

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 27 March 2017

Object: Jupiter – Io-A

Observer: JB

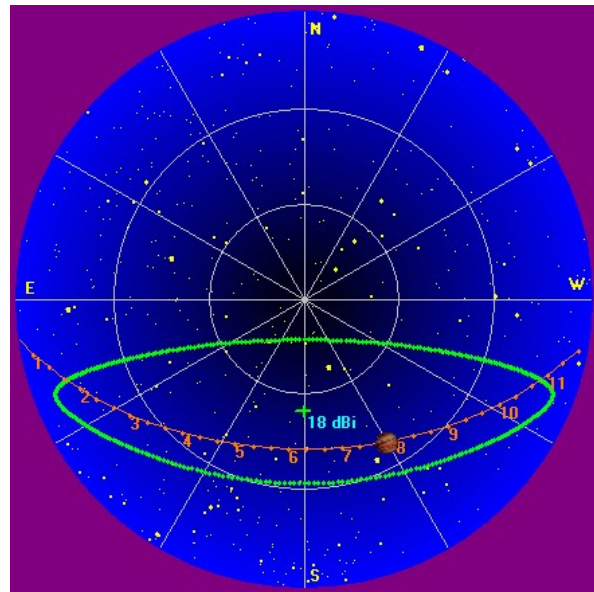
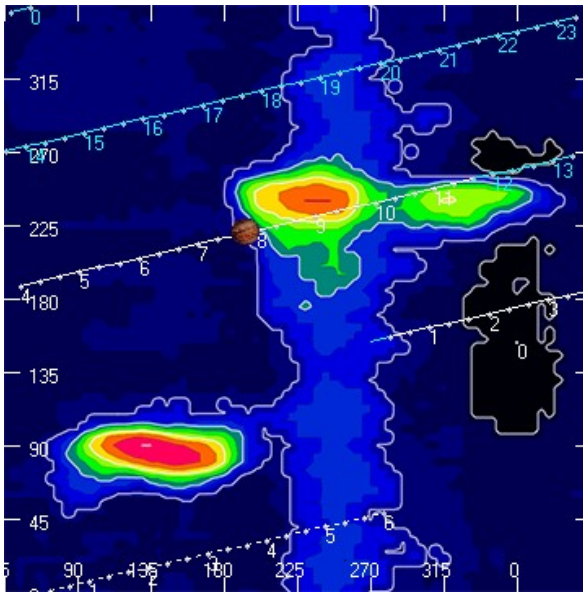
Start of pass:	0749 UT	Planetary K-index:	5
Jupiter Altitude:	38.6 degrees	Jupiter Azimuth:	209.8 degrees
Jupiter CML:	193.58	Jupiter Io Phase:	220.73
Jupiter RA:	13:15	Jupiter Dec:	-06:13
Hour Angle:	01:32	Polarization	RCP/LCP
Sun Altitude:	-35.5 degrees	Sun Azimuth:	048.0 degrees
Sun RA:	00:18	Sun Dec:	01:58

End of pass:	0940 UT		
Jupiter Altitude:	23.9 degrees	Jupiter Azimuth:	237.5 degrees
Jupiter CML:	260.69	Jupiter Io Phase	236.56
Hour Angle:	03:23		
Sun Altitude:	-17.3 degrees	Sun Azimuth:	071.6 degrees

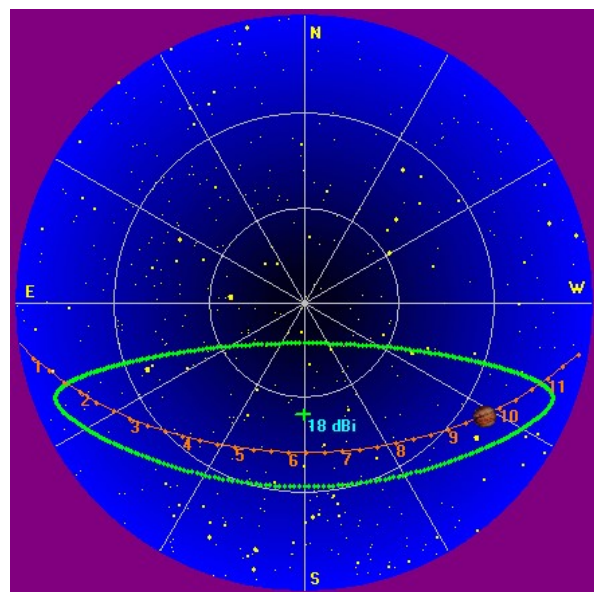
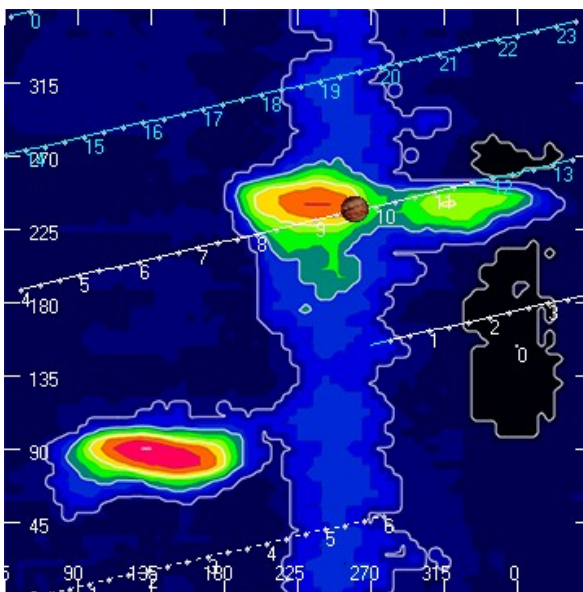
Observations made using:

