QUESTION ITU-R 256-1/7[[1]](#footnote-1)\*

Space weather observations

(2015-2023)

The ITU Radiocommunication Assembly,

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 interference at levels which could be permissible for other radio systems,

noting

*a)* that currently there is no definition for Space Weather in the ITU terminology;

*b)* that the definition of Space Weather given by the World Meteorological Organization is as follows: “Space Weather encompasses the conditions and processes occurring in space, including on the sun, in the magnetosphere, ionosphere and thermosphere, which have the potential to affect the near-Earth environment”;

*c)* that the definition of space weather elaborated in Working Party (WP) 7C and agreed by ITU Coordination Committee for Terminology (ITU CCT), is as follows: “natural phenomena, mainly originating from solar activity and occurring beyond the major portion of Earth´s atmosphere that impact Earth’s environment and human activities”;

*d)* that considerations of possible radio communication service under which space weather observations could be performed were carried out in WP 7C, and, as a result of that, meteorological aids service was considered appropriate,

*e)* that ITU-R performed technical and regulatory studies for space weather in Report ITU-R RS.2456-1,

decides that the following Questions should be studied

1 What is the radio service(s) applicable for space weather sensors?

2 Which parts of the existing frequency allocations in RR Article **5** are suitable for use by space weather observations?

3 What are typical technical and operational characteristics of space weather sensors?

4 What protection would be necessary for the operation of these systems?

further decides

1 that the results of the above studies should be included in one or more ITU‑R Recommendations and/or Reports as appropriate;

2 that the above studies should be completed by the year 2027.

Category: S2

1. \* This Question should be brought to the attention of the World Meteorological Organization. [↑](#footnote-ref-1)