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| UNITED STATES OF AMERICA |
| Proposals for the work of the conference |
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| Agenda item 10 |

10to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention;

**Background Information:**

At WRC-97, the Earth exploration-satellite (passive) service was upgraded from secondary to primary status in Region 2.

In the 1997-2000 study period leading up to WRC-2000, SG-4 and SG-7 examined the technical and regulatory issues associated with considering the possible worldwide allocation for the earth exploration-satellite (passive) and space research (passive) services in the band 18.6 - 18.8 GHz. At the time, the allocation for the Earth exploration-satellite (passive) service was on a primary basis in Region 2, but on a secondary basis in Regions 1 and 3. These studies, performed under agenda item 1.17 (WRC-2000) which led to the establishment of the current footnote No. 5.522B, did not provide consideration for all types of non-geostationary (non-GSO) satellite systems that could operate in this band.

During the studies, only one non-GSO satellite system was planning to use this band above an altitude of 20,000 km. Accordingly, the constraint was imposed without appropriate consideration of non-GSO systems operating with an apogee below 20,000 km. Since there is a growing demand for Low Earth Orbit (LEO) and Medium Earth Orbit (MEO) global satellite broadband services, revisiting the studies performed in the band 18.6-18.8 GHz while taking into account the latest technology developments, could help facilitate the deployment of non-GSO systems operating with an apogee below 20,000 km.

**Proposals**

SUP USA/10(XXX)/1

RESOLUTION 810 (WRC‑15)

Preliminary agenda for the 2023 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2015),

**Reasons:** This Resolution must be suppressed, as WRC-19 will create a new Resolution that will include the agenda for WRC-23.

ADD USA/10(XXX)/2

Draft New Resolution [USA-2023]

Agenda for the 2023 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2015),

considering

*a)* that, in accordance with No. 118 of the ITU Convention, the general scope of the agenda for a world radiocommunication conference should be established four to six years in advance and that a final agenda shall be established by the Council two years before the conference;

*b)* Article 13 of the ITU Constitution relating to the competence and scheduling of world radiocommunication conferences and Article 7 of the Convention relating to their agendas;

*c)* the relevant resolutions and recommendations of previous world administrative radio conferences (WARCs) and world radiocommunication conferences (WRCs),

resolves

to recommend to the Council that a world radiocommunication conference be held in 2023 for a maximum period of four weeks, with the following agenda:

1 on the basis of proposals from administrations, taking account of the results of WRC‑15 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the bands under consideration, to consider and take appropriate action in respect of the following items:

1.[XXX] to consider, on the basis of ITU-R studies in accordance with Resolution **[USA/10/FSS NGSO 18GHZ] (WRC-19)**, appropriate regulatory actionsregarding non-geostationary fixed-satellite service systems with an apogee below 20 000 km that operate in the 18.6-18.8 GHz (space-to-Earth) band;

…

resolves further

to activate the Conference Preparatory Meeting,

invites the Council

to finalize the agenda and arrange for the convening of WRC‑23, and to initiate as soon as possible the necessary consultations with Member States,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to prepare a report to WRC‑23,

instructs the Secretary-General

to communicate this Resolution to international and regional organizations concerned.

**Reasons:** To update footnoteNo. **5.522B** to revise the altitude restriction and introduce, as appropriate, a new power flux density limit in Article **21**, Table **21-4**, considering the latest technological advancements and growing demand for spectrum for non-geostationary Fixed-Satellite Service systems operating below 20,000 km.

ADD USA/10(XXX)/3

DRAFT NEW RESOLUTION [USA/10/FSS NGSO 18GHZ] (WRC-19)

Non-geostationary fixed-satellite service systems with an apogee below 20 000 km that operate in the 18.6-18.8 GHz (space-to-Earth) band

The World Radiocommunication Conference (Sharm el-Sheik Egypt, 2019),

*considering*

1. that high-density applications by the fixed-satellite service is identified for the 18.3-19.3 GHz (space-to-Earth) band in Region 2;
2. that geostationary and certain non-geostationary fixed-satellite service networks and systems operating in the 18.6-18.8 GHz (space-to-Earth) band must comply with the current regulatory provisions in Article **21**, Table **21-4** for power flux-density from space stations;
3. that previous studies establishing the power flux-density limits on the surface of the Earth, found in Article **21**, Table **21-4** for 18.6-18.8 GHz involved just one non-geostationary fixed-satellite service system, operating above 20,000 km,