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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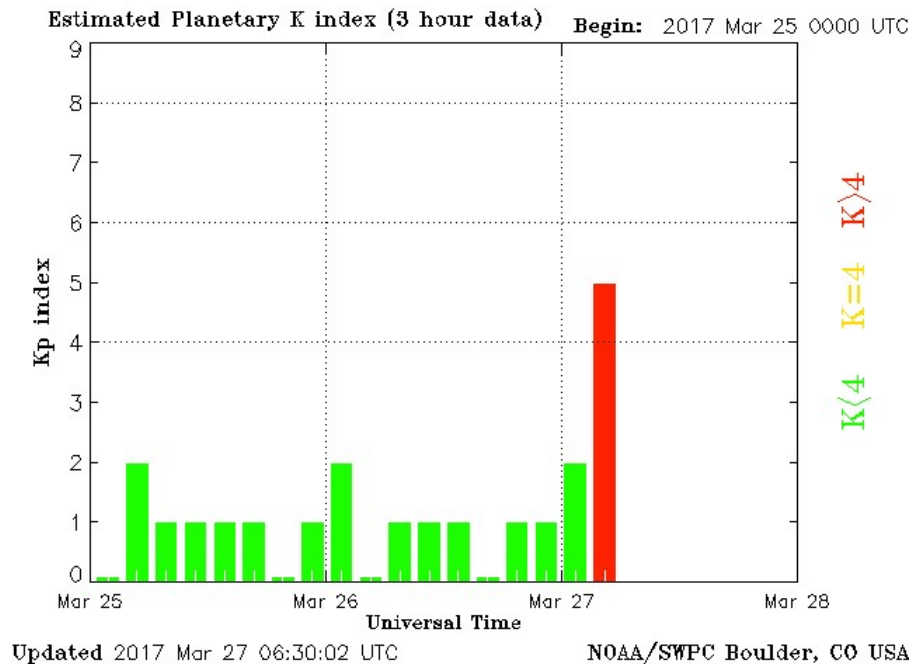


Beginning of Pass



End of Pass

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An unremarkable Io-A pass. Negative drift RCP L-bursts with negative drift modulation lanes. Very weak emissions, some barely above GB. Emissions spanned 16 MHz to 24 MHz as observed with the RSP1 SDR receiver. Both FSX spectrographs show emissions from 15-27 MHz.

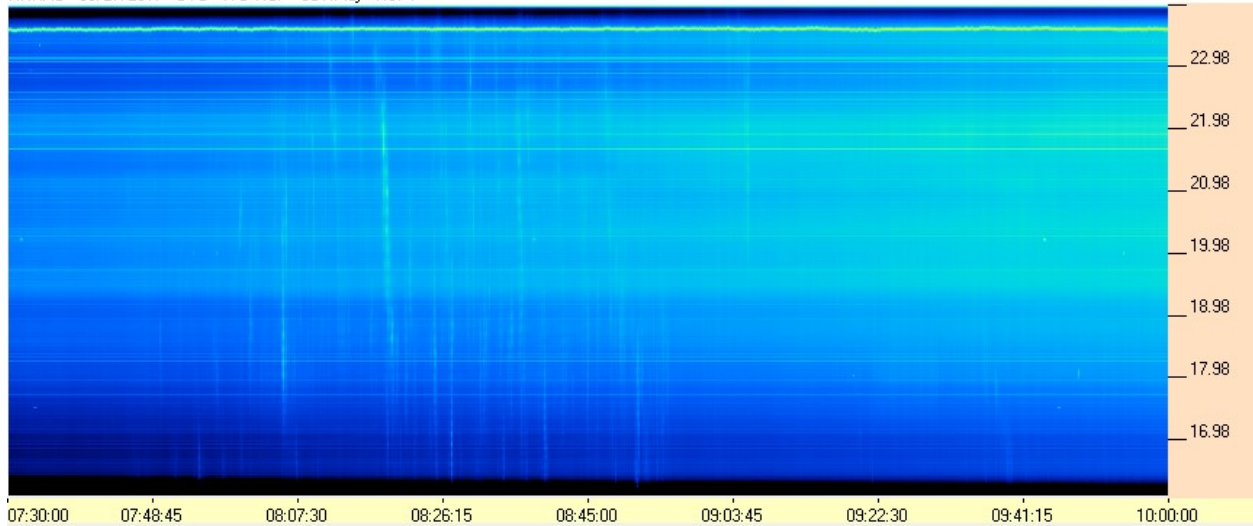
Modulation lanes ranged from a low of -84 kHz/sec to a high of -111 kHz/sec with an average of -98 kHz/sec.

