

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 19 April 2017

Object: Jupiter – Non-Io-A

Observer: JB

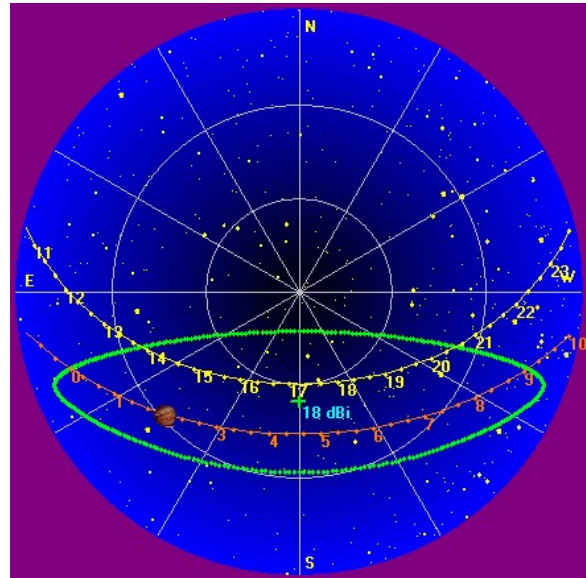
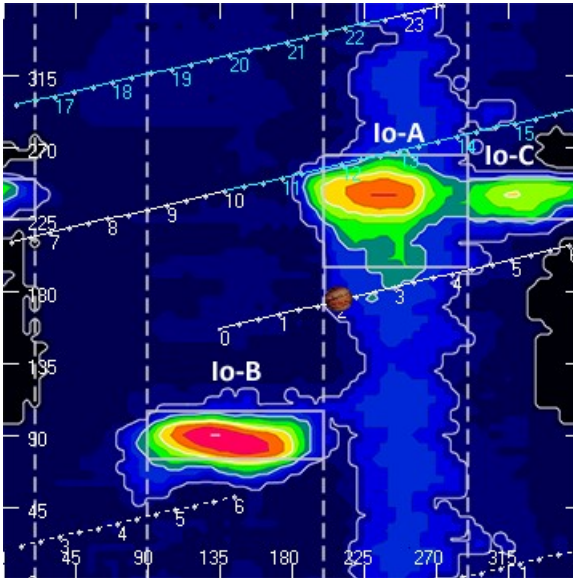
Start of pass:	0203 UT	Planetary K-index:	3
Jupiter Altitude:	32.8 degrees	Jupiter Azimuth:	133.1 degrees
Jupiter CML:	209.65	Jupiter Io Phase:	174.76
Jupiter RA:	13:04	Jupiter Dec:	-05:07
Hour Angle:	-02:32	Polarization	RCP
Sun Altitude:	-23.0 degrees	Sun Azimuth:	308.2 degrees
Sun RA:	01:42	Sun Dec:	10:31

End of pass:	0255 UT		
Jupiter Altitude:	39.2 degrees	Jupiter Azimuth:	147.1 degrees
Jupiter CML:	241.09	Jupiter Io Phase	182.15
Hour Angle:	01:40		
Sun Altitude:	-30.1 degrees	Sun Azimuth:	320.1 degrees

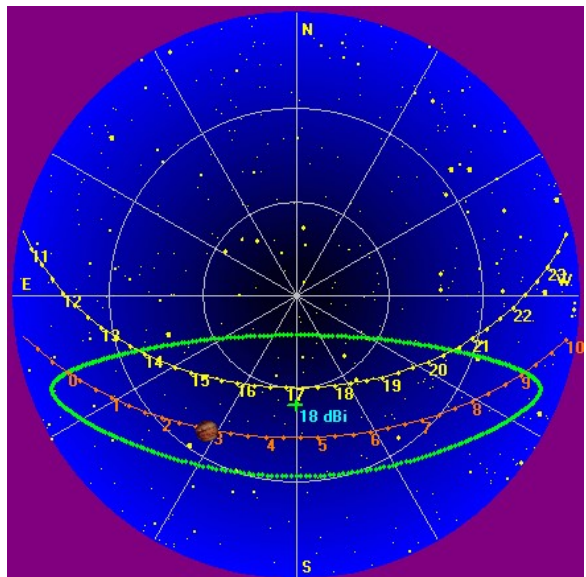
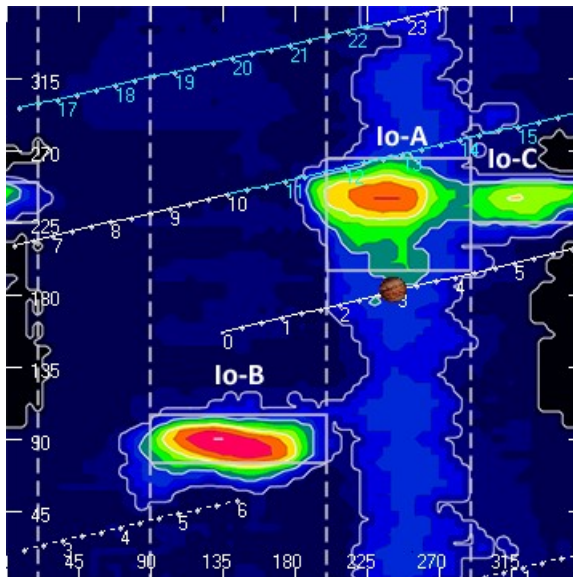
Observations made using:

