

CALLISTO status report/newsletter #73

Easter Solar Radio Burst Gallery from all over the world

After a long period of silence the Sun went active again on March 30, 2018.

1. Event 4330 observed in Alaska, Kazakhstan, Indonesia, Mongolia and Siberia.

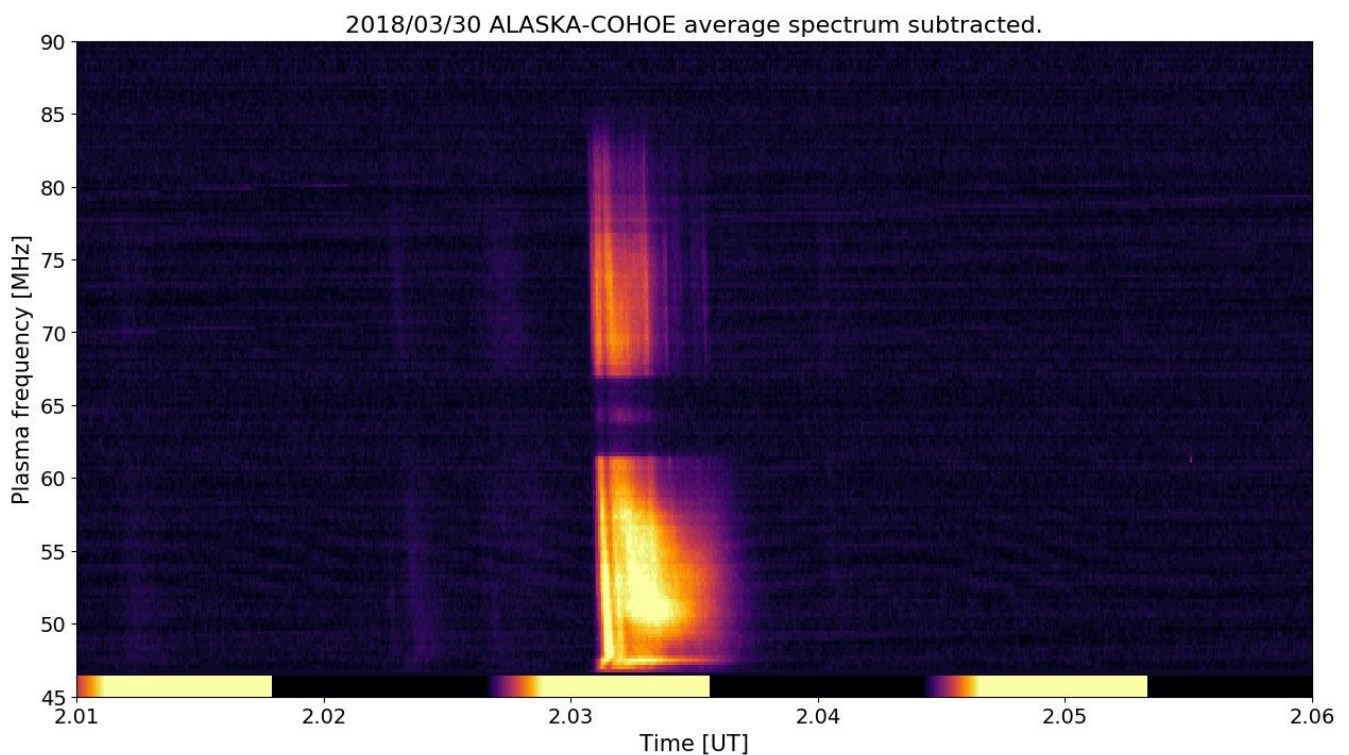


Fig. 1: Burst observed at COHOE, Alaska with LWA and Callisto.

