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| **WORLD WEATHER WATCH****COMMISSION FOR BASIC SYSTEMS** |  |
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| **Steering Group on Radio Frequency Coordination (SG-RFC)****Geenva. Switzerland. 17-19 Nov 2014.** | **Document SG-RFC/2014-2-04** |
|  | **05 Nov 2014** |
|  | **English only** |
|  |  |
|  | **Restricted access required? (Y/N)[[1]](#footnote-1)\*** | **N** |  |
| STEERING GROUP ON RADIO FREQUENCY COORDINATION (SG-RFC) |
| David Franc (USA) |
| ITU-R Study Group 7 Question on Space Weather Sensors |

**Introduction**

At its March 2014 meeting the SG-RFC had a discussion on the need to better understand the spectrum requirements, characteristics and operations of space weather sensors, and possibly consider action at a national level and/or within the ITU-R to provide additional protection to these sensors.

In order to better understand the possible actions needed to provide protection to these systems, a much better understanding of characteristics and operations of space weather sensors is required. In May 2014 the USA submitted a Preliminary Draft New Question to ITU-R Working Party 7C that was subsequently approved by Working Party 7C and Study Group 7 in September. The attached approved Question is the first step in the ITU-R to ensure the requirements for space weather sensors can be addressed.

**X. Action (by SG-RFC) Proposed**

The attached Study Group 7 Question is being provided to the SG-RFC for information. In addition, WMO Members are encouraged to contribute to the work under this Question by submitting information on space weather sensor characteristics, operations and compatibility issues with other radio systems. Member contributions can be made directly to meetings of ITU-R Working Party 7C or may possibly be submitted to future SG-RFC meetings for inclusion in a WMO submission to Working Party 7C.

**Y. Draft Text for Inclusion in the SG-RFC Meeting Reports or Other Documents**

As a follow-up to the discussion on space weather sensors at the March 2014 the USA developed a ITU-R Study Group 7 Question that was approved by ITU-R Study Group 7 in September 2014. The Question is the first step in determining the actions required to provide the necessary protection to space weather sensors. Members are encouraged to make contributions to the study process through submissions to either ITU-R Working Party 7C or to the WMO SG-RFC. Information on system characteristics, operations and known spectrum compatibility issues are needed.

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| Radiocommunication Study Groups |  |
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| Source: **7/102-E** | **Document**  |
| **7 October 2014** |
| **English only** |
| Working Party 7C |
|  NEW QUESTION ITU-R [SPACE-WEATHER][[2]](#footnote-2)\* |
| Space weather observations |

(2014)

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”,

decides that 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 2019.

Category: S3

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1. \* If restricted access is selected the WMO Document will only be accessible to the WMO WIKI registered users. [↑](#footnote-ref-1)
2. \* This Question should be brought to the attention of the World Meteorological Organization. [↑](#footnote-ref-2)