

CALLISTO status report/newsletter #59

Radio bursts observed during event #2200 at 2015-11-04, 03:23-03:34UT

Several stations of the e-Callisto network got quite nice observations of type II bursts during event 22**. Radar in Sweden was blind during the solar activity, see here: "Solar storm grounds Swedish air traffic"
<http://www.thelocal.se/20151104/solar-storm-grounds-swedish-air-traffic>

See also Twitter by Peter Gallagher here:

<https://twitter.com/petertgallagher/status/662038590403289088>

Below a few impressions in alphabetical order (file name) from the e-Callisto network. There are more data on the web. Here, I only present the 'best' ones. So there is a large amount of data which you can put together for a publication. Go ahead...

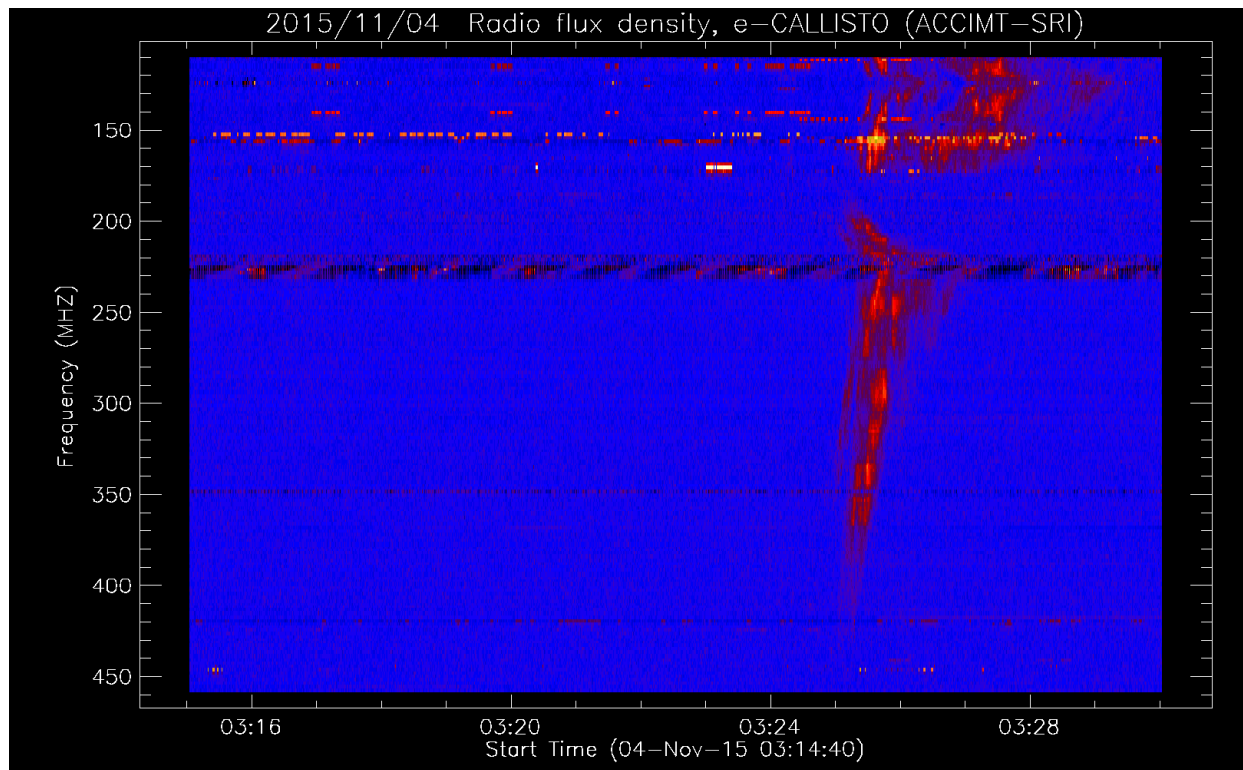


Fig. 1: Type II burst observed in Sri Lanka. Background is subtracted.

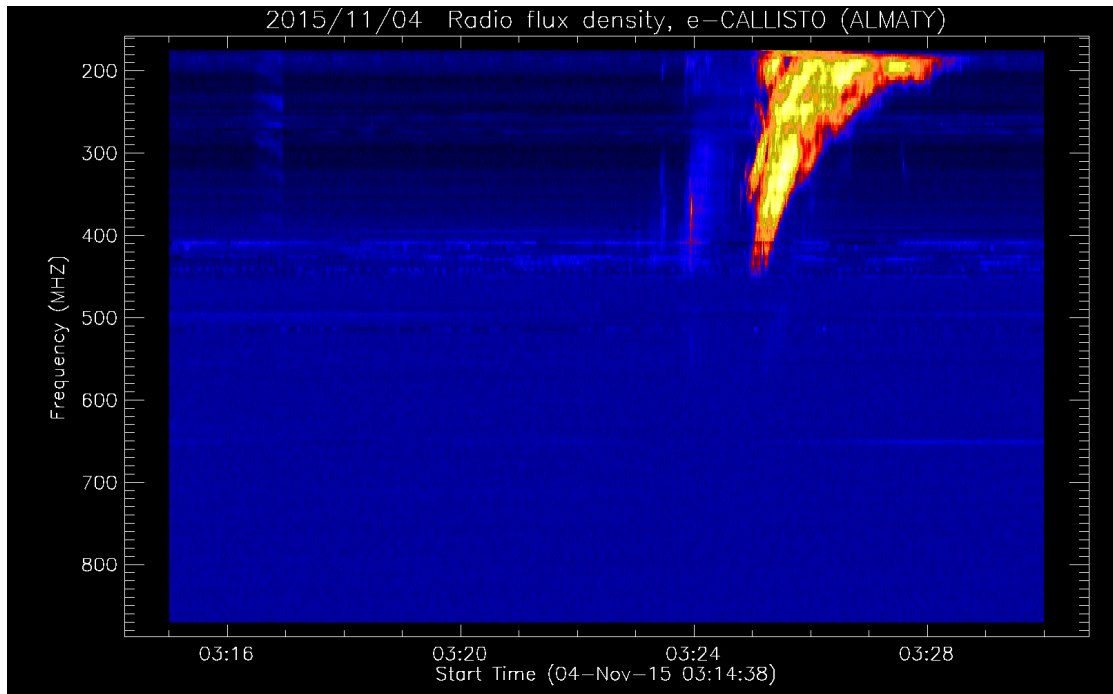


Fig. 2: Type II burst observed in Almaty, Kazakhstan. Background is subtracted. There is also a low frequency file available on the web.

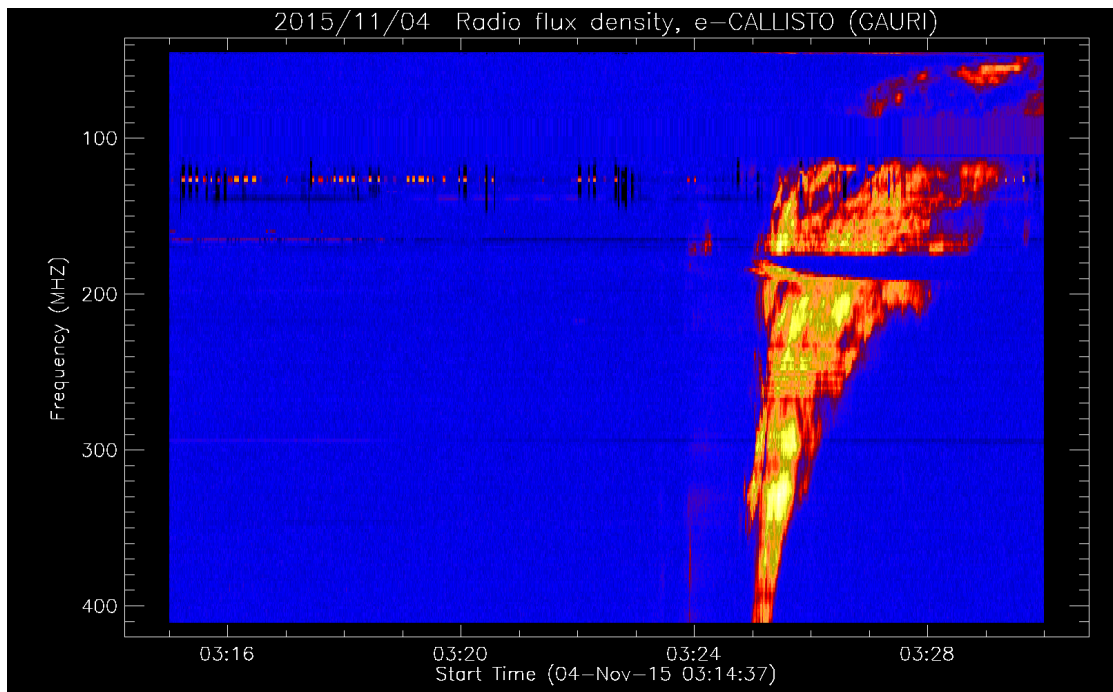


Fig. 3: Type II burst observed in Gauribidanur, India. Background is subtracted.

