S849	183	5.10	I	Space Station	Calculated Aggregate Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz
S850	183	5.10	I	Space Station	Type of Radio astronomy Station In Band 42.5-43.5 GHz
S851	182	5.10	I	Space Station	Operational Characteristics Compliance Indicator
S852	213	5.22	I	Earth Station Antenna	Radio Astronomy Antenna Type Description
S853	213	5.22	I	Earth Station Antenna	Radio Astronomy Antenna Dimensional Description
S854	213	5.22	I	Earth Station Antenna	Radio Astronomy Antenna Effective Area Description
S855	242	5.36	I	ACG Frequency	Non-conformity Indicator
S856	240	5.32	I	Emission Characteristic Set	Carrier To Noise Objective
S857	229	5.25	I	Assignment Coordination Group (ACG)	Energy Dispersal Description
S858	231	5.27	I	Receiving Earth Station ACG	Observation Type

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item/Relationship
S859	232	5.27	I	Receiving Earth Station ACG	Planned Minimum Elevation Angle
S860	211	5.22	R	Earth Station Antenna	An Earth Station Antenna must be located in a single Geographical Area
S861	216	5.23	R	Associated Earth Station Antenna	An Associated Earth Station Antenna must be located in a single Geographical Area
S862	172	5.5	R	Geographical Area	A Geographical Area may be the location for one or more Earth Station Antenna
S863	172	5.5	R	Geographical Area	A Geographical Area may be the location for one or more Associated Earth Station Antenna
S864	169	5.1	R	Administration	An Administration may be responsible for the notification of assignments from one or more Geographical Areas
S865	172	5.5	R	Geographical Area	A Geographical Area must be the responsibility of a single Administration
S866	186	5.12	R	Non-geostationary Orbit	A Non-geostationary Orbit must use transmission characteristics defined by one or more Beams
S867	202	5.19	R	Beam	A Beam must define the transmission characteristics used in a single Non-geostationary Orbit
S868	182	5.10	I	Space Station	Calculated Equivalent Power Density In Band 4 990-5 000 MHz

