Validation Rules for Space Station / Satellite Network
Form of Notice - Ap4/Annex 2

The validation rules are specified in tabular form. These rules apply to ADD and MOD (merged) transactions. SUP transactions need no validation. A description of the various columns of the table are given below :

Name of column	Description of column
Val. Item No.	This is a unique number (in increasing sequence) that is allocated to each data-item that has been considered for validation. There are gaps in the numbering sequence to allow for additional data-items that may be added in the corresponding tables. The description of each data-item can be found in the document "Description of the SRS database" that is distributed on each SRS-on-CDROM publication. The 'table name' and 'field name' values provided in the next two columns, along with the 'Ap4 Ref.', can be used to locate the description of the data-item in the above-mentioned document.
Table Name	The name of the table in the SRS (or SNS) database containing this data-item is provided here.
Field Name	This column contains the name of the field in the specified table (see Table Name) that contains the value of this data-item.
Ap4 Ref.	The number of the data-item in Annex 2 of Appendix 4 of the Radio Regulations is provided in this column - this is the same number that is on the form of notice for the data-item. Please note that "Overall Link Characteristics" are no longer mandatory but will be validated if provided. Only items with symbols **X** and **+** are presently validated.
Notice Type	This indicates the type of notice for which the specified data-item should be provided. Appendix 1 of the Annex to this document provides an explanation of the various notice types.
Data Format	The format of the data-item is described here. This is the format that is accepted by the Data Capture software SpaceCap and is described in the document "Description of the SRS database" that is distributed with the SRS-on-CDROM. It is provided here as reference.
Validation Rules	The checks that are to be executed on each data-item are specified here. They are sequentially numbered from 1 (the validation rule number) and each validation rule is uniquely identified by its 'Val. Item No.' and the validation rule number. Rules with numbers greater than 3 have a letter before the rule (C, D, E, P, G) indicating the type of validation check, as explained below: C : cross-check validation; the value of this data-item is to be checked against the values of other data-items D : duplicate check; this data-item cannot contain duplicate values as indicated in the validation rule E : extended check; the validation rule specifies a complex validation check on this data-item, involving calculations with other data-items P : dependency check; this data-item may be provided only if other data-items are provided / not provided. G : cross-validation with GIMS for geostationary space station. The value of the data item is compared to corresponding item in GIMS mdb format. In the validation report, the Validation item no. corresponding to a GIMS Cross Validation error will be *9000* At the end of each validation rule, there is a symbol in parentheses; this indicates the severity of the error if the rule fails. The error levels are : F the error is fatal and the transaction cannot pass validation if any fatal errors exist. W this is a warning to the user to check the flagged data item. A transaction with "warnings" can proceed further in the processing, if the user desires. Reference is made in some of the rules to certain tables in the Preface which is the Preface to the International Frequency list and BR IFIC DVD ROM. In some cases, the validation rule contains a check that is described with reference to a table in the Annex of this document. For data-items that are required only for certain Notice Types (see above), a general rule no. 0 (see item 9999, rule 0) is used to indicate that the value should not be provided for other Notice Types as indicated in the error message.

Space Validation Rules

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
1	notice	ntc_id	all		9(9)	1: mandatory (F) 2: must be numeric value between 76500000 and 399999999 (W) 3: E: the value represented by the last 6 digits must be greater than 500000 - BR internal validation (F) 4: E: check against item 11; 1st digit should be "0" (prior to 2000) or "1" (2000 or after) - BR internal validation (F) 5: E: the 2nd and 3rd digits must be equal to the year portion (last 2 digits) of item 11 - BR internal validation (F) 6.1: E: 4th to 6th digits have to be "520" if item 5 is "RR1060" or "RR1610" or "RS46", or "9.6" - BR internal validation (F) 6.2: E: 4th to 6th digits have to be "500" or "501"or "505" or "506" if item 5 is "RR1488" or "11.2" or "RR1492", or "11.12" - BR internal validation (F) 6.3: E: 4th to 5th digits have to be "54" if item 5 is "9.1/IA" or "9.1/IB" or "9.1/IA,IB" - BR internal validation (W)
2	notice	ntc_type	all		X	1: mandatory (F) 2: symbol must be "G" or "N" (F) 3: E: if symbol is not "G" or "N", then it must be one of "S", "T" or "R" (for earth stations); if none of these, then validation is stopped(F)
3	notice	adm_ref_id	all		X(20)	1: for administration use, not to be validated
4	notice	d_adm	all		9(8)	1: for administration use; not to be validated 2: must be a valid date
5	notice	prov	all		X(12)	1: mandatory (F) 2: the symbol must be one of "RR1488", "RR1060", "RR1610", "RS46", "RR1042", "9.1/IA", "9.1/IB","9.1/IA,IB","9.6", "9.6-RES553 ", "9.6-21.4-22G ", "9.7A","9.11A", "11.2", "11.2-RES553 ", "11.12"- if none of these, then validation is stopped (F)
6	notice	act_code	all		X	1: mandatory (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						2: the symbol must be "A" , "M", "S" or blank (F) 3: C:if this item = "M" or "S", then item 10 must be provided (F) 4: E: if this item = "M" or "S", then items 100 and 101 (for geo) or 200 (for non-geo) must be provided (F)
7	notice	adm	all	A1f1	X(3)	1: mandatory (F) 2: the symbol must be present in the reference table "rf_adm" containing valid symbols for administrations; this corresponds to table 1A in the Preface (F) 3: G: if geostationary, this item should match the administration symbol in the GIMS mdb (W)
8	notice	ntwk_org	all		X(3)	1: optional (W) 2: the symbol must be present in the reference table "rf_sat_org" containing valid symbols for satellite organizations; this corresponds to table 2 in the Preface (F) 3: E: check with item 7; must be a valid symbol for the notifying administration as indicated in table 2 in the Preface (F)
9	notice	ntf_occurs	all		X	1: conditionally required (W) 2: the symbol must be "F" or "R" or blank (F) 3: C: this item must be provided if item 5 is "RR1488" or "11.2" (F)
10	notice	tgt_ntc_id	all		9(9)	1: conditionally required (W) 2: must be a numeric value between 57500000 and 399999999 (F) 3: C: if this item contains a value (indicating the BR identification number of the satellite network to be modified or suppressed), then item 6 must be = "M" or "S" (F)
11	notice	d_rcv	all		9(8)	1: mandatory - BR internal validation (F) 2: must be a valid date, later than 1 January 1957 (inclusive) and prior to date of validation-run (exclusive) (F)
12	notice	f_int_ext	all		X	1: mandatory (F) 2: the symbol must be one of "I" (internal), "E" (external), "W" (withdrawal by adm) or "Z" (withdrawal by BR) (F)
13	notice	ntf_rsn	all		X	1: mandatory (F) 2: the symbol must be "A", "N" or "C"; check against item 5 for the corresponding values (F)

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						3.1: C: if value is "A", item 5 should be one of "RR1042", "9.1/IA", "9.1/IB" or "9.1/IA,IB" (F)
						3.2: C: if value is "C", item 5 should be one of "RR1060", "RS46", "9.6", "9.6-RES553", "9.6-21.4-22G" or "9.11A" (F)
						3.3: C: if value is "N", item 5 should be one of "RR1488", "RR1492", "11.2", "11.2-RES553" or "11.12"(F)
						4: E: only Coordination Requests (C) and Notification filings (N) are presently validated (F)
						5: G: if geostationary, this item should match the notification reason in GIMS mdb (W)
14	notice	st_cur	all		X(2)	1: mandatory - BR internal validation (F)
						2: symbol must be present in the Status Code Reference Table "rf_status" (F)
19	notice	f_adm_proxi	all	A1f2	X	1: optional (W)
						2: the symbol must be "Y" or blank (F)
20	notice	f_aes_char	all	A18a	X	1: conditionally required (W)
						2: symbol must be "Y", "N" or blank (F)
						3: E: the symbol must be "Y" if the satellite operates in the aeronautical mobile-satellite service (AMSS) (item 631 = "EJ" or "E5" or "E6") in the frequency band 14 - 14.5 GHz (F)
40	attch	attch_no	all		9(4)	1: optional; used in electronic notices to provide attachments; not validated
41	attch	attch_type	all		X	1: optional; used in electronic notices to provide attachments; not validated
42	attch	file_name	all		X(255)	1: optional; used in electronic notices to provide attachments; not validated
50	adm_assoc	adm	all	A1f2	X(3)	1: optional (W)
						2: the symbol must be present in the reference table "rf_adm" containing valid symbols for administrations; this corresponds to table 1A in the Preface (F)
						3: C: if any symbol is provided, then item 19 (f_adm_proxy) must be = "Y" (F)
100	geo	sat_name	geo	A1a	X(30)	1: mandatory (F)
						2: E: if action-code (item 6) = "M" or "S", then symbol must be present in the satellite name reference table "rf_sat_name" (F)
						3: E: if item 13 (ntf_rsn) = 'C', then this satellite name must be present in the SNS database for an API filing (item 13 = 'A'); if item 13 = 'N', then this satellite name must be present in the SNS database for a CR filing (item 13 = 'C') as well as for

