



## e-Callisto status report/news-letter #38

### 1st instrument in Spain deployed:

A new Callisto system eC57 has recently been installed and set into operation at the location of the Space Research Group of University of Alcalá in Spain.



Fig. 1: The antenna is a commercial LPDA (Logarithmic Periodic Dipole Array) from CREATE CLP5130-1N connected to a low noise preamplifier Mini-Circuits ZX60-33LN with 20 dB of gain and 1.1 dB of noise figure. Data (EA4RKU\*.fit) are already transferred in real time to the archive at FHNW in Switzerland. The antenna can track the sun with a radio-amateur positioning system.

**Welcome Spain on board of the e-Callisto network!**

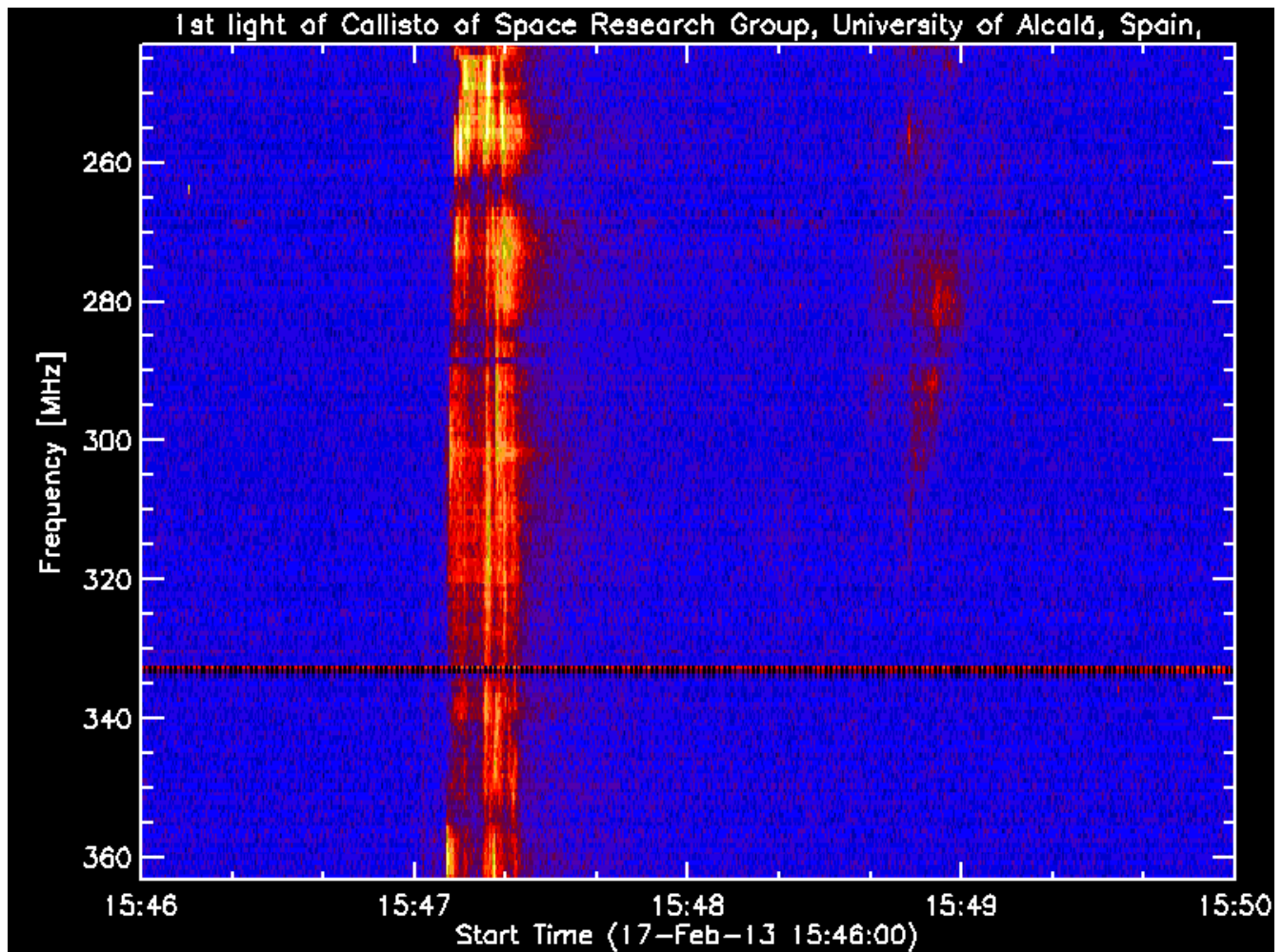


Fig. 2: 1st light, a type III solar burst recorded in Spain. The same burst was also observed at some other stations of the e-Callisto network at similar longitudes (Switzerland, Germany).