10.4 Space data groups and data items in alphabetical sequence

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item
S531	242	5.36	G	ACG Frequency	
S532	246	5.40	G	ACG Frequency Strap	
S536	252	5.44	G	ACG Intended Action	
S001	169	5.1	G	Administration	
S174	225	5.25	G	Assignment Coordination Group (ACG)	
S493	216	5.23	G	Associated Earth Station Antenna	
S533	242	5.37	G	Associated Space Station Position	
S107	202	5.19	G	Beam	
S251	241	5.34	G	Beam Frequency	
S632	245	5.38	G	Beam Frequency Strap	
S048	173	5.7	G	Class Of Station	
S580	174	5.8	G	Class Of Station Nature Of Service Pair	
S271	241	5.35	G	Coordination Agreement	
S756	219	5.24	G	Coordination Contour	
S016	170	5.2	G	Correspondence Address	
S151	211	5.22	G	Earth Station Antenna	
S824	196	5.17	G	Earth To Space EIRP Mask	
S314	208	5.20	G	Elliptical Beam	
S733	236	5.32	G	Emission Characteristic Set	
S729	190	5.14	G	Exclusive Operational Group	
S244	240	5.33	G	Frequency Range	
S036	172	5.5	G	Geographical Area	
S071	184	5.11	G	Geostationary Orbital Position	
S357	251	5.43	G	Intended Action	
S031	171	5.4	G	Intergovernmental Satellite Organization	
S818	192	5.15	G	Latitude Range Category	
S614	174	5.9	G	Nature Of Service	
S093	185	5.12	G	Non-geostationary Orbit	
S104	189	5.13	G	Non-geostationary Satellite Position	
S305	250	5.42	G	Notice Attachment	
S024	171	5.3	G	Operator	
S820	192	5.16	G	PFD Mask	
S615	253	5.45	G	Provision	
S044	173	5.6	G	Radiocommunication Service	
S218	231	5.27	G	Receiving Earth Station ACG	
S456	232	5.28	G	Receiving Space Station ACG	
S476	236	5.31	G	Receiving Space Station Space To Space ACG	
S376	211	5.21	G	Site	
S290	248	5.41	G	Space Service Notice	
S055	177	5.10	G	Space Station	
S831	198	5.18	G	Space To Earth EIRP Mask	
S282	245	5.39	G	Strap Characteristic Set	
S215	230	5.26	G	Transmitting Earth Station ACG	
S463	234	5.29	G	Transmitting Space Station ACG	
S472	235	5.30	G	Transmitting Space Station Space To Space ACG	
S765	234	5.28	I	Receiving Space Station ACG	(AB) Transponder Bandwidth Indicator
S736	231	5.26	I	Transmitting Earth Station ACG	(AB) Transponder Bandwidth Indicator
S762	172	5.4	I	Intergovernmental Satellite Organization	Address
S295	248	5.41	I	Space Service Notice	Administration Notice Code
S224	188	5.12	I	Non-geostationary Orbit	Administration's Selected Precession Rate Per Day
S214	235	5.29	I	Transmitting Space Station ACG	Affected Area
S646	234	5.28	I	Receiving Space Station ACG	Aggregate Bandwidth
S770	230	5.26	I	Transmitting Earth Station ACG	Aggregate Bandwidth (AB)
S839	212	5.22	I	Earth Station Antenna	Altitude Above Mean Sea Level
S507	243	5.37	I	Associated Space Station Position	Anticipated Nominal Longitude
S098	188	5.12	I	Non-geostationary Orbit	Apogee Altitude
S809	198	5.17	I	Earth To Space EIRP Mask	Associated Earth Station Planned Minimum Beam Axis To GSO Arc Separation Angle
S808	198	5.17	I	Earth To Space EIRP Mask	Associated Earth Station Planned Minimum Elevation Angle
S616	215	5.22	I	Earth Station Antenna	Associated Space Station Longitude
S604	208	5.19	I	Beam	Average Beam Peak EIRP – 1 MHz
S603	208	5.19	I	Beam	Average Beam Peak EIRP – 4 kHz
S784	179	5.10	I	Space Station	Average Number Of Associated Earth Stations Transmitting With Overlapping Frequencies
S190	226	5.25	I	Assignment Coordination Group (ACG)	Bandwidth
S374	231	5.27	I	Receiving Earth Station ACG	Bandwidth Of The Frequency Band Observed
S198	227	5.25	I	Assignment Coordination Group (ACG)	Baseband Composition
S196	227	5.25	I	Assignment Coordination Group (ACG)	Baseband Lower Frequency Limit
S197	227	5.25	I	Assignment Coordination Group (ACG)	Baseband Upper Frequency Limit
S677	217	5.23	I	Associated Earth Station Antenna	Beamwidth
S164	213	5.22	I	Earth Station Antenna	Beamwidth
S119	203	5.19	I	Beam	Boresight Geographical Coordinates
S298	248	5.41	I	Space Service Notice	BR Date Received
S186	225	5.25	I	Assignment Coordination Group (ACG)	BR Identification Code
S148	212	5.22	I	Earth Station Antenna	BR Identification Code
S805	197	5.17	I	Earth To Space EIRP Mask	BR Identification Code
S800	193	5.16	I	PFD Mask	BR Identification Code
S297	248	5.41	I	Space Service Notice	BR Identification Code
S067	178	5.10	I	Space Station	BR Identification Code
S812	199	5.18	I	Space To Earth EIRP Mask	BR Identification Code
S519	252	5.44	I	ACG Intended Action	BR IFIC Date For Last Advance Publication
S521	252	5.44	I	ACG Intended Action	BR IFIC Date For Last Coordination
S523	253	5.44	I	ACG Intended Action	BR IFIC Date For Last Notification
S302	250	5.41	I	Space Service Notice	BR IFIC Date For Publication
S520	252	5.44	I	ACG Intended Action	BR IFIC Number For Last Advance Publication
S522	253	5.44	I	ACG Intended Action	BR IFIC Number For Last Coordination
S524	253	5.44	I	ACG Intended Action	BR IFIC Number For Last Notification
S303	250	5.41	I	Space Service Notice	BR IFIC Number For Publication
S775	253	5.44	I	ACG Intended Action	BR IFIC Part For Last Notification

