

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 13 April 2017

Object: Jupiter – Non-Io-B

Observer: JB

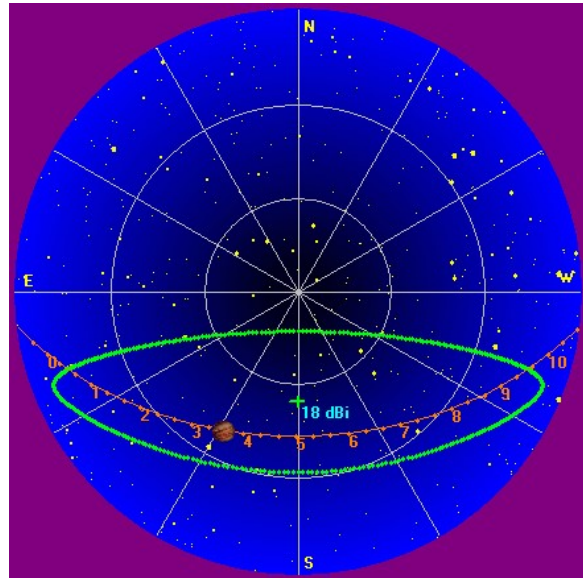
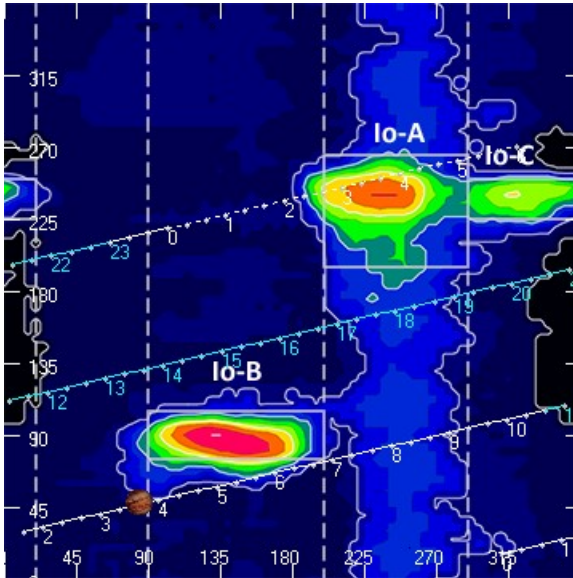
Start of pass:	0340 UT	Planetary K-index:	2
Jupiter Altitude:	40.2 degrees	Jupiter Azimuth:	152.6 degrees
Jupiter CML:	84.4	Jupiter Io Phase:	047.09
Jupiter RA:	13:07	Jupiter Dec:	-05:24
Hour Angle:	-01:23	Polarization	RCP
Sun Altitude:	-36.2 degrees	Sun Azimuth:	330.3 degrees
Sun RA:	01:20	Sun Dec:	08:23

End of pass:	0548 UT		
Jupiter Altitude:	42.7 degrees	Jupiter Azimuth:	195.6 degrees
Jupiter CML:	161.79	Jupiter Io Phase	065.04
Hour Angle:	00:46		
Sun Altitude:	-40.3 degrees	Sun Azimuth:	010.7 degrees

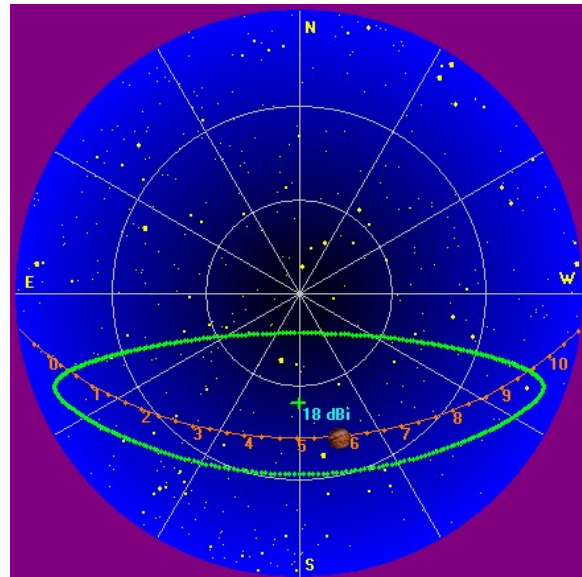
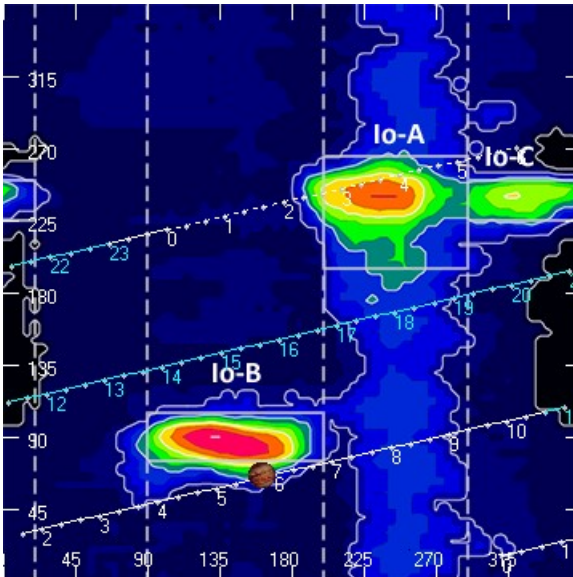
Observations made using:

1. FSX-8S fed by the TFD array
 - a. 7.7 dB loss between TFD and Multicouplers.
 - b. Connect to array through HNRAO Multicoupler #1 and #2, port 2
 - i. HNRAO Multicoupler #1 – TFD/LCP
 - ii. HNRAO Multicoupler #2 – TFD/RCP
 1. Port 1 having 10 dB of gain, all other ports have 3 dB gain.
2. FSX-2 fed by the LWA array directly
 - a. LWA element configuration – 90 degrees
3. JOVE 2 receiver fed by phased JOVE dipoles @ 10'
 - a. 12' phase cable - phased for 2016-17 season
 - b. Calibrated 6 March 2017
 - c. Connected to dipoles through HNRAO Multicoupler #3, port 1.
 - i. 3.165 dB loss between Multicoupler and dipoles.
4. Icom R75 receiver fed by experimental DDRR antenna directly.
 - a. Calibrated 6 March 2017
5. SDRPlay
 - a. RSP1 (2) and RSP2 (1)

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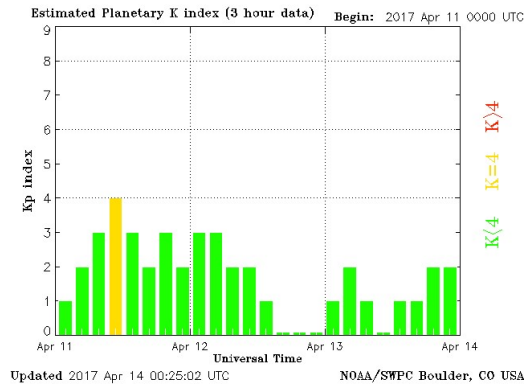


Beginning of Pass



End of Pass

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A Non-Io-A pass, remarkable only in the weakness of emissions observed from this observatory. The overwhelming majority were barely above the galactic background. RCP L-bursts with positive drift modulation lanes. Several times during the pass, hatch mark modulation lanes appeared. There were several N-like events, which may well qualify as N-events. One was between 0340:11 UT and 0340:40 UT. Another between 0405 UT and 0405:30 UT.

The strongest emission was observed with the SDRPlay RSP1 unit which was set to scan RCP between 12 MHz and 20 MHz using the TFD array. A negative drift L-burst group was observed at 0538 UT until 0541 UT between 16 MHz and 13 MHz.

Positive drift modulation lanes ranged from a high of 207 kHz/sec to 75 kHz/sec with an average of 157 kHz/sec. Two negative drift modulation lanes were measured at -76 kHz/sec and -22 kHz/sec.

The FSX-2/LWA Pair and TSX-8S/TFD Pair did not record any emissions during this time period.

Power line RFI continues to be a problem for all spectrographs.