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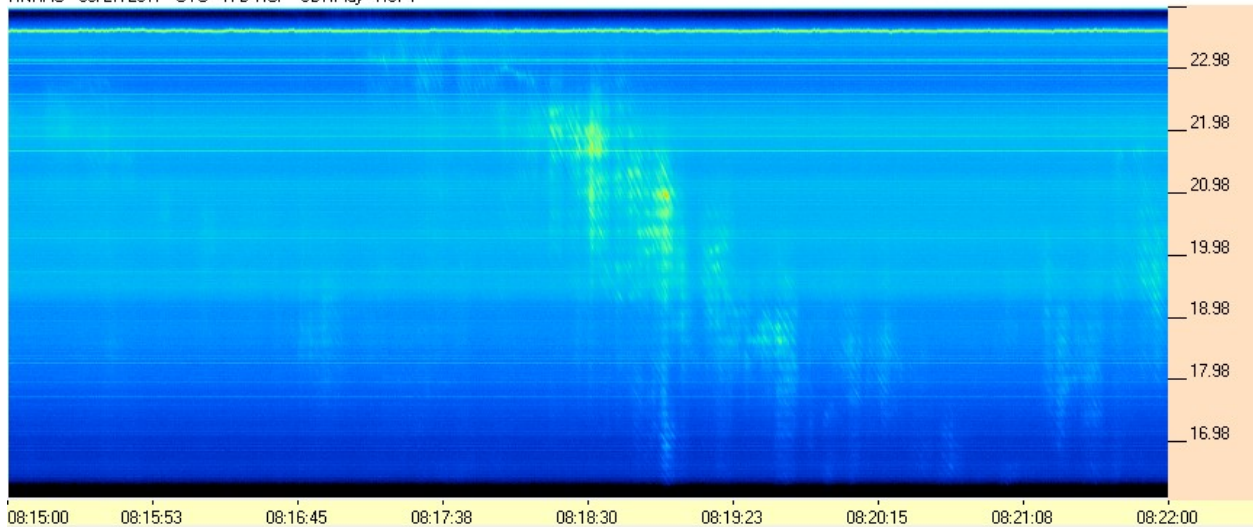


RSP1/TFD Pair

HNRAO - 03/27/2017 - UTC - TFD RCP - SDRPlay - RSP1



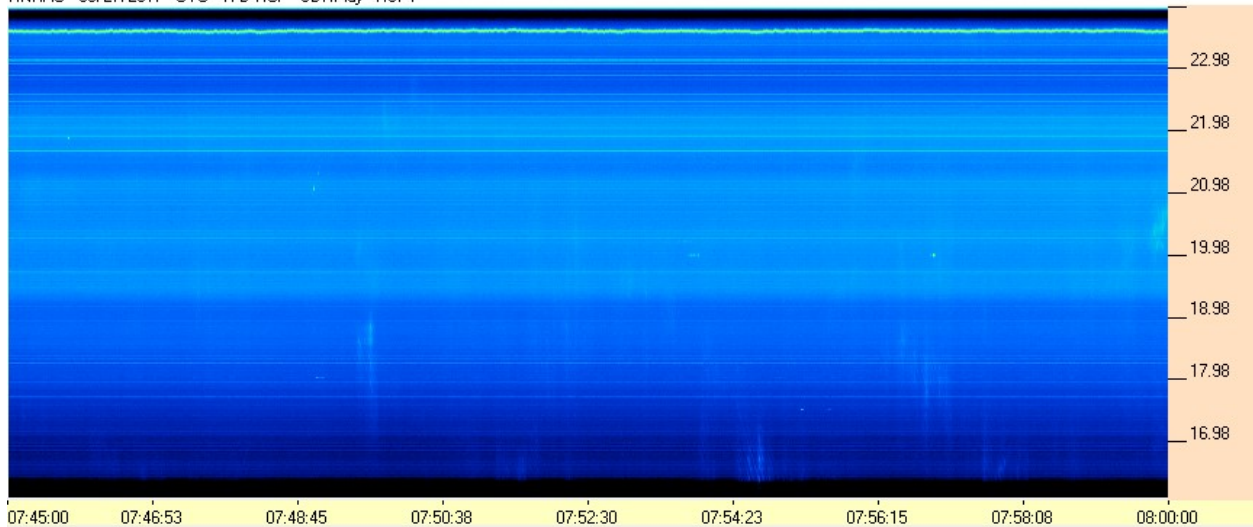
HNRAO - 03/27/2017 - UTC - TFD RCP - SDRPlay - RSP1



