Radiocommunication Bureau (BR)

Administrative Circular
CACE/1141

4 April 2025

To Administrations of Member States of the ITU, Radiocommunication Sector Members, ITU-R Associates and ITU Academia participating in the work of Radiocommunication Study Group 7

Subject: **Radiocommunication Study Group 7 (Science Services)**

– **Proposed adoption of 1 draft new and 3 draft revised ITU-R Recommendations and their simultaneous approval by correspondence in accordance with § A2.6.2.4 of Resolution ITU-R 1-9 (Procedure for the simultaneous adoption and approval by correspondence)**

At the meeting of Radiocommunication Study Group 7, held on 27 March 2025, the Study Group decided to seek adoption of 1 draft new and 3 draft revised ITU-R Recommendations by correspondence (§ A2.6.2 of Resolution ITU-R 1-9) and further decided to apply the procedure for simultaneous adoption and approval by correspondence (PSAA, § A2.6.2.4 of Resolution ITU-R 1-9). The titles and summaries of the draft Recommendations are given in the Annex to this letter. Any Member State raising an objection to the adoption of a draft Recommendation is requested to inform the Director and the Chair of the Study Group of the reasons for the objection.

The consideration period shall extend for 2 months ending on 4 June 2025. If within this period no objections are received from Member States, the draft Recommendations shall be considered to be adopted by Study Group 7. Furthermore, since the PSAA procedure has been followed, the draft Recommendations shall also be considered as approved.

After the above-mentioned deadline, the results of the above procedures will be announced in an Administrative Circular and the approved Recommendations will be published as soon as practicable (see http://www.itu.int/pub/R-REC).

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Any ITU member organization aware of a patent held by itself or others which may fully or partly cover elements of the draft Recommendations mentioned in this letter is requested to disclose such information to the Secretariat as soon as possible. The Common Patent Policy for ITU-T/ITU-R/ISO/IEC is available at http://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx.

Mario Maniewicz
Director

Annex: Titles and summaries of the draft Recommendations

Documents: Documents 7/22(Rev.1), 7/23(Rev.1), 7/24(Rev.1), 7/25(Rev.1).

These documents are available in electronic format at: https://www.itu.int/md/R23-SG07-C/en.

Annex

Titles and summaries of the draft ITU-R Recommendations

Draft new Recommendation ITU-R SA.[2 GHZ SOS CHAR] Doc. 7/24(Rev.1)

Technical and operational characteristics of the space operation service (SOS) systems that use the 2 025-2 110 MHz (Earth-to-space) (space-to-space) and 2 200-2 290 MHz (space-to-Earth) (space-to-space) frequency bands for use in assessing of interference and for conducting sharing studies

This Recommendation provides technical and operational characteristics for use in sharing studies for the space operation service (SOS) systems that use the 2 025-2 110 MHz (Earth-to-space) (space-to-space) and 2 200-2 290 MHz (space-to-Earth) (space-to-space) frequency bands.

Draft revision of Recommendation ITU-R RS.1166-5 Doc. 7/22(Rev.1)

Performance and interference criteria for active spaceborne sensors

The proposed revisions include information about a new active sensor type, the radar sounder, along with information about a special class of synthetic aperture radar (SAR) imager systems referred to as snow water equivalent (SWE) retrieval radars. Performance criteria and interference criteria for the radar sounder active sensor type are included in Tables 1 and 2. In addition, a new section (Section 2) has been added to the Annex presenting information on performance and interference criteria for radar sounders for the purposes of active sensing of aquifers and ice sheets. Furthermore, a new subsection to the section covering SAR imagers has been added, which describes performance and interference criteria specifically for SWE retrieval radar systems. References to the “minimum reflectivity” performance criteria have been replaced with an equivalent metric known as the “noise-equivalent sigma zero (NESZ)”, as this term is more commonly used contemporarily. Finally, the sections in the Annex which cover performance and interference criteria for the active sensor types have been rearranged to correspond to increasing lowest possible centre frequency.

Draft revision of Recommendation ITU-R RS.2105-2 Doc. 7/23(Rev.1)

Typical technical and operational characteristics of Earth exploration-satellite service (active) systems using allocations between 40~~32~~ MHz and 238 GHz

The proposed revisions include information about a new active sensor type, the radar sounder. To that end, Tables 1, 2 and 3 have been modified to include information related to the radar sounder type. The order of the active sensor types has been rearranged to correspond to increasing lowest possible centre frequency value. Furthermore, a new subsection (section 7.1) has been added to reflect typical parameters of active sensors operating in the 40-50 MHz band, which includes a new table, namely Table 5, which contains the characteristics of the EESS (active) spaceborne radar sounder characterized in Recommendation ITU-R RS.2042-2.

Characteristics for the L-band synthetic aperture radar (SAR) systems from the NASA-ISRO synthetic aperture radar (NISAR) mission and the Advanced Land Observing Satellite (ALOS) missions ALOS-2 and ALOS-4, have been updated in the new Table 7 (previously Table 6), under the monikers SAR-

B1, SAR-B2, and SAR-B4, respectively. In addition, characteristics for the NISAR S-band SAR have been included in the new Table 8 (previously Table 7), under the moniker SAR-C4.

Characteristics for a special class of synthetic aperture radar (SAR) imager systems referred to as snow water equivalent (SWE) retrieval radars can be found in Table 17, over the frequency range 13.25-13.75 GHz, and Table 18, over the frequency range 17.2-17.3 GHz.

Finally, the parameter name fields present in Tables 5-24, which contain characteristics of specific active sensor systems, have been modified to conform to the parameter name field definitions given in Table 4.

Draft revision of Recommendation ITU-R SA.2141-0 Doc. 7/25(Rev.1)

Characteristics of space research service systems in the frequency range 14.8-15.35 GHz

As a consequence of WRC-23 agenda item 1.13, the SRS allocation in the band was upgraded to primary status subject to a number of constraints to protect incumbent service systems. For SRS downlinks, Resolution **678 (WRC-23)** established a more restrictive power flux density limit of −138 dB(W/(m2・MHz)). Revisions are proposed as follows:

– Reduction of SRS spacecraft e.i.r.p. where necessary to meet the more constrained SRS downlink pfd requirement.

– Adjustment of SRS earth station parameters where necessary to provide for closure of the downlink.

– Updates to one of the *considerings*.

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