NOAA event-list:

7010	1545	1550	1552	G15	5	XRA	1-8A	M1.9	2.9E-03	1675
7010 +	1547	////	1547	SVI	C	RSP	103-180	III/2		
7010 +	1547	1547	1547	SAG	G	RBR	410	1600		
7010	1547	1547	1551	SAG	G	RBR	610	300		
7010 +	1547	1547	1551	SAG	G	RBR	1415	360		
7010 +	1547	1547	1549	SAG	G	RBR	245	6700		



### New antenna design at Mauritius University:

People from University of Mauritius designed and built in their workshop a new high gain logarithmic-periodic crossed dipole array to observe solar radio bursts. Due to the latitude of the observatory at Poste de Flacq, the antenna is pointing to zenith and does not need to track the sun.



Fig. 3: log-per at MRT. In the background between the bushes some white helix antennas from the historic large interferometer at 150 MHz.

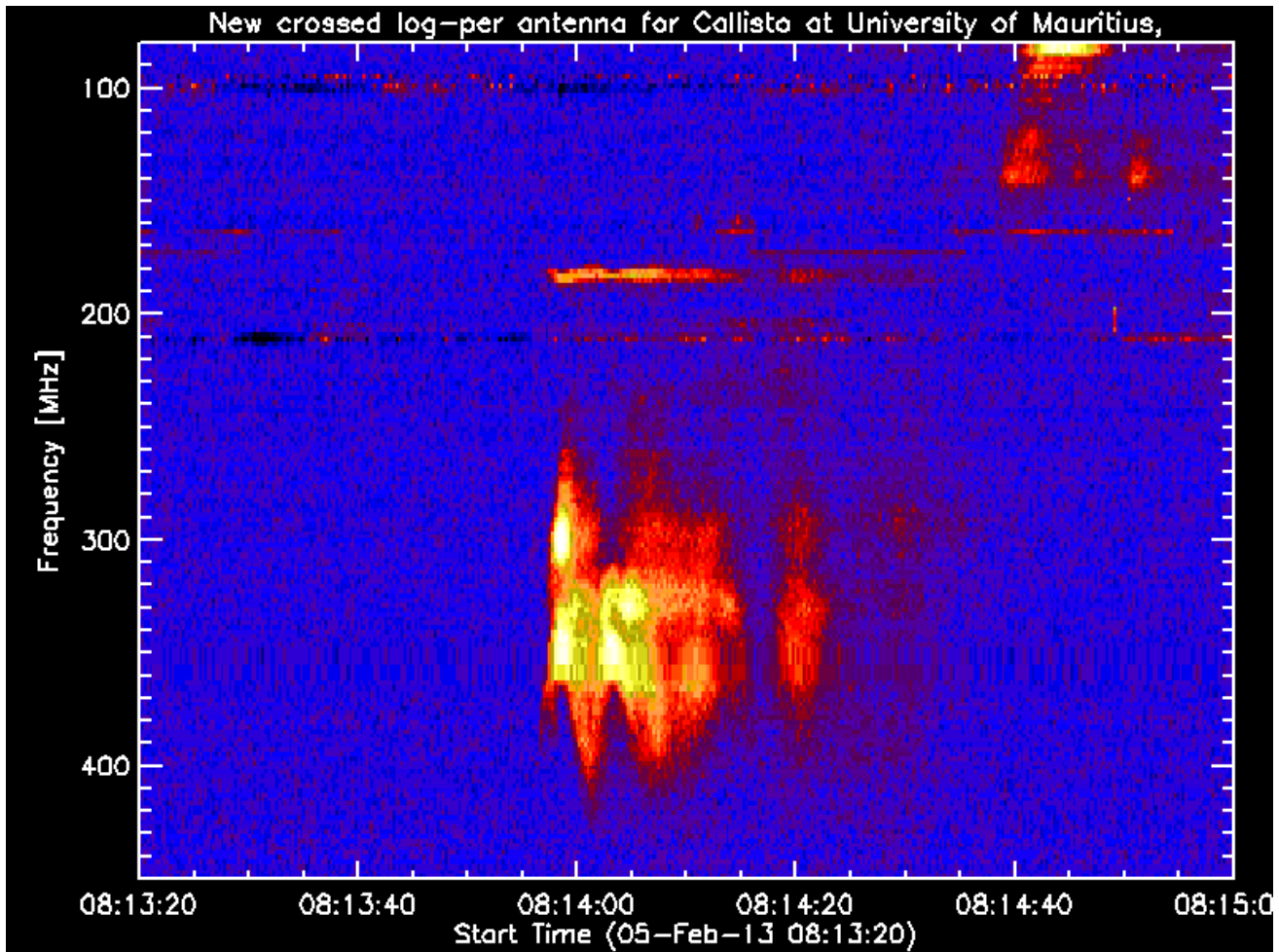
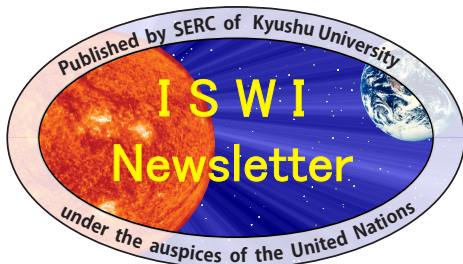