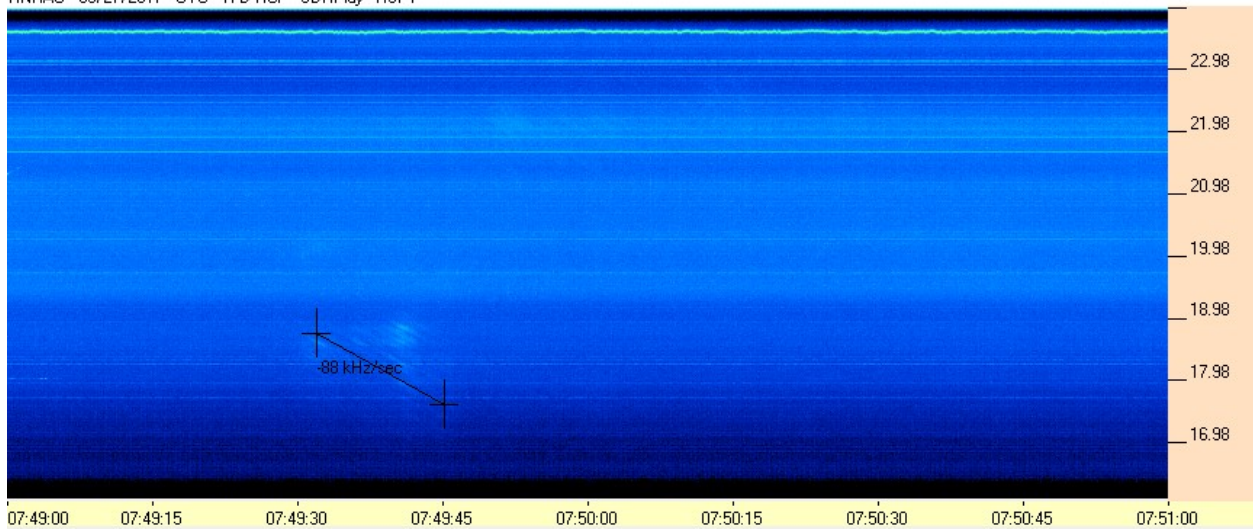
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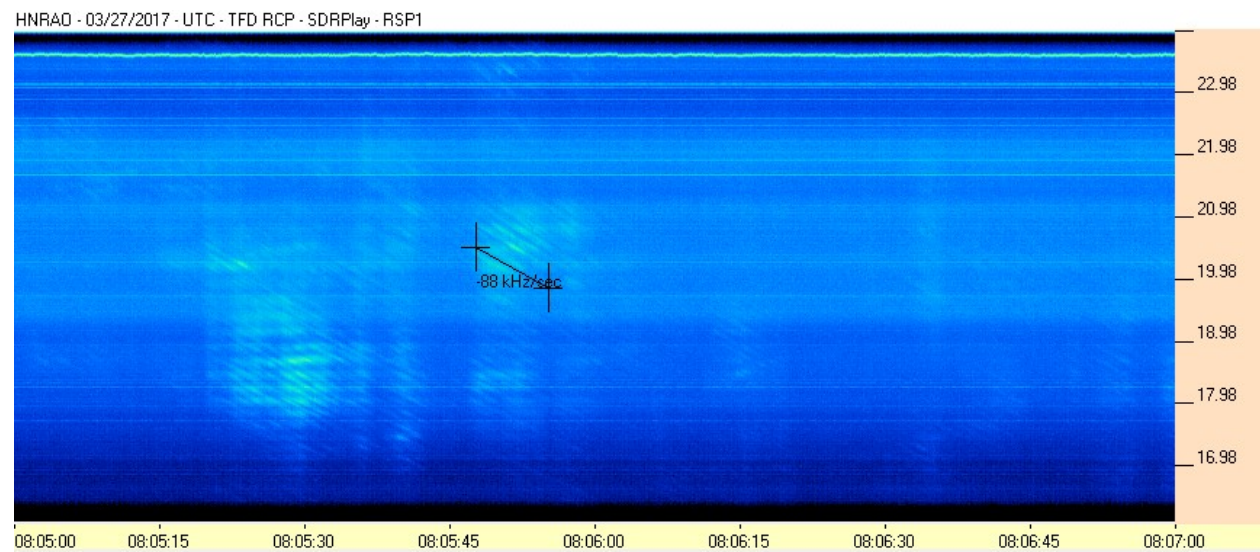
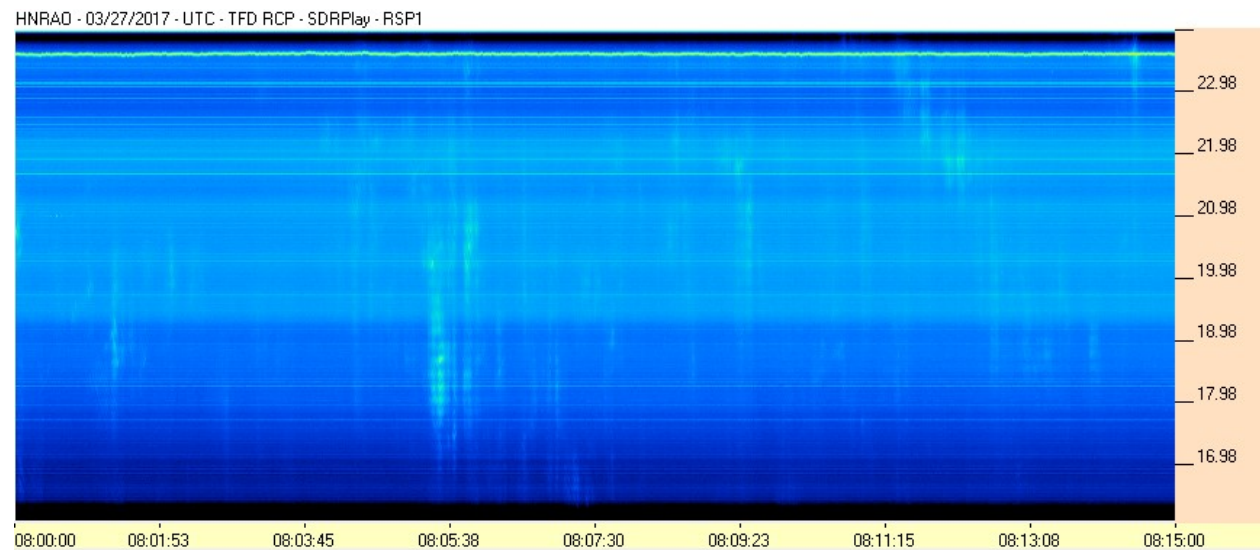
HNRAO - 03/27/2017 - UTC - TFD RCP - SDRPlay - RSP1