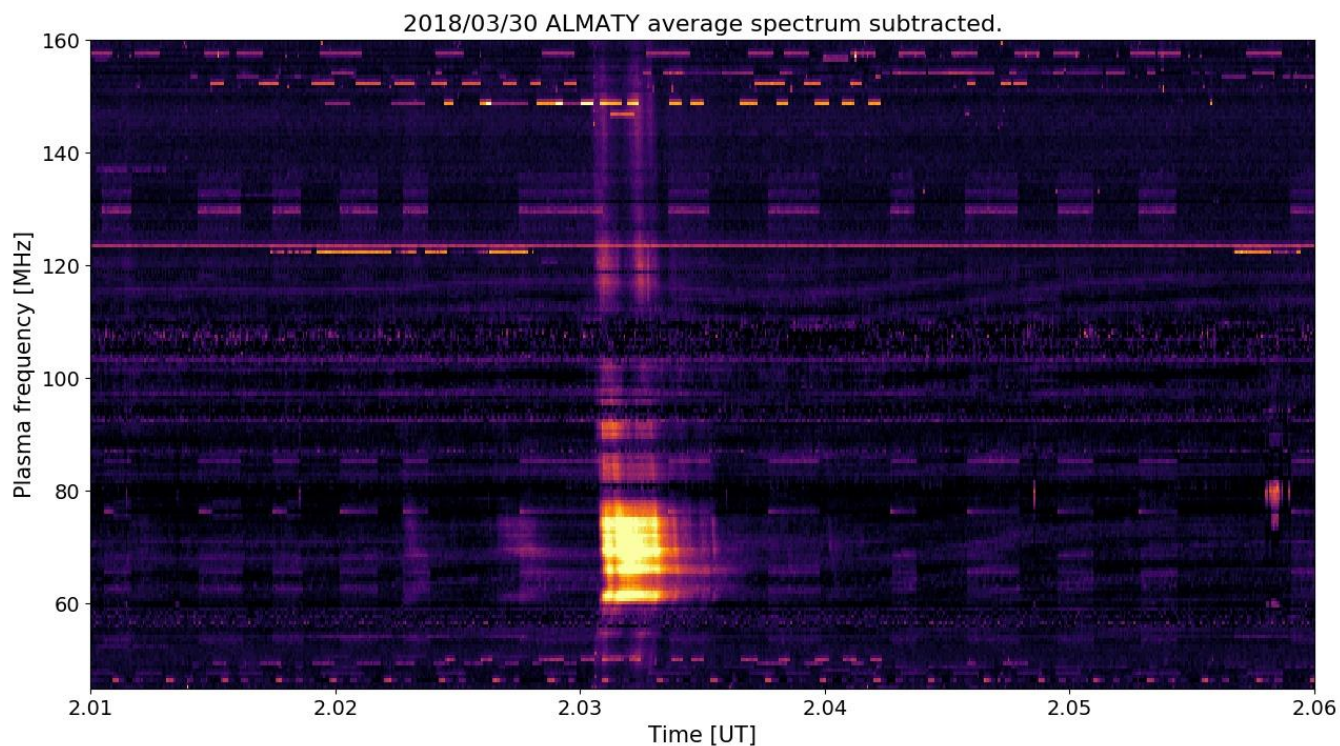


Fig. 2: Same burst as above, observed near Almaty/Kazakhstan with LPDA and Callisto

