

INTERNATIONAL TELECOMMUNICATION UNION



Radiocommunication Bureau
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Administrative Circular
CACE/572

1 June 2012

**To Administrations of Member States of the ITU, Radiocommunication Sector Members,
ITU-R Associates participating in the work of Radiocommunication Study Group 7
and ITU-R Academia**

Subject: Radiocommunication Study Group 7 (Science services)

- **Proposed adoption by correspondence of 1 draft new ITU-R Question**
- **Proposed suppression of 3 ITU-R Questions**

At the meeting of Radiocommunication Study Group 7, held from 8 to 9 May 2012, the Study Group decided to seek adoption of 1 draft new Question according to § 3.1.2 of Resolution ITU-R 1-6 (Adoption by a Study Group by correspondence). Furthermore, the Study Group proposed the suppression of 3 ITU-R Questions in accordance with Resolution ITU-R 1-6 (§ 3.6).

The consideration period shall extend for two months ending on 1 August 2012. If within this period no objections are received from Member States, the approval by consultation procedure of § 3.1.2 of Resolution ITU-R 1-6 will be initiated.

Any Member State who objects to the continuation of the approval procedure for the draft Question is requested to inform the Director and the Chairman of the Study Group of the reasons for the objection.

François Rancy
Director, Radiocommunication Bureau

Annexes: 2

- 1 draft new ITU-R Question
- Proposed suppression of 3 ITU-R Questions

Distribution:

- Administrations of Member States of the ITU and Radiocommunication Sector Members participating in the work of Radiocommunication Study Group 7
- ITU-R Associates participating in the work of Radiocommunication Study Group 7
- ITU-R Academia
- Chairmen and Vice-Chairmen of Radiocommunication Study Groups and the Special Committee on Regulatory/Procedural Matters
- Chairman and Vice-Chairmen of the Conference Preparatory Meeting
- Members of the Radio Regulations Board
- Secretary-General of the ITU, Director of the Telecommunication Standardization Bureau, Director of the Telecommunication Development Bureau

Annex 1

(Doc. 7/149)

Nano- and picosatellites have characteristics quite different from the well-known larger satellites. Currently there are over 500 of these satellites under development. Most of these satellites operate in the amateur-satellite service or meteorological-satellite service, although these missions are potentially inconsistent with these services. The growing number puts great pressure on the frequency bands currently in use. This new Study Question is intended to consider technical and regulatory measures to be taken for development of this new technology and supports the relevant WRC agenda items.

DRAFT NEW QUESTION ITU-R [XXX]/7

Characteristics and spectrum requirements of satellite systems using nano and pico satellites

The ITU Radiocommunication Assembly,

considering

- a)* that nano and pico satellites, commonly described as ranging in mass from 0.1 to 10 kg and measuring less than 0.5 m in any linear dimension excluding deployable antennas and booms, have physical characteristics that differ from those of larger satellites;
- b)* that as with any space station operations, it is important to ensure that operations are under positive control for purposes of avoiding interference, for purposes of any necessary collision avoidance operations, and for purposes of successful mission execution;
- c)* that such satellites are used increasingly, particularly in low Earth orbit, in studies of the Earth, the Earth's atmosphere, the near Earth space environment, other fields of science, educational activities and many other applications;
- d)* that for some activities, it may be desirable to make simultaneous use of several nano and pico satellites forming a satellite system;
- e)* that to date many of these nano and pico satellites have used spectrum allocated to the meteorological-satellite or the amateur-satellite service;
- f)* that nano and pico satellites for scientific applications may use bands that are allocated to the science services, consistent with those allocations,

decides that the following Questions should be studied

- 1 What are the distinctive characteristics of nano and pico satellites and satellite systems in terms of their use of the radio spectrum as defined by data rates, transmissions time and bandwidths?

2 Taking into account such distinctive characteristics, what are the spectrum requirements for nano and pico satellite systems?

3 Under which radiocommunication services can satellite systems using nano and pico satellites operate?

further decides

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

2 that the above studies should be completed by 2015.

Category: C2

Annex 2

Proposed suppression of ITU-R Questions

Question ITU-R	Title
232-1/7	Frequency sharing between spaceborne passive sensors and other services in the bands 10.60-10.68 GHz, 31.5-31.8 GHz and 36-37 GHz
235-1/7	Technical and operational characteristics of applications of science services operating above 275 GHz
243/7	Characterization of technical parameters and interference effects and possible interference mitigation techniques for passive sensors operating in the Earth exploration-satellite service (passive)