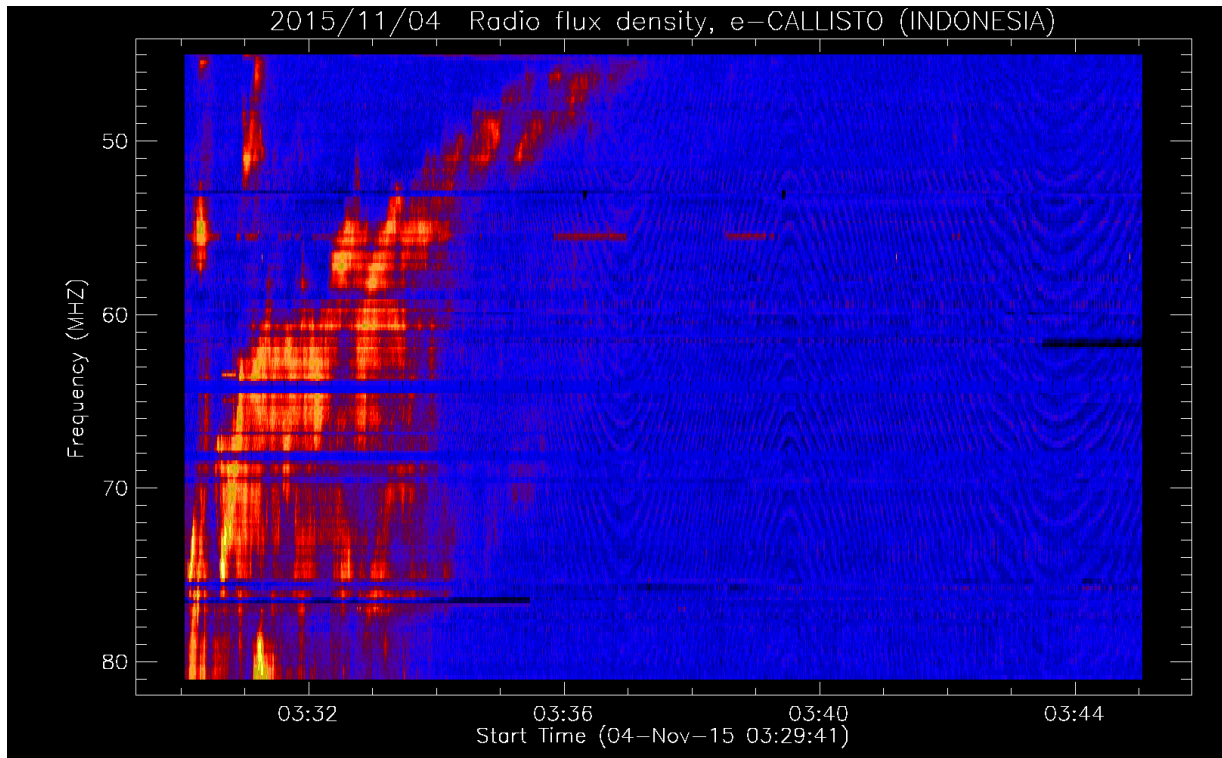


Fig. 4: Type II burst observed in Indonesia. Background is subtracted.

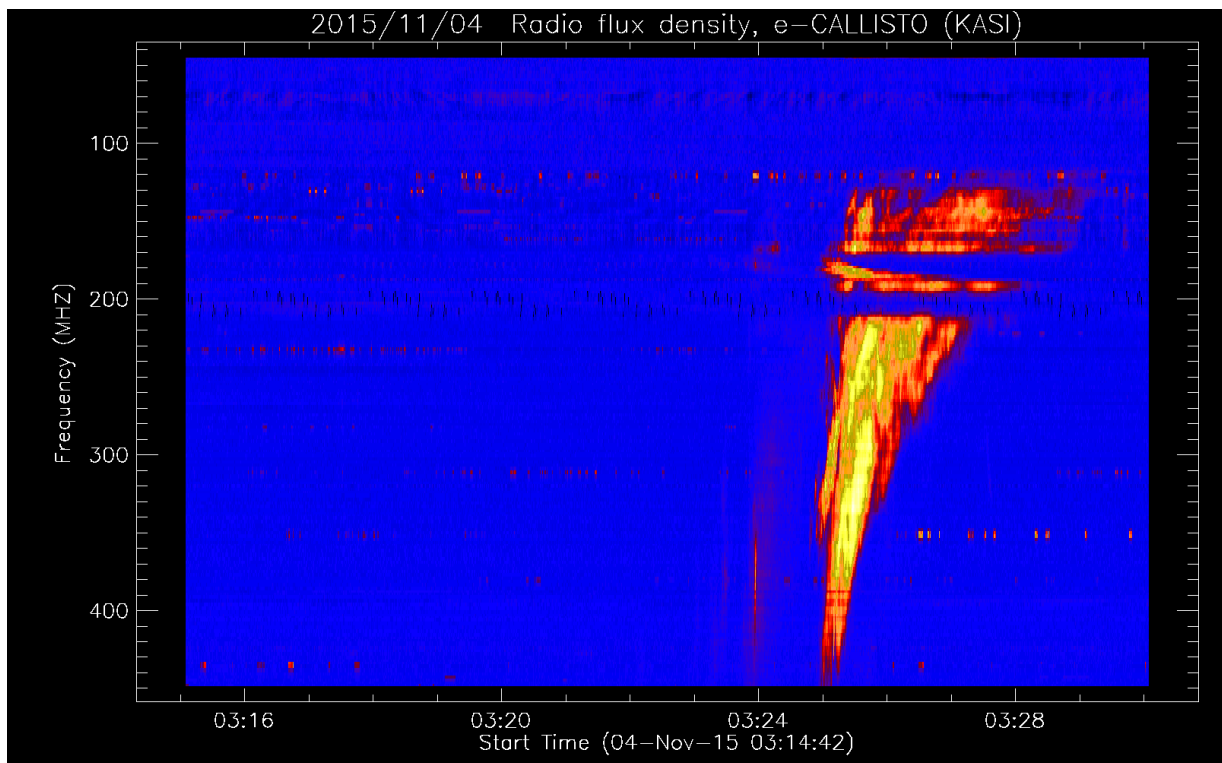


Fig. 5: Type II burst observed at KASI in South Korea. Background is subtracted.

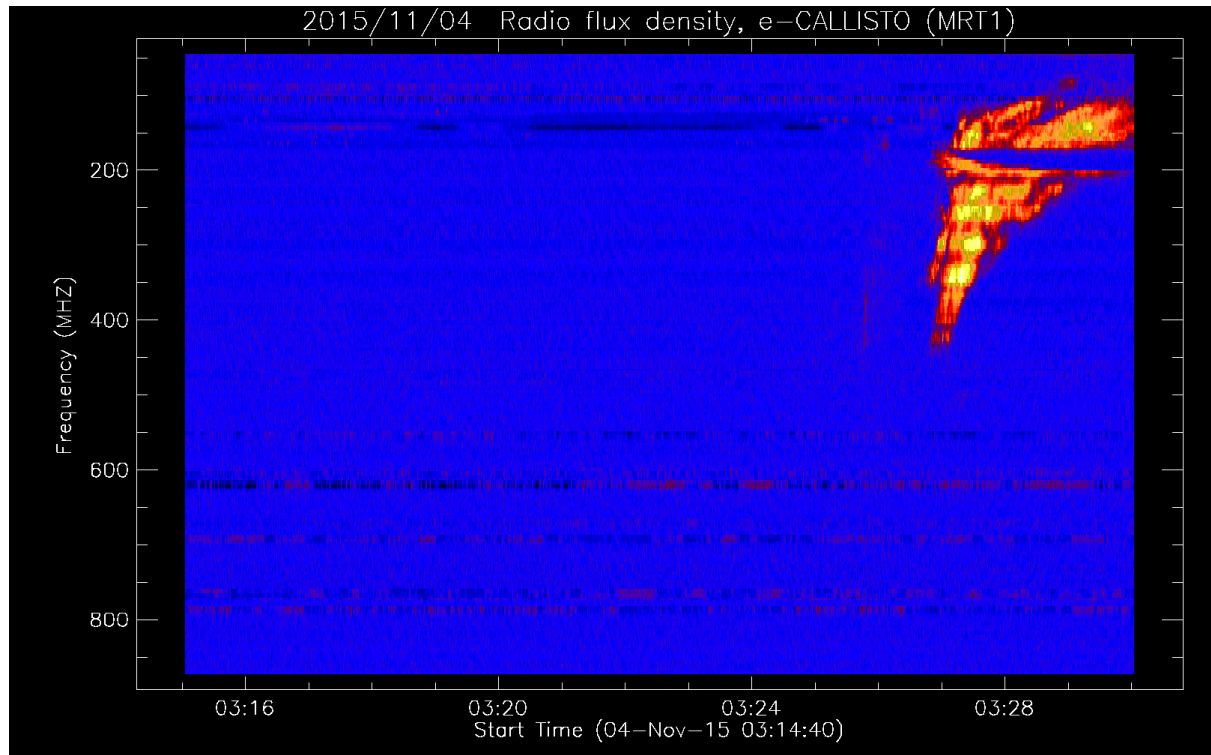


Fig. 6: Type II burst observed in Mauritius. Background is subtracted. More observations on the web.

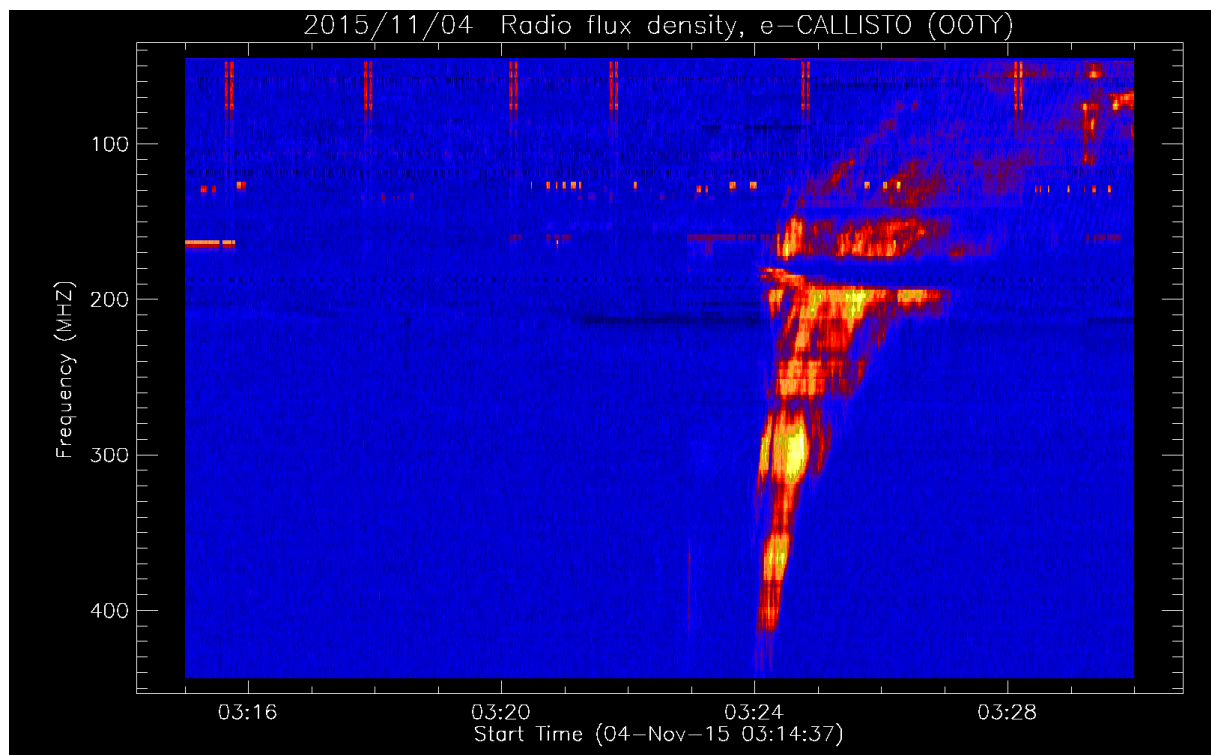


Fig. 7: Type II burst observed in Ooty, India. Background is subtracted. More observations on the web.

