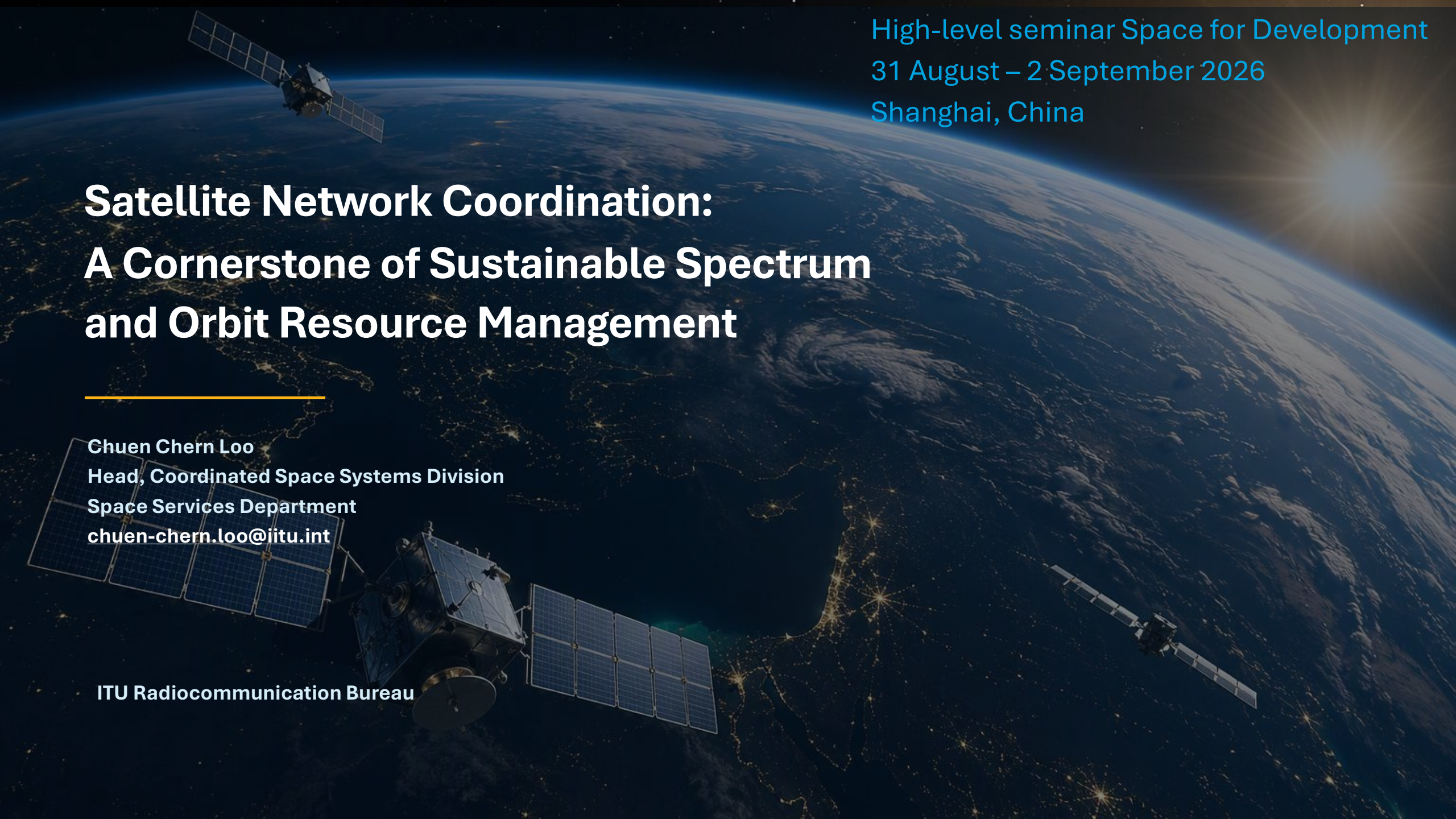


The background of the slide is a composite image of three satellites in orbit above Earth. The Earth's surface is visible, showing cloud patterns and city lights at night. The sun is visible in the upper right corner, creating a bright glow and lens flare effect. The satellites are positioned at different angles, showing their solar panels and antennas.

High-level seminar Space for Development
31 August – 2 September 2026
Shanghai, China

Satellite Network Coordination: A Cornerstone of Sustainable Spectrum and Orbit Resource Management

Chuen Chern Loo
Head, Coordinated Space Systems Division
Space Services Department
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ITU Radiocommunication Bureau

SHARING ORBIT/SPECTRUM RESOURCE

1. COORDINATION APPROACH

- First come, first served
- Rational, Efficient, Economical Use
- Rights acquired through coordination with administrations concerning actual usage
- Efficient spectrum/orbit management
- Results in dense/irregular orbital distribution of space stations

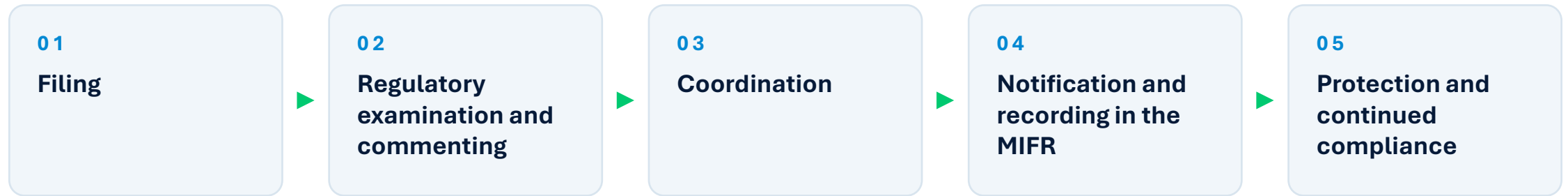
2. PLANNING APPROACH

- Plan for future use
- Equitable Access
- Frequency/orbital position plans
- For future use by all countries
- Predetermined orbital position & frequency spectrum

First come, first served?

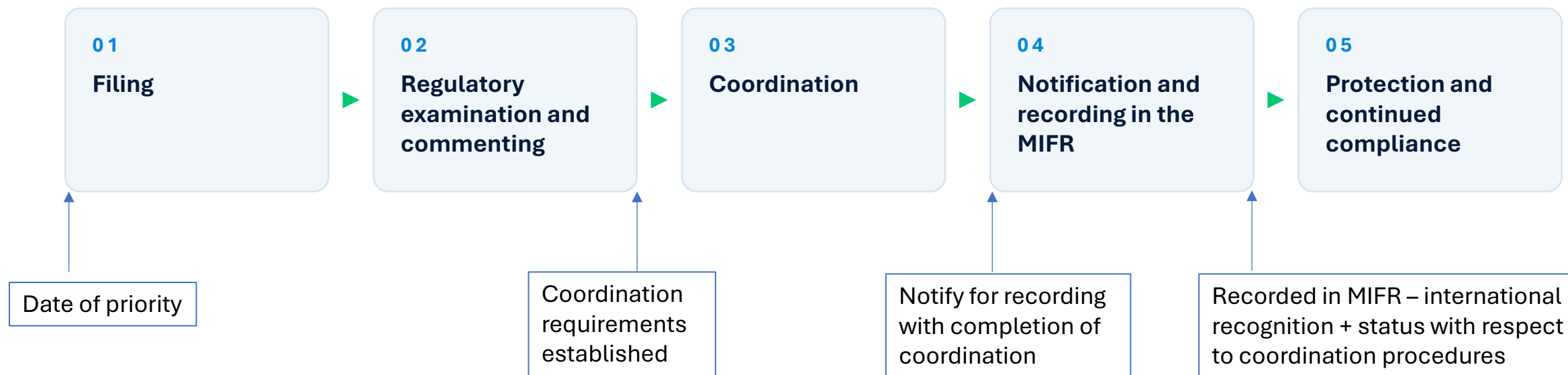
Priority **yes** — but not all spectrum is yours to keep.