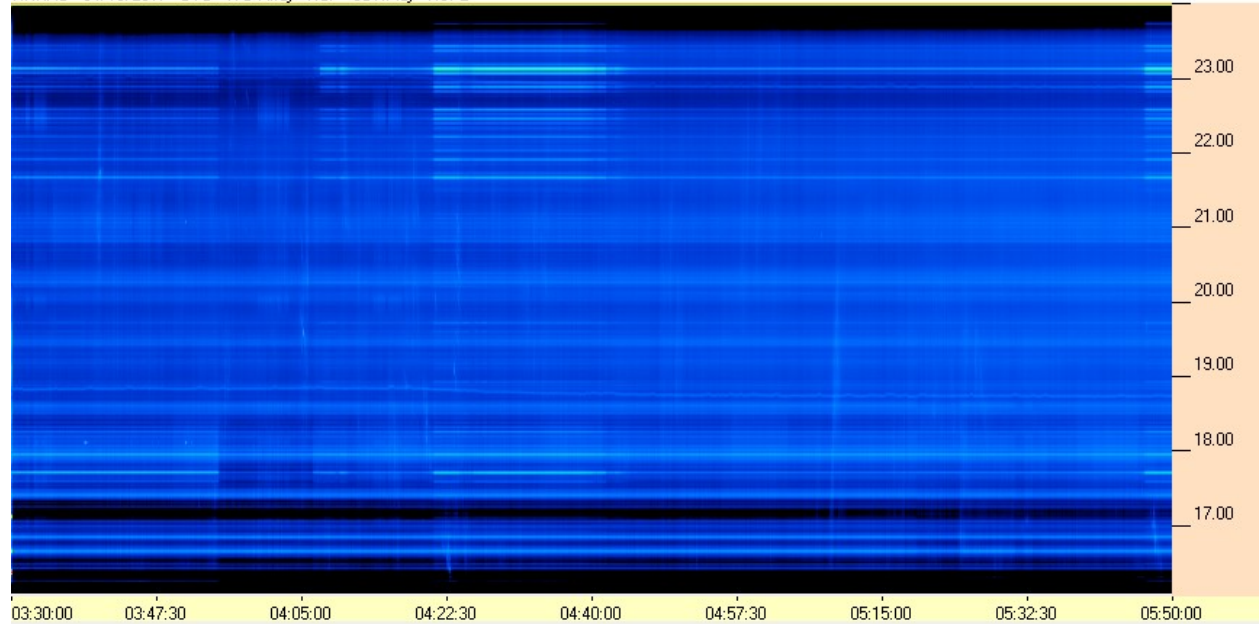
No emissions recorded on SkyPipe @ 20.1 MHz.

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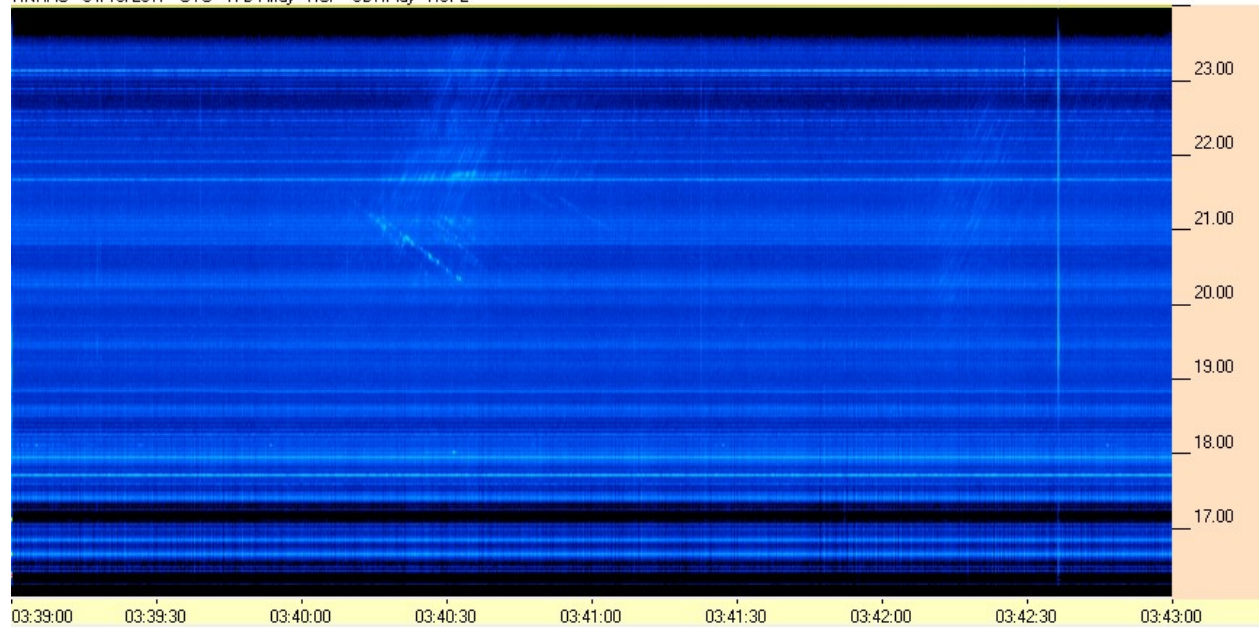


SDRPlay RSP2/TFD Pair

HNRAO - 04/13/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



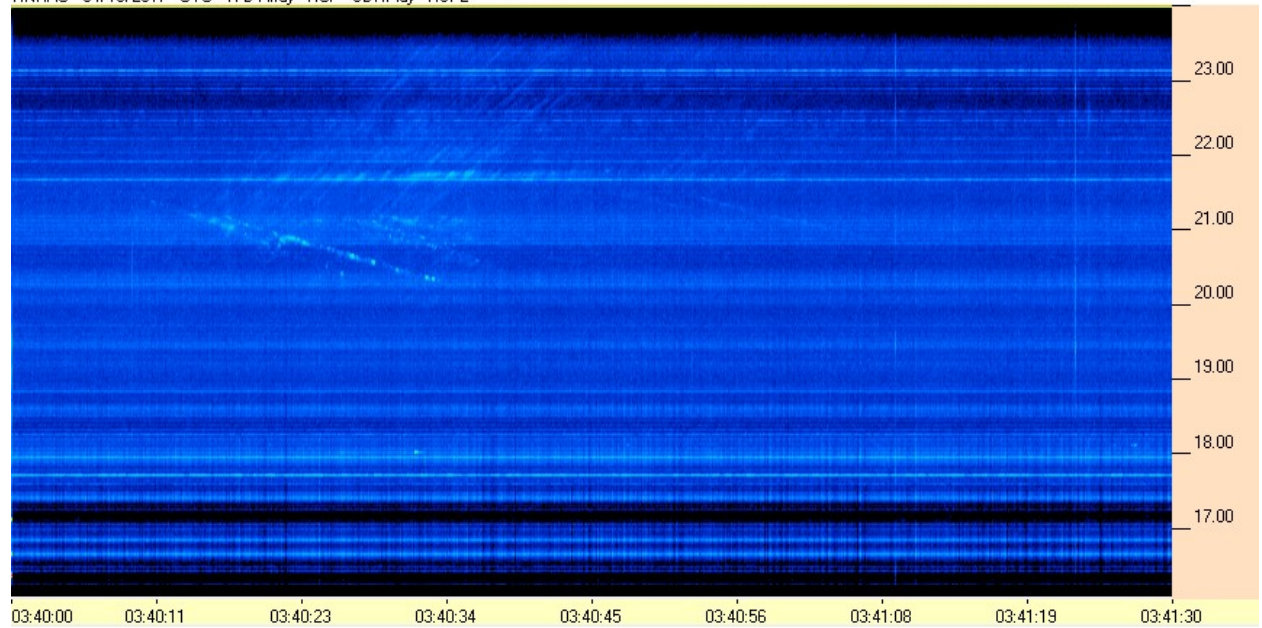
HNRAO - 04/13/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



