Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:

International Bureau Seeks Comment on Recommendations Approved by the World Radiocommunication Conference Advisory Committee	))))	IB Docket No. 16-185

COMMENTS OF ARRL, THE NATIONAL ASSOCIATION FOR AMATEUR RADIO

ARRL, The National Association for Amateur Radio, also known as the American Radio Relay League, Incorporated ("ARRL"), submits this response to the Public Notice[1] seeking comment on draft recommendations approved by the Commission's World Radiocommunication Conference Advisory Committee ("WAC") on September 30, 2021. These issues will be considered at the 2023 World Radiocommunication Conference (WRC-23). ARRL is in agreement with the draft recommendations concerning Agenda Item 1.12 and Agenda Item 9.1 Topic A.

I. Introduction

ARRL is the national organization of the more than 750,000 radio amateurs in the United States. ARRL regularly represents the interests of this nation's radio amateurs through its participation in the proceedings of the World Radio Conferences and the Commission's associated advisory committees. Its representatives are actively participating in the work of the WAC leading up to WRC-23.

[1] International Bureau Seeks Comment on Recommendations Approved By World Radiocommunication Conference Advisory Committee, IB Docket No. 16-185, DA 21-1235 (rel. Sept. 30, 2021) (Request for Comment).

II. Agenda Item 1.12, Spaceborne Radar Sounders

The WAC draft recommendation is that the United States support "studies and possible consideration of a new allocation to the Earth exploration-satellite (active) service on a secondary basis within the frequency range 40-50 MHz" for spaceborne radar sounders. Of critical importance is the statement in the draft recommendation that such consideration "would need to take into account the results of studies on spectrum needs and sharing studies, *and the need to provide protection and to not impose constraints on incumbent services in … adjacent frequency bands."* [2]

The Amateur Radio Service in the United States actively employs a primary allocation at 50-54 MHz, which is immediately adjacent to the band under consideration in Item 1.12. Other countries throughout Regions 2 and 3 also designate a primary allocation for the Amateur Radio Service in this spectrum range. Additionally, WRC-19 adopted a secondary allocation for the Amateur Radio Service in 50-52 MHz in Region 1, and the spectrum is used by radio amateurs in most Region 1 countries either on a secondary basis or, in many of those countries, on a primary basis in portions of the band as provided by footnote.

Our support for the draft recommendation is conditioned on explicitly including in the recommendation the need to provide protection and not impose constraints on incumbent services in adjacent frequency bands. Our expectation is that such studies will identify the capability and adequate means to protect the weak signal operations of the Amateur Radio Service on the adjacent 50-54 MHz band without imposing any restraint on those operations if the need to use this spectrum for spaceborne radar sounders is confirmed. In this regard, we note

[2] Draft Preliminary Views on WRC-23, WAC-23/034(13.09.2021) appended to the FCC's Request for Comment, *supra* note 1.

that use of this band by radio amateurs was recently studied and documented in Report ITU-R M.2478, "Spectrum needs for the amateur service in the frequency band 50-54 MHz in Region 1 and sharing with mobile, fixed, radiolocation and broadcasting services."[3]

III. Agenda Item 9.1 Topic A, Space Weather Sensors

Agenda Item 9.1 Topic A is to consider and approve the Report of the Director of the Radiocommunication Bureau reviewing the results of studies relating to space weather sensors "with a view to describing appropriate recognition and protection … without placing additional constraints on incumbent services." The WAC draft recommendation is that the view of the United States be "that changes to the Radio Regulations are outside the scope of Agenda Item 9.1" and that the United States express its support for "conducting the studies called for in Resolution 657 (Rev.WRC-19)" and commit to contributing "to the work required under the Resolution."[4]

ARRL supports this draft recommendation. Radio amateurs have a significant interest in space weather and its impacts.[5] Nevertheless, the scope of Resolution 657 is extremely broad,

[3] This ITU-R report can be accessed at: https://www.itu.int/dms_pub/itu-r/opb/rep/R-REP-M.2478-2019-PDF-E.pdf (viewed on Oct. 12, 2021).

[4] Draft Preliminary Views on WRC-23, WAC-23/036(13.09.2021) appended to the FCC's Request for Comment, *supra* note 1.

[5] For example, the NASA Space Weather Applications Operations Phase II Research Program awarded a grant to help develop an empirical model for predicting traveling ionospheric disturbances (TIDs) at high frequencies (HF) using data collected over an 11-year solar cycle by radio amateurs using automated, global-scale radio communications networks operated by the amateur radio community. *See* ARRL News, HamSCI Founder Nathaniel Frissell, W2NAF, Awarded $481,260 NASA Research Grant (Sept. 8, 2021) at https://tinyurl.com/nzpvzbba (viewed on Oct. 12, 2021). Space weather projects funded by grants from the National Science Foundation include radio amateurs developing a Personal Space Weather Station – a modular, multi-instrument, ground-based space science observation platform – to study variability in the coupled geospace system. *See* related ARRL news stories at https://tinyurl.com/4sxdf75c and https://tinyurl.com/xrujbucz (viewed on Oct. 12, 2021). *See also*, N.A. Frissell, Ionospheric Sounding Using Real-Time Amateur Radio Reporting Networks, 12 Space Weather pp. 651-656 (Dec. 2014).

covering frequencies from 13 kHz through at least 15 GHz and potentially impacting virtually all radio amateur operations. Studies have been undertaken by ITU-R relating to the technical and operational characteristics and spectrum requirements of space weather sensors. Completion and consideration of these studies are essential to achieving the desired objective of not placing any additional constraints on incumbent services.

In this regard, we also note that Resolution 657 is on the preliminary agenda for WRC-27 and may be further considered at WRC-23. ARRL accordingly supports the WAC draft recommendation that changes to the Radio Regulations are outside the scope of Agenda Item 9.1.

IV. Conclusion

ARRL supports the WAC draft recommendations concerning Agenda Item 1.12 and Agenda Item 9.1 Topic A for the reasons stated above.

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