



International Amateur Radio Union Region 1

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Subject: 15 m Band Satellite Planning

Summary: Proposal to allocate (part of) the 15 meter band for amateur satellite use

History

The 15 meter band (21.000-21.450 MHz), was allocated to the amateur and amateur-satellite services by WARC-1979. It has been used by amateur radio satellites since 1987 and has proven very useful for propagation research and DXing. Most of this use has been for linear transponder uplinks, in which the ground station transmits CW or SSB on 15 meters and the satellite retransmits the signal on another band.

Satellite	Launched	Frequency (MHz)	Type
RS-10	1987	21.160-21.200	Uplink
RS-11	1987	21.210-21.250	Uplink
RS-12	1991	21.210-21.250	Uplink
RS-13	1991	21.260-21.300	Uplink
AO-40	2000	21.210-21.250	Uplink

Recent coordination requests

In 2016 the IARU Satellite Frequency Coordination Panel received a coordination request from the USA for HFSAT, a HF satellite transponder with an uplink in the 15 m band and a downlink in the 10 m band. For 10 m the regional band plans show where amateur satellites can be accommodated. For 15 m there is no such provision although the ITU Radio Regulations allow both amateur and amateur satellite usage in the band. After consulting the IARU Regions it was agreed to allow satellite uplink traffic in the upper part of the 15 m band.

In a formal sense no coordination was done. The sentence used in the coordination letter was: "It is understood that terrestrial amateur stations will access the transponder in the frequency band 21.385-21.415 MHz using SSB-mode"

In 2018 a similar request was received for CAS-5A, a Chinese satellite that plans to use two transponders with uplinks in the 15 meter band:

1. 21.400 MHz with 30 kHz BW (downlink on 10 m)
2. 21.435 MHz with 15 kHz BW (downlink on 70 cm)

Again, the IARU Regions were consulted and a coordination letter containing a similar sentence as used for HFSAT was issued.

IARU Region 3 General Conference 2018

At its 17th General Conference held in Seoul, Republic of Korea, IARU Region 3 decided to amend the Region 3 bandplan, permitting 21.125-21.450 MHz for shared (non-exclusive) use by amateur satellites.

Proposal

Rather than asking the IARU Regions for permission every time a request for use of the 15 m band is submitted, the Satellite Frequency Coordination Panel prefers that the regional bandplans be modified to allow amateur satellite stations in all, or part, of the 15 m band.

The IARU Satellite Frequency Coordination Panel sees three options:

1. An exclusive satellite segment in the 15 m band similar to that provided in the 10 m band. However the view of the panel is that there is insufficient spectrum for this option.
2. Allow amateur satellite stations anywhere in the 15 m band. This option gives optimal flexibility. To reduce the possibility of interference with terrestrial stations, the use of transmission modes by the satellite would follow the planning for terrestrial stations.
3. Allow amateur satellite stations in part of the 15 m band. To support Global frequency harmonization, and given the outcome of the IARU Region 3 General Conference, I propose that the 21.125-21.450 MHz frequency band be designated for use by amateur satellites on a non-exclusive basis.

Financial Implications: none