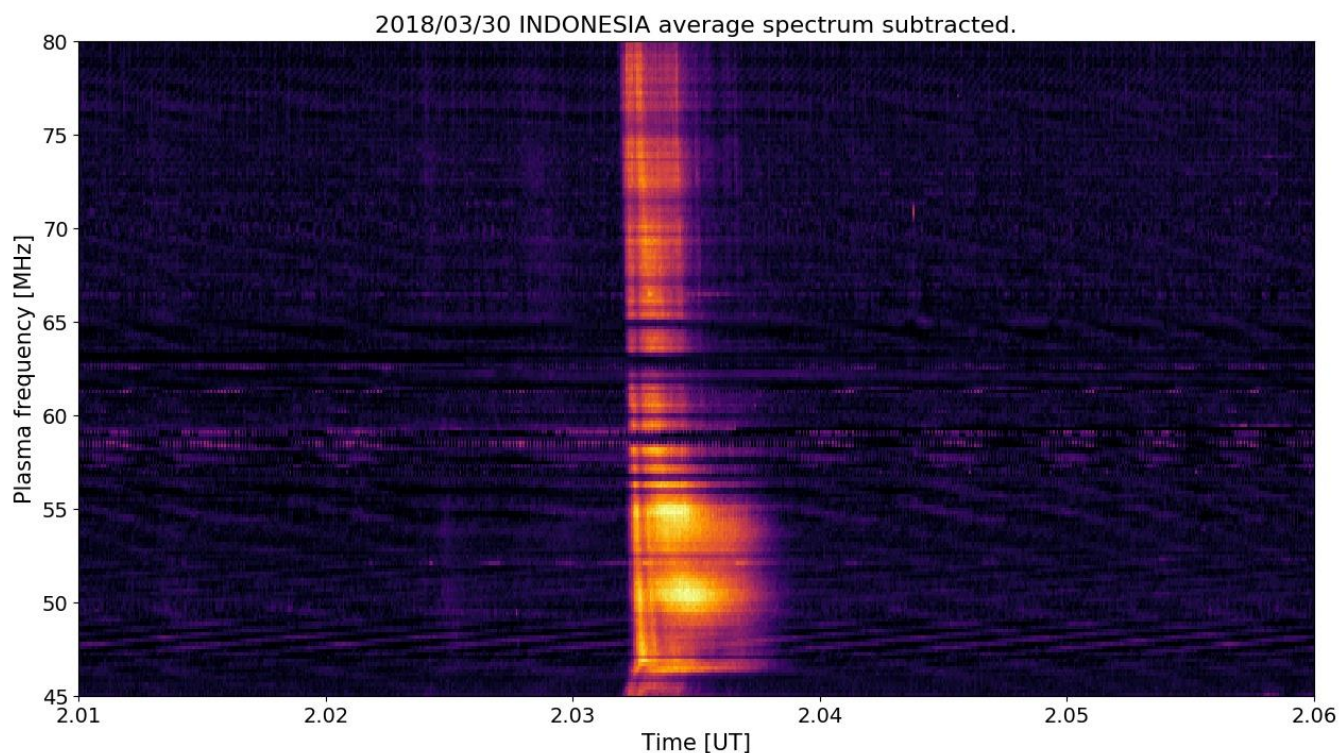


Fig. 3: Same burst as above from Indonesia, observed with LPDA

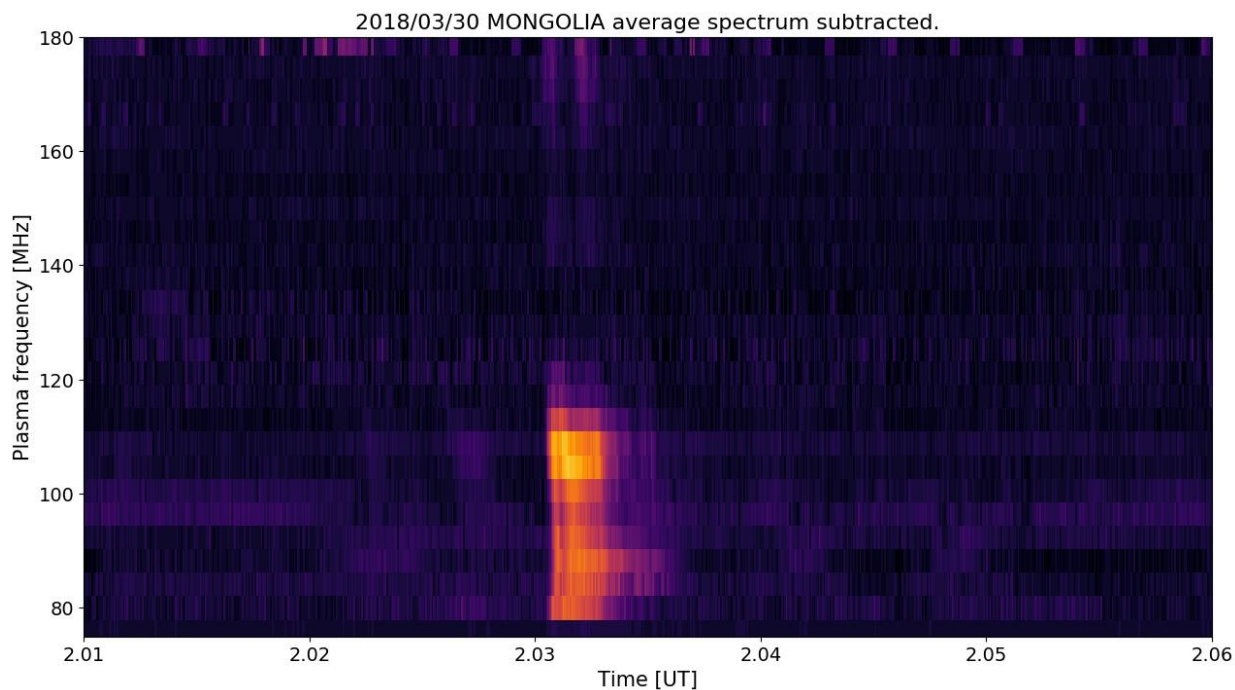


Fig. 4: Same burst as above, observed near Ulaanbaatar, Mongolia with LPDA+Callisto

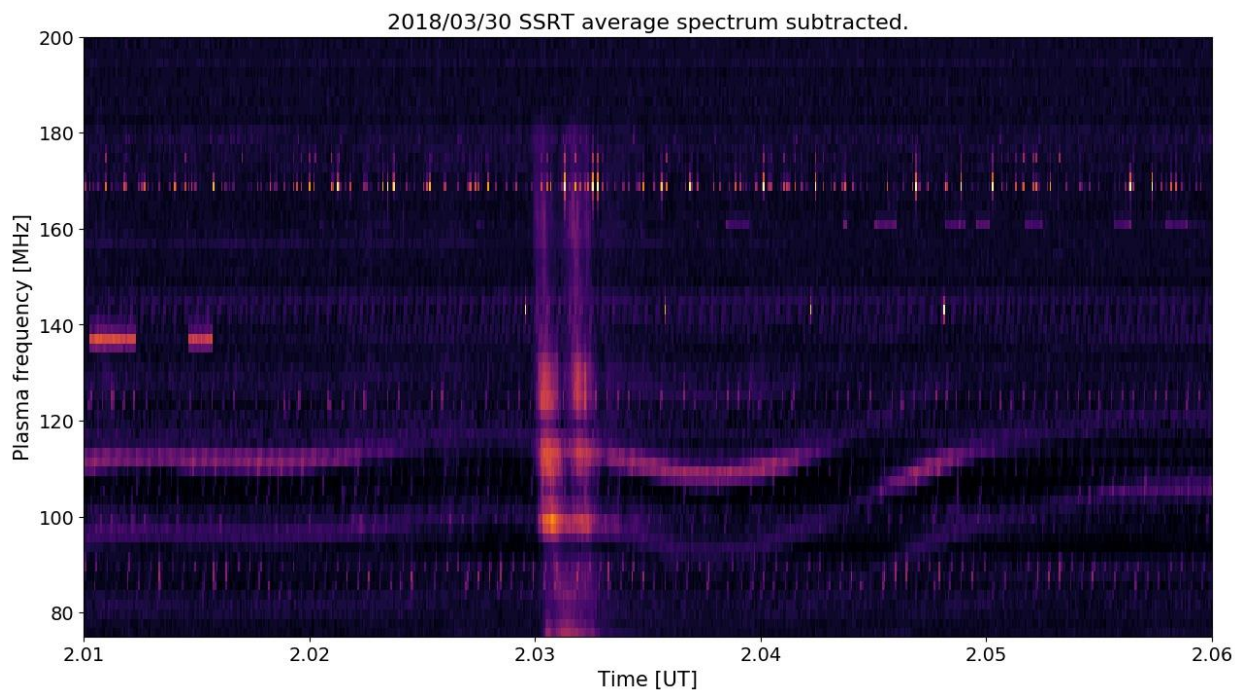


Fig. 5: Same burst as above, observed with LPDA in Badary, Russian Federation.