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						an API filing - BR internal validation (F)
						4: G: This item should match the name of the satellite in the GIMS mdb (W)
101	geo	long_nom	geo	A4A1	S9(3).9(2)	1: mandatory (F)
						2: must be numeric value in degrees between -179.99 (inclusive) and +180.00 (inclusive) (F)
						3: E: if action-code (item 6) = "M" or "S", then this item, along with item 100 and item 2, should match the corresponding entry in the reference table "rf_sat_name"(F)
						4: G: This item should match the nominal longitude in the GIMS mdb (F)
102	geo	tol_east	geo	A4a2a	9.9(2)	1: mandatory (F)
						2: for Coordination or Notification, if item 631 (srv_cls.stn_cls) is EC, EV or EB Tolerance must be <= 0.1 deg. If item 631 is not EC, EV or EB Tolerance must be <= 0.5 deg. Where Tolerance is the maximum value between tol_east and tol_west (F)
103	geo	tol_west	geo	A4a2b	9.9(2)	1: mandatory (F)
						2: for Coordination or Notification, if item 631 (srv_cls.stn_cls) is EC, EV or EB Tolerance must be <= 0.1 deg. If item 631 is not EC, EV or EB Tolerance must be <= 0.5 deg. Where Tolerance is the maximum value between tol_east and tol_west (F)
104	geo	inclin_exc	geo	A4a2c	9.9(2)	1: mandatory (F)
						2: must be a numeric value between 0 (exclusive) and 15.0 (inclusive) (F)
105	geo	f_pfd_sep	geo	A16c	X	1: conditionally required (W)
						2: symbol must be "Y", "N" or blank (null) (F)
						3: E: value must be either "Y" or "N" if the geostationary satellite operates in the fixed satellite service (FSS) - class-of-station (item 631) = "EC" in the bands 14.5 to 14.8 GHz and grp.f_nfd_lnk = "Y" (F)
						4: E: must be null if grp.f_nfd_lnk <> "Y" (W)
106	geo	f_esim	geo		X	1: conditionally required (W)
						2: symbol must be "Y" or "N" (F)
						3: E: value must be provided if the geostationary satellite operates in the bands 19.7 to 20.2 GHz and 29.5 to 30.0 GHz and class of station (item 706) = "UF" (F)
109	geo	f_off_axis	geo	A16a	X	1: conditionally required (W)
						2: symbol must be "Y", "N" or blank (null) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3: E: value must be "Y" or "N" if the geostationary satellite operates in the fixed satellite service (FSS) - class-of-station (item 631) = "EC" in the bands 12.75 to 13.25 GHz or 13.75 to 14.5 GHz or 29.5 to 30 GHz(W)
110	geo	f_pfd_lim	geo	A17A	X	1: conditionally required (W) 2: symbol must be "Y", "N" or blank (null) (F) 3: E: value "Y" or "N" must be provided if the geostationary satellite operates in the radionavigation satellite service (RNSS) - class-of-station = ("EN", "EO" or "EQ") - in the band 1164 - 1215 Mhz (F)
120	cmr_syst	seq_no	rs49		9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F)
121	cmr_syst	ntwk_name	rs49		X(20)	1: mandatory (F) 2: E: must have a maximum length of 20 characters (F)
122	cmr_syst	lsp_name	rs49		X(20)	1: mandatory (F) 2: E: must have a maximum length of 20 characters (F)
123	cmr_syst	vehicle	rs49		X(20)	1: mandatory (F) 2: symbol must be present in the Launch Vehicle name reference table "rf_vehicle" (F)
124	cmr_syst	d_exe	rs49		9(8)	1: mandatory (F) 2: must be a valid date (F)
125	cmr_syst	d_deliv_fr	rs49		9(8)	1: mandatory (F) 2: must be a valid date (F)
126	cmr_syst	d_deliv_to	rs49		9(8)	1: mandatory (F) 2: must be a valid date (F) 3: E: must be a date equal or later than cmr_syst.d_deliv_fr (F)
127	cmr_syst	facility	rs49		X(20)	1: mandatory (F) 2: symbol must be present in the Launch Facility reference table "rf_facility" (F)
128	cmr_syst	mfct_name	rs49		X(20)	1: mandatory (F) 2: E: must have a maximum length of 20 characters (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
129	cmr_syst	nbr_sat	rs49		9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 999 (inclusive) (F)
130	cmr_syst	d_exe_m	rs49		9(8)	1: mandatory (F) 2: must be a valid date (F)
131	cmr_syst	d_deliv_fr_m	rs49		9(8)	1: mandatory (F) 2: must be a valid date (F)
132	cmr_syst	d_deliv_to_m	rs49		9(8)	1: mandatory (F) 2: must be a valid date (F) 3: E: must be a date equal or later than cmr_syst.d_deliv_fr _m (F)
150	strap	strp_id	gxttc		9(4)	1: mandatory (not mandatory under Appendix 4 (WRC-2003); will be validated if provided) (F) 2: must be a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: there must be no duplicate values in the set of values for this item (F) 4: E: this strap-id value must be present in at least one of the ranges of strap-id numbers represented by items 162 and 163 (F)
151	strap	act_code	gxttc	D1	X	1: conditionally required (W) 2: the symbol must be "A" , "R", "S" or blank (F) 3: C: if this item is not blank, then item 6 must be "M" (F)
152	strap	beam_up	gxttc	D1a1a	X(8)	1: mandatory (F) 2: must be a non-blank alphanumeric symbol (F) 3: E: the symbol must be a valid receiving satellite beam; this is checked by verifying that this beam name is found in item 501 where item 500 is "R" (F)
153	strap	beam_dn	gxttc	D1a2a	X(8)	1: mandatory (F) 2: must be a non-blank alphanumeric symbol (F) 3: E: the symbol must be a valid transmitting satellite beam; this is checked by verifying that this beam name is found in item 501 where item 500 is "E" (F)
154	strap	freq_symup	gxttc	D1a1b	X	1: mandatory (F) 2: the symbol must be "K", "M" or "G" (F) 3: check this symbol against frequency value in item 155 (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3.1: C: if this item is "K", then the value in item 155 should be between 5000 (exclusive) and 27500 (inclusive) (F) 3.2: C: if this item is "M", then the value in item 155 should be between 27.5 (exclusive) and 10500 (inclusive) (F) 3.3: C: if this item is "G", then the value in item 155 should be between 10.5 (exclusive) and 400 (inclusive) (F)
155	strap	freq_up	gxttc	D1a1b	9(6).9(5)	1: mandatory (F) 2: must be a numeric value between 10.5 (inclusive) and 27500 (inclusive) (F) 3: E: uplink frequency / symbol (items 154/155) must be a valid assigned frequency (items 721/722) for the receiving satellite beam specified in item 152 (F) 4: E: if at least one assigned frequency in a group is strapped, then all the assigned frequencies in the group must be strapped (F)
156	strap	freq_symdn	gxttc	D1a2b	X	1: mandatory (F) 2: the symbol must be "K", "M" or "G" (F) 3: check this symbol against frequency value in item 157 (F) 3.1: C: if this item is "K", then the value in item 157 should be between 5000 (exclusive) and 27500 (inclusive) (F) 3.2: C: if this item is "M", then the value in item 157 should be between 27.5 (exclusive) and 10500 (inclusive) (F) 3.3: C: if this item is "G", then the value in item 157 should be between 10.5 (exclusive) and 400 (inclusive) (F)
157	strap	freq_dn	gxttc	D1a2v	9(6).9(5)	1: mandatory (F) 2: must be a numeric value between 10.5 (inclusive) and 27500 (inclusive) (F) 3: E: downlink frequency / symbol (items 156/157) must be a valid assigned frequency (items 721/722) for the transmitting satellite beam specified in item 153 (F) 4: E: if at least one assigned frequency in a group is strapped, then all the assigned frequencies in the group must be strapped (F) 5: D: the strapped link represented by the uplink beam (item 152), uplink frequency (items 154/155), downlink beam (item 153) and downlink frequency (items 156/157) must not be duplicated in the set of the strap records (F) 6: E: each emission (item 671) belonging to an uplink group which is strapped should appear in at least one downlink group to which this uplink group is strapped and vice versa - to be done only for planned networks (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
160	ngma	ngma_id	gxttc	D2	9(4)	1: mandatory (not mandatory under Appendix 4 (WRC-2003); will be validated if provided) (F) 2: must be a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: there must be no duplicate values in the set of values for this item (F)
161	ngma	act_code	gxttc	D2	X	1: conditionally required (F) 2: the symbol must be "A" , "R", "S" or blank (F) 3: C: if this item is not blank, then item 6 must be "M" (F)
162	ngma	strp_id_fr	gxttc	D2	9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 9999 (inclusive) (F)
163	ngma	strp_id_to	gxttc	D2	9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: C: value must be greater than or equal to that in item 162 (F) 4: E: the range of numbers represented by items 162 and 163 must be included in the set of numbers in item 150; if MOD filing and user is non-BR, then this message is issued as a Warning (F)
164	ngma	noise_t_lo	gxttc	D2a1	9(8)	1: mandatory (F) 2: must be a numeric value between 0 (exclusive) and 9999999 (inclusive) (F)
165	ngma	gain_as_lo	gxttc	D2a2	S9(2).9(1)	1: mandatory (F) 2: must be a numeric value between -40 (inclusive) and 99.9 (inclusive) (W)
166	ngma	noise_t_hr	gxttc	D2b1	9(8)	1: mandatory (F) 2: must be a numeric value between 0 (exclusive) and 9999999 (inclusive) (F)
167	ngma	gain_as_hr	gxttc	D2B2	S9(2).9(1)	1: mandatory (F) 2: must be a numeric value between -40 (inclusive) and 20 (inclusive) (W)
168	ngma	stn_name	gxttc	D2	X(30)	1: mandatory (F) 2: must be a non-blank alphanumeric symbol (F) 3: D: the combination of values represented by the range of serial numbers in items 162/163 and by this item must not be duplicate. That is, if the associated earth station name occurs more than once in the set of records, then for all these occurrences there must be no overlap in their corresponding ranges of serial numbers (in item 162/163) (F)

						4: E: this must be a valid associated earth station name (item 680) for the transmitting satellite beam/frequency identified by items 153 and 156/157, taking into account the correspondence between items 150 and 162/163. That is, the data in the strap and noise-gma records is combined on the basis of the values in items 150 and 162/163. This is done for all cases where the serial number in item 150 is within a range of serial numbers specified in items 162/163. A set of "extended records" is thus created by multiplying out the sets of strap and noise-gma records (F) 5: E: the "extended records" are validated as follows: for each uplink beam (item 152), find the group (or all groups) where the corresponding uplink frequency (items 154/155) occurs and note the receiving system noise temperature - item 643 - (Ts) for each group. For each downlink beam (item 153), find the group (or all groups) where the corresponding downlink frequency (items 156/157) occurs; these groups should have an associated earth station with the same name as that specified in this item. For each such associated earth station found, note its receiving system noise temperature - item 693 - (Te). The ESLNT values in items 164 and 166 and their corresponding associated transmission gains in items 165 and 167 of the extended records are validated according to the formula given below : where ESLNT is the value in items 164 and 166 and Gamma is the corresponding value in items 165 and 167, converted into the form : gamma = $10^{(value)/10}$ where value is the value of item 165/167. This is done for the two pairs, items 164/165 and items 166/167 and for all values of Te and Ts found as described above (W)
200	non_geo	sat_name	ngeo	A1a	X(30)	1: mandatory (F) 2: E: if action-code (item 6) = "M" or "S", then symbol must be present in the satellite name reference table "rf_sat_name" (F) 3: E: if item 13 (ntf_rsn) = 'C', then this satellite name must be present in the SNS database for an API filing (item 13 = 'A'); if item 13 = 'N', then this satellite name must be present in the SNS database for an API filing - BR internal validation (F
201	non_geo	ref_body	ngeo	A4B2	X	1: mandatory (F) 2: symbol must be one of the following characters-"T", "L", "M", "J", "V", "S", "D" or "H" (F)
202	non_geo	nbr_sat_nh	ngeo	A4b3a	9(3)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 999 (inclusive) (F) 3: E: value must be provided if it is non-geostationary FSS (EC) operating in the band 3400 - 4200 MHz (F)

