



ITUWRS

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Geneva, Switzerland



ESIMs – Resolution 123 (WRC-23) and Resolution 169 (WRC-19)

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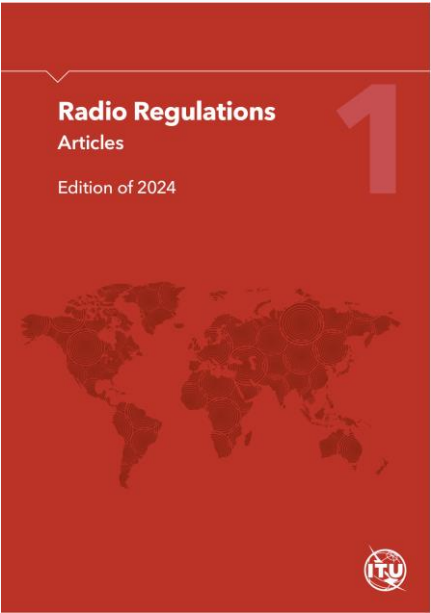
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2-6 December 2024, Geneva, Switzerland

RESOLUTION 156 (Rev-WRC-23)



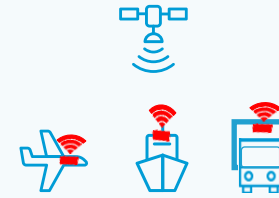
MOBILE		
19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.517B 5.527A INTER-SATELLITE 5.521A Mobile-satellite (space-to-Earth) 5.524	19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.517B 5.527A INTER-SATELLITE 5.521A MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528 5.529	19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.517B 5.527A INTER-SATELLITE 5.521A Mobile-satellite (space-to-Earth) 5.524
20.1-20.2	FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.517B 5.527A INTER-SATELLITE 5.521A MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528	

FIXED		
29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.517B 5.527A 5.539 INTER-SATELLITE 5.521A Earth exploration-satellite (Earth-to-space) 5.541 Mobile-satellite (Earth-to-space) 5.540 5.542	29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.517B 5.527A 5.539 INTER-SATELLITE 5.521A MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.525 5.526 5.527 5.529 5.540	29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.517B 5.527A 5.539 INTER-SATELLITE 5.521A Earth exploration-satellite (Earth-to-space) 5.541 Mobile-satellite (Earth-to-space) 5.540 5.542

Region 1	Region 2	Region 3
29.9-30	FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.517B 5.527A 5.539 INTER-SATELLITE 5.521A MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.543 5.525 5.526 5.527 5.538 5.540 5.542	

5.527A The operation of earth stations in motion communicating with the FSS is subject to Resolution **156 (Rev.WRC-23)**. (WRC-23)

RESOLUTION 156 (Rev-WRC-23)



Adopted in WRC-15

GSO FSS

Frequency bands

Uplink

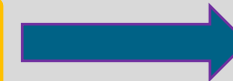
□ 29.5 – 30 GHz

Downlink

□ 19.7 – 20.2 GHz

Regulatory procedures

C
(ESIM)



N
(ESIM)

Class of Station

UF *

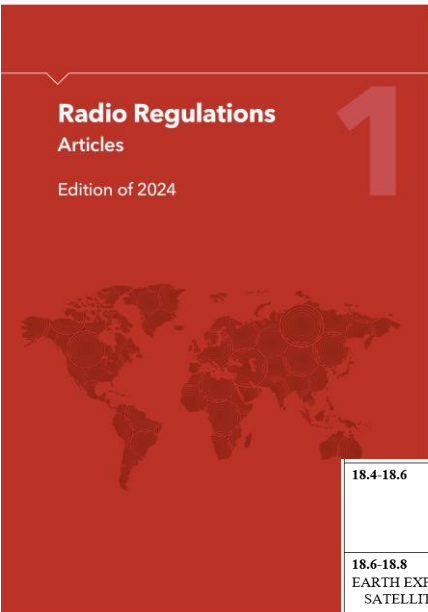
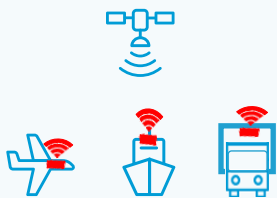
*CR/393

A.19.b

a commitment in accordance with *resolves* 1.5 of Resolution 156 (Rev.WRC-23) that the administration responsible for the use of the assignment shall implement *resolves* 1.4 of Resolution 156 (Rev.WRC-23)

Required only for geostationary-satellite networks operating in the fixed-satellite service in the frequency bands 19.7-20.2 GHz and 29.5-30 GHz communicating with transmitting earth stations in motion

RESOLUTION 169 (WRC-19)



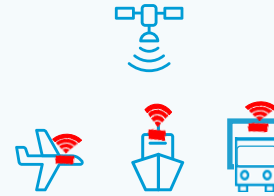
17.7-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A 5.517B (Earth-to-space) 5.516 MOBILE	17.7-17.8 FIXED FIXED-SATELLITE (space-to-Earth) 5.517 5.517A 5.517B (Earth-to-space) 5.516 BROADCASTING-SATELLITE Mobile 5.515 17.8-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A 5.517B (Earth-to-space) 5.516 MOBILE 5.519	17.7-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A 5.517B (Earth-to-space) 5.516 MOBILE
18.1-18.4	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A 5.517B (Earth-to-space) 5.520 INTER-SATELLITE 5.521A MOBILE 5.519 5.521	

18.4-18.6	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A 5.517B INTER-SATELLITE 5.521A MOBILE	
18.6-18.8 EARTH EXPLORATION- SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.517A 5.522B MOBILE except aeronautical mobile Space research (passive) 5.522A 5.522C	18.6-18.8 EARTH EXPLORATION- SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.517A 5.522B MOBILE except aeronautical mobile SPACE RESEARCH (passive) 5.522A	18.6-18.8 EARTH EXPLORATION- SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.517A 5.522B MOBILE except aeronautical mobile Space research (passive) 5.522A
18.8-19.3	FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.517A 5.517B 5.523A INTER-SATELLITE 5.521A MOBILE	
19.3-19.7	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.517A 5.523B 5.523C 5.523D 5.523E INTER-SATELLITE 5.521A 5.523DA MOBILE	

27-27.5 FIXED INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB	27-27.5 FIXED 5.534A FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 5.536 5.537 MOBILE 5.338A 5.532AB
27.5-28.5	FIXED 5.537A FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.517B 5.539 INTER-SATELLITE 5.521A MOBILE 5.538 5.540
28.5-29.1	FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.517B 5.523A 5.539 INTER-SATELLITE 5.521A MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540
29.1-29.5	FIXED FIXED-SATELLITE (Earth-to-space) 5.516B 5.517A 5.523C 5.523E 5.535A 5.539 5.541A INTER-SATELLITE 5.521A MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540