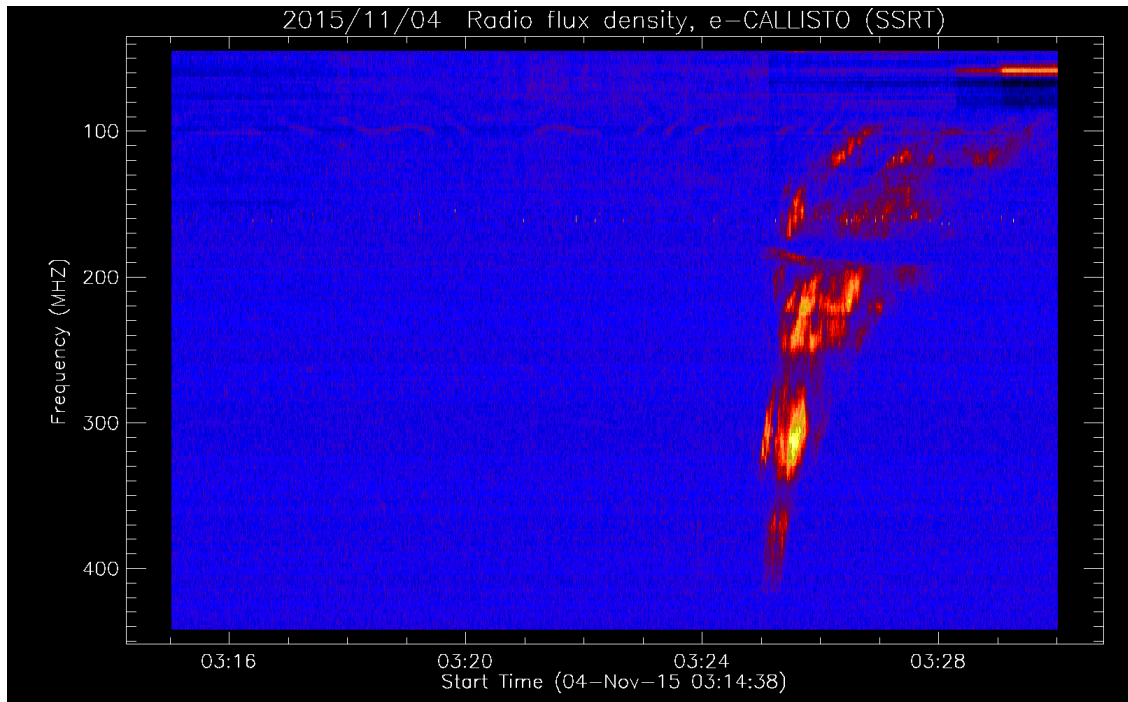


Fig. 8: Type II burst observed in Badary, Siberia, Russian Federation. Background is subtracted.

Radio bursts observed during event #2320 at 2015-11-04, 12:00-12:09UT

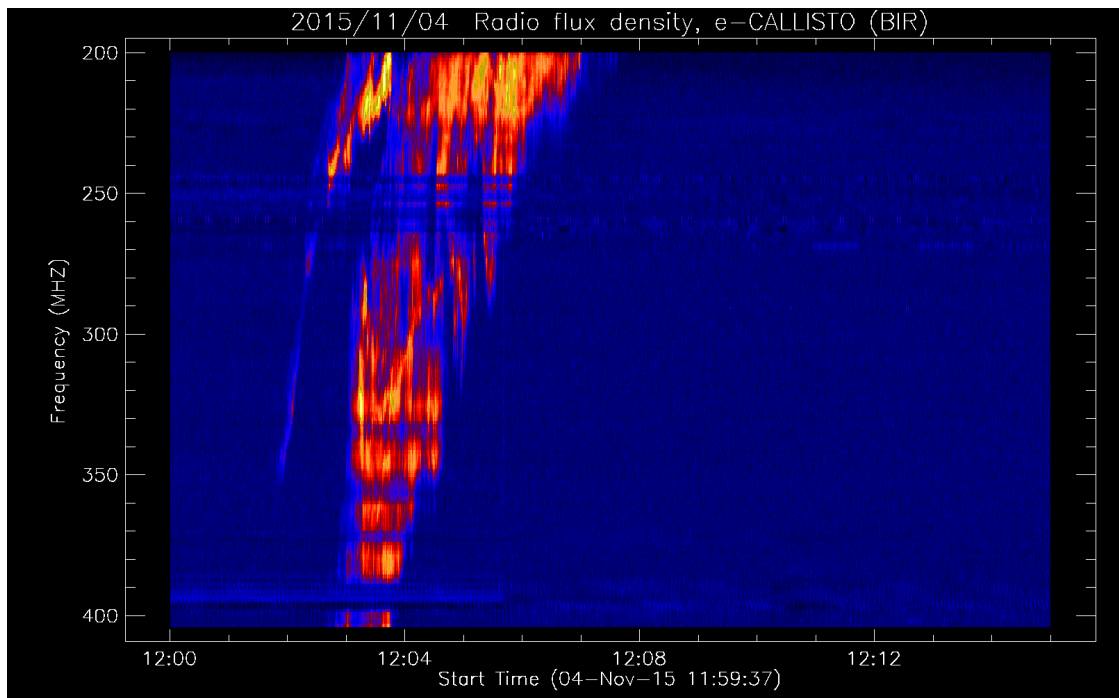


Fig. 9: Type II burst observed at TCD in Birr, Ireland. Background is subtracted. More data on the web.

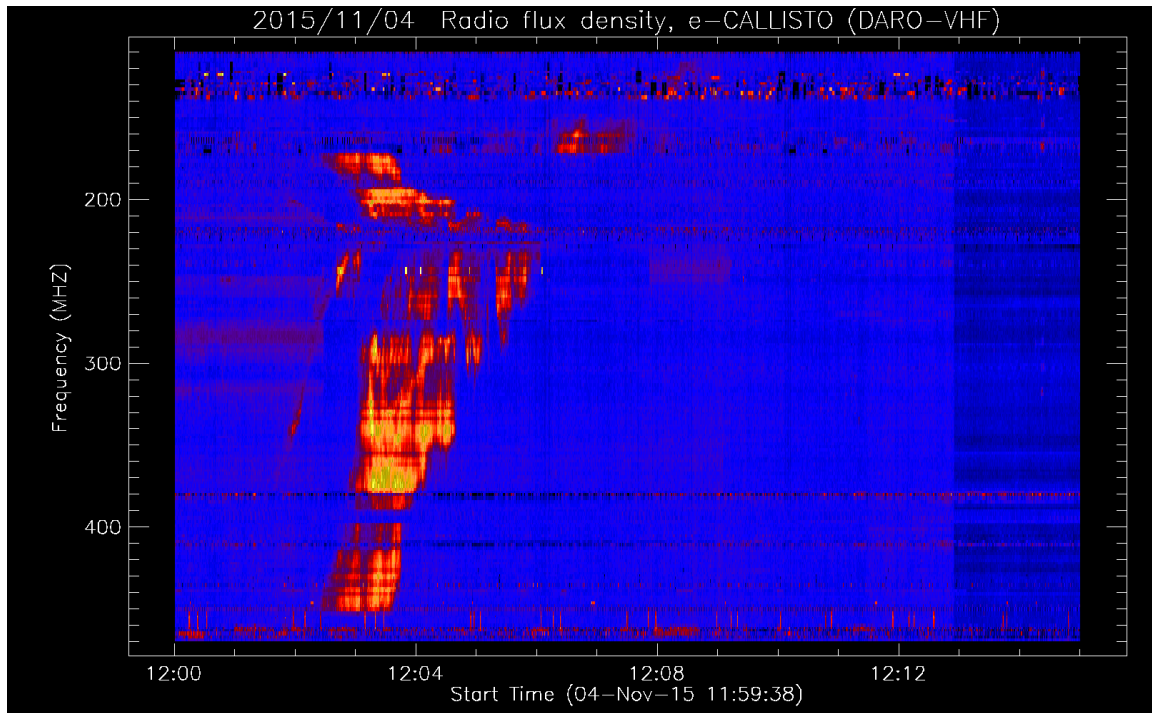


Fig. 10: Type II burst observed at DARO, Germany. Background is subtracted. More data on the web.

