

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 28 April 2017

Object: Jupiter – Io-A

Observer: JB

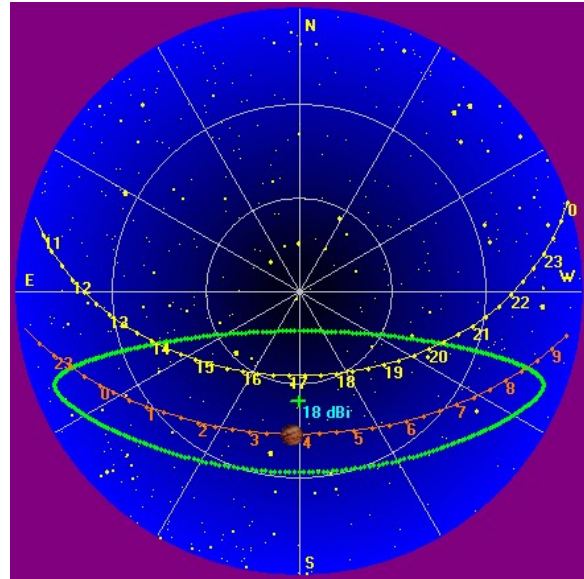
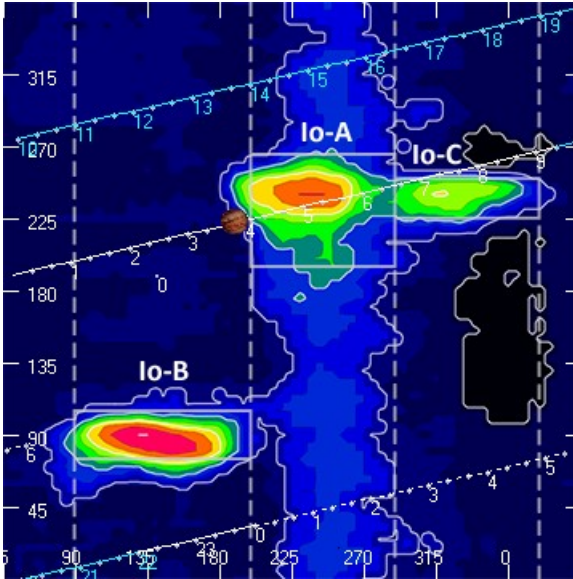
Start of pass:	0349 UT	Planetary K-index:	
Jupiter Altitude:	44.6 degrees	Jupiter Azimuth:	177.3 degrees
Jupiter CML:	189.42	Jupiter Io Phase:	222.56
Jupiter RA:	13:00	Jupiter Dec:	-04:43
Hour Angle:	-00:08	Polarization	RCP
Sun Altitude:	-32.4 degrees	Sun Azimuth:	335.9 degrees
Sun RA:	02:16	Sun Dec:	13:35

End of pass:	0536 UT		
Jupiter Altitude:	39.2 degrees	Jupiter Azimuth:	212.8 degrees
Jupiter CML:	254.11	Jupiter Io Phase	237.80
Hour Angle:	01:40		
Sun Altitude:	-35.4 degrees	Sun Azimuth:	007.2 degrees

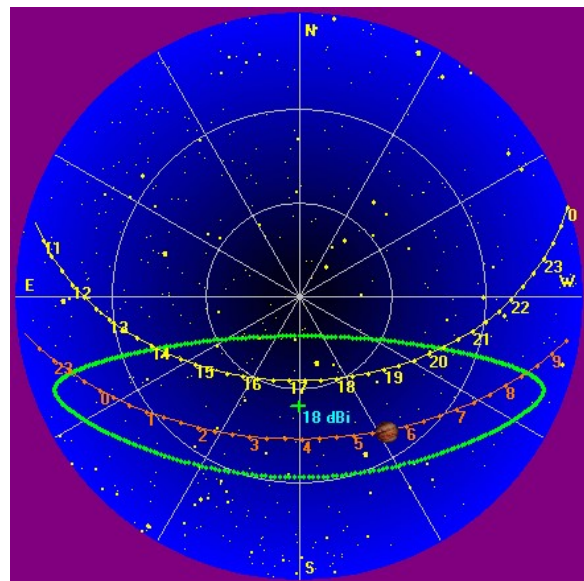
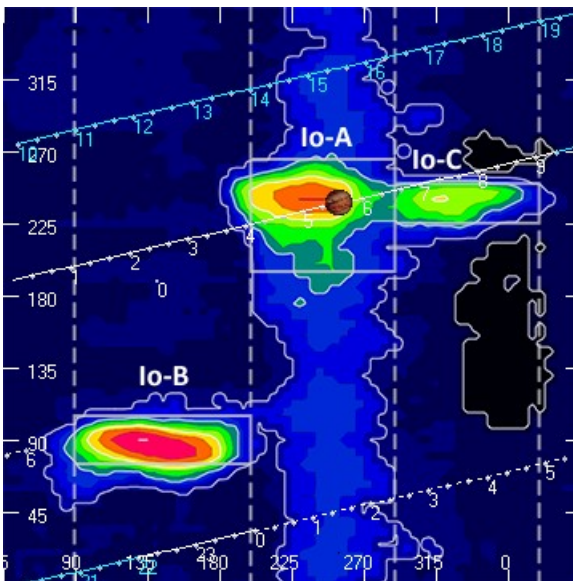
Observations made using:

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 @ 13'
 - a. 12' 6" phase cable - phased for 2016-17 season
 - b. Calibrated 19 April 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 19 April 2017
5. SDRPlay
 - a. RSP1 (2) and RSP2 (1)

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Beginning of Pass



End of Pass

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A strong Io-A storm. Negative drift L-bursts with negative drift modulation lanes. Emissions ranged from just at or slightly above the galactic background to saturation. There were many examples of periods where the emissions and modulation lanes are strong, disappear, then reappear. One such example is at 0407 UT, although the phenomenon is seen throughout the storm.

Modulation drift rates were measured at various times during the storm with drift rates increasing with higher frequency. This has been the pattern observed for all modulation lanes this apparition.

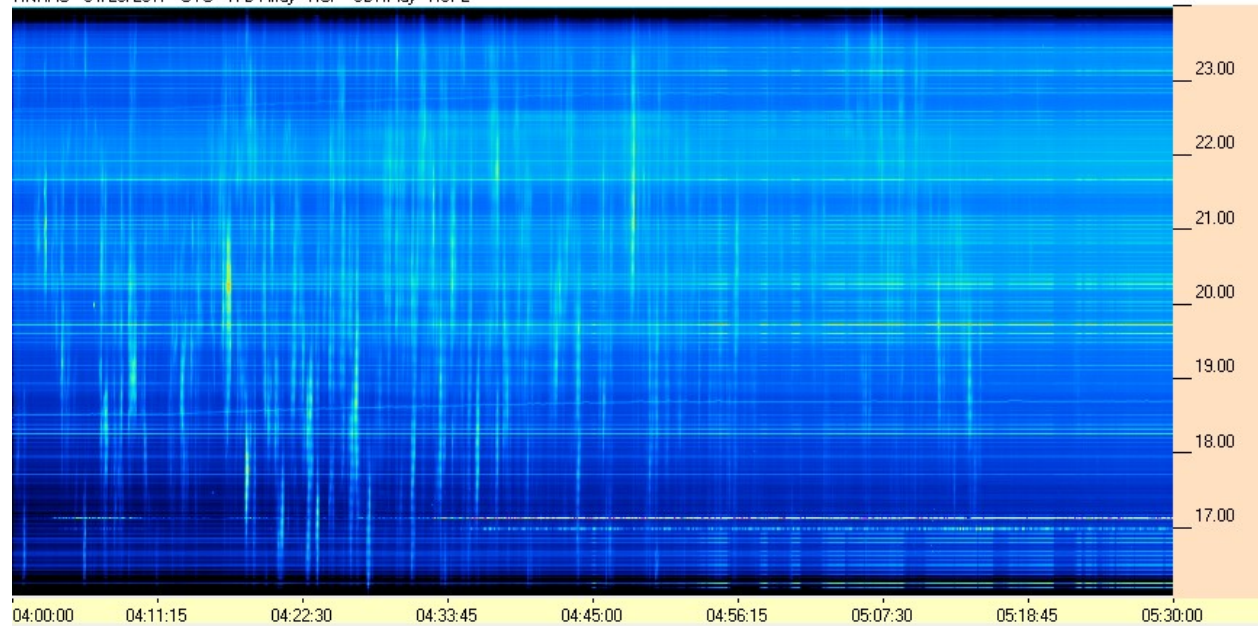
There was activity at the Radio JOVE frequency at 20.1 MHz with several strong L-bursts recorded. The strongest recorded was at 0416:30 UT and was recorded at 230 kK.

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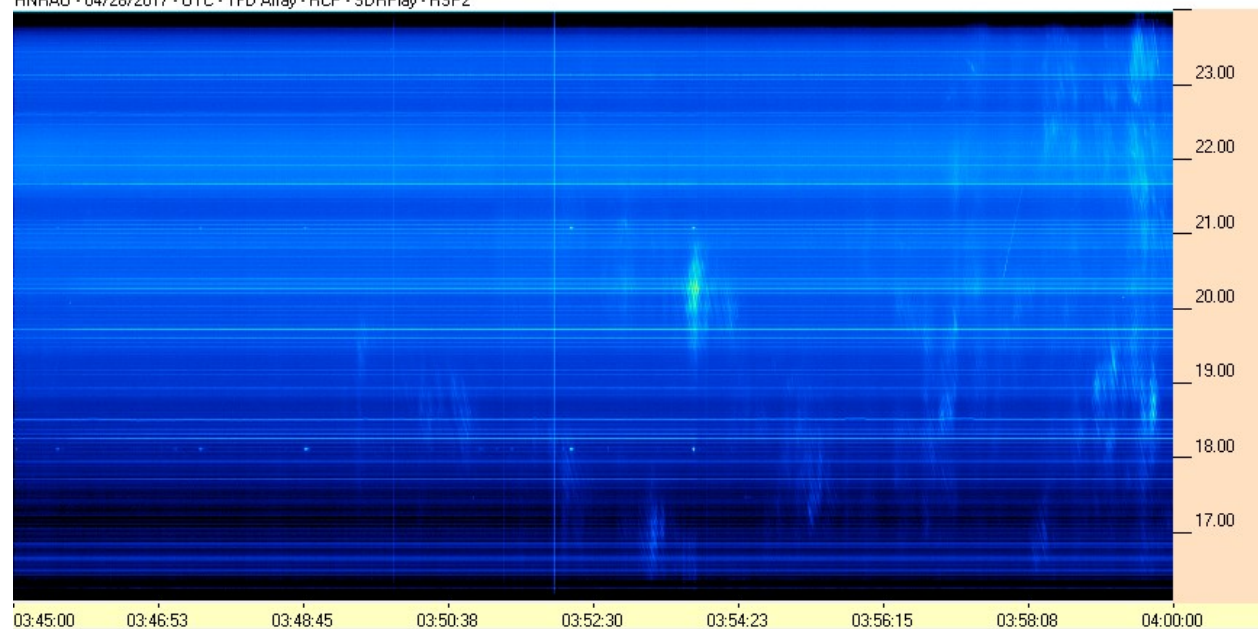


