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| **38 MEETING OF PERMANENT**  **CONSULTATIVE COMMITTEE II:**  **RADIOCOMMUNICATIONS**  **November 8 to 12, 2021**  ***Virtual, Mexico*** | | **OEA/Ser.L/XVII.4.2.38**  **CCP.II-RADIO /doc. /21**  **22 October 2021**  **Original: English** | |
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|  | **PRELIMINARY VIEWS FOR WRC-23**  **AGENDA ITEM 9.1 Topic A** | |  |
|  | **(Item on the Agenda: 3.1)** | |  |
|  | **(Document submitted by delegation of the United States of America)** | |  |

**Impact on the sector:**

This document supports the work of CITEL’s PCC.II Working Group for WRC under 3.1 of the agenda.

**Executive Summary:**

This document contains an attachment for the USA preliminary view on WRC-23 Agenda Item 9.1 Topic A for consideration in CITEL´s preparation for WRC-23.

**UNITED STATES OF AMERICA**

**DRAFT PRELIMINARY VIEWS ON WRC-23**

**AGENDA ITEM 9.1 Topic A**: to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the ITU Convention on the activities of the ITU Radiocommunication Sector since WRC-19:

- In accordance with Resolution **657** (**Rev.WRC-19**), review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weather sensors with a view to describing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services;

**BACKGROUND:** Space weather refers to the physical processes occurring in the space environment that ultimately affects human activities on Earth and in space. Space weather is influenced by the solar wind and the interplanetary magnetic field (IMF) carried by the solar wind plasma. These disturbances can result in a hazardous radiation environment for satellites and humans at high altitudes, ionospheric disturbances, geomagnetic field variations, and the aurora. These effects can in turn impact a number of services and infrastructure located on the Earth’s surface, airborne, or in Earth orbit. Disturbances in the ionosphere and atmosphere have important impacts on radio communication, satellite navigation systems and heat the atmosphere which increases the atmospheric drag experienced by LEO satellites, including the International Space Station. Radionavigation-satellite service (RNSS) signals, which are used for a growing number of precision positioning, navigation, and timing applications, as well as for sounding the atmosphere using radio-occultation, are affected by space weather as they propagate through the ionosphere.

The ITU-R has undertaken the study of the technical and operational characteristics and spectrum requirements of spectrum-reliant space weather sensor systems. Specific study efforts underway in response to the requirements in Resolution **657 (Rev.WRC-19)** include:

1) document technical and operational characteristics, including development of sensor protection requirements, on specific receive-only space weather sensor types which need to be protected,

2) to determine if receive-only space weather sensors shall be designated as applications of the Metaids service; to determine the appropriate radiocommunication service, if any, for cases where it is determined that receive-only space weather sensors do not fall under the Metaids service;

3) conduct sharing studies with incumbent systems operating in various frequency bands used by receive-only space weather sensors (within select ranges of 10 MHz-15 500 MHz) with the objective of determining potential regulatory provisions for their appropriate recognition in the Radio Regulations, while not placing additional constraints on incumbent services,

Resolution 657 **(Rev.WRC-19)** is also on the preliminary agenda for WRC-27 and will be further considered at WRC-23 based on the results of studies.

**U.S. VIEW:** The United States is of the view that changes to the Radio Regulations are outside the scope of Agenda Item 9.1. The United States supports conducting the studies called for in Resolution **657 (Rev.WRC-19)** andwill contribute to the work required under the Resolution.

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