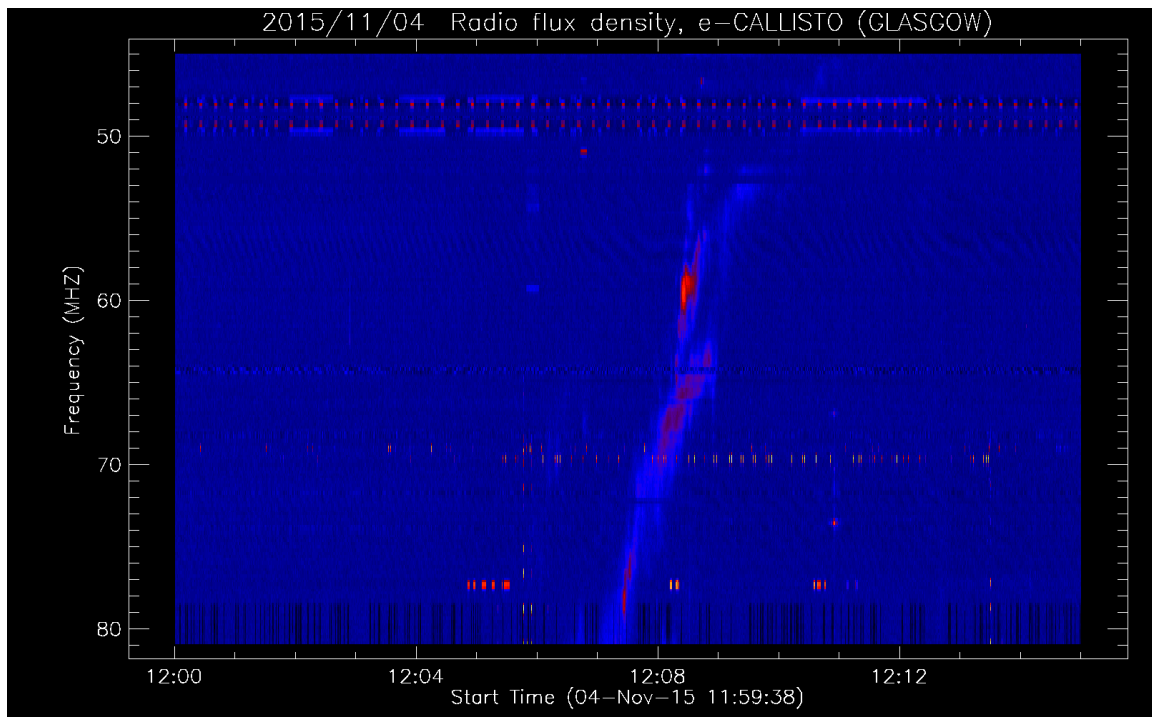


Fig. 11: Type II burst observed at UOG, Scotland/UK, Germany. Background is subtracted.

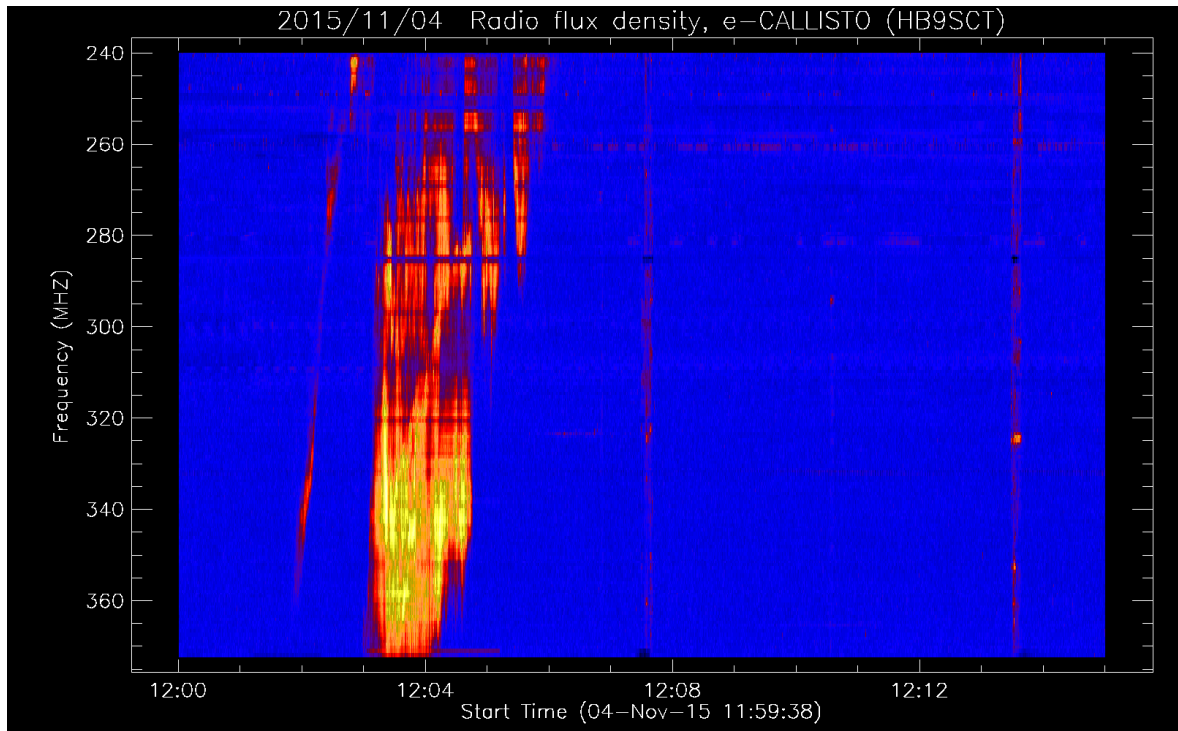


Fig. 12: Type II burst observed at HB9SCT, Switzerland. Background is subtracted.

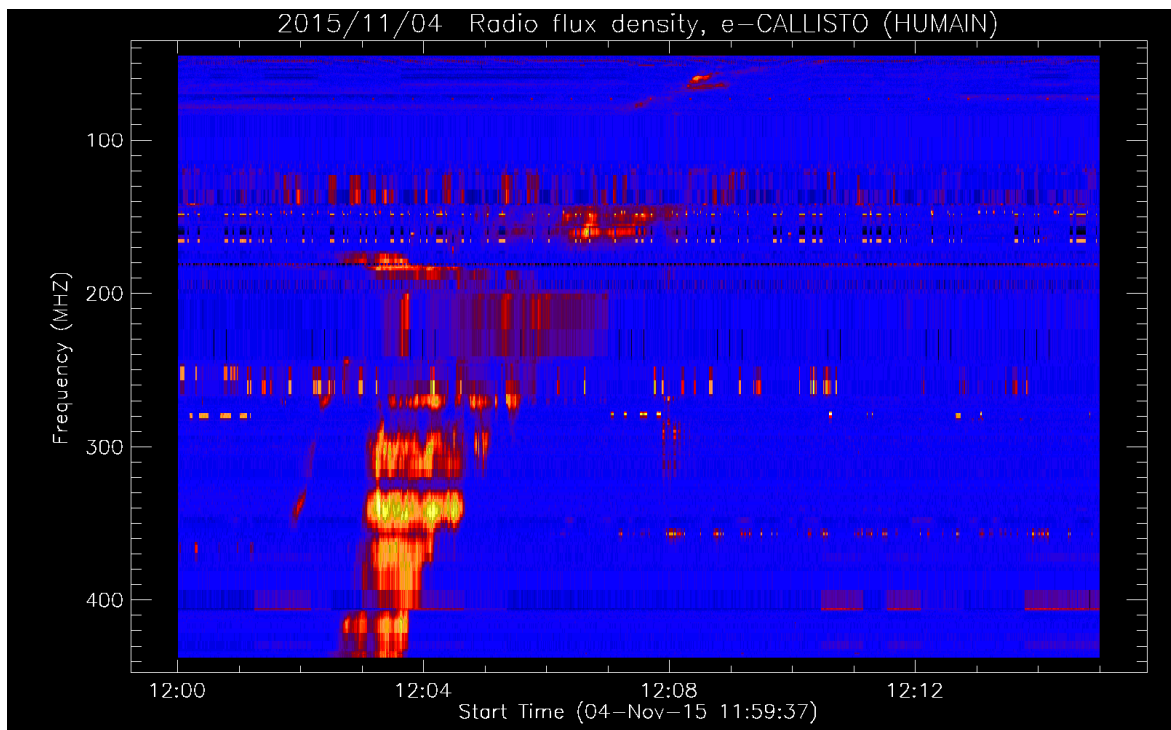


Fig. 13: Type II burst observed at Humain, ROB/Belgium. Background is subtracted.

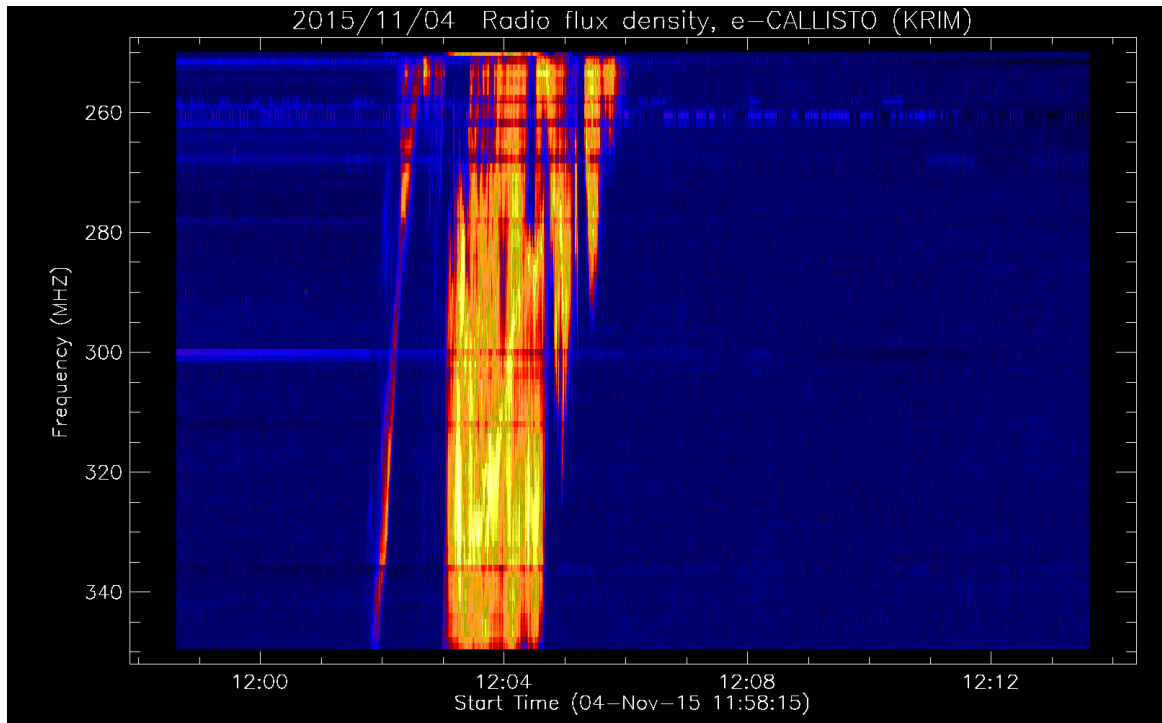


Fig. 14: Type II burst observed at KRIM, Ukraine. Background is subtracted.