SDRPlay RSP2/TFD Pair

HNRAO - 04/28/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



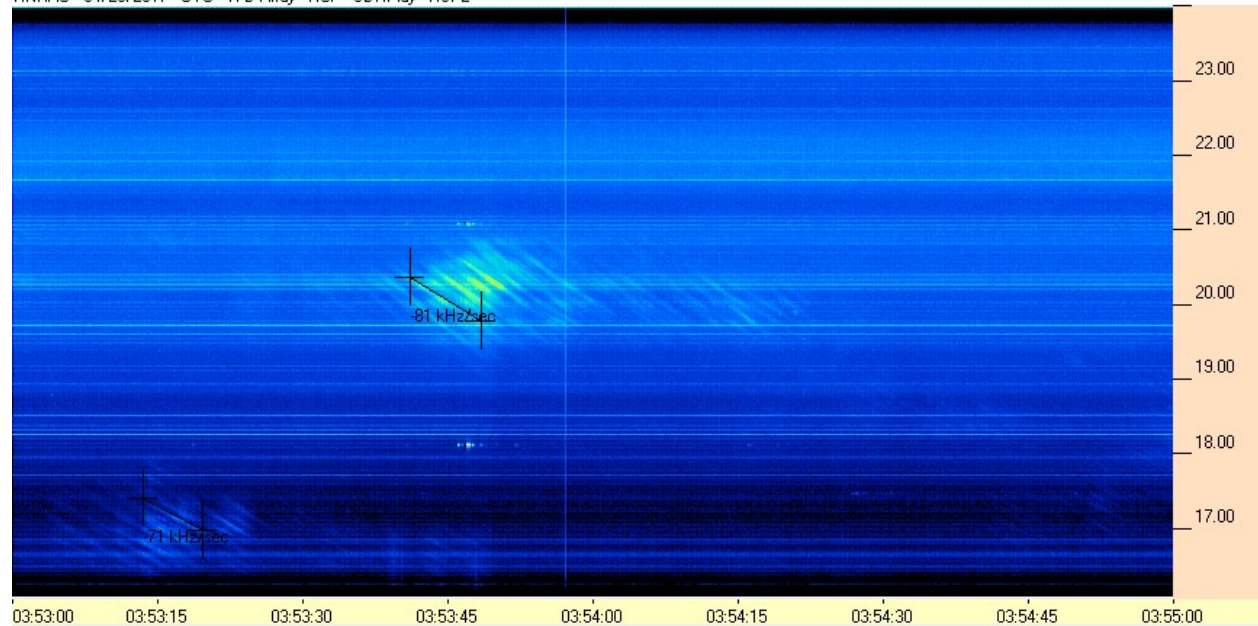
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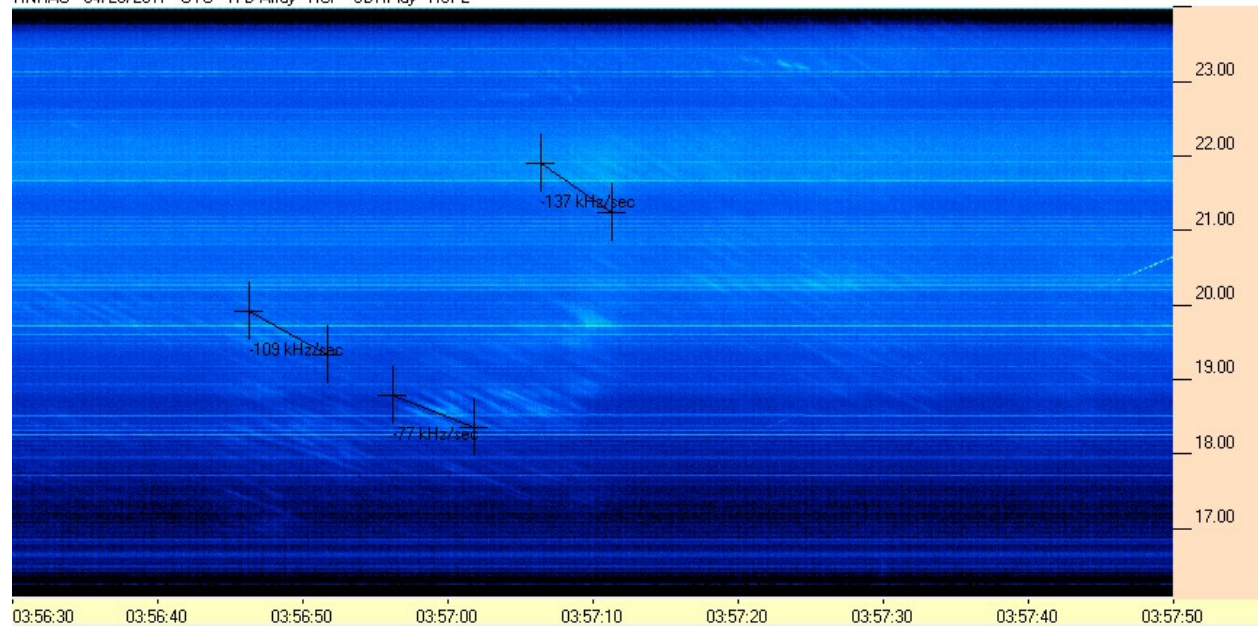
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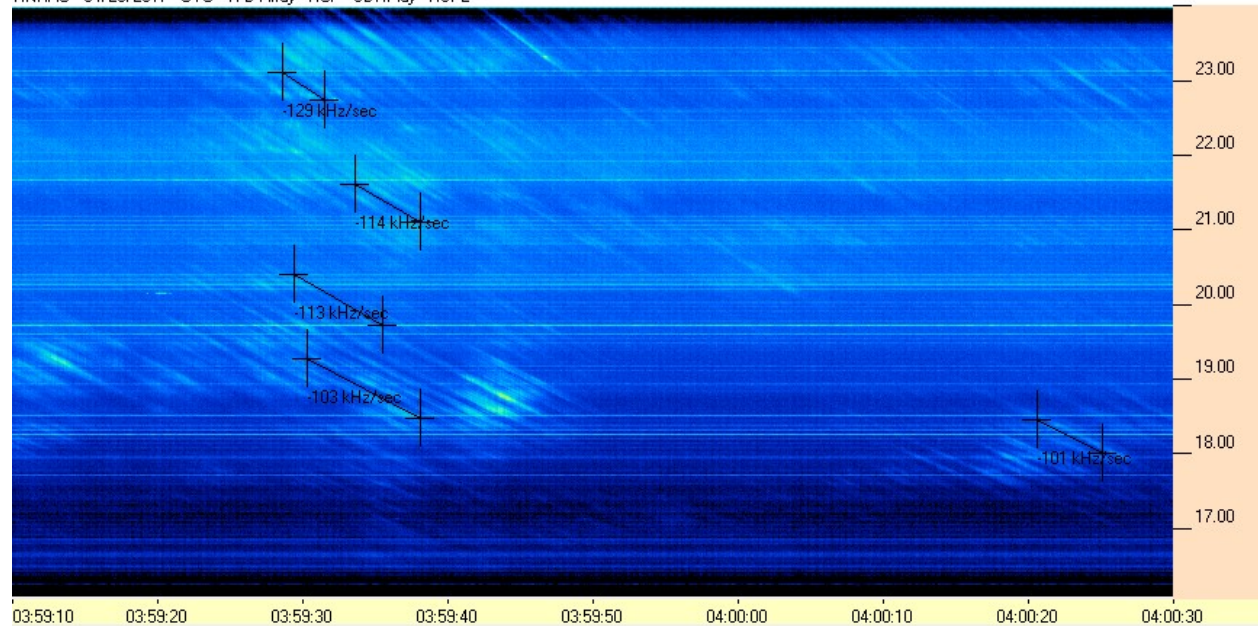
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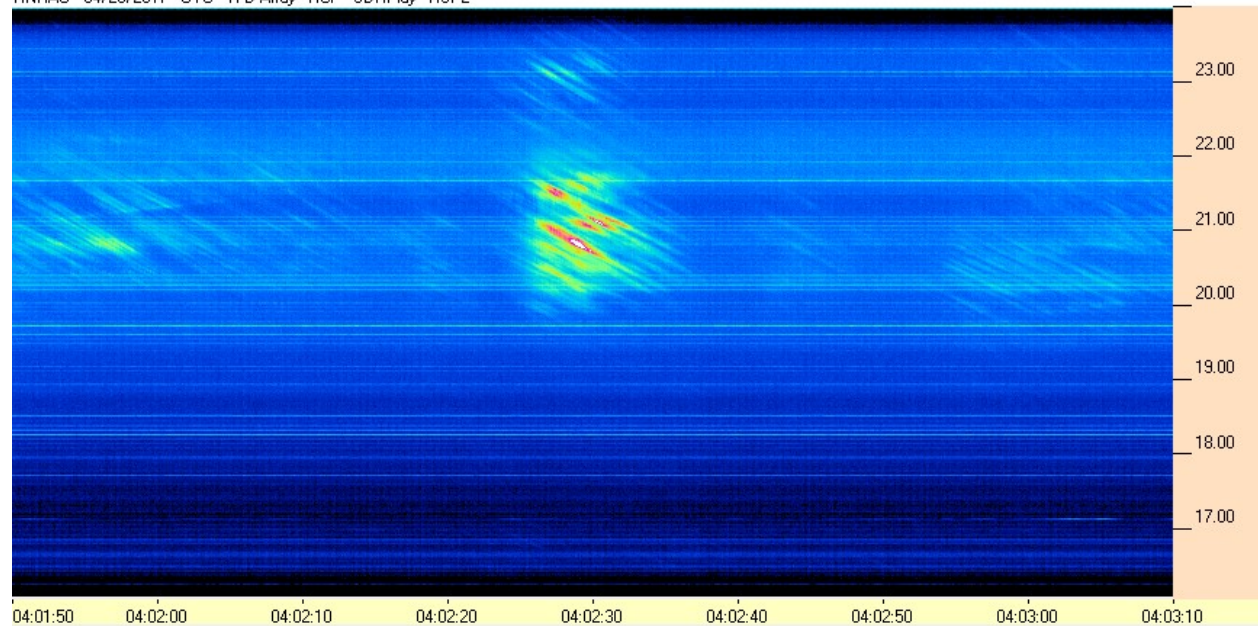
