

## RECOMMENDATION ITU-R BO.1505

**Coordination procedure for assignments of space operation service in the guardbands of Appendices S30 and S30A Plans of the Radio Regulations (RR)**

(Question ITU-R 99/11)

(2000)

The ITU Radiocommunication Assembly,

*considering*

- a) that § 3.9 of Annex 5 of RR Appendix S30 and § 3.1 and 4.1 of Annex 3 of RR Appendix S30A allow assignments of the space operation service to operate in the guardbands of RR Appendices S30 and S30A Plans;
- b) that RR No. S1.23 stipulates that the functions of space operation service will normally be provided within the service in which the space station is operating,

*recognizing*

- a) that Annex 5 of RR Appendix S30 does not stipulate any coordination procedure for the transmissions of the space operation service in the guardbands of these Plans;
- b) that the space operation service in the guardbands of these Plans should be included in the coordination procedure to receive and provide proper protection from and to other services;
- c) that various types of coordination procedures exist for the fixed-satellite service (FSS) sharing the same band with the broadcasting-satellite service (BSS) and its associated feeder links in the bands covered by RR Appendices S30 and S30A,

*recommends*

- 1** that the coordination procedure for space operation service in the guardbands of the BSS and associated feeder-link Plans contained in RR Appendices S30 and S30A, should be based on the information contained in Table 1.

TABLE 1

**Coordination requirement for space station of space operation service in guardbands in BSS and associated feeder-link Plans**

Applicable procedure	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
RR No. S9.7	A station in a satellite network using the geostationary-satellite orbit (GSO), in any space radiocommunication service, in a frequency band and in a Region where this service is not subject to a Plan, in respect of any other satellite network using that orbit, in any space radiocommunication service in a frequency band and in a Region where this service is not subject to a Plan, with the exception of the coordination between earth stations operating in the opposite direction of transmission, when at least one of these networks is in the space operation service	11.7-11.714 GHz (R1, R3) 12.189-12.2 GHz (R3) 12.2-12.212 GHz (R2) 12.489-12.5 GHz (R1) 12.688-12.7 GHz (R2) 14.5-14.5118 GHz (R1 except Europe, R3) <sup>(1)</sup> 14.78814-14.8 GHz (R1 except Europe, R3) <sup>(1)</sup> 17.3-17.312 GHz (R2) 17.3-17.314 GHz (R1, R3) 17.788-17.8 GHz (R2) 18.089-18.1 GHz (R1, R3)	Value of $\Delta T/T$ exceeds 6%	RR Appendix S8	
Article 7 of RR Appendix S30/ RR No. S9.8	A transmitting space station in the space operation service using the GSO in respect of earth stations of the BSS which are subject to the Plans in RR Appendix S30	11.7-11.714 GHz (R1, R3) 12.189-12.2 GHz (R3) 12.2-12.212 GHz (R2) 12.489-12.5 GHz (R1) 12.688-12.7 GHz (R2)	a) There is an overlap in the necessary bandwidths of the space stations of the space operation service and BSS, and the pfd of the space station of the space operation service exceeds the value given in Annex 4 of RR Appendix S30 on the territory of another administration.  b) There is no overlap in the necessary bandwidths of the space stations of the space operation service and BSS, and the difference in frequencies between the wanted and interfering transmission is less than 27.5 MHz, and the single entry $C/I$ is less than 26 dB within the service area of the BSS space station		

TABLE 1 (continued)