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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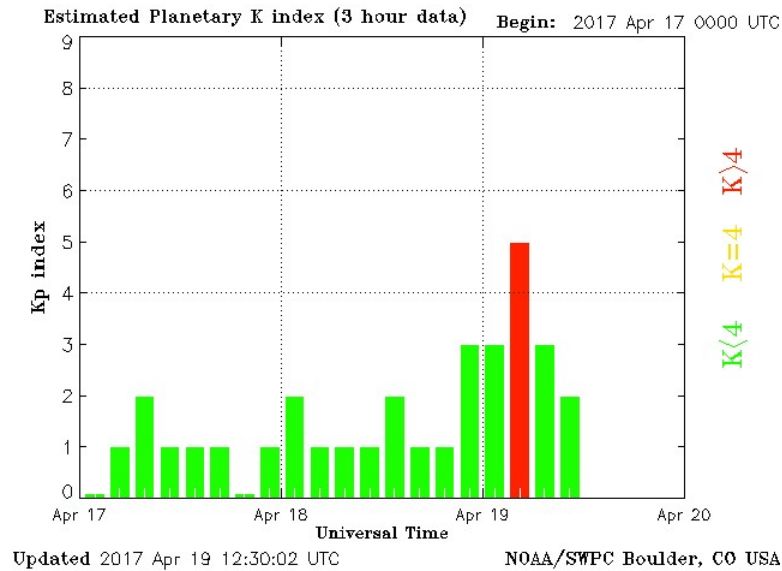


Beginning of Pass



End of Pass

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A weak and an unremarkable Non-Io-A pass. RCP L-bursts with negative drift modulation lanes. Only two events stood out. At 0219 UT, a sudden strengthening of the emission for a brief period and a group of much stronger emissions at 0235 UT that may be a short-lived N-event, or N-like event. There was no observable LCP component to the pass.

Modulation lanes were measured. Drift rates ranged from -121 kHz/sec to -85 kHz/sec with an average of -102 kHz/sec. Measurements at different locations show that drift rates decrease as the frequency decreases.

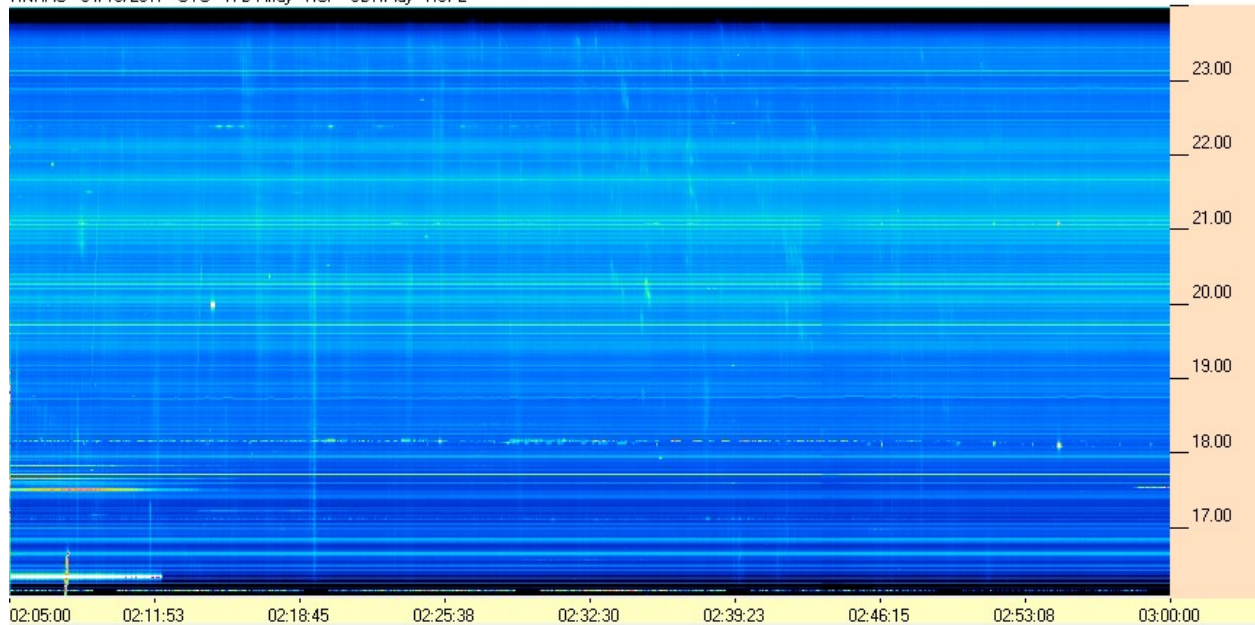
This pass was just barely detected with the FSX-2/LWA pair, and virtually not seen by the FSX-8S/TFD pair.