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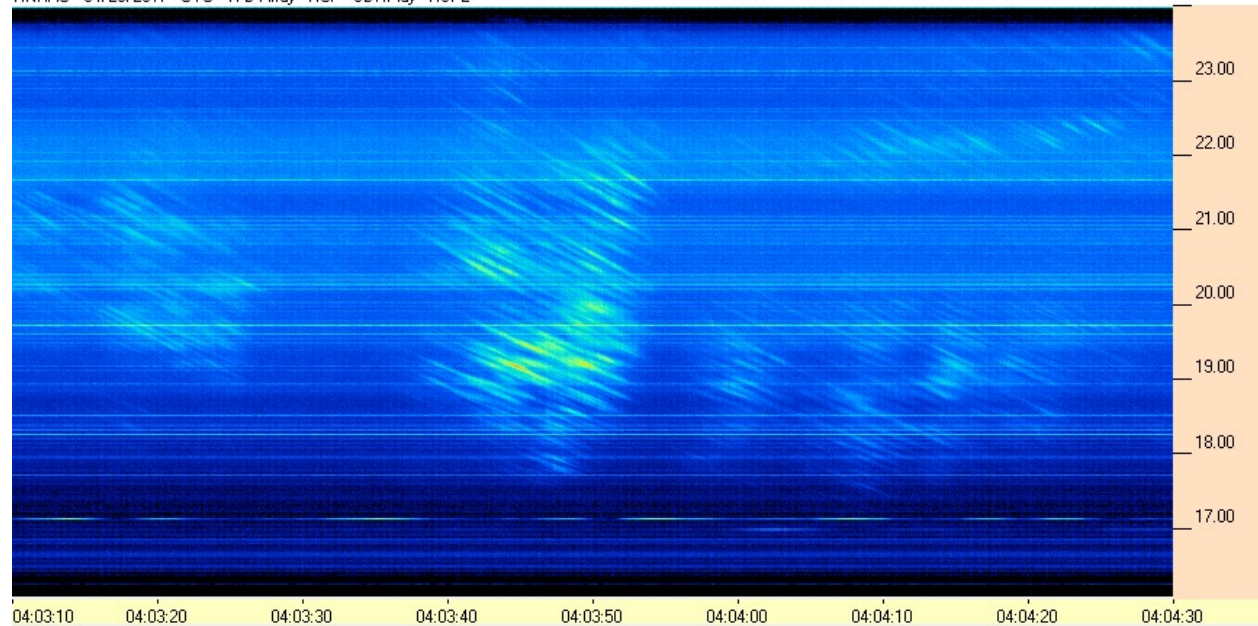
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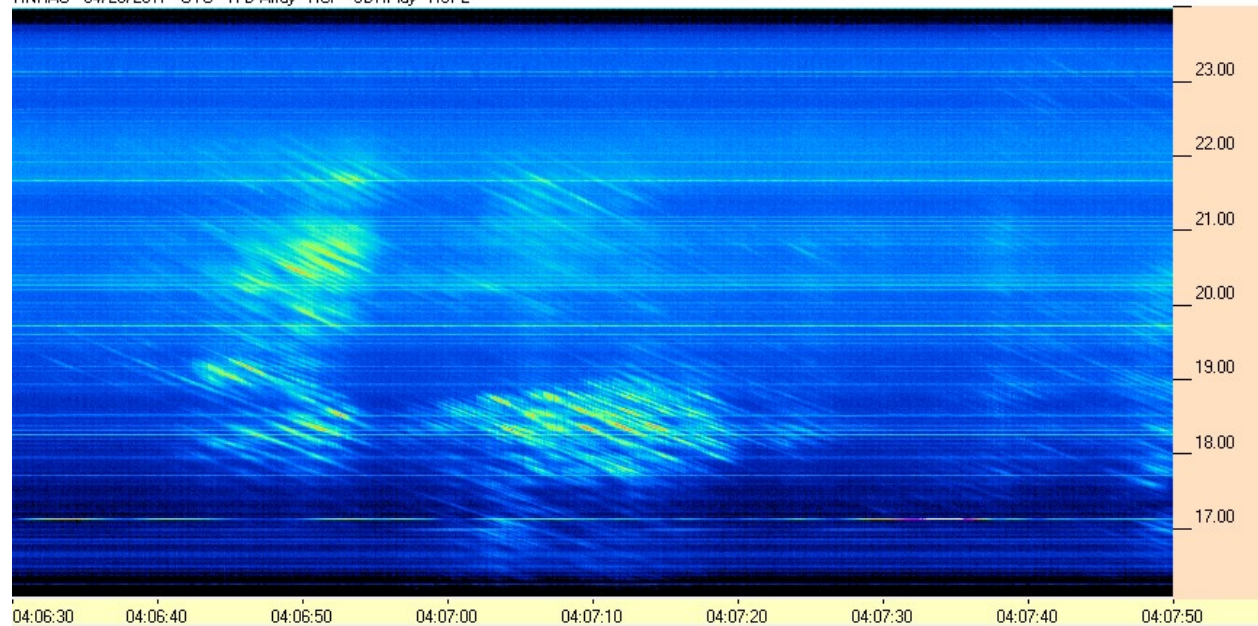
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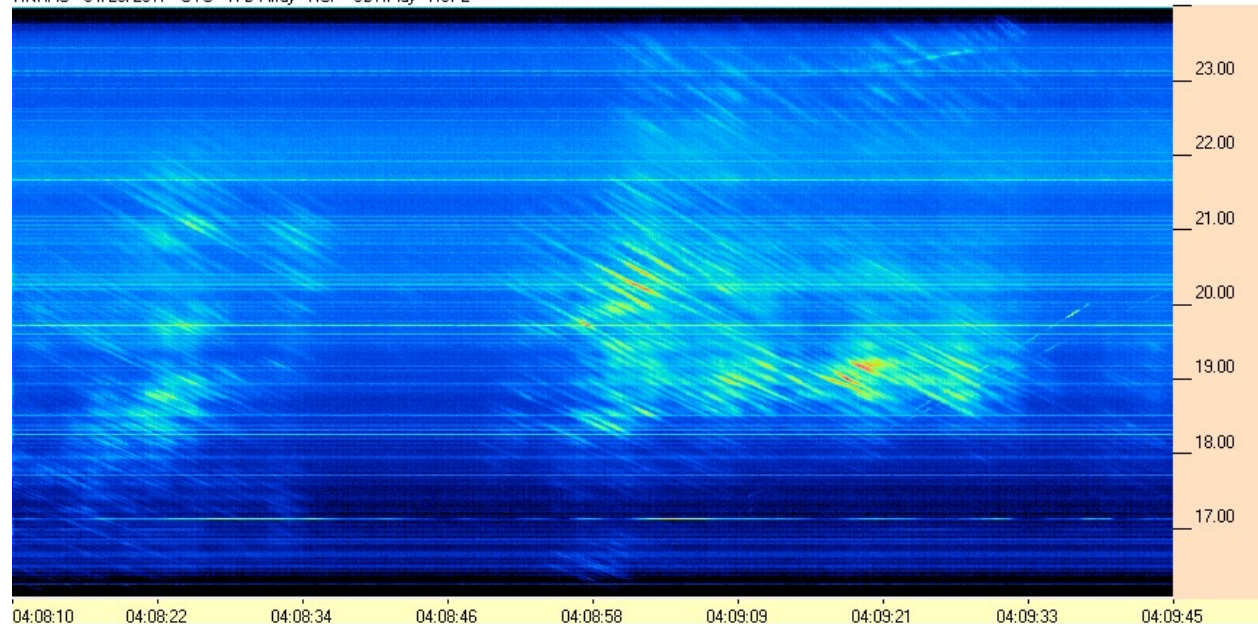
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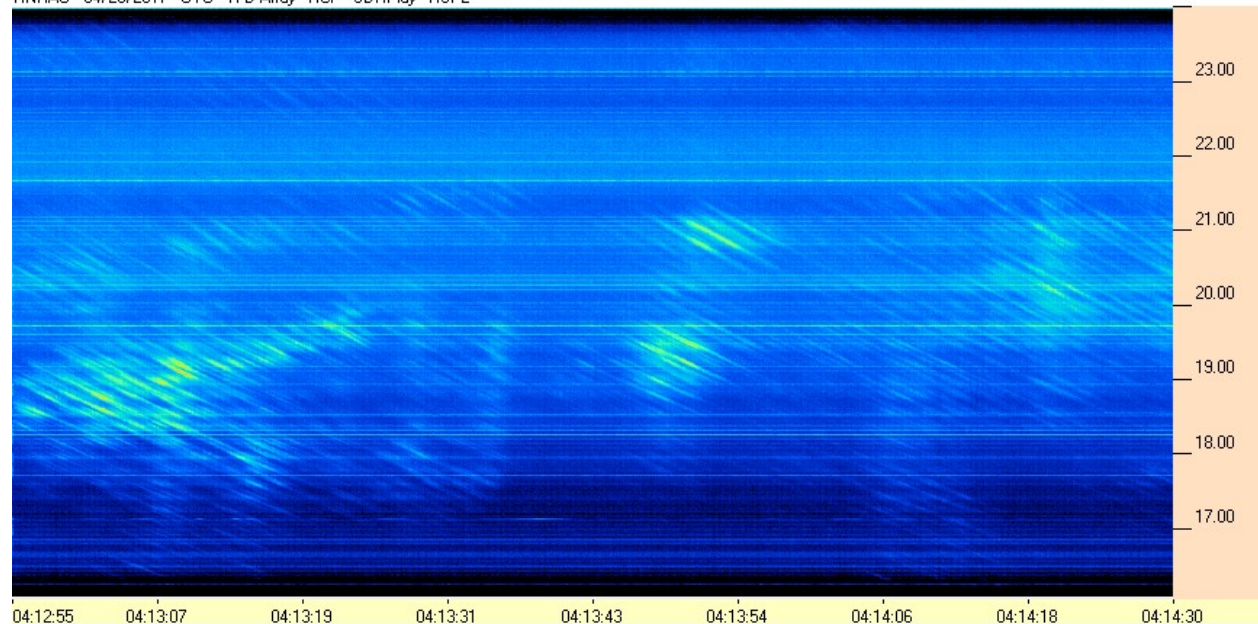