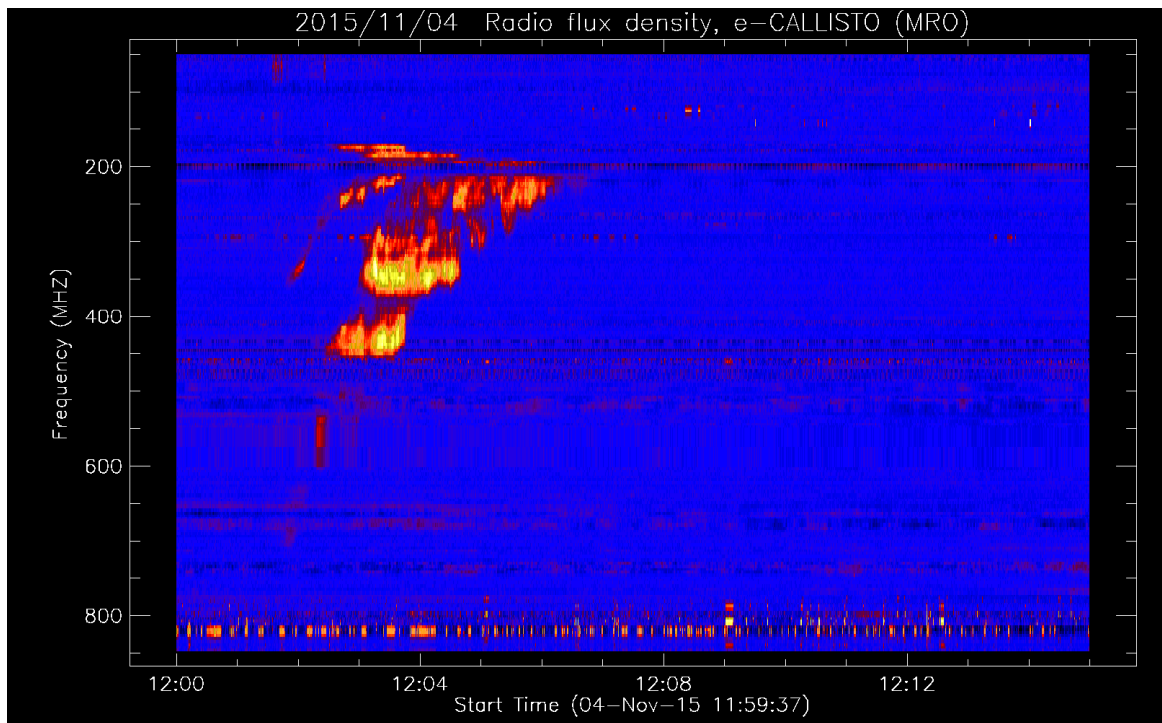


Fig. 15: Type II burst observed at MRO, Metsähovi, Finland. Background is subtracted. More data on the web.

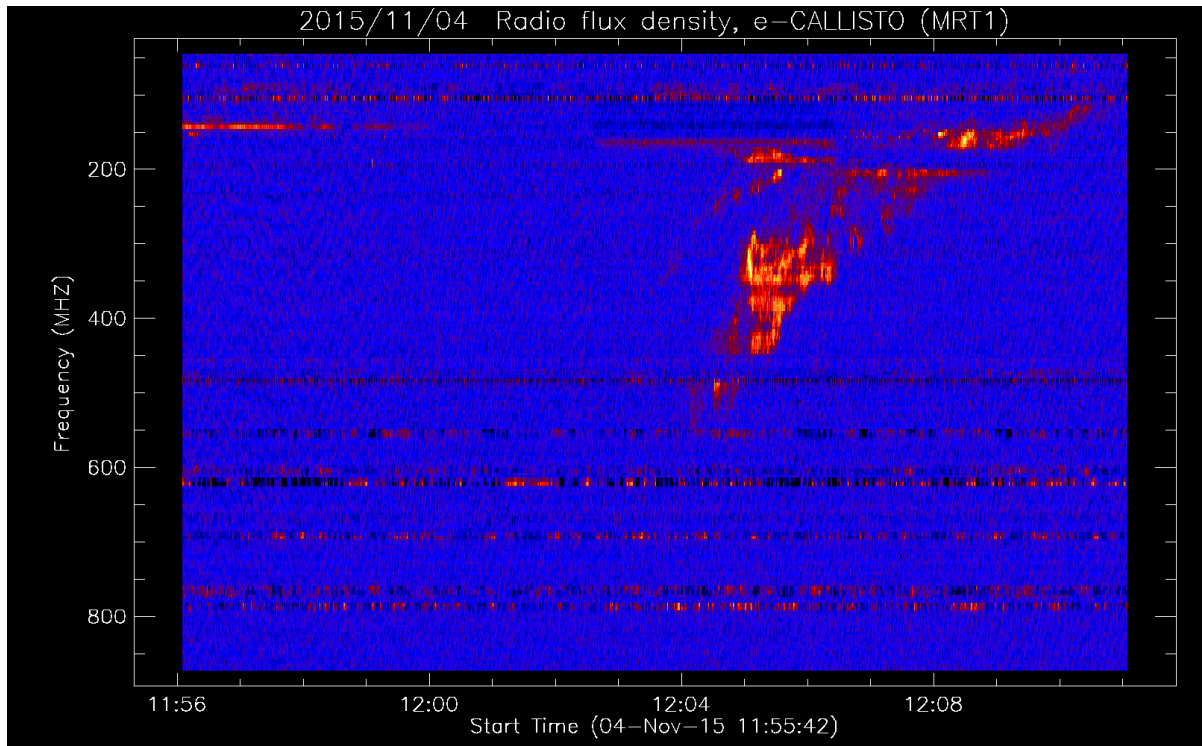


Fig. 16: Type II burst observed in Mauritius. Background is subtracted. More data on the web.

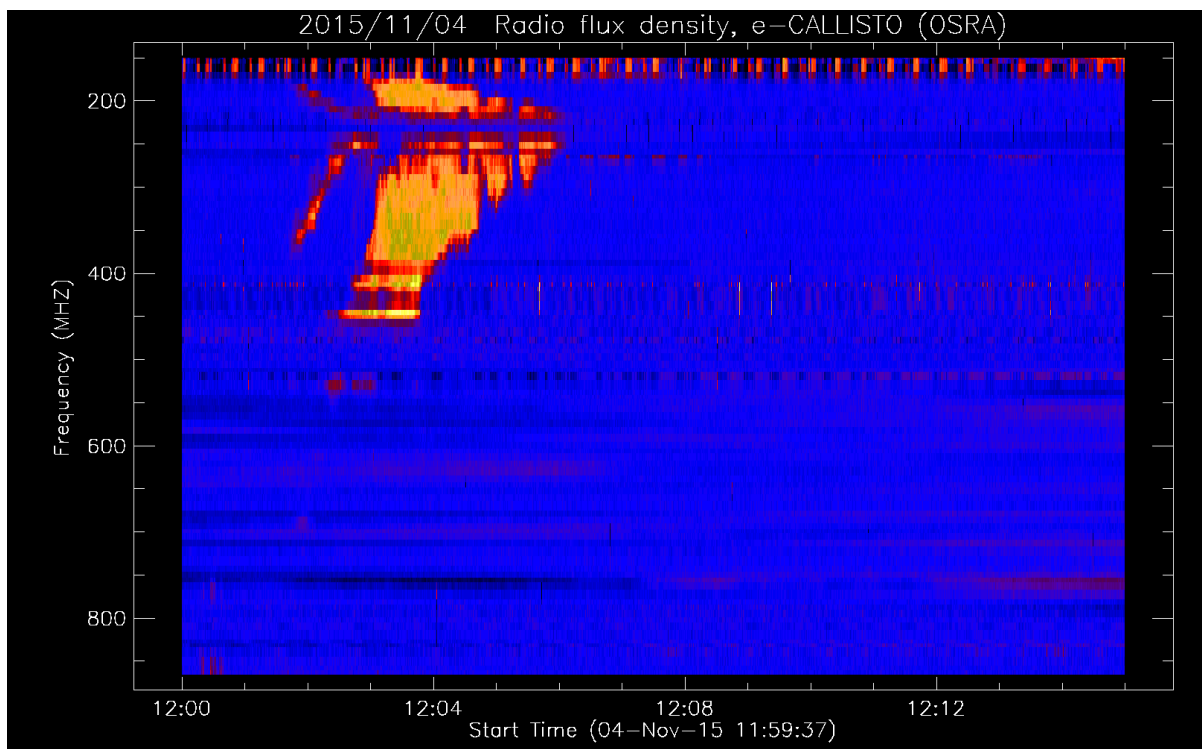


Fig. 17: Type II burst observed at OSRA, Czech Republic. Background is subtracted.