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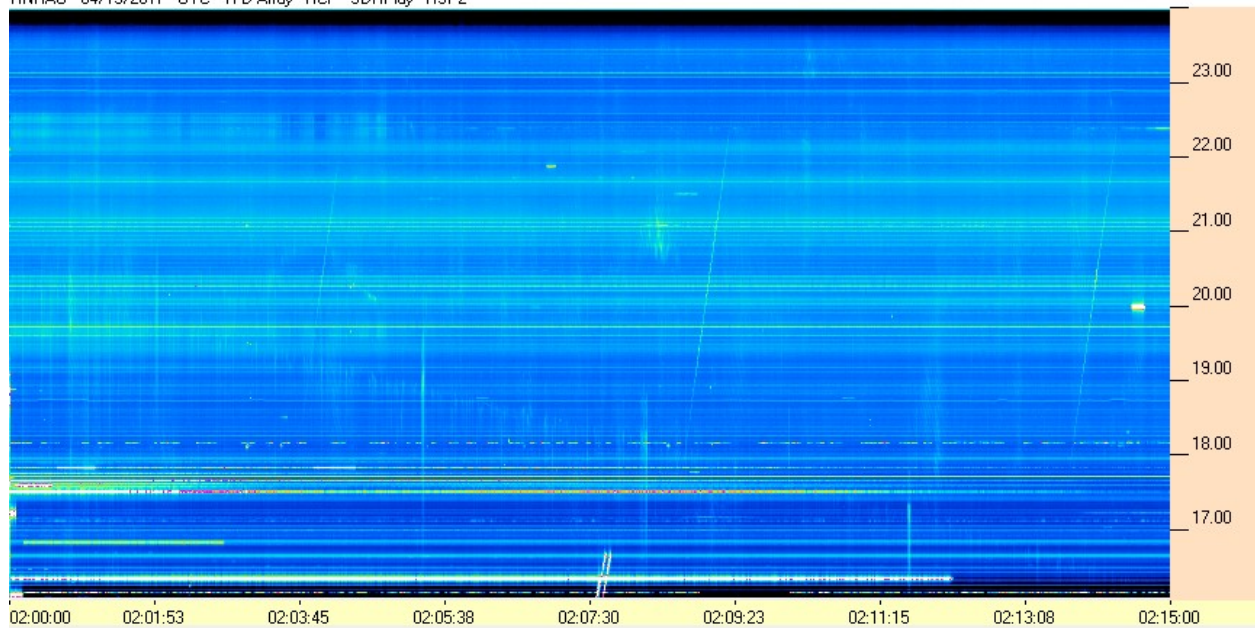


SDRPlay RSP2/TFD Pair

HNRAO - 04/19/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



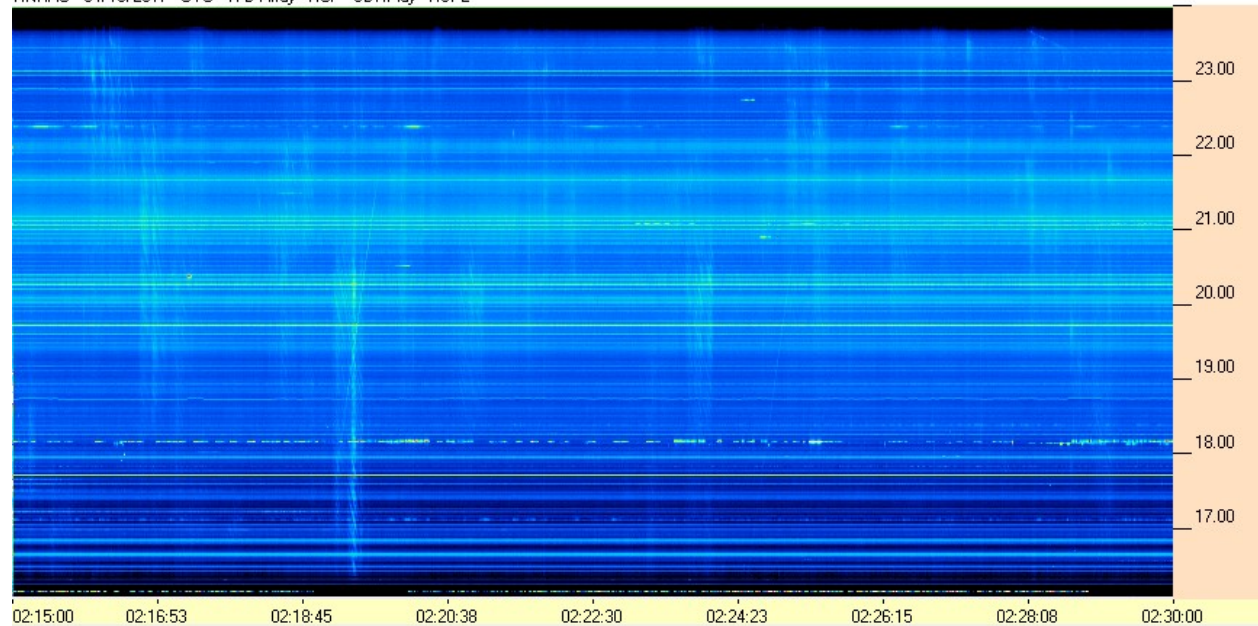
HNRAO - 04/19/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