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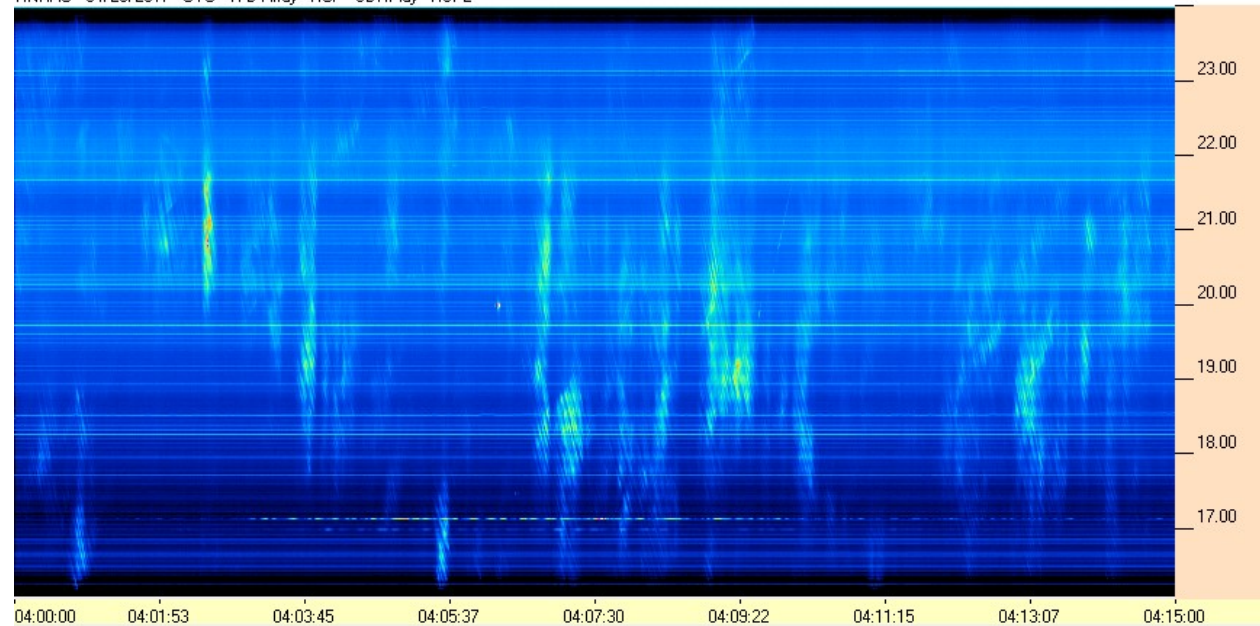
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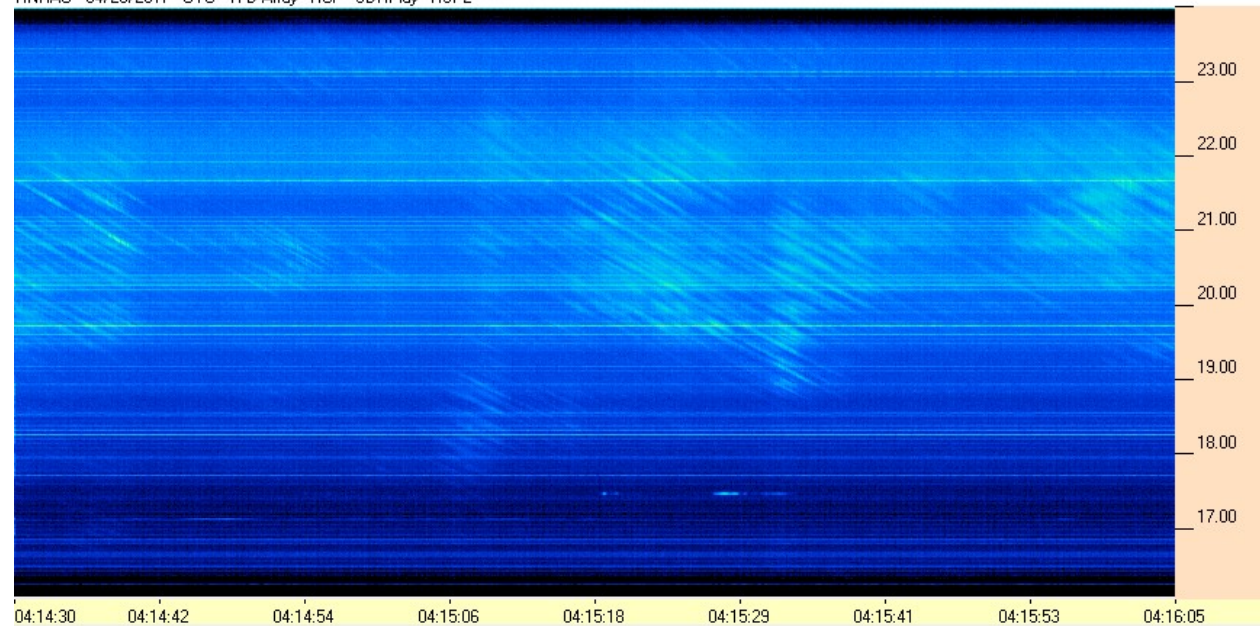
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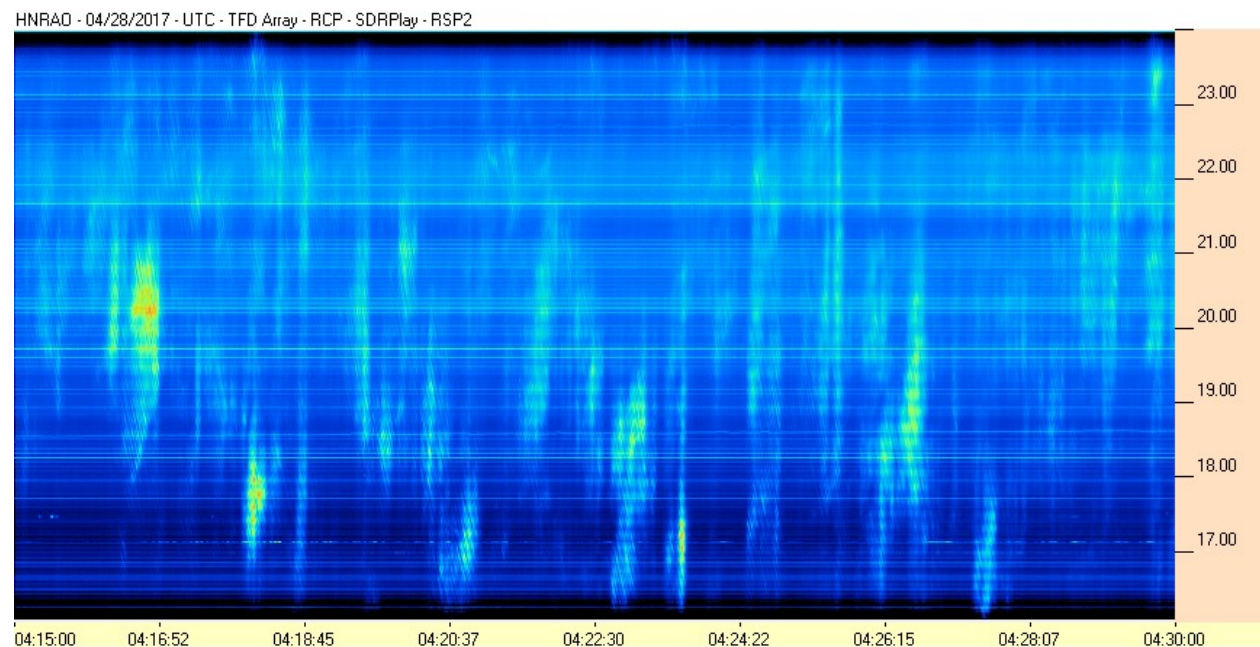
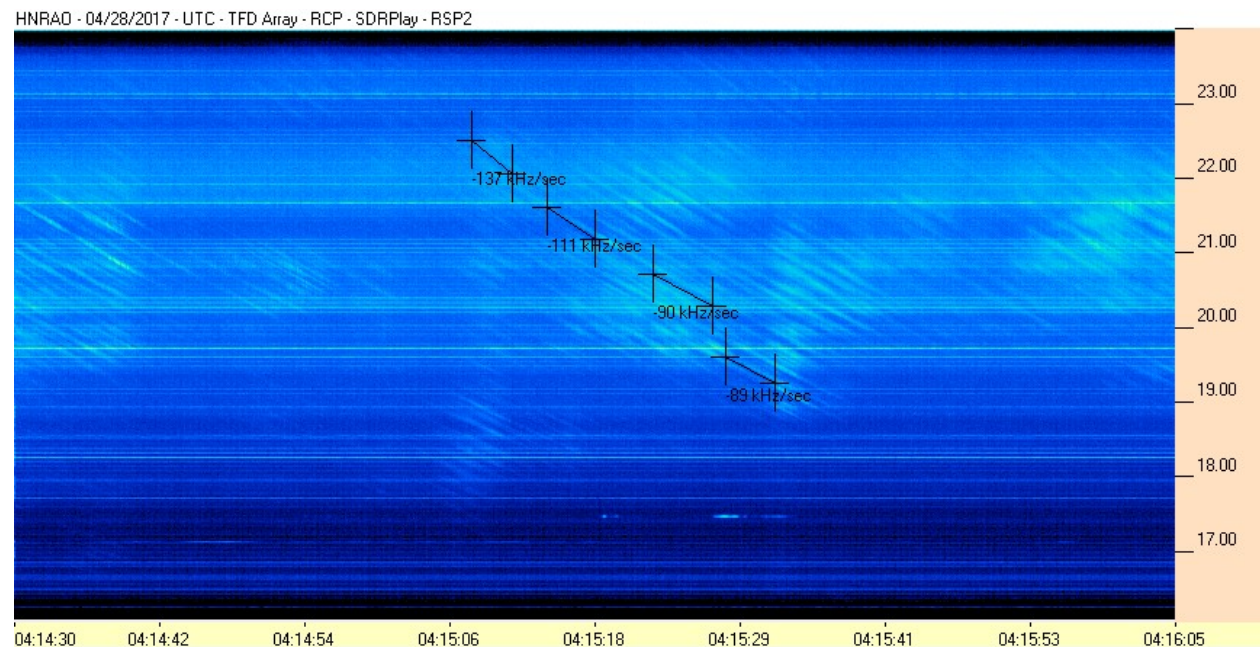
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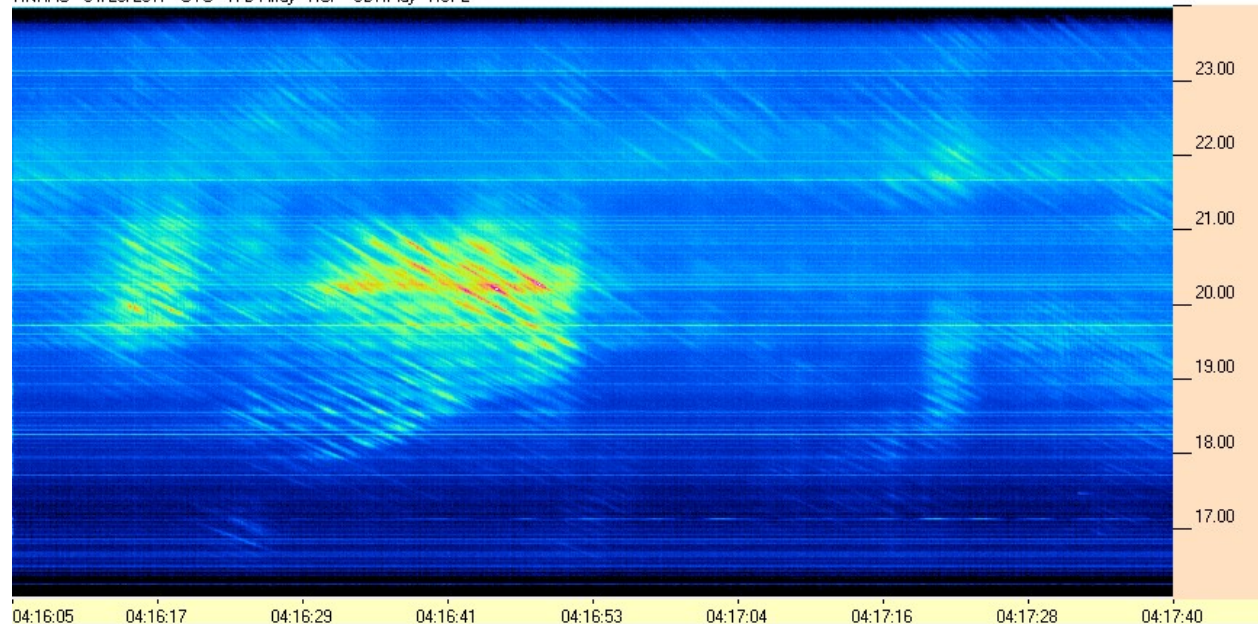