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item
S299	250	5.41	1	Space Service Notice	BR IFIC Part For Publication
S849	183	5.10	1	Space Station	Calculated Aggregate Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz
S796	182	5.10	1	Space Station	Calculated Aggregate Power Density In Band 15.35-15.4 GHz
S843	182	5.10	1	Space Station	Calculated Aggregate Power Density In Band 4 990-5 000 MHz
S848	183	5.10	1	Space Station	Calculated Aggregate Power Density In Band 42.5-43.5 GHz
S792	182	5.10	1	Space Station	Calculated Aggregate Power Density In Band 5 030-5 150 MHz
S846	183	5.10	1	Space Station	Calculated Equivalent Power Density Averaged Over 500 kHz In Band 42.5-43.5 GHz
S868	182	5.10	1	Space Station	Calculated Equivalent Power Density In Band 4 990-5 000 MHz
S845	183	5.10	1	Space Station	Calculated Equivalent Power Density In Band 42.5-43.5 GHz
S844	182	5.10	1	Space Station	Calculated Mean Power Density In Band 35.5-36 GHz
S728	208	5.19	1	Beam	Calculated Peak PFD
S716	242	5.36	1	ACG Frequency	Carrier Frequency
S257	241	5.34	1	Beam Frequency	Carrier Frequency
S856	240	5.32	1	Emission Characteristic Set	Carrier To Noise Objective
S256	232	5.27	1	Receiving Earth Station ACG	Centre Of The Frequency Band Observed
S719	242	5.36	1	ACG Frequency	Channel Number
S262	238	5.32	1	Emission Characteristic Set	Class Of Emission Code
S011	169	5.1	1	Administration	Code
S052	174	5.7	1	Class Of Station	Code
S021	170	5.2	1	Correspondence Address	Code
S041	172	5.5	1	Geographical Area	Code
S360	251	5.43	1	Intended Action	Code
S034	172	5.4	1	Intergovernmental Satellite Organization	Code
S617	174	5.9	1	Nature Of Service	Code
S029	171	5.3	1	Operator	Code
S304	253	5.45	1	Provision	Code
S404	173	5.6	1	Radiocommunication Service	Code
S785	179	5.10	1	Space Station	Co-frequency Cell Separation
S678	217	5.23	1	Associated Earth Station Antenna	Co-polar Gain Pattern
S122	205	5.19	1	Beam	Co-polar Gain Pattern
S167	213	5.22	1	Earth Station Antenna	Co-polar Gain Pattern
S321	218	5.23	1	Associated Earth Station Antenna	Cross-polar Gain Pattern
S123	206	5.19	1	Beam	Cross-polar Gain Pattern
S718	226	5.25	1	Assignment Coordination Group (ACG)	Date Of Bringing Into Use For Geostationary Operation
S187	226	5.25	1	Assignment Coordination Group (ACG)	Date Of Bringing Into Use For Non-geostationary Operation
S296	248	5.41	1	Space Service Notice	Date Sent
S308	250	5.42	1	Notice Attachment	Description
S116	202	5.19	1	Beam	Designation
S165	217	5.23	1	Associated Earth Station Antenna	Diameter
S840	213	5.22	1	Earth Station Antenna	Diameter
S205	228	5.25	1	Assignment Coordination Group (ACG)	Digital Signal Number Of Phases
S204	228	5.25	1	Assignment Coordination Group (ACG)	Digital Signal Transmitted Bit Rate
S276	234	5.29	1	Transmitting Space Station ACG	Downlink Service Area
S330	233	5.28	1	Receiving Space Station ACG	Earth Station Power Control Range
S101	189	5.12	1	Non-geostationary Orbit	Eccentricity
S363	203	5.19	1	Beam	Effective Boresight Area
S369	206	5.19	1	Beam	Effective Co-polar Gain Contour