5.517A The operation of earth stations in motion communicating with geostationary fixed-satellite service space stations within the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) shall be subject to the application of Resolution **169 (Rev.WRC-23)**. (WRC-23)

RESOLUTION 169 (WRC-19)



Adopted in WRC-19

GSO FSS

Frequency bands

Uplink

☐ 27.5 – 29.5 GHz

Downlink

☐ 17.7 – 19.7 GHz

Class of Stations

UU – Land earth station in motion

UO – Aeronautical earth station in motion

US – Maritime earth station in motion

RESOLUTION 169 (WRC-19)



Circular letter CR/461

Regulatory procedures

N
(typical FSS ES)



N mod
(ESIM)

Characteristics of ESIMs - considered receivable by the Bureau only if they are submitted in a submission of a modification to a previously submitted notification notice.

RESOLUTION 169 (WRC-19)




A.20	COMPLIANCE WITH <i>resolves</i> 1.1.4 OF RESOLUTION 169 (Rev.WRC-23)
A.20.a	a commitment that the ESIM operation would be in conformity with the Radio Regulations and Resolution 169 (Rev.WRC-23) Required only for the notification of earth stations in motion submitted in accordance with Resolution 169 (Rev.WRC-23)


A.21	COMPLIANCE WITH <i>resolves</i> 1.2.6 OF RESOLUTION 169 (Rev.WRC-23)
A.21.a	a commitment that, upon receiving a report of unacceptable interference, the notifying administration for the GSO FSS network with which ESIMs communicate shall follow the procedures in <i>resolves</i> 4 of Resolution 169 (Rev.WRC-23) Required only for the notification of earth stations in motion submitted in accordance with Resolution 169 (Rev.WRC-23)
A.22	COMPLIANCE WITH <i>resolves</i> 7 OF RESOLUTION 169 (Rev.WRC-23)
A.22.a	a commitment that aeronautical ESIMs would be in conformity with the pfd limits on the Earth's surface specified in Part II of Annex 3 to Resolution 169 (Rev.WRC-23) Required only for the notification of earth stations in motion submitted in accordance with Resolution 169 (Rev.WRC-23)

- In application of *resolves* 1.1.4bis and 1.1.1 of Resolution 169
- the Bureau examines ESIM characteristics to ensure that they are within the envelope characteristics of typical earth stations associated with the satellite network

- Examination is carried out in accordance to paragraph 2.3 of the Rule of Procedure on RR No. 9.27.
- If additional coordination requirements identified, unfavourable findings will be given under No. 11.32

- In addition, in application of resolves 1.2.5
- the Bureau examines the characteristics of aeronautical ESIM with respect to the conformity with the pfd limits on the Earth's surface specified in Part II of Annex 2 of Resolution 169

- 
- As software to examine aeronautical ESIM with respect to the conformity with the pfd limits on the Earth's surface is not yet available, the Bureau formulates a qualified favourable finding under No. 11.31 with respect to the pfd limits

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- In the interim, notifying administrations are required to send to the Bureau a commitment that the aeronautical ESIM comply with the pfd limits in order to receive a qualified finding

Formulation of findings for ESIMs in the frequency bands 27.5-29.5(E-to-s) GHz and 17.7-19.7 GHz(s-to-E) under RES169 (WRC-19)

Favourable finding

ESIM	Column 13B1
L-ESIM, M-ESIM (27.5-29.5 GHz)	RS169
A-ESIM (27.5-29.5 GHz)	Q/RS169
L-ESIM, M-ESIM, A-ESIM (17.7-19.7 GHz)	RS169

Unfavourable finding (AN-)

ESIM	Column 13B1
L-ESIM, M-ESIM (27.5-29.5 GHz)	X/1.1.1 RS169
A-ESIM (27.5-29.5 GHz)	X/1.1.1 RS169, Q/RS169
L-ESIM, M-ESIM, A-ESIM (17.7-19.7 GHz)	X/1.1.1 RS169

Favourable finding

A	BR7a/BR7b Group id.	122632137	BR1 Date of receipt	21.02.2022	C2c RR No. 4.4		BR97 No. 11.43A	Y	BR98 For use in accordance with Res 163/164	
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A2a Date of bringing into use as submitted by the Administration 01.01.2022

A2a Date of bringing into use 23.08.2016 A2b Period of valid. 50 A3a Op. agency 001 A3b Adm. resp. A BR16 Value of type C8b

BR96 Start date for 9.1/9.1A 21.02.2022

BR62 Expiry date for bringing into use 01.03.2019 BR63 Confirmed date of bringing into use 23.08.2016 BR64 Date of receipt of 1st Res49

BR14 Special Section

C4a Class of station EC C3a Assigned freq. band 100000

C4b Nature of service CP C6a Polarization type M

C6b Polarization angle

C8d1 Max. tot. peak pwr. 11.2 C8d2 Contiguous bandwidth 100000

C11a1 Service area no. 1

A5/A6 Coordinations/Agreements	11.41/9.13	X	F G USA
	11.41/9.7	X	PNG
	9.7	O	AUS CHN G

C2a1 Assigned frequency											
18.85	GHz	19.05	GHz	19.25	GHz	19.4	GHz	19.65	GHz		
18.95	GHz	19.15	GHz	19.35	GHz	19.6	GHz				

A13 Ref. to Special Sections	C7a Design. of emission	C8a1/C8b1 Max. peak pwr	C8a2/C8b2 Max. pwr dens.	C8c1 Min. peak pwr	C8c2 Attch.	C8c3 Min. pwr dens.	C8c4 Attch.	C8e1 C/N ratio	C8e2 Attch.
API/A/7521	1 100MG7W--	11.2	-68.8	-15.8		-95.8		16.5	
CR/C/3260	2 100MF7W--	11.2	-68.8	-15.8		-95.8		16.5	
	3 50M0X7W--	8.2	-68.8	-18.8		-95.8		16.5	
	4 50M0G7W--	8.2	-68.8	-18.8		-95.8		16.5	
	5 50M0F7W--	8.2	-68.8	-18.8		-95.8		16.5	



C10b1 Assoc. earth station id.	C10b2 Type	C10c1 Geographical coord.	C10c2 Ctry	C10d1/C10d2 Cls. / Nat.	C10d3 Max. iso. gain	C10d4 Bmwidth	C10d6 Noise temp.	C10d7 Ant. diameter	C10d9 Ant. dim. (DGSO)
TYPICAL-RKA-0.75	T			1 UO CP	40.5	1.49	200		
TYPICAL-RKA-0.45	T			1 UO CP	36.1	2.47	200		
TYPICAL-RKA-0.4	T			1 UO CP	35.2	2.74	200		

