

WRC-19

OUTCOMES

on issues relevant to GNSS

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1

Radio Regulations

Articles

Edition of 2016



RR5-66

1 525-1 610 MHz

Region 1	Region 2	Region 3
	1 525-1 530 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Fixed Mobile 5.343	1 525-1 530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile 5.349
5.341 5.351 5.354	5.341 5.351 5.354	5.341 5.351 5.352A 5.354
1 530-1 615 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile 5.343		
5.341 5.351 5.354		
MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A		
OPTICAL RADIONAVIGATION		
NAVIGATION-SATELLITE (space-to-Earth) (space-to-space)		
5.328B 5.339A		
5.362C		

RADIO REGULATIONS

- Contains rights and obligations in using radio-frequency spectrum
- Binding on all Member States
- Revised by WRC

WRC-19

World Radiocommunication Conference

28 Oct – 22 Nov 2019, Sharm El-Sheikh, Egypt



WRC-19 Agenda Items & Issues



Mobile communications, etc.

Amateur at 54 MHz: 1.1
IMT: 1.13 (5G), Sharing with satellites: 9.1.1 (MSS 2 GHz), 9.1.2 (BSS 1,4 GHz), 9.1.8 (IoT)
HAPS: 1.14
FS 300 GHz: 1.15
RLAN 5 GHz: 1.16, 9.1.5



Scientific Services

400 MHz bands: 1.2
460 MHz band: 1.3
TTC for small satellites: 1.7



Transports

GMDSS: 1.8
AIS and VDES : 1.9
GADSS: 1.10
Trains: 1.11 ITS: 1.12
WPT: 9.1.6
Sub-orbital flights: 9.1.4



Satellites

ESIM 30/20 GHz: 1.5
NGSO issues: 1.6 (Q/V), 9.1.3 (C)
FSS 51.4-52.4 GHz : 9.1.9
Regulatory issues: 1.4, **7**, 9.1.7



General

Recommendations: 2
Resolutions: 4
National footnotes: 8
Director's report: 9.2
Resolution 80: 9.3
WRC-23 agenda: 10

Bringing into Use & Milestones for Non-GSO

WRC-19 Agenda Item 7 Issue A

Within 7y regulatory period

One satellite deployed +
capability to transmit/receive
frequency assignment

FSS, MSS, BSS (11.44C)

- Maintained 90d on notified orb plane*
- Inform within 30d after 90d

Earth Ref Body (11.44D) e.g. RNSS

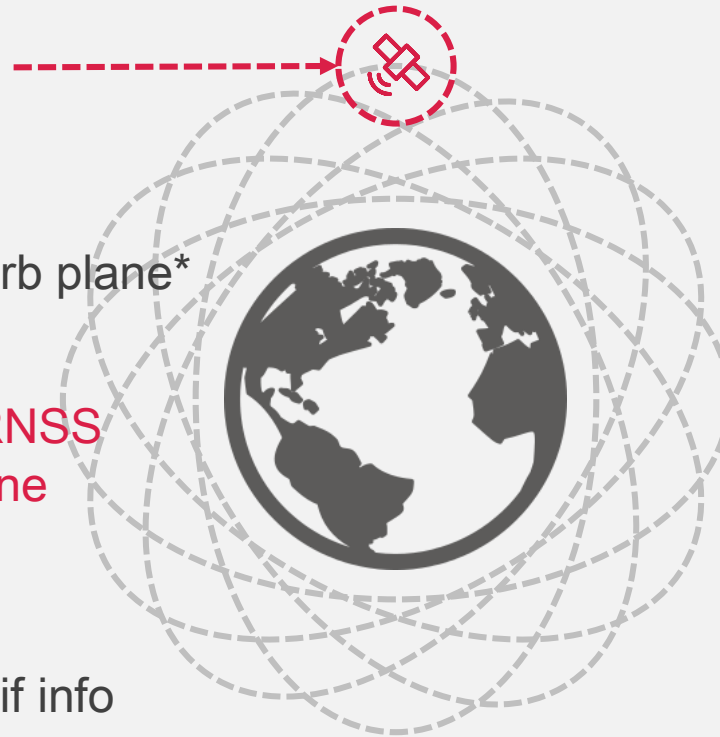
- Deployed on notified orb plane
- Inform $\leq 7y$ limit + 30d

Non-Earth Ref Body (11.44E)

- Deployed in accord. with notif info
- Inform $\leq 7y$ limit + 30d

Entry into force: 01.01.2021

*Tolerance to be studied



Bringing into Use & Milestones for Non-GSO

WRC-19 Agenda Item 7 Issue A



After 7y regulatory period
(on or after 01.01.2021*)