S370	206	5.19	1	Beam	Effective Cross-polar Gain Contour
S403	171	5.2	1	Correspondence Address	E-mail Address
S115	203	5.19	1	Beam	Emission/Reception Indicator
S798	192	5.15	1	Latitude Range Category	End Latitude
S857	229	5.25	1	Assignment Coordination Group (ACG)	Energy Dispersal Description
S200	229	5.25	1	Assignment Coordination Group (ACG)	Energy Dispersal Frequency Deviation
S324	229	5.25	1	Assignment Coordination Group (ACG)	Energy Dispersal Sweep Frequency
S325	229	5.25	1	Assignment Coordination Group (ACG)	Energy Dispersal Waveform
S791	181	5.10	1	Space Station	EPFDDOWN Compliance Indicator
S650	217	5.23	1	Associated Earth Station Antenna	Equivalent Antenna Diameter
S286	245	5.39	1	Strap Characteristic Set	ESLNT For Highest Ratio Of Transmission Gain To ESLNT
S287	246	5.39	1	Strap Characteristic Set	ESLNT Lowest Value
S390	171	5.2	1	Correspondence Address	Facsimile Address
S759	220	5.24	1	Coordination Contour	Frequency Band
S126	207	5.19	1	Beam	Gain Versus Elevation Angle Diagram
S125	207	5.19	1	Beam	Gain Versus GSO Diagram
S673	217	5.23	1	Associated Earth Station Antenna	Geographical Coordinates
S159	212	5.22	1	Earth Station Antenna	Geographical Coordinates
S811	198	5.17	1	Earth To Space EIRP Mask	Highest Usable Frequency
S829	196	5.16	1	PFD Mask	Highest Usable Frequency
S817	200	5.18	1	Space To Earth EIRP Mask	Highest Usable Frequency
S144	215	5.22	1	Earth Station Antenna	Horizon Distance Pattern
S171	215	5.22	1	Earth Station Antenna	Horizon Elevation Pattern
S307	250	5.42	1	Notice Attachment	Identifier
S096	186	5.12	1	Non-geostationary Orbit	Inclination Angle
S076	185	5.11	1	Geostationary Orbital Position	Inclination Excursion
S221	187	5.12	1	Non-geostationary Orbit	Initial Longitude Of The Ascending Node
S106	190	5.13	1	Non-geostationary Satellite Position	Initial Phase Angle
S337	249	5.41	1	Space Service Notice	Intended Action Code
S642	230	5.25	1	Assignment Coordination Group (ACG)	Interference Study Information
S013	170	5.1	1	Administration	ITU Language Code
S074	184	5.11	1	Geostationary Orbital Position	Longitude Tolerance Easterly Limit
S075	185	5.11	1	Geostationary Orbital Position	Longitude Tolerance Westerly Limit
S222	188	5.12	1	Non-geostationary Orbit	Longitudinal Tolerance Of The Ascending Node
S247	240	5.33	1	Frequency Range	Lower Limit
S810	198	5.17	1	Earth To Space EIRP Mask	Lowest Usable Frequency
S804	196	5.16	1	PFD Mask	Lowest Usable Frequency
S816	200	5.18	1	Space To Earth EIRP Mask	Lowest Usable Frequency
S130	208	5.20	1	Elliptical Beam	Major Axis Beamwidth
S132	209	5.20	1	Elliptical Beam	Major Axis Orientation
S600	234	5.28	1	Receiving Space Station ACG	Maximum Aggregate Power
S771	230	5.26	1	Transmitting Earth Station ACG	Maximum Aggregate Power
S602	208	5.19	1	Beam	Maximum Beam Peak EIRP – 1 MHz
S601	208	5.19	1	Beam	Maximum Beam Peak EIRP – 4 kHz
S124	205	5.19	1	Beam	Maximum Co-polar Gain
S621	205	5.19	1	Beam	Maximum Cross-polar Gain
S676	217	5.23	1	Associated Earth Station Antenna	Maximum Gain