From filing to protection



Not simply an engineering exercise. ITU coordination combines international treaty obligations, regulatory priority, technical interference analysis, administrative procedures, with the aim to achieve efficient and equitable access to scarce spectrum/orbital resources, without harmful interference.

From filing to protection





1963

Extraordinary Administrative Radio Conference to allocate frequency bands for space radiocommunication purposes

Radio Regulations

The **Radio Regulations (international treaty)** incorporate the decisions of the World Radiocommunication Conferences, including all Appendices, Resolutions, Recommendations and ITU-R Recommendations incorporated by reference.

INTERGOVERNMENTAL TREATY

Governing the use of spectrum / orbit resources by Member States

RIGHTS AND OBLIGATIONS

Defines the rights and obligations of Member States in respect of the use of the limited resources

REVISED EVERY 4 YEARS

Revised and adopted every four years by World Radiocommunication Conferences



World Radiocommunication Conference

World Radiocommunication Conferences (WRCs) review and revise the Radio Regulations, the international treaty governing the use of the radio frequency spectrum and the satellite orbit.

Revisions are made based on an agenda determined by the [ITU Council](#), which takes into account recommendations made by previous world radiocommunication conferences.

WRCs consider the results of the studies on options to improve the international spectrum for the ITU Radio Regulations with respect to the evolution of existing, emerging and future applications, systems and technologies.

Next WRC:

WRC-27

ITU World Radiocommunication Conference 2027

18 October – 12 November 2027
Shanghai, China



CONTROL OF INTERFERENCE



RADIO REGULATIONS

ALLOCATION

Frequency separation of stations of different services

COORDINATION

between Administrations to ensure interference-free operations conditions

POWER LIMITS

PFD to protect TERR services / EIRP to protect SPACE services / EPFD to protect GSO from Non-GSO

RECORDING

In the Master International Frequency Register (MIFR)
International recognition

MONITORING

International monitoring system

Table of Frequency Allocations

Article 5 of the Radio Regulations — check the frequency band, service allocation, direction of transmission and the relevant footnotes.

RR5-122

CHAPTER II – Frequencies

14-14.5 GHz

Allocation to services		
Region 1	Region 2	Region 3
14-14.25	FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A Space research 5.504A 5.505	
14.25-14.3	FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A Space research 5.504A 5.505 5.508	
14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A	14.3-14.4 FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.484B 5.506 5.506B Mobile-satellite (Earth-to-space) 5.506A Radionavigation-satellite 5.504A	14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.484B 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A

Radio Regulations, Article 5 excerpt

Main Table Allocations to Ser		
Region 1	Region 2	Region 3
Table: 14 - 14.25 GHz FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A Space research 5.504A 5.505		
Table: 14.25 - 14.3 GHz FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A Space research 5.504A 5.505 5.508		
Table: 14.3 - 14.4 GHz FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A	Table: 14.3 - 14.4 GHz FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.484B 5.506 5.506B Mobile-satellite (Earth-to-space) 5.506A Radionavigation-satellite 5.504A	Table: 14.3 - 14.4 GHz FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.484B 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A

Online Table of Frequency Allocations

So your desired service is allocated in a frequency band, can you use it freely?

An allocation does not mean the frequency band can be used freely for that service.

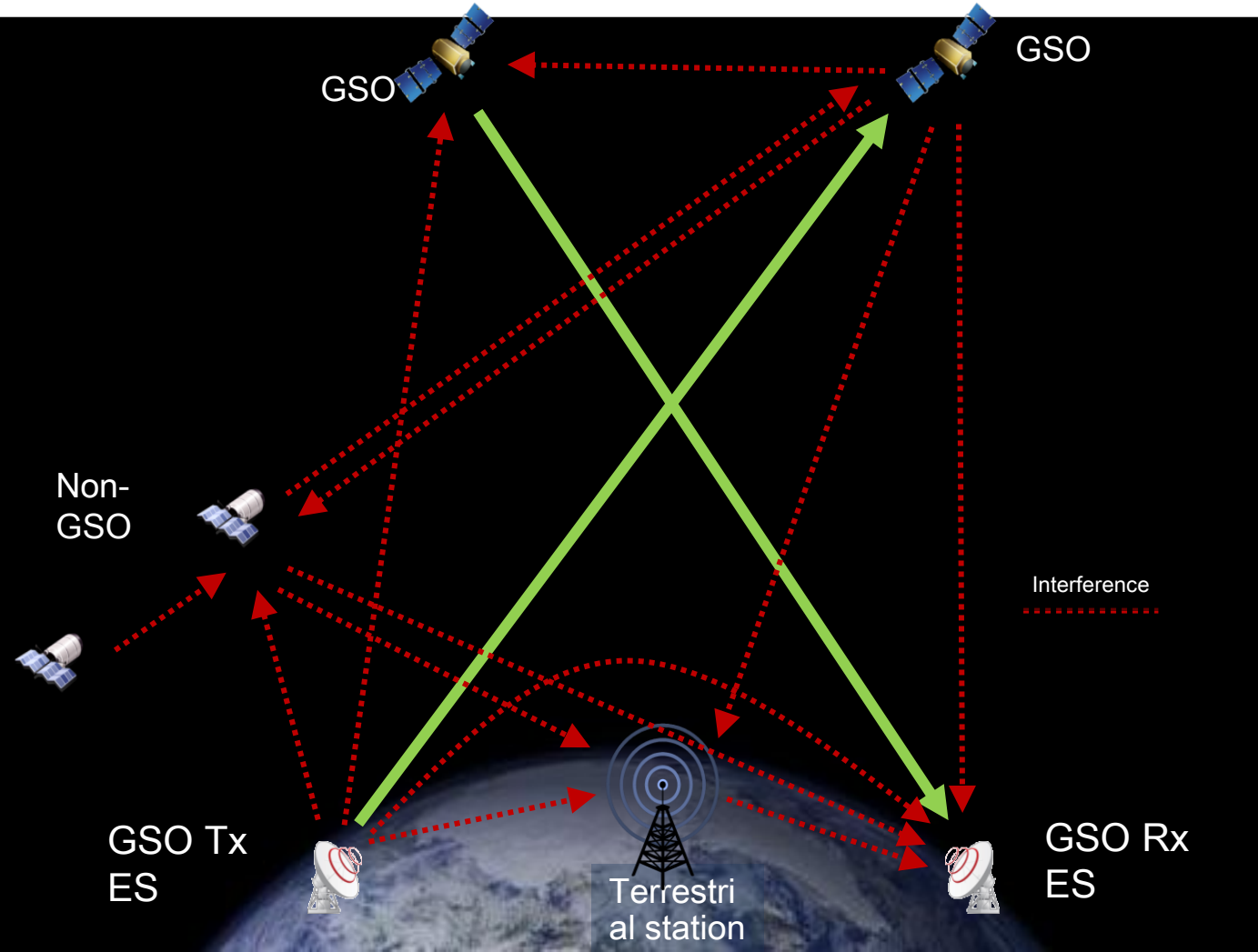
Sharing with other services

- PFD limits
- EPFD limits
- Other conditions
- Coordination

Sharing within the same service

- EPFD limits (NGSO vis-à-vis GSO)
- No. 22.2 (NGSO vis-à-vis GSO)
- Other conditions
- Coordination

