

CALLISTO and the e-CALLISTO network

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Abstract

The solar radio spectrometer, Callisto and the network e-Callisto, is presented. Callisto a frequency-agile receiver based on commercially available consumer electronics. Its major characteristic is the low price for hardware and software, and the short assembly time, two or more orders of magnitude below existing spectrometers. The instrument is sensitive at the physical limit and extremely robust and stable. The total bandwidth is 45 MHz up to 870 MHz, and the radiometric width of individual channels is 300 kHz. A total of up to 800 measurements can be made per second with 1 msec integration time. The output of the spectrometer is stored in FIT-files, one per 15 minutes of observation. The spectrometer is well suited for solar low-frequency radio observations pertinent for space weather research, radio monitoring or education. More than 50 instruments of the type were constructed until now and put into operation at more than 20 sites, distributed over the whole planet. Several copies of Callisto are intended to put into operation in view of IHY and ISWI. Antenna setup and first results in the 45 – 870 MHz range are presented. Some first results were already recorded in a preliminary setup during the time of high solar activity in 2002. So this year 2012 we celebrate 10 years of Callisto operation. Preliminary results of recent base band measurements made at different stations will be presented and discussed. Additional information here: <http://www.e-callisto.org/>