FSS, MSS, BSS in specific bands
in Res COM5/7

- Milestone 1, +2y, 10%
- Milestone 2, +5y, 50%
- Milestone 3, +7y, 100%

*Transitional arrangements if 7y period
expires before:

- 01.01.2021, start Milestones on 01.01.2021
- 28.11.2022, skip Milestone 1 but report status
by 01.04.2023

Identification of Specific Satellite Networks & Systems

WRC-19 Agenda Item 7 Issue D

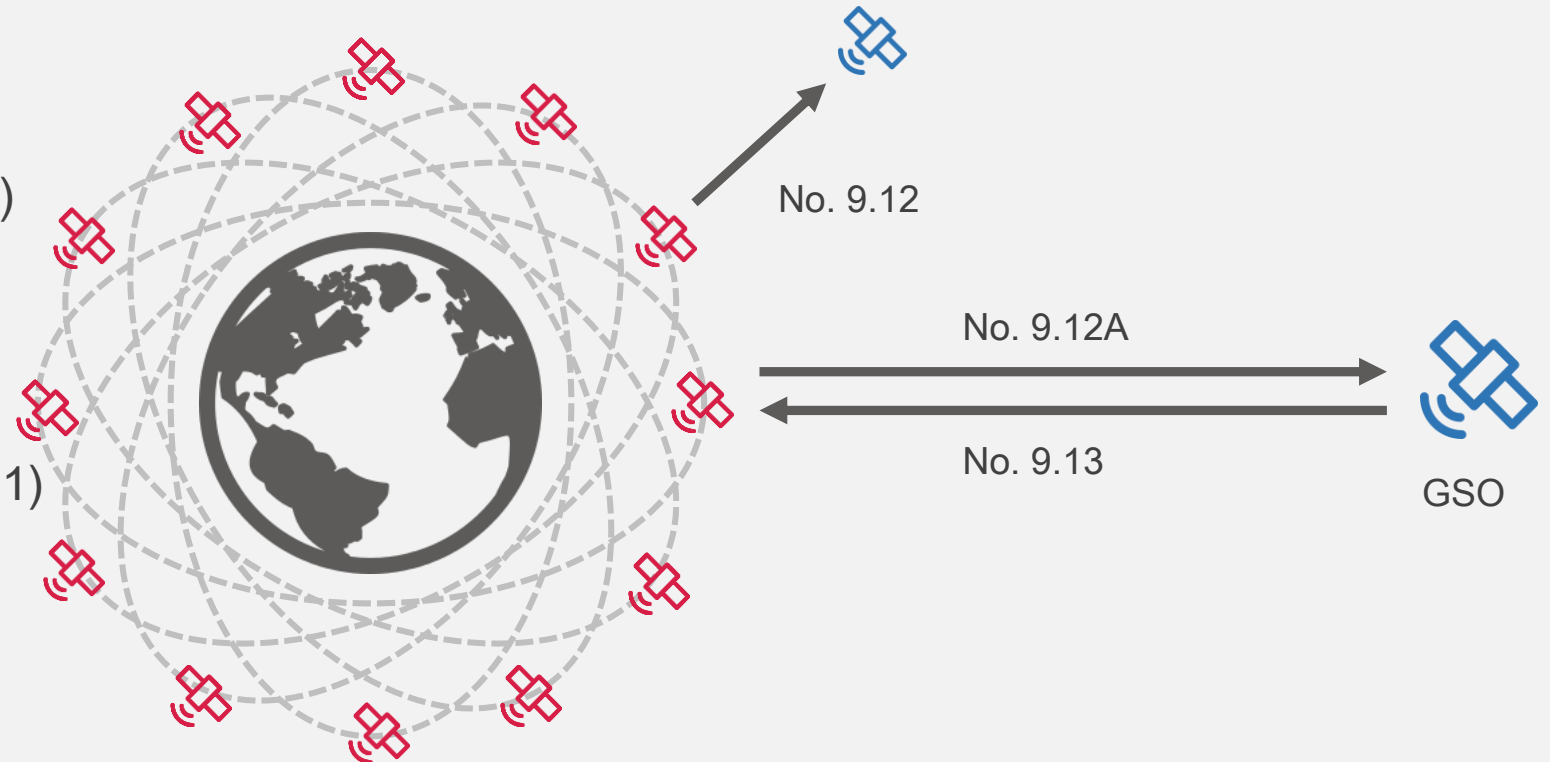
Coordination requirements

- Non-GSO vs Non-GSO (No. 9.12)
- Non-GSO vs GSO (No. 9.12A)
- GSO vs Non-GSO (No. 9.13)

