

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 18 March 2017

Object: Jupiter – Non-Io-A

Observer: Unattended

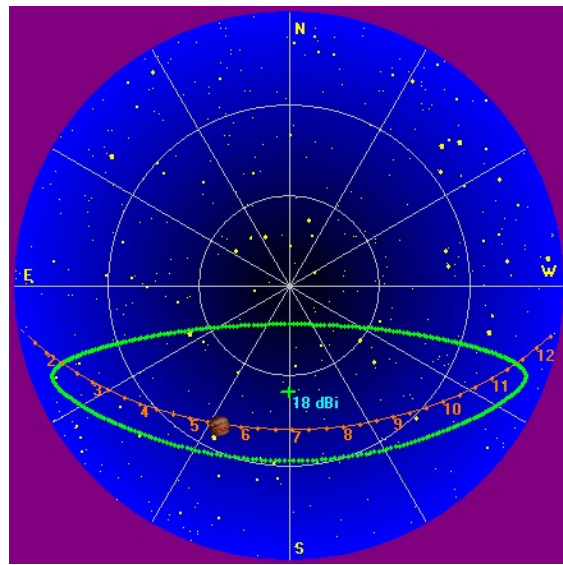
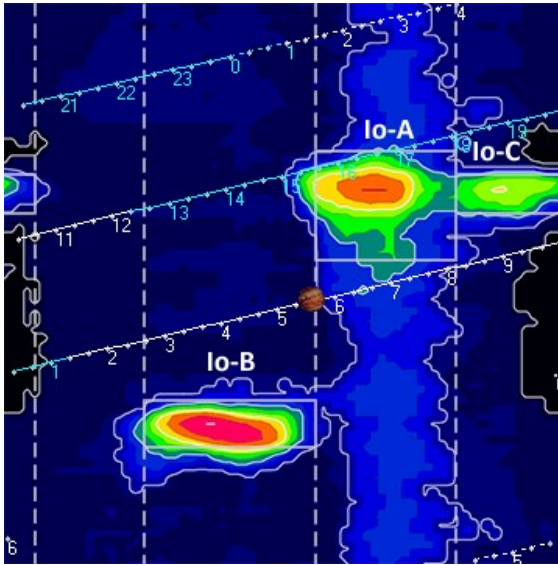
Start of pass:	0536 UT	Planetary K-index:	0
Jupiter Altitude:	39.2 degrees	Jupiter Azimuth:	153.8 degrees
Jupiter CML:	197.05	Jupiter Io Phase:	169.08
Jupiter RA:	13:19	Jupiter Dec:	-06:37
Hour Angle:	-01:21	Polarization	RCP
Sun Altitude:	-50.8 degrees	Sun Azimuth:	005.2 degrees
Sun RA:	23:45	Sun Dec:	-01:37

End of pass:	0757 UT		
Jupiter Altitude:	40.7 degrees	Jupiter Azimuth:	200.1 degrees
Jupiter CML:	282.31	Jupiter Io Phase	189.10
Hour Angle:	01:01		
Sun Altitude:	-37.7 degrees	Sun Azimuth:	051.9 degrees

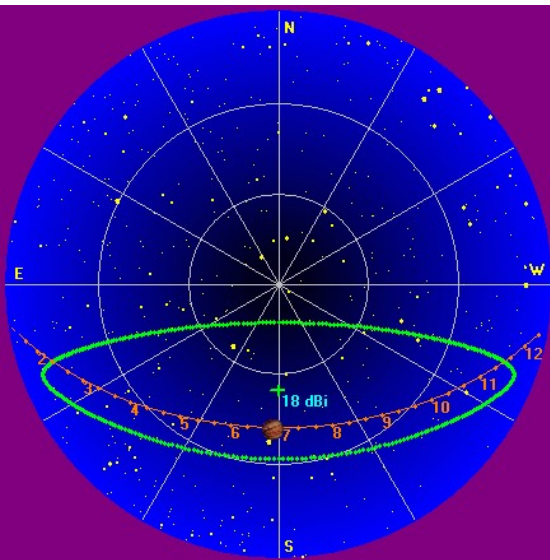
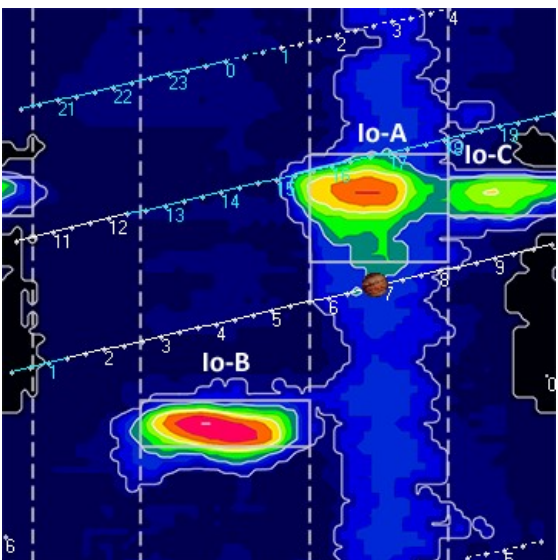
Observations made using:

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 and RSP2

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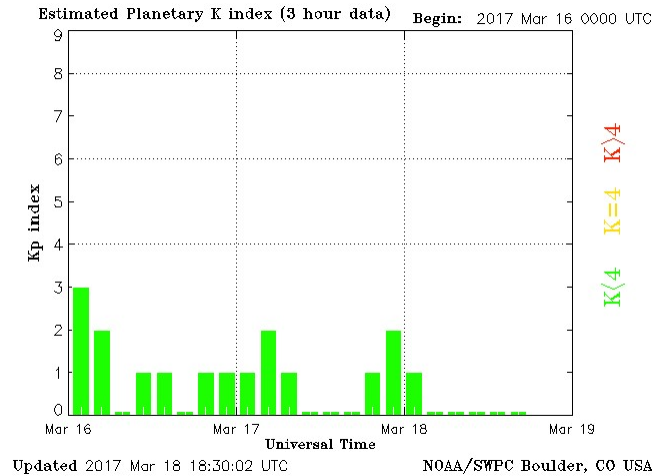


Beginning of Pass



End of Pass

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This was a real challenge. While the CML/Io plane indicates non-Io-A, there were portions that could have been called Non-Io-B. Negative drift L-bursts with negative slope modulation lanes measured at an average of -102 kHz/sec.