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203	non_geo	nbr_sat_sh	ngeo	A4b3b	9(3)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 999 (inclusive) (F) 3: E: value must be provided if it is non-geostationary FSS (EC) operating in the band 3400 - 4200 MHz (F) 4: E: for non-geostationary FSS (EC) operating in the band 3400 - 4200 MHz both values of items 202 and 203 should not be 0 (F)
204	non_geo	nbr_plane	ngeo	A4b1	9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 999 (inclusive) (W)
205	non_geo	nbr_sat_td	ngfss	A4b7a	9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 9999 (inclusive) (F)
206	non_geo	density	ngfss	A4b7b	9.9(6)	1: mandatory (F) 2: must be a numeric value between 0 (inclusive) and 10000 (inclusive) (F)
207	non_geo	avg_dist	ngfss	A4b7c	9(4).9	1: mandatory (F) 2: must be a numeric value between 0 (inclusive) and 9999 (inclusive) (F)
208	non_geo	f_x_zone	ngfss	A4b7d1	X	1: mandatory (F) 2: symbol must be "Y" (angle alpha), "N" (angle X), "O" or blank (F)
209	non_geo	x_zone	ngfss	A4b7d2	9(2).9	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 90 (exclusive) (F) 3: E: value must be provided if item 208 = "Y" or "N" (F)
210	non_geo	f_epfd	ngfss	A15a	X	1: conditionally required (W) 2: symbol must be either "Y" or blank (null) (F) 3: E: value must be = "Y" if this is a non-geostationary satellite (item 2 = "N") in the Fixed Satellite Service (item 631 = "EC") and there are frequencies in the band 10.7 - 11.7 GHz (in all Regions) (F) 4: E: value must be = "Y" if this is a non-geostationary satellite (item 2 = "N") in the Fixed Satellite Service (item 631 = "EC") and there are frequencies in the band 11.7 - 12.2 GHz (Region 2), 12.2 - 12.5 GHz (Region 3) and 12.5 - 12.75 GHz (Regions 1 & 3) (W)
211	non_geo	attch_x_zone	ngfss	A4b7d3	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3: C: value must be provided if item 208 = blank (F)
212	non_geo	f_pfd_lim	ngeo	A17a	X	1: conditionally required (W) 2: symbol must be "Y", "N" or blank (null) (F) 3: E: value "Y" or "N" must be provided if the non-geostationary satellite operates in the radionavigation satellite service (RNSS) - class-of-station = ("EN", "EO" or "EQ") - in the band 1164 - 1215 Mhz (F)
213	non_geo	attch_simult_ops	ngeo		9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (W) 3: E: an attachment should be provided to describe whether all satellites in the satellite network will be operational at the same time, or if not, provide description on the configuration of operation (W) 4: E: For Coordination notice, if sum of orbit.nbr_sat_pl for all orbits is greater or equal to 2, then this field must be greater or equal to 1 (F)
230	orbit	orb_id	ngeo		9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 999 (inclusive) (F) 3: C: value must be less than or equal to that of item 204 (F) 4: E: Period calculated using the apogee (orbit.apog and orbit.orbit_exp) and perigee (orbit.perig and orbit.perig_exp) should be within 10% of the period (orbit.prd_ddd, orbit.prd_hh, orbit.prd_mm) provided in the notice (F)
231	orbit	nbr_sat_pl	ngeo	A4b4b	9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: C: value must be provided if ref-body (item 201) = "T" (F)
232	orbit	right_asc	ngr46	A4B5a	9(3).9(2)	1: mandatory (F) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F)
233	orbit	inclin_ang	ngeo	A4b4a	9(3).9	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 180 (exclusive) (F) 3: C: value must be provided if ref-body (item 201) = "T" (F)
234	orbit	prd_ddd	ngeo	A4b4c1	9(3)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 2 (inclusive) (W) 3: C: value must be provided if ref-body (item 201) = "T" (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						4: P: at least one of the items 234 or 235 has to exist (F)
235	orbit	prd_hh	ngeo	A4b4c2	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 23 (inclusive) (F) 3: C: value must be provided if ref-body (item 201) = "T" (F)
236	orbit	prd_mm	ngeo	A4b4c3	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 59 (inclusive) (F) 3: C: value must be provided if ref-body (item 201) = "T" (F) 4: E: if provided, all the three items 234, 235 & 236 must not be = 0 (F)
237	orbit	apog	ngeo	A4B4d	9(5).9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99999 (inclusive) (F) 3: C: value must be provided if ref-body (item 201) = "T" (F)
238	orbit	apog_exp	ngeo	A4B4d	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 99 (inclusive) (F) 3: P: value can be present only if item 237 is present (F)
239	orbit	perig	ngeo	A4B4e	9(5).9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99999 (inclusive) (F) 3: C: value must be provided if ref-body (item 201) = "T" (F)
240	orbit	perig_exp	ngeo	A4B4e	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 99 (inclusive) (F) 3: P: value can be present only if item 239 is present (F) 4: E: calculate the altitude of apogee as item 237 multiplied by the exponent (item 238 expressed as power of 10) and the altitude of perigee similarly using items 239 and 240; the altitude of apogee should be greater than or equal to the altitude of perigee (F)
241	orbit	perig_arg	ngr46	A4B5c	9(3).9	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F) 3: E: the value must be provided if the altitude of apogee (items 237, 238) is not equal to the altitude of perigee (item 239, 240) (F)
242	orbit	op_ht	ngfss	A4b4f	9(5).9(2)	1: conditionally required (W) 2: E: must be provided for ngeo not subject to coordination (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3: E: must be provided for coordination and notification of ngeo except for those subject to 22.5D,C,G (ngiss) (F) 4: E: calculate the minimum altitude as item 242 multiplied by the exponent (item 243 expressed as a power of 10); the minimum altitude must be >= the perigee (items 239,240) and must be <= the apogee (items 237,238) (F)
243	orbit	op_ht_exp	ngfss	A4b4f	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 99 (inclusive) (F) 3: C: value must be provided if item 242 is present (F) 4: C: value must not be provided if item 242 is not provided (F)
244	orbit	f_stn_keep	ngfss	A4b6c	X	1: optional (W) 2: symbol must be either "Y" or blank (null) (F)
245	orbit	rpt_prd_dd	ngfss	A4b6d	9(3)	1: conditionally required (W) 2: C: must be provided if item 244 = "Y" (F)
246	orbit	rpt_prd_hh	ngfss	A4b6d	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 23 (inclusive) (F) 3: C: must be provided if item 244 = "Y" (F)
247	orbit	rpt_prd_mm	ngfss	A4b6d	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 59 (inclusive) (F) 3: C: must be provided if item 244 = "Y" (F)
248	orbit	rpt_prd_ss	ngfss	A4b6d	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 59 (inclusive) (F) 3: C: must be provided if item 244 = "Y" (F)
249	orbit	f_precess	ngfss	A4b6e	X	1: optional (W) 2: symbol must be either "Y" or blank (null) (F)
250	orbit	precession	ngfss	A4b6f	9(3).9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (exclusive) and 360 (exclusive) (F) 3: C: value must be provided if item 249 = "Y" (F)
251	orbit	long_asc	ngfss	A4B6g	9(3).9(2)	1: mandatory (F) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
252	orbit	keep_rnge	ngfss	A4b6j	9(2).9	1: mandatory (F) 2: must be a numeric value between 0 (inclusive) and 90 (exclusive) (F)
260	phase	orb_sat_id	ngfs9		9(4)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: item must be less than or equal to that of item 231 (F)
261	phase	phase_ang	ngr46	A4B5B	9(3).9(2)	1: mandatory (F) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F)
262	phase	d_ref	ngfss	A4b6h / A4b6i	9(8).9(6)	1: mandatory (F) 2: must be a valid date and time value - corresponds to A.4.b.6.h & A.4.b.6.i (F)
270	c_pfd	seq_no	all		9(4)	1: conditionally required (W) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)
271	c_pfd	freq_min	all		9(7).9(6)	1: conditionally required (W) 2: must contain a numeric value between 1164 (inclusive) and 42500 (inclusive) (F) 3: C: this item must be provided if item 272 is provided (F) 4: C: this item must not be provided if item 272 is not provided (F)
272	c_pfd	freq_max	all		9(7).9(6)	1: conditionally required (W) 2: must contain a numeric value between 1215 (inclusive) and 43500 (inclusive) (F) 3: C: this item must be provided if item 271 is provided (F) 4: C: this item must not be provided if item 271 is not provided (F)
273	c_pfd	pfd	all		S9(3).9(2)	1: conditionally required (W) 2: must contain a numeric value between -999.9 (inclusive) and -115 (inclusive) (W) 3: C: this item must be provided if item 271 is provided(F) 4: C: this item must not be provided if item 271 is not provided (F) 5: E: if item 13 = ("C" or "N") and class-of-station is= ("EN" or "EO" or "EQ") (RNSS) and there are frequencies (item 723) in the band 5010 - 5030 MHz, then there must be 'freq_min' (item 271) and 'freq_max' (item 272) values equal to 4990 and 5000 - A.17.b.1 & A.17.b.3 (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						6: E: if item 13 = ("C" or "N") and class-of-station is= ("EN" or "EO" or "EQ") (RNSS) and there are frequencies (item 723) in the band 5010 - 5030 MHz, then there must be 'freq_min' (item 271) and 'freq_max' (item 272) values equal to 5030 and 5150 - A.17.b.2 (F) 7: E: if item 13 = ("C" or "N") and item 2 = "N" and item 500 = "E" and class-of-station is"EC" (NGSO FSS) and there are frequencies (item 723) in the band 15.43 - 15.63 GHz, then there must be 'freq_min' (item 271) and 'freq_max' (item 272) values equal to 15350 and 15400 - A.17.c (F) 8: E: if item 13 = ("C" or "N") and transmitting beams exist (item 500 = "E") and class-of-station is = ("EH" or "EW" or "EM") (SRS or EESS) and there are frequencies (item 723) in the band 35.5 - 36 GHz, then there must be 'freq_min' (item 271) and 'freq_max' (item 272) values equal to 35550 and 36000 - A.17.d (F) 9: E: if item 13 = ("C" or "N") and class-of-station is"EC" or "EB" or "EV" (FSS or BSS) and there are frequencies (item 723) in the band 42 - 42.5 GHz, then there must be 'freq_min' (item 271) and 'freq_max' (item 272) values equal to 42500 and 43500 - A.17.e.1 & A.17.e.2 (F)
300	orbit_lnk	emi_rcp	ngeo	B2	X	1: mandatory (F) 2: the symbol must be "E" (emission) or "R" (reception) (F)
301	orbit_lnk	beam_name	ngeo	B1a	X(8)	1: mandatory (F) 2: E: beam_name and emi_rcp must exist as a set in s_beam table (F)
302	orbit_lnk	orb_id	ngeo	B4a1	9(4)	1: mandatory (F) 2: E: must be less than or equal to the number of orbital planes, item 204 (non_geo.nbr_plane) (F)
304	orbit_lnk	f_all_sat	ngeo		X	1: mandatory (F) 2: symbol must be "Y" or "N" (F) 3: E: if value is "Y" then sat_lnk should not be filled (F) 4: E: if value is "N" then sat_lnk should be filled (F)
305	sat_lnk	beam_name	ngeo	B1a	X(8)	1: mandatory (F) 2: E: beam_name and emi_rcp must exist as a set in s_beam table (F)
306	sat_lnk	emi_rcp	ngeo	B2	X	1: mandatory (F) 2: the symbol must be "E" (emission) or "R" (reception) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
307	sat_lnk	orb_id	ngeo	B4a1	9(4)	1: mandatory (F) 2: E: must be less than or equal to the number of orbital planes, item 204 (non_geo.nbr_plane) (F)
308	sat_lnk	orb_sat_id	ngeo	B4a2	9(4)	1: mandatory (F) 2: E: must be less than or equal to the number of satellites in the orbit, item 231 (non_geo.nbr_sat_pl) (F)
310	sat_oper	lat_fr	ngfss	A4b6a2	S9(2).9(3)	1: mandatory (F) 2: must be a numeric value between -90 (inclusive) and +90 (inclusive) (F)
311	sat_oper	lat_to	ngfss	A4b6a3	S9(2).9(3)	1: mandatory (F) 2: must be a numeric value between -90 (inclusive) and +90 (inclusive) (F) 3: C: this item must be > item 310 (F)
312	sat_oper	nbr_op_sat	ngfss	A4b6a1	9(4)	1: mandatory (F) 2: must be a numeric value greater or equals to 1 (F)
500	s_beam	emi_rcp	all	B2	X	1: mandatory (F) 2: the symbol must be "E" (emission) or "R" (reception) (F)
501	s_beam	beam_name	all	B1a	X(8)	1: mandatory (F) 2: must be a non-blank alphanumeric symbol (F) if submission under RS49, value must be "RS49" (F) 3: E: if item 502 is "M" then the beam-name symbol must be an existing beam in the SNS for the target network; if not, check item 503 - BR internal validation (F) 4: G: if not steerable beam, required contour must be provided in GIMS, and in the correct order (F) 5: G: if geostationary,check that all diagrams for that beam have been provided in GIMS mdb format according to Appendix 10 of the Annex (W)
502	s_beam	act_code	all		X	1: conditionally required (W) 2: symbol must be "A", "M", "S" or blank (F) 3: C: if this item is not blank, then item 6 must be "M" (F) 4: E: if item 6 = "M", then this item must be non-blank for non-BR users (F)
503	s_beam	beam_old	all		X(8)	1: optional (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						2: must be a non-blank alphanumeric symbol (F) 3: C: if this item is not blank, then item 502 must be "M" (F) 4: E: this beam name symbol should be present as an existing beam in the SNS database for the target network - BR internal validation, to be done (F)
504	s_beam	gain	all	B3a1	S9(2).9(1)	1: mandatory (F) 2: must be a numeric value between -6 (inclusive) and 65 (inclusive) (W) 3: E: if beam is repositionable (see Rule of Procedure 21.16), i.e. item 512 = "Y", then the value must be >= 24.2 (W) 4: E: check value against notified frequencies (item 753) as per table in Appendix 2a of the Annex (W)
505	s_beam	pnt_acc	geo	B3d	9.9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 0.3 (inclusive) (W) 3: C: this field may be blank if item 504 is <= 4.0; otherwise, it must be provided (there shall be a value unless an antenna is omni-directional) (F) 4: E: the value must be less than or equal to the larger of the two beamwidths calculated according to Appendix 3 of the Annex (W)
506	s_beam	attch_gain	all	B3b1	9(2)	1: this field should only be filled for ngeo or ngiss (F) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: if this item contains a valid value, then items 509 and 514 must not contain a value (F) 4: E: this field must contain a valid number if there is at least one associated earth station for this beam (item 680) and vice-versa; however, if user is non-BR and action-code (item 502) = "M", then this item can be missing (F)
509	s_beam	attch_e	ngiss	B3c1a	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: if this item contains a valid value, then item 506 must not contain a value (F)
512	s_beam	f_steer	all	B1C	X	1: conditionally required (W) 2: the symbol must be "Y" (if steerable beam) or blank (F) 3: G: if steerable beam, 0dB contour must be provided in GIMS database (F)
514	s_beam	pattern_id	ngiss	B3c1b	9(4)	1: conditionally required (W) 2: must be numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: C: if this item is provided, then item 509 must not contain a value (F) 4: C: if this item is not provided, then item 509 must contain a value (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						5: E: value must exist as a primary key in the antenna pattern reference table <ant_type> (F)
						6: E: value must be added by BR as a primary key in the antenna pattern reference table <ant_type> (F)
517	s_beam	attch_pfd_steer	all	B3b1	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: E this item must be provided if item 500 = "E" (transmitting beam) and item 512 = "Y" (steerable beam) and item 518 = "N" (f_pfd_steer_default) (F)
518	s_beam	f_pfd_steer_default	all	B3b1	X	1: conditionally required (W) 2: symbol must be "Y" or "N" (F) 3: E: this item must be provided if item 500 = "E" (transmitting beam) and item 512 = "Y" (steerable beam) (F) 4: E: if value is "Y", item 517 (s_beam.attch_pfd_steer) must not be provided (F)
520	s_beam	f_tx_vis	all	B2bisa	X	1: Conditionally required (W) 2: the symbol must be "Y" or blank (F) 3: E: should be provided for ngeo not subject to coordination (W) 4: E: must be provided for coordination and notification of ngeo except for those subject to 22.5D,C,G (ngiss) (W)
521	s_beam	tx_ang_min	all	B2bisb	9(2).9	1: Conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F) 3: E: must not be provided if item 520 (f_tx_vis) is not Y (F)
522	s_beam	f_co_change	geo		X	1: Conditionally required (W) 2: the symbol must be "Y" or "N" (F) 3: C: if symbol is "Y", beam action code must be "M" (F)
523	s_beam	f_aggso_change	geo		X	1: Conditionally required (W) 2: the symbol must be "Y" or "N" (F) 3: C: if symbol is "Y", beam action code must be "M" (F)
550	s_beam	sr_type	all		X	1: conditionally required (W) 2: must be either NULL, 'P' or 'A' (F) 3: C: if this item is 'P', item 500 (emi_rcp) must be 'R' (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						4: E: if this item is 'P', all groups below this must have item 666 (sr_type) = 'P' (F) 5: E: if this item is 'A', all groups below this must have item 666 (sr_type) = 'A' (F) 6: E: if this item is 'A', there should be another beam with the same s_beam.beam_name but with opposite direction (i.e. emi_rcp would indicate the opposite direction of transmission) (W)
551	s_beam	ang_alpha	ngeo	B4a3a1	9(3).9	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F) 3: E: this item is not necessary for deep space (item 201 = "D") 4: E: must be provided if notice code is ngr46 (F) 5: E: must be provided if this beam contains sensors (F)
552	s_beam	ang_beta	ngeo	B4a3a2	9(2).9	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 90 (exclusive) (F) 3: E: this item is not necessary for deep space (item 201 = "D") 4: C: must not be present if item 551 is not provided (F) 5: C: if the value of this item = 0, then item 551 must be also = 0 (F) 6: E: must be provided if notice code is ngr46 (F) 7: E: must be provided if this beam contains sensors (F)
553	s_beam	attch_elev	ngr46	B4B2	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: this item must be provided if item 500 = "E" (F) 4: C: this item must not be provided if item 500 = "R" (F)
554	s_beam	attch_loss	ngr46	B4B3	9(2)	1: conditionally required (W) 2: must be a numeric value 1 (inclusive) and 99 (inclusive) (F) 3: C: this item must be provided if item 500 = "E" (F) 4: C: this item must not be provided if item 500 = "R" (F)