Coordination procedures (Article 9 of Radio Regulations)



Scenario	Provision
GSO to GSO	9.7, Art7 AP30/30A
Certain ES of GSO to NGSO	9.7A
NGSO to Certain ES of GSO	9.7B
BSS (GSO/NGSO) to Terrestrial Services	9.11
NGSO to NGSO	9.11A/9.12
NGSO to GSO	9.11A/9.12A
GSO to NGSO	9.11A/9.13
NGSO/GSO to Terrestrial Services	9.11A/9.14
the requirement to seek the agreement of other administrations	9.21

THE COORDINATION LIFECYCLE

From filing to protection



ARTICLE 9, SECTION II

Coordination Request: Examination by the Bureau

Procedure for satellite networks and systems subject to Section II of the Article 9 coordination procedure



Examination of Coordination Request

Conformity with Table of Frequency Allocation (No.9.35)

Network Summary

E/R	Freq	BW	MinFreq	MaxFreq	ClsStn	SA No	Beam 1	Beam 2
E	848	84000	806	890	EI	SA R1	A	A
E	951	18000	942	960	EI	SA R1	A	A
E	1522	7000	1518	1525	EI	SA R1	A	A
E	1535	19000	1525	1544	EI	SA R1	A	A
E	1552	14000	1545	1559	EI	SA R1	A	A
R	848	84000	806	890	EI	SA R1	A	A
R	951	18000	942	960	EI	SA R1	A	A
R	1618	16000	1610	1626	EI	SA R1	A	A
R	1636	19000	1626.5	1645.5	EI	SA R1	A	A
R	1654	14000	1646.5	1660.5	EI	SA R1	A	A

Frequency bands
Direction of transmission
Class of station/Services
Beams/Service area

Compare with
Table of Frequency Allocation
(Article 5 of Radio Regulations)

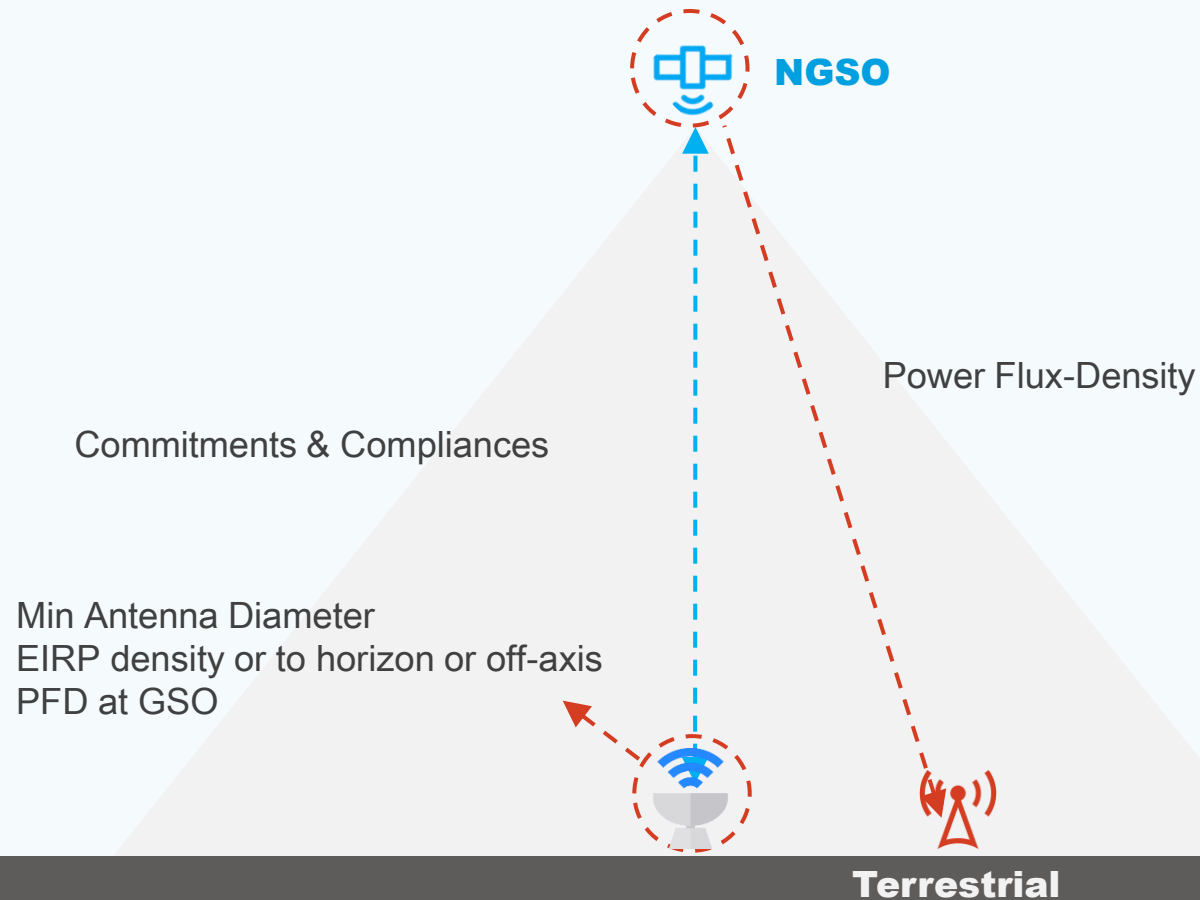
Allocation to services		
Region 1	Region 2	Region 3
1 492-1 518 FIXED MOBILE except aeronautical mobile 5.341A 5.341 5.342	1 492-1 518 FIXED MOBILE 5.341B 5.343 5.341 5.344	1 492-1 518 FIXED MOBILE 5.341C 5.341
1 518-1 525 FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341 5.342	1 518-1 525 FIXED MOBILE 5.343 MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341 5.344	1 518-1 525 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341

Relevant footnotes

Examination of Coordination Request

Conformity with PFD, EIRP, EPFD

(Art 21, 22)



EXAMINATION OF COORDINATION REQUEST

Coordination requirements (No. 9.36)

What the Bureau determines when examining the coordination requirements of a request

STEP 01

Establish the forms of coordination

Under Section II of Article 9 of the Radio Regulations.



STEP 02

Identify the administrations concerned

Those with which coordination may need to be effected for each form of coordination.



STEP 03

Identify the networks involved

The satellite networks, systems and earth stations concerned.