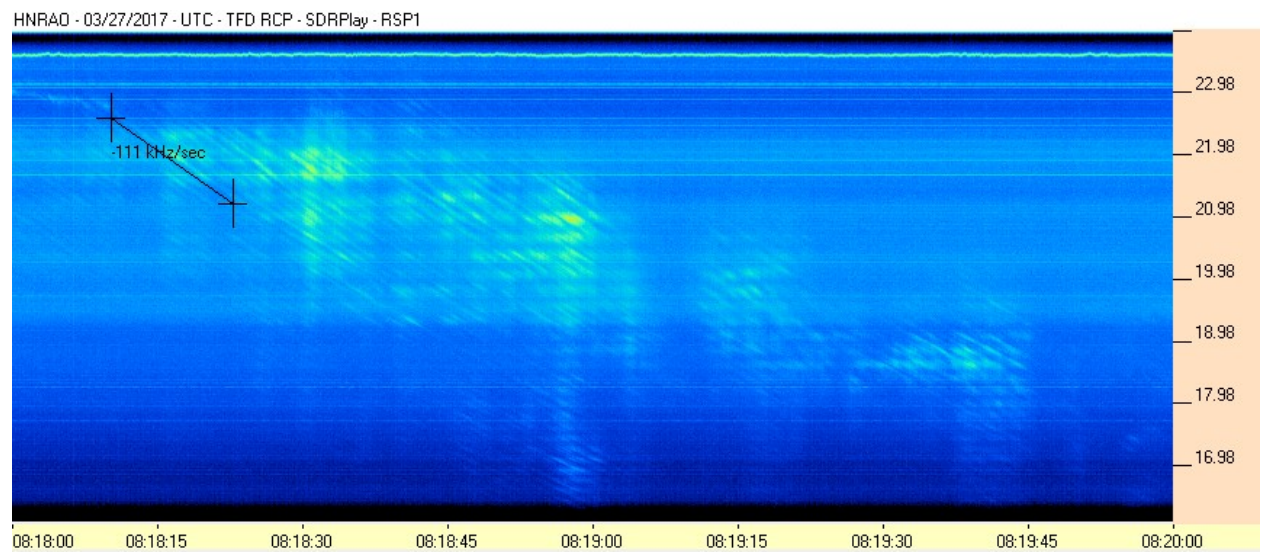
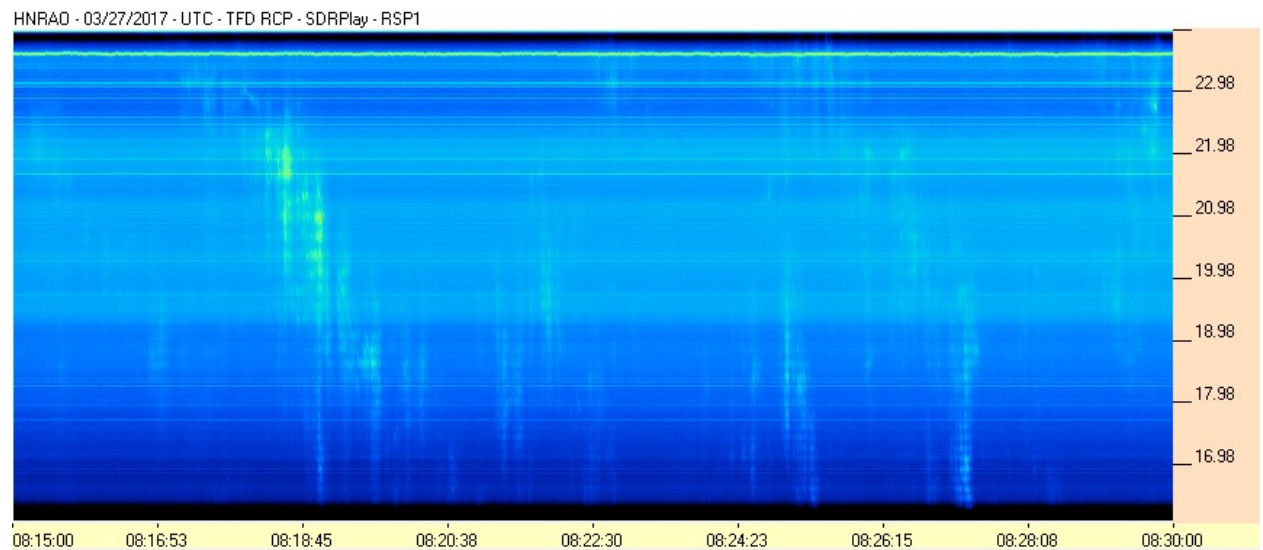
HNRAO - 03/27/2017 - UTC - TFD RCP - SDRPlay - RSP1