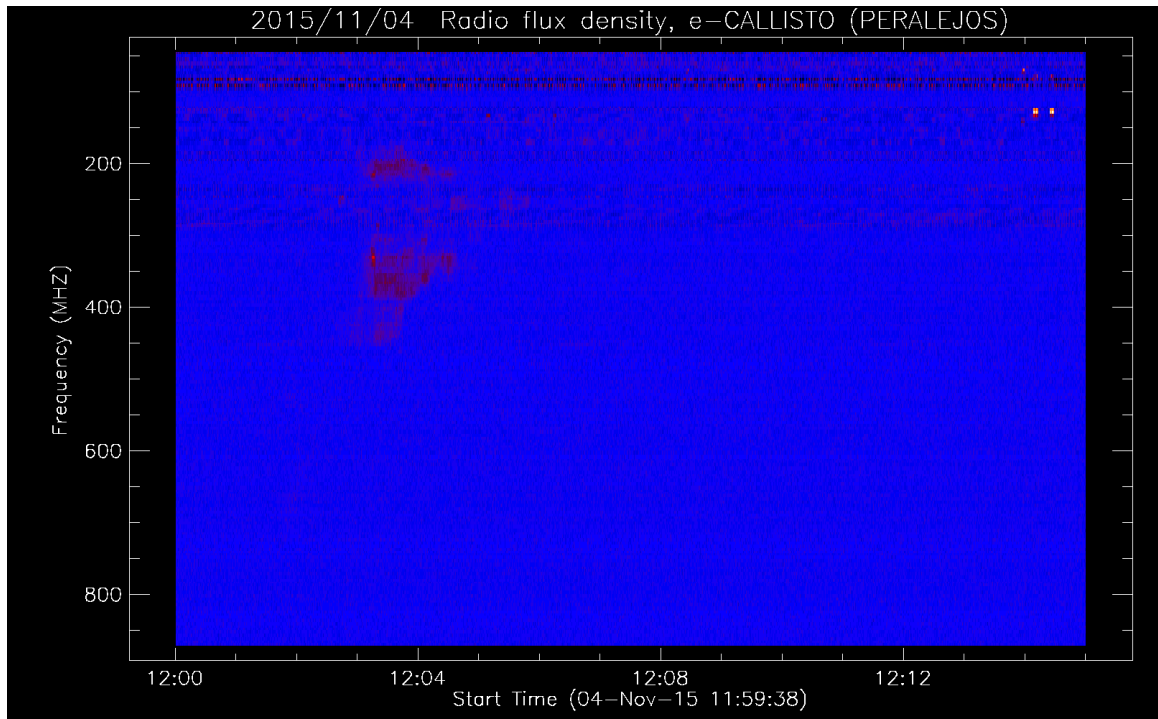


Fig. 18: Type II burst observed in Peralejos, Spain. Background is subtracted.

Radio bursts observed during event #2340 at 2015-11-04, 13:36-15:07UT

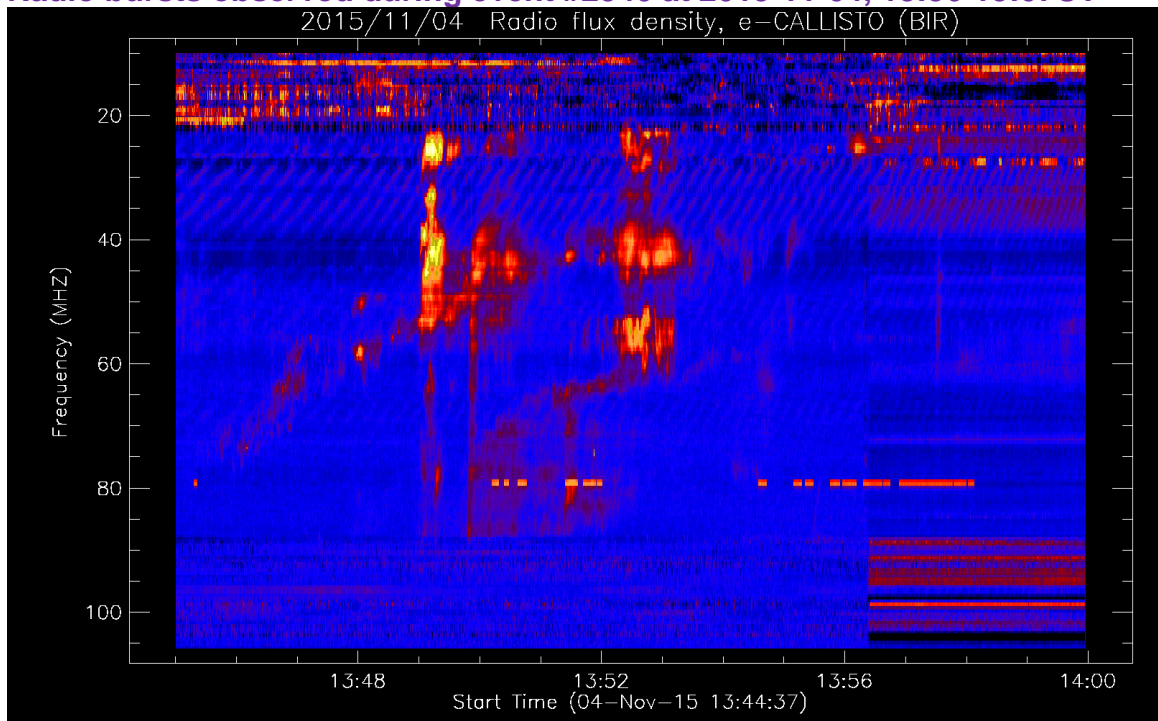


Fig. 19: Complex burst observed at TCD Birr, Ireland. Background is subtracted. More data on the web.

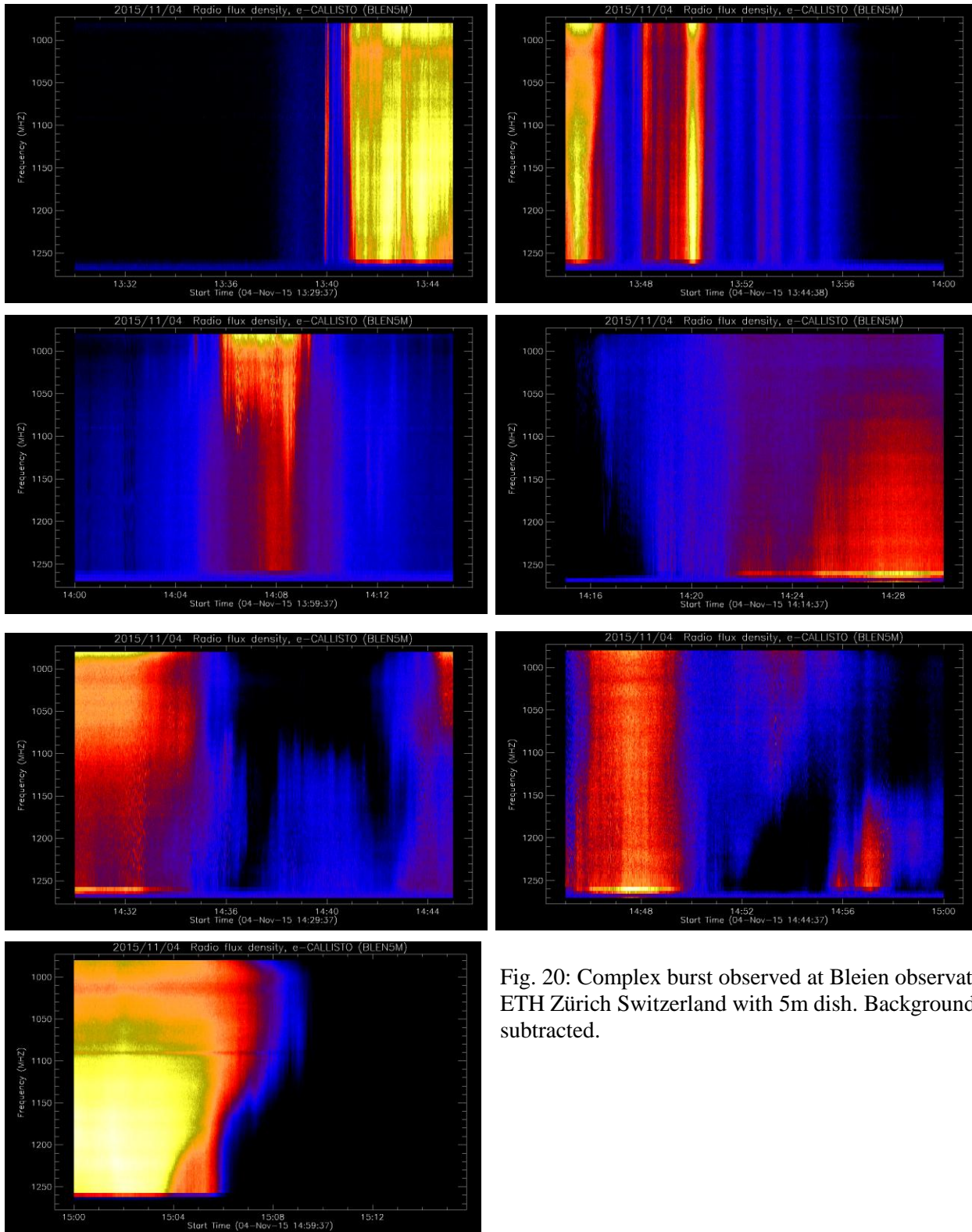


Fig. 20: Complex burst observed at Bleien observatory, ETH Zürich Switzerland with 5m dish. Background is subtracted.

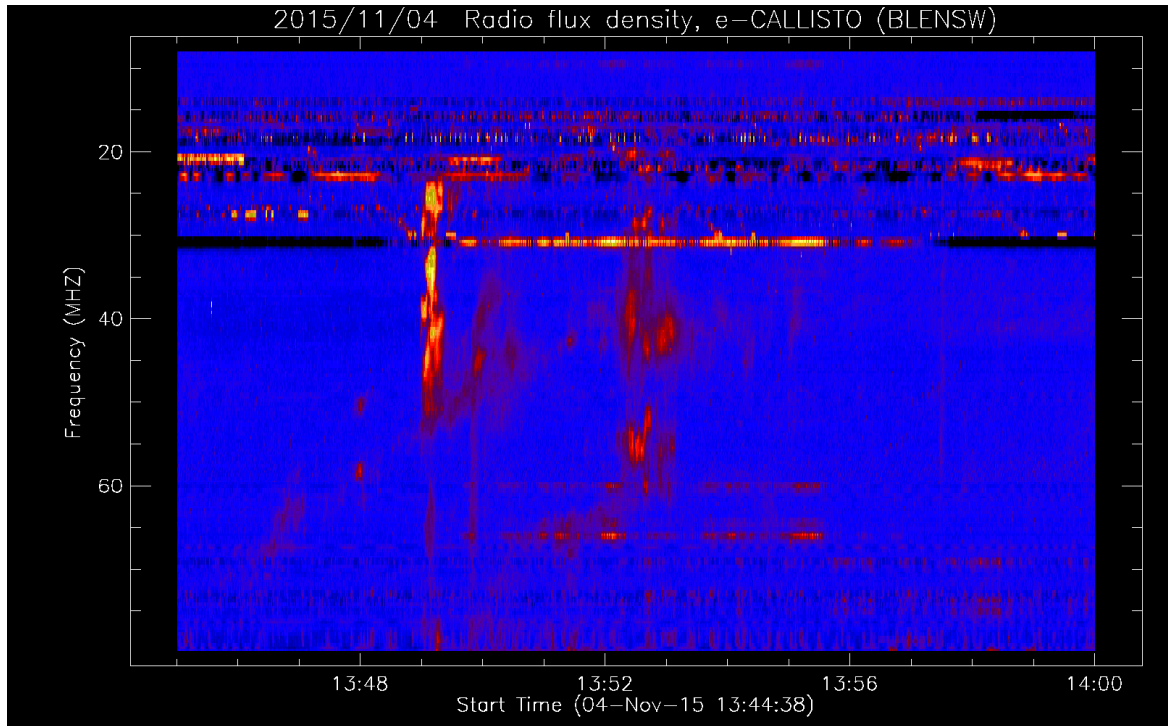


Fig. 21: Complex burst observed at Bleien observatory, ETH Zürich Switzerland with LWA. Background is subtracted. More data on the web.