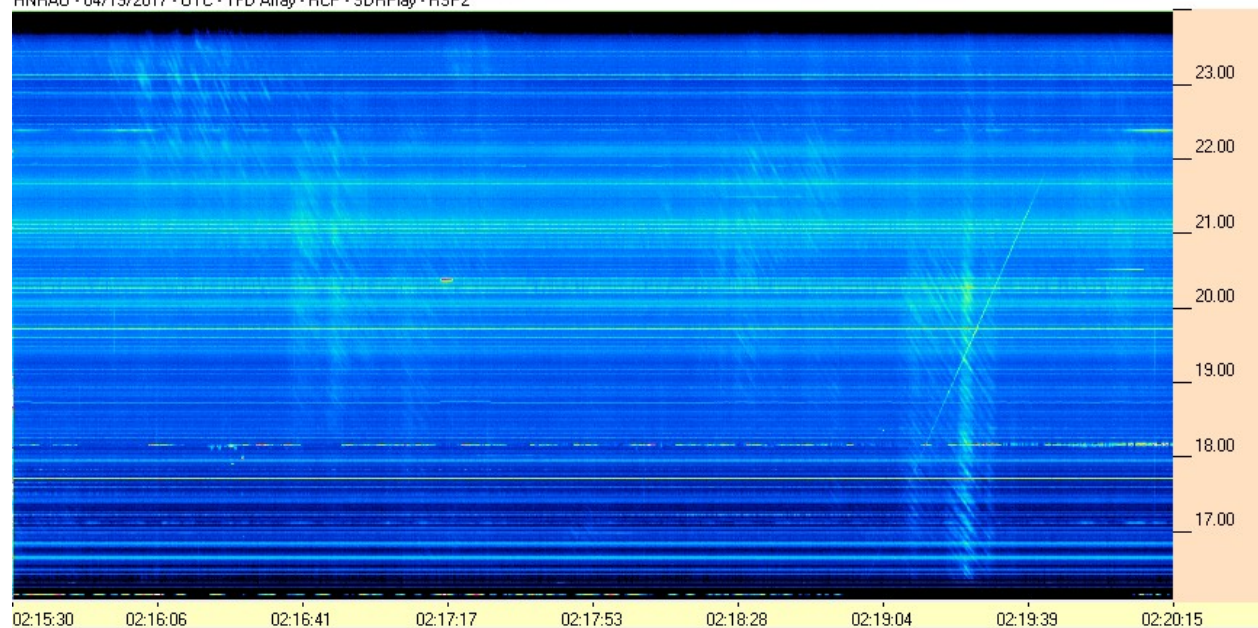
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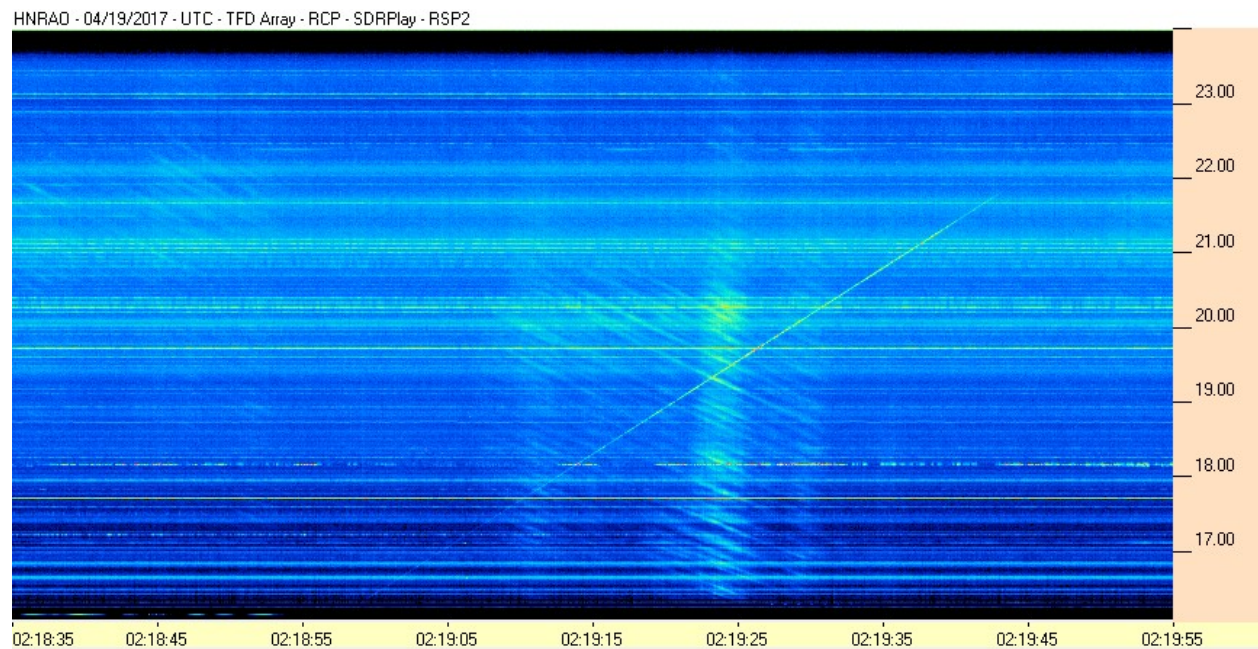
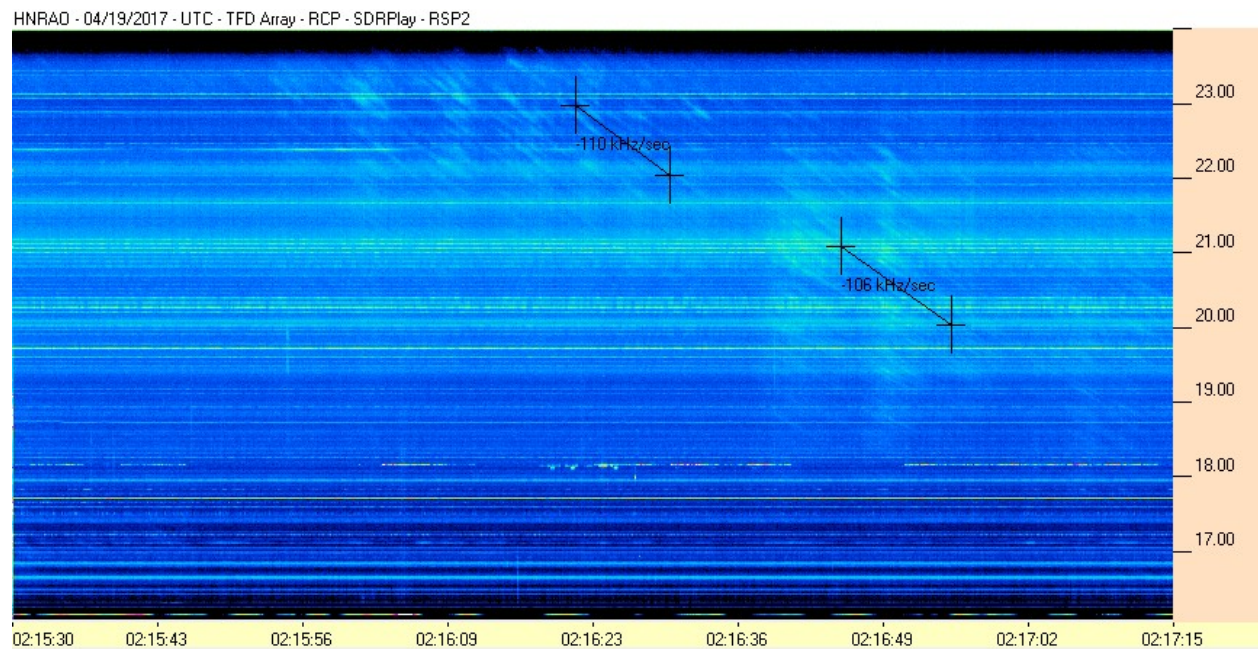
HNRAO - 04/19/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



