

INTERNATIONAL TELECOMMUNICATION UNION

PLENARY MEETING

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Member States of the Inter-American Telecommunication Commission (CITEL)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 10

10 to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention,

Background Information: Prediction and detection of disruptive geomagnetic storms and other space perturbations (hereinafter “space weather”) are critical to many economic and infrastructure areas globally. A definition of Space Weather was proposed to the CCV by the May 2015 meeting of Working Party 7C. Some of the larger vulnerable economic areas are satellite operations, air transport and electric power distribution. Failure to detect and predict disruptive conditions could result in loss of life and property as well severe impact to the economy. Space weather observations are critical to many aspects of national economies and the world population.

The motivating factor behind this proposal is the concern that space weather sensor technology has been developed and operational systems have been deployed without much regard for domestic or international spectrum regulations, or for the potential need for protection from interference. Systems of importance to national economies and the safety of the world population should have some level of recognition and protection in the international Radio Regulations.

It was recognized that obtaining protection from harmful interference to these systems after the fact may be challenging, at best. Given their importance, exploring the options for protection without placing additional restrictions on incumbent services has merit. Study Group 7 agreed to a Question at its October 2014 meeting to study the technical and operational characteristics and spectrum requirements of space weather detection systems. The Question also calls for the study to determine the most appropriate service or designation for space weather sensors.

The proposal is being made to add this issue to the preliminary agenda of WRC-23, providing adequate time to properly complete the required studies and allow all interested parties, including incumbent radio services, sufficient time to properly consider the matter. Inclusion on the WRC-19 agenda would likely result in insufficient time to complete all work to the satisfaction of all incumbent services.

Proposal:

ADD USA/10(SW)/1

DRAFT NEW RESOLUTION [USA-2023]

Preliminary agenda for the 2023 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2015),

considering

- a) that, in accordance with No. 118 of the ITU Convention, the general scope of the agenda for WRC-18 should be established four to six years in advance;
- b) Article 13 of the ITU Constitution relating to the competence and scheduling of world radiocommunication conferences and Article 7 of the Convention relating to their agendas;
- c) the relevant resolutions and recommendations of previous world administrative radio conferences (WARCs) and world radiocommunication conferences (WRCs),

resolves to give the view

that the following items should be included in the preliminary agenda for WRC-23:

- 1 to take appropriate action in respect of those urgent issues that were specifically requested by WRC-19;
- 2 on the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, and taking account of the results of WRC-19, to consider and take appropriate action in respect of the following items:
 - 2.[SW] in accordance with Resolution [AAA] (WRC-15), to 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 providing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services;
- 3 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC-03)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in Annex 1 to Resolution **27 (Rev.WRC-12)**;
- 4 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

5 in accordance with Resolution **95 (Rev.WRC-07)**, to review the resolutions and
recommendations of previous conferences with a view to their possible revision, replacement or
abrogation;

6 to review, and take appropriate action on, the Report from the Radiocommunication
Assembly submitted in accordance with Nos. 135 and 136 of the Convention;

7 to identify those items requiring urgent action by the Radiocommunication Study Groups;

8 to consider possible changes, and other options, in response to Resolution 86
(Rev. Marrakesh, 2002) of the Plenipotentiary Conference, an advance publication, coordination,
notification and recording procedures for frequency assignments pertaining to satellite networks, in
accordance with Resolution **86 (Rev.WRC-07)** to facilitate the rational, efficient, and economical use
of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

9 to consider and take appropriate action on requests from administrations to delete their
country footnotes or to have their country name deleted from footnotes, if no longer required, taking
into account Resolution **26 (Rev.WRC-07)**;

10 to consider and approve the Report of the Director of the Radiocommunication Bureau, in
accordance with Article 7 of the Convention:

10.1 on the activities of the Radiocommunication Sector since WRC-19;

10.2 on any difficulties or inconsistencies encountered in the application of the Radio
Regulations; and

10.3 on action in response to Resolution **80 (Rev.WRC-07)**;

11 to recommend to the Council items for inclusion in the agenda for the following WRC, in
accordance with Article 7 of the Convention,

invites the Council

to consider the views given in this Resolution,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to
prepare a report to WRC-23,

instructs the Secretary-General

to communicate this Resolution to international and regional organizations concerned.