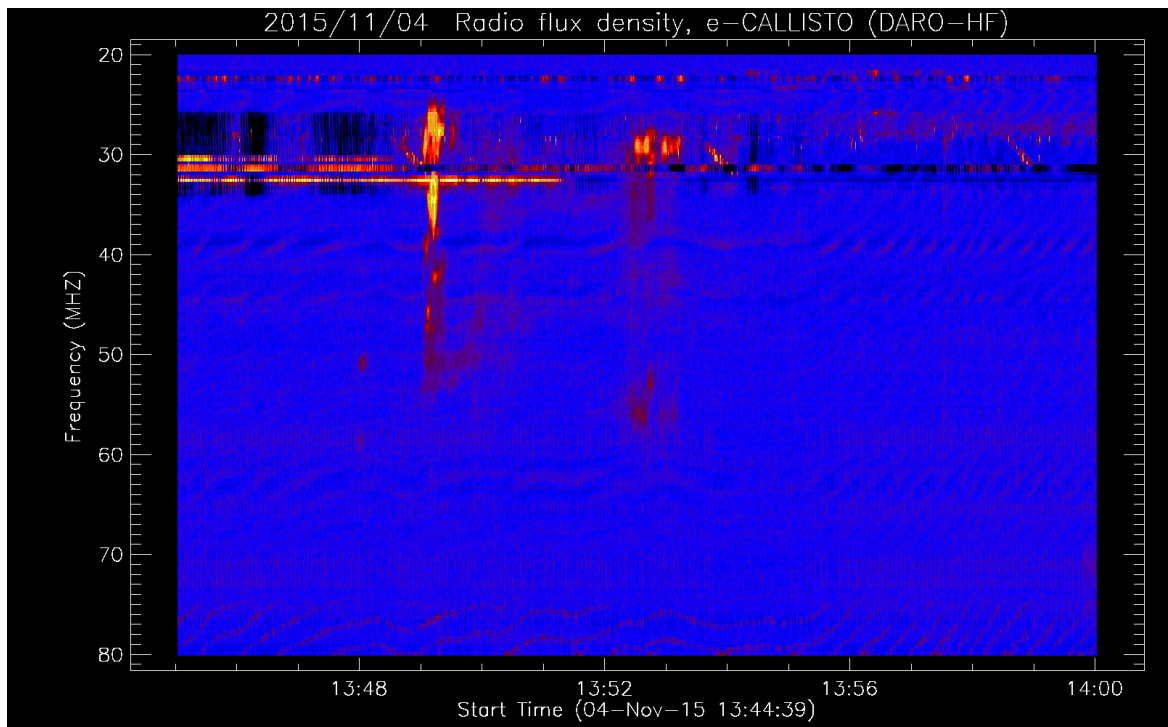


Fig. 22: Complex burst observed at DARO, Germany. Background is subtracted.

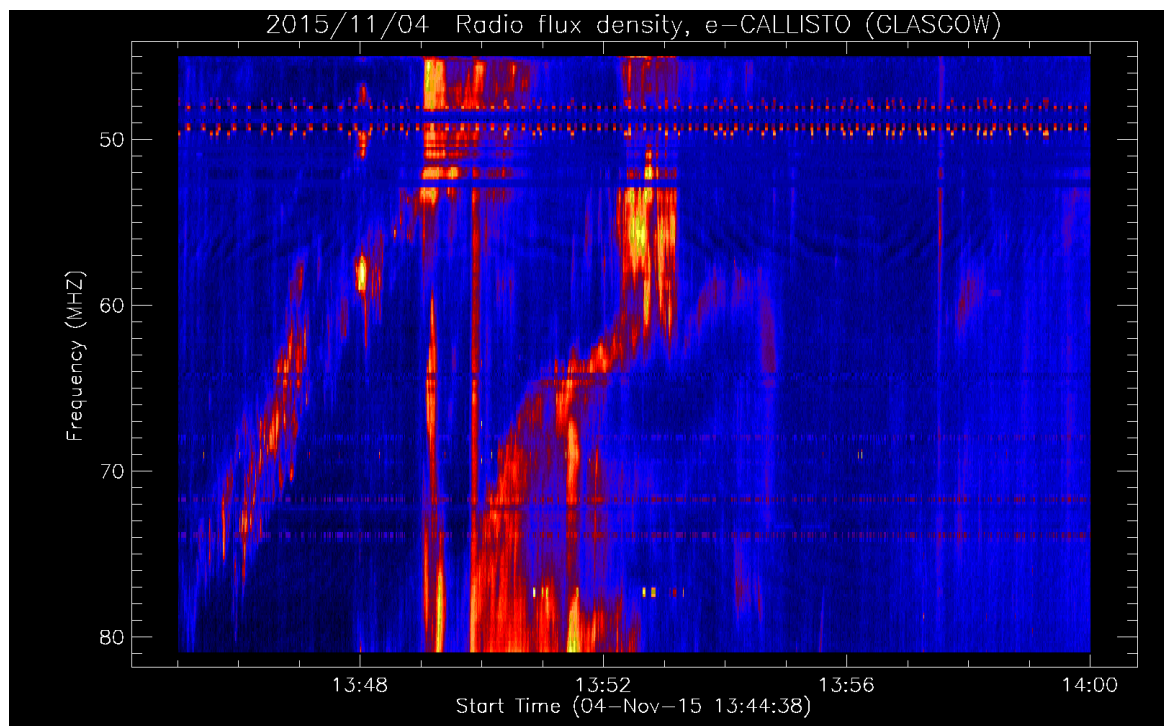


Fig. 23: Complex burst observed at UOG, Glasgow, UK. Background is subtracted.

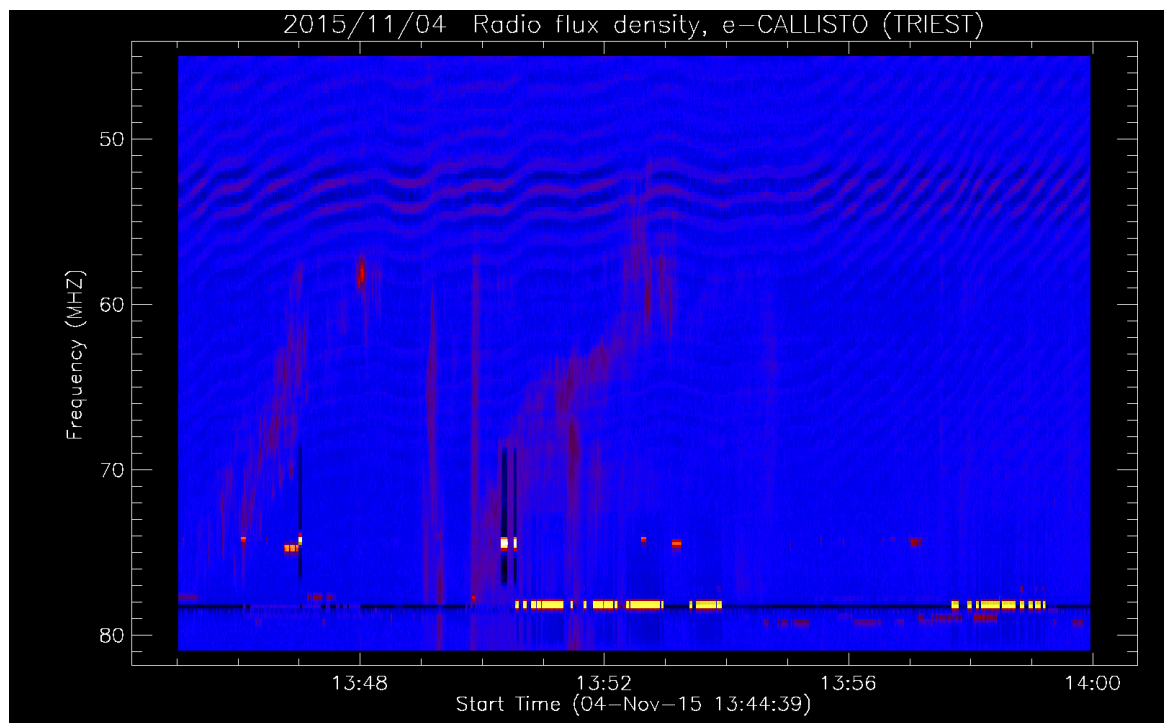


Fig. 24: Complex burst observed at TRIESTE, Italy. Background is subtracted.

