

CALLISTO status report/newsletter #58

Almaty, Kazakhstan 2nd Callisto at low frequency fully operational

In February 2015 the **Institute of Ionosphere** in Alma-Ata, Republic of Kazakhstan got a 2nd Callisto to conduct low frequency solar burst observations with a CLP -5130-N antenna (LPDA), attached to the rim of their 12 m parabolic dish at the Tian Shan Observatory (TSAO) at 2800 m asl.

For a dish image, see: <https://www.flickr.com/photos/steppetales/6189771683/>

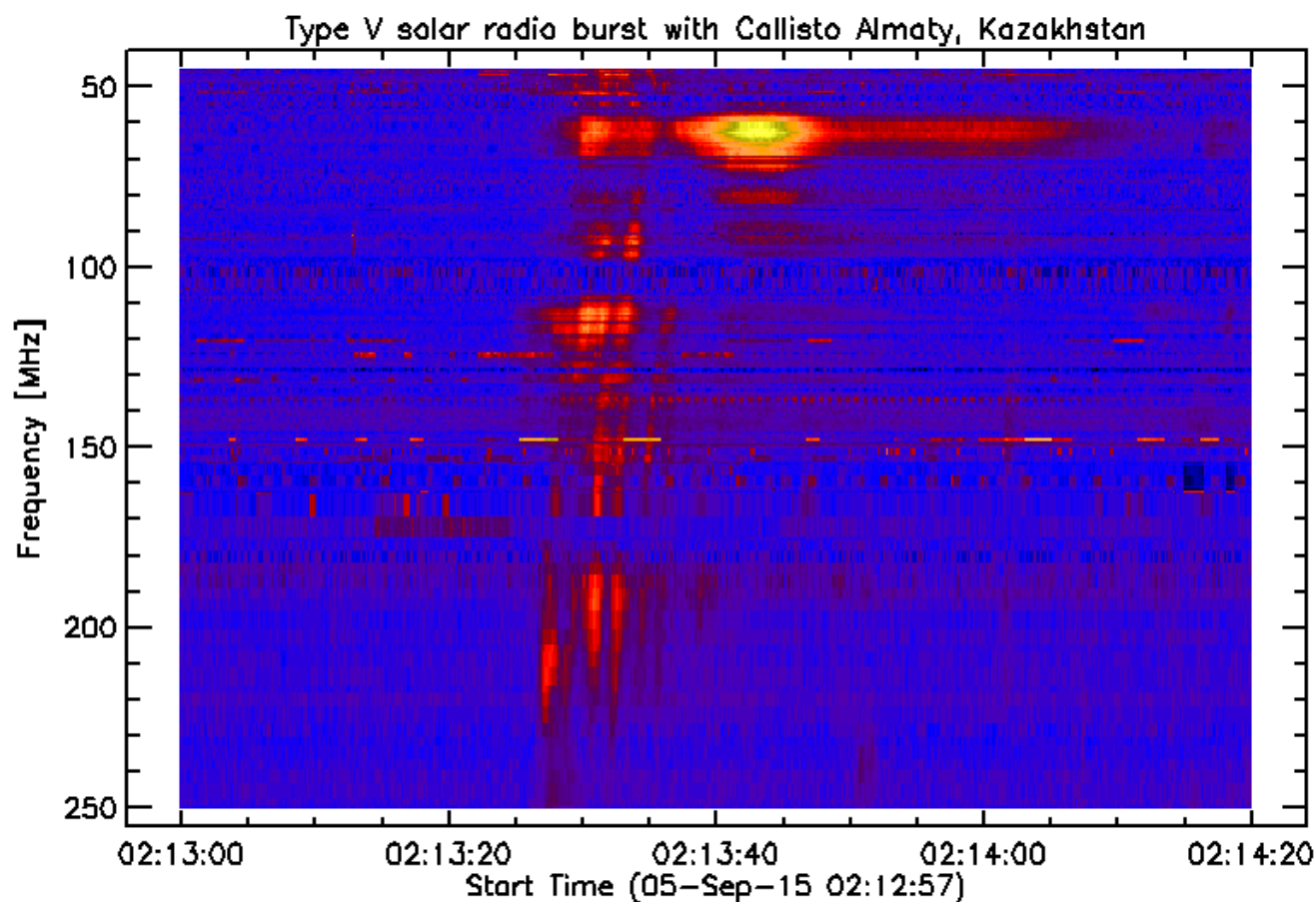


Fig. 1: Type V burst during an x-ray event XRA 1-8A, B3.0. Plot shows a combination of two instruments, processed in SSW-IDL. Background is subtracted and wrong channels eliminated.



Callisto #83 delivered to Rozhen Astronomical Observatory, Bulgaria

Kamen Kozarev of the **Rozhen National Astronomical Observatory** in Bulgaria managed to get sufficient funding through crowd funding for a small radio telescope for education see here:

<https://www.indiegogo.com/projects/solar-radio-telescope-for-education-and-research/#/story>

Congratulations for this success!

Their plan is to set up a LPDA of type CLP-5130 on a rotator to track the Sun. We hope they will get operational soon to provide solar radio burst data to the e-Callisto data archive.

Soon a Callisto instrument in Greenland

Kristoffer Leer from National Space Institute, **Technical University of Denmark** managed to get funding for solar radio burst observatory in Greenland. Currently we are in the planning phase, hoping to get the instrument installed early next year. This instrument will be the one at the most northern latitude.

INAF provides experimental automatic solar radio burst detection

An experimental radio burst automatic detection pipeline is active at the Basovizza Observing Station of the **Astronomical Observatory of Trieste**. It is based upon a GDL (GNU Data Language) batch procedure running on Trieste CALLISTO fits files acquired in the HF (45-80 MHz) and VHF (220-420 MHz) bands. Every day 2 HTML results files, containing radio bursts times and links to the related CALLISTO fits files and quick-looks, are generated. They may be opened by clicking respectively on the "HF bursts" and "VHF bursts" buttons placed in the daily result pages of Triest CALLISTO data search at: <http://140.105.77.37/calendar/callisto.php>; 2 different formats are currently offered in order to be evaluated.