Reasons: To provide recognition and protection of space weather sensors in the Radio
Regulations.

ADD USA/10(SW)/2

DRAFT NEW RESOLUTION [AAA]

Spectrum Requirements and Protection of Space Weather Sensors

The World Radiocommunication Conference (Geneva, 2015),

considering

- a) that space weather observations are becoming increasingly important in detecting solar activity events that could impact services critical to the economy, safety and security of administrations;
- b) that these observations are made from platforms that may be ground based, airborne, or space-based;
- c) that some of the sensors operate by receiving low level natural emissions of the Sun or the Earth's atmosphere, and therefore may suffer harmful interference at levels which could be tolerated by other radio systems;
- d) that space weather sensor technology has been developed and operational systems have been deployed without much regard for domestic or international spectrum regulations, or for the potential need for protection from interference,

recognizing

- a) that no frequency bands have been allocated or documented in any manner in the Radio Regulations for space weather sensor applications;
- b) that the ITU-R has a Study Question in force (7/102) to study the technical and operational characteristics, frequency requirements, and appropriate radio service designation for space weather sensors;
- c) that any regulatory action associated with space weather sensor applications should take into account incumbent services that are already operating in the frequency bands of interest,

resolves to invite WRC-23

while taking into account the results of ITU-R studies and without placing additional constraints on incumbent services, to consider regulatory provisions necessary to provide protection to space weather sensors operating in the appropriately designated radio service that is to be determined during ITU-R studies,

invites the ITU-R

- 1 to document, in time for WRC-19, the technical and operational characteristics of space weather sensors;
- 2 to determine, in time for WRC-19, the appropriate radio service designations for space weather sensors;
- 3 to conduct, in time for WRC-23, any necessary sharing studies for incumbent systems operating in frequency bands used by space weather sensors, with the objective of determining regulatory protection that can be provided while not placing additional constraints on incumbents services,

invites administrations

to participate actively in the studies and provide the technical and operational characteristics of the systems involved by submitting contributions to the ITU-R,

instructs the Secretary General

to bring this resolution to the attention of the World Meteorological Organization (WMO), Space Frequency Coordination Group (SFCG) and other international and regional organizations concerned.

Reasons: A resolution will support the ITU-R studies needed under the relevant WRC-23 agenda item.

ATTACHMENT

**PROPOSAL FOR ADDITIONAL PRELIMINARY AGENDA ITEM STUDYING
TECHNICAL AND OPERATIONAL CHARACTERISTICS, SPECTRUM
REQUIREMENTS AND PROTECTION OF SPACE WEATHER SENSORS**

Subject: Proposed Future WRC Agenda Item for WRC-2023 studying appropriate service designations and protection requirements for space weather measurements

Origin: United States of America

Proposal: in accordance with Resolution AAA, to review the review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weathers sensors with a view to providing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services.

Background/reason: Prediction and detection of disruptive geomagnetic storms and other space perturbations (hereinafter “space weather”) are critical to many economic and infrastructure areas, globally. Some of the larger vulnerable economic areas are satellite operations, air transport and electric power distribution. Failure to detect and predict disruptive conditions could result in loss of life and property as well severe impact to the economy. Space weather observations are critical to many aspects of national economies and the world population. Space weather sensor technology has been developed and operational systems have been deployed without much regard for domestic or international spectrum regulations, or for the potential need for protection from interference. Systems of importance to national economies and the safety of the world population should have some level of recognition and protection in the International Radio Regulations.

Radiocommunication services concerned: To be determined

Indication of possible difficulties: None foreseen

Previous/ongoing studies on the issue: ITU-R Study Question 7/102 in force with studies underway to document technical and operational characteristics and spectrum requirements.

Studies to be carried out by: SG7

with the participation

ITU-R Study Groups concerned: SG4, SG 5, SG 6

ITU resource implications, including financial implications (refer to CV126): **Minimal**

Common regional proposal: Yes/No
Number of countries:

Multicountry proposal: Yes/No

Remarks