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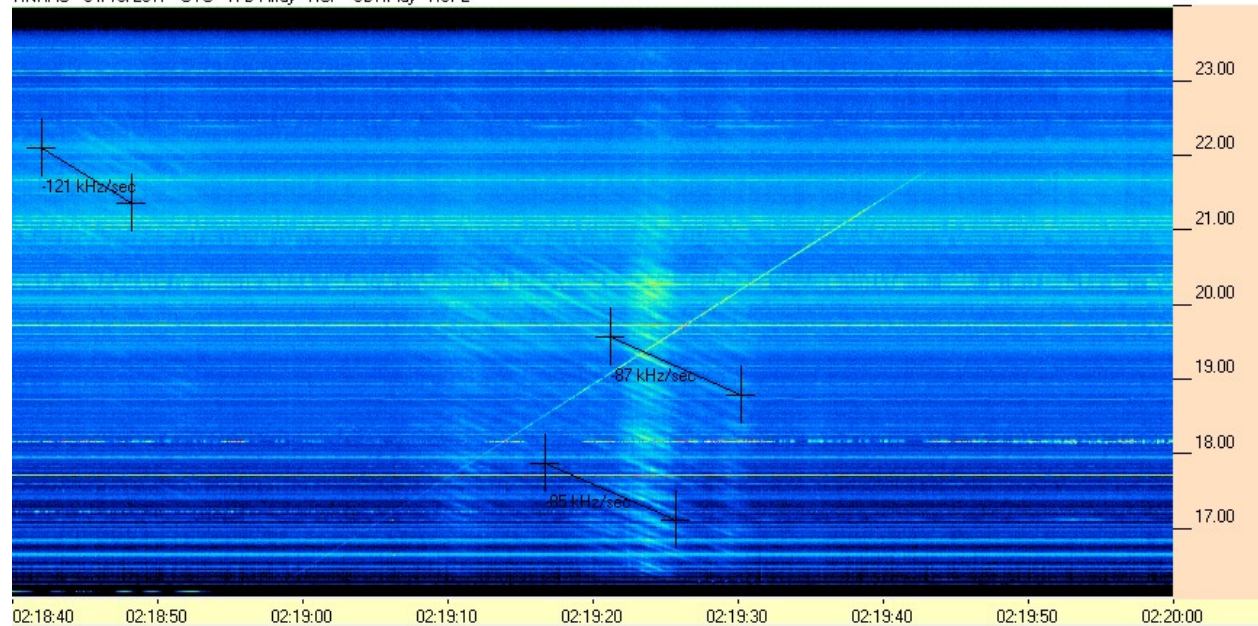
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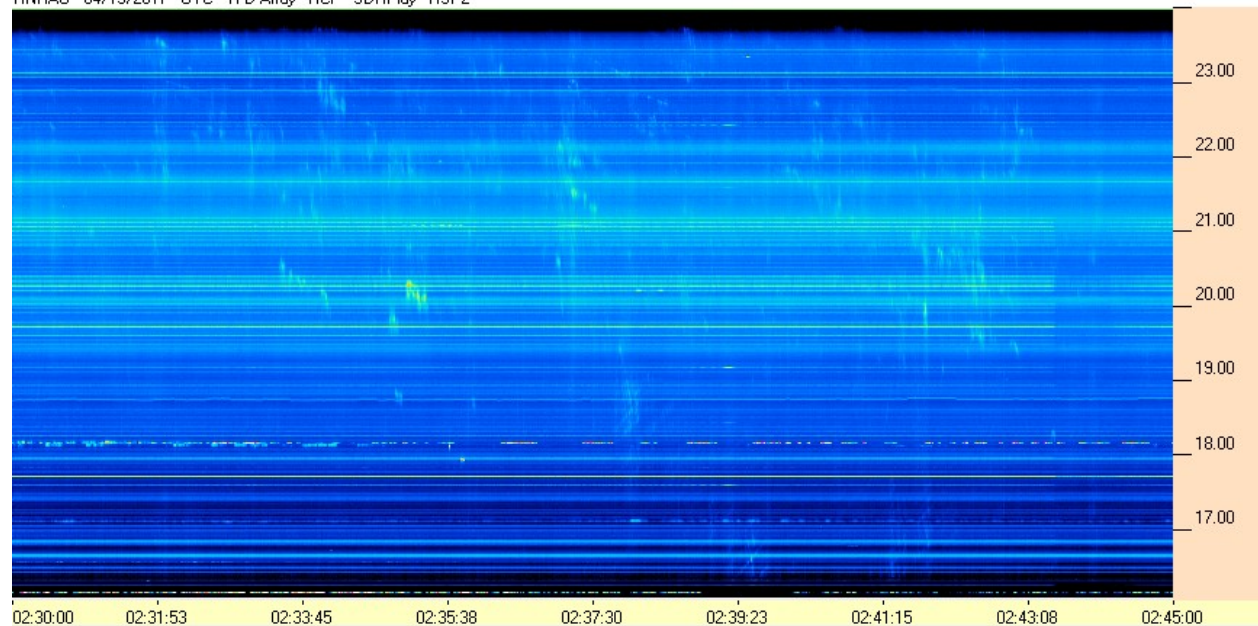
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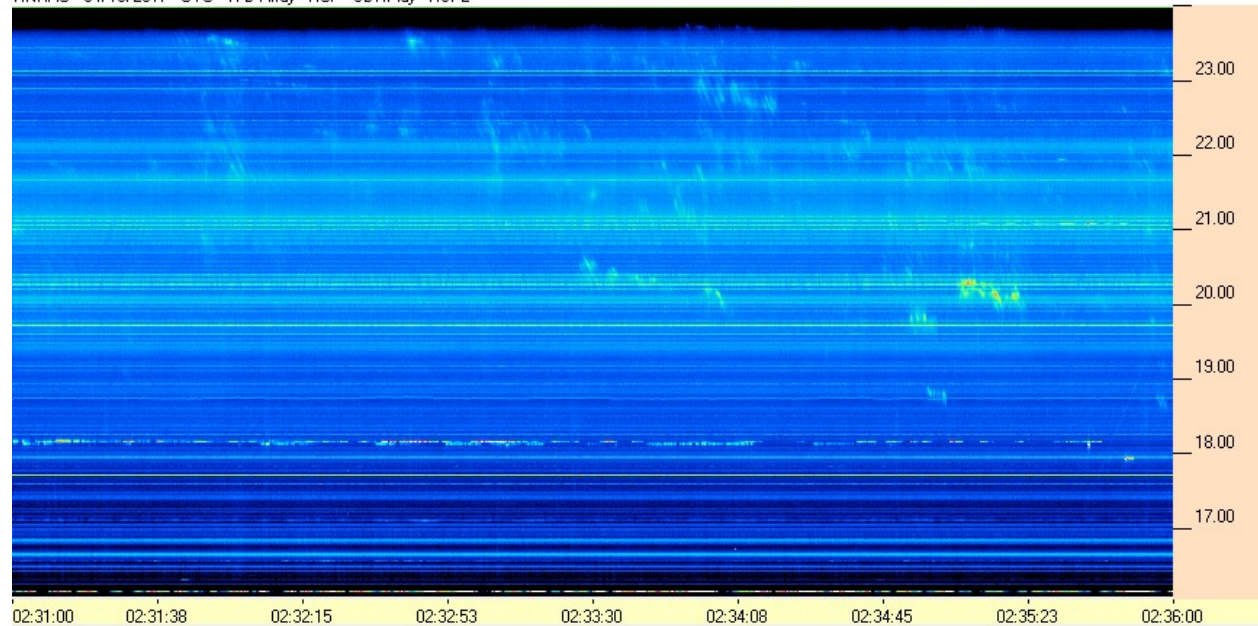
HNRAO - 04/19/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