APPLICABLE PROVISIONS

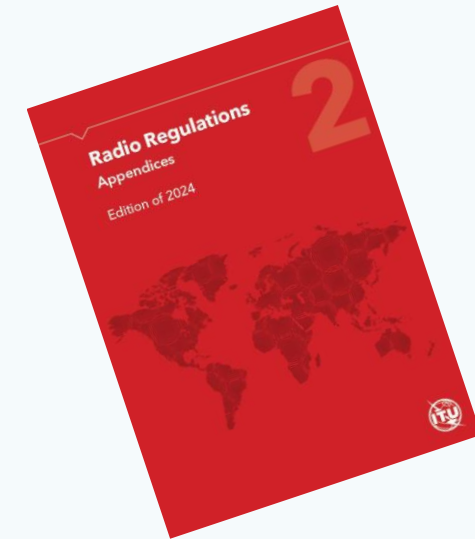
Nos. 9.7, 9.7A, 9.7B, 9.11, 9.11A, 9.12, 9.12A, 9.13, 9.14, 9.21, Ap30/Art.7, Ap30A/Art.7

Examination of Coordination Request

Criteria and methods for scenarios identification

Ap 5 Table 5-1: Forms of coordination, Frequency bands, thresholds/conditions:

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method
No. 9.7 GSO/GSO	A station in a satellite network using the geostationary-satellite orbit (GSO), in any space radiocommunication service, in a frequency band and in a Region where this service is not subject to a Plan, in respect of any other satellite network using that orbit, in any space radiocommunication service in a frequency band and in a Region where this service is not subject to a Plan, with the exception of the coordination between earth stations operating in the opposite direction of transmission	1) 3 400-4 200 MHz 5 725-5 850 MHz (Region 1) and 5 850-6 725 MHz 7 025-7 075 MHz 2) 10.95-11.2 GHz 11.45-11.7 GHz 11.7-12.2 GHz (Region 2) 12.2-12.5 GHz (Region 3) 12.5-12.75 GHz (Regions 1 and 3) 12.7-12.75 GHz (Region 2) and 13.75-14.8 GHz	i) Bandwidth overlap, and ii) any network in the fixed-satellite service (FSS) and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 7^\circ$ of the nominal orbital position of a proposed network in the FSS i) Bandwidth overlap, and ii) any network in the FSS or broadcasting-satellite service (BSS), not subject to a Plan, and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 6^\circ$ of the nominal orbital position of a proposed network in the FSS or BSS, not subject to a Plan iii) in the frequency band 14.5-14.8 GHz any network in the space research service (SRS) or FSS not subject to a Plan and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 6^\circ$ of the nominal orbital position of a proposed network in the SRS or FSS not subject to a Plan	



Examination of Coordination Request

Criteria and methods for scenarios identification

Ap 5 Table 5-1: Forms of coordination, Frequency bands, thresholds/conditions:

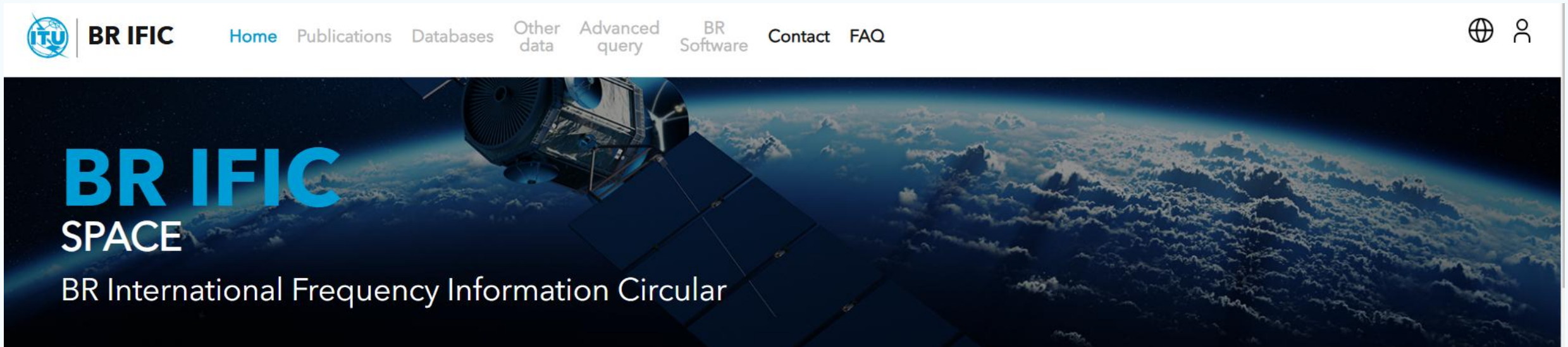
TABLE 5-1 (*continued*) (Rev.WRC-23)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.12A Non-GSO/ GSO	A station in a non-GSO satellite network in the frequency bands for which a footnote refers to No. 9.11A or No. 9.12A, in respect of any GSO satellite network, with the exception of coordination between earth stations operating in the opposite direction of transmission	Frequency bands for which a footnote refers to No. 9.11A or No. 9.12A	Bandwidths overlap	Check by using the assigned frequencies and bandwidths	
No. 9.13 GSO/ non-GSO	A station in a GSO satellite network in the frequency bands for which a footnote refers to No. 9.11A or No. 9.13, in respect of any other non-GSO satellite network, with the exception of coordination between earth stations operating in the opposite direction of transmission	Frequency bands for which a footnote refers to No. 9.11A or No. 9.13	1) Bandwidths overlap 2) For the band 1 668-1 668.4 MHz with respect to MSS network coordination with SRS (passive) networks, in addition to bandwidth overlap, the e.i.r.p. spectral density of mobile earth stations in a GSO network of the mobile-satellite service operating in this band exceeds -2.5 dB(W/4 kHz) or the power spectral density delivered to the mobile earth station antenna exceeds -10 dB(W/4 kHz)	1) Check by using the assigned frequencies and bandwidths 2) Check by using MSS network Appendix 4 data	



