



Radiocommunication Bureau
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Administrative Circular
CAR/286

22 October 2009

To Administrations of Member States of the ITU

Subject: Radiocommunication Study Group 7

- **Proposed approval of 1 draft new ITU-R Question and 1 draft revised ITU-R Question**

At the meeting of Radiocommunication Study Group 7 held on 7 and 15 September 2009, 1 draft new ITU-R Question and 1 draft revised ITU-R Question were adopted and it was agreed to apply the procedure of Resolution ITU-R 1-5 (see § 3.4) for approval of Questions in the interval between Radiocommunication Assemblies.

Having regard to the provisions of § 3.4 of Resolution ITU-R 1-5, you are requested to inform the Secretariat (brsgd@itu.int) by 22 January 2010, whether your Administration approves or does not approve the proposals above.

After the above-mentioned deadline, the results of this consultation will be notified in an Administrative Circular. If the Questions are approved, they will have the same status as Questions approved at a Radiocommunication Assembly and will become official texts attributed to Radiocommunication Study Group 7 (see: <http://www.itu.int/publ/R-QUE-SG07/en>).

Valery Timofeev
Director, Radiocommunication Bureau

Annexes: 2

- 1 draft new ITU-R Question and 1 draft revised ITU-R Question

Distribution:

- Administrations of Member States of the ITU
- Radiocommunication Sector Members participating in the work of Radiocommunication Study Group 7
- ITU-R Associates participating in the work of Radiocommunication Study Group 7

Annex 1

(Source: Document 7/74)

DRAFT NEW QUESTION ITU-R [GROUND]/7*

Ground-based passive sensors

The ITU Radiocommunication Assembly,

considering

- a) that ground-based passive sensing is becoming increasingly important in the observation and monitoring of the Earth environment and phenomena affecting it;
- b) that these observations are made from platforms that may be ground-based, or from airborne platforms flown on balloons or aircraft;
- c) that RR No. **5.563A** specifically addresses ground-based passive atmospheric sensing,

noting

- a) that the definition of the Earth exploration-satellite service (EESS) in RR No. **1.51** indicates that information is collected from airborne or Earth-based platforms;
- b) that ground-based passive sensing is currently operated largely in frequency bands allocated to either EESS (passive) or radio astronomy,

decides that the following Questions should be studied

- 1** What are the main types of ground-based passive observations and what are their main applications?
- 2** What are the technical characteristics, operational and protection requirements of the ground-based passive sensing stations used to make these observations?
- 3** What are the frequency bands in which these measurements are made?

further decides

- 1** that the results of the above studies should be included in one or more Recommendation(s) and/or Report(s) as appropriate;
- 2** that the above studies should be completed by the year 2015.

Category: S2

* This Question should be brought to the attention of the World Meteorological Organization (WMO).

Annex 2

(Source: Document 7/64)

DRAFT REVISION OF QUESTION ITU-R 230/7

Preferred frequency bands and protection and sharing criteria for radio astronomy measurements from in space

(2000)

The ITU Radiocommunication Assembly,

considering

- a) that space-based radio telescopes provide information which cannot be obtained with ground-based radio telescopes, particularly as they enable observations:
 - with angular resolution not achievable with ground-based interferometry (~~Space VLBI~~);
 - with unprecedented sensitivity in measuring the cosmic microwave background radiation;
 - at frequencies below approximately 10 MHz where the Earth's ionosphere blocks radiation;
 - in some millimetre and sub-millimetre bands, where the Earth's atmosphere significantly attenuates (or completely blocks) radiation;
- b) that space-based VLBI, cosmic microwave background observations, very low frequency observations and observations in the atmospherically-opaque millimetre and sub-millimetre bands may be the only means to provide answers to certain fundamental questions of modern astronomy;
- c) that ~~frequency sharing and~~ protection criteria for radio astronomy observations with space-based radio telescopes may differ from those for ground-based radio astronomy due to the location of the space-based telescopes in orbit, their distance from the Earth, and their orientation relative to man-made emissions;
- d) that radio astronomy observations from space may be conducted in the frequency bands utilized by the space research service (passive);
- e) that, when conducting radio astronomy observations from space in bands shared by the active and passive services, the needs and requirements of both active and passive services need to be considered;
- f) that, unlike ground-based radio telescopes, space-based radio telescopes are located in close proximity to transmitters and receivers which are used for space operations and for data transmission;
- g) that highly successful space radio astronomy missions have already been flown and launch and operation of more such missions are envisaged in the future;

~~f~~h) that relevant technologies are being developed to enable such missions (deployable antennas, cooling systems, high data rate recording, transmission and processing systems, accurate pointing and stabilization of space based radio telescopes, etc.) and that such technology may be used by other telecommunication services in the future;

~~g~~i) that there ~~are~~is no specific provisions in the Radio Regulations for the protection of space-based radio astronomy (except for applications in the space research (passive) service in the band 1 668-1 668.4 MHz) ~~nor are there appropriate sharing criteria for such observations,~~

decides that the following Questions should be studied

1 What are the ~~appropriate~~preferred frequency bands in which space-based radio astronomy observations could be conducted?

2 What are the typical technical and operational characteristics of space-based radio astronomy observation systems?

3~~2~~ What are the ~~appropriate~~performance requirements, and protection and sharing criteria for space-based radio astronomy observations ~~from space?~~

further decides

1 that the results of the above studies should be included in (a) Recommendation(s) and/or (a) Report(s);

2 that the above studies should be completed by 2013~~06~~.

Category: S2