Main body of emission was between 0539 UT and ending at 0650 UT. There was a period of about 50 minutes of no activity, then another brief emission group from 0742 UT until 0757 UT. A -97 kHz/sec negative modulation slope was measured during this period.

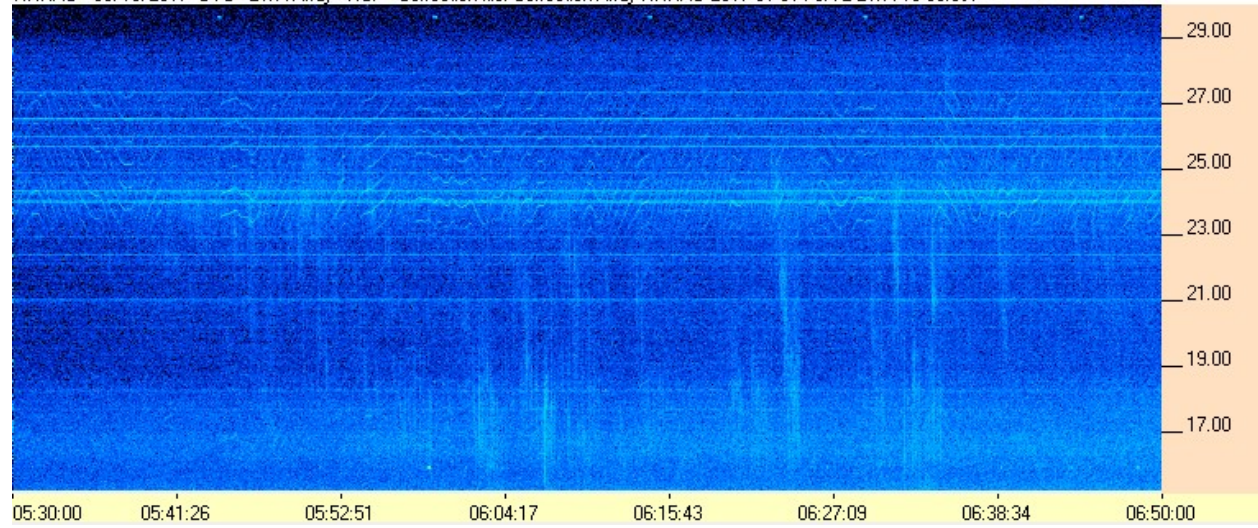
No activity at 20.1 MHz on SkyPipe was observed here, although other observers may have had different results.

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FSX-2/LWA Pair

HNRAO - 03/18/2017 UTC - LWA Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-2 LWA 15-30.csv

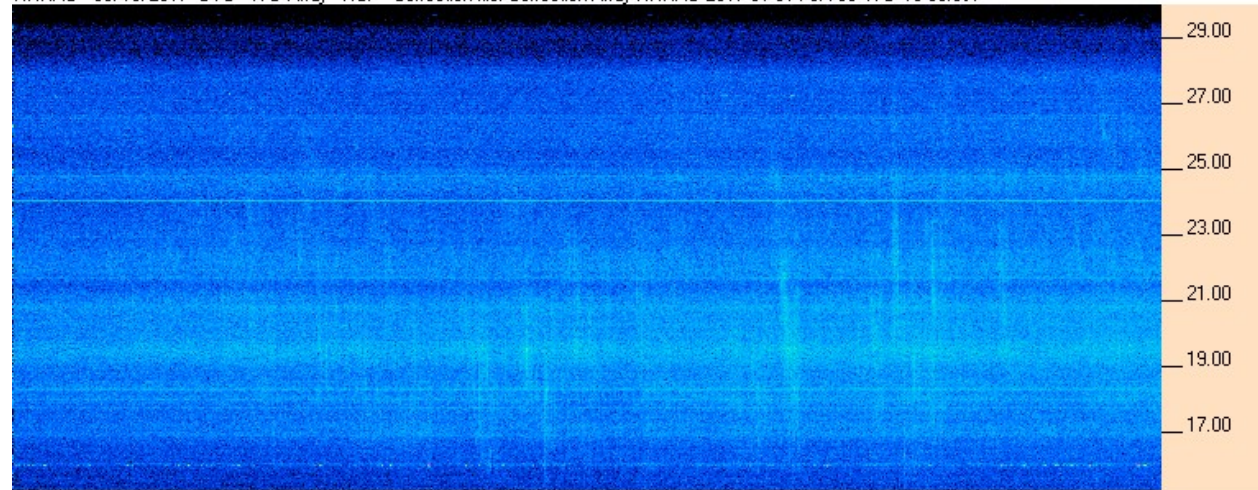


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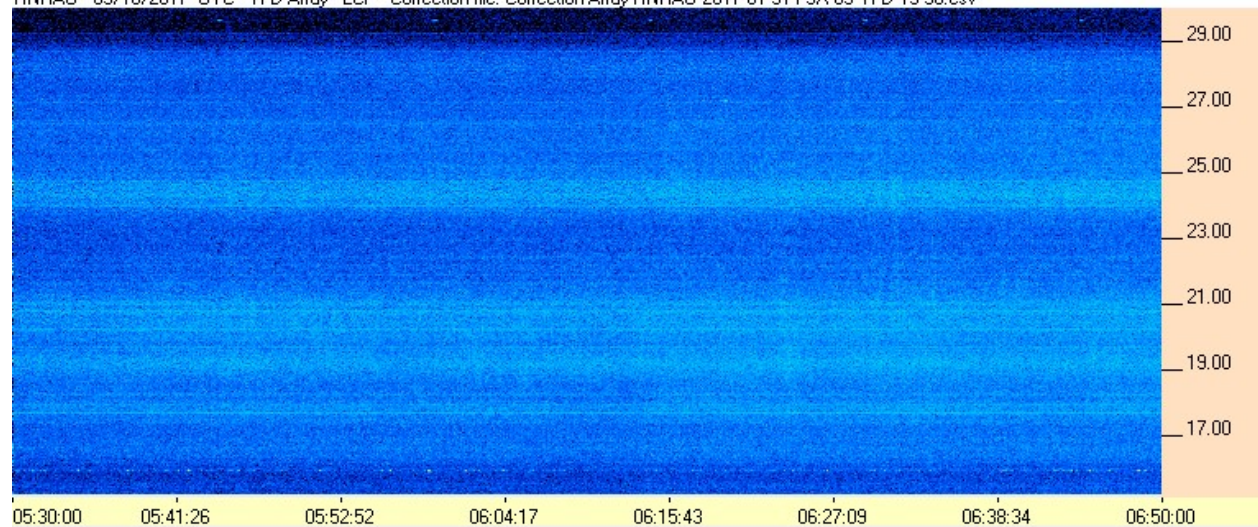


