

## RESOLUTION 768 (WRC-19)

**Need for coordination of Region 2 fixed-satellite service networks in the frequency band 11.7-12.2 GHz with respect to the Region 1 broadcasting-satellite service assignments located further west than 37.2° W and of Region 1 fixed-satellite service networks in the frequency band 12.5-12.7 GHz with respect to the Region 2 broadcasting-satellite service assignments located further east than 54° W**

The World Radiocommunication Conference (Sharm el-Sheikh, 2019),

*considering*

- a)* that WRC-15 decided to conduct studies on, review, and identify possible revisions to, if necessary, the limitations mentioned in Annex 7 to Appendix 30 (**Rev.WRC-15**), while ensuring the protection of, and without imposing additional constraints on, assignments in the Plan and in the List and the future of broadcasting-satellite service (BSS) networks and existing fixed-satellite service (FSS) networks;
- b)* that the provisions applying to the BSS frequency assignments in the frequency bands 11.7-12.5 GHz in Region 1 and 12.2-12.7 GHz in Region 2 are contained in Appendix 30;
- c)* that the FSS has primary allocations in the frequency bands 12.5-12.75 GHz in Region 1 and 11.7-12.2 GHz in Region 2;
- d)* that the BSS has primary allocations in the frequency bands 11.7-12.5 GHz in Region 1 and 12.2-12.7 GHz in Region 2;
- e)* that this conference has suppressed the limitation in Annex 7 to Appendix 30 (**Rev.WRC-15**) that prevented broadcasting satellites serving an area in Region 1 and using frequency assignments in the frequency band 11.7-12.2 GHz at orbital positions further west than 37.2° W;
- f)* that this conference has suppressed the limitation in Annex 7 to Appendix 30 (**Rev.WRC-15**) that prevented broadcasting satellites serving an area in Region 2 and using frequency assignments in the frequency band 12.5-12.7 GHz at orbital positions further east than 54° W;
- g)* that the result of those suppressions shall ensure the protection of, and cannot impose additional constraints on, assignments in the Plan and the List and the future development of the BSS within the Plan, and existing and planned FSS networks,

*recognizing*

- a)* that existing FSS networks operating in the frequency bands mentioned in *considering c)* and BSS frequency assignments in the Plan and List implemented in accordance with the provisions of Annex 7 to Appendix 30 (**Rev.WRC-15**) prior to this conference shall continue to be protected;

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b) that the frequency bands 11.7-12.5 GHz in Region 1 and 12.2-12.7 GHz in Region 2 are widely used by BSS networks, subject to the provisions of Annex 7 to Appendix 30 (Rev.WRC-15) prior to this conference;

c) that the frequency bands 12.5-12.75 GHz in Region 1 and 11.7-12.2 GHz in Region 2 are widely used by FSS networks,

*resolves*

1 that, in the frequency band 11.7-12.2 GHz, with respect to §§ 7.1 a), 7.2.1 a), 7.2.1 b) and 7.2.1 c) of Article 7 of Appendix 30, in determining the need for coordination of a transmitting space station in the FSS in Region 2 with a transmitting space station in the BSS in Region 1 at an orbital position further west than 37.2° W, and with minimum geocentric orbital separation of less than 4.2 degrees between the FSS and BSS space stations, the conditions in Annex 1 to this Resolution apply instead of those contained in Annex 4 to Appendix 30;

2 that, in the frequency band 12.5-12.7 GHz, with respect to §§ 7.1 a), 7.2.1 a) and 7.2.1 c) of Article 7 of Appendix 30, in determining the need for coordination of a transmitting space station in the FSS in Region 1 with a transmitting space station in the BSS in Region 2 at an orbital position further east than 54° W and not within its clusters in the Region 2 Plan of Appendix 30, and with a minimum geocentric orbital separation less than 4.2 degrees between FSS and BSS space stations, the conditions in Annex 2 to this Resolution apply instead of those contained in Annex 4 to Appendix 30;

3 that, except the cases specified in *resolves* 1 and 2, the conditions in Annex 4 to Appendix 30 continue to apply.

### ANNEX 1 TO RESOLUTION 768 (WRC-19)

With respect to §§ 7.1 a), 7.2.1 a), 7.2.1 b) and 7.2.1 c) of Article 7 of Appendix 30, coordination of a transmitting space station in the fixed-satellite service (FSS) (space-to-Earth) in Region 2 is required with a broadcasting-satellite (BSS) station serving an area in Region 1 and using a frequency assignment in the frequency band 11.7-12.2 GHz with a nominal orbital position further west than 37.2° W when, under assumed free-space propagation conditions, the power flux-density at any test point within the service area of the overlapping frequency assignments in the BSS exceeds the following values:

-147	dB(W/(m <sup>2</sup> · 27 MHz))	for	0° ≤ θ < 0.23°
-135.7 + 17.74 log θ	dB(W/(m <sup>2</sup> · 27 MHz))	for	0.23° ≤ θ < 2.0°
-136.7 + 1.66 θ <sup>2</sup>	dB(W/(m <sup>2</sup> · 27 MHz))	for	2.0° ≤ θ < 3.59°
-129.2 + 25 log θ	dB(W/(m <sup>2</sup> · 27 MHz))	for	3.59° ≤ θ < 4.2°

where θ is the minimum geocentric orbital separation in degrees between the wanted and interfering space stations, taking into account the respective east-west station-keeping accuracies.

## ANNEX 2 TO RESOLUTION 768 (WRC-19)

With respect to §§ 7.1 *a*), 7.2.1 *a*) and 7.2.1 *c*) of Article 7 of Appendix **30**, coordination of a transmitting space station in the fixed-satellite service (FSS) (space-to-Earth) in Region 1 is required with a broadcasting-satellite (BSS) station serving an area in Region 2 and using a frequency assignment in the frequency band 12.5-12.7 GHz with a nominal orbital position further east than 54° W and not within its clusters in the Region 2 Plan of Appendix **30** when, under assumed free-space propagation conditions, the power flux-density at any test point within the service area of the overlapping frequency assignments in the BSS exceeds the following values:

$$\begin{array}{llll}
 -147 & \text{dB(W/(m}^2 \cdot 27 \text{ MHz))} & \text{for} & 0^\circ \leq \theta < 0.23^\circ \\
 -135.7 + 17.74 \log \theta & \text{dB(W/(m}^2 \cdot 27 \text{ MHz))} & \text{for} & 0.23^\circ \leq \theta < 1.8^\circ \\
 -134.0 + 0.89 \theta^2 & \text{dB(W/(m}^2 \cdot 27 \text{ MHz))} & \text{for} & 1.8^\circ \leq \theta < 4.2^\circ
 \end{array}$$

where  $\theta$  is the minimum geocentric orbital separation in degrees between the wanted and interfering space stations, taking into account the respective east-west station-keeping accuracies.