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item
S163	212	5.22	1	Earth Station Antenna	Maximum Gain
S799	192	5.15	1	Latitude Range Category	Maximum Number Of Satellites
S783	179	5.10	1	Space Station	Maximum Number Of Satellites Receiving Simultaneously From Any Single Cell
S835	179	5.10	1	Space Station	Maximum Number Of Satellites Transmitting Simultaneously Into The Northern Hemisphere
S836	179	5.10	1	Space Station	Maximum Number Of Satellites Transmitting Simultaneously Into The Southern Hemisphere
S264	238	5.32	1	Emission Characteristic Set	Maximum Peak Envelope Power Per Carrier
S335	239	5.32	1	Emission Characteristic Set	Maximum Power Density Averaged Over 1 MHz
S266	239	5.32	1	Emission Characteristic Set	Maximum Power Density Averaged Over 4 kHz
S618	240	5.32	1	Emission Characteristic Set	Maximum Power Density Averaged Over The Necessary Bandwidth
S336	239	5.32	1	Emission Characteristic Set	Maximum Power Density Per Carrier Averaged Over 1 MHz
S267	239	5.32	1	Emission Characteristic Set	Maximum Power Density Per Carrier Averaged Over 4 kHz
S653	236	5.31	1	Receiving Space Station Space To Space ACG	Maximum Radiated Power
S652	235	5.30	1	Transmitting Space Station Space To Space ACG	Maximum Radiated Power
S193	235	5.29	1	Transmitting Space Station ACG	Maximum Total Peak Envelope Power Per Transponder
S776	235	5.30	1	Transmitting Space Station Space To Space ACG	Maximum Total Peak Envelope Power Per Transponder
S780	178	5.10	1	Space Station	Minimum Altitude
S150	214	5.22	1	Earth Station Antenna	Minimum Elevation Pattern
S265	239	5.32	1	Emission Characteristic Set	Minimum Peak Envelope Power Per Carrier
S371	239	5.32	1	Emission Characteristic Set	Minimum Power Density Per Carrier Averaged Over 1 MHz
S268	239	5.32	1	Emission Characteristic Set	Minimum Power Density Per Carrier Averaged Over 4 kHz
S131	208	5.20	1	Elliptical Beam	Minor Axis Beamwidth
S787	180	5.10	1	Space Station	Mitigation Technique Angle Alpha
S788	180	5.10	1	Space Station	Mitigation Technique Angle X
S786	180	5.10	1	Space Station	Mitigation Technique Code
S837	181	5.10	1	Space Station	Mitigation Technique Description
S329	233	5.28	1	Receiving Space Station ACG	Multiple Access Indicator
S199	228	5.25	1	Assignment Coordination Group (ACG)	Multiplex Type (Video/Sound)
S012	169	5.1	1	Administration	Name
S054	174	5.7	1	Class Of Station	Name
S042	173	5.5	1	Geographical Area	Name
S035	172	5.4	1	Intergovernmental Satellite Organization	Name
S734	174	5.9	1	Nature Of Service	Name
S030	171	5.3	1	Operator	Name
S047	173	5.6	1	Radiocommunication Service	Name
S380	211	5.21	1	Site	Name
S069	178	5.10	1	Space Station	Name
S715	246	5.39	1	Strap Characteristic Set	National Code
S334	238	5.32	1	Emission Characteristic Set	Necessary Bandwidth Code
S072	184	5.11	1	Geostationary Orbital Position	Nominal Longitude
S855	242	5.36	1	ACG Frequency	Non-conformity Indicator
S774	246	5.40	1	ACG Frequency Strap	Notified Identification Code
S610	245	5.38	1	Beam Frequency Strap	Notified Identification Code
S149	212	5.22	1	Earth Station Antenna	Notified Identification Code