Publication of CR/C, CR/D, CR/E

Special Sections Publication of BR IFIC



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS BUREAU DES RADIOCOMMUNICATIONS		INTERNATIONAL TELECOMMUNICATION UNION RADIOCOMMUNICATION BUREAU		UNIÓN INTERNACIONAL DE TELECOMUNICACIONES OFICINA DE RADIOCOMUNICACIONES		© I.T.U.
RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATELITE		QATARSAT-G6-10.5W		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º		CR/C/6096
STATION TERRENNNE EARTH STATION ESTACIÓN TERRENA		---		BR IFIC / DATE BR IFIC / FECHA		3019 / 16.04.2024
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE		QAT	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	10.5 W	NÚMERO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	123520170
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL 13.11.2023						
Cette demande de coordination, reçue par le Bureau des radiocommunications en vertu du numéro 9.30 du Règlement des radiocommunications, a été examinée au titre des numéros 9.35 et 9.36 et est publiée conformément au numéro 9.38. Elle est autorisée au type de coordination indiqué dans la colonne de gauche par un X dans la case pertinente. This request for coordination, received by the Radiocommunication Bureau pursuant to No. 9.30 of the Radio Regulations, has been examined under Nos. 9.35 and 9.36 and is published in accordance with No. 9.38. It is subject to the form of coordination indicated in the left-hand column by an X in the relevant box. Esta solicitud de coordinación recibida por la Oficina de Radiocomunicaciones de conformidad con el punto N° 9.30 del Reglamento de Radiocomunicaciones, se ha examinado de conformidad con los N°s 9.35 y 9.36 y se publica de conformidad con el N° 9.38. Esta acepta el formulario de coordinación indicado en la columna de la izquierda con una X en la casilla correspondiente.						
Type de coordination mentionné dans le Tableau I / Form of coordination mentioned in Table I / Forma de coordinación mencionada en el Cuadro I X 9.7 9.7A 9.7B X AP0307.1 Conformément aux numéros 9.50 à 9.52 du Règlement des radiocommunications, les Administrations identifiées dans le Tableau I ci-après sont priées de communiquer leur décision à l'Administration responsable et au Bureau avant la date limite indiquée ci-dessous. In accordance with Nos. 9.50-9.52 of the Radio Regulations, the Administrations identified in Table I below are requested to communicate their decision to the Responsible Administration and the Bureau by the deadline indicated below. De conformidad con los N°s 9.50-9.52 del Reglamento de Radiocomunicaciones, se solicita a las Administraciones señaladas en el cuadro I a continuación que comuniquen su decisión a la administración responsable y a la Oficina antes del plazo indicado más abajo.						
Type de coordination mentionné dans le Tableau II / Form of coordination referred to in Table II / Formulario de coordinación remitido al cuadro II X 9.11 X 9.11A 9.12 9.12A X 9.13 X 9.14 X 9.21A 9.21B 9.21C Les Administrations, énumérées ou non dans le Tableau I ci-après, qui n'acceptent pas la demande de coordination au titre des numéros 9.11 à 9.14 et 9.21, sont priées de communiquer leurs observations à l'Administration responsable et au Bureau avant la date limite indiquée ci-dessous. Toute Administration qui ne réagit pas au titre du numéro 9.52 avant cette date limite sera considérée comme n'ayant pas réagi et, dans le cas contraire, par les numéros 9.11 à 9.14, les dispositions des numéros 9.48 et 9.49 s'appliqueront. Administrations listed or not listed in Table I below, which do not agree to the request for coordination under Nos. 9.11 to 9.14 and 9.21 are requested to communicate their comments to the responsible administration and the Bureau by the deadline indicated below. Any administration not responding under No. 9.52 within this deadline shall be regarded as unaffected and, in the cases of Nos. 9.11 to 9.14, the provisions of Nos. 9.48 and 9.49 shall apply. Se ruega a las Administraciones que figuran en la lista del Cuadro I siguiente, que no estén de acuerdo con la solicitud de coordinación con arreglo a los números 9.11 a 9.14 y 9.21 que comuniquen sus observaciones a la administración responsable y a la Oficina dentro del plazo que se indica más adelante. Se considerará que toda administración que no responda con arreglo a lo dispuesto en el núm. 9.52 dentro del plazo indicado no se ve afectada y, en los casos de los números 9.11 a 9.14, se aplicarán las disposiciones de los números 9.48 y 9.49.						
DATE LIMITE POUR LA DECISION / EXPIRY DATE FOR DECISION / FECHA LIMITE PARA LA DECISION 16.08.2024						

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS BUREAU DES RADIOCOMMUNICATIONS		INTERNATIONAL TELECOMMUNICATION UNION RADIOCOMMUNICATION BUREAU		UNIÓN INTERNACIONAL DE TELECOMUNICACIONES OFICINA DE RADIOCOMUNICACIONES		© I.T.U.
RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATELITE		QATARSAT-G6-10.5W		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º		CR/D/5144
STATION TERRENNNE EARTH STATION ESTACIÓN TERRENA		---		BR IFIC / DATE BR IFIC / FECHA		3031 / 01.10.2024
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE		QAT	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	10.5 W	NÚMERO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	123520170
X 9.11 X 9.11A 9.12 9.12A X 9.13 X 9.14 X 9.21A 9.21B 9.21C 1. La présente Section spéciale est publiée conformément au numéro 9.53A du Règlement des radiocommunications, et comme la demande de coordination publiée dans la section spéciale CR/C indique au bas de cette page. 2.* Les administrations qui ont soumis des observations au titre du numéro 9.52 dans le délai de quatre mois suivant la date de publication de la Section spéciale CR/C précitée, concernant le type de coordination indiqué par une croix (X) dans la case appropriée de la colonne de gauche, sont indiquées dans les Tableaux I et II ci-dessous. 3.* Conformément au numéro 9.52C, toute administration autre que celles qui ont formulé des observations dans le délai réglementaire, sera réputée ne pas être affectée, et dans le cas de demande de coordination au titre des numéros 9.11 à 9.14 les dispositions des numéros 9.48 et 9.49 s'appliqueront. 2.* et 3.* ne sont pas applicables, conformément au numéro 5.474A, aux bandes de fréquences 9 200 - 9 300 MHz et 9 900 - 10 400 MHz. 1. This Special Section is published in accordance with No. 9.53A of the Radio Regulations, in respect of the request for coordination published in the CR/C Special Section referenced at the bottom of this page. 2.* Administrations that have submitted comments under No. 9.52 within four months of the date of publication of the mentioned CR/C Special Section, with respect to the form of coordination indicated in the left-hand column by an X in the relevant box, are listed in Tables I and II below. 3.* Pursuant to No. 9.52C, any administration other than those having submitted comments within the regulatory time-limit shall be regarded as unaffected, and in the case of coordination requests under Nos. 9.11 to 9.14 the provisions of Nos. 9.48 and 9.49 shall apply. 2.* and 3.* are not applicable, in accordance with No. 5.474A, to the frequency bands 9 200 - 9 300 MHz and 9 900 - 10 400 MHz. 1. Esta Sección Especial se publica de conformidad con lo dispuesto en el número 9.53A del Reglamento de Radiocomunicaciones, en lo que respecta a la solicitud de coordinación publicada en la Sección Especial CR/C cuya referencia se indica en el extremo de esta página. 2.* En los Cuadros I y II que figuran a continuación se enumeran las administraciones que han presentado comentarios conforme al número 9.52 dentro de un plazo de cuatro meses a partir de la fecha de publicación de la Sección Especial CR/C mencionada, con respecto al tipo de coordinación indicado en la columna de la izquierda mediante una X en el casillero correspondiente. 3.* Según lo dispuesto en el 9.52C, toda administración que no haya presentado comentarios en el plazo de tiempo reglamentario se considerará como no afectada, y a las peticiones de coordinación previstas en los números 9.11 a 9.14 se le aplicarán las disposiciones de los números 9.48 y 9.49. De conformidad con lo dispuesto en el número 5.474A, 2.* y 3.* no son de aplicación a las bandas de frecuencias 9 200 - 9 300 MHz y 9 900 - 10 400 MHz.						
RÉFÉRENCE DE LA SECTION SPÉCIALE (BR IFIC / DATE) SPECIAL SECTION REFERENCE (BR IFIC / DATE) REFERENCIA DE LA SECCIÓN ESPECIAL (BR IFIC / FECHA) CR/C/6096 (BR IFIC 3019 / 16.04.2024)						