C10d5a Co-polar antenna pattern							
C10b1 Assoc. earth station id.	Co-polar ref. pattern	Coef. A	Coef. B	Coef. C	Coef. D	Phi1	Co-polar rad. diag.
TYPICAL-RKA-0.75	AP8						
TYPICAL-RKA-0.45	AP8						
TYPICAL-RKA-0.4	AP8						

Findings	2D Date of protection	01.09.2012	13A Conformity with RR	A- N- N-	13B1 Prov.	RS169 11.41	13B2 Remarks		13B3 Date of Review	
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13C Remarks	
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**NOTES DU BUREAU
DES RADIOCOMMUNICATIONS**

NOTE 1

Les résultats de l'examen effectué conformément au point **1.1.5** du *décide* de la Résolution **169** en ce qui concerne les dispositions visées au point 1.1.1 du *décide* de ladite Résolution sont présentés dans le tableau ci-dessous.

无线电通信局的注解

注解 1

根据第**169**号决议做出决议1.1.5，对该决议中做出决议1.1.1中提及的条款进行的审查结果如下表所示。

**RADIOCOMMUNICATION BUREAU
NOTES**

NOTE 1

The results of the examination in accordance with *resolves* **1.1.5** of Resolution **169** with respect to the provisions referred to in *resolves* **1.1.1** of the Resolution is shown in the table below.

ПРИМЕЧАНИЕ БЮРО РАДИОСВЯЗИ

ПРИМЕЧАНИЕ 1

Результаты рассмотрения, проведенного согласно п. **1.1.5** раздела *решает* Резолюции **169** в отношении соответствия положениям, упомянутым в п. **1.1.1** раздела *решает* этой Резолюции, представлены в таблице ниже.

**NOTAS DE LA OFICINA
DE RADIOCOMUNICACIONES**

NOTA 1

Los resultados del examen realizado en virtud del *resuelve* **1.1.5** de la Resolución **169** en relación con las disposiciones mencionadas en el *resuelve* **1.1.1** de la Resolución se muestran en el cuadro que sigue.

ملاحظة مكتب الاتصالات الراديوية

1الملاحظة

نتائج التفحص وفقاً للفقرة **5.1.1** من "يقرر" بالقرار **169** فيما يتعلق بالأحكام المشار إليها في الفقرة **1.1.1** من "يقرر" بالقرار مبينة في الجدول الوارد أدناه.

Émission/ Réception E/R E/R 发射/接收 Излучение/ прием إرسال/استقبال	Nom du faisceau Beam Name Nombre del haz 波束名称 Название луча اسم الحزمة	Numéro d'identification de groupe de la station ESIM ESIM Group ID ID de grupo de ETEM ESIM的组ID Идентификатор группы ESIM هوية المجموعة للمحطات الأرضية المتحركة	Numéro d'identification de groupe des stations terriennes types – Caractéristiques Characteristics of typical earth station Group ID Características del ID de grupo de la estación terrena típica 典型地球站组ID的特性 Характеристики типовых земных станций, относящихся к идентификатору группы هوية المجموعة للمحطات الأرضية النمطية - الخصائص	Dans les limites des caractéristiques des stations terriennes types associé au réseau à satellite (point 1.1.1 du <i>décide</i>) Within the envelope characteristics of typical earth stations associated with the satellite network (resolve 1.1.1) Dentro de las características globales de las estaciones terrenas típicas asociadas a la red de satélites (<i>resuelve</i> 1.1.1) 在与卫星网络相关的典型地球站的特性包 络范围内 (做出决议1.1.1) В пределах характеристик типовых земных станций, связанных со спутниковой сетью (п. 1.1.1 раздела <i>решаем</i>) ضمن الخصائص الغلافية للمحطات الأرضية النمطية المصاحبة للشبكة الساتلية (يقرر 1.1.1)
R	RA2R	322632128	118718898	Yes
R	RA2R	322632129	118718903	Yes
R	RA2R	322632138	118718898	Yes
R	RA2R	322632139	118718898	Yes
R	RA2R	322632140	118718903	Yes
R	RA2R	322632141	118718903	Yes
E	TA1R	322632124	118718880	Yes
E	TA1R	322632125	118718885	Yes
E	TA1R	322632126	118718886	Yes
E	TA1R	322632127	118718887	Yes
E	TA1R	322632130	118718880	Yes
E	TA1R	322632131	118718880	Yes
E	TA1R	322632132	118718885	Yes
E	TA1R	322632133	118718885	Yes
E	TA1R	322632134	118718886	Yes
E	TA1R	322632135	118718886	Yes
E	TA1R	322632136	118718887	Yes

NOTES DU BUREAU
DES RADIOCOMMUNICATIONS

NOTE 2

Les résultats de l'examen effectué conformément au point **1.2.5** du *décide* de la Résolution **169** en ce qui concerne la Partie II de l'Annexe 3 de la Résolution sont les suivants:

Le BR n'est pas en mesure d'examiner les caractéristiques des stations ESIM aéronautiques du point de vue de la conformité aux limites de puissance surfacique à la surface de la Terre indiquées dans la Partie II de l'Annexe 3 de la Résolution, étant donné que la méthode de calcul est en cours d'élaboration à l'UIT-R. L'administration notificatrice a envoyé au BR un engagement selon lequel les stations ESIM aéronautiques respectent les limites indiquées dans la Partie II de l'Annexe 3 de la Résolution.

Par conséquent, une conclusion favorable conditionnelle est formulée au titre du numéro **11.31** conformément aux points 7 et 8 du *décide* de la Résolution **169**, et sera réexaminée une fois que l'UIT-R aura parachevé la méthode de calcul permettant de vérifier la conformité aux limites de puissance surfacique à la surface de la Terre indiquées dans la Partie II de l'Annexe 3 de la Résolution.

RADIOCOMMUNICATION BUREAU
NOTES

NOTE 2

The results of the examination in accordance with *resolves* **1.2.5** of Resolution **169** with respect to Part II of Annex 3 of the Resolution are as follows:

The BR is unable to examine the characteristics of aeronautical ESIMs with respect to the conformity with the power flux-density (pfd) limits on the Earth's surface specified in Part II of Annex 3 of the Resolution because the calculation methodology is under development in ITU-R. The notifying administration has sent to the BR a commitment that the aeronautical ESIMs comply with the limits specified in Part II of Annex 3 of the Resolution.

