



CALLISTO status report/newsletter #78

Super low solar radio activity in 2018

The Sun was not very active in 2018, there were hardly any bursts observed with all the instruments in the e-Callisto network. Currently, we have more than 150 instruments delivered to several places worldwide. Unfortunately, only about 50 instrument-hosts provide data to archive on a regular basis. My wish for 2019 is to get more of existing instruments operational. There is only very low manpower required to keep an instrument operational. We think a 1% FTE is sufficient to take care of an instrument. If you need support, just let me know. I'm retired now and have plenty of time left to support you. Ideally, you install TeamViewer on your PC and provide login data such that I can help remotely.

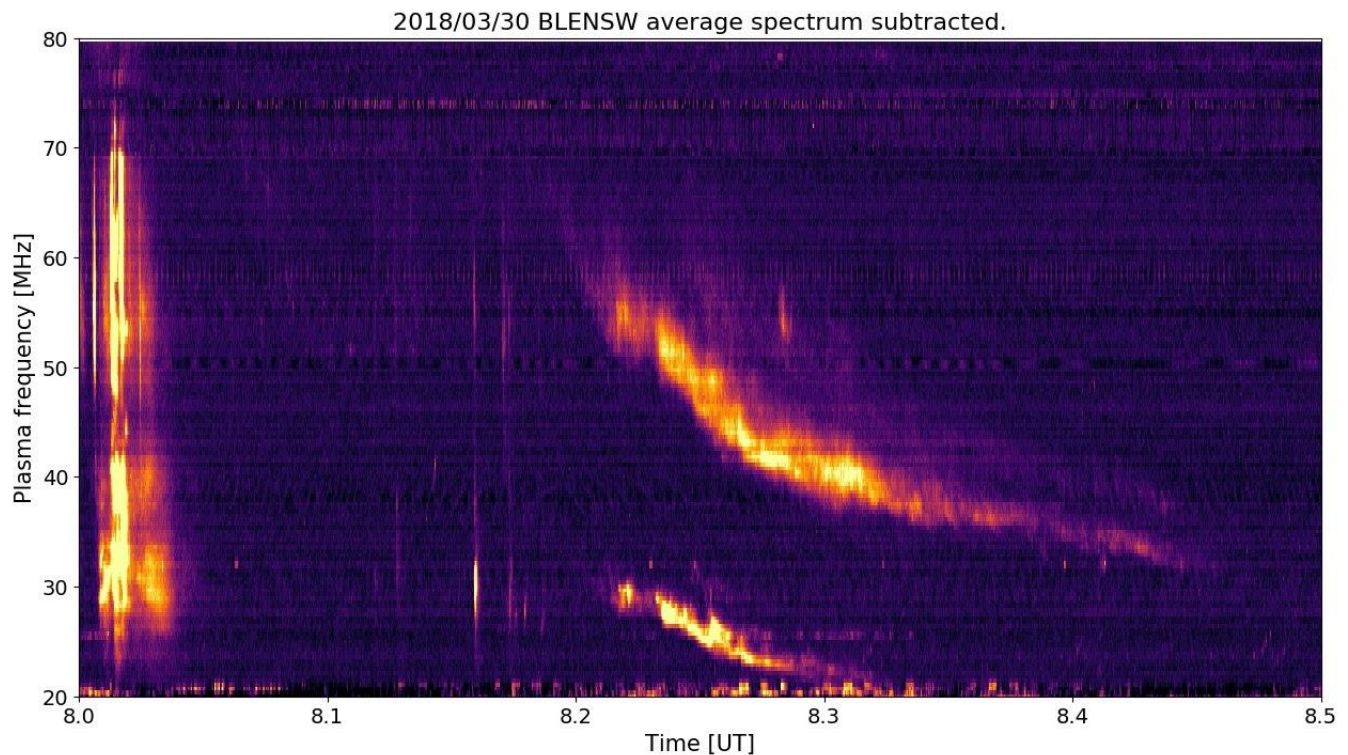


Fig. 1: Exceptional nice type II burst with fundamental and 1st harmonic as our **2018 high-light**. Remark: If you want to observe frequencies < 45 MHz, you need a heterodyne up-converter.



CESRA news

Shock location and CME 3-D reconstruction of a solar type II radio burst with LOFAR

by P. Zucca et al.*

<http://cesra.net/?p=2005>

Coronal Densities Probed by Type III Radio Burst Imaging

by P. McCauley et al.*

<http://cesra.net/?p=2032>

First high-resolution look at the quiet Sun with ALMA at 3 mm

by A. Nindos et al.*

<http://cesra.net/?p=2044>

A type III radio burst automatic analysis system and statistic results for a half solar cycle with Nançay Decameter Array data

by Zhang et al.*

<http://cesra.net/?p=2050>

Coronal mass ejections associated to a super-active region

by H. Cremades et al.*

<http://cesra.net/?p=2080>



AOB

- Please check your PC-time&date at least once a month to be sure that the system time is locked to UTC. This year several observatories sent data either from the past or even from the future. This is not what we want. Time stamp on our data is extremely important, otherwise data are useless. Even worse, data with wrong time stamps may destroy 'good' old data. Data with time stamps from the future I can easily recognise and delete. But data from the past are difficult to detect.
- There are still 2 used but refurbished Callisto instruments on stock for reduced prize of US250\$ plus shipping cost. For test data, see here: <http://e-callisto.org/Qualification/applidocs.htm>
- Interest for CALLISTO from Arecibo, Puerto Rico
- Links for LPDA design:
 - <http://www.changpuak.ch/electronics/lpda.php>
 - <http://www.stroobandt.com/lpda/en/index.html>
- 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 University of Applied Sciences, Institute for Data Science FHNW in Brugg/Windisch, Switzerland. Additionally, data are hosted at ESA site here: SSA Space Weather Portal (<http://swe.ssa.esa.int/>).
Click ESC Solar Weather, then eCallisto

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Happy New Year 2019 and more nice solar radio bursts than 2018