S806	197	5.17	1	Earth To Space EIRP Mask	Notified Identification Code
S717	186	5.12	1	Non-geostationary Orbit	Notified Identification Code
S225	190	5.13	1	Non-geostationary Satellite Position	Notified Identification Code
S801	193	5.16	1	PFD Mask	Notified Identification Code
S068	178	5.10	1	Space Station	Notified Identification Code
S814	199	5.18	1	Space To Earth EIRP Mask	Notified Identification Code
S671	216	5.23	1	Associated Earth Station Antenna	Notified Identifying Code
S712	190	5.14	1	Exclusive Operational Group	Notified Identifying Code
S087	186	5.12	1	Non-geostationary Orbit	Number Of Satellites In Orbit
S858	231	5.27	1	Receiving Earth Station ACG	Observation Type
S300	249	5.41	1	Space Service Notice	Occurrence Code
S402	170	5.1	1	Administration	Official E-mail Address
S401	169	5.1	1	Administration	Official Facsimile Address
S014	169	5.1	1	Administration	Official Postal Address
S015	169	5.1	1	Administration	Official Telex Address
S851	182	5.10	1	Space Station	Operational Characteristics Compliance Indicator
S170	214	5.22	1	Earth Station Antenna	Operational Sector End Azimuth
S169	214	5.22	1	Earth Station Antenna	Operational Sector Start Azimuth
S121	203	5.19	1	Beam	Orientation Angle Alpha
S368	204	5.19	1	Beam	Orientation Angle Beta
S807	197	5.17	1	Earth To Space EIRP Mask	Pattern
S803	193	5.16	1	PFD Mask	Pattern
S815	199	5.18	1	Space To Earth EIRP Mask	Pattern
S802	193	5.16	1	PFD Mask	Pattern Type
S250	230	5.25	1	Assignment Coordination Group (ACG)	Peak To Average Power Ratio Upper Frequency Limit
S099	188	5.12	1	Non-geostationary Orbit	Perigee Altitude
S100	189	5.12	1	Non-geostationary Orbit	Perigee Argument
S782	179	5.10	1	Space Station	Period Of Repeating Ground Track
S188	226	5.25	1	Assignment Coordination Group (ACG)	Period Of Validity
S381	215	5.22	1	Earth Station Antenna	Planned Maximum Elevation Angle
S168	215	5.22	1	Earth Station Antenna	Planned Minimum Elevation Angle
S859	232	5.27	1	Receiving Earth Station ACG	Planned Minimum Elevation Angle
S120	203	5.19	1	Beam	Pointing Accuracy
S189	226	5.25	1	Assignment Coordination Group (ACG)	Polarization Code
S364	227	5.25	1	Assignment Coordination Group (ACG)	Polarization Linear Angle
S022	170	5.2	1	Correspondence Address	Postal Address
S841	216	5.22	1	Earth Station Antenna	Power Density Compliance Indicator
S830	181	5.10	1	Space Station	Power Density Compliance Indicator
S842	181	5.10	1	Space Station	Power Density Compliance Indicator In Band 1 164-1 215 MHz
S223	188	5.12	1	Non-geostationary Orbit	Precession Rate Indicator
S323	221	5.24	1	Coordination Contour	Predetermined Distance Contour
S202	228	5.25	1	Assignment Coordination Group (ACG)	Pre-emphasis Characteristics
S201	228	5.25	1	Assignment Coordination Group (ACG)	Pre-emphasis P-P Frequency Deviation
S326	228	5.25	1	Assignment Coordination Group (ACG)	Pre-emphasis RMS Frequency Deviation
S073	184	5.11	1	Geostationary Orbital Position	Preferred Longitude
S173	220	5.24	1	Coordination Contour	Propagation Mode (1) Contour
S322	221	5.24	1	Coordination Contour	Propagation Mode (2) Contour
S758	220	5.24	1	Coordination Contour	Purpose