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS REAU DES RADIOCOMMUNICATIONS		INTERNATIONAL TELECOMMUNICATION UNION RADIOCOMMUNICATION BUREAU		UNIÓN INTERNACIONAL DE TELECOMUNICACIONES OFICINA DE RADIOCOMUNICACIONES		© I.T.U.
TELLITE TWORK LITE		QATARSAT-G6-10.5W		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º		CR/E/2750
STATION TERRENNNE EARTH STATION ESTACIÓN TERRENA		---		BR IFIC / DATE BR IFIC / FECHA		3030 / 17.09.2024
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE		QAT	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	10.5 W	NÚMERO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	123520170
7. 1. La présente Section spéciale est publiée conformément au numéro 9.42 du Règlement des radiocommunications, en ce qui concerne la demande de coordination publiée dans la Section spéciale CR/C citée en référence au bas de cette page. 7A 2. Les administrations qui ont soumis des observations au titre du numéro 9.41 dans les quatre mois qui ont suivi la publication des Sections spéciales susmentionnées, en ce qui concerne la forme de la coordination indiquée dans la colonne de gauche par un X dans la case appropriée, sont énumérées dans le Tableau I ci-après. 7B 1. This Special Section is published in accordance with No. 9.42 of the Radio Regulations, in respect of the request for coordination published in the CR/C Special Section referenced at the bottom of this page. 2. Administrations that have submitted comments under No. 9.41 within four months of the date of publication of the mentioned CR/C Special Sections, with respect to the form of coordination indicated in the left-hand column by an X in the relevant box, are listed in Table-I, below. 2. Las Administraciones que han presentado comentarios con arreglo al número 9.41 en el plazo de cuatro meses a partir de la fecha de publicación de la mencionada Sección Especial CR/C, con respecto al formulario de coordinación indicado en la columna izquierda introduciendo una X en la casilla correspondiente, se indican en el Cuadro-I, que aparece más adelante.						
RÉFÉRENCE DE LA SECTION SPÉCIALE (BR IFIC / DATE) TION REFERENCE (BR IFIC / DATE) DE LA SECCIÓN ESPECIAL (BR IFIC / FECHA) CR/C/6096 (BR IFIC 3019 / 16.04.2024)						

BR IFIC Online Hub

*The BR International Frequency Information
Circular Online HUB brings together
information and useful links for Space and
Terrestrial Services*



itu.int/itu-r-brific-hub



Commenting procedure to a CR/C

Commenting under provisions No. 9.53A

An Adm informs its disagreement using SpaceCom within **4** month
- for coordination under Nos.9.11, 9.11A (9.12, 9.12A, 9.13, 9.14)
and/or 9.21



CR/D

Commenting under provisions No. 9.41

An Adm requests for inclusion or exclusion of adm using SpaceCom
within **4** month
- For coordination under Nos 9.7, 9.7A, 9.7B



CR/E

Final List of coordination requirements: CR/C, CR/D and CR/E

Commenting under provision No. 9.52.1 – no publication

THE COORDINATION LIFECYCLE

From filing to protection



Coordination is a two-way process

Four principles that shape every coordination case

01

Interference-based

Coordination is based on interference criteria, not on preference or priority of intent.

02

Administration to administration

It is primarily a process between administrations, not between operators.

03

Regulatory status matters

The status of an assignment determines the rights and obligations that apply.

04

A two-way process

Both parties engage: requests are examined, comments are made, and agreement is sought, and both parties work together to achieve an agreement

If coordination cannot be concluded: regulatory assistance

No. 9.60 — assistance from the Bureau

Action in the event of no reply, no decision or disagreement on a request for coordination.

Article 13 of the Radio Regulations — assistance from the Bureau

difficulty in applying the procedures of Articles 9 and 11

FUNDAMENTAL PRINCIPLE

“Prevention of harmful interference” underpins the entire coordination process.

Multilateral consultation meetings

Three examples where administrations must act together to keep aggregate interference within agreed limits

RESOLUTION 609 (REV.WRC-07)

Protection of ARNS from RNSS

1164–1215 MHz

- Aggregate epfd from all space stations of all RNSS systems must not exceed -121.5 dB(W/m²) in any 1 MHz band.
- Administrations operating or planning RNSS systems agree cooperatively through consultation meetings to achieve that protection.

RESOLUTION 76 (REV.WRC-23)

Protection of GSO FSS/BSS from multiple non-GSO FSS systems

subject to EPFD limits

- Aggregate interference into GSO FSS and BSS networks must not exceed the levels in Tables 1A to 1D (No. 22.5K).
- Non-GSO FSS operators hold regular consultation meetings (e.g. yearly) to determine aggregate interference and the measures needed for compliance.

RESOLUTION 769 (REV.WRC-19)

Protection of GSO FSS, MSS and BSS networks

Q/V bands

- Aggregate impact of co-frequency non-GSO FSS systems must not exceed the aggregate limits in No. 22.5M.
- Administrations agree cooperatively through the regular consultation meetings.

THE COORDINATION LIFECYCLE

From filing to protection



Recording in the MIFR is what gives an assignment international recognition and the right to protection.

Notification and recording in the MIFR

Final characteristics must be notified under Article 11, within the regulatory period, to be recorded in the MIFR and gain international recognition.

Conditions for recording in the MIFR

No. 11.31

In conformity with the Table of Frequency Allocations and other provisions of the Radio Regulations

No. 11.32

Coordination requirements completed

No. 11.32A

Or favourable finding on the probability of harmful interference

Other possibilities for recording

Under No. 11.41

Unfavourable finding under Nos. 11.32 and 11.32A.
Requires indication of coordination effort (No. 11.41.2) and elimination of harmful interference (No. 11.42).

Under Nos. 4.4 / 8.4

Unfavourable finding under No. 11.31.
For information only — no international recognition.

Recording in the MIFR is what gives an assignment international recognition and the right to protection.

Recording under No.11.41

When findings are unfavorable under Nos. 11.32A & 11.33, a notice can be resubmitted for recording under No. 11.41