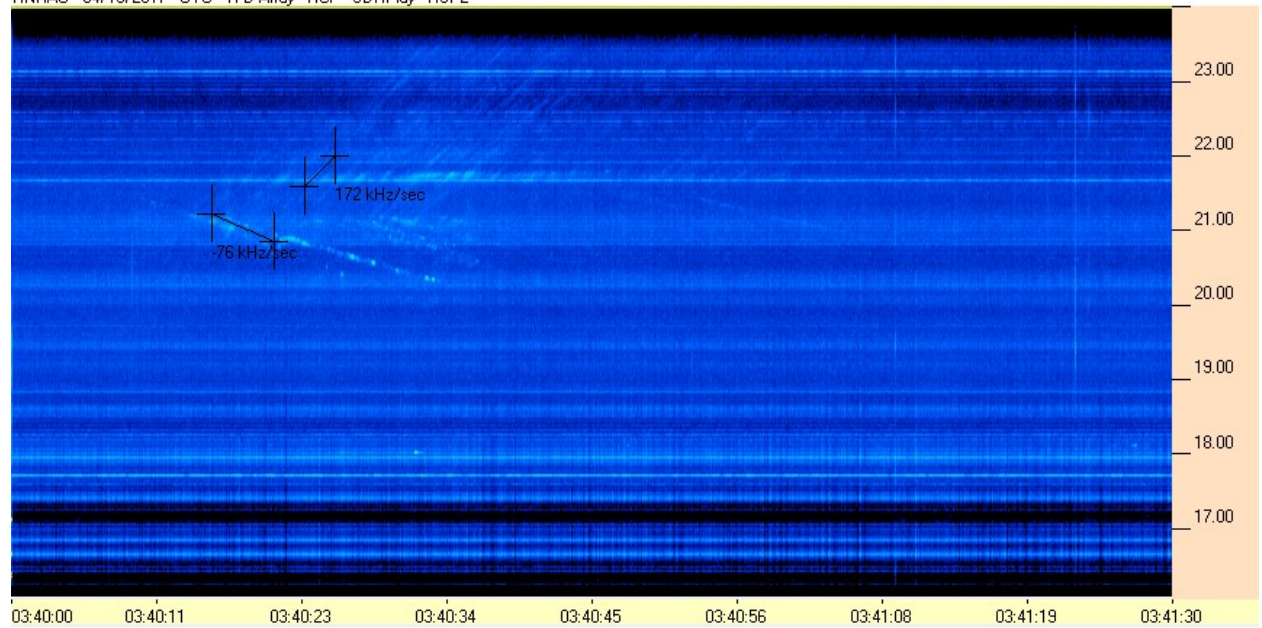
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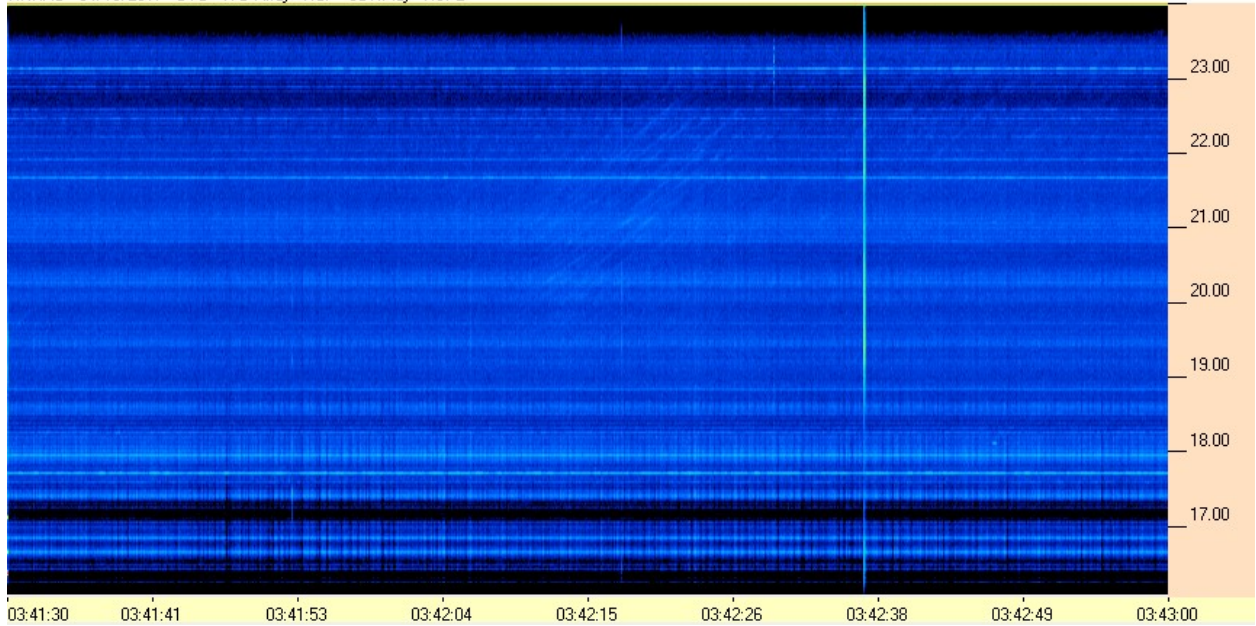
HNRAO - 04/13/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