2. Event 4380 observed in Heiterswil and Bleien Switzerland, Mauritius, Ooty/India, Trieste/Italy, Glasgow/UK, Metsähovi/Finnland

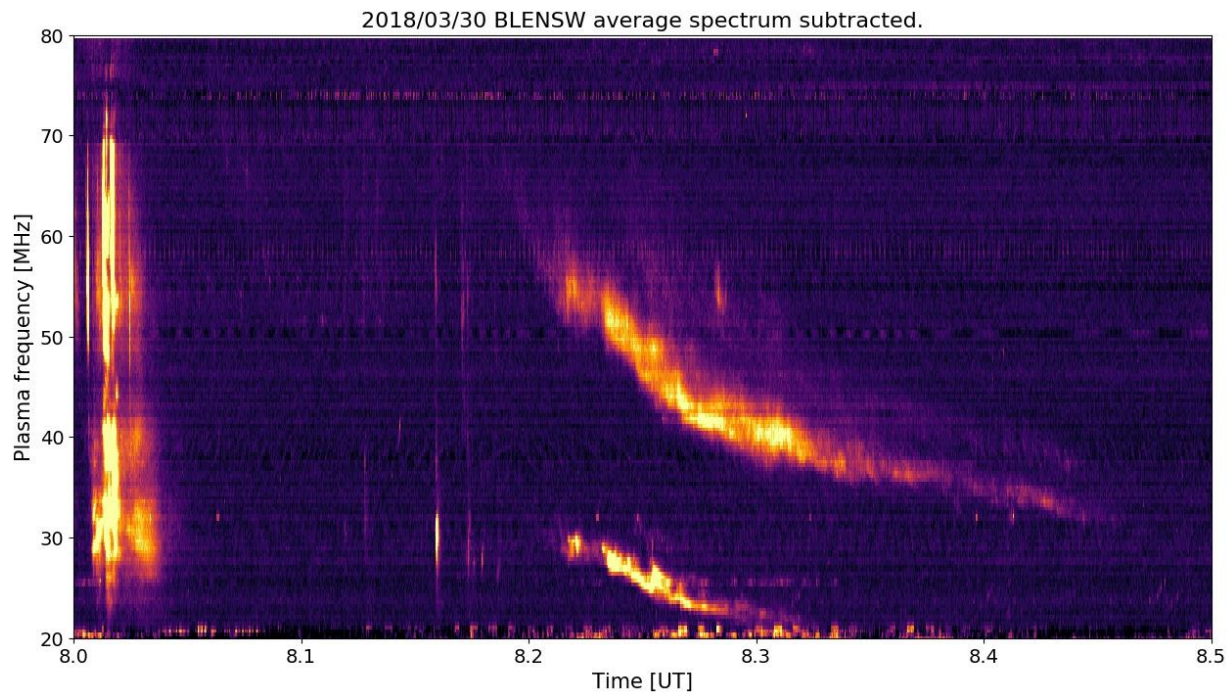


Fig. 6: Type III, followed by type II at Bleien observatory. Obs. With LWA

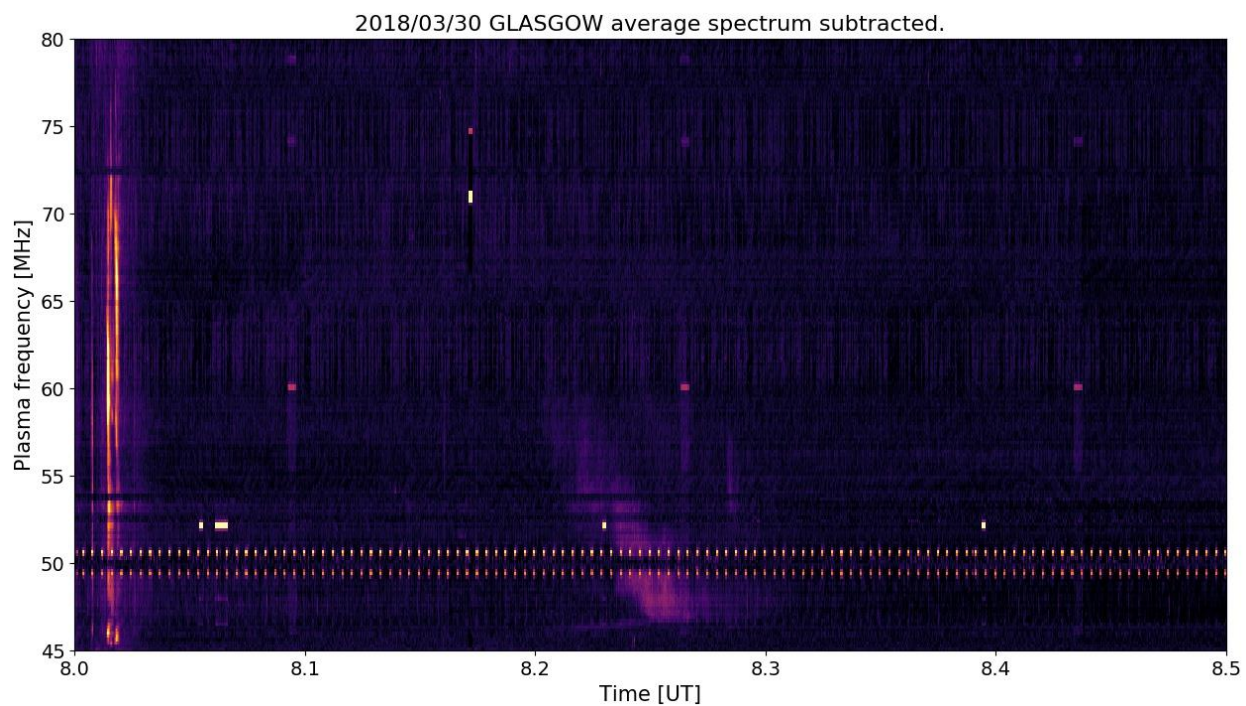


Fig. 7: Type III and II as above observed with LPDA in Glasgow.