FSX-8S/TFD Pair

HNRAO - 03/18/2017 UTC - TFD Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv



HNRAO - 03/18/2017 UTC - TFD Array - LCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv

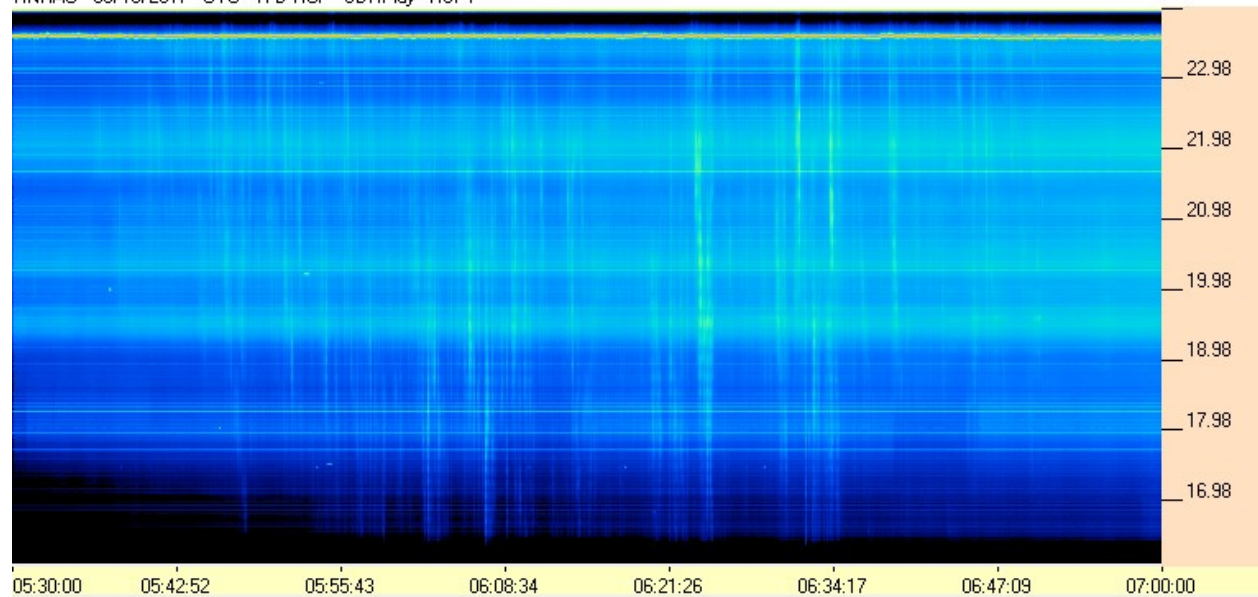


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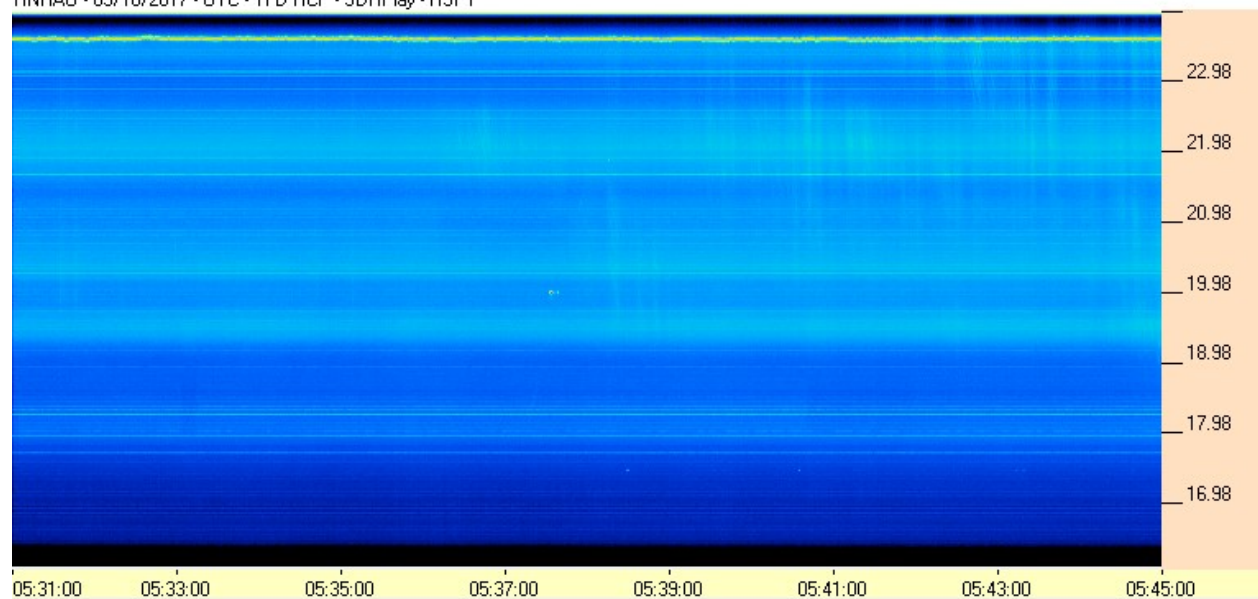