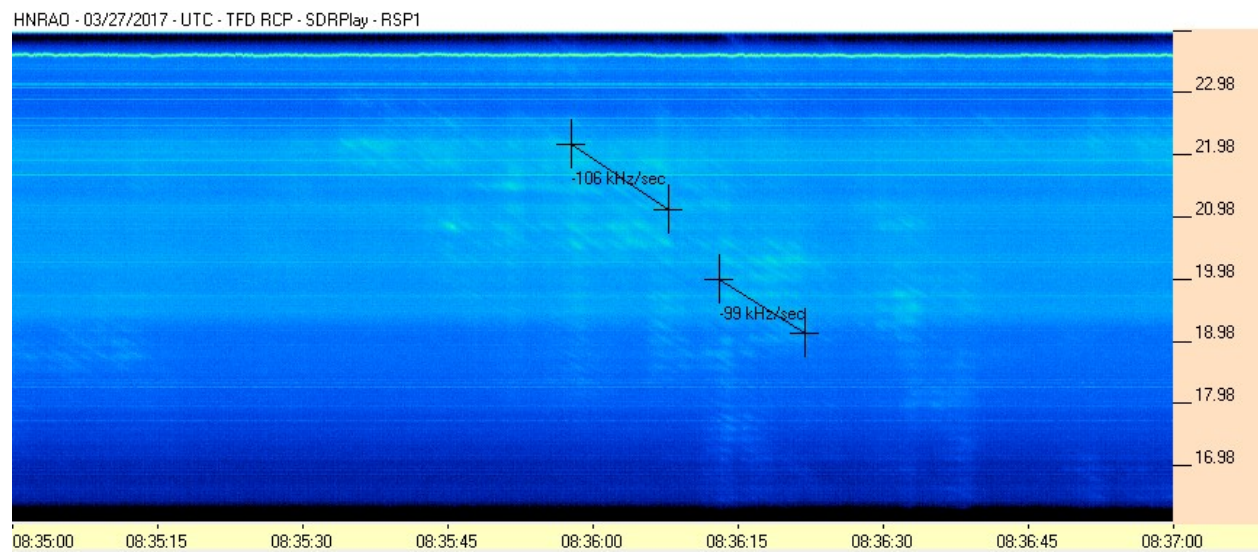
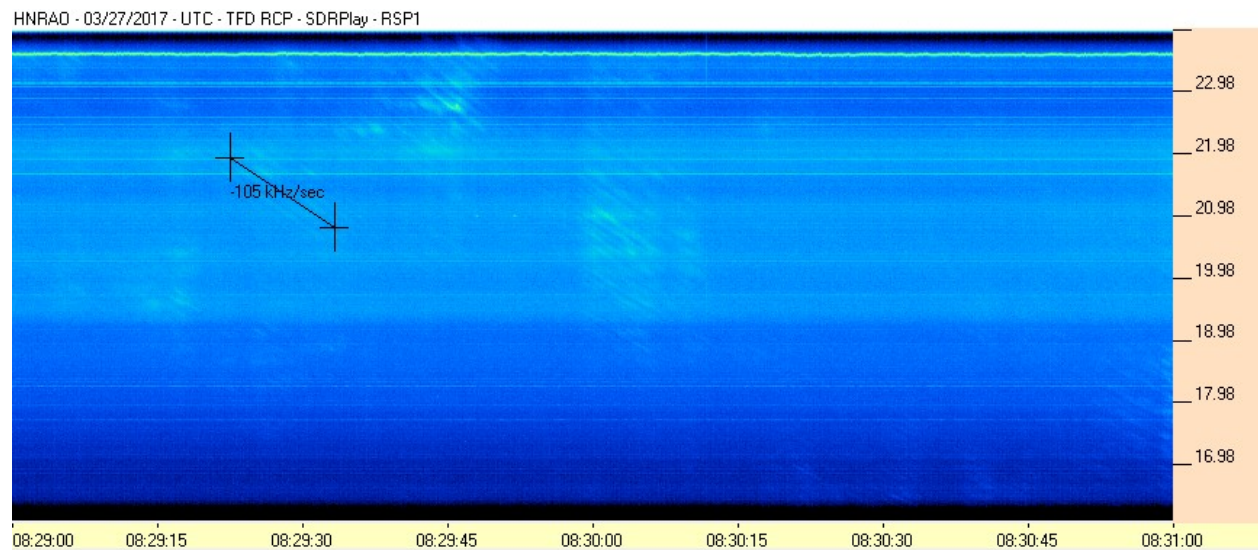
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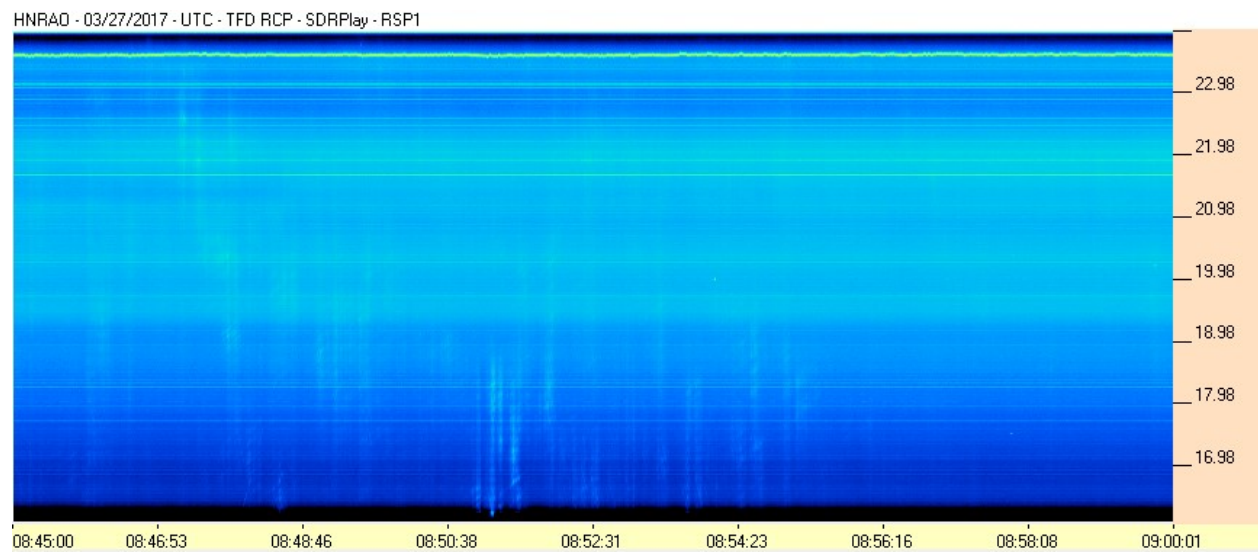
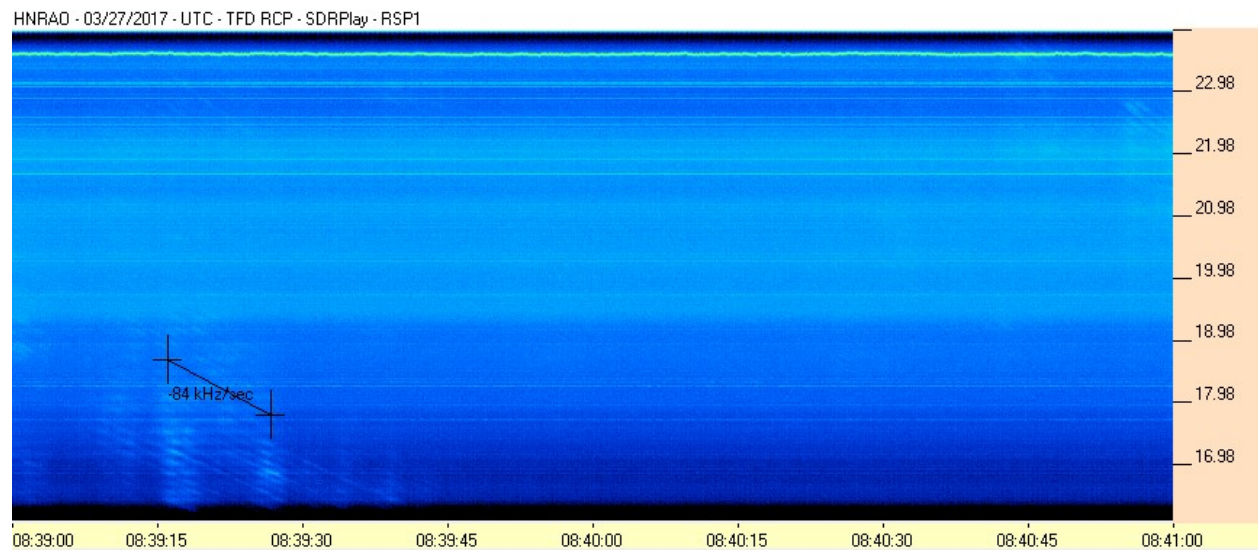