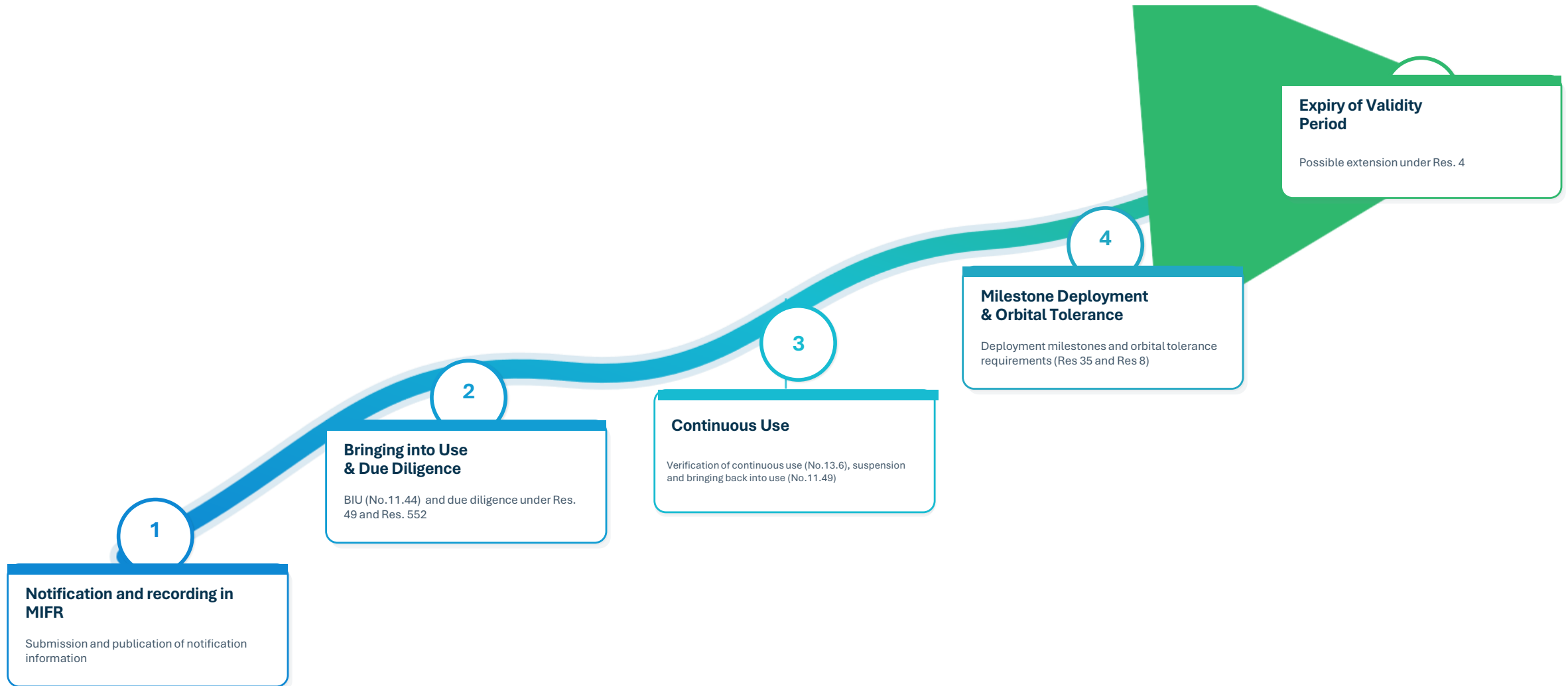
Administration shall indicate that efforts have been made to effect coordination with those administrations whose assignments were the basis of the unfavourable findings

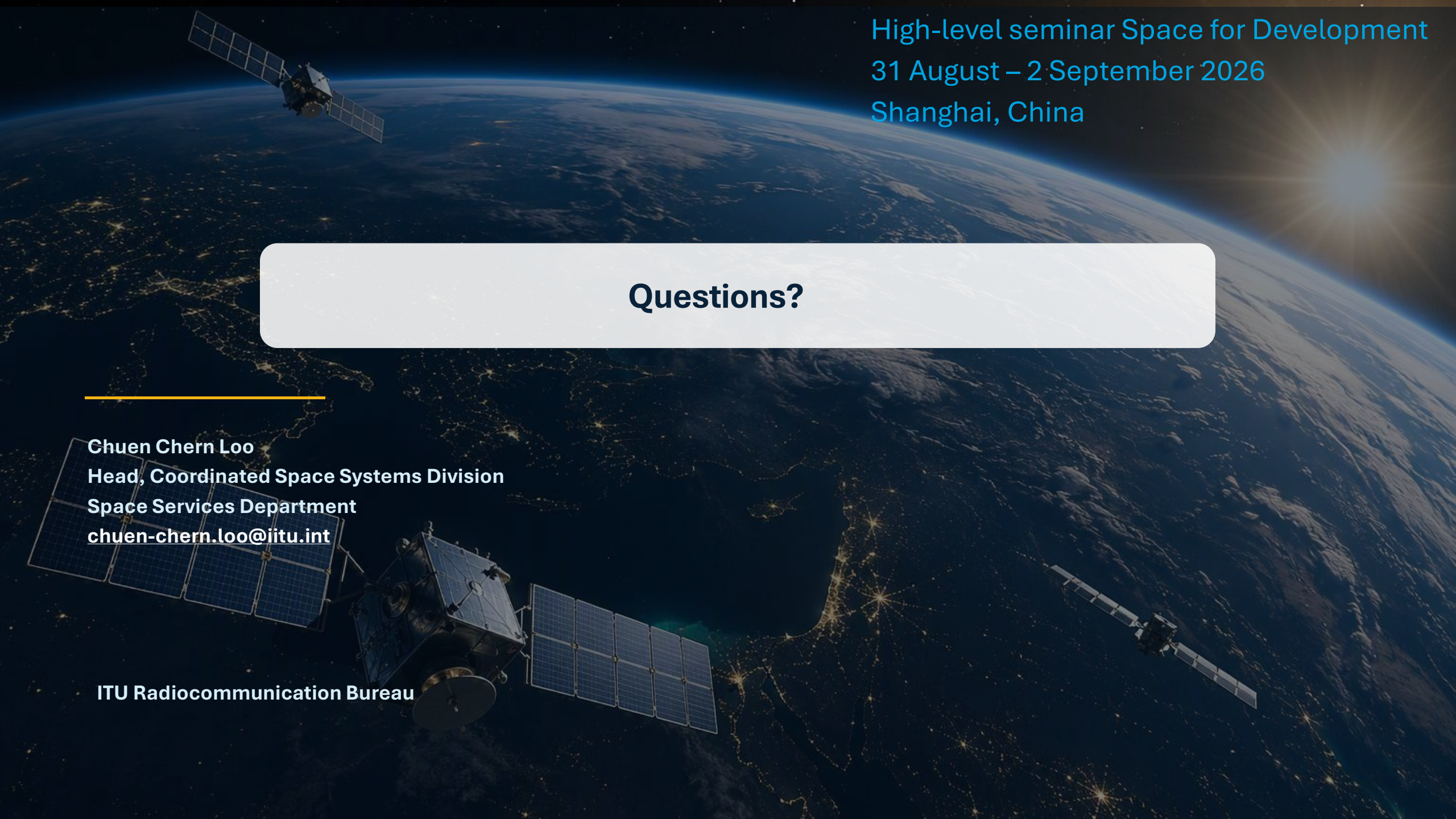
Should harmful interference actually be caused by an assignment recorded under No. 11.41 to any recorded assignment which was the basis of the unfavourable finding, the administration responsible for the station using the ***frequency assignment recorded under No. 11.41*** shall, upon receipt of a report providing the particulars relating to the harmful interference, **immediately eliminate this harmful interference**