SDRPlay/RSP1 TFD Pair

HNRAO - 03/18/2017 - UTC - TFD RCP - SDRPlay - RSP1



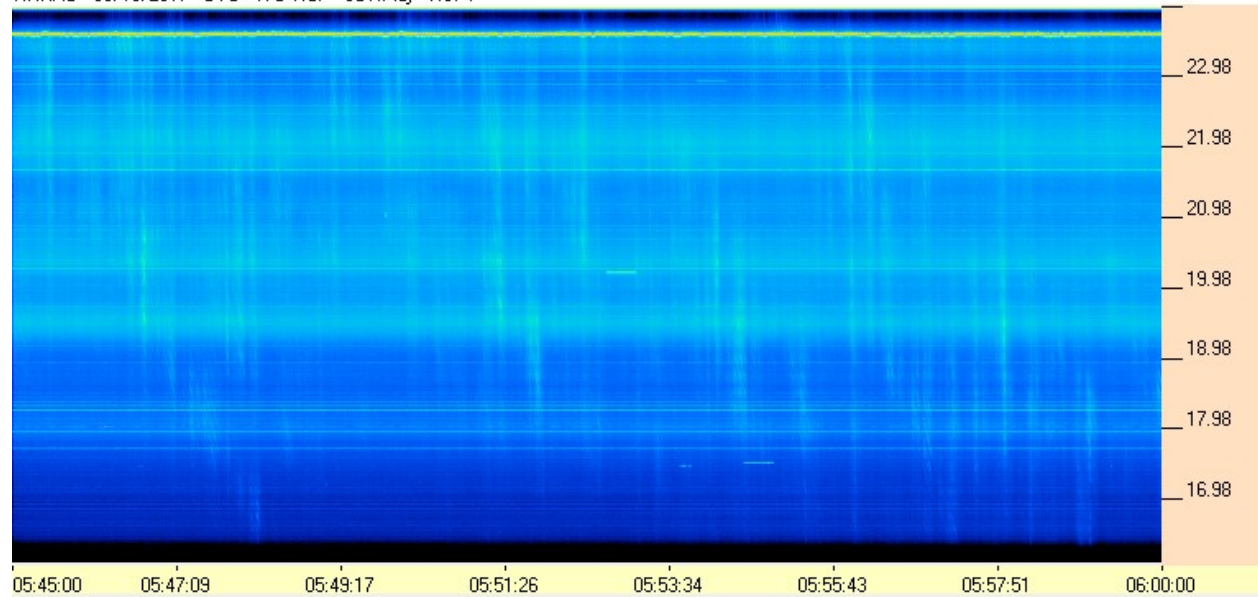
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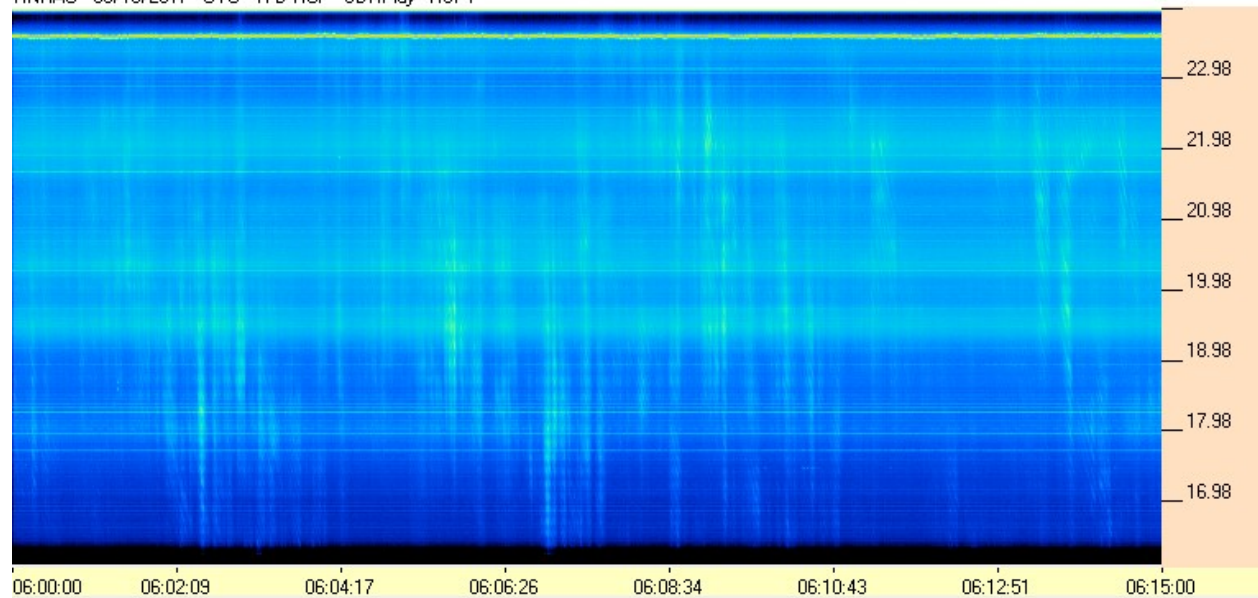
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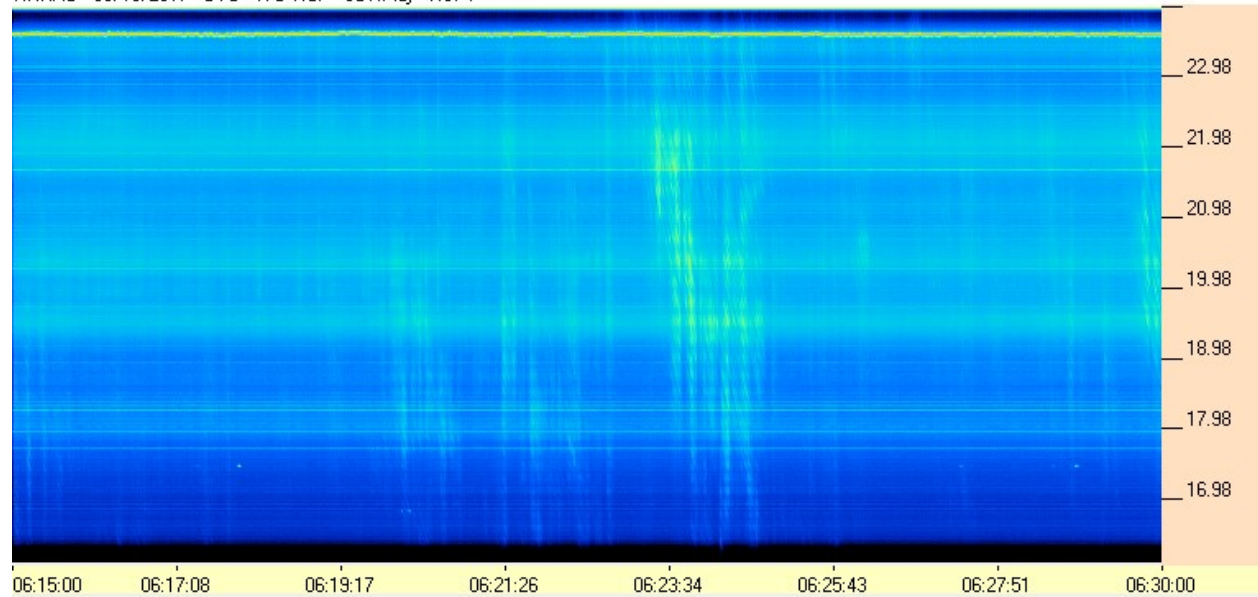
HNRAO - 03/18/2017 - UTC - TFD RCP - SDRPlay - RSP1



