

INTERIM MEETING OF THE IARU REGION 1 VHF/UHF/MICROWAVE COMMITTEE
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Contact	Graham Shirville G3VZV
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Current active transponder satellites

There are currently only four satellites, in low earth orbit, carrying voice transponders:

- A07 - linear transponders – launched 1974 so will celebrate its 40th birthday next year!
 - F029 - linear transponder
 - S050 - FM transponder
 - V052 - linear transponder
- (There were nine such active spacecraft at the time of my last report in 2011)

Additionally there are more than 20 cubesats currently active transmitting a variety of data and CW beacons and a number of Russian satellites which also use frequencies within the 70cms band for their data downlinks.

AMSAT satellite projects (under construction or at proposal stage)

This list shows a number of the active projects known to be underway at this time:

- Phase 3E - AMSAT-DL – launch date unknown
- Kiwisat - AMSAT-ZL – launch date unknown
- ESEO - AMSAT-UK (communications package only) possible launch 2015
- FUNcube-1 - AMSAT-UK (cubesat) expected launch 2013
- FUNcube-2 on UKube - AMSAT-UK (cubesat) expected launch 2013
- Nextgen/Fox - AMSAT-NA (cubesat) expected launch 2013/2014

CubeSats

Delfi-N3Xt and Turksat -3USat are both University CubeSat projects which have linear U/V (ie 435MHz up 145MHz down) or V/U transponders as part of their mission. Both of these are expected to be launched this year. Additionally, there are a number of University CubeSats under development, which have an “end of life” single channel FM to DSB transponder incorporated into their transceivers. Generally these are U/V configurations.

Frequency Coordination

The IARU Frequency Coordination Panel has continued to be very active and is working to ensure that any satellite project which is intending to use frequencies in the amateur satellite service is actually compliant with the requirements for such use. The IARU Panel has dealt with more than 70 proposals in the past three years.

It is understood that in the US the FCC have decided to require most of the NASA supported CubeSat projects to be licensed as “experimental stations” rather than as amateur stations using the Amateur Satellite Service. Where these projects are using frequencies which coincide with those of the amateur satellite Service the IARU AC has instructed the Panel to provide coordination for them. Obviously the usual requirements for the stations to be operated only by licensed radio amateur operators will no longer apply, but these spacecraft will have to cease operations in the event of them causing interference to any amateur activities.

Full details of all satellite projects which have come to the notice of the Coordination Panel can be found at <http://www.amsat.org.uk/iaru/>

Education Outreach

Both of the FUNcube projects and the FOX and ESEO projects are intended as dual-use missions, for both educational outreach and amateur usage, to support will support the educational Science, Technology, Engineering, Maths (STEM) initiatives. The FUNcube Dongle SDR will be used to create simple groundstations for use by schools.

The International Space Station

There continue to be a large number of contacts between the astronauts and schools using the 145MHz band organised by ARISS. Additionally the HAMtv project, to support these contacts with direct DATV video links from the ISS should start this year. The hardware for this system will be delivered to the ISS in June on board the Japanese HTV cargo carrier and tests should commence shortly thereafter. The HAMtc hardware will be located in the European Columbus module and it has been funded by the ESA Human Space Flight Education Office. It is anticipated that this system, which will use our S Band allocation, will transmit a video beacon when not in use for school qsos.

Graham Shirville G3VZV

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