Fig. 4. 1<sup>st</sup> light observed with the new antenna, probably a type V burst or may be even U-bursts {tbd}?



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on 27 Feb 2013.



## AOB:

Thanks to Witham. D. Reeve, Anchorage Alaska, we are now aware of a street in Tucson Arizona with the same name as our network....



Fig. 5: E Callisto Circle on Google Earth.

- A new Callisto system is currently set up in Hawaii, more about this in one of the next news-letters.
- A new Callisto system is currently set up in New York, more about this in one of the next news-letters.
- Another Callisto with LNA has been delivered to Malaysia. Malaysia is the country with the highest density of Callisto radio spectrometers (currently 5 instruments).
- The server at FHNW is breaking down almost once a week, sorry about that. I hope technicians can fix the problem soon.
- A new burst type has been found with our prototype spectrometer BINGO-Demo while observing L-band. This prototype is a combination of an L-band down-converter and Callisto as a backend. In fact this event is NOT a solar burst, but a direct hit into the antenna beam from a plane using TACAN (Tactical Air Navigation). Prof. Benz (emeritus) named this new type of electromagnetic



event 'Cigar-burst'. They are so strong, that many channels are affected; the instrument may even get saturated.

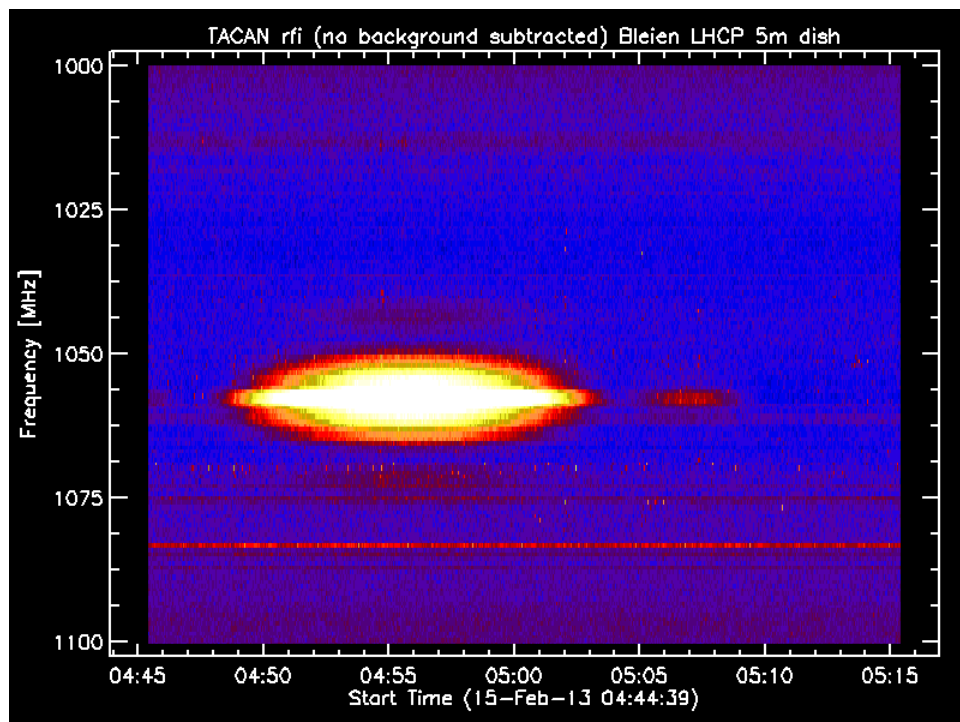


Fig. 6. 'Cigar-burst' from TACAN observed with Callisto, connected to a heterodyne-down-converter.

### To remember:

CALLISTO or Callisto denotes to the spectrometer itself while e-Callisto denotes to the worldwide network.

Please do not respond to the email-address of the list-server, respond instead directly to me to the address below.

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