3. Event 4390 observed in Mauritius, Trieste, Bleien and Greenland

2018/03/30 GREENLAND average spectrum subtracted.

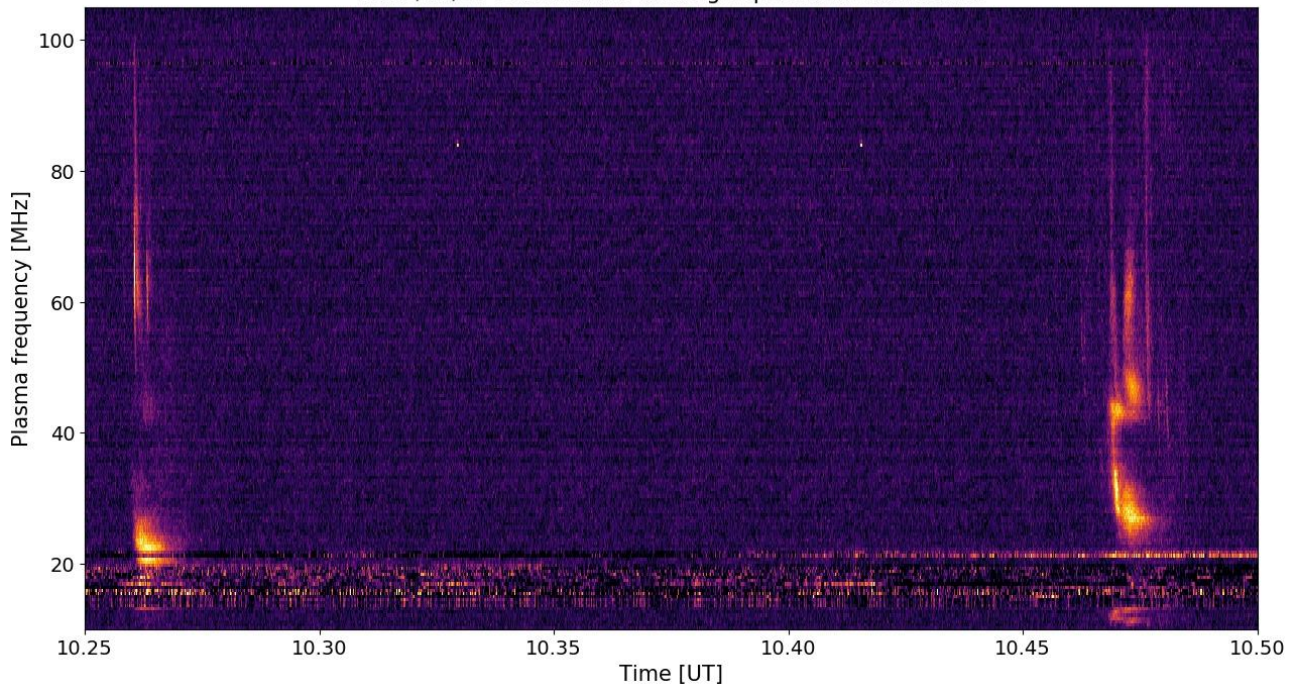
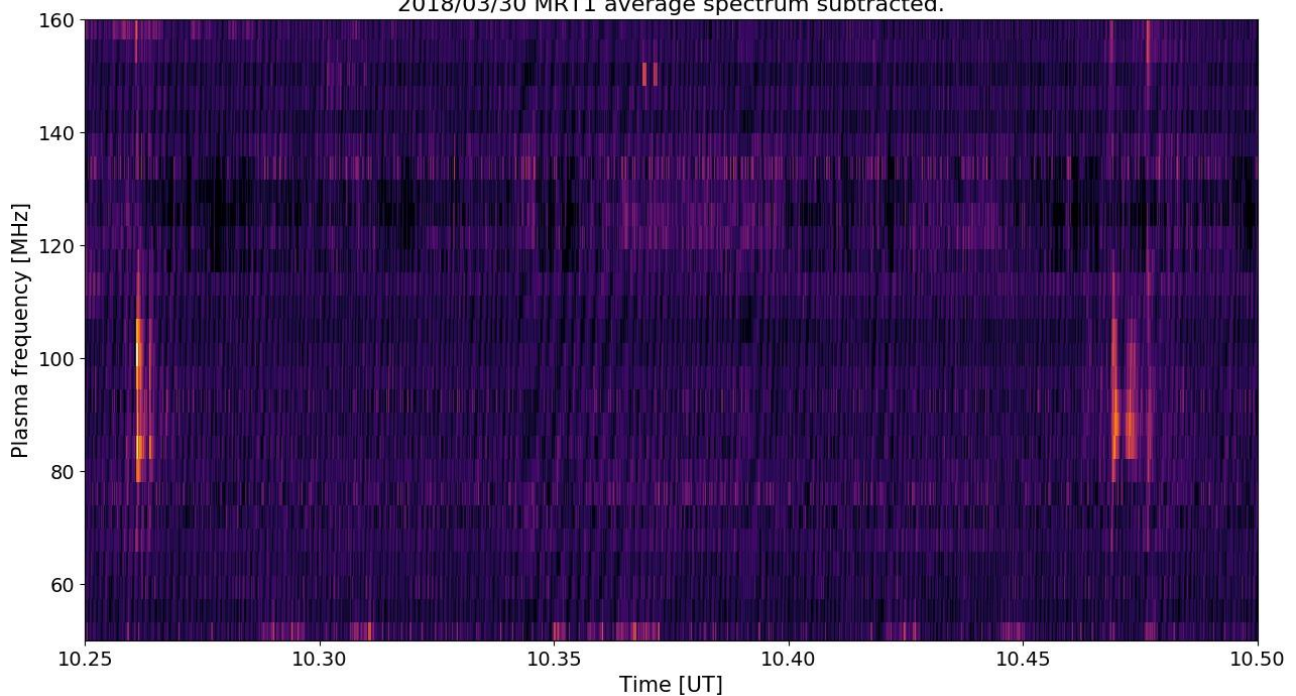
Fig. 8: Two bursts within 15 minutes, observed with LWA, Kangerlussuaq/Greenland
2018/03/30 MRT1 average spectrum subtracted.