Therefore, a qualified favourable finding is given under No. **11.31** in accordance with *resolves* **7** and **8** of Resolution **169** and will be reviewed once ITU-R has completed the calculation methodology for verifying the conformity with the pfd limits on the Earth's surface specified in Part II of Annex 3 of the Resolution.

NOTAS DE LA OFICINA
DE RADIOCOMUNICACIONES

NOTA 2

Los resultados del examen realizado en virtud del *resuelve* **1.2.5** de la Resolución **169** en relación con la Parte II del Anexo 3 de la Resolución son los siguientes:

La BR no puede examinar las características de las ETEM aeronáuticas en relación con la conformidad con los límites de densidad de flujo de potencia (dfp) en la superficie de la Tierra especificados en la Parte II del Anexo 3 de la Resolución porque el UIT-R no ha completado la metodología de cálculo. La administración notificante se ha comprometido con la BR a que las ETEM aeronáuticas respeten los límites especificados en la Parte II del Anexo 3 de la Resolución.

Por consiguiente, se otorga una conclusión cualificada favorable en virtud del núm. **11.31**, de conformidad con los *resuelve* **7** y **8** de la Resolución **169**. Esta conclusión se revisará cuando el UIT-R haya completado la metodología de cálculo a fin de verificar que se cumplen los límites de dfp en la superficie de la Tierra que figuran en la Parte II del Anexo 3 de la Resolución.

UNfavourable finding



A5/A6 Coordinations/Agreements																			
C2a1 Assigned frequency																			
19.05		GHz																	
A13 Ref. to Special Sections		C7a Design. of emission		C8a1/C8b1 Max. peak pwr		C8a2/C8b2 Max. pwr dens.		C8c1 Min. peak pwr		C8c2 Attch.		C8c3 Min. pwr dens.		C8c4 Attch.		C8e1 C/N ratio		C8e2 Attch.	
API/A/6437		1 220MG7W--		18.7		-64.7		3.1				-80.4				9			
CR/C/2926		2 55M0G7W--		12.7		-64.7		-3				-80.4				9			
C10b1 Assoc. earth station id.		C10b2 Type	C10c1 Geographical coord.		C10c2 Ctry	C10d1/C10d2 Cls. / Nat.		C10d3 Max. iso. gain	C10d4 Bmwidth	C10d6 Noise temp.	C10d7 Ant. diameter		C10d9 Ant. dim. (DGSO)						
TYPE-0.8M		T				1 UU CP 2 US CP 3 UO CP		42	1.2	290	0.8								
C10d5a Co-polar antenna pattern																			
C10b1 Assoc. earth station id.		Co-polar ref. pattern		Coef. A		Coef. B		Coef. C		Coef. D		Phi1		Co-polar rad. diag.					
TYPE-0.8M		REC-580-6																	
Findings	2D Date of protection		13A Conformity with RR		A- N- --		13B1 Prov.		X/1.1.1 RS169		13B2 Remarks		13B3 Date of Review						
13C Remarks																			

**NOTES DU BUREAU
DES RADIOCOMMUNICATIONS**

NOTE 1

Les résultats de l'examen effectué conformément au point **1.1.5** du *décide* de la Résolution **169** en ce qui concerne les dispositions visées au point 1.1.1 du *décide* de ladite Résolution sont présentés dans le tableau ci-dessous.

无线电通信局的注解

注解 1

根据第**169**号决议做出决议1.1.5，对该决议中做出决议1.1.1中提及的条款进行的审查结果如下表所示。

**RADIOCOMMUNICATION BUREAU
NOTES**

NOTE 1

The results of the examination in accordance with *resolves* **1.1.5** of Resolution **169** with respect to the provisions referred to in *resolves* **1.1.1** of the Resolution is shown in the table below.

ПРИМЕЧАНИЕ БЮРО РАДИОСВЯЗИ

ПРИМЕЧАНИЕ 1

Результаты рассмотрения, проведенного согласно п. **1.1.5** раздела *решает* Резолюции **169** в отношении соответствия положениям, упомянутым в п. **1.1.1** раздела *решает* этой Резолюции, представлены в таблице ниже.

**NOTAS DE LA OFICINA
DE RADIOCOMUNICACIONES**

NOTA 1

Los resultados del examen realizado en virtud del *resuelve* **1.1.5** de la Resolución **169** en relación con las disposiciones mencionadas en el *resuelve* **1.1.1** de la Resolución se muestran en el cuadro que sigue.

ملاحظة مكتب الاتصالات الراديوية

الملاحظة 1

نتائج التفحص وفقاً للفقرة **5.1.1** من "يقرر" بالقرار **169** فيما يتعلق بالأحكام المشار إليها في الفقرة **1.1.1** من "يقرر" بالقرار مبينة في الجدول الوارد أدناه.

Émission/ Réception E/R E/R 发射/接收 Излучение/ прием إرسال/استقبال	Nom du faisceau Beam Name Nombre del haz 波束名称 Название луча اسم الحزمة	Numéro d'identification de groupe de la station ESIM ESIM Group ID ID de grupo de ETEM ESIM的组ID Идентификатор группы ESIM هوية المجموعة للمحطات الأرضية المتحركة	Numéro d'identification de groupe des stations terriennes types – Caractéristiques Characteristics of typical earth station Group ID Características del ID de grupo de la estación terrena típica 典型地球站组ID的特性 Характеристики типовых земных станций, относящихся к идентификатору группы هوية المجموعة للمحطات الأرضية النمطية - الخصائص	Dans les limites des caractéristiques des stations terriennes types associé au réseau à satellite (point 1.1.1 du <i>décide</i>) Within the envelope characteristics of typical earth stations associated with the satellite network (resolve 1.1.1) Dentro de las características globales de las estaciones terrenas típicas asociadas a la red de satélites (<i>resuelve</i> 1.1.1) 在与卫星网络相关的典型地球站的特性包 络范围内 (做出决议1.1.1) В пределах характеристик типовых земных станций, связанных со спутниковой сетью (п. 1.1.1 раздела <i>решаем</i>) ضمن الخصائص الغلافية للمحطات الأرضية النمطية المصاحبة للشبكة الساتلية (يقرر 1.1.1)
R	KA1BUP	321757177	117617515	NO
R	KA1BUP	321757178	117617516	NO
R	KA1BUP	321765397	117617515	NO
R	KA1BUP	321765398	117617516	NO
R	KA1CUP	321757179	117617517	NO
R	KA1CUP	321757180	117617518	NO
R	KA1CUP	321765399	117617517	NO
R	KA1CUP	321765400	117617518	NO
R	KA1DUP	321757181	117617519	NO
R	KA1DUP	321757182	117617520	NO
R	KA1DUP	321765401	117617519	NO
R	KA1DUP	321765402	117617520	NO
R	KA1EUP	321757183	117617521	NO
R	KA1EUP	321757184	117617522	NO
R	KA1EUP	321765403	117617521	NO
R	KA1EUP	321765404	117617522	NO
R	KA1FUP	321757185	117617523	NO
R	KA1FUP	321757186	117617524	NO
R	KA1FUP	321765405	117617523	NO
R	KA1FUP	321765406	117617524	NO
E	KA1BDN	321757155	117617469	NO

**NOTES DU BUREAU
DES RADIOCOMMUNICATIONS**

NOTE 2

Unfavourable finding under No.11.32 is given to assignments which are not in conformity with the provisions referred to in *resolves 1.1.1* of Resolution 169.