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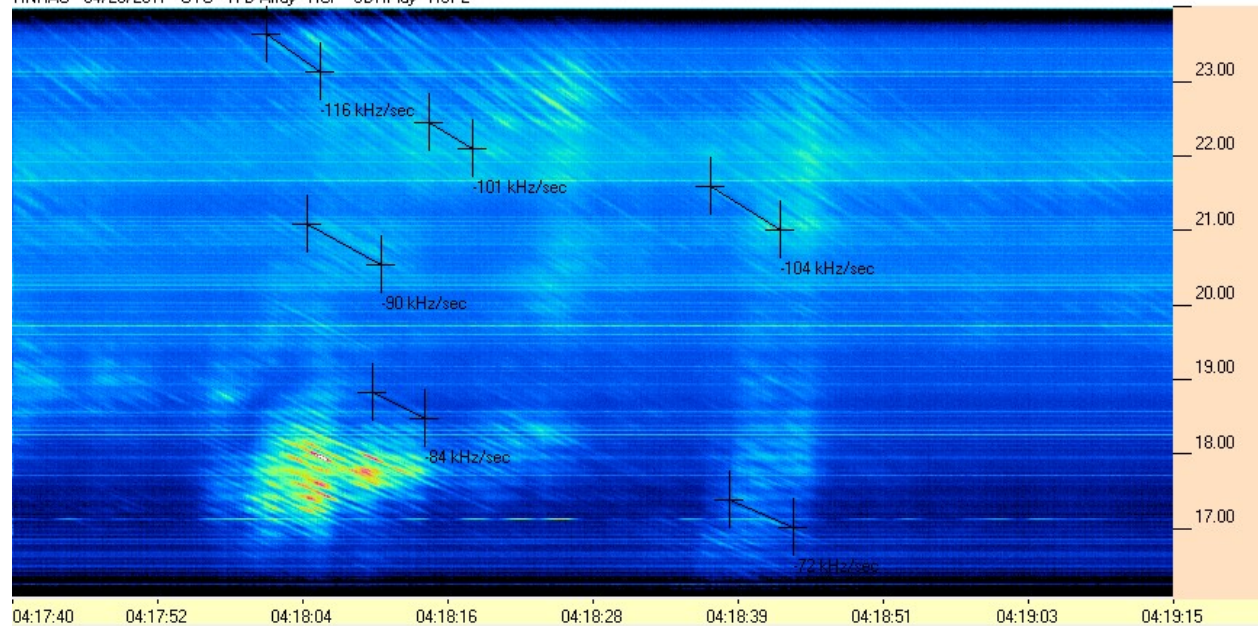
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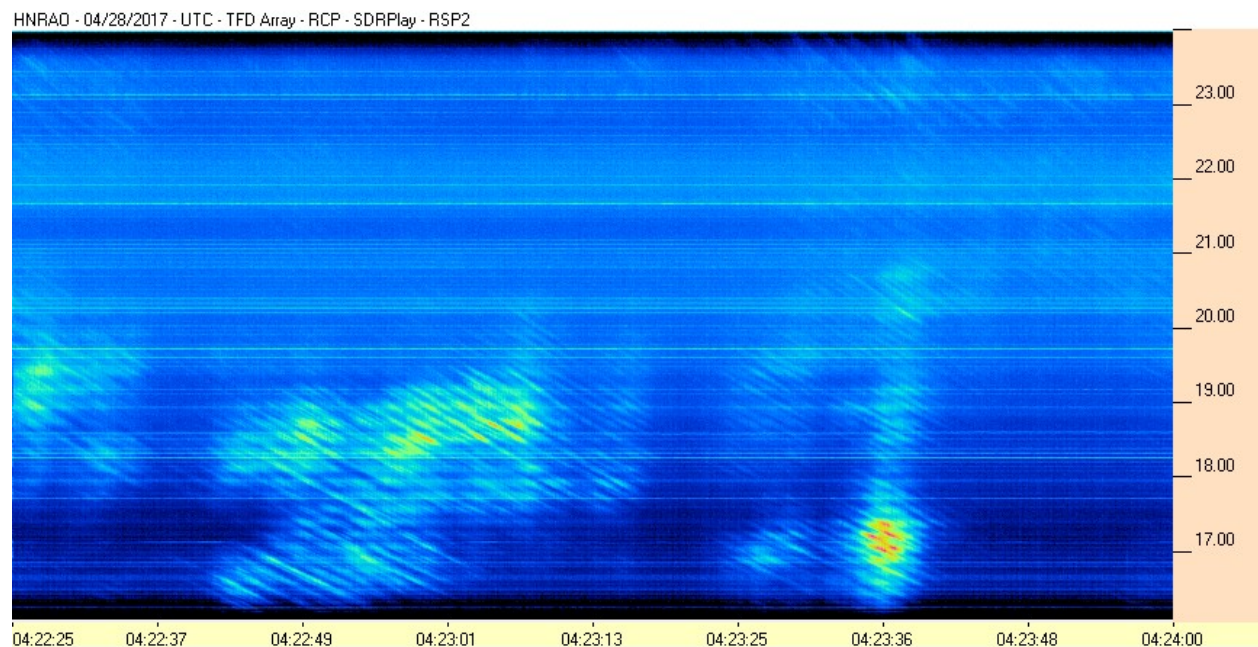
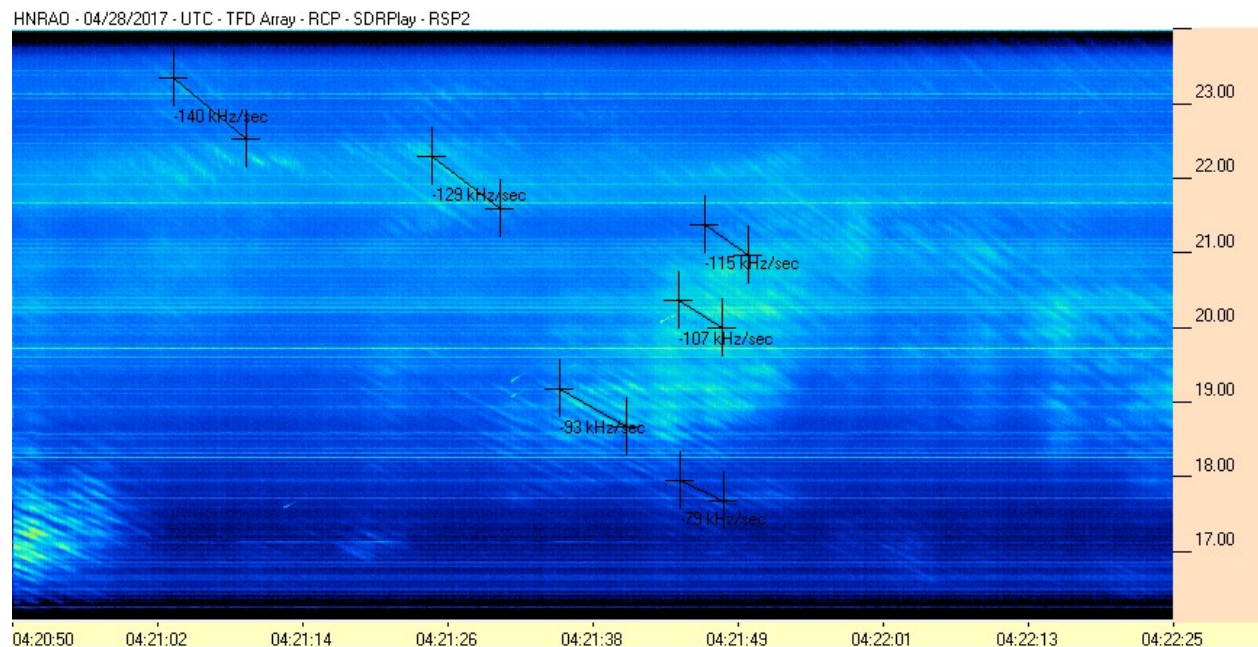
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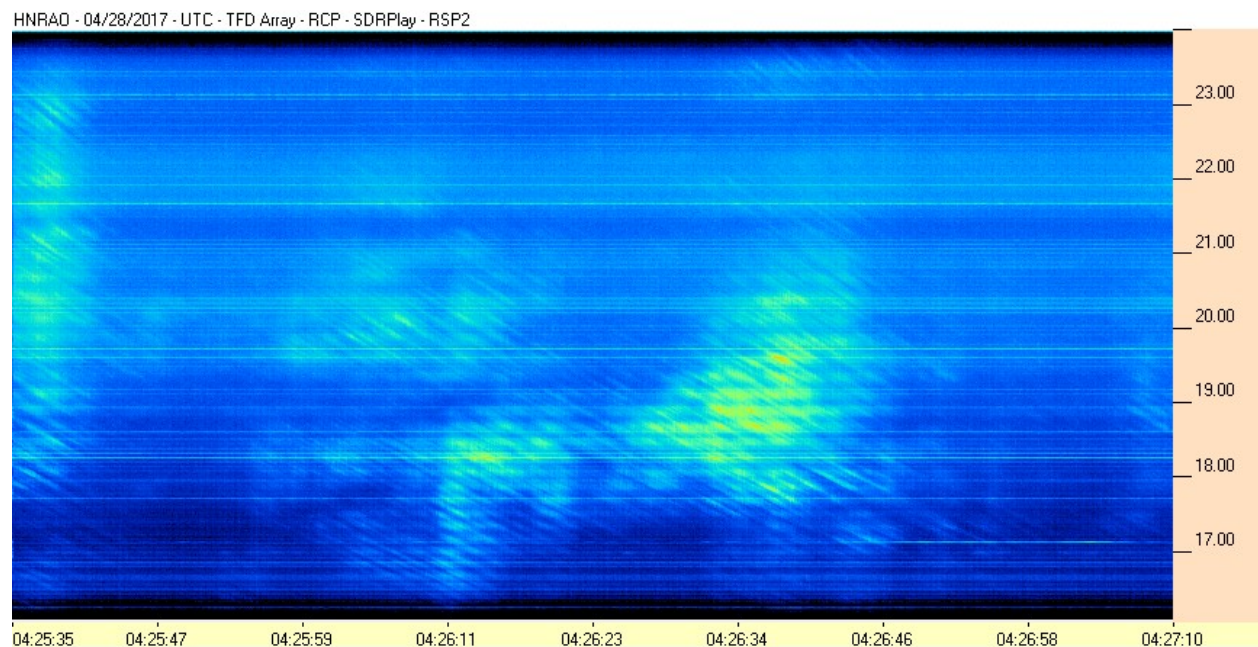
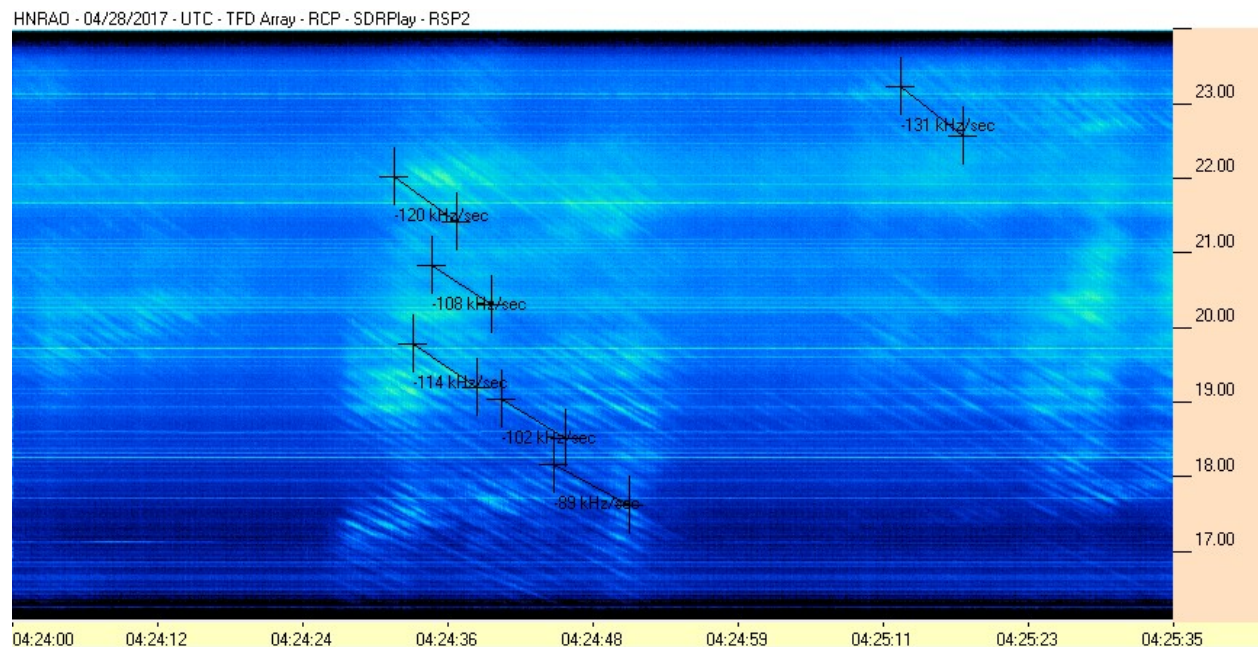