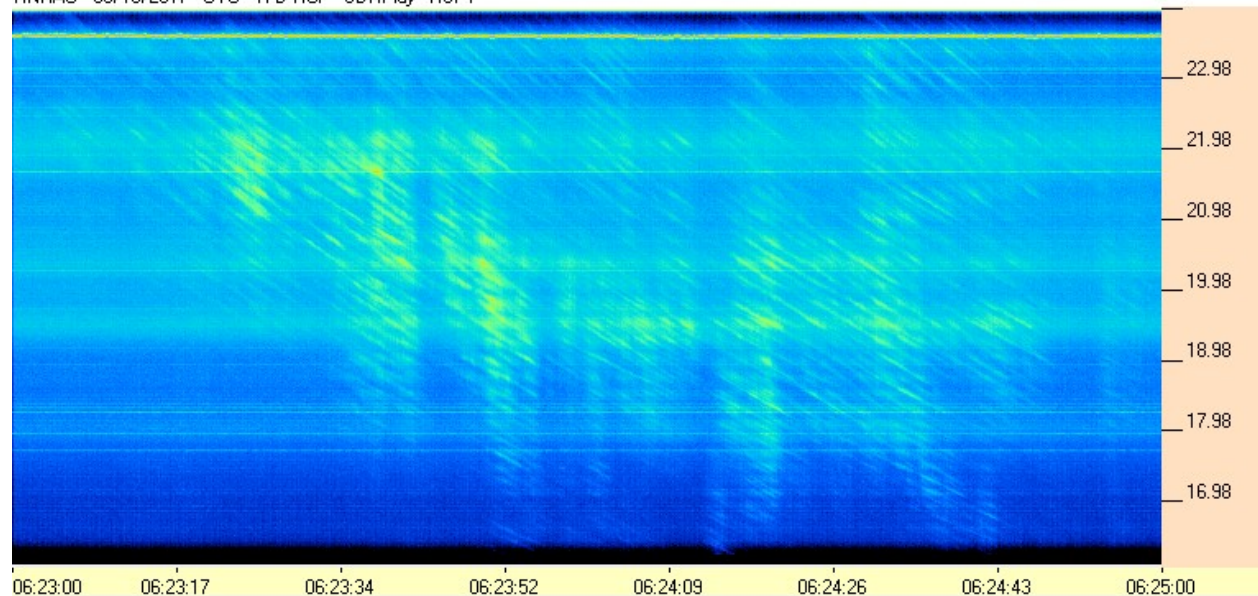
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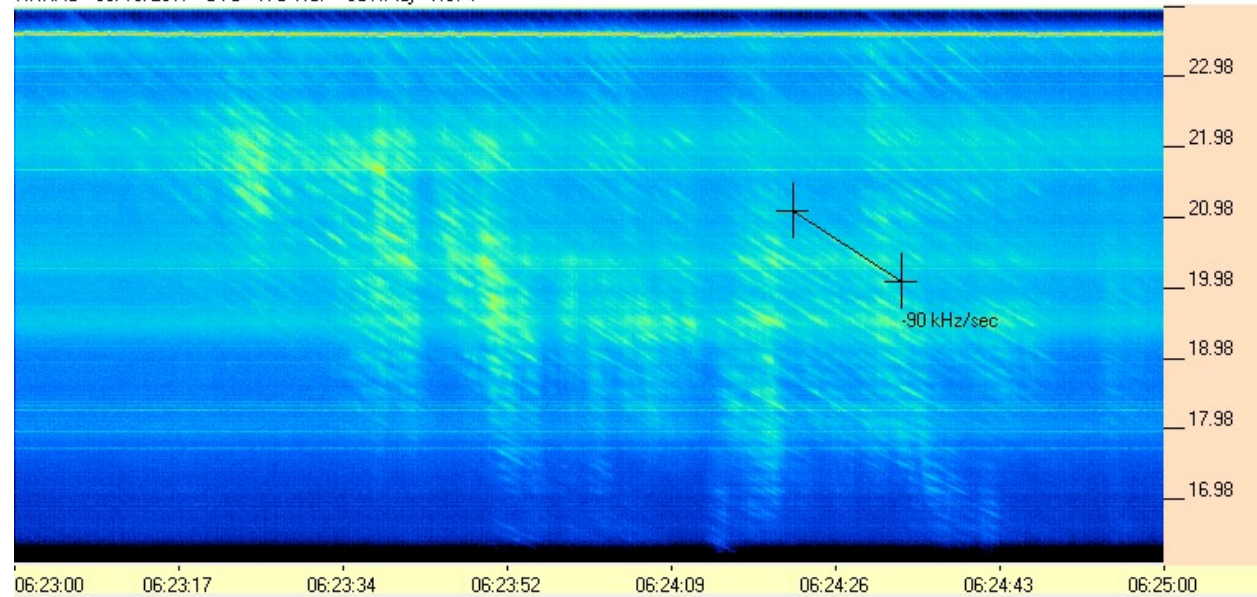
HNRAO - 03/18/2017 - UTC - TFD RCP - SDRPlay - RSP1