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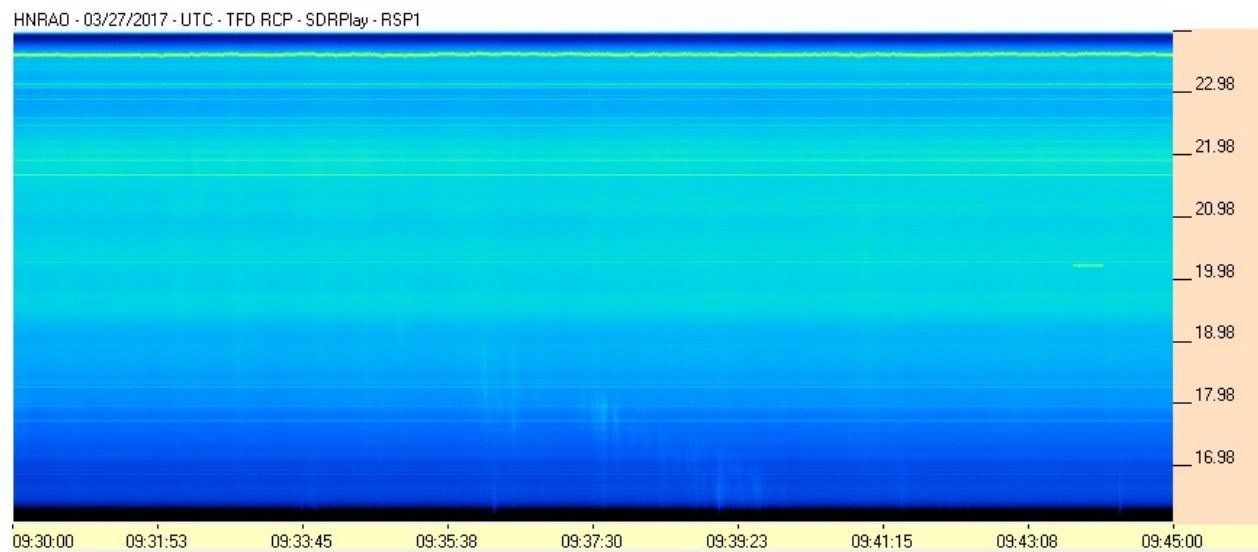
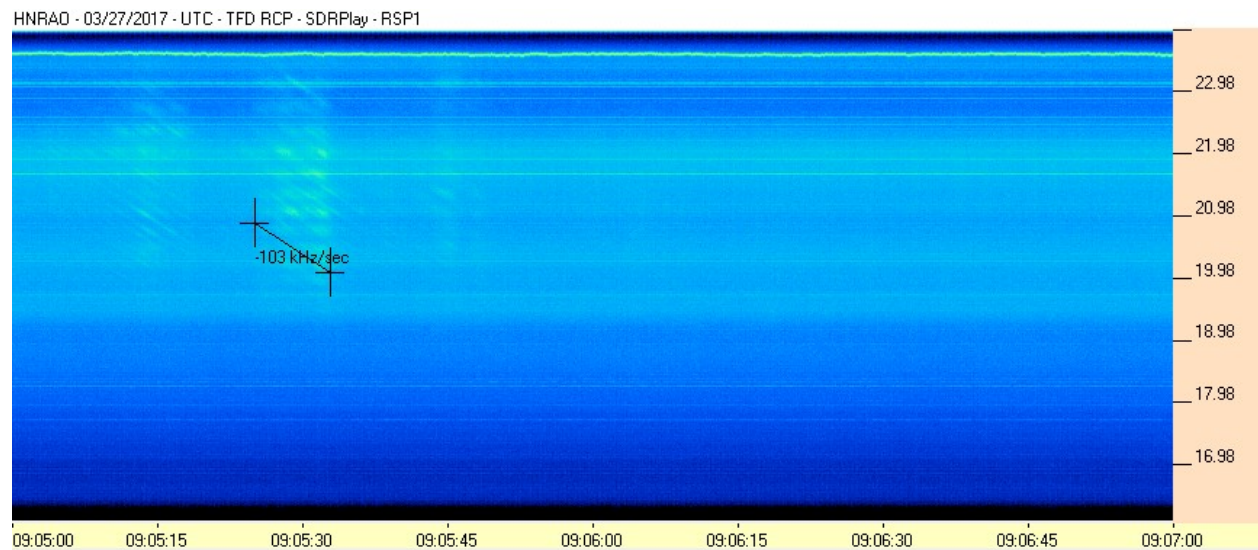
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