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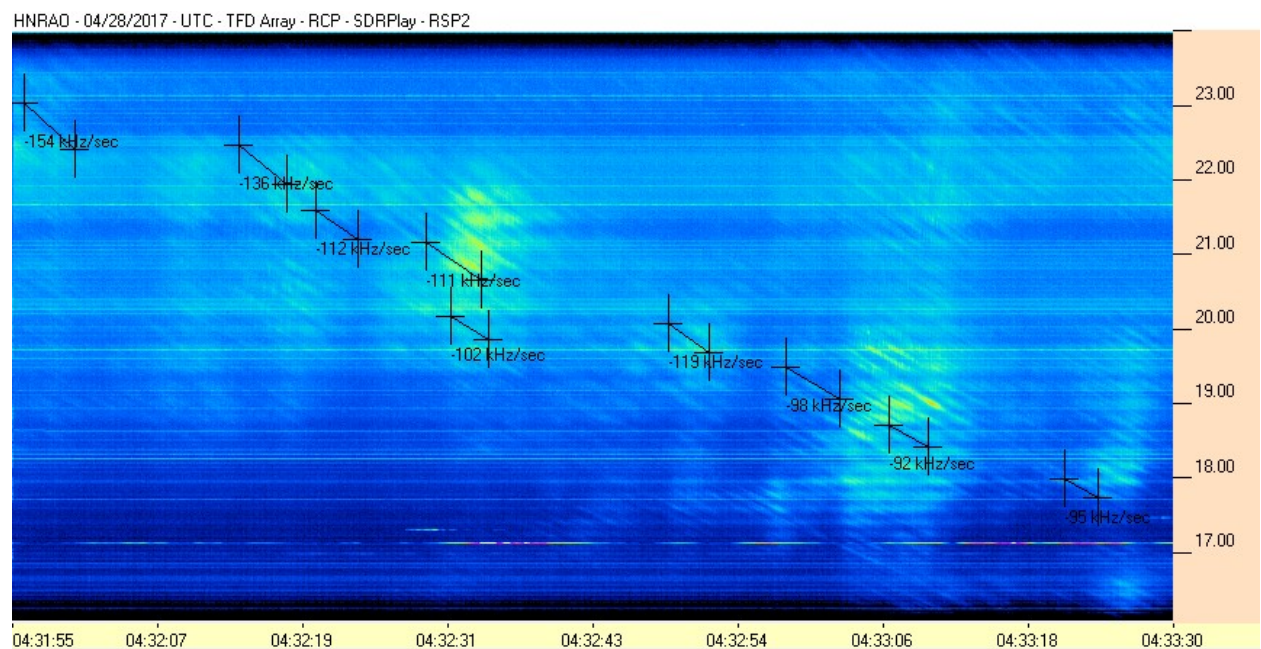
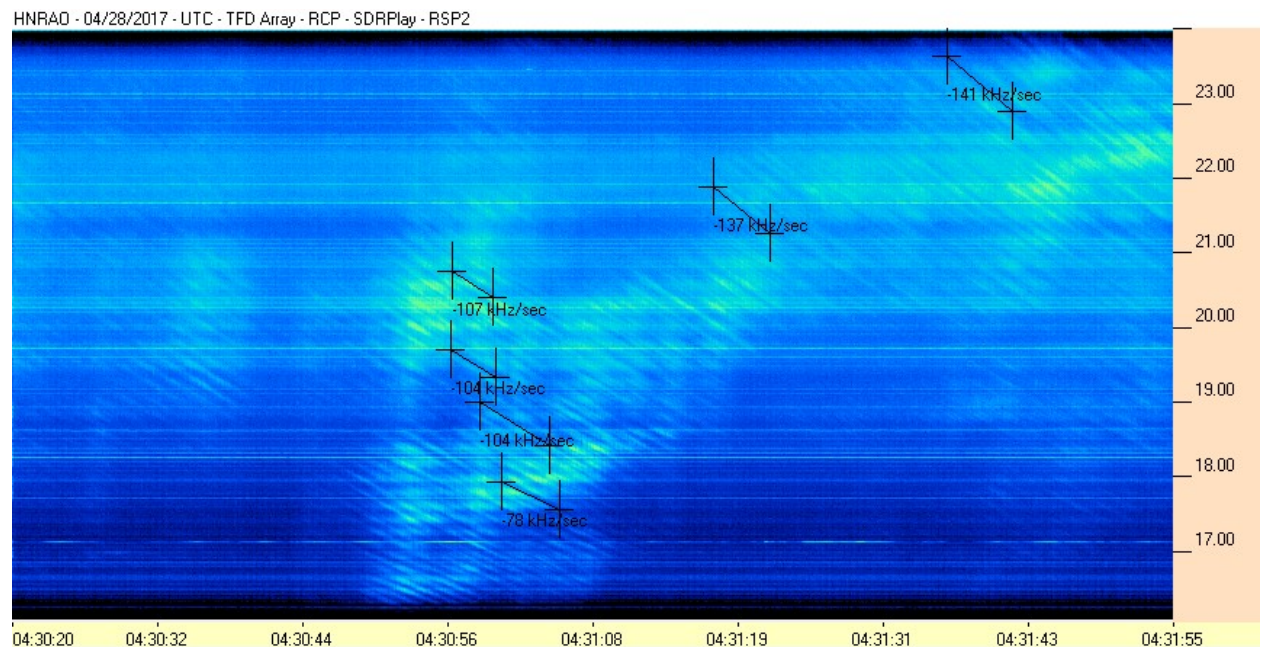
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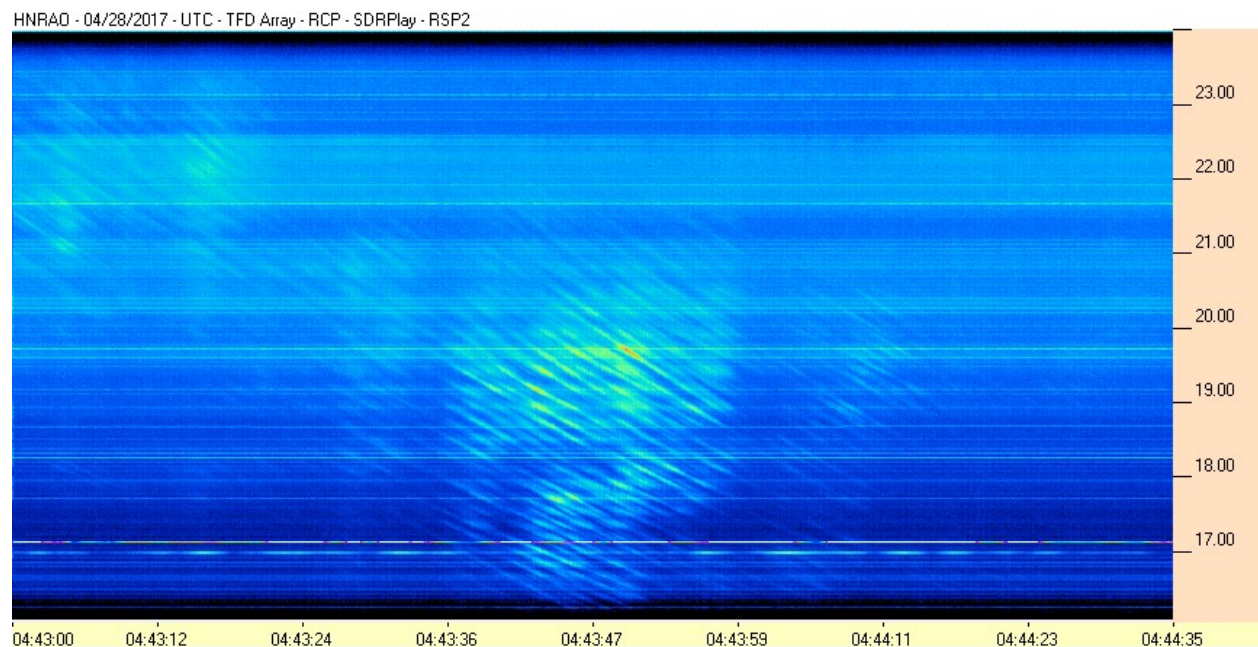
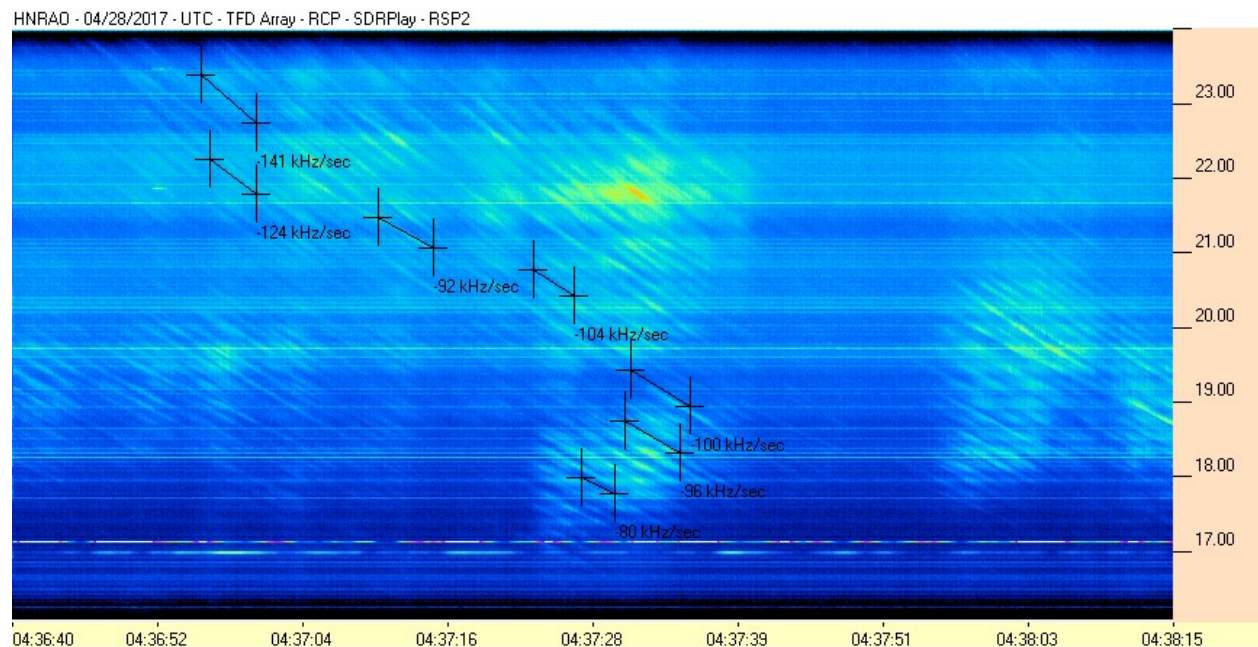