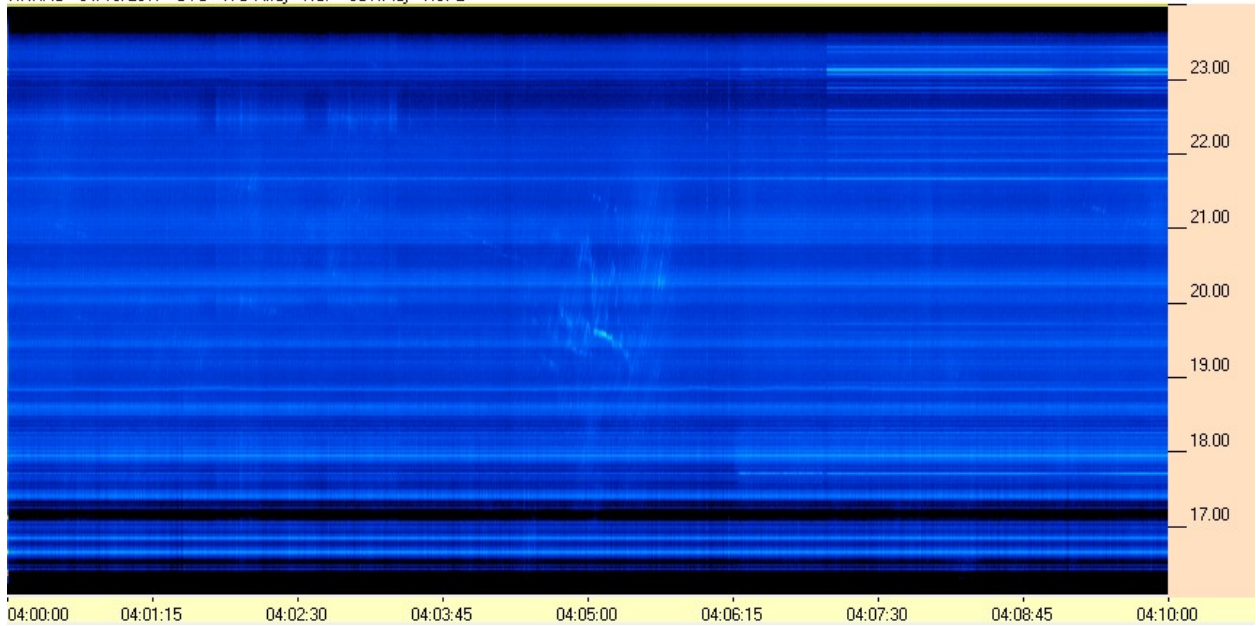
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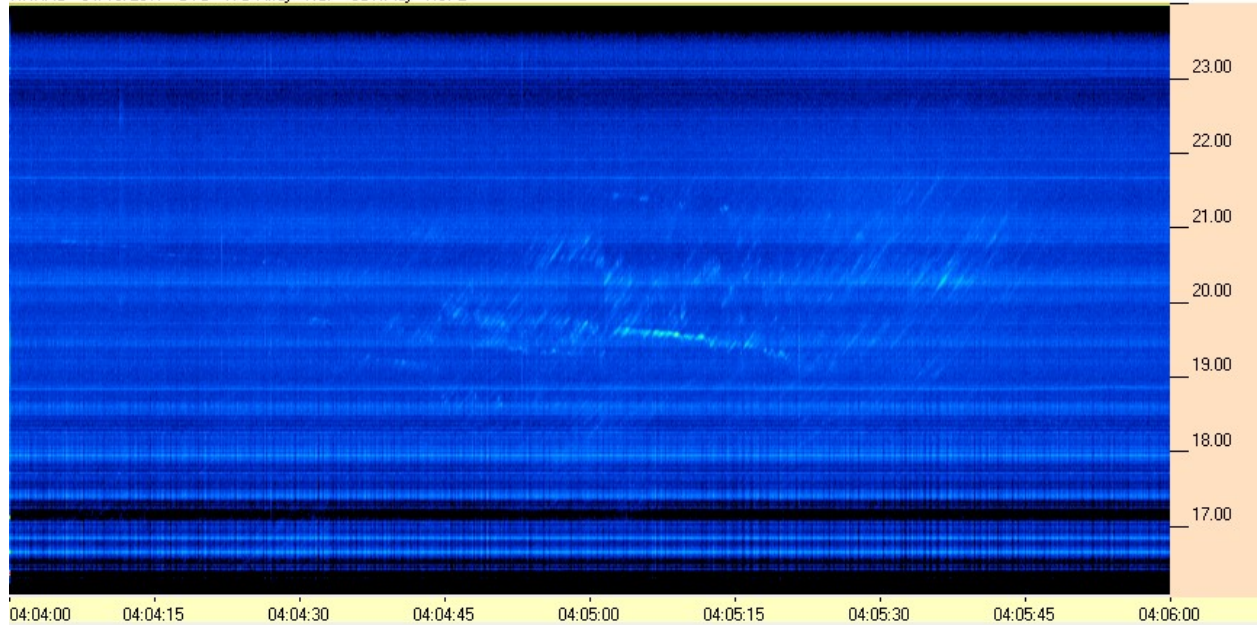
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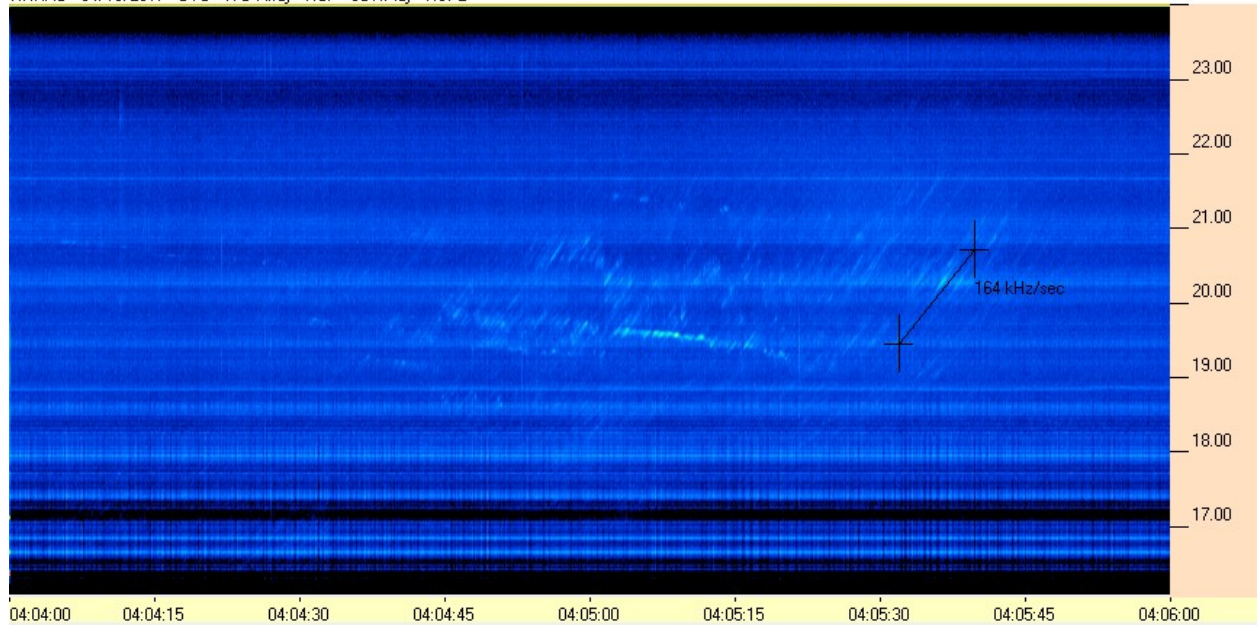
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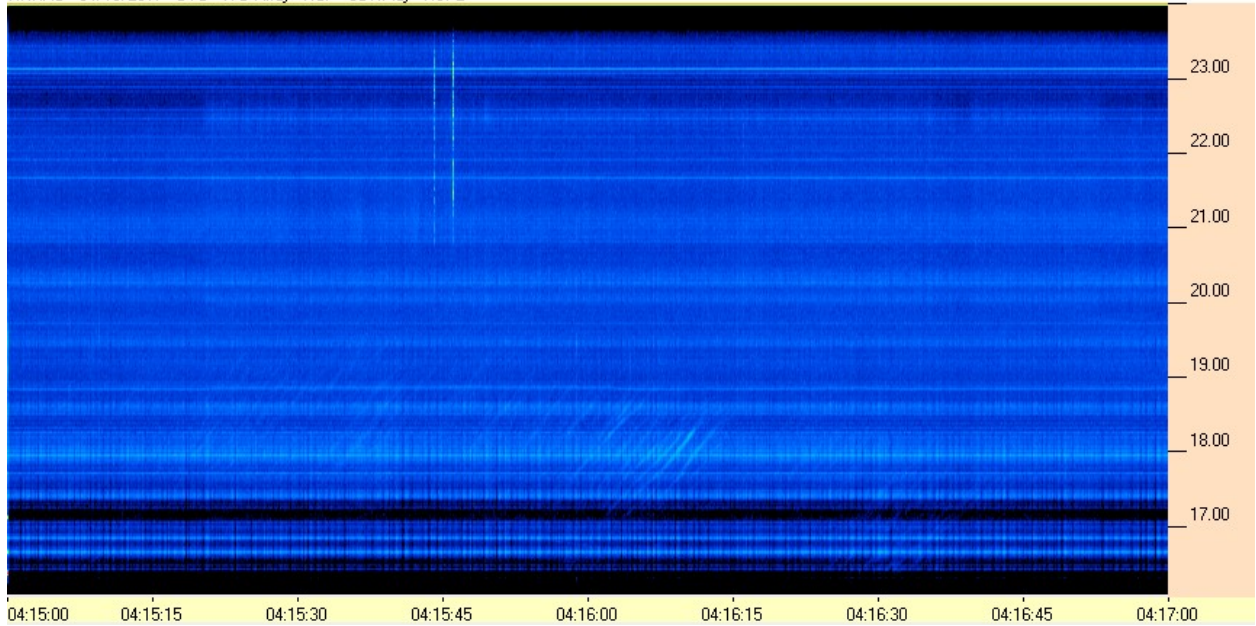
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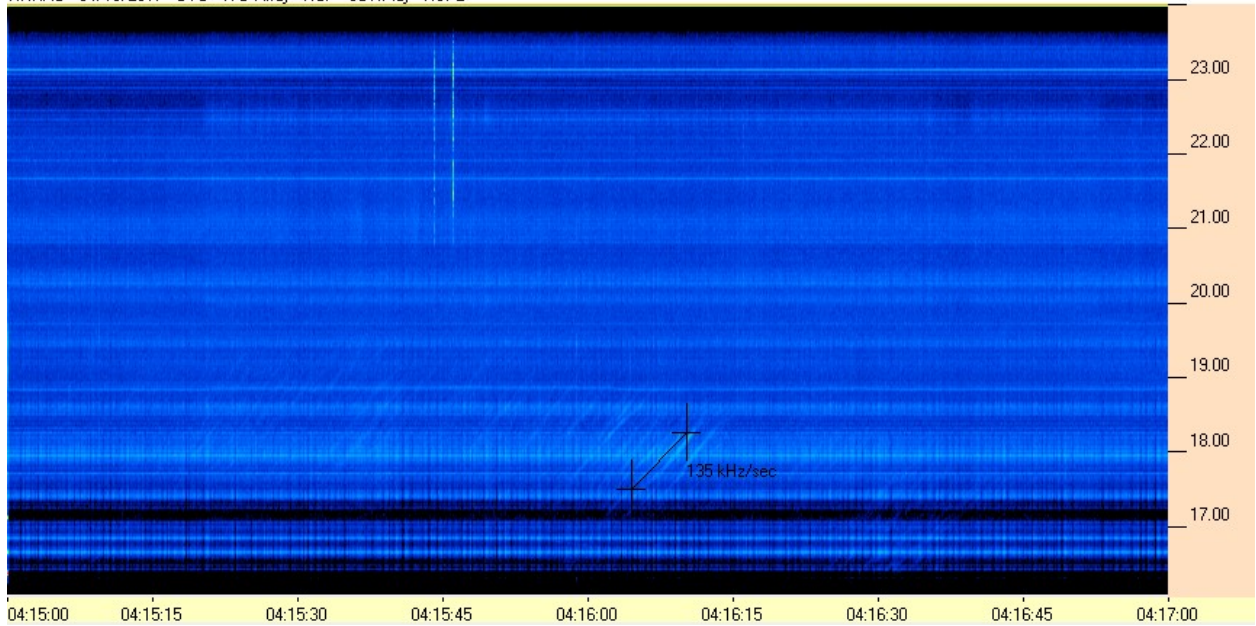
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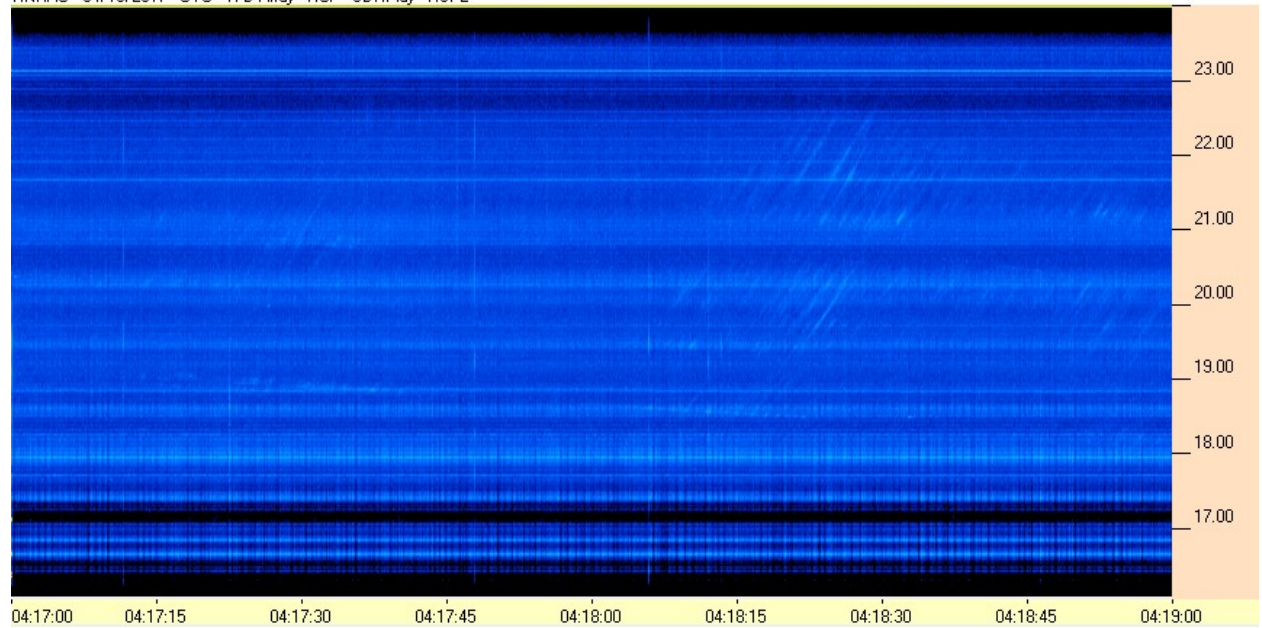