555	s_beam	pwr_max_4k	ngr46	B4B4A	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value between -99.9 (inclusive) and 99.9 (inclusive)(F) 3: C: this item must be provided if item 500 = "E" (F) 4: C: this item must not be provided if item 500 = "R" (F)
556	s_beam	pwr_avg_4k	ngr46	B4B4B	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value between -99.9 (inclusive) and 99.9 (inclusive)(F) 3: C: this item must be provided if item 500 = "E" (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						4: C: this item must not be provided if item 500 = "R" (F) 5: C: item value must be less than or equal to that of item 555 (F)
557	s_beam	pwr_max_1m	ngr46	B4B4C	S9(2).9(1)	1: conditionally required (W) 2: must be numeric value between -99.9 (inclusive) and 99.9 (inclusive)(F) 3: C: this item must be provided if item 500 = "E" (F) 4: C: this item must not be provided if item 500 = "R" (F)
558	s_beam	pwr_avg_1m	ngr46	B4B4D	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value between -99.9 (inclusive) and 99.9 (inclusive)(F) 3: C: this item must be provided if item 500 = "E" (F) 4: C: this item must not be provided if item 500 = "R" (F) 5: C: item value must be less than or equal to that of item 557 (F)
559	s_beam	f_all_orbit	ngeo		X	1: conditionally required (W) 2: symbol must be "Y" or "N" (F) 3: C: this item must be provided if item 201 (non_geo.ref_body) is not = "D" (F) 4: E: if value is "Y" then orbit_lnk should not be filled (F) 5: E: if value is "N" and non_geo.ref_body is "T" then orbit_lnk should be filled (F)
600	grp	grp_id	all		9(9)	1: mandatory - BR internal validation (F) 2: must be a numeric value between 1 (inclusive) and 999999999 (inclusive) (F) 3: D: value must be unique in the set of all grp_id values (F)
601	grp	act_code	all		X	1: conditionally required (W) 2: the symbol must be "A", "M", "S" or blank (F) 3: C: if this item is not blank, then item 502 must be "M" (F) 4: C: if this item = "M" or "S", then target-notice-id (item 635) must be provided (F) 5: E: if item 502 = "M", then this item must be non-blank for non-BR user (F)
602	grp	page_no	all		9(4)	1: optional (W) 2: must be a numeric value - for BR internal use (W)
603	grp	d_inuse	all	A2a	9(8)	1: conditionally required (W) 2: must be a valid date (F) 3.1: E: if item 13 = "N", this date must not be later than the date of receipt (item 11) plus three years (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
604	grp	prd_valid	all	A2b	9(2)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 50 (inclusive) (W)
605	grp	op_agcy	all	A3a	9(3)	1: mandatory (F) 2: must be a numeric value between 1 (inclusive) and 999 (inclusive) (W) 3: E: value should be present in the reference Table "rf_op_agcy" corresponding to Table 12A/12B in the Preface; if providing a new value, please enter 999 and provide the details as an attachment (F)
606	grp	adm_resp	all	A3b	X(2)	1: mandatory (F) 2 : must be a symbol with 1 or 2 characters (F) 3: E: symbol should be present in the reference Table "rf_adm_resp" corresponding to Table 12A/12B in the Preface; if providing a new symbol, please enter XX and provide the details as an attachment (F)
608	grp	beam_name	rs49	B1a	X(8)	1: mandatory (F) 2: value must be "RS49" (F)
610	gpub	seq_no	all		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)
611	gpub	pub_ref	all		X(12)	1: mandatory (F) 2: must be a non-blank alphanumeric symbol (F) 3: C: if the symbol is one of "API/A", "API/C", "AR11/A", "SPA-AA", "RES46/A", "RES33/A", "AP30/A", "RR1042", "RES SPA2-3AA", then ntf_rsn (item 13) must be = "C" or "N" (F) 4: C: if the symbol is one of "CR/C", "AR11/C", "AR14/C", "RES46/C", "RES33/C", "AP30/C", "AP30-30A/F/C", "SPA-AJ", "RES SPA2-3AJ", then ntf_rsn (item 13) must be = "N" (F) 5.1: E: if ntf_rsn (item 13) = "C" or "N", then this item must contain atleast one of the following values - "API/A", "API/C", "AR11/A" or "SPA-AA" (F) 5.2: E: if Resolution 46 (or "9.11A") applies and item 13 = "C", one occurrence of this item must have "RES46/A" or "API/A" (W) 5.3: E: if Resolution 46 (or "9.11A") applies and item 13 = "N", the values "RES46/A" and "RES46/C" must be present for this item (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						6.1: E: If the symbol is "AP30-30A/F/C", then stn_cls (item 631) must be "ED", "EK", "ER" or "ET" (F)
						6.2: E: and if emi_rcp (item 500) = "E", then freq_assgn (item 752) shall be in 11.7-11.714; 12.189-12.2; 12.489-12.5; 12.2-12.212; 12.688-12.7 GHz, or if emi_rcp (item 500) = "R", then freq_assgn (item 752) shall be in 14.5-14.5118; 14.78814-14.8; 17.3-17.314;18.089-18.1 GHz; 17.3-17.312; 17.788-17.8 GHz (F)
612	gpub	pub_no	all		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 99999 (inclusive) (F)
620	provn	seq_no	all		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences of a particular value of item 621 for this group - BR Internal data (F) 4: E: if the user is non-BR and this is Coordination Request filing (CR), then no data should be provided in this table (F)
621	provn	coord_prov	all	A5/A6	X(20)	1: mandatory (F) 2: the symbol must be one of the following: "RR1060", "RR1066A", "RR1067", "RR1068", "RR1069", "RR1070", "RS46#2.1", "RS46#2.2", "RS46#3.1", "NI" , "9.7", "9.7B", "9.11", "9.11A", "9.12", "9.12A","9.13", "9.14", "9.21", "9.21/A", "9.21/B", "9.21/C", "AP5#6D1/9", "AP30", "AP30A", "AP30B", "A30#7.1", "A30A#7.1", "RS33#2.1", "RS33#3", "RS77", "RS84" or "RS539" (F) except for resubmission (item 9 = "R")
622	provn	agree_st	all		X	1: mandatory (F) 2: the symbol must be one of "R", "O", "A", "Q", "T", "B", "F", "P", "N", "V" or "*" (F) 3: C: if ntf_rsn (item 13) = 'N', then this item must be not = 'R' (F)
623	provn	adm	all		X(3)	1: optional (W) 2: the symbol must be present in the reference table "rf_adm" corresponding to table no. 1A in the Preface (but only as an administration) (F) 3: C: if this item = blank, then item 621 must not be one of "RR1060", "NI" or "9.7" (W) 4: D: there must be no duplicate administration/satellite network organisation pairs (items 623 / 624) for the same provision in item 621 (F) 5: E: the coordination/agreement information consisting of items 621, 622, 623 and 624 must not be duplicated for the group (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
624	provn	ntwk_org	all		X(3)	1: optional (W) 2: symbol must be present in reference tables "rf_sat_org" and "rf_ctry" corresponding to values in Tables 2 and 1B in the Preface (F) 3: E: if provided, then the corresponding symbol of the notifying administration in this table must be the same as item 623 (this item should be a valid symbol for the administration) (F)
627	grp	remark	all		X(30)	1: optional; not to be validated
628	grp	st_cur	all		X(2)	1: conditionally required - BR internal validation (W) 2: E: for a notice with item 6 (act_code) = "A" or "M", this item must not be equal to 52 (F)
630	srv_cls	seq_no	all		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)
631	srv_cls	stn_cls	all	C4a	X(2)	1: mandatory (F) 2: the symbol must correspond to Table 3 in the Preface (F) 3.1: C: if value = "ED", then item 500 must be "R" - uplink only (F) 3.2: C: if value = "ER", then item 500 must be "E" - downlink only (F) 4: E: if value = "ES", then only associated space station (item 710) can be present and/or no service area (items 645/646) can be indicated(F) 5: C: if value = 'E1' or 'E3' then item 666 (sr_type) must be 'A' (F) 6: C: if value = 'E2' or 'E4' then item 666 (sr_type) must be 'P' (F) 7: E: if value = "ET", frequency assignment must be within frequency band and direction of Appendix 11 of the Annex (F)
632	srv_cls	nat_srv	all	C4b	X(2)	1: mandatory (F) 2: the symbol must be one of "CO", "CP", "CR", "CV" or "OT"; corresponding to Table 4 in the Preface (F) 3: E: there must be no duplicate class-of-station / nature-of-service pairs (item 631 / 632) for the group (F)
633	grp	f_sa_change	geo		X	1: Conditionally required (W) 2: the symbol must be "Y" or "N" (F) 3: E: if symbol is "Y", notice action code and beam action code must be "M" (F) 4: E: if symbol is "Y", item 647 (grp.area_no) must be provided (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						5: E: if symbol is "Y", item 645 (srv_area.ctry) must not be provided (F)
635	grp	tgt_grp_id	all		9(9)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 999999999 (inclusive) (F) 3: C: if this item contains a value (representing the BR identification number of the group to be modified, replaced or suppressed), then item 601 must be = "M" or "S" (F)
637	grp	d_reg_limit	all		9(8)	1: conditionally required (W) 2: must be a valid date (F) 3: E: must be provided for API, Coordination and Notification - BR Internal validation (F)
638	grp	d_rcv_start	all		9(8)	1: conditionally required (W) 2: must be a valid date (F) 3: E: must be provided for Coordination and Notification - BR Internal validation (F)
640	grp	polar_type	all	C6a	X(2)	1: mandatory (F) 2: the symbol must be present in reference table "rf_polar" corresponding to Table 5 of the Preface (F)
641	grp	polar_ang	all	C6b	9(3).9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (exclusive) (F) 3: C: if this item is not provided, then item 640 must be not = "L" 4: C: if this item is provided, then item 640 must be = "L" (F)
642	grp	bdwdth	all	C3a/C5d2	9(9)	1: mandatory (F) 2.1: E: if item 666 (sr_type) = NULL or 'P', must be a numeric value between 1 (inclusive) and 3,000,000 (inclusive) (W) 2.2: E: if item 666 (sr_type) = 'A', must be a numeric value between 100 (inclusive) and 600,000 (inclusive) (W) 3: E: value must be less than or equal to the maximum possible value as determined by using the highest assigned frequency notified for the group and Appendix 5 of the Annex (W)
643	grp	noise_t	all	C5A	9(6)	1: conditionally required (W) 2: must be a numeric value between 100 (inclusive) and 10000 (inclusive) (W) 3: E: this item must be provided if item 500 = "R" except when item 666 (sr_type) = "P" (F) 4: E: this item must not be provided if item 500 = "E" (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						5: E: this item should have the same value for all groups within this receiving beam (W)
644	grp	pwr_max	all	C8d1 / C8g1	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value less than or equal to 40 (W) 3: E: this item must be provided if item 666 (sr_type) is NULL and item 500 = "E" (F) 4: E: if receiving beam - item 500= "R" - and if item 680 - associated earth station- does not exist then this item 644 must be empty (F)
645	srv_area	ctry	axiss	C11a	X(3)	1: conditionally required (W) 2: symbol must be present in reference table "rf_ctry_area" corresponding to Table no. 1B in the Preface (F)
646	diag_grp	attch_no	nxiss		9(2)	0: when diag_grp.diag_type = 'SA' (ServiceArea), the following rules apply to this field: 1: conditionally required (W) 2: must contain a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: E: for nongeo, this item must be provided if item 645 (srv_area.ctry) is not provided and where there is at least one associated earth station and where grp.sr_type <> ("A" or "P") (F) 4: E: for nongeo, both items 645 (srv_area.ctry) and 646 (diag_grp.attch_no) should not be provided at the same time (F)
647	grp	area_no	gxiss	C11a	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 10 (inclusive) (W) 3: E: for GEO, if there is at least one associated earth station and grp.sr_type <> ("A" or "P"), either this item or srv_area.ctry must be provided, but not both (F) 4: G: check whether the service area exceeds the regions where the service is allocated, based on the reference table of regional restriction - BR Internal (W) 5.1: G: If frequency band include 18.1-18.4 GHz and emi_rcp = "R", service area must not include UAE and GRC 5.2: G: If frequency band include 14.5-14.8 GHz and grp.f_nfd_lnk is TRUE then: if frequency band include 14.75-14.8 GHz, then service area must be limited to countries listed in Res 164, otherwise, if frequency band does not include 14.75-14.8 GHz, then service area must be limited to countries listed in Res 163 and 164 (F)
648	diag_grp	attch_no	ngr46		9(2)	0: when diag_grp.diag_type = 'AFRGN' (AffectedRegion), the following rules apply to this field: 1: optional (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3: E: must be provided if the group uses frequencies between 1000 and 3000 MHz and item 645 is not equal to "XAA" or "MWM" and the service is MSS - item 631="EG", "EI", "EJ", "E5", "E6" or "EU" - as defined in Recommendation ITU-R M.1187 (F)
650	diag_grp	attch_no	ngr46		9(2)	0: when diag_grp.diag_type = 'MOTYP' (MultipleAccess), the following rules apply to this field: 1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: this item must be provided if item 666 (sr_type) is not provided (F)
651	diag_grp	attch_no	ngr46		9(2)	0: when diag_grp.diag_type = 'SMK' (SpectrumMask), the following rules apply to this field: 1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: C: this item must be provided if item 666 (sr_type) is not provided (F)
655	grp	f_no_intfr	all		X	1: optional (W) 2: symbol must be either "Y" or blank (F)
656	grp	bdwdth_aggr	all	C8d2 / C8g2	9(6)	1: optional (W) 2: must be a numeric value between 1 (inclusive) and 3,000,000 (inclusive) (W) 3: C: this item must not be provided for a receiving beam - item 500 = "R" (F)
657	grp	f_1143a	all		X	1: conditionally required for Notification filing (W) 2: symbol must be "Y" or "N" (F) 3: must be provided only if MOD filing (F)
662	grp	pfd_pk_7g	ngr46	B4b5	S9(3).9(1)	1: conditionally required (W) 2: value must be between -200 (inclusive) and -10 (inclusive) (W) 3: E: value must be provided if this is a transmitting satellite beam (item 500 = "E") operating in the fixed satellite service (item 631 = "EC") and using frequencies (items 751/752) in the band 6700 - 7075 MHz (F)
663	grp	freq_min	all		9(7).9(6)	1: mandatory for res49 and API not subject to coordination (F) 2: must be a numeric value (F)
664	grp	freq_max	all		9(7).9(6)	1: mandatory for res49 and API not subject to coordination (F) 2: must be a numeric value (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3: E: This item shall be greater than item 663, freq_min (F) 4: E: For RES49, items 663 and 664 (freq_min and freq-max) must not overlap the band 21.4-22 GHz (F) 5: E: For API not subject to coordination, Items 664-663 (freq_max - freq_min) must not be smaller than 1 kHz (F)
665	grp	sensitivity	all	C16b1	9(3).9(2)	1: conditionally required (W) 2: must be a numeric value between 0.001 (inclusive) and 2 (inclusive) (W) 3: C: this item must be provided if item 666 (sr_type) = "P" (F) 4: C: this item must not be provided if item 666 (sr_type) = "A" or NULL (F)
666	grp	sr_type	all		X	1: conditionally required (W) 2: must be "A", "P" or null (F) 3: C: must be "A" if item 550 (sr_type) = "A" (F) 4: C: must be "P" if item 550 (sr_type) = "P" (F) 5: C: must be NULL if item 550 (sr_type) = NULL (F) 6: C: must be "A" if item 631 (stn_cls) = "E1" or "E3" (F) 7: C: must be "P" if item 631 (stn_cls) = "E2" or "E4" (F)
667	grp	eirp_nom	ngiss	C8f1/C8f2	S9(2).9(1)	1: conditionally required (W) 2: E: must be provided for API not subject to coordination where there is an associated space station or when stn_cls is ES (F) 3: E: must not be provided for where there is an associated earth station (W)
668	emiss	seq_no	all		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)
669	emiss	design_emi	all	C7a	X(9)	1: conditionally required (W) 2: E: except when it is "SENSOR", the symbol must contain 9 alphanumeric characters, which are validated in two parts from left to right - the first four characters (necessary bandwidth) and the next five characters (class of emission) (F) 3.1: E: the first character must be numeric, ranging from 1 (inclusive) to 9 (inclusive) or "H" (F) 3.2: E: the next three characters can be numeric (0 to 9 inclusive) or "H", "K", "M" or "G"; however, there must be only one alphabetic character ("H", "K", "M", "G") in the set of the first four characters (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3.3: E: the necessary-bandwidth portion of this item (the first four characters) is converted to a frequency value in kilohertz by using the unit specified by the alphabetic character (H - hertz, K - kilohertz, M - megahertz, G - gigahertz) and its position in the four character sequence as an implied decimal point (for eg. 36M0 is 36.0 megahertz or 36000 kilohertz); this value should be less than or equal to the assigned frequency band - item 642 - (F) 4.1: E: 5th character - must be alphabetic but not one of "E", "I", "O", "S", "T", "U", "Y", "Z" (F) 4.2: E: 6th character - must be one of "0", "1", "2", "3", "7", "8", "9", "X" (F) 4.3: E: 7th character - must be one of "A", "B", "C", "D", "E", "F", "N", "W", "X" (F) 4.4: E: 8th character - must be one of "A", "B", "C", "D", "E", "F", "G", "H", "J", "K", "L", "M", "N", "W", "X" and "-" (F) 4.5: E: 9th character - must be one of "N", "C", "F", "T", "W", "X" and "-" (F) 5: E: must be provided for all groups where item 666 (sr_type) = NULL or item 666 = "A" and item 500 = "E" (F)
670	emiss	pep_max	all	C8b3a	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value between -40 (inclusive) and +40 (inclusive) (W) 3: C: must be provided for all groups exept when item 666 (sr_type) = "P" (F) 4: E: for transmitting beam (item 500 = "E") and sr_type NULL, value must be less than or equal to the value of item 644 (F)
671	emiss	pwr_ds_max	all	C8b3b	S9(3).9(1)	1: conditionally required (W) 2: must be a numeric value between -200 (inclusive) and -10 (inclusive) (W) 3: C: must be provided for all groups exept when item 666 (sr_type) = "P" (F) 4: E: submitted value of power spectral density (pwr_ds_max) should be defined using the method of Recommendation SF.675, i.e. is averaged over the worst averaging bandwidth (W)