Affected Adm + satellite networks

- Publish in CR/C for info (No.9.36.1)
- Adm to make comments
- Publish in CR/D as confirmed list (No.9.53A)

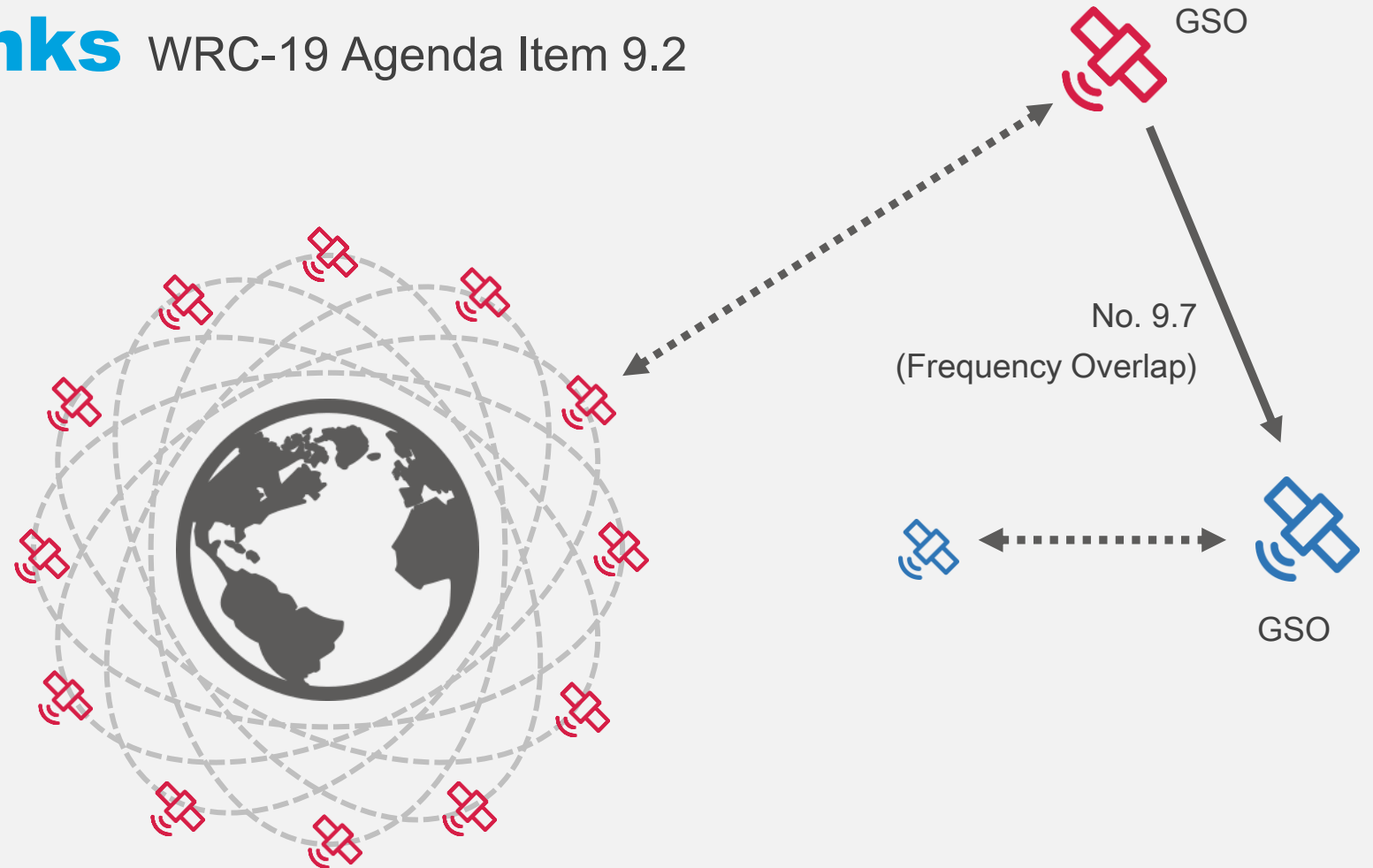
Entry into force: 01.01.2021



Coordination Requirements for Inter-Satellite Links

WRC-19 Agenda Item 9.2

Coordination under No. 9.7 for **GSO ISL with associated non-GSO** in 1215-1300 & 1559-1610 MHz (No. 5.328B) will be based on **Frequency Overlap**



RR Appendix 4 data items for Non-GSO

WRC-19 Agenda Item 7 Issue H

New or Mod data items in Ap4

- To describe non-GSO constellations - **single** or **multiple mutually exclusive** configurations
- For API not subject to coordination and non-GSO subject to EPFD limits.