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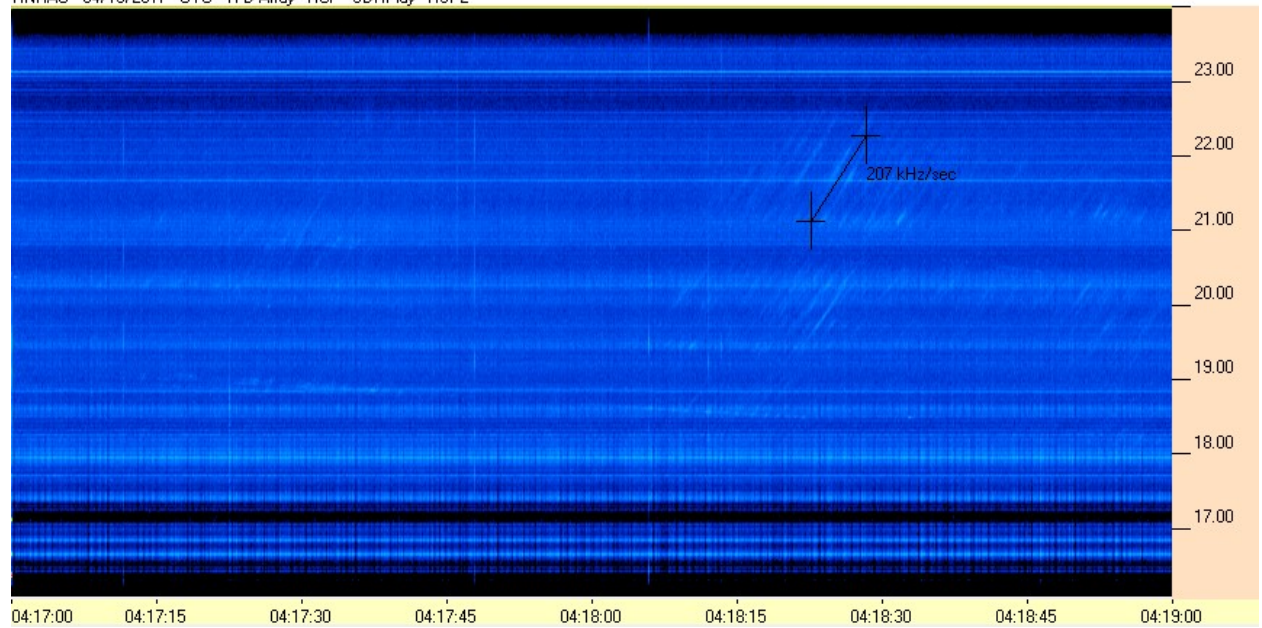
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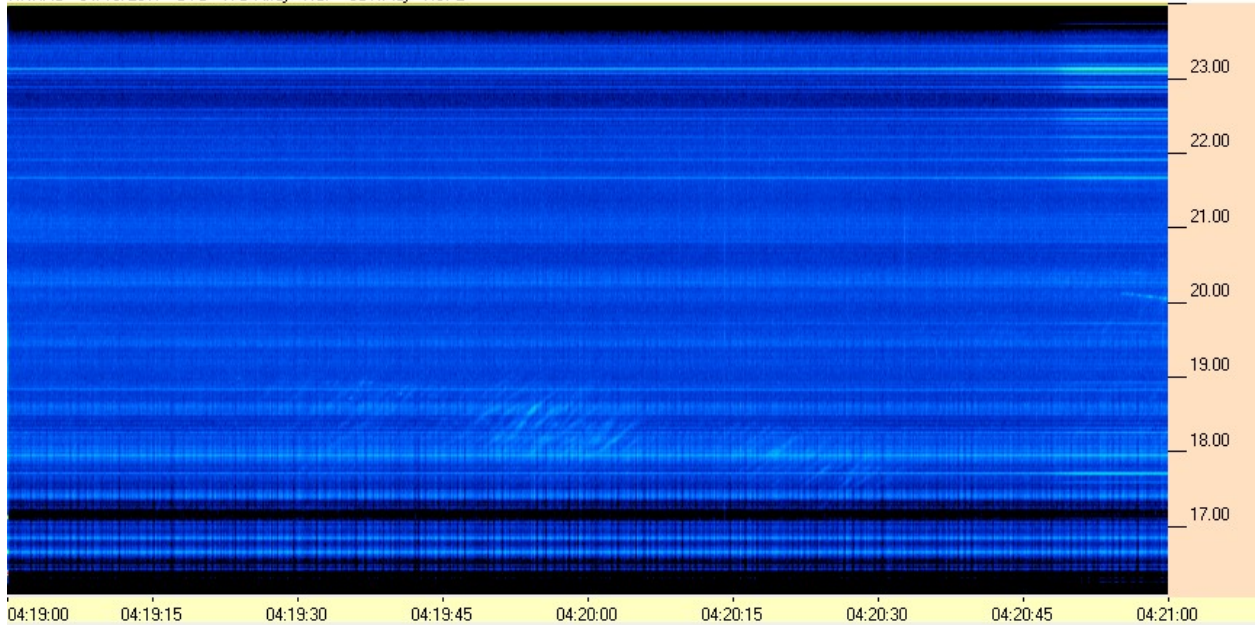
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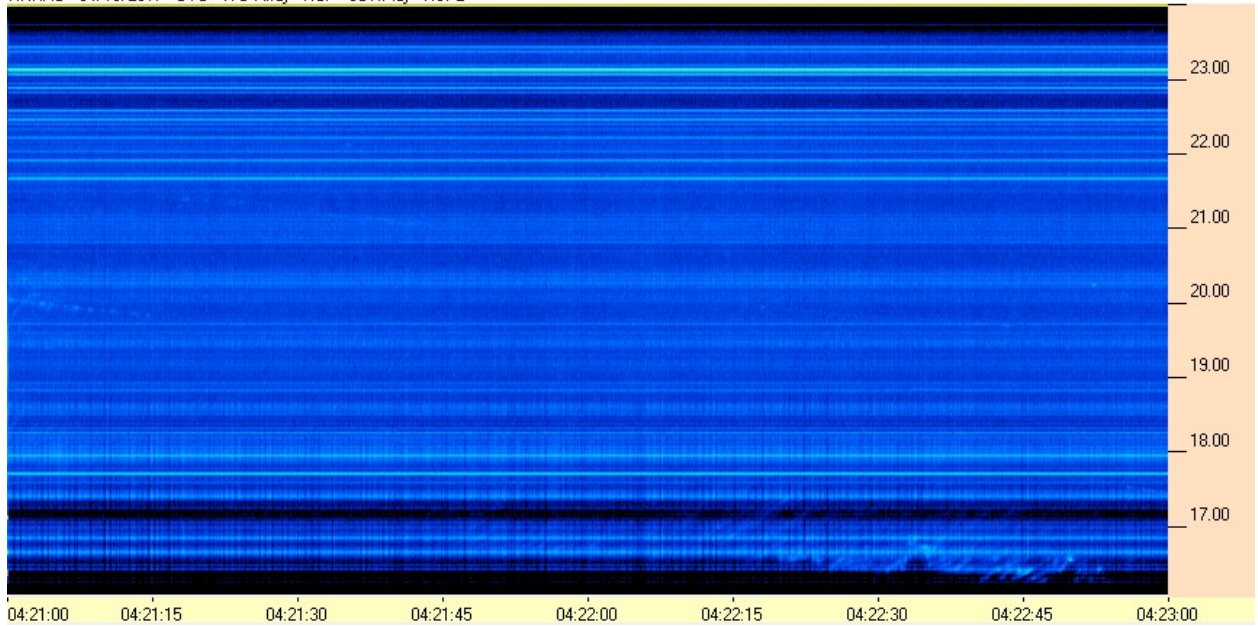
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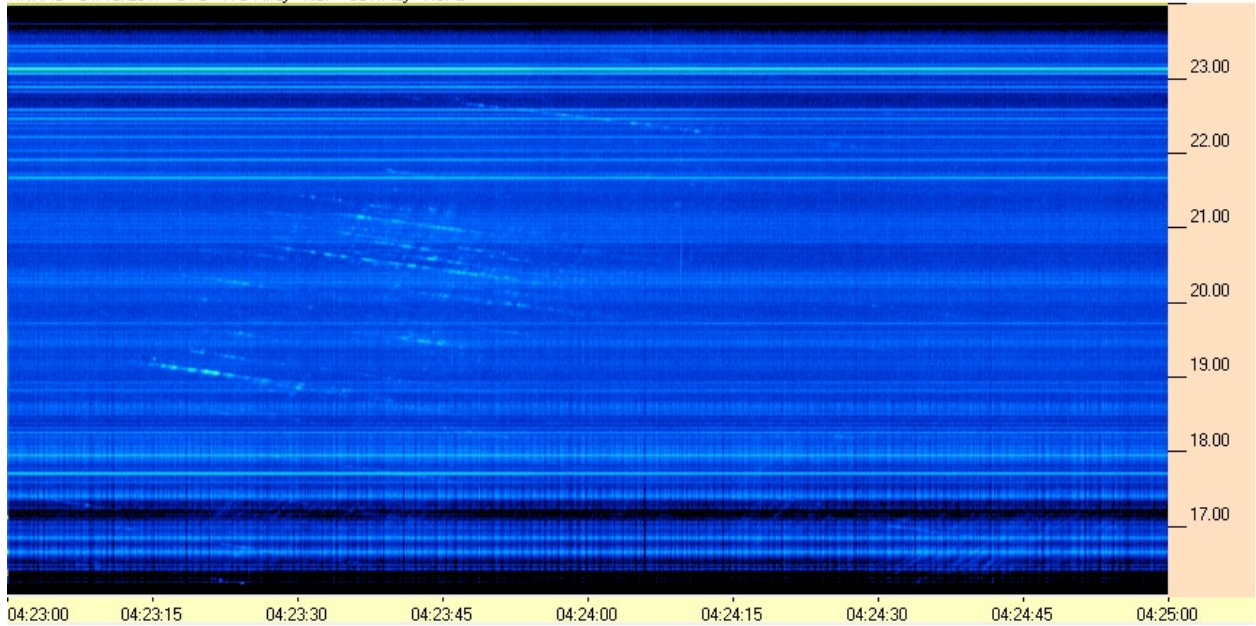
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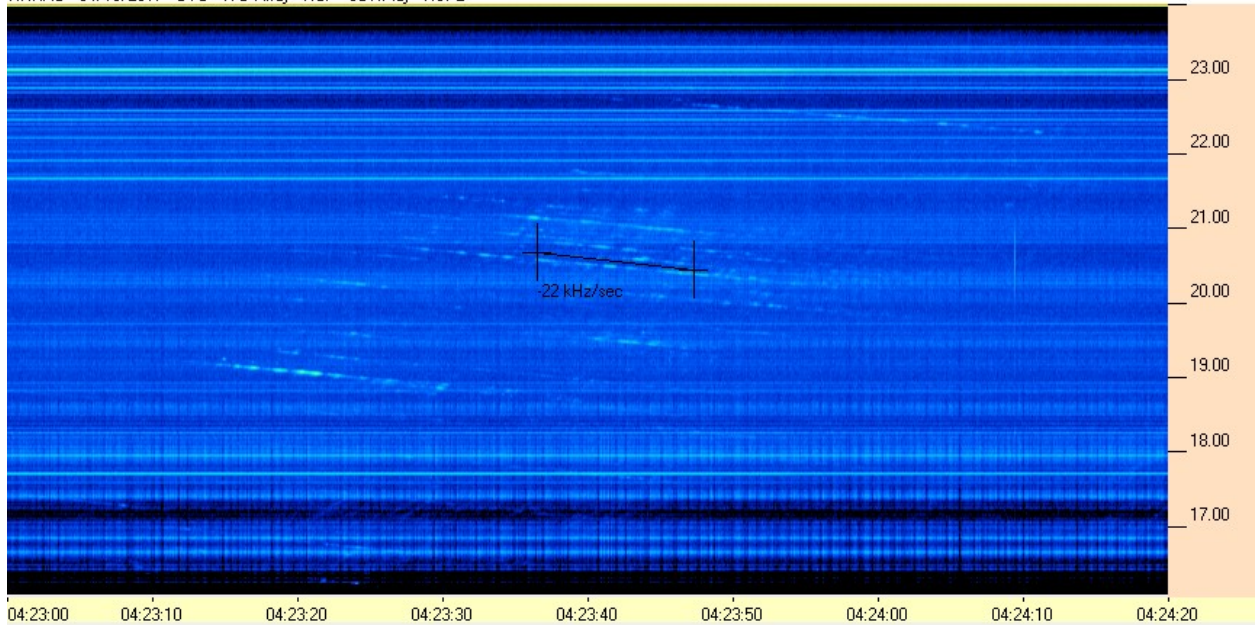