Applicable procedure	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
RR No. S9.9/ Article 7 of RR Appendix S30A	An associated earth station in the space operation service, in respect of a BSS feeder-link space station which is subject to the Plans in RR Appendix S30A	14.5-14.5118 GHz (R1 except Europe, R3) <sup>(1)</sup> 14.78814-14.8 GHz (R1 except Europe, R3) <sup>(1)</sup> 17.3-17.312 GHz (R2) 17.3-17.314 GHz (R1, R3) 17.788-17.8 GHz (R2) 18.089-18.1 GHz (R1, R3)	a) There is an overlap in the necessary bandwidths of the wanted and interfering transmissions, and the value of $\Delta T/T$ exceeds 4%. b) There is no overlap in the necessary bandwidths of the wanted and interfering transmissions, and the difference in frequencies between the wanted and interfering transmissions is less than 27.5 MHz, and the single entry $C/I$ is less than 26 dB at the input of the BSS feeder-link space station	a) Case I of RR Appendix S8	
Article 4 of RR Appendix S30	A transmitting space station in the BSS for which a modification to one of the Plans in RR Appendix S30 is proposed, in respect of a receive earth station in the space operation service	11.7-11.714 GHz (R1, R3) 12.189-12.2 GHz (R3) 12.2-12.212 GHz (R2) 12.489-12.5 GHz (R1) 12.688-12.7 GHz (R2)	a) There is an overlap in the necessary bandwidths of the wanted and interfering transmissions, and the value of $\Delta T/T$ exceeds 3%. b) There is no overlap in the necessary bandwidths of the space stations of the space operation service and BSS, and the difference in frequencies between the wanted and interfering transmission is less than 27.5 MHz, and the single entry $C/I$ is less than 27 dB at the input of the receive earth station within the service area of the space station in the space operation service	a) Case I of RR Appendix S8	
Article 4 of RR Appendix S30A	A transmitting BSS feeder-link earth station for which a modification to one of the Plans in RR Appendix S30A is proposed, in respect of a receive space station in the space operation service	14.5-14.5118 GHz (R1 except Europe, R3) <sup>(1)</sup> 14.78814-14.8 GHz (R1 except Europe, R3) <sup>(1)</sup> 17.3-17.312 GHz (R2) 17.3-17.314 GHz (R1, R3) 17.788-17.8 GHz (R2) 18.089-18.1 GHz (R1, R3)	a) There is an overlap in the necessary bandwidths of the wanted and interfering transmissions, and the value of $\Delta T/T$ exceeds 3%. b) There is no overlap in the necessary bandwidths of the wanted and interfering transmissions, and the difference in frequencies between the wanted and interfering transmission is less than 27.5 MHz, and the single entry $C/I$ is less than 27 dB at the input of the receive space station in the space operation service	a) Case I of RR Appendix S8	

TABLE 1 (end)

Applicable procedure	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
RR No. S9.17 GSO/non-GSO/ terrestrial	A specific earth station in the space operation service in respect of terrestrial stations, where the coordination area of the earth station includes the territory of another country with the exception of the coordination under RR No. S9.15	11.7-11.714 GHz (R1, R3) 12.189-12.2 GHz (R3) 12.2-12.212 GHz (R2) 12.489-12.5 GHz (R1) 12.688-12.7 GHz (R2) 14.5-14.5118 GHz (R1 except Europe, R3) <sup>(1)</sup> 14.78814-14.8 GHz (R1 except Europe, R3) <sup>(1)</sup> 17.788-17.8 GHz (R2) 18.089-18.1 GHz (R1, R3)	The coordination area of the earth station covers the territory of another administration	RR Appendix S7	It is understood that system parameters of the FSS are used for the determination of the coordination area around an earth station in the space operation service in the guard-bands of RR Appendices S30 and S30A Plans
§ 7.2 of Article 7 of RR Appendix S30A/ RR No. S9.17A GSO, non-GSO/ GSO, non-GSO	A specific earth station in respect of another earth station operating in the opposite direction of transmission, when one of these stations is in the space operation service	12.688-12.7 GHz (R2) 17.3-17.312 GHz (R2) 17.3-17.314 GHz (R1, R3) 17.788-17.8 GHz (R2) 18.089-18.1 GHz (R1, R3)	The coordination area of the earth station covers the territory of another administration or the earth station is located within the coordination area of an earth station	RR Appendix S7	It is understood that system parameters of the FSS are used for the determination of the coordination area around an earth station in the space operation service in the guard-bands of RR Appendices S30 and S30A Plans
RR No. S9.18 Terrestrial/GSO, non-GSO	Any transmitting station of a terrestrial service within the coordination area of an earth station in the space operation service, in respect of this earth station	11.7-11.714 GHz (R1, R3) 12.189-12.2 GHz (R3) 12.2-12.212 GHz (R2) 12.489-12.5 GHz (R1) 12.688-12.7 GHz (R2) 17.788-17.8 GHz (R2) 18.089-18.1 GHz (R1, R3)	Transmitting terrestrial station is situated within the coordination area of a receiving earth station	See remarks column	The coordination area of the affected earth station has already been determined using the calculation method of RR No. S9.17

<sup>(1)</sup> See RR No. S5.510.

NOTE 1 – The use of these bands by the space operation service in relation to non-GSO FSS space stations is subject to the provisions of Resolution 538 (WRC-97).