Fig. 9: Same bursts as above, observed with LPDA in Poste de Flacq, Mauritius

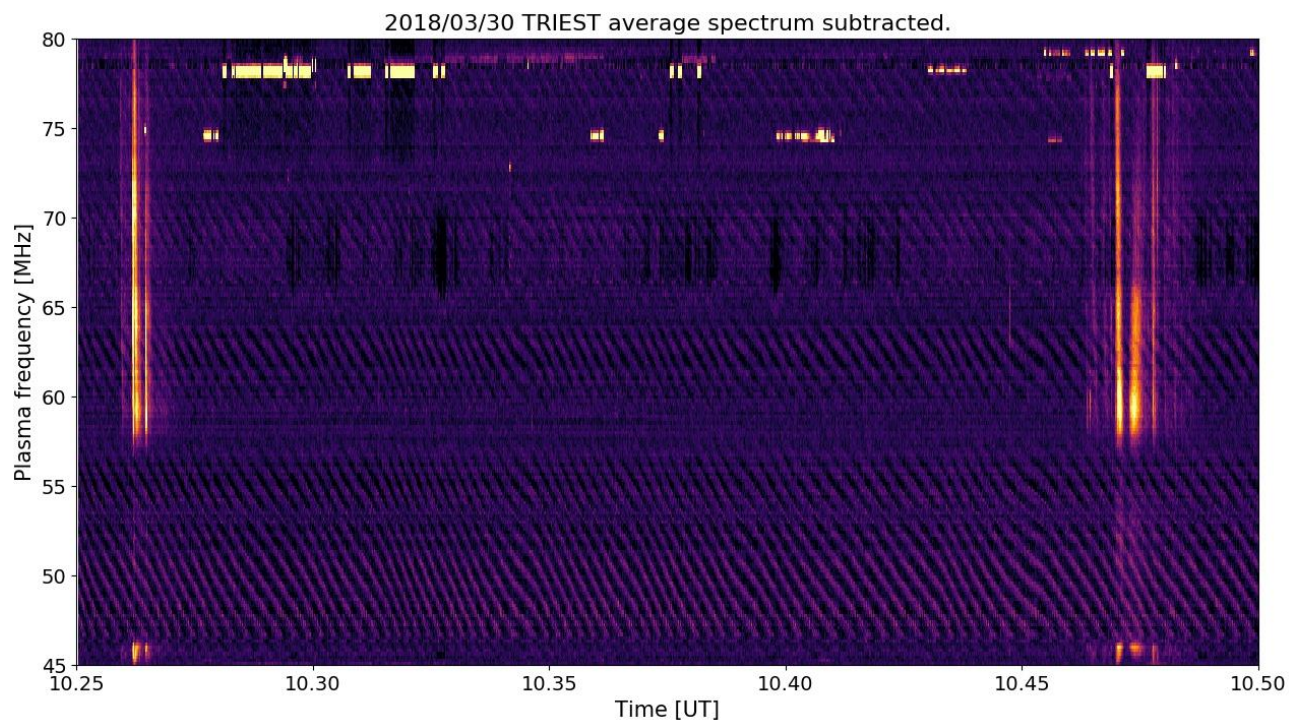


Fig. 10: Same bursts as above observed in Trieste, Italy.