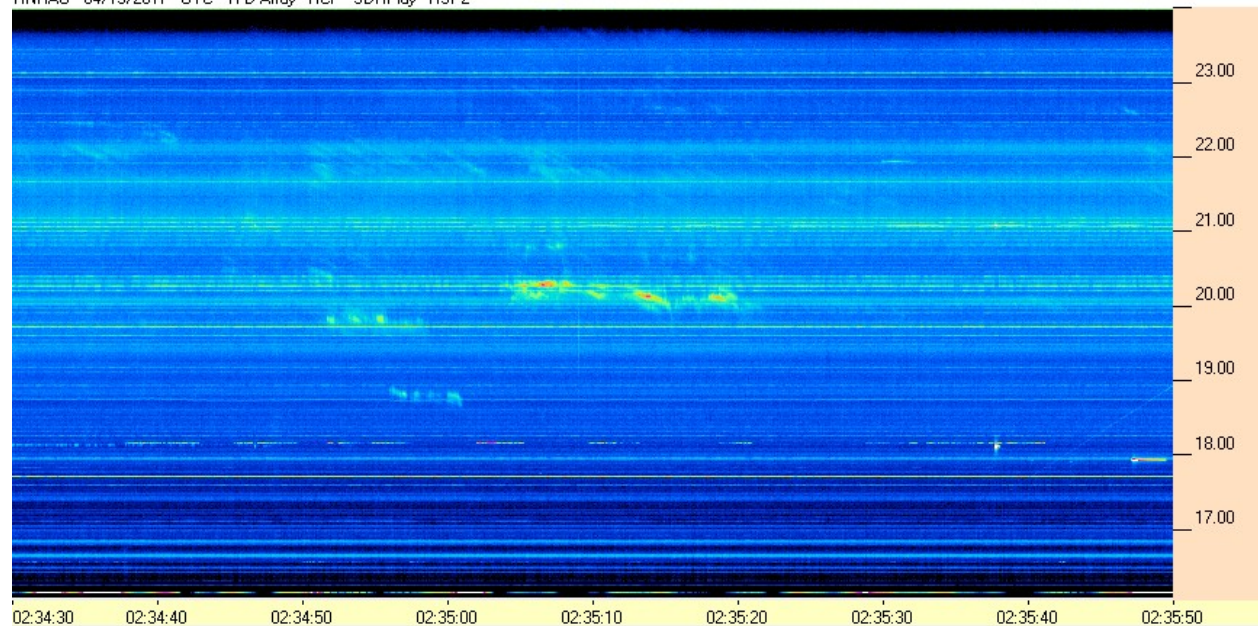
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HNRAO - 04/19/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