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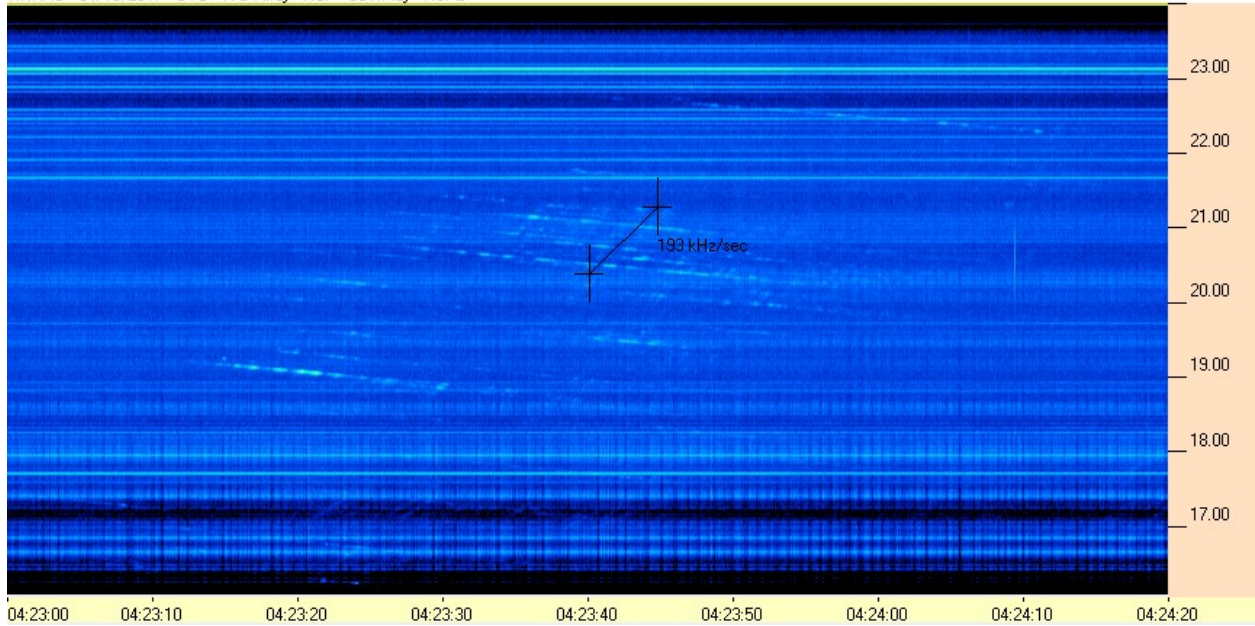
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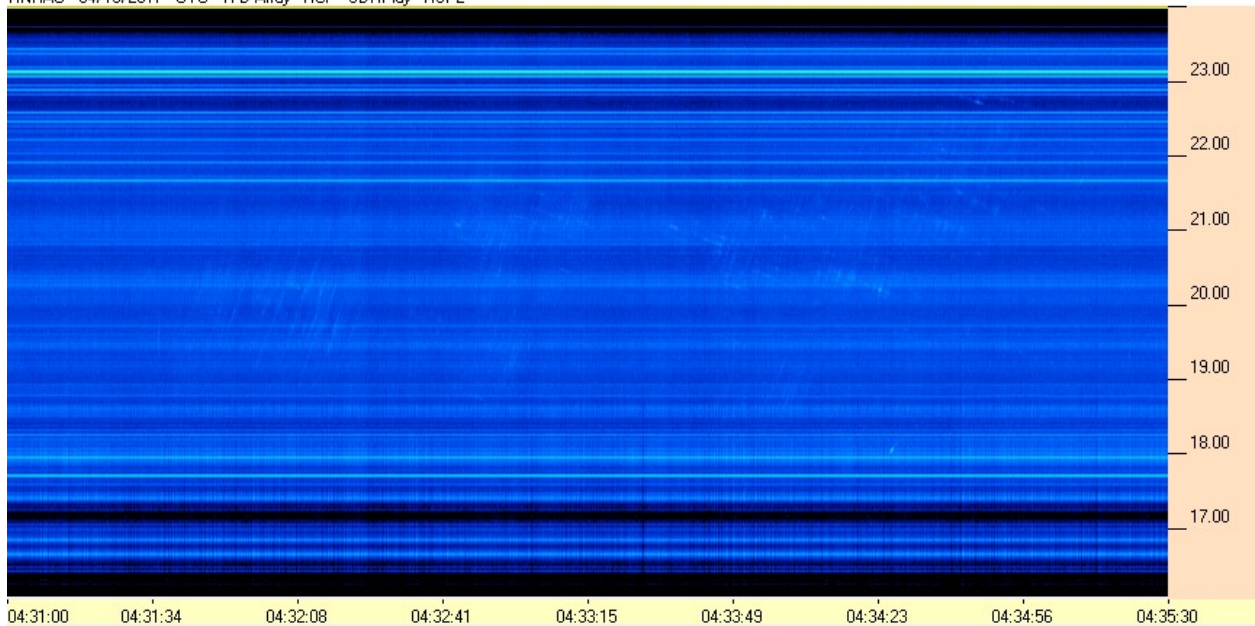
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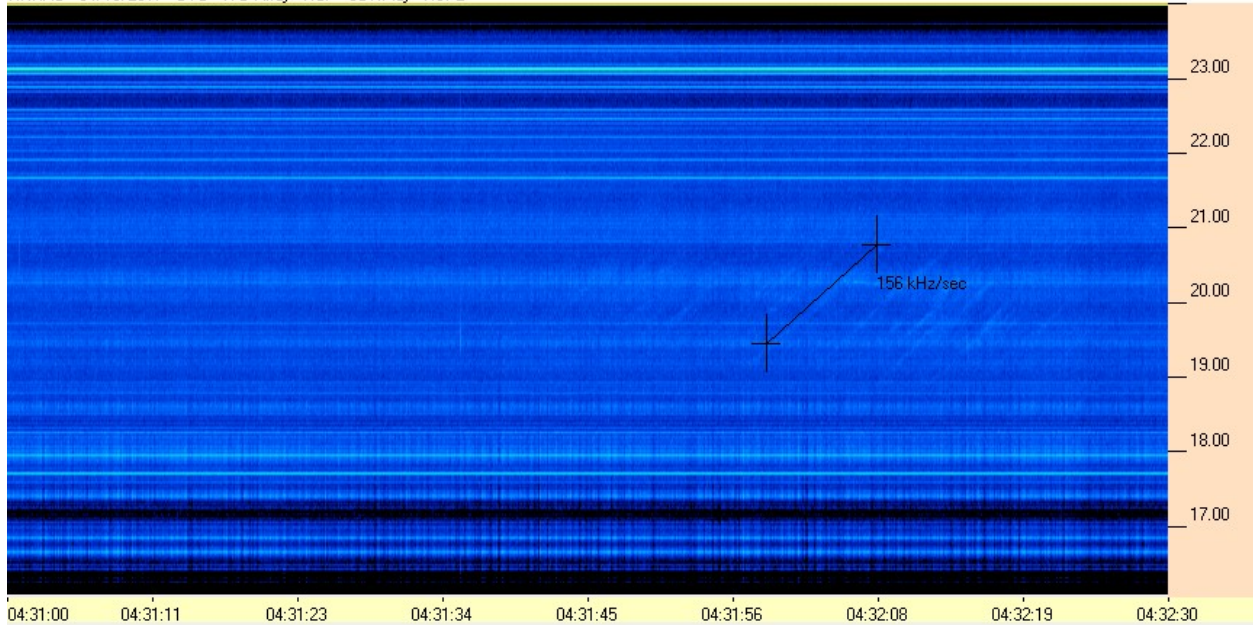
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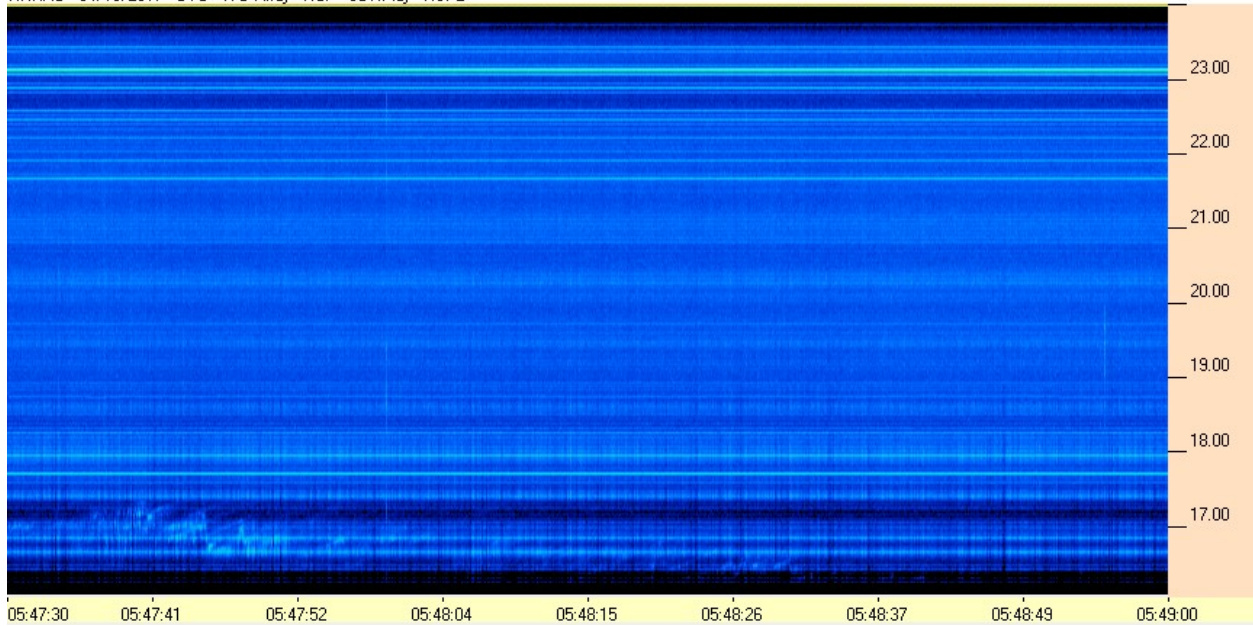
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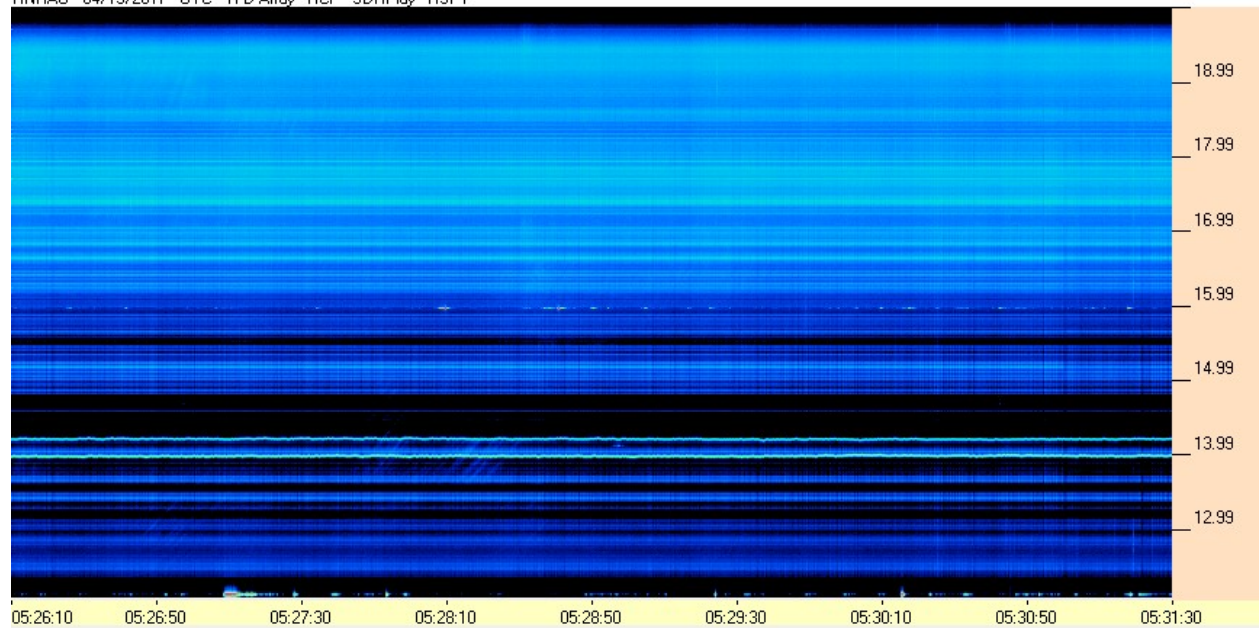


