



International Amateur Radio Union

Summary Meeting Report

ITU-R WP5A #28: 14th – 25th November 2022 (Hybrid Meeting)

Relating to the 23cm Band RNSS Coexistence Aspects and WRC23 AI 9.1b

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

Background

As detailed in the report from WRC23 CPM-1, ITU-R WP5A is the lead group responsible for developing the CPM report on agenda item 9.1 topic b and is working in collaboration with WP4C on the studies identified under *invites 2* of Resolution 774.

The contributions relating to this work are dealt with in working group WG5A-1 which met for thirteen sessions over the ten meeting days. WG5A-1 also deals with other aspects related to the amateur and amateur satellite services reported elsewhere.

New contributions to the meeting on the WRC23 AI9.1b topic were provided by ITU-R WP4C, Canada, France/China/Korea, France, Russian Federation and IARU. A German contribution from the last meeting was considered too. These were presented in WG5A-1 and used as the basis for further discussion and development of the WG5A-1 deliverables. The deliverables under development relating to AI9.1b are:

1. draft technical report **ITU-R M.[AMATEUR.CHARACTERISTICS]**
2. draft ITU-R Recommendation **ITU-R M.[AS_GUIDANCE]**

Working documents and contributions to the meeting relevant to AI 9.1b

The following working documents carried over from the previous meeting #27 formed the basis for the work to progress:

Document 5A/597-E, Annex 10 - The draft technical report **ITU-R M.[AMATEUR.CHARACTERISTICS]**.

Document 5A/597-E, Annex 11 - The draft recommendation **ITU-R M.[AS_GUIDANCE]**.

Input contributions

Doc 5A/664 – France/China/Korea– proposals for the draft recommendation ITU-R M.[AS_GUIDANCE]

Doc 5A/656 – Canada - proposals for the draft recommendation ITU-R M.[AS_GUIDANCE]

Doc 5A/661 – Russian Federation - proposals for the draft recommendation ITU-R M.[AS_GUIDANCE]

Doc 5A/670 – IARU - proposals for the draft recommendation ITU-R M.[AS_GUIDANCE]

Doc 5A/666 – France - proposals for the draft report ITU-R M.[AMATEUR.CHARACTERISTICS]

Doc 5A/618 – WP4C – Liaison

Doc 5A/577 – Germany - proposals for the draft recommendation ITU-R M.[AS_GUIDANCE]

IARU objectives

The IARU provided one contribution to this meeting proposing a simplified format and preferred 23cm band operating frequencies for the Annexes in the draft recommendation ITU-R M.[AS_GUIDANCE]. This contribution had been agreed in the IARU WRC23 AI9.1b task group and can be found [here](#). The IARU objective was therefore to stabilise the structure of the working document and attempt to get as many aspects as possible adopted. Contributions for the other deliverables were monitored closely.

Meeting Activity

a) Recommendation **ITU-R M.[AS_GUIDANCE]**

The work focussed on developing the main body and annex of this draft recommendation which is intended to provide guidance to administrations if they need to facilitate the protection of the RNSS primary allocation from transmissions in the secondary amateur and amateur satellite services.

The core of the guidance is to recommend certain parts from the band 1240 – 1300 MHz as far removed as possible from the RNSS operating centre frequencies in which amateur station operations would be preferred along with some power level constraints. A single annex is now proposed based on the “preferred frequencies” in the IARU contribution and all the input proposals received were compiled and discussed to decide whether any could be agreed at this point. Part of the draft annex is copied below and all the aspects between [] are to be discussed further at the next WP5A meeting. **The IARU proposals are in yellow highlight:**

Guidance on preferred frequency blocks and associated power levels for the amateur and amateur-satellite services use of the band 1 240-1 300 MHz

To avoid harmful interference into the RNSS (space-to-Earth), the following preferred frequency blocks and associated transmitter power levels are {identified}{ should be considered and should be implemented in the frequency band 1 240-1 300 MHz by the amateur and amateur-satellite service.}