无线电通信局的注解

注解 2

根据第11.32款，对不符合第169号决议做出决议1.1.1所述条款的指配给予不合格的审查结论。

**RADIOCOMMUNICATION BUREAU
NOTES**

NOTE 2

Unfavourable finding under No.11.32 is given to assignments which are not in conformity with the provisions referred to in *resolves 1.1.1* of Resolution 169.

ПРИМЕЧАНИЕ БЮРО РАДИОСВЯЗИ

ПРИМЕЧАНИЕ 2

Неблагоприятное заключение в соответствии с п. 11.32 вынесено в отношении присвоений, которые не соответствуют положениям, упомянутым в пункте 1.1.1 раздела *решает* Резолюции 169.

**NOTAS DE LA OFICINA
DE RADIOCOMUNICACIONES**

NOTA 2

Se otorga una conclusión desfavorable con arreglo al número 11.32 para las asignaciones que no se ajustan a las disposiciones señaladas en el *resuelve 1.1.1* de la Resolución 169.

ملاحظة مكتب الاتصالات الراديوية

الملاحظة 2

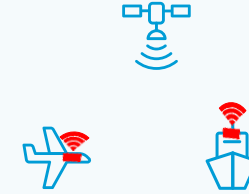
تُمنَح نتيجة غير مؤاتية بموجب الرقم 32.11 للتخصيصات التي لا تتمثل للأحكام المشار إليها في الفقرة 1.1.1 من "يقرر" بالقرار 169.

RESOLUTION 123 (WRC-23)



5.517B The operation of aeronautical and maritime earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service in the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) shall be subject to the application of Resolution 123 (WRC-23). (WRC-23)

RESOLUTION 123 (WRC-23)



Adopted in WRC-23

NGSO FSS

Frequency bands

Uplink

- ☐ 27.5-29.1 GHz
- ☐ 29.5-30 GHz

Downlink

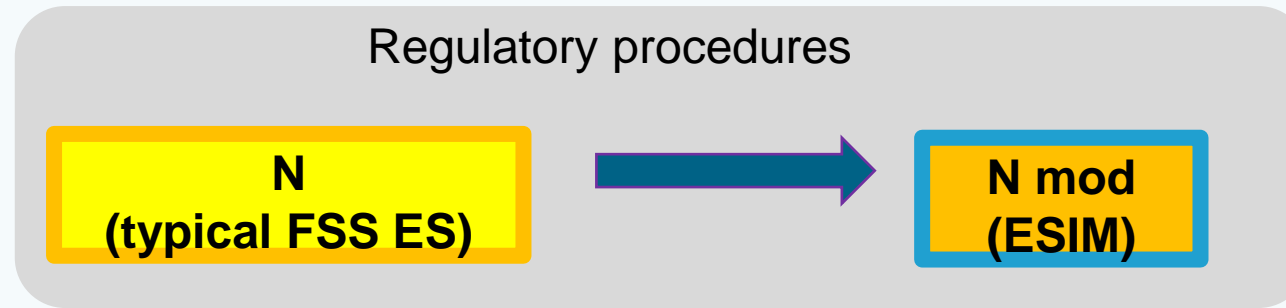
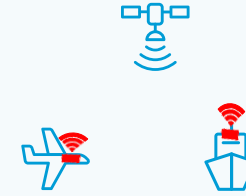
- ☐ 17.7-18.6 GHz
- ☐ 18.8-19.3 GHz
- ☐ 19.7-20.2 GHz

Class of Stations

UO – Aeronautical earth station in motion

US – Maritime earth station in motion

RESOLUTION 123 (WRC-23)



Characteristics of ESIMs - considered receivable by the Bureau only if they are submitted in a submission of a modification to a previously submitted notification notice.

A.34	COMPLIANCE WITH <i>resolves 1</i> OF RESOLUTION 123 (WRC-23)
A.34.a	a commitment that the notifying administration will operate the non-GSO ESIMs in conformity with the Radio Regulations, including Resolution 123 (WRC-23) Required only for the notification of earth stations in motion submitted in accordance with Resolution 123 (WRC-23)
A.35	COMPLIANCE WITH <i>resolves 3.5 and further resolves 1, 2, 3 and 4</i> OF RESOLUTION 123 (WRC-23)
A.35.a	a commitment that the notifying administration will operate the non-GSO ESIMs in conformity with <i>resolves 3.5 and further resolves 1, 2, 3 and 4</i> of Resolution 123 (WRC-23) Required only for the notification of earth stations in motion submitted in accordance with Resolution 123 (WRC-23)
A.36	FOR THE NOTIFICATION OF EARTH STATIONS IN MOTION SUBMITTED IN ACCORDANCE WITH RESOLUTION 123 (WRC-23)
A.36.a	the minimum elevation angle at which any associated non-GSO A-ESIM can transmit to a non-GSO satellite in the frequency band 27.5-29.1 GHz and 29.5-30 GHz Required only for the notification of aeronautical earth stations in motion submitted in accordance with Resolution 123 (WRC-23)
A.36.b	the aircraft fuselage attenuation mask associated with the non-GSO A-ESIM and based on ITU-R Recommendations. If none provided, the fuselage attenuation mask in Table 4 of Annex 2 to Resolution 123 (WRC-23) Required only for the notification of aeronautical earth stations in motion submitted in accordance with Resolution 123 (WRC-23)
A.36.c	a point of contact for the purpose of tracing any cases of unacceptable interference from non-GSO ESIMs and to respond immediately to requests from the focal point of the affected administration Required only for the notification of earth stations in motion submitted in accordance with Resolution 123 (WRC-23)
A.37	COMPLIANCE WITH <i>resolves 3.7.1</i> OF RESOLUTION 123 (WRC-23)
A.37.a	a commitment that the notifying administration will operate the non-GSO ESIMs in conformity with <i>resolves 3.7 and further resolves 1, 2, 3 and 4</i> of Resolution 123 (WRC-23), see <i>resolves 3.7.1</i> of Resolution 123 (WRC-23) Required only for the notification of earth stations in motion submitted in accordance with Resolution 123 (WRC-23)
A.38	COMPLIANCE WITH <i>further resolves 1</i> OF RESOLUTION 123 (WRC-23)
A.38.a	a firm, objective, actionable, measurable and enforceable commitment that in case of reported unacceptable interference, the notifying administration undertakes to immediately eliminate the interference or reduce it to an acceptable level Required only for the notification of earth stations in motion submitted in accordance with Resolution 123 (WRC-23)

