

**PROPOSED EDITS TO NTIA DRAFT PROPOSAL ON WRC-15 AI 10  
(REF. WAC/098(17.12.14))**

**DRAFT**

**UNITED STATES OF AMERICA**

**~~DRAFT~~ PROPOSALS FOR THE WORK OF THE CONFERENCE**

**Agenda item 10**

~~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:**

~~The 200-290 MHz radio frequency band is allocated on a co-primary basis to the following services: Space Operation (space-to-Earth) (space-to-space), Earth Exploration Satellite (space-to-Earth) (space-to-space), Fixed, Mobile, and Space Research. In the 200-290 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 of Appendix S7 of the Radio Regulations (RR) (1998) previously provided the methods for determining the coordination area around earth stations, including space research service earth stations in the 200-290 MHz band, 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. The World Radiocommunication Conference (Istanbul, 2000) deleted Appendix S7 of the 1998 edition of the Radio Regulations (RR) and introduced a new Appendix (the current Appendix 7) entitled "Methods for the determination of the coordination area around an earth station in frequency bands between 100 MHz and 105 GHz".~~

Table 10 of Annex 7 to Appendix 7 of the Radio Regulations provides “Predetermined coordination distances” for determination of the coordination area around an earth station. This Table currently does not include a row specifying predetermined coordination distances between aeronautical mobile stations and space research earth stations in the 2 200- 2 290 MHz frequency band. 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 aeronautical mobile ~~(aircraft)~~ stations and ground-based earth stations in the bands in which the frequency sharing situation is not covered in the other rows of the Table.

-Since the current Table 10 does not include a row that specifies the required coordination distance between space research earth stations and aeronautical mobile ~~(aircraft)~~ stations, the administrations are likely to use 500 km as the predetermined coordination distance between these types of stations in the 2 200-2 290 MHz frequency band. 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 add a row ~~include to provide an appropriate~~ predetermined coordination distance between ~~the stations of~~ the space research service earth stations and aeronautical mobile ~~(aircraft)~~ stations in the 2 200- 2 290 MHz frequency band. However, other approaches are also being pursued to effect this change in the Radio Regulations, which may obviate the need for a future conference agenda proposal. In that case, this proposal for a future agenda item would be withdrawn.

**Proposal:**

**MOD USA/10/1**

**RESOLUTION 808 (Rev. WRC-1215)**

**Preliminary aAgenda for the 20198 World Radiocommunication Conference**

The World Radiocommunication Conference (Geneva, 20122015),

**Reasons:** To modify the agenda for WRC-198 to add a new item.

**ADD USA/10/2**

**2.XX** to review Table 10 of, Annex 7 to, Appendix 7 of the Radio Regulations 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 adding a new row to that Table limited to specifying the predetermined coordination distance between space research service earth stations and aeronautical mobile stations in the 2 200 - 2 290 MHz frequency band to ensure protection of the space research service, in accordance with Resolution [USA-YYY] (WRC-15), without modifying any other rows in Table 10.

**Reasons:** To conduct studies to examine if the 500-km predetermined coordination distance given in Table 10 of, Annex 7 to, Appendix 7 of the Radio Regulations is adequate to protect the space research service earth stations from the emission of aeronautical mobile (aircraft)-stations in the 2 200 - 2 290 MHz band with a view of possible modification adding a new row in of that Table limited to providing the predetermined coordination distance between the space research service earth stations and aeronautical mobile stations in the 2 200-2 290 MHz frequency band without modifying any other rows.

**ADD USA/10/3**

**RESOLUTION USA-YYY (WRC-15)**

**Protection of Coordination distance between space research service earth stations and from aeronautical mobile (aircraft)-stations in the 2 200 - 2 290 MHz frequency band**

The World Radiocommunication Conference (Geneva, 2015),

*considering*

a) that the radio frequency 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 ~~of~~; Annex 7 ~~to~~, Appendix 7 of the Radio Regulations gives predetermined coordination distances between earth stations and terrestrial stations in sharing situations involving services allocated with equal rights;
- c) that in the radio frequency band 2 200 - 2 290 MHz, for the frequency sharing between space research service and aeronautical mobile ~~(aircraft)~~ service, Table 10 ~~of~~; Annex 7; Appendix 7 of Radio Regulations does not specify explicitly the predetermined required coordination distance;
- d) that the last row of Table 10 ~~of~~; Annex 7 ~~to~~ Appendix 7-of the Radio Regulations ~~gives~~ provides a coordination distance of 500 km between aeronautical mobile ~~(aircraft)~~ stations and ground-based earth stations in the bands in which the frequency sharing situation is not covered in the other rows;
- ~~recognizing~~
- ~~ea)~~ that the predetermined coordination distance of 500 km may not be enough to meet the protection criterion of space research service earth stations from aeronautical mobile service stations;
- ~~fb)~~ 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 that the coordination area is not an exclusion zone within which the sharing of frequencies between the earth station and terrestrial stations or other earth stations is prohibited, but a means for determining the area within which more detailed calculations needs to be performed;