Both the detection algorithm and the user interface are still 'work in progress'.

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Recent publication of University of Alcalá, Spain

Colleagues from **University of Alcalá**, Spain managed to get a paper published with the title 'A year of operation of Melibea e-Callisto Solar Radio Telescope'. The Journal of Physics: Conference Series "Volume 632 24th European Cosmic Ray Symposium (ECRS) 1–5 September 2014, Kiel, Germany" has been published (<http://iopscience.iop.org/1742-6596/632/1>). You can find attached our paper or downloaded from the link <http://iopscience.iop.org/1742-6596/632/1/012078>.



Recent publication based on Callisto data from TCD, Ireland

Astrophysics Research Group, School of Physics, **Trinity College Dublin**, Dublin 2, Ireland.
http://www.researchgate.net/publication/280773216_Low_frequency_radio_observations_of_bi-directional_electron_beams_in_the_solar_corona

AOB

- In case you plan to publish a paper based on e-Callisto data, please invite the observer and me as the PI of the network for co-authorship. This, according to the UN/ISWI resolution addressed during the last UN/Japan workshop at Fukuoka university. We are working on a document regarding data policy which will be published soon (Fung Shing NASA).
- Currently we have more than 83 instruments at more than 43 locations with users from 122 different countries. Unfortunately only a minority of hosts is providing data to the e-Callisto network. Please keep your instruments operational and send data to the archive.
- CALLISTO or Callisto denotes to the spectrometer itself while e-Callisto denotes to the worldwide network.
- General information and data access here: <http://e-callisto.org/>
- Callisto software does operate also under Win 8.1
- e-Callisto data are hosted at Fachhochschule Nordwestschweiz (University of applied sciences FHNW) in Brugg/Windisch, Switzerland. Process control, user communication and scripts are conducted at institute for Astronomy, ETH Zurich.

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email-address to be added to the data base.

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