Recommendation ITU-R S.2158-0

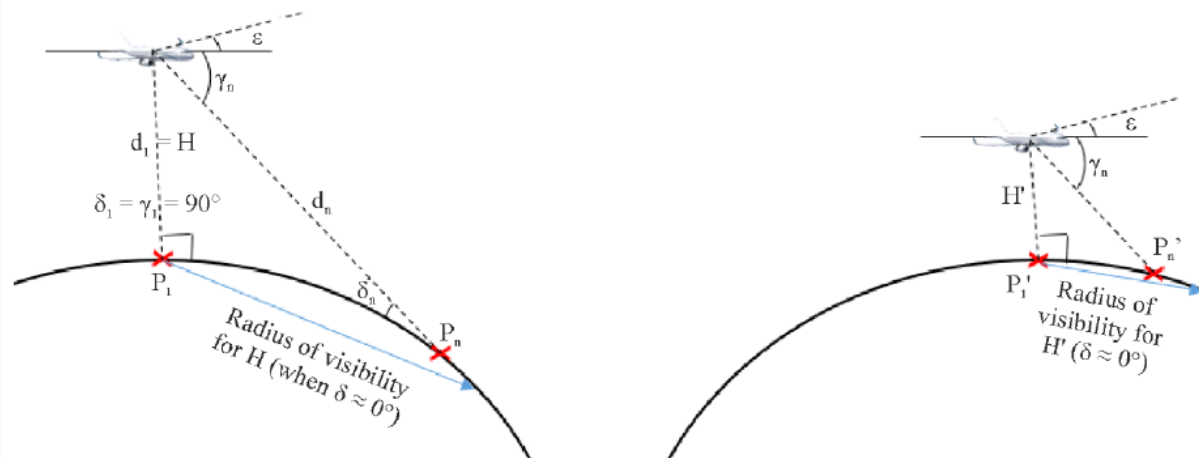
(09/2023)

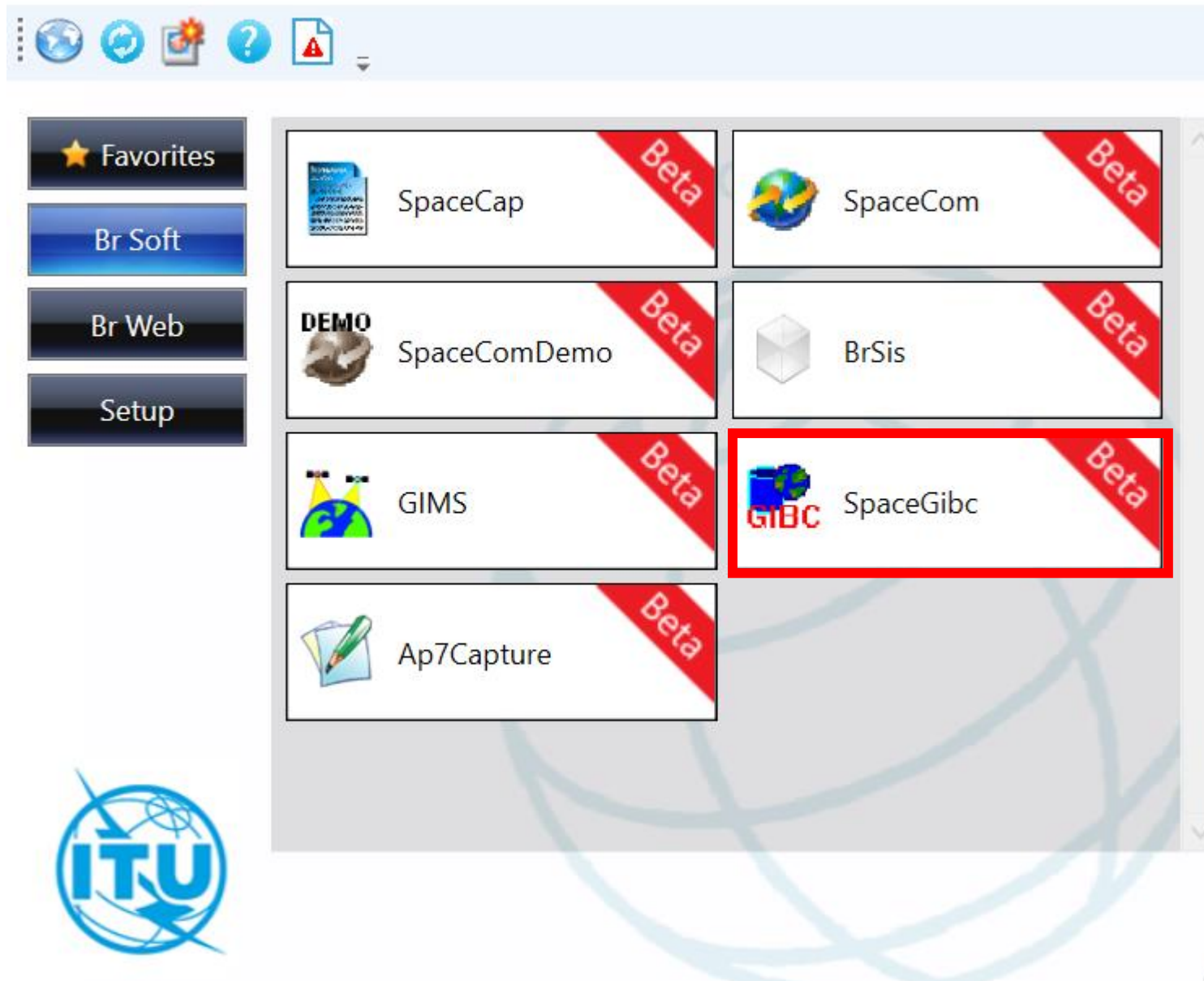
S Series: Fixed-satellite service

Methodology for examining the compliance of an aeronautical earth station in motion communicating with geostationary space stations in the fixed-satellite service in the 27.5-29.5 GHz band with a set of pre-established pfd limits on the Earth's surface

FIGURE 1

Geometry for the examination of compliance for two different A-ESIM altitudes





Coordination 9.7B | EPFD | PFD/EIRP EarthStation | PFD/EIRP NGSO | PFD/EIRP GSO
Appendix 7 | Appendix 30B | Appendix 30 30A | An8 & PFD Space | Power Control
FOS | FOT (Beta version) | AP30BESIM | **Tools / Options** | Chaining Manager

GIMS Databases

Container	Database	Container Path
*****	GIMS	Prod

Add...