672	emiss	pep_min	all	C8c1	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value between -40 (inclusive) and +40 (inclusive) (W) 3: E: if item is missing and item 666 (sr_type) is not provided, item 677 should be provided (F) 4: C: value must be less than or equal to item 670 (F) 5: E: if the frequencies for the group - item 753 - are in the band 13.75-14 GHz for FSS - item 631 = 'EC' - then this item is mandatory (F)
673	emiss	pwr_ds_min	all	C8c3	S9(3).9(1)	1: conditionally required (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						2: must be a numeric value between -200 (inclusive) and -10 (inclusive) (W)
						3: C: if item is missing and item 666 (sr_type) is not provided, item 678 should be provided (F)
						4: C: value must be less than or equal to item 671 (F)
						5: E: if the frequencies for the group - item 753 - are in the band 13.75-14 GHz for FSS - item 631 = 'EC' - then this item is mandatory (F)
674	emiss	c_to_n	all	C8e1	S9(2).9	1: conditionally required (W)
						2: must be a numeric value between -20 (inclusive) and +30 (inclusive) (W)
						3: C: if item is missing and item 666 (sr_type) is not provided, item 679 must be provided (F)
677	emiss	attch_pep	all	C8c2	9(2)	1: conditionally required (W)
						2: must be a numeric value between 1(inclusive) and 99 (inclusive) (F)
						3: C: this item must be provided if items 666 and 672 are not provided (F)
678	emiss	attch_mpd	all	C8c4	9(2)	1: conditionally required (W)
						2: must be a numeric value between 1(inclusive) and 99 (inclusive) (F)
						3: C: this item must be provided if items 666 and 673 are not provided (F)
679	emiss	attch_c2n	all	C8e2	9(2)	1: conditionally required (W)
						2: must be a numeric value between 1(inclusive) and 99 (inclusive) (F)
						3: C: this item must be provided if items 666 and 674 are not provided (F)
680	e_as_stn	stn_name	axiss	C10b1	X(30)	1: mandatory (F)
						2: must be an alphanumeric symbol (F)
						3: E: symbol must be checked against the reference table for earth stations if item 684 = "S"; if found, it should have the same values for the country - item 681 - and the coordinates - items 685 to 692; if action-code (item 683) = "M" or "S", then the error severity is F (W)
						4: E: if present, item 710 - associated space station - must not be provided for the group (F)
						5: E: except for submissions under "RES553", all associated earth stations with the same name working with this beam must have the same values for items 681, 684, 685-692, 693, 694, 695 and 710 (F)
681	e_as_stn	ctry	axiss	C10c2	X(3)	1: conditionally required (W)
						2: symbol must be present in reference table "rf_ctry" corresponding to Table no. 1B of the preface (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3.1: C: if specific station - item 684 = "S" - symbol must be provided (F)
						3.2: if typical station or Testpoint - item 684 is "T" or "P" - this field should be blank (W)
682	e_as_stn	stn_old	axiss	C10b	X(30)	1: conditionally required (W)
						2: must be an alphanumeric symbol (F)
						3: C: if this item is not blank, then item 683 must be "M" (F)
						4: E: the symbol must represent the name of an associated earth station that is in the SNS for the target group (F)
683	e_as_stn	act_code	axiss		X	1: conditionally required (W)
						2: symbol must be "A", "M", "S" or blank (F)
						3: C: if this item is not blank, then item 601 must be "M" (F)
684	e_as_stn	stn_type	axiss	C10b2	X	1: mandatory (F)
						2: symbol must be "T", "P" or "S" (F)
685	e_as_stn	long_deg	axiss	C10c1	9(3)	1: conditionally required (W)
						2: must be a numeric value between 0 (inclusive) and 180 (inclusive) (F)
						3: C: this item must be provided if item 684 = "S" - specific station (F)
						4: C: this item must not be provided if item 684 = "T" - typical station (F)
						5: E: check value against items 686 to 688; values of 0W 0min 0sec and 180W 0min 0sec are not valid but 0E 0min 0sec and 180E 0min 0sec are valid (W)
686	e_as_stn	long_ew	axiss	C10c1	X	1: conditionally required (W)
						2: symbol must be "E" or "W" (F)
						3: C: this item must be provided if item 684 = "S" - specific station (F)
						4: C: this item must not be provided if item 684 = "T" - typical station (F)
687	e_as_stn	long_min	axiss	C10c1	9(2)	1: conditionally required (W)
						2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F)
						3: C: this item must be provided if item 684 = "S" - specific station (F)
						4: C: this item must not be provided if item 684 = "T" - typical station (F)
688	e_as_stn	long_sec	axiss	C10c1	9(2)	1: conditionally required (W)
						2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F)
						3: C: this item must be provided if item 684 = "S" - specific station (F)
						4: C: this item must not be provided if item 684 = "T" - typical station (F)
						5: E: if item 685 = 180, then items 687 and 688 should be = 0 (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
689	e_as_stn	lat_deg	axiss	C10c1	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 90 (inclusive) (F) 3: C: this item must be provided if item 684 = "S" - specific station (F) 4: C: this item must not be provided if item 684 = "T" - typical station (F)
690	e_as_stn	lat_ns	axiss	C10c1	X	1: conditionally required (W) 2: symbol must be "N" or "S" (F) 3: C: this item must be provided if item 684 = "S" - specific station (F) 4: C: this item must not be provided if item 684 = "T" - typical station (F)
691	e_as_stn	lat_min	axiss	C10c1	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F) 3: C: this item must be provided if item 684 = "S" - specific station (F) 4: C: this item must not be provided if item 684 = "T" - typical station (F)
692	e_as_stn	lat_sec	axiss	C10c1	9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 60 (exclusive) (F) 3: C: this item must be provided if item 684 = "S" - specific station (F) 4: C: this item must not be provided if item 684 = "T" - typical station (F) 5: E: if item 689 = 90, then items 691 and 692 must be equal to 0 (F) 6: E: items 685 - 692 should be checked against the Earth Station reference table; if the earth station - item 680 - exists in the reference table, the distance between these coordinates and the reference coordinates should not exceed 20 km (distance of 20 km to be confirmed) - to be done (W) 7: E: if item 681 is valid, then the geographic coordinates must be within the boundaries of the country specified; this check is done using the IDWM - to be done (W) 8: E: if this is a geostationary satellite and the service area diagram for this beam exists in GIMS, then the geographic coordinates must be within the service area boundary for this earth station - to be done (W)
693	e_as_stn	noise_t	axiss	C10d6	9(6)	1: conditionally required (W) 2: must be a numeric value between 30 (inclusive) and 500 (inclusive) (W) 3: C: this item must be provided if item 500 = "E" except if stn_type = "P" (F) 4: C: this item must not be provided if item 500 = "R" (F)
694	e_as_stn	gain	axiss	C10d3	S9(2).9(1)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 72 (inclusive) (W)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3: C: this item must be provided if item 684 = "S" - specific station or "P" - TestPoint (F)
						4: E: check value against notified frequencies (item 753) as per table in Appendix 2b of the Annex (W)
695	e_as_stn	bmwdth	axiss	C10d4	9(3).9(2)	1: conditionally required (W) 2: must be a numeric value between 0 (inclusive) and 360 (inclusive) (F) 3: C: if this item is not provided, then item 708 (pattern_id) must identify antenna types "ND-EARTH" or "ND-SPACE" (values 607, 608, 609 or 610) or stn_type = "P" (F) 4: E: value must be within the range from the minimum allowable to the maximum allowable calculated as per Appendix 6 of the Annex (W)
697	e_as_stn	diag_e	axiss		9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: E: if this item or item 698 is provided, then item 708 must not be provided (F)
698	e_as_stn	attch_e	axiss	C10d5a2	9(2)	1: conditionally required (W) 2: must be a numeric value between 1 (inclusive) and 99 (inclusive) (F) 3: E: if this item or item 697 is provided, then item 708 must not be provided (F)
703	e_as_stn	long_dec	axiss		S9(3).9(4)	1: conditionally required; BR Internal use (W) 2: must be a numeric value between -180 (exclusive) and 180 (inclusive) (F) 3: C: this item must be provided if item 684 = "S" - specific station or "P" - TestPoint (F) 4: C: this item must not be provided if item 684 = "T" - typical station (F) 5: E: the value must be derived from the longitude part of the geo coordinates - items 685 .. 688 (F)
704	e_as_stn	lat_dec	axiss		S9(2).9(4)	1: conditionally required; BR Internal use (W) 2: must be a numeric value between -90 (inclusive) and 90 (inclusive) (F) 3: C: this item must be provided if item 684 = "S" - specific station or "P" - TestPoint (F) 4: C: this item must not be provided if item 684 = "T" - typical station (F) 5: E: the value must be derived from the latitude part of the geo coordinates - items 689 .. 692 (F)
705	e_srvcls	seq_no	axiss		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
706	e_srvcls	stn_cls	axiss	C10d1	X(2)	1: conditionally required (W) 2: the symbol must be one of the following - "TA", "TB", "TC", "TD", "TE", "TF", "TG", "TH", "TI", "TJ", "TK", "TL", "TM", "TN", "TO", "TQ", "TR", "TT", "TU", "TW", "TX", "TY", "TZ", "T5", "T6", "UA", "UB", "UF", "UD", "UE", "UH", "UK", "UM", "UN","UR", "UT", "UV", "UW", "UY", "VA"; corresponding to Table 3 in the Preface (F) 3: C: this item must be provided if item 684 = "S" - specific station or "P" - TestPoint (F) 4: E: each symbol must be valid for the corresponding class of station symbol of the satellite group to which this associated earth station belongs - this correspondence is given in Appendix 7 of the Annex (F) 5: E: for each class-of-station symbol of the satellite group, there must be a corresponding class-of-station symbol for this association earth station belonging to the satellite group, as per the correspondence given in Appendix 7 of the Annex (F) 6: E: symbol "UC" is no longer valid (from 1.1.2017), please use "UF" instead (F) 7: E: If symbol is "UF", then frequency must be within 19.7-20.2 GHz, 29.5-30 GHz (W) 8: E: Symbol "UG" will not be processed by BR until resolves 1-12 and 14-19 of Res 155 are implemented (W)
707	e_srvcls	nat_srv	axiss	C10d2	X(2)	1: mandatory (F) 2: the symbol must be one of "CO", "CP", "CR", "CV" or "OT"; corresponding to Table 4 in the Preface (F) 3: E: the class-of-station / nature-of-service pair - items 706, 707 - must not be duplicated for the group (F) 4: E: the symbol must be the same as the nature-of-service - item 632 - associated with the corresponding class-of-station - item 631 - of the space group found in rule 706/3 (F)
708	e_as_stn	pattern_id	axiss	C10d5a1	9(4)	1: conditionally required (W) 2: must be numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: E: if this item is not provided, then item 697 or 698 must be provided or stn_type = "P" (F) 4: E: value must exist as a primary key in the antenna pattern reference table <ant_type> (F)
710	e_as_stn	ant_diam	axiss	C10d7/d8	9(3).9(4)	1: conditionally required (W) 2: E: if the group uses frequencies in the band 13.75 - 14 GHz for FSS (item 706 = "TC" or "TD" or "TK" or "TT") , then this item is mandatory (F), and: 2.1: E: if geostationary satellite (item 2 = "G") in the band 13.75 - 14 GHz; the value must be >= 1.2 meters; refer to No. 5.502 (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						2.2: G: if the group uses frequencies in the band 24.65-25.25 GHz in Region 1 or the band 24.65-24.75 in Region 3 for FSS (item 706 = "TC" or "TD" or "TK" or "TT"), then this item is mandatory (F), and the value must be >=4.5 meters (W) 2.3: E: if non-geostationary satellite (item 2 = "N") in the band 13.75 - 14 GHz, the value must be >= 4.5 meters; refer to No. 5.502 (F) 3: E: if the group uses frequencies in the band 14 - 14.5 GHz for MMSS (item 706 = "TG") , then this item is mandatory (F) 4: E: if grp.f_nfd_lnk = Y and in the band 14.5-14.8 GHz and FSS, then this item is mandatory (F) 5: E: if grp.f_nfd_lnk = Y and in the band 14.5-14.8 GHz and FSS, then value must be >= 6m (W)
714	e_as_stn	dgso	all	C10d9	9(3).9(2)	1: Optional (W) 2: E: should not be provided for notice type other than Coordination or Notification of a Geostationary Satellite Network (W)
730	s_as_stn	sat_name	ngiss	C10a1	X(30)	1: mandatory (F) 2: the symbol must be present in the satellite name reference table "rf_sat_name" (F) 3: E: if this satellite exists as a notified satellite network in the database (form Ap4/II) as the same type of satellite as indicated in item 735, items 730 and 732 must be found in that satellite network (W) 4: E: if present, then item 680 -associated earth station - must not be provided for the group (F)
731	s_as_stn	sat_old	ngiss		X(30)	1: optional (W) 2: the symbol must be present in the satellite name reference table "rf_sat_name" (W) 3: C: if this item is not blank, then item 734 must be "M" (F)
732	s_as_stn	beam_name	ngiss		X(8)	1: optional (W) 2: must be an alphanumeric symbol (F) 3: E: if this satellite name in item 730 exists as a notified satellite network in the database (form Ap4/II) with the same type as in item 735, that satellite network must have a beam with the same name as in item 732 but with a different value for item 500 - the emission/reception indicator - ; if item 500 of the other satellite network is "E", this beam should be "R" and vice-versa (W)
733	s_as_stn	beam_old	ngiss		X(8)	1: optional (W) 2: must be an alphanumeric symbol (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3: C: if this item is not blank, then item 734 must be "M" (F) 4: E: if this satellite name in item 730 exists as a notified satellite network in the database (form ApS4/II) with the same type as in item 735, that satellite network must have a beam with the same name as in item 733 but with a different value for item 500 - the emission/reception indicator - ; if item 500 of the other satellite network is "E", this beam should be "R" and vice-versa (W)
734	s_as_stn	act_code	ngiss		X	1: conditionally required (W) 2: symbol must be "A", "M", "S" or blank (F) 3: C: if this item is not blank, then item 601 must be "M" (F)
735	s_as_stn	stn_type	ngiss	C10	X	1: mandatory (F) 2: symbol must be either "G" or "N" (F) 3: E: all associated space stations in the group must have the same value for this item (F) 4: E: If symbol is "N" and notice is API subject to coordination, consult paragraph 6 of Rules of Procedure relating to No.11.32 (W)
736	s_as_stn	long_nom	ngiss	C10a2	S9(3).9(2)	1: conditionally required (W) 2: must be a numeric value in degrees between -179.99 (inclusive) and +180.00 (inclusive) (F) 3: C: value must be provided if geostationary associated space station; i.e. item 735 (stn_type) = "G" (F) 4: E: geostationary associated space station must be visible to this geostationary satellite network (item 2 = "G"); difference between this item and item 101 must be less than or equal to 162.5 (F)
750	assgn	seq_no	all		9(4)	1: mandatory (F) 2: must contain a numeric value between 1 (inclusive) and 9999 (inclusive) (F) 3: D: the value must be unique and ascending for all occurrences for this group - BR Internal data (F)
751	assgn	freq_sym	all	C2a1a	X	1: mandatory (F) 2: symbol must be "K", "M" or "G" (F) 3: check this symbol against frequency value in item 722 (F) 3.1: C: if this item is "K", then the value in item 752 should be between 5000 (exclusive) and 27500 (inclusive) (F) 3.2: C: if this item is "M", then the value in item 752 should be between 27.5 (exclusive) and 10500 (inclusive) (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
						3.3: C: if this item is "G", then the value in item 752 should be between 10.5 (exclusive) and 3000 (inclusive) (F)
752	assgn	freq_assgn	all	C2a1b	9(7).9(6)	1: mandatory (F) 2: must be a numeric value between 10.5 (inclusive) and 27500 (inclusive) (F) 3: E: this figure should conform to the format 9(5).9(5) (F) 4: E: there must not be any duplicate frequency / symbol pairs in the list of assigned frequencies for the group (F) 5: E: there should be no overlap in the list of assigned frequencies for the group; i.e. for each frequency in the sorted list of assigned frequencies, the lower and upper limits are calculated, using the bandwidth - item 642 - , as (assigned frequency +/- bandwidth/2); the upper limit of each assigned frequency should be less than or equal to the lower limit of the next assigned frequency in the sorted list (W) 6: E: For API/IB (i.e. subject to coordination), there should be no frequency overlap among the different groups (W) 7: E: if the value is in the Guard bands ensure that AP30/30A Art.2A applies - BR internal validation (W) 8: E: The use of the bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) by geostationary-satellite systems in the fixed satellite service shall be in accordance with the provisions of Appendix 30B (F) The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix 30B (F) The use of the band 17.3-17.8 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service is limited to feeder links for the broadcasting-satellite service in accordance with the provisions of Appendix 30A (F) The bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) in the fixed satellite service shall NOT be included in the non-geostationary-satellite systems (F)
753	assgn	freq_mhz	all		9(7).9(6)	1: mandatory; for BR Internal use (F) 2: must be a numeric value between 7 (inclusive) and 400000 (inclusive) (F) 3: E: the value must be equal to the assigned frequency in megahertz derived from items 751 and 752 according to rule 751/3 (F)
770	mod_char	i_mod_typ	plan	C9a1	9(4)	1: conditionally required (W) 2: the symbol must be present in the reference table "rf_charact" (F) 3: E: must be provided for all non-GSO subject to 9.11A except for active and passive sensors (F)

