



International Amateur Radio Union

Summary Meeting Report

ITU-R WP4C #27: 20 – 26 October 2021 (Virtual Meeting)

Relating to preparatory work on WRC23 AI 9.1b only

The IARU was represented by Ole Garpstad (LA2RR – ITU Lead) and Barry Lewis (G4SJH – WRC23 AI9.1b Lead).

The relevant 4C 9.1b related contributions were reviewed ahead of the meeting by correspondence in the IARU Global WRC23 AI9.1b task group. The IARU did not provide any written contributions to this meeting.

Background

As detailed in the report from WRC23 CPM-1, ITU-R WP4C is a contributing group and is responsible for developing the studies identified under *invites 2* of Resolution 774 on **WRC23 AI 9.1 topic b (RNSS and Amateur services coexistence)**.

All the contributions relating to this work were quickly referred to Sub Group 4C3 and dealt with directly in the 4C3 group chaired by a temporary chairman Mr Mitome from Japan. Sub group 4C3 met in five sessions over the period 20-25th October.

Contributions to the meeting relevant to AI 9.1b

The draft technical report **ITU-R M.[AMATEUR_RNSS]** which had been attached as Annex 7 to the chairman's report Doc 4C/245 from the previous meeting formed the basis as the working document for the work to progress.

Doc 4C/254 – France – Proposing a Liaison document to WP-5A.

Doc 4C/255 – France – Proposing new and updated studies for the draft working document.

Doc 4C/264– USA – Proposing editorial updates and comments against several elements of the working document.

Doc 4C/267– Germany – Providing results from a measurement campaign testing RNSS receivers for degradation from interference to examine the impact of frequency offset from the GALILEO carrier frequency.

Doc 4C/270– China – Proposing a new study for the draft working document.

Doc 4C/276– EC JRC- –Reporting on C/N0 degradation measurements across three RNSS receivers.

IARU objectives

The IARU objectives for the meeting on the 9.1b topic were:

- 1) To maintain the integrity of the amateur and amateur satellite service characteristics provided through WP5A.
- 2) Ensure any contributed studies choose appropriate characteristics for the scenarios under study.
- 3) Ensure that no pre-mature conclusions are drawn before full evaluation of the results have been considered by all parties.

Meeting Activity

For 9.1b, the IARU engagement concentrated on the contributions proposing studies and updates to the ITU-R M.[AMATEUR_RNSS] working document.

The working document now contains simulations provided by France and China to estimate the interfered area that might exist around an amateur service transmitter. A number of configurations are assumed including “Home Station 1”, “Home Station 2” and “Permanent Station” (e.g. Repeater station) producing both narrowband and wideband emissions. In addition two further scenarios are considered in which “Home Station 1” operates with antenna uptilt as an amateur satellite uplink station and in which “Home Station 2” operates with antenna uptilt as an E-M-E station.

During the meeting there was a great deal of off-line email discussion to mould the amateur station parameters used to be more appropriate than those that had been applied in the original contribution papers. Both China and France revised their studies based on these negotiations during the meeting and these updated studies are reflected in the draft working document. The interim results show interference distances of up to several km depending on the scenario, antenna and power level assumed. Work on these studies will continue into the next meeting.

These studies are also liaised to WP5A where initial comments, reactions and clarifications will be developed.

Summary of the meeting outputs relevant to AI 9.1b

Annex X to the chairman’s report **4C/YYY**: Working document towards preliminary draft new report **ITU-R M.[AMATEUR-RNSS]**. This working document forms the basis for ongoing contributions and work at the next meeting.

Annex G to the chairman’s report **4C/YYY**: Updated work plan for AI9.1 b. This shows there are only **two** more meetings to finalise the AI9.1b topic in WP4C. There is a timing issue between WP’s 4C and 5A and the deadline for CP{M text that needs resolution.

Temp Doc 105r1 Liaison to WP5A.

Next WP-4C meeting

4 –6 May 2022