Clear List

SRS Database

C:\Database\ESIM.mdb

Browse...

Add...

Clear List

ESCC Database Transfer

Transfer All

Remove

Clear All

Add

Pwd:

EXIT

Databases to give as input to GIBC

GIMS database containing at least the GIMS data of the ESIM satellite network

SNS database containing the new ESIM notice.

SpaceGIBC SNS V10.0 Beta

Appendix Z | Appendix 30B | Appendix 30 30A | Ap 8 & PFD Space | Power Control
 FOS | FOT (Beta version) | AP30BESIM | Tools / Options | Chaining Manager
 Coordination 9.7B | EPFD | PFD/EIRP Earth Station | **PFD/EIRP NGSO** | PFD/EIRP GSO

PFD/EIRP Limits applicable to GSO network

Network: **119500047 SE-KA-56.5E** [Start] [Cancel]

Examination Options:
 Examination: [Hard Limits]
 PowerControl (dBW):
☒ Worst case only
☒ Use SF.675 from 1st May 2024
☒ Use RoP 21.16 where applicable

"Before" Examination
☐ Perform "Before" Comparisons
☐ Appendix 30 Art.4.1.11
 [Add]

 [Delete]
 [Clear all]

Schedule
 [Add >>]
 [Clear]
 [Start all] [File <<]

Messages Filter
☒ Progress ☒ Warning ☐ Debug

Message
 PROGR> Compacting output database
 PROGR> Compacting batchresults database
 PROGR> End of program.
PFD calculation finished. 04:50:54.

Calculation Results
 C:\Users\tham\ITU\BR_SPACE_v10.0\TEX_RESULTS\119500047\PFD_H_24112
 [Open Database] [View Log] [Open Folder] **[View Report]**

Version
 10.0.0.5 PFD GSO Pack - Beta [View Notes] [Select Version]

[EXIT]

1. ESIM(RES123) PFD/EIRP NGSO
 or
 1. ESIM(RES169) PFD/EIRP GSO

2. Select the notice ID of the incoming ESIM

3. Click on start

Once the calculation is finished without Errors...

4. ...you can View the Report of the results...

SpaceGIBC SNS V10.0 Beta

Appendix Z | Appendix 30B | Appendix 30 30A | Ap8 & PFD Space | Power Control
FOS | FOT (Beta version) | AP30BESIM | Tools / Options | Chaining Manager
Coordination 9.7B | EPFD | PFD/EIRP EarthStation | PFD/EIRP NGSO | PFD/EIRP GSO

PFD/EIRP Limits applicable to GSO network

Network: 119500047 SE-KA-56.5E [Start] [Cancel]

Examination Options
Examination: Hard Limits
PowerControl (dBW):
☒ Worst case only
☒ Use SF.675 from 1st May 2024
☒ Use RoP 21.16 where applicable

"Before" Examination
☐ Perform "Before" Comparisons
☐ Appendix 30 Art.4.1.11
[Add] [Delete] [Clear all]

Schedule
[Add >>] [Clear] [Start all] [File <<]

Messages Filter
☒ Progress ☒ Warning ☐ Debug

Message
PROGR> Compacting output database
PROGR> Compacting batchresults database
PROGR> End of program.
PFD calculation finished. 04:50:54.

Calculation Results
C:\Users\tham\ITU\BR_SPACE_v10.0\TEX_RESULTS\119500047\PFD_H_24112
[Open Database] [View Log] [Open Folder] [View Report]

Version
10.0.0.5 PFD GSO Pack - Beta [View Notes] [Select Version]








[EXIT]

5. ...or you can open the output Database to check the results

Table



- ★ Favorites
- Br Soft
- Br Web
- Setup

 SpaceCap Beta	 SpaceCom Beta
DEMO  SpaceComDemo Beta	 BrSis Beta
 GIMS Beta	 SpaceGibc Beta
 Ap7Capture Beta	



