



90<sup>th</sup> Anniversary  
CCIR/ITU-R Study Groups  
(1927-2017)

## Radiocommunication Bureau (BR)

Administrative Circular  
CACE/846

29 November 2017

**To Administrations of Member States of the ITU, Radiocommunication Sector Members, ITU-R Associates participating in the work of the Radiocommunication Study Group 3 and ITU Academia**

**Subject: Radiocommunication Study Group 3 (Radiowave propagation)**

- Approval of 1 new ITU-R Question
- Suppression of 1 ITU-R Question

By Administrative Circular CACE/832 of 22 September 2017, 1 draft new ITU-R Question was submitted for approval by correspondence in accordance with Resolution ITU-R 1-7 (§ A2.5.2.3). In addition, the Study Group proposed the suppression of 1 ITU-R Question.

The conditions governing this procedure were met on 22 November 2017.

The text of the approved Question is attached for your reference in Annex 1 and will be published by the ITU. The suppressed ITU-R Question is indicated in Annex 2.

François Rancy  
Director

**Annexes: 2**

**Distribution:**

- Administrations of Member States of the ITU and Radiocommunication Sector Members participating in the work of Radiocommunication Study Group 3
- ITU-R Associates participating in the work of Radiocommunication Study Group 3
- ITU Academia
- Chairmen and Vice-Chairmen of Radiocommunication Study Groups
- 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

### QUESTION ITU-R 234/3

#### Computation of ionospheric scintillation indices

(2017)

The ITU Radiocommunication Assembly,

*considering*

- a) that, in the case of some high-performance systems involving satellites, ionospheric scintillation effect should be considered for signals up to below 3 GHz and may occasionally be observed up to 10 GHz;
- b) that various satellite systems, including mobile- and radionavigation-satellite services, are employing non-geostationary satellite networks;
- c) that, in case of a scintillation event, rapid amplitude and phase fluctuations are observed with modifications to signal time coherence properties;
- d) that, in case radionavigation satellite services, scintillation can cause cycle slips, degrade the positioning accuracy and, in case of a strong event, can lead to a complete loss of signal lock,

*decides* that the following Question should be studied

for the computation of S4 and  $\sigma_\phi$  ionospheric indices, what is the impact of factors such as:

- the detrending process;
- the cut-off frequencies of the signal power spectral density;
- the sampling rate of the signal power spectral density;
- the signal duration;
- the GNSS receiver,

*further decides*

- 1 that the available information should be prepared as new Recommendations or as revisions to existing Recommendations;
- 2 that the above studies should be completed by 2019.

Category: S3

## Annex 2

### Suppressed ITU-R Question

Question ITU-R	Title
232-1/3	The effect of nanostructure materials on propagation

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