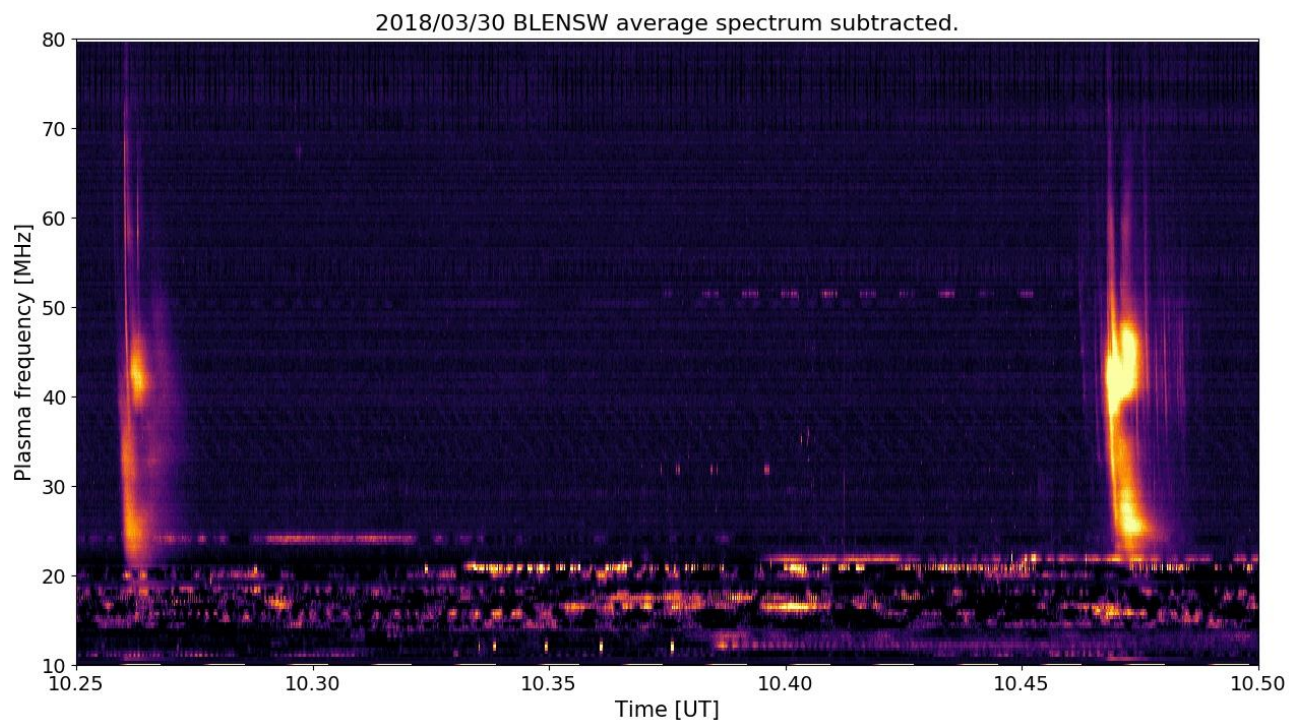


Fig. 11: Same burst as above, observed with LWA at Bleien, Switzerland

4. Event 4430 observed in Austria (OE3FLB and University of Graz), Bleien, Glasgow, Greenland, Humain/Belgium, Heiterswil/Switzerland, Metsahövi/Finnland and Trieste/Italy.