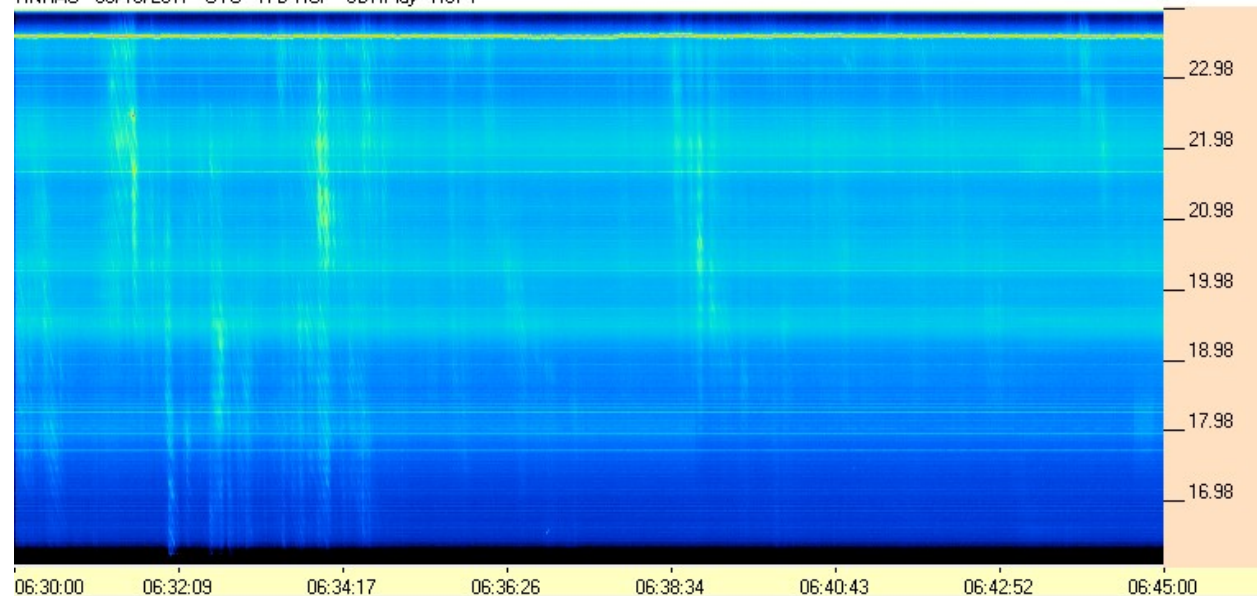
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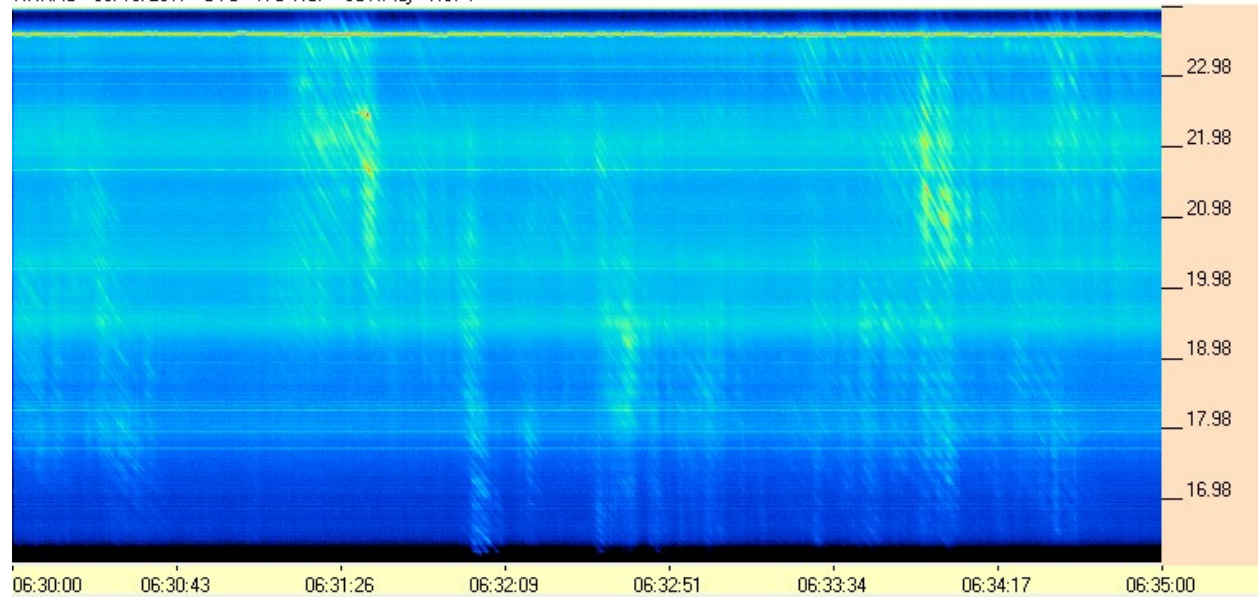
HNRAO - 03/18/2017 - UTC - TFD RCP - SDRPlay - RSP1