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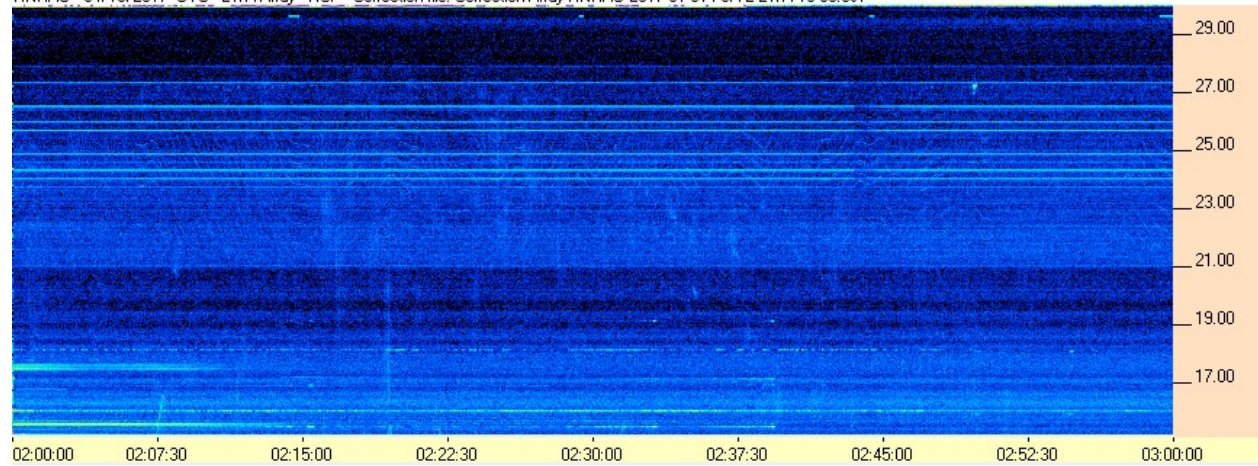