Val. Item No	Table Name	Field Name	Notice Type	Ap4 Ref.	Data Format	Validation Rules
778	emiss	pulse_length	all	C16a1	9(7).9(2)	1: conditionally required (W) 2: must be a numeric value between 0.1 (inclusive) and 2000 (inclusive) (W) 3: C: this item must be provided if item 666 (sr_type) = "A" and item 500 (emi_rcp) = "E" (F)
779	emiss	pulse_rep	all	C16a2	9(6).9(5)	1: conditionally required (W) 2: must be a numeric value between 0.01 (inclusive) and 10 (inclusive) (W) 3: C: this item must be provided if item 666 (sr_type) = "A" and item 500 (emi_rcp) = "E" (F)
780	carrier_fr	freq_carr	all	C7b	9(6).9(6)	1: conditionally required (W) 2: E: For NGSO not subject to coord., carrier frequency with the necessary bandwidth specified in the emission must fall within the frequency range of the group (F)
790	ntc_lnk	lnk_ntc_id	rs49		9(9)	1: mandatory (F) 2: must be a numeric value greater then 0 (F)
9000	all	all	all		none	1: refer to Appendix 10 of this document
9999	all	all	all		none	0: the data item should not be provided for notice type as indicated in the field ntc_code (F) 1: the action-code at a level above (notice, beam or grp) is 'A' and no rows are provided in the specified table (F) 2: for groups with Active or Passive sensors, no associated earth station is required (W) 3: for groups with Active sensor in receiving beam and all groups with Passive sensors, no emissions are required (W)