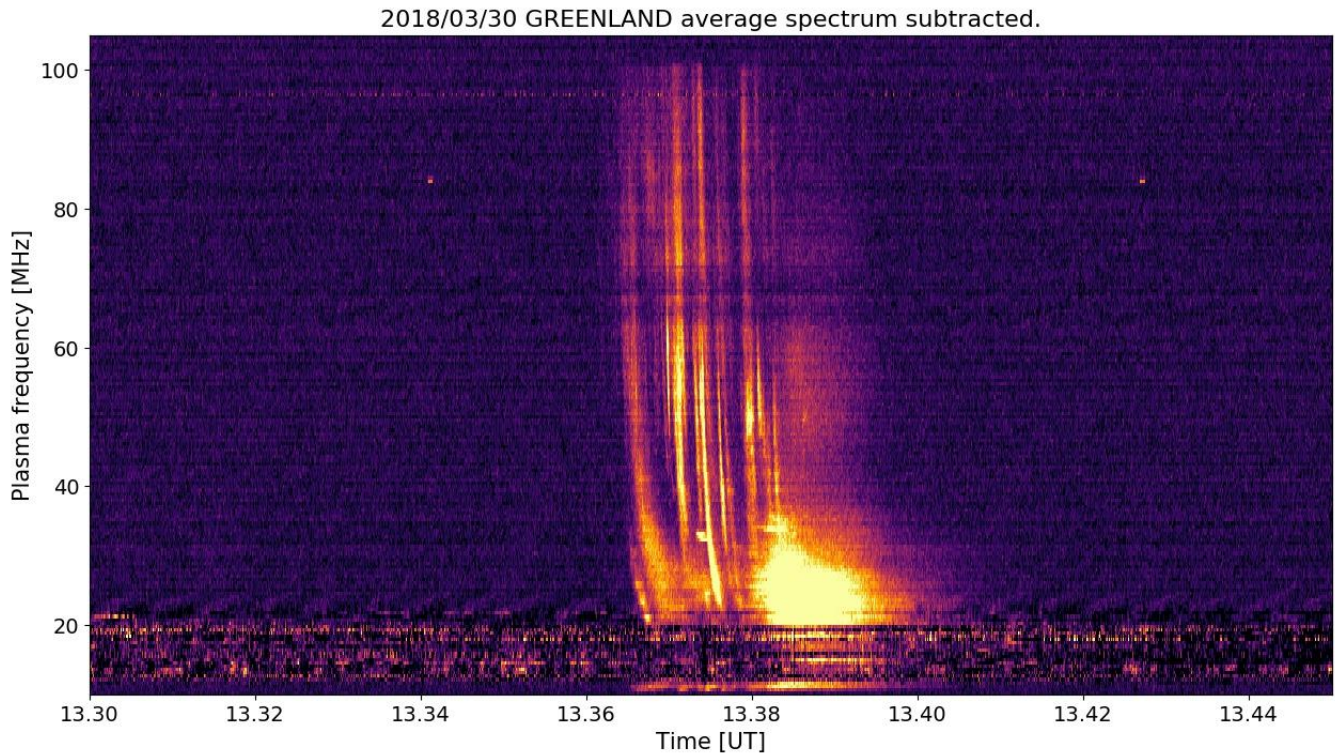


Fig. 12: Nice small group of type III burst, observed with LWA in Greenland

There were many more burst on this day, only very few have been presented above. It might be a small student's project to compare and discuss observations from different locations. Those stations which could have observed these bursts, but could not find anything in there data should urgently check there antenna, cables, connectors and low noise amplifier. Either the antenna and/or the LNA is no more working. Now it is time to maintain the instruments as long as the Sun is still in minimum phase.



Space Weather Prediction Center, National Oceanic and Atmospheric Administration

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:Product: 20180330events.txt
:Created: 2018 Mar 30 1447 UT
:Date: 2018 03 30
# Prepared by the U.S. Dept. of Commerce, NOAA, Space Weather Prediction Center
# Please send comments and suggestions to SWPC.Webmaster@noaa.gov
#
# Missing data: ////
# Updated every 5 minutes.
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Edited Events for 2018 Mar 30

#Event	Begin	Max	End	Obs	Q	Type	Loc/Frq	Particulars	Reg#
4330 +	0148	////	0206	LEA	C	RSP	025-173	III/2	
4340 +	0254	////	0300	LEA	C	RSP	025-180	III/3	
4340 +	0256	0300	0302	G15	5	XRA	1-8A	B1.7	3.2E-05
4350 +	0411	0415	0419	G15	5	XRA	1-8A	B1.8	5.0E-05
4350 +	0412	////	0417	LEA	C	RSP	025-180	III/2	
4360	0445	////	0530	LEA	C	RSP	025-180	III/3	
4360 +	0507	0515	0521	G15	5	XRA	1-8A	B4.5	2.5E-04
4360	0514	////	0532	SVI	C	RSP	025-180	VI/2	
4370 +	0722	////	0727	LEA	C	RSP	025-084	III/1	
4380 +	0745	////	0811	LEA	C	RSP	025-180	VI/3	2703
4380 +	0757	0804	0808	G15	5	XRA	1-8A	C4.6	1.6E-03
4380	0800	////	0802	SVI	C	RSP	025-180	V/2	2703
4380	0800	0800	0800	SVI	G	RBR	245	360	2703
4380	0800	0800	0800	SVI	G	RBR	410	170	2703
4380	0801	0802	0809	LEA	3	FLA	S06E71	SF	ERU
4380 +	0804	////	0828	SVI	C	RSP	025-050	II/2	805
4390	1015	////	1016	SVI	C	RSP	025-180	III/1	
4400	1028	////	1029	SVI	C	RSP	025-147	III/2	
4410 +	1113	1117	1120	G15	5	XRA	1-8A	B2.1	5.3E-05
4410 +	1115	////	1118	SVI	C	RSP	025-111	III/1	2703
4410	B1116	U1116	A1128	SVI	2	FLA	S12E69	SF	ERU
4430 +	1321	////	1324	SVI	C	RSP	025-180	III/2	
4430 +	1322	1322	1322	SVI	G	RBR	245	210	
4440	1326	1327	1330	HOL	3	FLA	S10E68	SF	2703



Instrument status

2 new instruments have been delivered to Indian Institute of Astronomy, Bangalore, India
1 old instrument in Perth/Australia has deteriorated and has been switched off
In the order of ~90 instruments are not operational or simply do not provide data due to several reasons.
I'd like to encourage those stations to provide data to the central server which is part of the ISWI instrument array.

CESRA news

The Community of European Solar Radio Astronomers (*CESRA*), currently represented by Eduard Kontar of University of Glasgow provides highlights of the solar community, called 'nuggets'. Here a few recent examples:

Solar ALMA observations: constraining the chromosphere above sunspots
by M. Loukitcheva et al.*
<http://cesra.net/?p=1777>

Dressing the Coronal Magnetic Extrapolations of Active Regions with a
Parameterized Thermal Structure
by Gelu M. Nita et al.
<http://cesra.net/?p=1798>

Association of radio polar cap brightening with bright patches and
coronal holes
by C. L. Selhorst et al.*
<http://cesra.net/?p=1807>



AOB

- 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 Fachhochschule Nordwestschweiz (University of applied sciences FHNW) in Brugg/Windisch, Switzerland. Process control, user communication and scripts are conducted at *Institute for Particle Physics and Astrophysics (IPA)*, ETH Zurich.

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On the other hand, if you think someone else might be interested in this kind of info, please let me know his/her email-address to be added to the database.

Christian Monstein, Institute for Particle Physics and Astrophysics (IPA), ETH Zurich, Switzerland.
[monstein\(at\)astro.phys.ethz.ch](mailto:monstein@astro.phys.ethz.ch)