Effective date: 23.11.2019



Future Agenda Items for WRC-2023/27

with possible impact to RNSS/RDSS

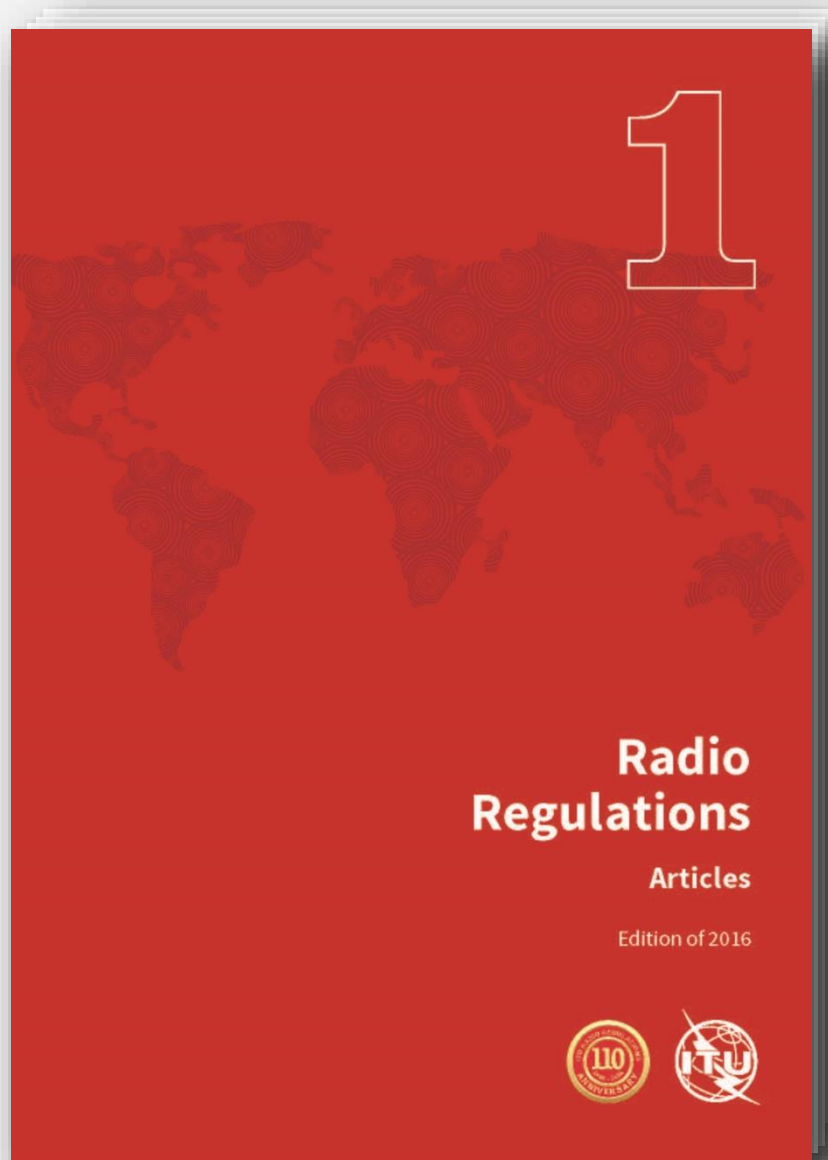
WRC-19 Agenda Item 10

Agenda for WRC-2023 Res COM6/1 (WRC-19)

- AI9.1.1 Protection of spectrum-reliant space weather sensors Res 657 (Rev.WRC-19)
- AI9.1.2 Protection of RNSS in 1 240-1 300 MHz from amateur & amateur-satellite service Res COM6/17 (WRC-19)

Preliminary Agenda for WRC-2027 Res COM6/19 (WRC-19)

- AI2.8 Non-GSO & GSO MSS space-to-space links in ...
[1 610-1 645.5], [2 483.5-2 500 MHz] ... Res COM6/26 (WRC-19)
- AI2.9 Additional allocations to LMS in 1 300-1 350 MHz Res COM6/27 (WRC-19)



RADIO REGULATIONS

- Next edition 2020
- Entry into force on 1 Jan 2021*
*except those in Res 99 (WRC-19)
- Provisional Final Acts
<https://www.itu.int/en/ITU-R/conferences/wrc/2019/Documents/PFA-WRC19-E.pdf>
- CPM23-1
<https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/cpm-23.aspx>

International Telecommunication Union



www.itu.int