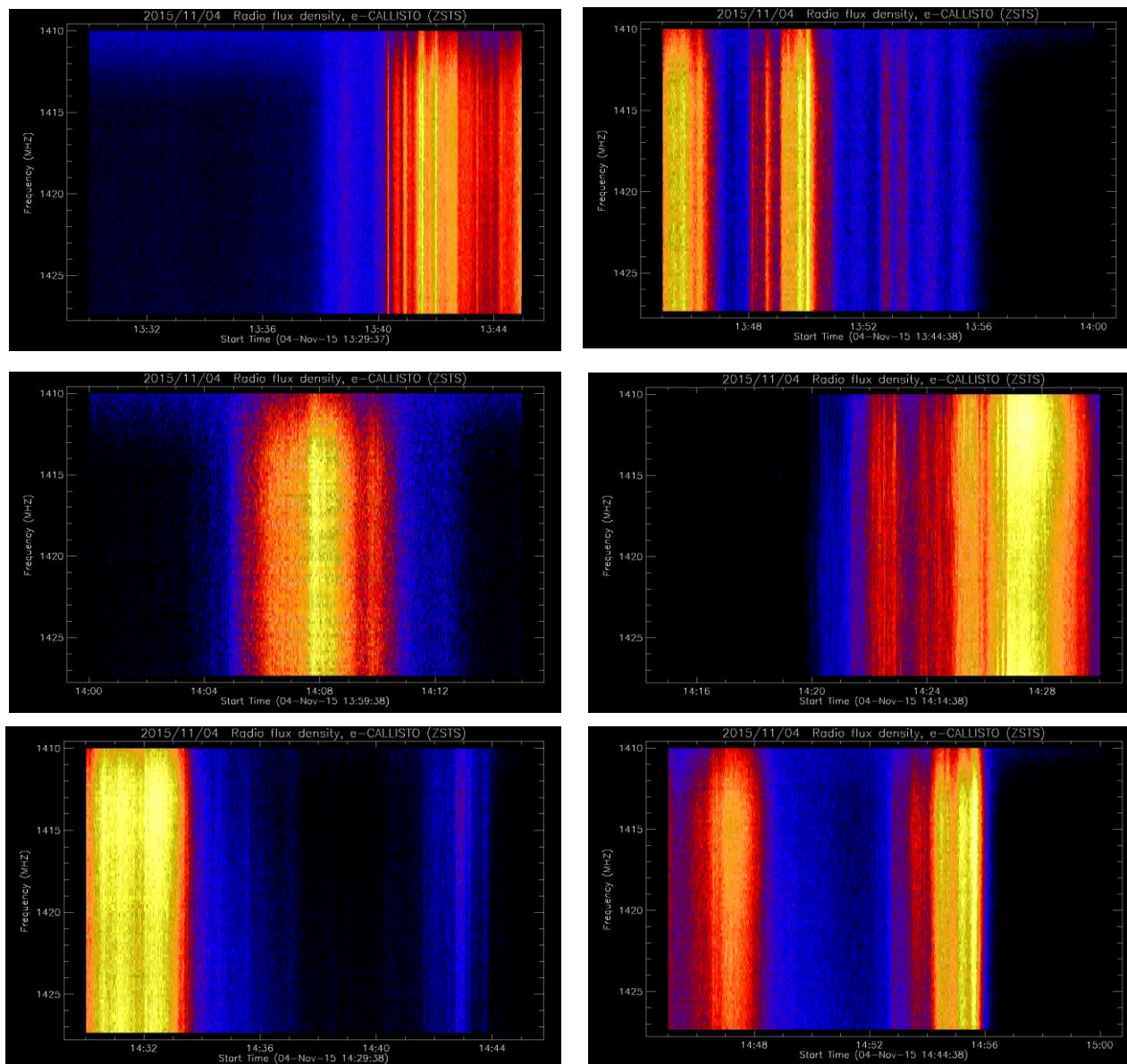


Fig. 25: 21cm microwave radiation at sun tower ETH Zürich, Switzerland. Background is subtracted.

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).

- Our article "Analysis of radio astronomy bands using CALLISTO spectrometer at Malaysia-UKM station" has just been published and is available on SpringerLink: <http://link.springer.com/article/10.1007/s10686-015-9480-z>
- 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 and Win 10
- 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.

Please do **not** respond to the email-address of the list-server, respond instead directly to me (address below).

If you do not want to receive this news-letter please send me an email and I'll take your address out of the data base.

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 data base.

Christian Monstein, Institute for Astronomy, ETH Zurich, Switzerland. email: [monstein\(at\)astro.phys.ethz.ch](mailto:monstein(at)astro.phys.ethz.ch)

Appendix 1:

:Product: 20151104events.txt

:Created: 2015 Nov 05 1827 UT

:Date: 2015 11 04

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.

#

Edited Events for 2015 Nov 04

#

#Event	Begin	Max	End	Obs	Q	Type	Loc/Frq	Particulars	Reg#
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2140 + 0000 //// 0033 LEA C RSP 025-180 VI/2

2130 + 0025 0032 0037 G15 5 XRA 1-8A C3.0 1.3E-03 2445

2130 0029 0034 0041 LEA 3 FLA N15W63 SF DSD 2445



2130 +	0029	0030	0030	LEA	G	RBR	410	170		2445
2130 +	0030	0030	0033	LEA	G	RBR	245	5400		2445
2150	0111	////	0133	LEA	C	RSP	025-180	VI/2		
2150 +	0117	0120	0122	G15	5	XRA	1-8A	B9.1	1.5E-04	2445
2150	0118	////	0119	PAL	C	RSP	025-180	III/2		
2150	0118	////	0119	LEA	C	RSP	025-180	V/2		
2150	0118	0118	0119	LEA	G	RBR	245	110		
2160 +	0124	0127	0129	G15	5	XRA	1-8A	B9.9	1.5E-04	2445
2170 +	0133	0133	0133	LEA	G	RBR	245	4200		
2170	0133	////	0133	PAL	C	RSP	025-180	III/2		
2170 +	0133	0133	0133	LEA	G	RBR	410	1300		
2170 +	0133	0133	0133	LEA	G	RBR	610	120		
2180	0139	0141	0146	LEA	3	FLA	N07E09	SF	ERU	2443
2190	0201	0218	0249	G15	5	XRA	1-8A	C1.1	3.0E-03	2443
2190	0205	////	0543	LEA	C	RSP	025-180	VI/1		
2200 +	0320	0326	0329	G15	5	XRA	1-8A	M1.9	5.2E-03	2445
2200	0323	0325	0326	PAL	U	RBR	410	41000		2445
2200	0323	0325	0334	LEA	3	FLA	N15W64	1N	BPT	2445
2200	0323	0324	0325	PAL	G	RBR	8800	430		2445
2200	0323	0324	0325	PAL	G	RBR	15400	1000		2445
2200 +	0323	////	0334	PAL	C	RSP	041-180	II/2	790	2445
2200	0323	0324	0325	PAL	G	RBR	2695	220		2445
2200	0323	0324	0325	PAL	G	RBR	4995	250		2445
2200	0324	0324	0325	PAL	U	RBR	610	230		2445
2200	0324	0324	0325	PAL	G	RBR	1415	130		2445
2200	0324	0325	0327	PAL	U	RBR	245	56000		2445
2210 +	0353	0359	0405	G15	5	XRA	1-8A	C1.4	7.1E-04	2443
2210	0355	0358	0408	LEA	3	FLA	N07W01	SF		2443
2220 +	0450	0456	0459	G15	5	XRA	1-8A	C1.0	3.7E-04	2445
2220	0455	0455	0459	LEA	3	FLA	N15W64	SF		2445
2230	0542	////	0543	SVI	C	RSP	031-120	III/2		
2240	0543	0543	0543	SVI	G	RBR	245	170		
2300 +	0753	////	1145	SVI	C	RSP	025-171	VI/2		
2250 +	0836	////	0837	LEA	C	RSP	025-180	V/2		
2260 +	0846	0847	0849	LEA	3	FLA	N17W65	SF	DSD	2445
2260 +	0847	0900	0904	G15	5	XRA	1-8A	C4.6	2.1E-03	2445
2260	0856	0857	0857	SVI	G	RBR	4995	89		2445
2260	0856	0857	0858	SVI	G	RBR	8800	94		2445
2260	0856	0857	0858	SVI	G	RBR	15400	69		2445
2260 +	0859	0859	0859	SVI	G	RBR	410	360		2445



2270	0912	0912	0912	LEA	G	RBR	245	110		
2280 +	0921	0925	0927	G15	5	XRA	1-8A	B9.6	2.1E-04	2445
2280	0924	0925	0929	LEA	3	FLA	N17W65	SF	DSD	2445
2310 +	B0930	U0948	A1055	SVI	3	FLA	N08E03	SF		2443
2310 +	1028	1032	1035	G15	5	XRA	1-8A	C1.1	2.9E-04	2443
2320 +	1155	1203	1206	G15	5	XRA	1-8A	M2.5	7.3E-03	2445
2320	1200	1200	1202	SAG	G	RBR	1415	34		2445
2320 +	1201	1202	1203	SVI	G	RBR	8800	94		2445
2320	1201	1202	1203	SAG	G	RBR	610	750		2445
2320 +	1201	1202	1203	SVI	G	RBR	4995	69		2445
2320 +	1202	1202	1203	SVI	G	RBR	15400	66		2445
2320	1202	1202	1203	SAG	G	RBR	2695	28		2445
2320 +	1202	1204	1205	SVI	G	RBR	245	3600		2445
2320 +	1202	1203	1203	SVI	G	RBR	410	18000		2445
2320 +	1204	////	1209	SVI	C	RSP	047-171	II/1	1033	2445
2320	B1205	U1205	A1219	SVI	3	FLA	N12W73	1N	BPT	2445
2330 +	1314	////	1319	SAG	C	RSP	025-180	III/1		
2340	B1327	U1339	A1348	SVI	2	FLA	N09W04	2B	ERU	2443
2340 +	1331	1352	1413	G15	5	XRA	1-8A	M3.7	5.9E-02	2443
2340 +	1336	1341	1438	SVI	G	RBR	4995	740		2443
2340 +	1337	1341	1442	SVI	G	RBR	2695	340		2443
2340 +	1337	1341	1429	SVI	G	RBR	8800	560		2443
2340 +	1338	1341	1414	SVI	G	RBR	15400	210		2443
2340 +	1343	////	1358	SAG	C	RSP	048-180	II/2	955	2443
2340 +	1351	////	1531	SVI	C	RSP	025-171	IV/1		2443
2340 +	1404	1426	1502	SAG	G	RBR	410	1400		2443
2340 +	1405	1433	1507	SAG	G	RBR	245	1400		2443
2340 +	1406	1427	1456	SAG	G	RBR	1415	5800		2443
2340 +	1406	1427	1458	SAG	G	RBR	610	1000		2443
2390	1421	1425	1433	SAG	G	RBR	2695	180		
2340	B1448	////	1854	SOH	4	CME	XUV, EUV, UV118-314/FS594			2443
2360 +	2248	2253	2258	G15	5	XRA	1-8A	C1.0	4.6E-04	2448