Appendix 1 : Notice Code values

NOTICE CODE	DESCRIPTION
all	all notice types
api	advance publication of information notices
axiss	all space notices except for ISS (inter-satellite-service - ES in item 631)
geo	geostationary
gxiss	geostationary but not ISS
gxttc	geostationary but not telemetry, tracking or telecommand
ngeo	non-geostationary
ngfss	nongeo satellites in the FSS subject to 22.5C, 22.5D, 22.5F (applicable frequency bands in Appendix 8)
ngiss	nongeo and geo beams in ISS
nxiss	nongeo and not ISS
ngpfd	nongeo requiring PFD compliance
ngr46	nongeo under 9.11A (applicable frequency bands in Appendix 9)
opt	optional for notice
plan	space plan notices (AP30, AP30A, AP30B)
space	all space notices
rs49	special section res49
ngfs9	nongeo satellites in the FSS subject to 22.5C, 22.5D, 22.5F (applicable frequency bands in Appendix 8) or nongeo under 9.11A (applicable frequency bands in Appendix 9)

Appendix 2a : Values for Maximum Isotropic Gain as a function of Assigned Frequency (Space Stations)

Lowest Frequency for this Beam	Minimum Allowable Gain Value	Highest Frequency for this Beam	Maximum Allowable Gain Value
1000 .. 3000 MHz	-6 dB	1000 .. 3000 MHz	40 dB
3400 .. 9000 MHz	4 dB	3400 .. 9000 MHz	45 dB
10.1 .. 30 GHz	15 dB	10.1 .. 30 GHz	56 dB
> 30 GHz	18 dB	> 30 GHz	65 dB

Appendix 2b : Values for Maximum Isotropic Gain as a function of Assigned Frequency (Earth Stations)

Lowest Frequency for this Beam	Minimum Allowable Gain Value	Highest Frequency for this Beam	Maximum Allowable Gain Value
1000 .. 3000 MHz	0 dB	1000 .. 3000 MHz	50 dB
3400 .. 9000 MHz	20 dB	3400 .. 9000 MHz	63 dB
10.1 .. 30 GHz	24 dB	10.1 .. 30 GHz	65 dB
> 30 GHz	30 dB	> 30 GHz	72 dB

Appendix 3 : Calculation of the two test beamwidths

Calculate the two test beamwidths using the maximum isotropic gain (item 504) as follows: beamwidth $\theta_1 = 65.0 / (D/\lambda)$ where $D/\lambda = 10^{\{(G_{max} - 7.7)/20.0\}}$ and G_{max} is the maximum isotropic gain in dB and beamwidth $\theta_2 = \sqrt{(27000/g_{max})}$ where $g_{max} = 10.0^{(G_{max} / 10.0)}$.

Appendix 4 : list of frequency bands with bi-directional utilization

Freq. from (MHz)	Freq. To (MHz)	Remarks
28	29.7	AMATEUR-SATELLITE
30.005	30.01	SPACE OPERATION (satellite identification) SPACE RESEARCH
39.986	40.02	Space Research
40.98	41.015	Space Research
144	146	AMATEUR-SATELLITE
149.9	150.05	RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (Earth-to-space) S5.224 B - allocation until 01/01/2015
235	322	Mobile-satellite S5.254
335.4	399.9	Mobile-satellite S5.254
399.9	400.05	RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (Earth-to-space)
400.05	400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1)
401	402	SPACE OPERATION (space-to-Earth) Earth Exploration Satellite (Earth-to-space) Meteorological-Satellite (Earth-to-space)
435	438	Amateur-Satellite S5.282

806	890	in Reg. 3 - MOBILE SATELLITE except aeronautical mobile-satellite (R) S5.320 in Reg. 2 - MOBILE SATELLITE serviceS5.317 (except Brazil and USA)
942	960	in Reg. 3 - MOBILE SATELLITE except aeronautical mobile-satellite (R) S5.320
1164	1300	RADIONAVIGATION-SATELLITE (space-to-earth)
1260	1270	Amateur-satellite service S5.282
1525	1535	Earth Exploration-Satellite
1559	1610	RADIONAVIGATION-SATELLITE (space-to-earth) (space-to-space)
1613.8	1626.5	Mobile-Satellite service (space-to-Earth) MOBILE SATELLITE service (Earth-to-space)
1670	1675	METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (Earth-to-space)
1770	1790	METEOROLOGICAL-SATELLITE SERVICE S5.387
2025	2110	SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) SPACE RESEARCH (Earth-to-space) (space-to-space)
2200	2290	SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) SPACE RESEARCH (Earth-to-space) (space-to-space)
2400	2450	Amateur-satellite service S5.282
2655	2690	FIXED-SATELLITE (Reg. 2) (Earth-to-space and space-to-Earth)
3400	3410	Amateur-satellite (Regions 2 and 3) S5.282
5000	5150	AERONAUTICAL MOBILE-SATELLITE (R) S5.367
5150	5216.5	RADIODETERMINATION-SATELLITE S5.446
5250	5255	Space research