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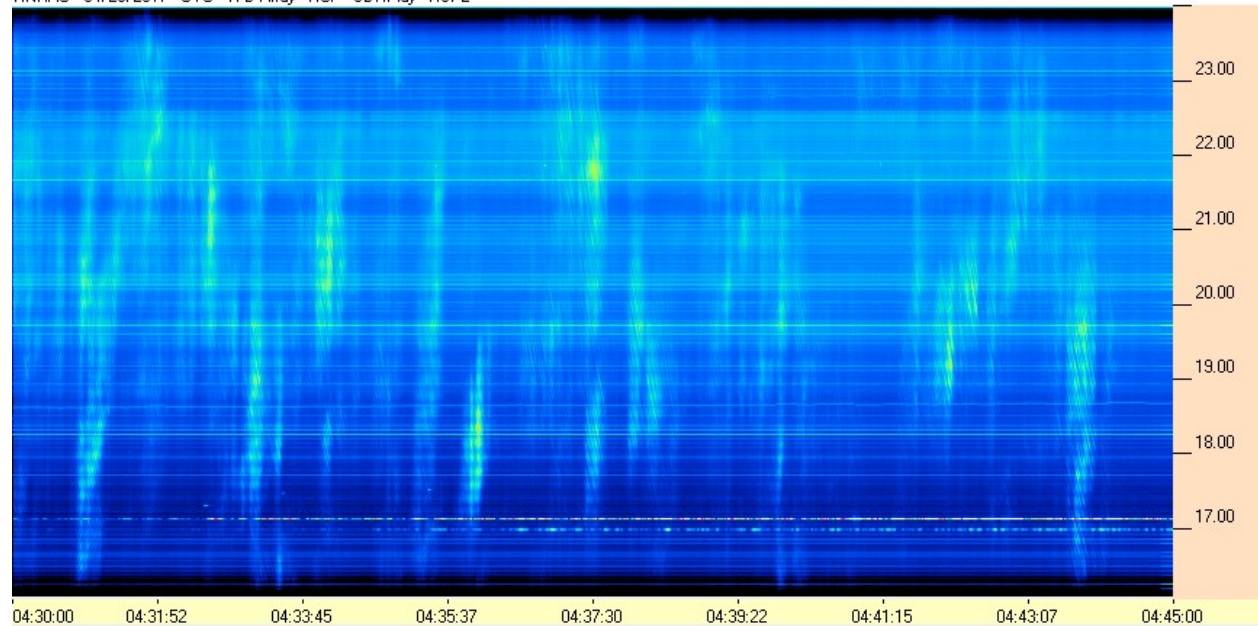
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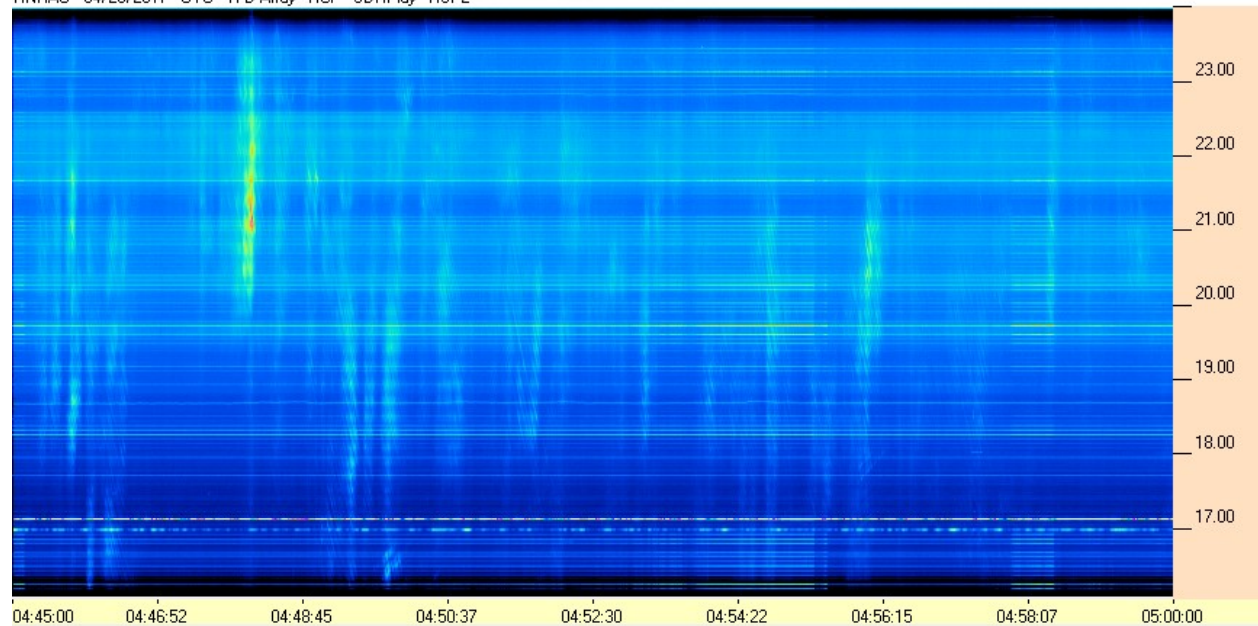
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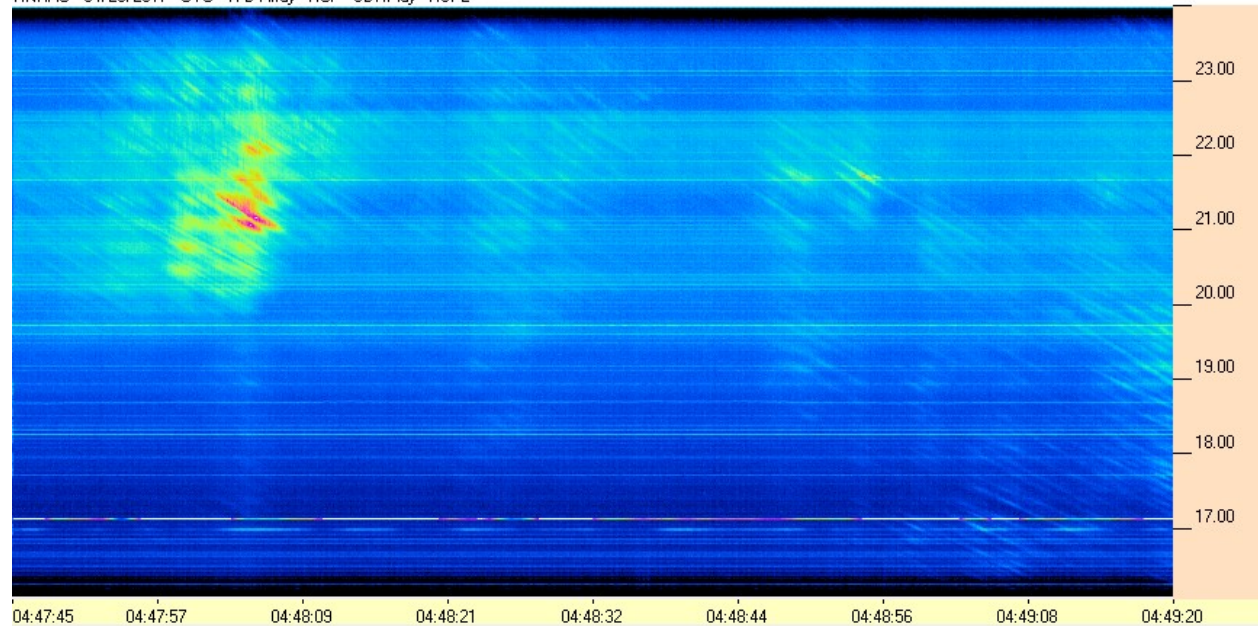
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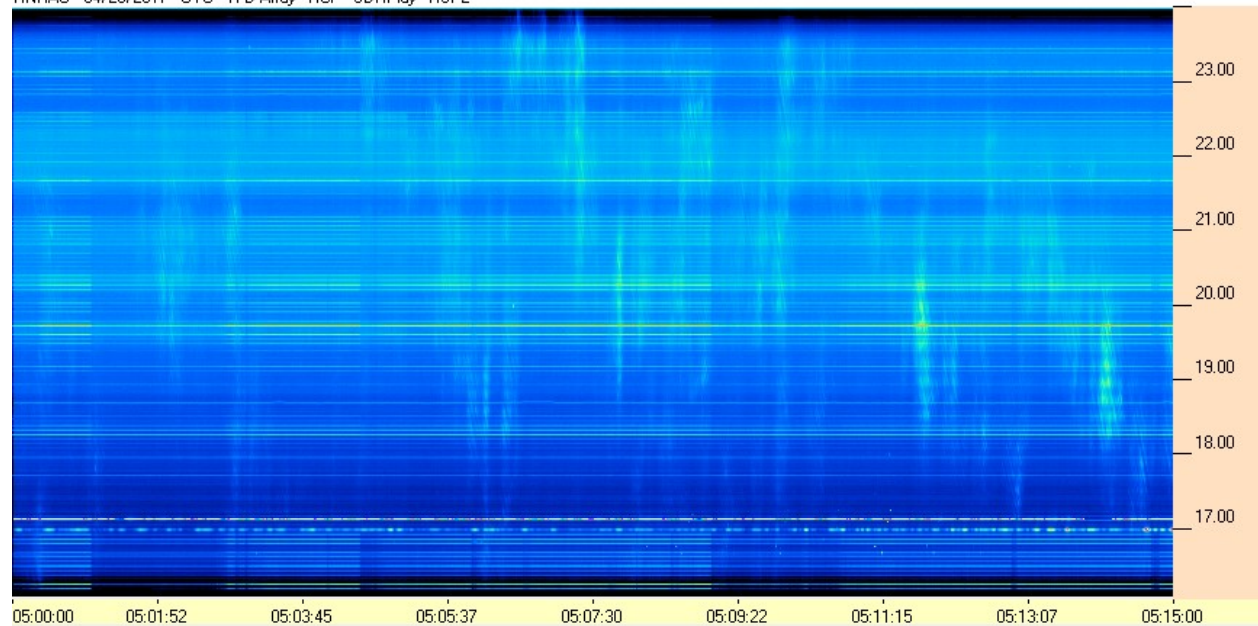
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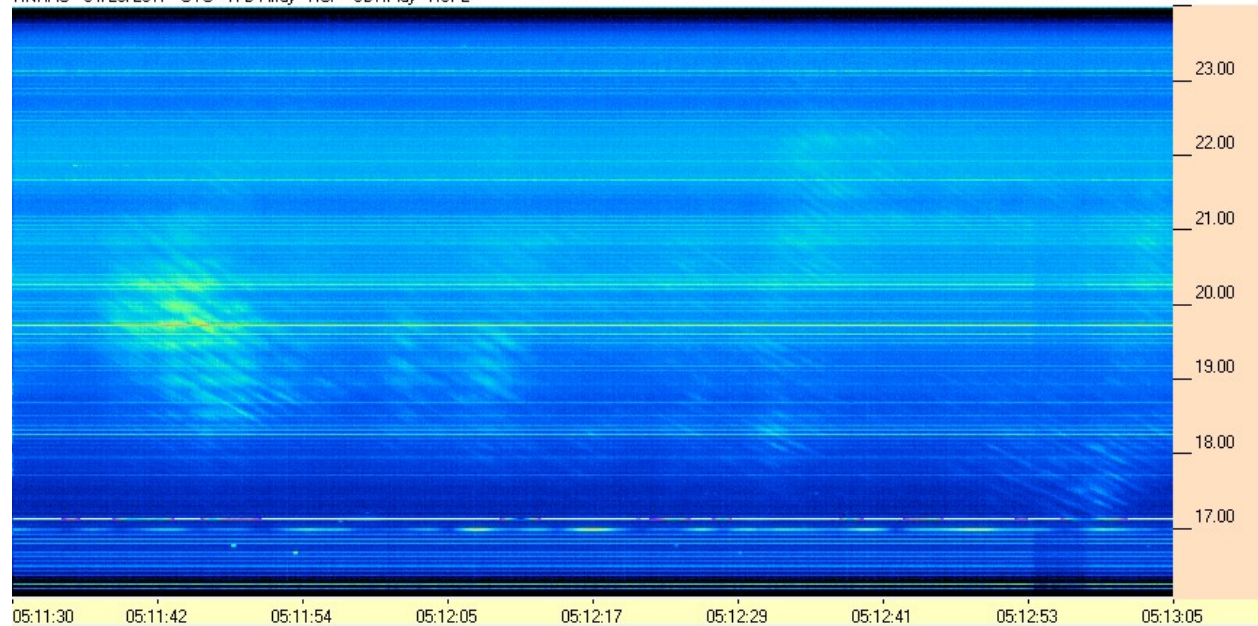
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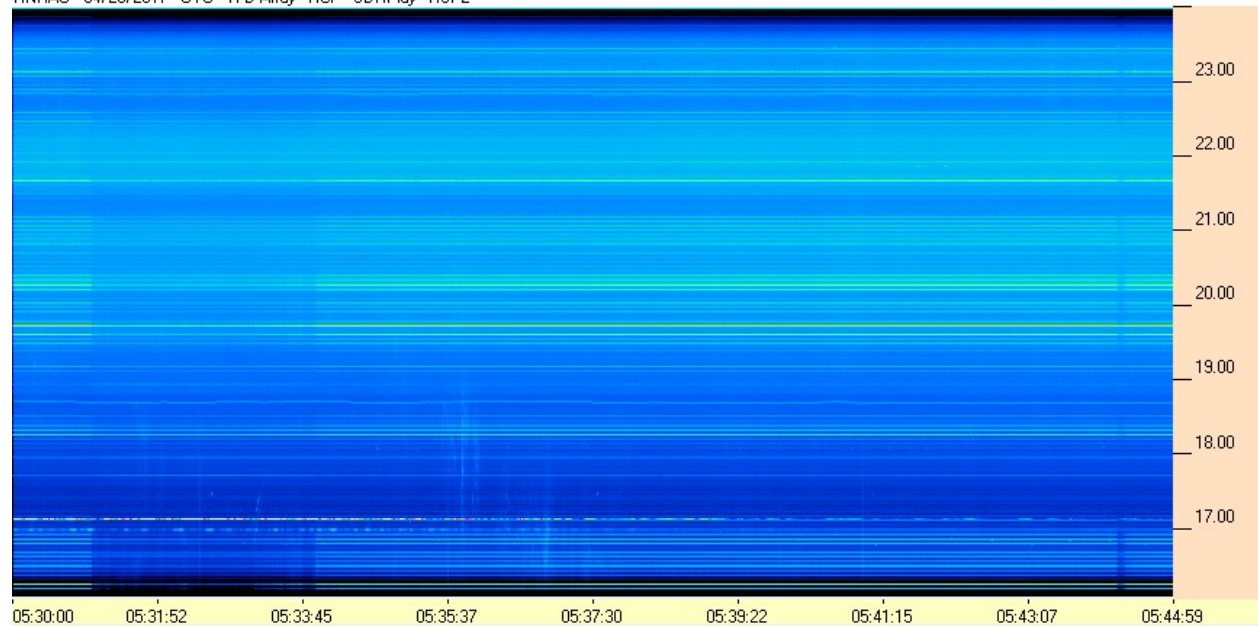
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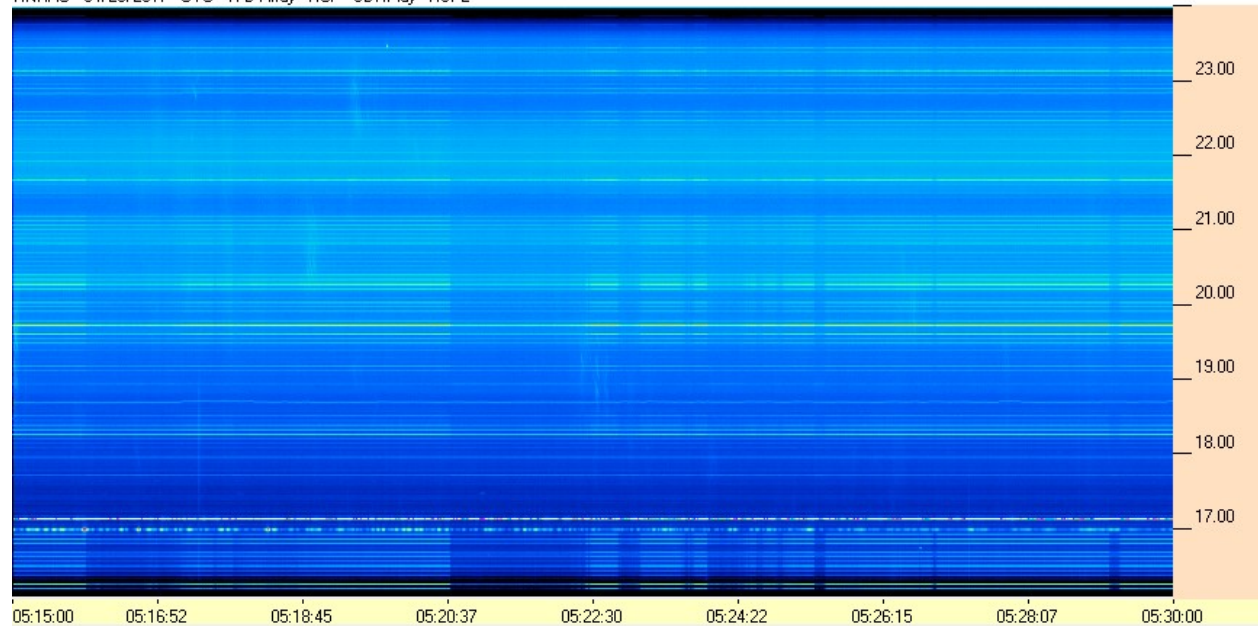
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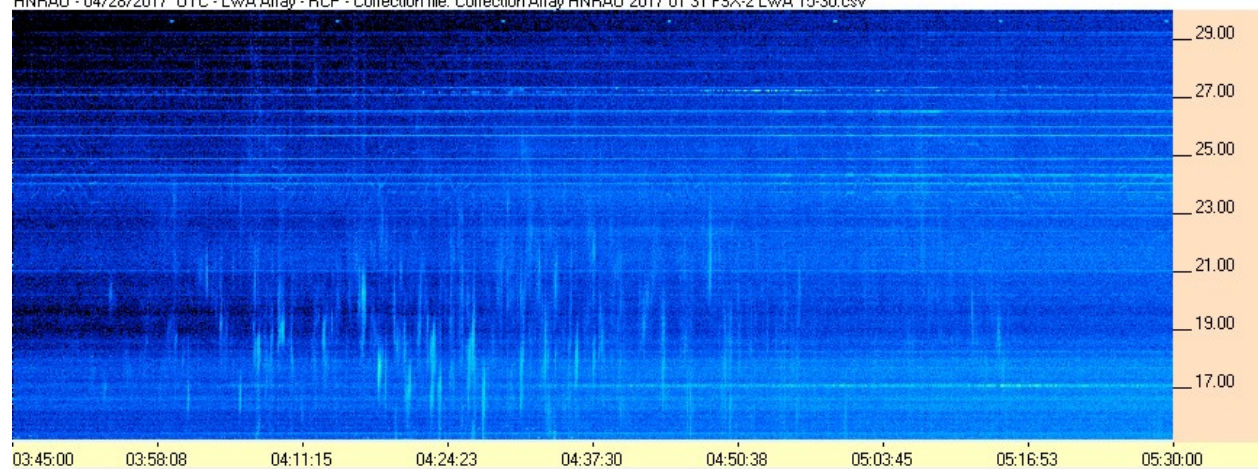