- 1) For narrowband applications in the amateur service:
 - a) **Block A1: [1 296 – 1 298 MHz]; [Maximum transmitter power = 150W]**
Block A2: 1 298 – 1 300 MHz; Maximum transmitter power = 150W
 - b) **[Block B: [1 254 – 1 258 MHz]; [Maximum transmitter power = 100W]**
Block B: [1 255 – 1 257 MHz]: [Maximum transmitter power = 100W]
 - c) **[Block A': [1 293 – 1 294 MHz]; [Maximum transmitter power = 1W]**

[Block A' [1 293.845 – 1 294.345 MHz][10W EIRP] [Maximum transmitter power = 1W]

Preferred frequency block A' identified above should only be used for narrowband repeater station user input applications.

- 2) For broadband applications in the amateur service:
 - a) [Block B: [1 254 – 1 258 MHz]; [Maximum transmitter power = 100W][100W/1MHz]]
[Block B: [1 255 – 1 257 MHz]: [Maximum transmitter power = 100W][100W/1MHz]]
- 3) For narrowband applications operating in the amateur satellite service (Earth-to-space):
 - a) Block C: [1 260 – 1 262 MHz]; [Maximum transmitter power = 20W][100 W eirp @ 18 dBi dir]
Block C: [1 262 – 1 264 MHz]; [Maximum transmitter power = 20W][100 W eirp @ 18 dBi dir]
Block C: [1 261 – 1 263 MHz]; [Maximum transmitter power = 20W][100 W eirp @ 18 dBi dir]
Block C: [1 261 – 1 262 MHz]; [Maximum transmitter power = 20W][100 W eirp @ 18 dBi dir]
- 4) Outside these preferred frequency blocks, very low power experimental applications in the amateur and amateur-satellite-services may operate with a maximum power = [500mW][5mW]{ TBD}.
- 5) exclusion of the frequency bands [1 263.75-1 293.75] MHz and [1 259.25-1 277.25] MHz for national licensing and assignments of ATV.

Three main blocks A, B and C are proposed and anything above placed between [] remains unresolved and open for further contribution and discussion. Only Block A2 was agreed in this meeting. Block A' has been proposed to accommodate narrowband repeater input operation.

There are additional specific constraints from certain proponents that also require further discussion and contribution. Some of these constraints whilst based around the WP4C studies would seem difficult for administrations to implement and caused a long debate.

Finally there was a long discussion on the status of the recommendation and its implementation (should be/could be). There remains some tension between certain parties who would insist that it must be implemented given the status of the allocations. Others believe the administrations have a right to decide whether they need to protect RNSS nationally and therefore a need to adopt the guidance. This debate will continue.

b) Report **M.[AMATEUR.CHARACTERISTICS]**:

A contribution from France was largely editorial but a proposal in the introduction highlighting the “mass market roll out in the near future” of RNSS receivers caused a lengthy debate about its relevance in this report. The text remains unresolved. However other changes were largely accepted and the draft is elevated to Preliminary Draft Report.

During discussion the Russian Federation proposed text to indicate the primary allocation to the RNSS (space-to-space) in the same frequency range and wanted to stress this has

not been studied. They consider that these space borne receivers need protection too. Most in the meeting questioned this and considered it out of scope.

Summary of the meeting outputs relevant to AI 9.1b

Annex 5 to the chairman's report **5A/708**: PDNR ITU-R M.[AMATEUR.CHARACTERISTICS]. This working document forms the basis for ongoing contributions and work at the next meeting.

Annex 6 to the chairman's report **5A/708**: Working document towards a Recommendation on guidance for the amateur and amateur satellite service use of the 1240-1300 MHz band.

A liaison response to WP4C has been held over to the next meeting.

Next WP-5A meeting: 9 – 18th May 2023.

A second meeting is scheduled for 11-21st September 2023 but there is likely to be a debate at the next meeting on whether this is required. Study Group 5 is scheduled 25-26th September 2023 where it is expected that the deliverables discussed above will be adopted..