5650	5725	SPACE RESEARCH
5830	5850	FIXED-SATELLITE Service (Reg. 1) (Earth-to-space) Amateur-satellite service (space-to-Earth)
6700	7075	FIXED-SATELLITE (Earth-to-space) (space-to-Earth)
8025	8400	FIXED-SATELLITE (Earth-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth)
9975	10025	Meteorological-satellite service (weather radars)S5.479
10450	10500	Amateur-satellite service
10700	11700	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
12500	12750	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
12750	13250	FIXED-SATELLITE (Earth-to-space) Space research (deep space) (space-to-Earth)
13400	14300	FIXED-SATELLITE (Earth-to-space) Space research
14300	14400	FIXED-SATELLITE (Earth-to-space)
14400	14470	FIXED-SATELLITE (Earth-to-space) Space research (space-to-Earth)
14500	15350	Space research
15430	15630	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space) available for APS4 received after 1/1/99
15450	15650	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space) available for APS4 received before 1/1/99 S5.511D
15630	15650	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space) available for advance information (AP4) received before 22.11.97 and APS4 received after 1/1/99 S5.511D
17300	18400	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)
19300	19700	FIXED-SATELLITE (space-to-Earth) and (Earth-to-space)

22550	23550	INTER-SATELLITE
24000	24050	AMATEUR-SATELLITE
24650	24750	INTER-SATELLITES (in Reg.1) RADIOLOCATION-SATELLITE (Earth-to-space) (in Reg.1)
25250	25500	INTER-SATELLITES Standard frequency and time signal-satellite (Earth-to-space)
25500	27000	Earth Exploration-Satellite (space-to-Earth) Standard-frequency and Time Signal-Satellite (Earth—to—space) (in Reg.1)
27000	27500	FIXED-SATELLITE (Earth-to-space) (in Regions 2 and 3) INTER-SATELLITES (in Regions 2 and 3)
27500	27501	Space-to-Earth (beacon transmissions intended for up-link power control) S5.538 FIXED-SATELLITE (Earth-to-space)
27501	29999	FIXED-SATELLITE (Earth-to-space) and (space-to-Earth) S5.540
29999	30000	Space-to-Earth (beacon transmissions intended for up-link power control) S5.538 FIXED-SATELLITE (Earth-to-space)
30000	31000	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) Standard-frequency and Time Signal-Satellite (space-to-Earth)
31000	31300	Standard-frequency and Time Signal-Satellite (Earth-to-space) Space research
32300	33000	INTER-SATELLITE
34700	35200	Space Research
40000	40500	EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth)
43500	47000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
47000	47200	AMATEUR-SATELLITE

47500	47900	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
48200	48540	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
49440	50200	FIXED-SATELLITE Service (in Reg. 1) (Earth-to-space) and(space-to-Earth)
65000	66000	EARTH EXPLORATION-SATELLITE SPACE RESEARCH
66000	71000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
76000	81000	Amateur-satellite Space research (space-to-Earth)
81000	84000	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) SPACE RESEARCH (space-to-Earth) AMATEUR-SATELLITE
95000	100000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
123000	130000	RADIONAVIGATION-SATELLITE
134000	141000	AMATEUR-SATELLITE
191800	200000	INTER-SATELLITE MOBILE-SATELLITE RADIONAVIGATION-SATELLITE
238000	240000	FIXED-SATELLITE(Space-to-earth) RADIONAVIGATION-SATELLITE
241000	248000	Amateur-satellite
248000	250000	AMATEUR-SATELLITE
252000	265000	MOBILE-SATELLITE RADIONAVIGATION-SATELLITE

Appendix 5 : Values for Assigned Frequency Band as a function of Assigned Frequency

Highest Frequency for this Group	Maximum Allowable Value of Assigned Frequency Band
10.0 MHz	100 000 kHz
30.0 GHz	1 000 000 kHz
> 30.0 GHz	3 000 000 kHz

Appendix 6 : Calculation of minimum and maximum beamwidths

Calculate the two test beamwidths (θ_1, θ_2) as indicated in Appendix 3. The minimum allowable beamwidth θ_{min} = (0.9) (min θ_1, θ_2); if θ_{min} is greater than 360, it is set to 360. The maximum allowable beamwidth θ_{max} = (1.1) (max θ_1, θ_2) . If θ_{max} is greater than 360, it is set to 360.

Appendix 7 : Correspondence between Earth Station Class of Station and Space Station Class of Station

Earth Station Class of Station	Corresponding Space Station Class of Station
T5	E5
T6	E6
TA	EA
TB	EJ
TC	EC
TD	ED
TE	(EI)
TF	EF
TG	EG
TH	EH
TI	EG

TJ	EJ
TJ	EC[1]
TK	EK
TL	EF
TM	EM
TN	EN
TO	EO
TQ	EQ
TR	ER
TT	ET
TU	EU
TW	EW
TX	EQ
TY	EU
TZ	EO
UA	EI
UB	EB
UD	ED
UE	EE
UF	EC
UG	EC
UH	EH
UK	EK
UM	EM
UN	EN
UR	ER
UT	ET
UV	EV
UW	EW
UY	EY
VA	EI

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[1] This association is only for 14-14.5 GHz (due to No.5.504A)

Appendix 8 : Frequency bands applicable to provisions 22.5C, 22.5D & 22.5F

Lower Frequency	Higher Frequency	Transmitting / Receiving	Applicable Region
3700 MHz	4200 MHz	Transmitting	All
5925 MHz	6725 MHz	Receiving	All
10.7 GHz	12.75 GHz	Transmitting	All
12.5 GHz	13.25 GHz	Receiving	All
13.75 GHz	14.5 GHz	Receiving	All
17.3 GHz	17.8 GHz	Receiving	Regions 1 & 3
17.8 GHz	18.1 GHz	Receiving	All
17.8 GHz	18.6 GHz	Transmitting	All
19.7 GHz	20.2 GHz	Transmitting	All
27.5 GHz	28.6 GHz	Receiving	All
29.5 GHz	30.0 GHz	Receiving	All

Appendix 9 : Frequency bands applicable to provisions Nos. 9.11A – 9.15

(Adapted from Table 9.11A-1 of the Rules of Procedure)

Lower Frequency (MHz)	Upper Frequency (MHz)	Notice type	Class of station	Direction of transmission
137	138	N	EI, EG, EJ, EU	E
137	137.025	B	ET, EK, ER, EM, EH	E
137.175	137.825	B	ET, EK, ER, EM, EH	E
148	149.9	N	EI, EG, EJ, EU	R
149.9	150.05	N	EU	R
312	315	B	EI, EG, EJ, EU	E,R
387	390	B	EI, EG, EJ, EU	E,R
399.9	400.05	N	EU	R
400.15	401	N	EI, EG, EJ, EU	E
400.15	401	B	EM, EH	E
454	456	N	EI, EG, EJ, EU	R
459	460	N	EI, EG, EJ, EU	R
1164	1215	B	EN, EQ, EO	E
1215	1300	B	EN, EQ, EO	E
1260	1300	B	EW, EH, E1, E3	E
1518	1525	B	EI, EG, EJ, EU	E
1525	1559	B	EI, EG, EJ, EU	E
1525	1535	B	ET, EK, ER	E
1559	1610	B	EN, EQ, EO	E
1610	1626.5	B	EJ	E
1610	1626.5	B	EI, EG, EJ, EU, EF	R
1613.8	1626.5	B	EI, EG, EJ, EU	E
1626.5	1660.5	B	EI, EG, EJ, EU	R
1668	1675	B	EI, EG, EJ, EU	R
1668	1668.4	B	EH	E,R

1670	1675	B	EM	E
1980	2010	B	EI, EG, EJ, EU	R
2010	2025	B	EI, EG, EJ, EU	R
2160	2170	B	EI, EG, EJ, EU	E
2170	2200	B	EI, EG, EJ, EU	E
2483.5	2500	B	EI, EG, EJ, EU, EF	E
2500	2520	B	EI, EG, EJ, EU, EC, EF	E
2515	2520	B	EJ	E
2520	2535	B	EI, EG, EU, EB, EV, EC, EJ	E
2605	2630	B	EB, EV, EC	E
2630	2655	B	EB, EV, EC	E
2655	2670	B	EI, EG, EU, EB, EV	R
2655	2670	B	EC	E,R
2670	2690	B	EI, EG, EJ, EU	R
2670	2690	B	EC	E,R
5010	5030	B	EN, EQ, EO	E
5010	5030	B	EJ	E,R
5091	5150	N	EC	R
5091	5150	B	EJ	R
5150	5216	N	EC	E,R
5150	5216	N	EN, EQ, EO, EF	E
5216	5250	N	EC	R
6700	7075	N	EC	E,R
10700	11700	N	EC	E,R
11700	12200	G	EC	E
11700	12500	N	EC	E
12500	12700	N	EC	R
12500	12700	N	EB, EV, EC	E
12700	12750	N	EC	R
12700	12750	N	EB, EV, EC	E
12750	13250	N	EC	R

13750	14500	N	EC	R
15430	15630	N	EC	E,R
15630	15650	N	EC	E
15630	15650	B	EC	R
17300	17700	N	EC	R
17300	17700	N	EB, EV, EC	E
17700	17800	N	EC	E,R
17700	17800	N	EB, EV	E
17800	18100	N	EC	E,R
18100	18600	N	EC	E
18800	19300	B	EC	E
19300	19600	N	EC	R
19300	19600	B	EC	E
19600	19700	B	EC	R
19700	20200	N	EC	E
19700	20100	N	EI, EG, EJ, EU	E
20100	20200	N	EI, EG, EJ, EU	E
27500	28600	N	EC	R
27500	27501	N	EC	E
28600	29100	B	EC	R
29100	29500	B	EC	R
29500	30400	N	EC	R
29500	29900	N	EI, EG, EJ, EU	R
29900	30400	N	EI, EG, EJ, EU	R
29999	30000	N	EC	E

Appendix 10 : Cross validation with GIMS mdb format of Geostationary satellite network

GIMS Diagram headers should match the corresponding SNS values for the following items:
- ntc_id
- sat_name
- long_nom
- adm
- ntf_rsn

The key of the diagram is based on the following fields:
- diagram type
- beam_name
- emi_rcp
- polarization
- area_no

diagram type (*)	beam name	emi_rcp	polarization	area_no	remark
CO	s_beam.beam_name	s_beam.emi_rcp	C	N/A	
GSO	s_beam.beam_name	s_beam.emi_rcp	C	N/A	If bi-directional frequency band
SA	s_beam.beam_name	s_beam.emi_rcp	C	grp.area_no	

(*)
CO: B.3.b - antenna gain contour diagrams
GSO: B.3.e - antenna gain towards geostationary satellite orbit diagrams
SA: C.11.a - service area diagrams

Appendix 11 : Frequency bands applicable to Space Operation Service

freq from (MHz)	freq to (MHz)	E/R
30.01	37.5	E,R
137	137.025	E
137.025	137.175	E
137.175	137.825	E
137.825	138	E
148	149.9	R
163	167	E
174	184	E
267	272	E
272	273	E
258	261	R
400.15	401	E
401	402	E
433.75	434.25	R
449.75	450.25	R
470	485	E
549.75	550.25	E
1427	1429	R
1525	1530	E
1530	1535	E
1750	1850	R
2025	2110	E,R
2200	2290	E,R
7100	7155	R
7190	7235	R