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CALLISTO status report/news letter #46

New Callisto set into operation at Essen Observatory, Germany

During spring 2012, the radio astronomy group at the Walter Hohmann Sternwarte in Essen, Germany, began to build and set up the equipment for the e-Callisto system. Guided by an article from „Funkamateur“ magazine and the expertise of Karl Heinz Gansel, we succeeded. We started using a commercial log-periodic DVB-T antenna and the results were rather poor. Looking for a simple, low frequency variant we set up a biconical antenna. To get rid of tracking system, the antenna is oriented vertically and tilted. At this site the CALLISTO software is running on an Linux box over a Windows emulator and there a still some quirks to solve. Since October 25th 2013 we are online again and better than ever!
The stations coordinates are longitude 6.9790 degrees east, latitude 51.3938 degrees north and 120 meters above sea level.
Thanks to all involved in this project!

Homepage: http://www.sternwarte-essen.de

The biconical antenna and the responsible engineer Hannes.

The biconical antenna (called “Fliegenfischfänger” in German language, because it looks like a trap for flying fishes) mounted to a tree. The antennas directional sensitivity should follow the sun, so no tracking system is needed. (Still waiting for some NEC simulations.

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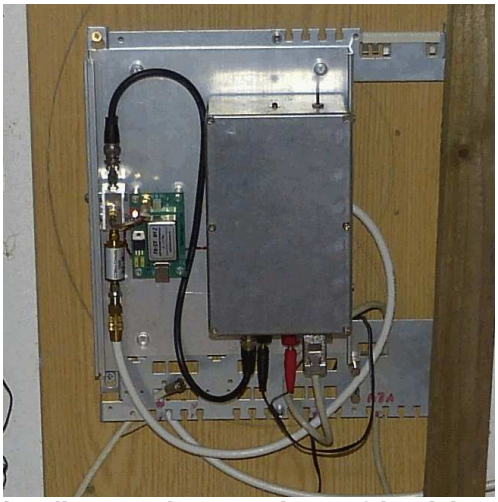
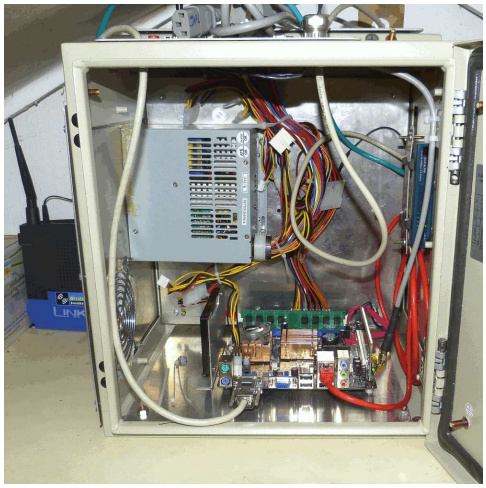
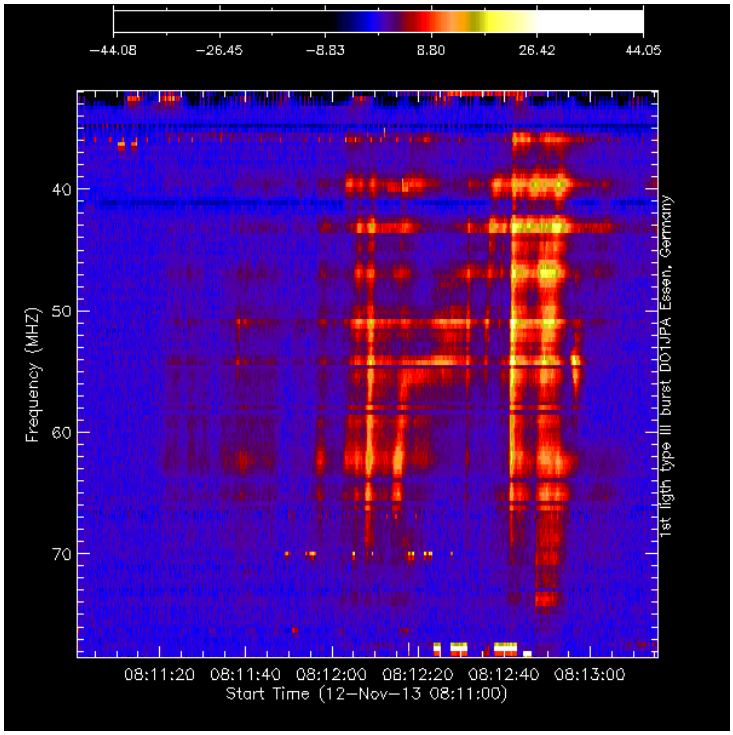


Opened, wall mounted receiver-box. Left hand the up-converter, in the middle the CALLISTO tuner box. Now a surge arrester is mounted between the antenna plug and the low pass input filter to protect the electronics.



Computer box containing a small low-power computer, disk and switch.



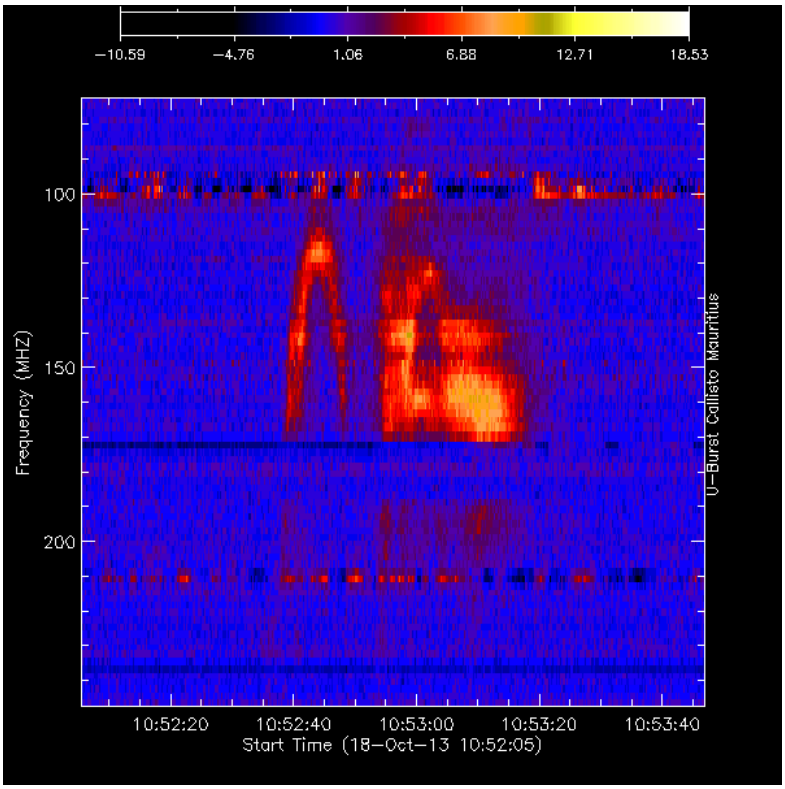
1st light, a small group of type III bursts at low frequency observed at Essen observatory.

Welcome Jochen Plessmann and his crew on board of the e-Callisto network

For those stations which can observe at low frequencies (with a heterodyne up-converter), we plan to conduct a campaign based on identical frequency programs such, that the results can easily be correlated. This to significantly improve the SNR.

AOB:

- Mauritius recently observed a nice U-type solar radio burst.



- 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/

- 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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