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FSX-2/LWA Pair

HNRAO - 04/28/2017 UTC - LWA Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-2 LWA 15-30.csv

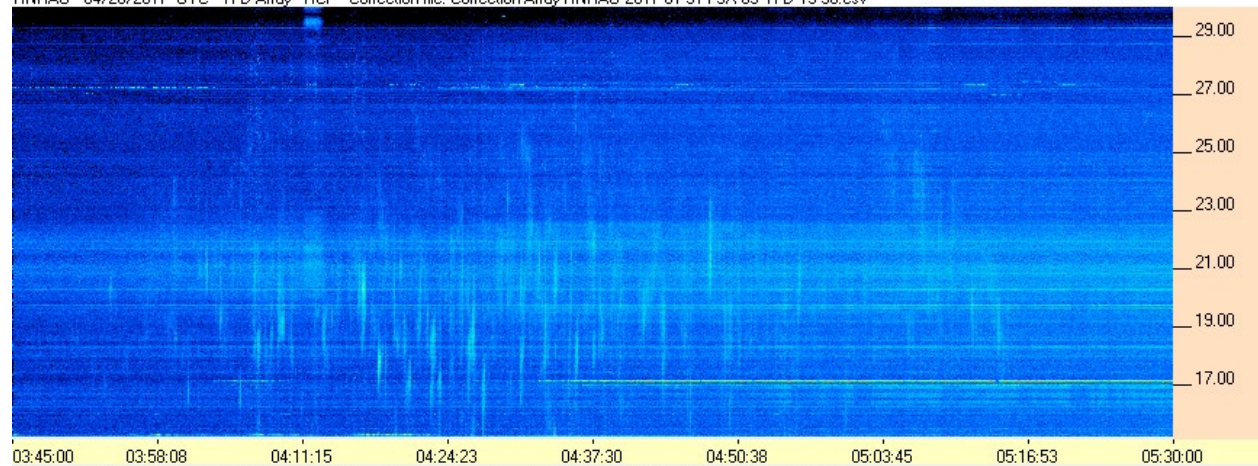


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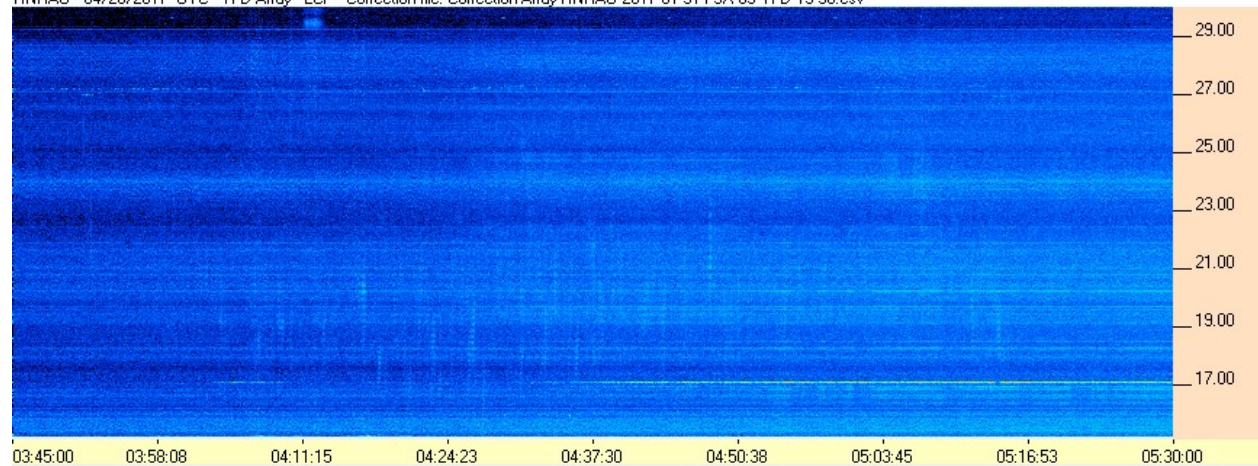


FSX-8S/TFD Pair

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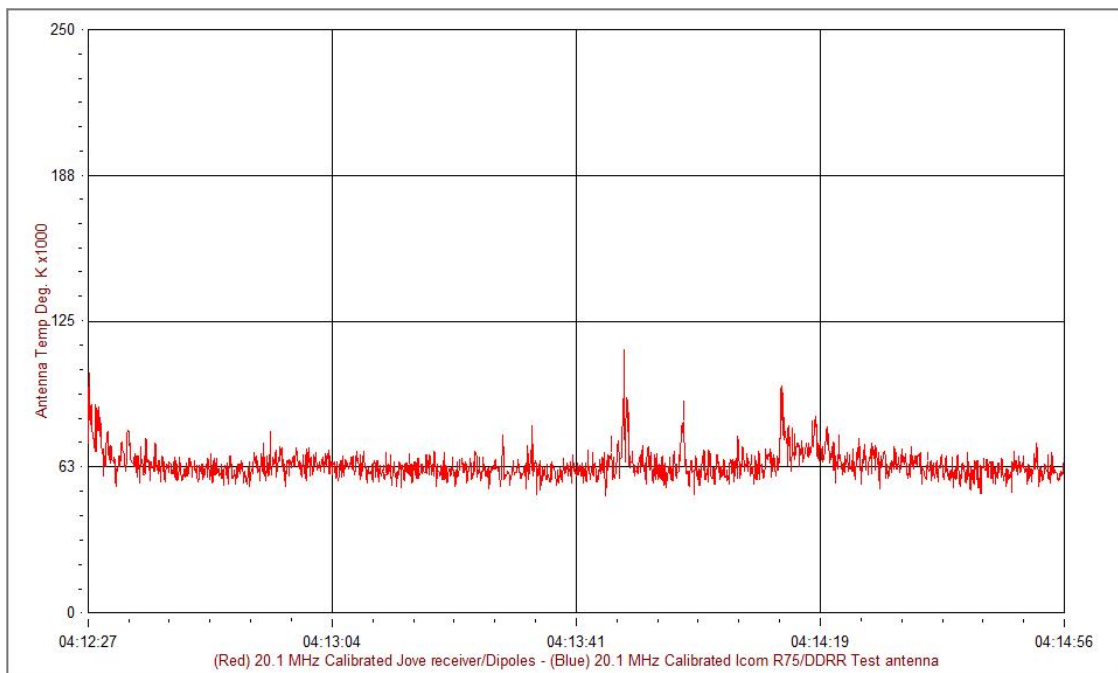
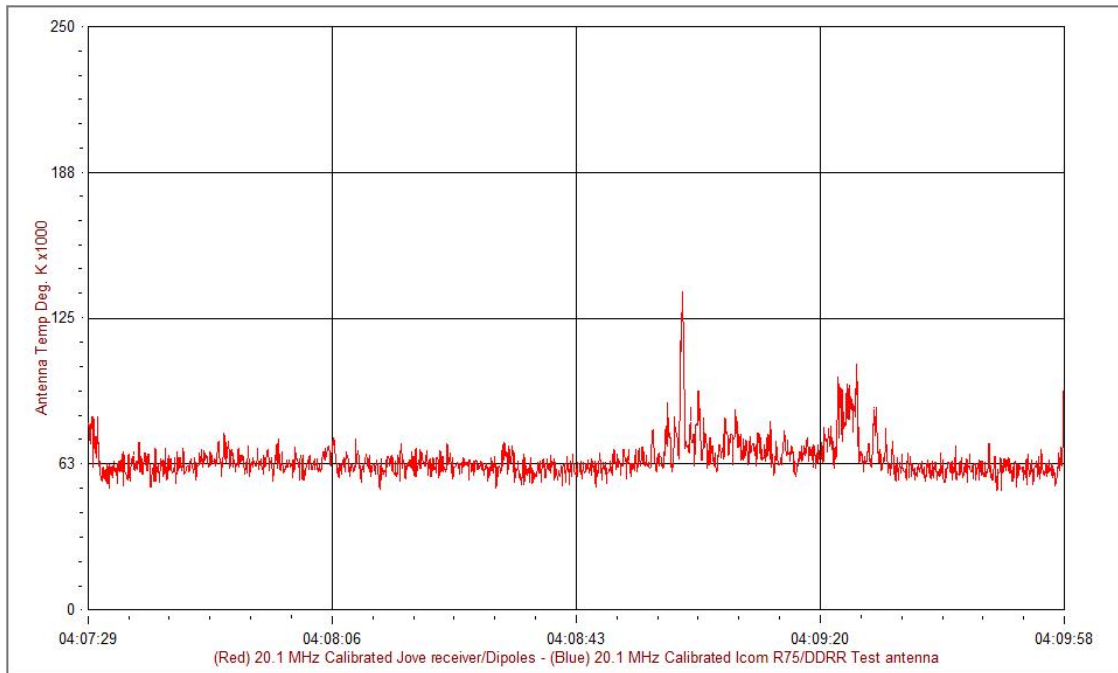
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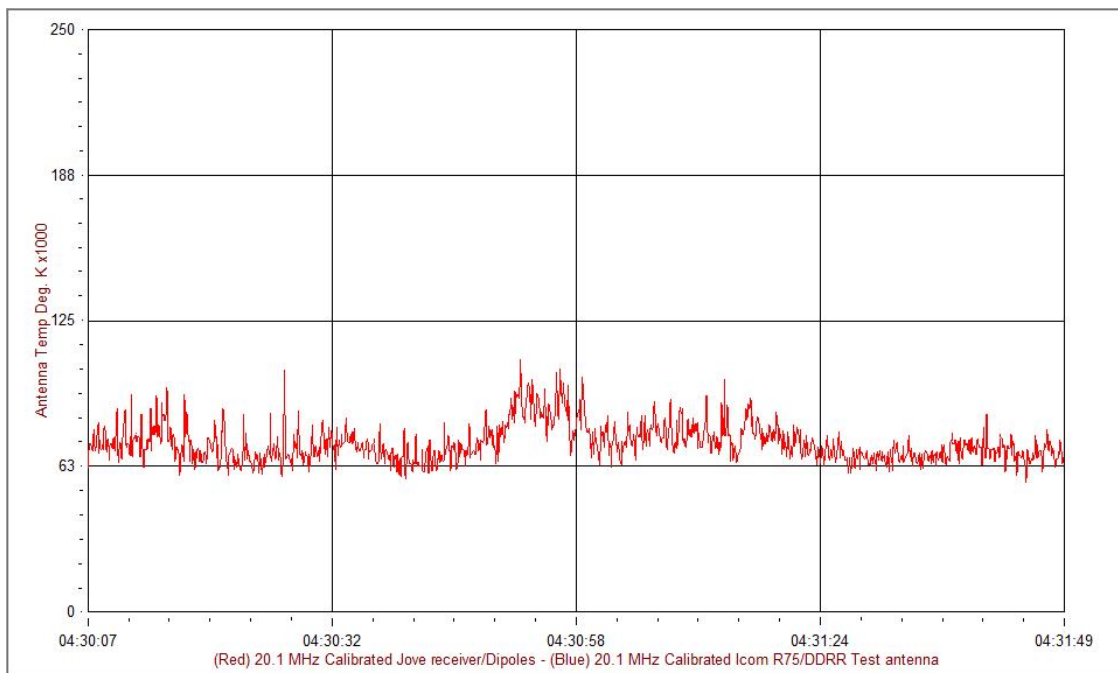
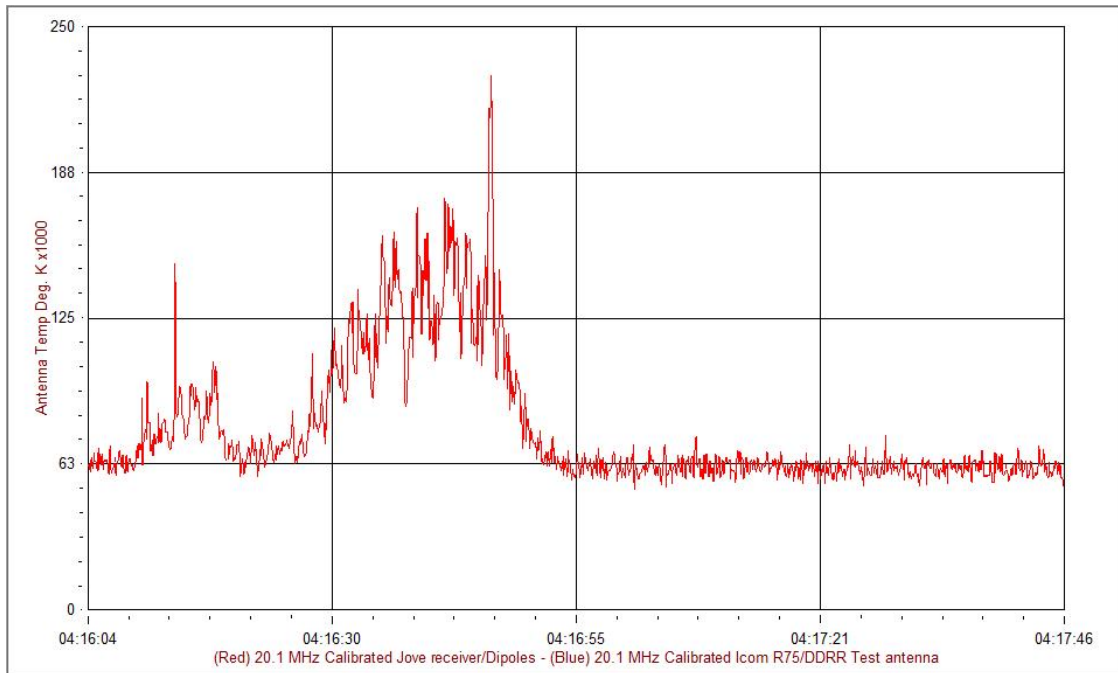
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Radio JOVE II/JOVE Dipoles Pair



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HNRAO Observing Log
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