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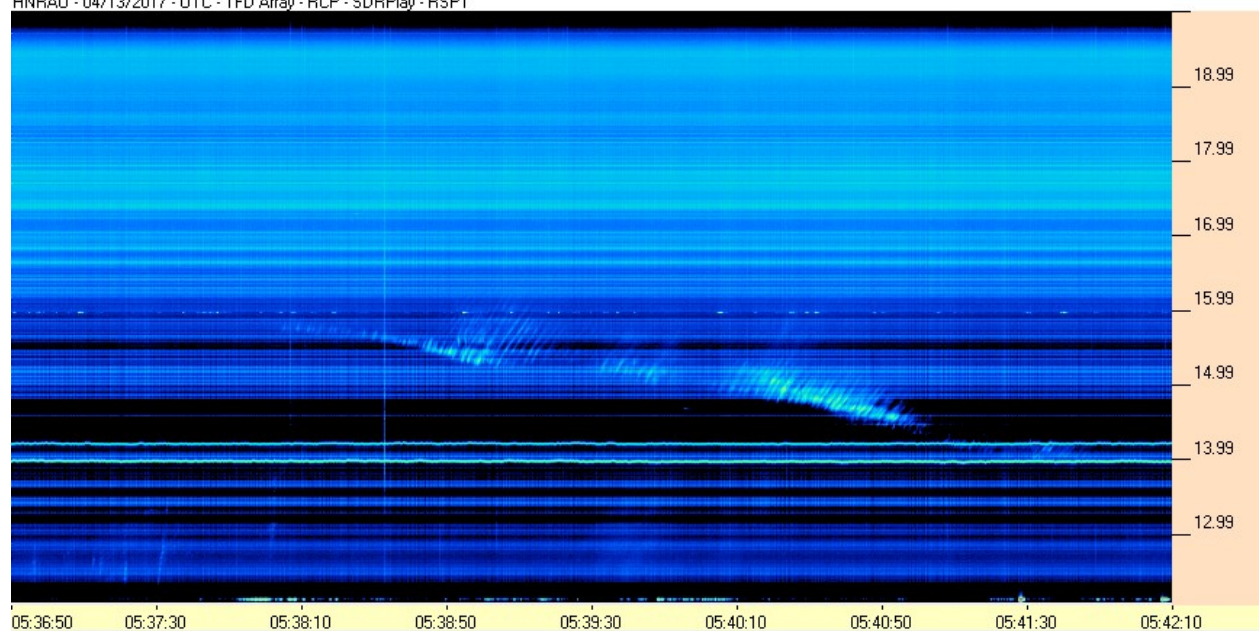