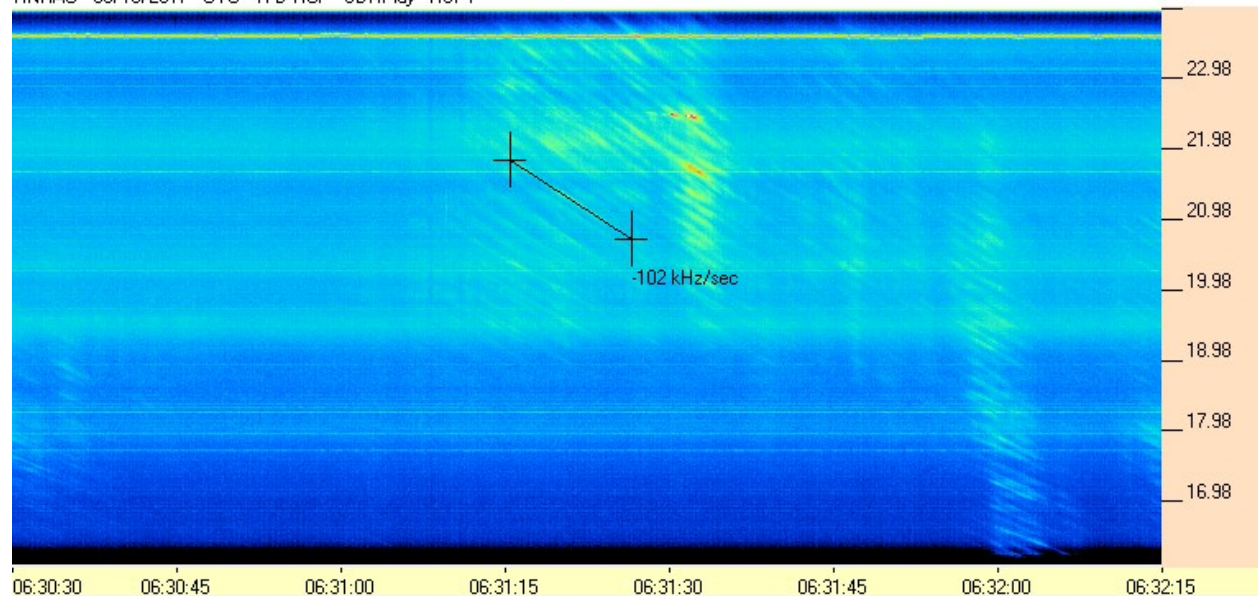
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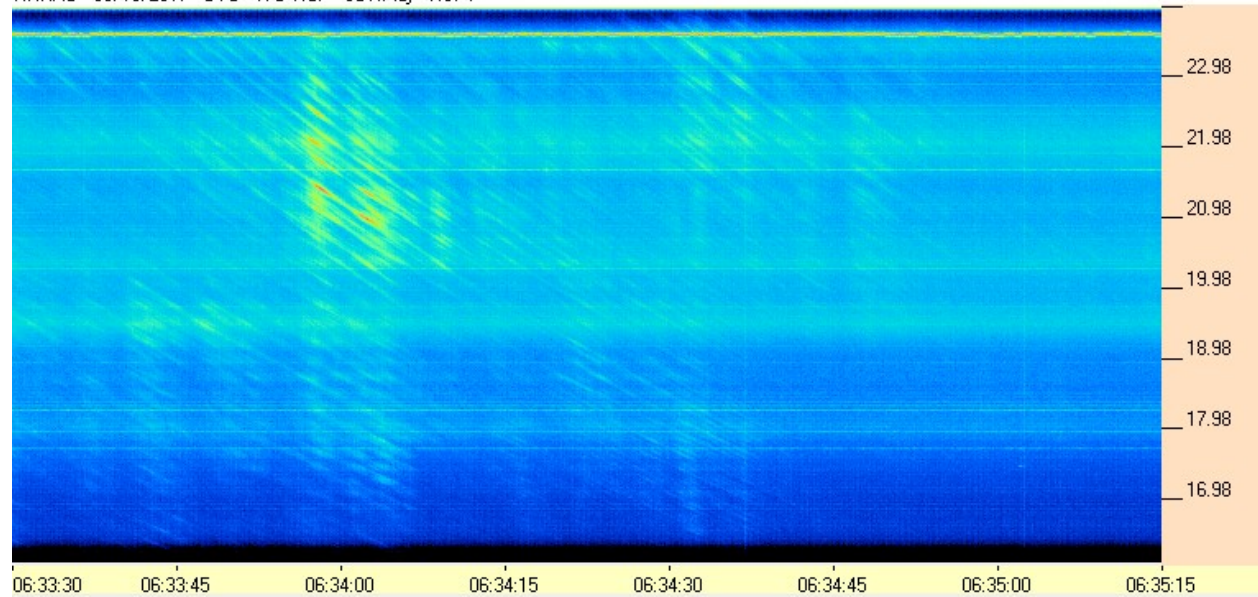
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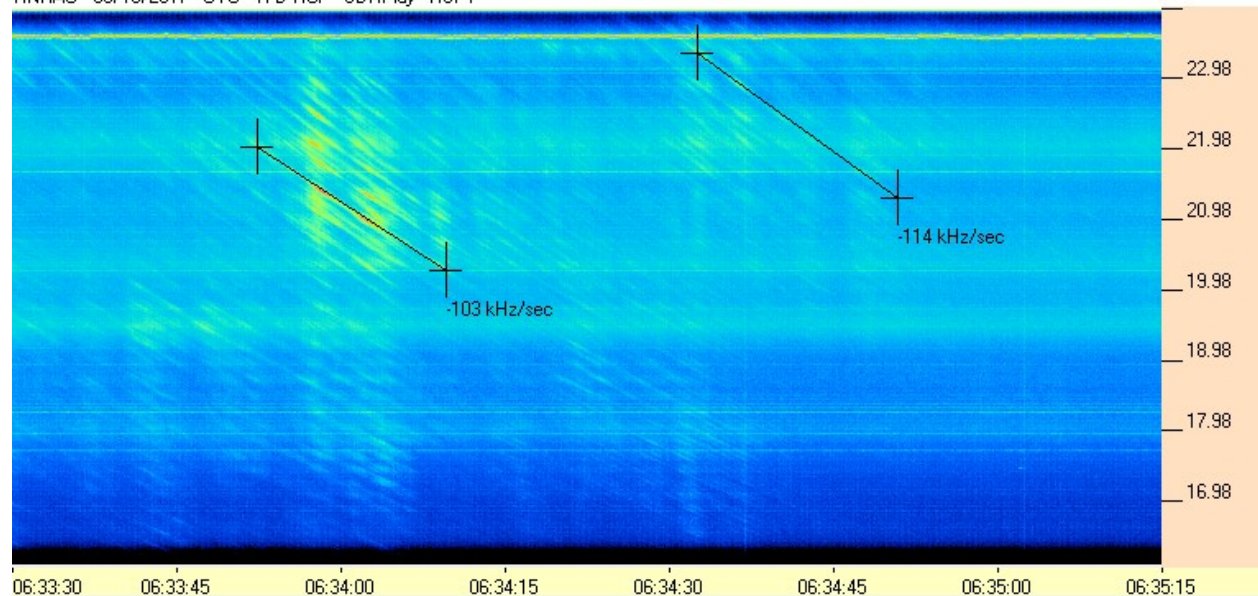
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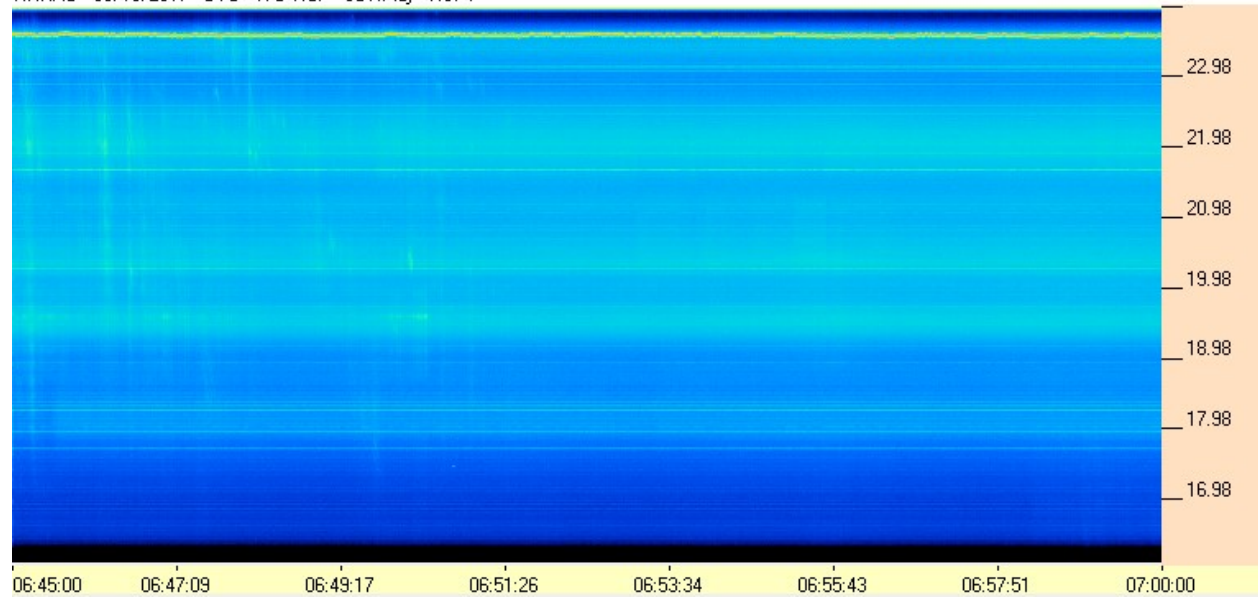