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FSX-2/LWA Pair

HNRAO - 04/19/2017 UTC - LWA Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-2 LWA 15-30.csv

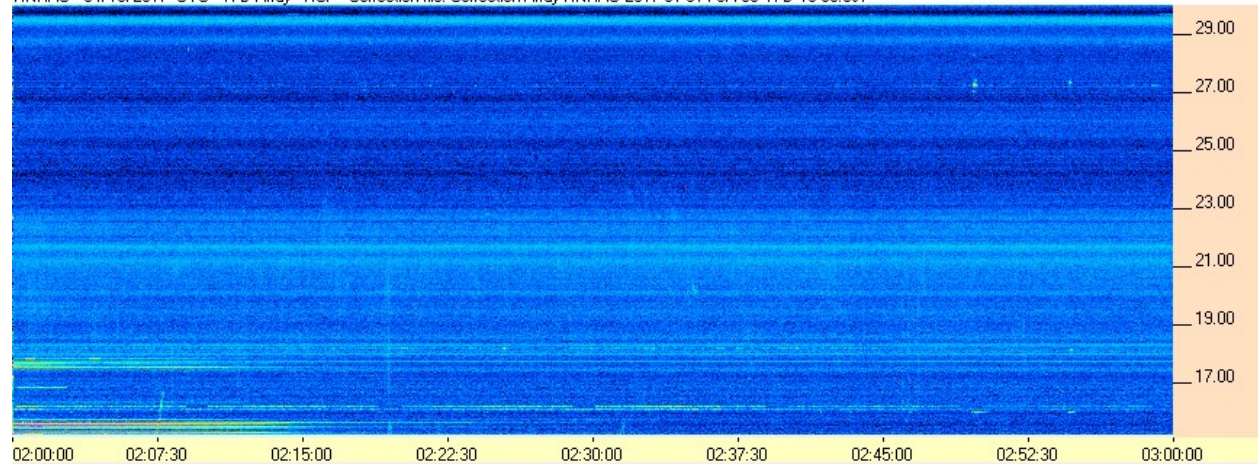


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FSX-8S/TFD Pair

HNRAO - 04/19/2017 UTC - TFD Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv



HNRAO - 04/19/2017 UTC - TFD Array - LCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv

