

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 10: *to 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: In the 2 200-2 290 MHz band, administrations had previously agreed to use 1050 km as the predetermined coordination distance between space research earth stations and mobile (aircraft) stations based on the distances specified in Table III, Appendix S7 of the Radio Regulations (RR) (1998), which gave the maximum coordination distance for propagation mode (1), determined by requiring that interference from all sources (line-of-sight and non-line-of-sight) would not exceed the protection criterion of the space research earth stations. The ITU-R determined that this coordination distance was adequate for protecting the space research service earth stations from transmissions of aircrafts flying over the ocean surface, where signals would propagate through ducting mechanism and would potentially create interference at the space research stations.

WRC-07 added a new row to Table 10, Annex 7, Appendix 7 of the RR that specified a 500-km predetermined coordination distance between mobile (aircraft) stations and ground-based stations in the bands in which the frequency sharing situation is not covered in the other rows. Since the current Table 10 does not include a row that specifies the required coordination distance between space research earth stations and mobile (aircraft) stations, the administrations are likely to use 500 km as the coordination distance between these stations. This distance may not be sufficient to protect the space research earth stations. This future conference agenda item proposes to study this case and potentially modify Table 10 to explicitly include an appropriate coordination distance between the stations of the space research service and mobile (aircraft) stations.

Proposal:

MOD USA/10/1

RESOLUTION 808 (Rev. WRC-~~12~~15)

~~Preliminary a~~Agenda for the 2018 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, ~~2012~~2015),

Reasons: To modify the agenda for WRC-18 to add a new item.

ADD USA/10/2

2.XX to review Table 10, Annex 7, Appendix 7 for the suitability of 500-km predetermined coordination distance between space research service earth stations and mobile (aircraft) stations in the 2 200 - 2 290 MHz band, with a view of amending it to ensure protection of the space research service, in accordance with Resolution [USA-YYY] (WRC-15).

Reasons: To conduct studies to examine if 500-km predetermined coordination distance given in Table 10, Annex 7, Appendix 7 of the RR is adequate to protect the space research service

earth stations from the emission of mobile (aircraft) stations in the 2 200 - 2 290 MHz band with a view of possible modification of that Table.

ADD USA/10/3

RESOLUTION USA-YYY (WRC-15)

Protection of space research service earth stations from mobile (aircraft) stations in the 2 200 - 2 290 MHz band

The World Radiocommunication Conference (Geneva, 2015),

considering

- a)* that the band 2 200 - 2 290 MHz is allocated to the space operation (s-E)(s-s), Earth exploration-satellite (s-E)(s-s), fixed, mobile, and space research (s-s) services on a primary basis;
- b)* that Table 10, Annex 7, Appendix 7 of the RR gives predetermined coordination distances between earth stations and terrestrial stations in sharing situations involving services allocated with equal rights;
- c)* that in the band 2 200 - 2 290 MHz, for the frequency sharing between space research service and mobile (aircraft) service, Table 10, Annex 7, Appendix 7 of RR does not specify explicitly the required coordination distance;
- d)* that the last row of Table 10, Annex 7, Appendix 7 of RR gives a coordination distance of 500 km between mobile (aircraft) stations and ground-based stations in the bands in which the frequency sharing situation is not covered in the other rows;

recognizing

- a)* that the predetermined coordination distance of 500 km may not be enough to meet the protection criterion of space research service earth stations;
- b)* that in the past administrations have used a coordination distance of 1 050 km to meet the protection criterion of space research service earth stations;

resolves to invite ITU-R

- 1 to conduct sharing studies between space research service (s-E) and mobile (aircraft) service in the band 2 200 - 2 290 MHz;
- 2 to complete the studies, taking into account the present use of the allocated band, with a view of presenting, at the appropriate time, the technical basis for the work of WRC-18;
- 3 to determine the appropriate coordination distance so that the emissions from transmissions of the mobile (aircraft) stations meet the protection criterion of space research service earth stations in the 2200-2290 MHz band;

resolves to invite WRC-18

to consider modifications to Table 10, Annex 7, Appendix 7 of RR, taking into account the results of ITU-R studies, including addition of a new row specifying the appropriate coordination distance between space research earth stations and mobile (aircraft) station, without modifying the other rows;

invites administrations

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

instructs the Secretary-General

to bring this resolution to the attention of the Space Frequency Coordination Group (SFCG) and other international and regional organizations concerned.

Reasons: A resolution will support the ITU-R studies needed under the relevant WRC-18 agenda item.

ATTACHMENT

PROPOSAL FOR AGENDA ITEM STUDYING PROTECTION OF SPACE RESEARCH EARTH STATIONS FROM MOBILE (AIRCRAFT) STATIONS IN THE 2 200 - 2 290 MHZ BAND

Subject: Proposed future WRC agenda item for WRC-2018 studying the protection of space research earth stations from mobile (aircraft) stations in the 2 200 - 2 290 MHz band.

Origin: United States of America

Proposal: to review Table 10, Annex 7, Appendix 7 with a view to modify it by specifying a more appropriate coordination distance to protect the space research earth stations from mobile (aircraft) stations in the 2200 - 2290 MHz band, in accordance with **Resolution [USA-YYY] (WRC-15)**.

Background/reason:

In the 2 200-2 290 MHz band, administrations had previously agreed to use 1050 km as the predetermined coordination distance between space research earth stations and mobile (aircraft) stations based on the distances specified in Table III, Appendix S7 of the RR (1998), which gave the maximum coordination distance for propagation mode (1), determined by requiring that interference from all sources (line-of-sight and non-line-of-sight) would not exceed the protection criterion of the space research earth stations. The ITU-R determined that this coordination distance was adequate for protecting the space research service earth stations from transmissions of aircrafts flying over the ocean surface, where signals would propagate through ducting mechanism and would potentially create interference at the space research stations.

WRC-07 added a new row to Table 10, Annex 7, Appendix 7 of the RR that specifies a 500-km predetermined coordination distance between mobile (aircraft) stations and ground-based stations in the bands in which the frequency sharing situation is not covered in the other rows. Since the current Table 10 does not include a row that specifies the required coordination distance between space research earth stations and mobile (aircraft) stations, the administrations are likely to use 500 km as the coordination distance between these stations. This distance may not be sufficient to protect the space research earth stations. It is therefore necessary to study this case and to possibly modify Table 10 to explicitly include appropriate coordination distance between the stations of space research service and mobile (aircraft) stations.

Radiocommunication services concerned: mobile (aircraft), space research (s-E)

Indication of possible difficulties: none foreseen

Previous/ongoing studies on the issue: TBD

<i>Studies to be carried out by:</i> WP 7B	<i>with the participation of:</i> WPs 5B
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ITU-R Study Groups concerned: SG7

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

<i>Common regional proposal:</i> No	<i>Multi-country proposal:</i> No
	<i>Number of countries:</i>

Remarks