SDRPlay RSP1/TFD Pair

HNRAO - 04/13/2017 - UTC - TFD Array - RCP - SDRPlay - RSP1



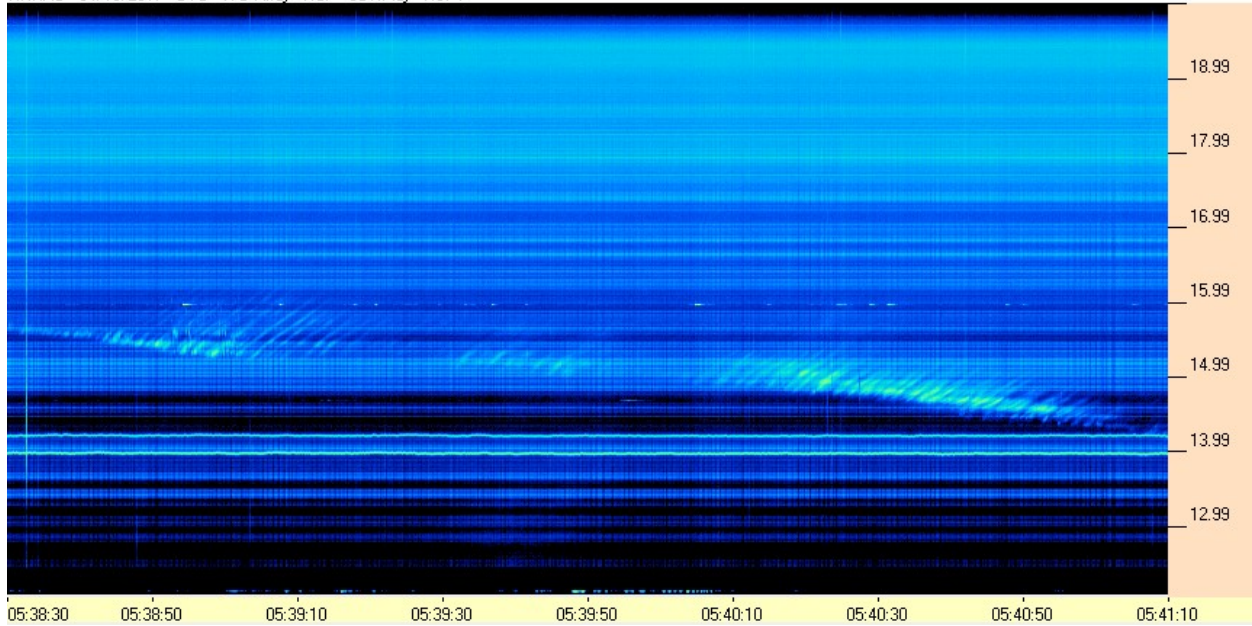
HNRAO - 04/13/2017 - UTC - TFD Array - RCP - SDRPlay - RSP1



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