*resolves to invite ITU-R*

- 1 to conduct sharing studies between the space research service (s-E) and the aeronautical mobile ~~(aircraft)~~ service in the ~~band~~ 2 200 - 2 290 MHz radio frequency band to determine appropriate predetermined coordination distance;
- 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 ~~to~~ of WRC-198;
- 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-198*

to consider the addition of a new row in modifications to Table 10 ~~of~~; Annex 7 ~~to~~, Appendix 7 of the Radio Regulations, taking into account the results of ITU-R studies, ~~including addition of a new row~~ specifying the appropriate predetermined coordination distance between space research earth stations and aeronautical mobile ~~(aircraft)~~ stations in the 2 200- 2 290 MHz frequency band, without modifying any of 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), the International Civil Aviation Organization (ICAO) and other international and regional organizations concerned.

**Reasons:** A resolution will support the ITU-R studies needed under the relevant WRC-198 agenda item.

ATTACHMENT

PROPOSAL FOR AGENDA ITEM STUDYING  
~~PROTECTION OF PREDETERMINED COORDINATION DISTANCE BETWEEN~~ SPACE  
 RESEARCH EARTH STATIONS ~~AND FROM AERONAUTICAL MOBILE (AIRCRAFT)~~  
 STATIONS IN THE 2 200 - 2 290 MHZ FREQUENCY BAND

*Subject:* Proposed future WRC agenda item for WRC-2019~~8~~ studying the protection of predetermined coordination distance between space research earth stations ~~from and aeronautical~~ mobile ~~(aircraft)~~ stations in the 2 200 - 2 290 MHz frequency band.

*Origin:* United States of America

*Proposal:* to review Table 10 ~~of , Annex 7 to,~~ Appendix 7 of the Radio Regulations with a view to ~~modify it by~~ add a new row to that Table limited to specifying a more appropriate the predetermined coordination distance ~~to protect the~~ between space research earth stations ~~from and aeronautical~~ mobile ~~(aircraft)~~ stations in the 2200 - 2290 MHz frequency band, in accordance with **Resolution [USA-YYY] (WRC-15)** without modifying any other rows in Table 10.

***Background/reason:***

The 2 200- 2 290 MHz radio frequency band is allocated on a co-primary basis to the following services: Space Operation (space-to-Earth) (space-to-space), Earth Exploration Satellite (space-to-Earth) (space-to-space), Fixed, Mobile, and Space Research.

~~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 of , Appendix S7 of the Radio Regulations (1998) previously provided the methods for determining the coordination area around earth stations, including space research earth stations in the 2 200-2 290 MHz band, 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.~~

The World Radiocommunication Conference (Istanbul, 2000) deleted Appendix S7 of the 1998 edition of the Radio Regulations (RR) and introduced a new Appendix (the current Appendix 7) entitled "Methods for the determination of the coordination area around an earth station in frequency bands between 100 MHz and 105 GHz".

Table 10 of Annex 7 to Appendix 7 of the Radio Regulations provides "Predetermined coordination distances" for determination of the coordination area around an earth station. This Table currently does not include a row specifying predetermined coordination distances between aeronautical mobile stations and ground-based earth stations in the 2 200- 2 290 MHz frequency band. 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 aeronautical 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 ~~predetermined~~required coordination distance between space research earth stations and aeronautical mobile ~~(aircraft)~~ stations in the 2 200- 2 290 MHz frequency band, the administrations are likely to use 500 km as the coordination distance between these types of stations in the 2 200- 2 290 MHz frequency band. 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~~add a row to Table 10 to explicitly provide a predetermined ~~include appropriate~~ coordination distance between ~~the stations of~~ space research service earth stations and aeronautical mobile ~~(aircraft)~~ stations in the 2 200-2 290 MHz frequency band.

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

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***Indication of possible difficulties:*** none foreseen

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***Previous/ongoing studies on the issue:*** TBD

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<b><i>Studies to be carried out by:</i></b> WP 7B	<b><i>with the participation of:</i></b> WP <del>s</del> -5B
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***ITU-R Study Groups concerned:*** SG7 and SG5

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

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

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***Remarks***