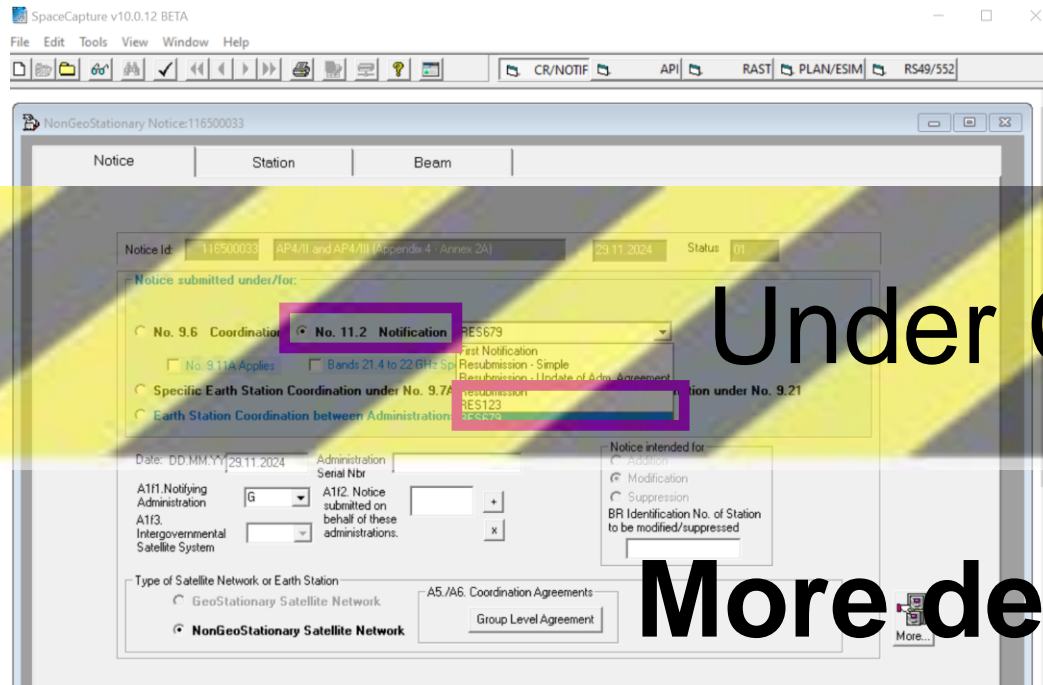
BR Application to be used

To capture the notice

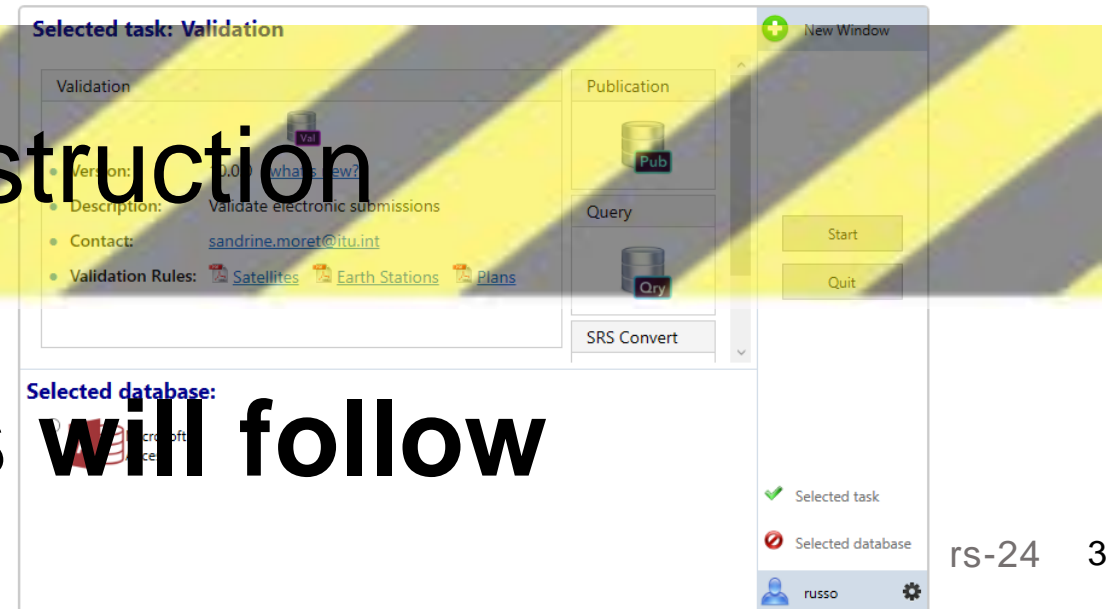
SpaceCap Version 10

To validate the notice

BRSIS Validation Version 10



Space Information System (SNS v10.0)



Under Construction

More details will follow

Resolution 123 (WRC-23)

Non-GSO ESIM Notification Mod

SpaceCapture v10.0.12 BETA - [NonGeoStationary Notice:164]

File Edit Tools View Window Help

CR/NOTIF API RAST PL

Notice Station Beam

Notice Id: 164 AP4/II and AP4/III (Appendix 4 - Annex 2A) 30/11/2024 Status 01

Notice submitted under/for:

☐ No. 9.6 Coordination ☒ **No. 11.2 Notification** RES123

☐ No. 9.11A Applies ☐ Bands 21.4 to 22 GHz Special Procedure

☐ Specific Earth Station Coordination under No. 9.7A ☐ Earth Station Coordination under No. 9.21

☐ Earth Station Coordination between Administrations under No. 9.17

Date: DD/MM/YY 30/11/2024 Administration Serial Nbr

A1f1. Notifying Administration A1f2. Notice submitted on behalf of these administrations.

A1f3. Intergovernmental Satellite System

Notice intended for

☐ Addition ☒ **Modification** ☐ Suppression

BR Identification No. of Station to be modified/suppressed

Type of Satellite Network or Earth Station

☐ GeoStationary Satellite Network ☒ **NonGeoStationary Satellite Network**

A5./A6. Coordination Agreements

Group Level Agreement

Resolution 123 (WRC-23)

A.36.a/b Aeronautical ESIM Parameters

SpaceCapture v10.0.12 BETA - [NonGeoStationary Notice:134]

File Edit Tools View Window Help

CR/NOTIF API RAS

Coordination Notice Special Section Station Assoc Earth Station Beam Assoc Space Station Group Emissions

Notice: 134 Satellite Network: 123 Beam Id: ESIM R Group Id: 13

3. Observed Frequencies and Related Characteristics

☐ Add ☐ Mod ☐ Sup of the group BR Identification of the Group to be modified/suppressed Page No.

Characteristics Common to a Group of Frequencies **General Characteris**

C3a. Assigned Frequency Bandwidth (kHz) ☒ No Sensors ☐ Active Sensors ☐ Passive Sensors

☐ C2c. Frequency assignments are filed under No.4.4 ☐ BR97 No.11.43A

C4a. Cls Stn C4b. Nat Srv

C6. Polarization Type If linear, provide angle

C5a. Receiving System Noise Temperature

C11a. Service Area (to be provided in Gims)

Service Area No. (diag provided in Gims)

A36a. Minimum elevation angle A36b. Aircraft fuselage attenuation mask

Remarks

Resolution 169 (Rev. WRC-23)

GSO ESIM Notification Mod

SpaceCapture v10.0.12 BETA - [GeoStationary Notice:165]

File Edit Tools View Window Help

CR/NOTIF API RAST PLAN/E

Notice Station Beam Strapping Noise Gamma

Notice Id: 165 AP4/II and AP4/III (Appendix 4 - Annex 2A) 30/11/2024 Status 01

Notice submitted under/for:

☐ No. 9.6 Coordination ☒ **No. 11.2 Notification** RES169

☐ No. 9.11A Applies ☐ Bands 21.4 to 22 GHz Special Procedure

☐ Specific Earth Station Coordination under No. 9.7A ☐ Earth Station Coordination under No. 9.21

☐ Earth Station Coordination between Administrations under No. 9.17

Date: DD/MM/YY 30/11/2024 Administration Serial Nbr

A1f1. Notifying Administration A1f2. Notice submitted on behalf of these administrations.

A1f3. Intergovernmental Satellite System

Notice intended for

☐ Addition ☒ **Modification** ☐ Suppression

BR Identification No. of Station to be modified/suppressed

Type of Satellite Network or Earth Station

☒ **GeoStationary Satellite Network** ☐ NonGeoStationary Satellite Network

A5./A6. Coordination Agreements A5a2a./A6a1. Coordination Agreements

Group Level Agreement Satellite Network List