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|  | **DRAFT PRELIMINARY VIEW FOR** **WRC-27 AGENDA ITEM 1.17** |  |
|  | **(Item on the Agenda: 3.1)** |  |
|  | **(Document submitted by the Delegation of the United States)** |  |

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**UNITED STATES OF AMERICA**

**DRAFT PRELIMINARY VIEWS ON WRC-27**

**AGENDA ITEM 1.17**: to consider regulatory provisions for receive-only space weather sensors and their protection in the Radio Regulations, taking into account the results of ITU Radiocommunication Sector studies, in accordance with Resolution **682 (WRC23)**;

**BACKGROUND**:

Space weather events can cause harm to important sectors of national economies, security and human welfare. As such, space weather data is important, and regulatory protection is needed for space weather observation systems, including receive-only sensors that measure low-level emissions from sources such as the Sun, the Earth’s atmosphere and other celestial bodies. Article **29B** and Resolution **675 (WRC-23)** defines space weather and designates space weather sensors to the meteorological aids service in the subset MetAids (space weather). However, no notification of frequency assignments to a station used for space weather observation be made by administrations under MetAids (space weather) until WRC-27 introduces the corresponding allocations in Article **5**.

Resolution **682 (WRC-23)** calls for studies on system characteristics, spectrum needs, and appropriate protection criteria for receive-only space weather sensors. Additionally, it calls for sharing and compatibility studies of receive-only sensors for potential new primary allocations to MetAids (space weather) in six specific frequency bands (27.5-28.0 MHz, 29.7-30.2 MHz, 32.2-32.6 MHz, 37.5-38.325 MHz, 73.0-74.6 MHz and 608-614 MHz) without claiming protection from, or constraining the future development of, incumbent services in these or adjacent frequency bands. Lastly, it calls for studies on possible regulatory provisions to accommodate the notifications of receive-only space weather sensor stations for inclusion in the Master International Frequency Register (MIFR).

The importance of space weather radiocommunication applications has been emphasized by several international bodies, including the World Meteorological Organization (WMO), the Intergovernmental Panel on Climate Change (IPCC), the United Nations Office for Disaster Risk Reduction (UNDRR), the International Civil Aviation Organization (ICAO), the United Nations Office for Outer Space Affairs (UNOOSA). Furthermore, Resolution **136** (Rev. Bucharest, 2022) of the Plenipotentiary Conference underscores the important role of telecommunications and information technologies in monitoring, early warning, prevention and mitigation of emergency and disaster situations.

In carrying out the studies under WRC-27 agenda item 1.17, it is important to recognize that while space weather data products are used for forecasts and warnings related to public safety, the provisions of No. **1.59** and **4.10** do not apply. Additionally, it is important to recognize that the current provisions of Article **11** do not allow an administration to notify a frequency assignment to a receive-only terrestrial radio station, except for certain types of station (see **11.2**, **11.9** and **11.12**). Therefore, the procedure for notifying receive-only MetAids (space weather) stations currently does not exist. Furthermore, some receive-only space weather sensors in operation utilize bands not currently allocated to the MetAids service, and some of these sensors need to continue their current operation. Lastly, the studies under this agenda item consider receive-only space weather sensors with the understanding that they will be deployed only at a limited number of specific locations and not in a ubiquitous manner.

Report ITU-R RS.2456 provides information on radio spectrum-reliant sensors and systems that are operating in support of space weather monitoring, prediction and warnings. Additionally, there are ongoing efforts within ITU-R to determine the spectrum requirements and protection criteria of receive-only space weather sensors.

As stated in Resolution **682 (WRC-23)**, any new allocations to MetAids (space weather) shall not claim protection from, or constrain the future development of, incumbent services in the frequency bands considered in the Resolution, or in adjacent bands.

For the 608 – 614 MHz band, there are a number of allocations, among those include the broadcasting service on a primary basis in Regions 1 and 3 and in the adjacent bands in Region 2. Furthermore, this band is also allocated to the mobile service on a primary basis in Region 3 and on a secondary basis in Europe. In the adjacent bands, among other allocations, the mobile service is allocated on a primary basis, including IMT identifications in several countries across all three ITU Regions.

**U.S. VIEW**:

The United States recognizes that space weather phenomena pose a significant threat to ground-based and space-based critical infrastructure, modern technological systems, and humans working in space. The United States supports the consideration of new primary allocations to MetAids (space weather) in the six specified frequency bands and the associated regulatory provisions for ground-based, receive-only space weather sensors in the Radio Regulations, taking into account the results of the studies under Resolution **682 (WRC-23)**. Any allocations to MetAids (space weather) made at WRC-27 shall not claim protection from or constrain the future development of incumbent services in the specified frequency bands or in adjacent bands.