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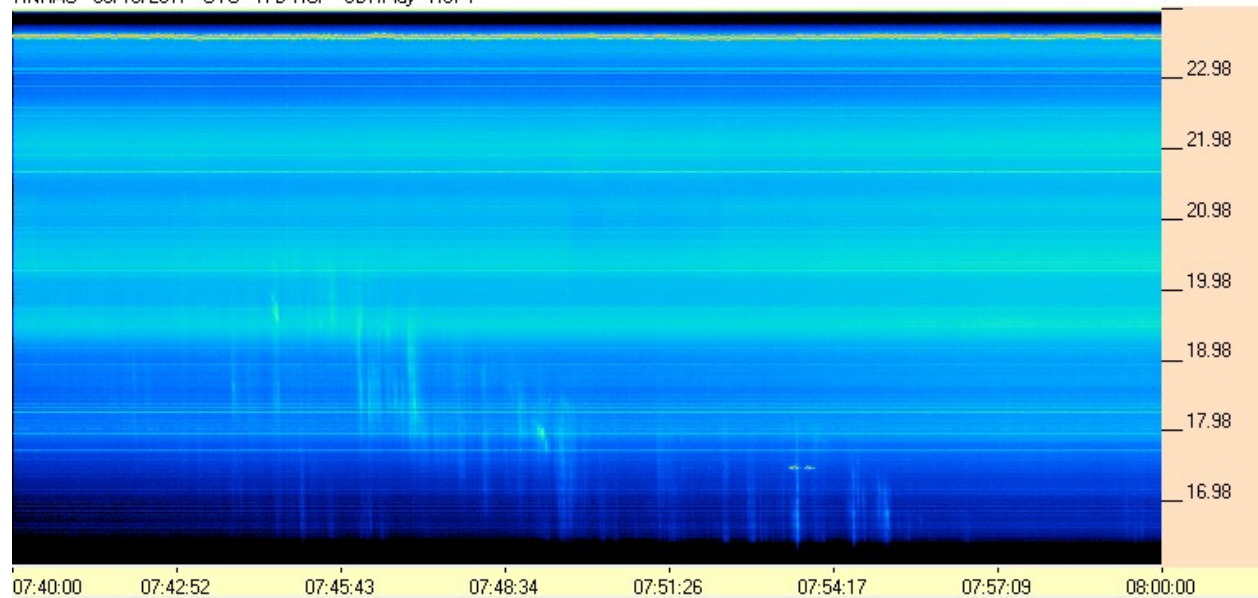
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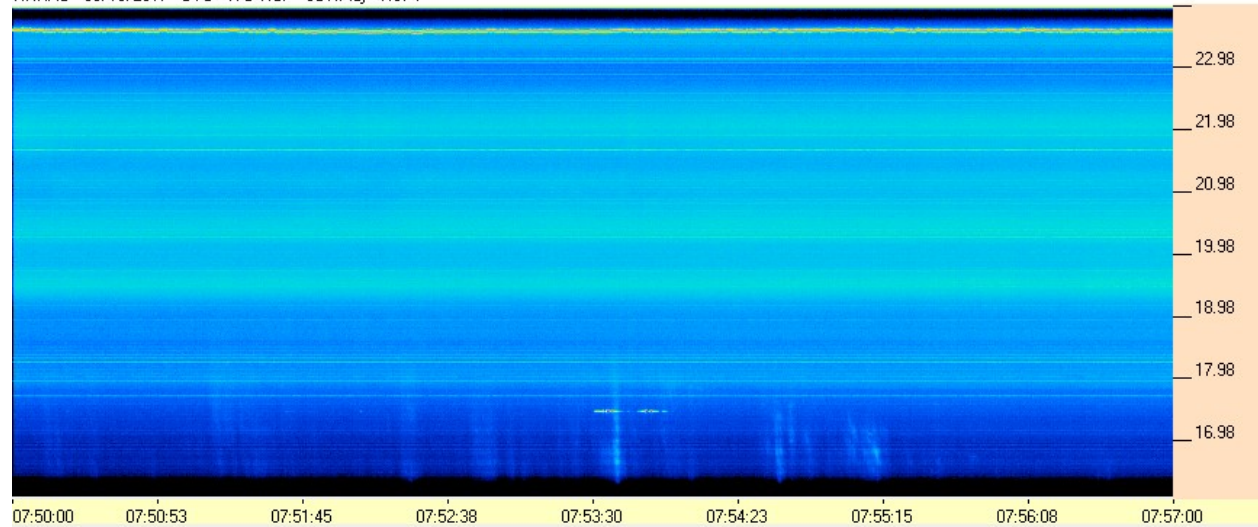
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