*recognizing*

1. that the frequency band 18.6-18.8 GHz is currently allocated on a primary basis to the earth exploration-satellite (passive), fixed, mobile, fixed-satellite (space-to-Earth) services globally, as well as space research service (passive) on a primary basis in Region 2 and secondary basis in Regions 1 and 3;
2. that the emissions of the fixed, mobile and fixed-satellite services in the band 18.6-18.8 GHz are limited to the values given in **Nos**. **21.5** and, in accordance with footnote **No. 5.522A**, **21.5A** and **21.16.2**;
3. that non-geostationary-satellite systems shall not cause unacceptable interference to and shall not claim protection from geostationary-satellite networks in the fixed-satellite service and the broadcasting-satellite service in accordance with **No. 22.2**;
4. that the modification of the limits referenced in *recognizing b* for the fixed and mobile services and stations operating in the fixed-satellite service above an apogee of 20 000 km to protect EESS (passive) and SRS (passive) stations are outside the scope of this Resolution;
5. that the use of the band 18.6-18.8 GHz by geostationary networks and non-geostationary systems in the fixed-satellite service (space-to-Earth) operate in accordance with Footnote **5.522B** in the Radio Regulations;
6. that **No.** **21.16** contains power flux-density limits applicable to fixed-satellite service to protect fixed and mobile services with allocations in the frequency band 18.6-18.8 GHz;
7. that the power flux-density specified in **No. 21.16.2** across the 200 MHz band 18.6-18.8 GHz produced at the surface of the Earth by emissions from a space station operating in the fixed-satellite service under assumed free-space propagation conditions shall not exceed −95 dB(W/m2), except for less than 5% of time, when the limit may be exceeded by up to 3 dB;
8. that the provisions of No. **21.17** do not apply in this band,

*resolves to invite ITU-R*

1 to conduct and complete in time for WRC-23 sharing and compatibility studies between non-geostationary fixed-satellite service (space-to-Earth) systems operating with an apogee below 20,000 km and the earth exploration-satellite (passive) service in 18.6-18.8 GHz;

2 to develop technical conditions and regulatory provisions for non-geostationary stations operating in the fixed-satellite service (space-to-Earth) with an apogee below 20,000 km in 18.6-18.8 GHz, with the constraint that the power flux-density limits in Table **21-4** of Article **21** associated with the protection of the fixed and mobile service in this band remain unchanged,

*further resolves*

1 that the technical conditions and regulatory provisions developed under *resolves to invite ITU-R* 2 includes the constraint that of the limits referenced in *recognizing b* applicable to the fixed and mobile services and to stations operating in the fixed-satellite service with an apogee greater than 20 000 km remain unchanged;

2 to invite WRC-23 to review the results of these studies and take appropriate action,

*invites administrations*

to participate actively in the studies by submitting contributions to ITU-R.

**ATTACHMENT**

**PROPOSAL FOR FUTURE AGENDA ITEM FOR [XXX]**

**Subject:** Proposed Future WRC Agenda Item for WRC-2023 to consider the results of studies on the … **Revision to footnote No. 5.522A and 5.522B and Radio Regulations Article 21 power flux density limits regarding non-geostationary Fixed-Satellite Service systems with an apogee below 20 000 km that operate in the 18.6-18.8 GHz (space-to-Earth) band**

**Origin**: United States of America

*Proposal:* Examine revision of Radio Regulation footnote 5.522A and 5.522B and Article **21**, Table **21-4** regarding expansion of regarding non-geostationary Fixed-Satellite Service systems with an apogee below 20 000 km that operate in the 18.6-18.8 GHz (space-to-Earth) band.

***Background/reason:***

At WRC-97, the Earth exploration-satellite (passive) service was upgraded from secondary to primary status in Region 2.

In the 1997-2000 study period leading up to WRC-2000, SG-4 and SG-7 examined the technical and regulatory issues associated with considering the possible worldwide allocation for the earth exploration-satellite (passive) and space research (passive) services in the band 18.6 - 18.8 GHz. At the time, the allocation for the Earth exploration-satellite (passive) service was on a primary basis in Region 2, but on a secondary basis in Regions 1 and 3. These studies, performed under agenda item 1.17 (WRC-2000) which led to the establishment of the current footnote No. 5.522B, did not provide consideration for all types of non-geostationary (non-GSO) satellite systems that could operate in this band.

During the studies, only one non-GSO satellite system was planning to use this band above an altitude of 20,000 km. Accordingly, the constraint was imposed without appropriate consideration of non-GSO systems operating with an apogee below 20,000 km. Since there is a growing demand for Low Earth Orbit (LEO) and Medium Earth Orbit (MEO) global satellite broadband services, revisiting the studies performed in the band 18.6-18.8 GHz while taking into account the latest technology developments, could help facilitate the deployment of non-GSO systems operating with an apogee below 20,000 km.

***Radiocommunication services concerned:***

Earth Exploration Satellite, Fixed, Mobile, Fixed-Satellite, Space research

***Indication of possible difficulties:***  None foreseen

***Previous/ongoing studies on the issue:*** Studied in the 1997-2000 preparatory cycle leading up to WRC-2000 considering an allocation to EESS (passive) and SRS (passive).

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| ***Studies to be carried out by:*** ITU-R Study Group 4 | *with the participation of:* |

***ITU-R Study Groups concerned:*** SG 5 and SG 7

***ITU resource implications, including financial implications (refer to CV126):*** Minimal

***Common regional proposal:*** No ***Multicountry proposal:*** No

*Number of countries:*

One

***Remarks***