RDD ref	Page	Para-graph	Data Type	Data Group	Data Item
S301	249	5.41	1	Space Service Notice	Purpose Code
S853	213	5.22	1	Earth Station Antenna	Radio Astronomy Antenna Dimensional Description
S854	213	5.22	1	Earth Station Antenna	Radio Astronomy Antenna Effective Area Description
S852	213	5.22	1	Earth Station Antenna	Radio Astronomy Antenna Type Description
S043	173	5.5	1	Geographical Area	Radiocommunication Region Code
S373	240	5.32	1	Emission Characteristic Set	Reason For Absence Of C/N
S269	240	5.32	1	Emission Characteristic Set	Reason For Absence Of Minimum Power
S372	240	5.32	1	Emission Characteristic Set	Reason For Absence Of Minimum Power Density
S332	231	5.27	1	Receiving Earth Station ACG	Receiver Sensitivity Indicator
S763	217	5.23	1	Associated Earth Station Antenna	Receiving System Noise Temperature
S764	231	5.27	1	Receiving Earth Station ACG	Receiving System Noise Temperature
S192	232	5.28	1	Receiving Space Station ACG	Receiving System Noise Temperature
S084	186	5.12	1	Non-geostationary Orbit	Reference Body Code
S789	181	5.10	1	Space Station	Reference Date
S790	181	5.10	1	Space Station	Reference Time
S781	178	5.10	1	Space Station	Repeating Ground Track Indicator
S210	240	5.32	1	Emission Characteristic Set	Required Protection Ratio (Minimum C/I)
S097	187	5.12	1	Non-geostationary Orbit	Right Ascension Of The Ascending Node
S133	209	5.20	1	Elliptical Beam	Rotational Accuracy
S103	189	5.12	1	Non-geostationary Orbit	Satellite Period
S102	189	5.12	1	Non-geostationary Orbit	Semi Major Axis
S079	185	5.11	1	Geostationary Orbital Position	Service Arc Easterly Limit
S080	185	5.11	1	Geostationary Orbital Position	Service Arc Westerly Limit
S203	228	5.25	1	Assignment Coordination Group (ACG)	Sound Broadcasting Characteristics
S331	232	5.28	1	Receiving Space Station ACG	Space Station Automatic Gain Control Range
S606	252	5.44	1	ACG Intended Action	Special Section Number For Last Advance Publication
S607	253	5.44	1	ACG Intended Action	Special Section Number For Last Coordination
S605	250	5.41	1	Space Service Notice	Special Section Number For Publication
S768	252	5.44	1	ACG Intended Action	Special Section Reference For Advance Publication
S769	253	5.44	1	ACG Intended Action	Special Section Reference For Last Coordination
S767	250	5.41	1	Space Service Notice	Special Section Reference For Publication
S195	227	5.25	1	Assignment Coordination Group (ACG)	Spectrum Mask
S127	207	5.19	1	Beam	Spreading Loss Versus Elevation Angle
S797	192	5.15	1	Latitude Range Category	Start Latitude
S091	229	5.25	1	Assignment Coordination Group (ACG)	Start Time
S275	241	5.35	1	Coordination Agreement	Status Code
S118	203	5.19	1	Beam	Steerable Indicator
S092	229	5.25	1	Assignment Coordination Group (ACG)	Stop Time
S070	178	5.10	1	Space Station	Subregional System Indicator
S023	171	5.2	1	Correspondence Address	Telex Address
S086	178	5.10	1	Space Station	Total Number Of Non-geostationary Orbits
S263	238	5.32	1	Emission Characteristic Set	Total Peak Envelope Power
S288	246	5.39	1	Strap Characteristic Set	Transmission Gain For Highest Ratio Of Transmission Gain To ESLNT
S289	246	5.39	1	Strap Characteristic Set	Transmission Gain For Lowest ESLNT
S249	235	5.29	1	Transmitting Space Station ACG	Transponder Bandwidth Indicator
S777	236	5.30	1	Transmitting Space Station Space To Space ACG	Transponder Bandwidth Indicator
S327	228	5.25	1	Assignment Coordination Group (ACG)	TV System And Colour Standard Description
S309	250	5.42	1	Notice Attachment	Type
S641	230	5.25	1	Assignment Coordination Group (ACG)	Type Of Amplitude Modulation
S640	230	5.25	1	Assignment Coordination Group (ACG)	Type Of Modulation
S850	183	5.10	1	Space Station	Type of Radio astronomy Station In Band 42.5-43.5 GHz
S559	216	5.23	1	Associated Earth Station Antenna	Typical/Specific Indicator
S157	212	5.22	1	Earth Station Antenna	Typical/Specific Indicator
S384	233	5.28	1	Receiving Space Station ACG	Uplink Service Area
S248	241	5.33	1	Frequency Range	Upper Limit
S723	242	5.36	1	ACG Frequency	Value
S333	241	5.34	1	Beam Frequency	Value

10.5 RDD numbers deleted in revisions to ITU-R SM.1413

RDD numbers deleted in revisions to ITU-R SM.1413 should not be reused in future revisions of the recommendation.

The following RDD numbers were deleted in revision 1 to the Recommendation

Terrestrial Data: 0110, 0132, 0142, 0204, 0205, 0371, 0373, 0374, 0391, 0421, 0422, 0423, 0424, 0425, 0429, 0496, 0497, 0524, 0525, 0526, 0542, 0543, 0549, 0574, 0575

Space Data: S128, S129, S156, S172, S212, S619, S624, S680.

The following RDD numbers were deleted in this revision to the Recommendation

Space Data: S077, S078, S081, S085, S161, S162, S166, S207, S208, S209, S270, S501, S505, S506, S517, S544, S625, S638, S639, S643, S644, S647, S674, S675, S679, S705, S706, S708, S709, S793, S794, S795.