From filing to protection



Post MIFR Recording compliance



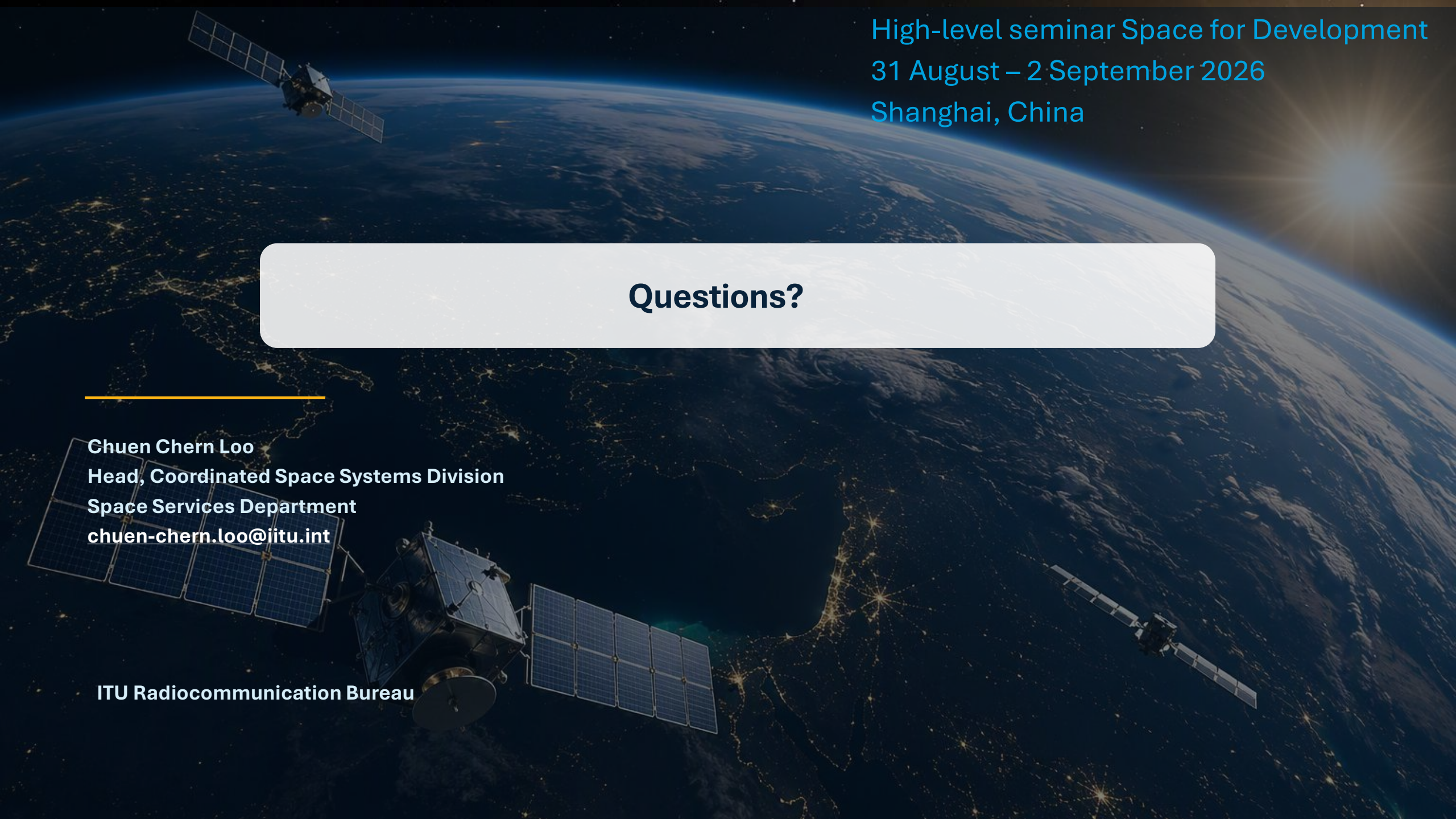


High-level seminar Space for Development
31 August – 2 September 2026
Shanghai, China

Questions?

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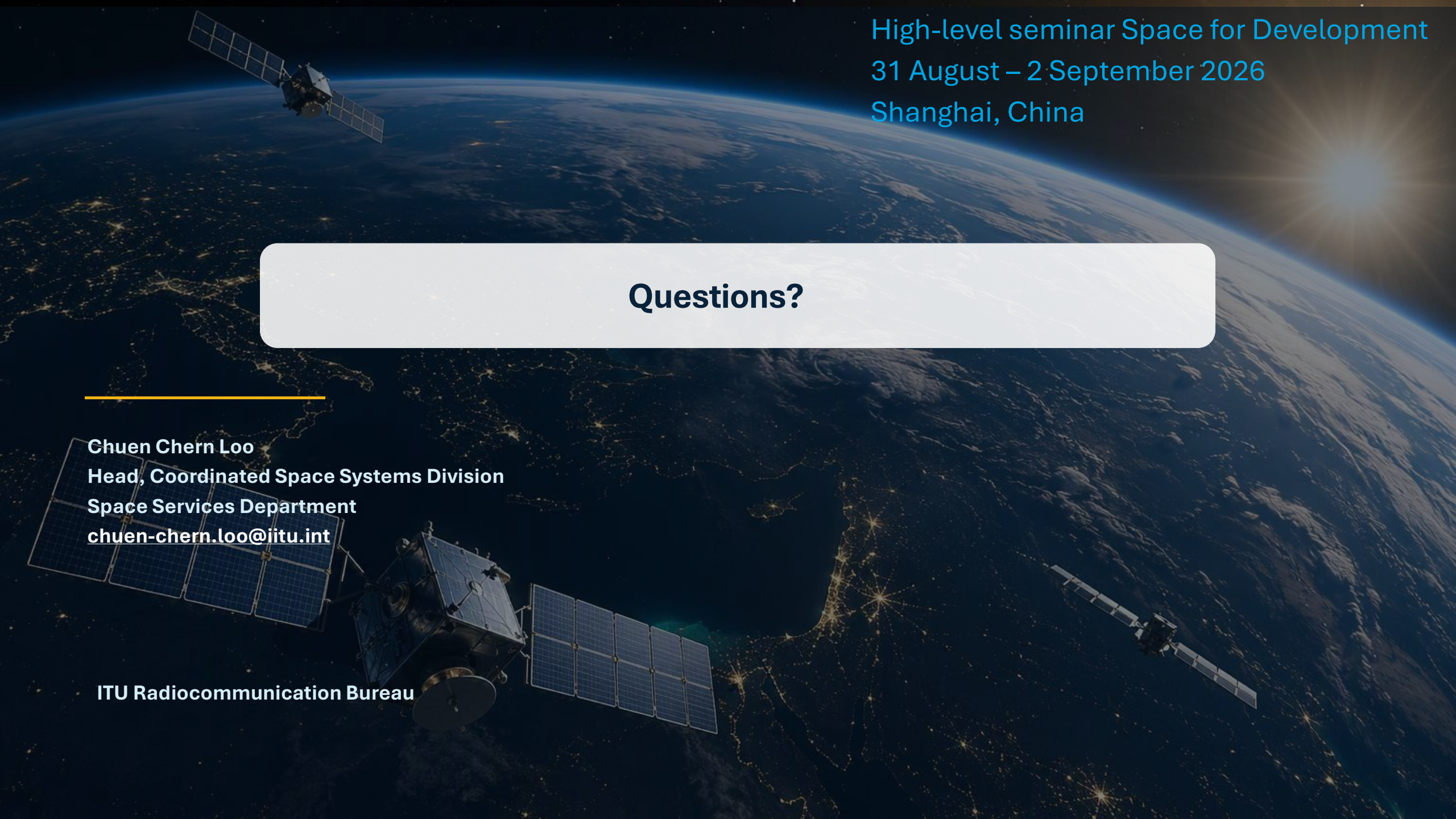


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