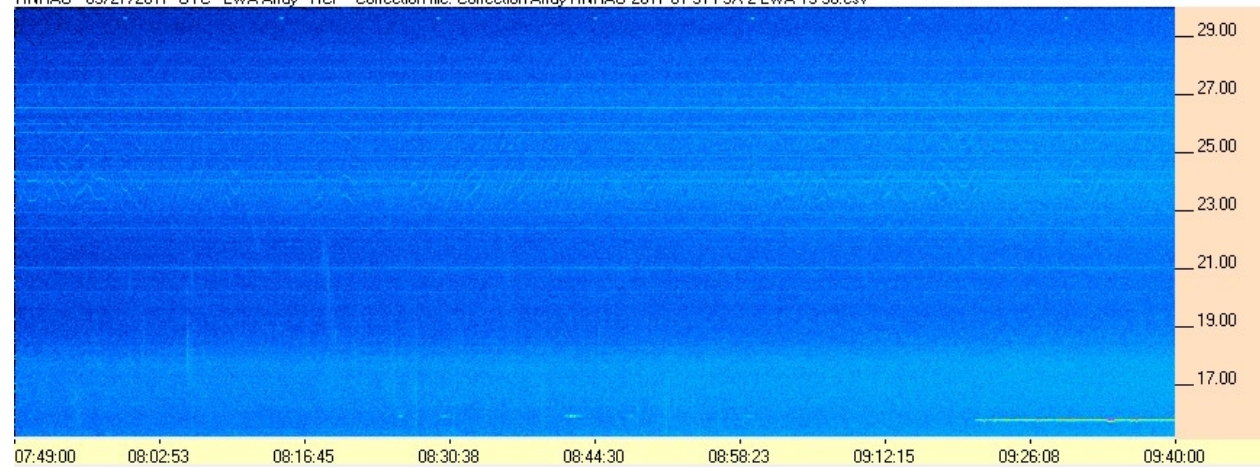


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FSX-2/LWA Pair

HNRAO - 03/27/2017 UTC - LWA Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-2 LWA 15-30.csv

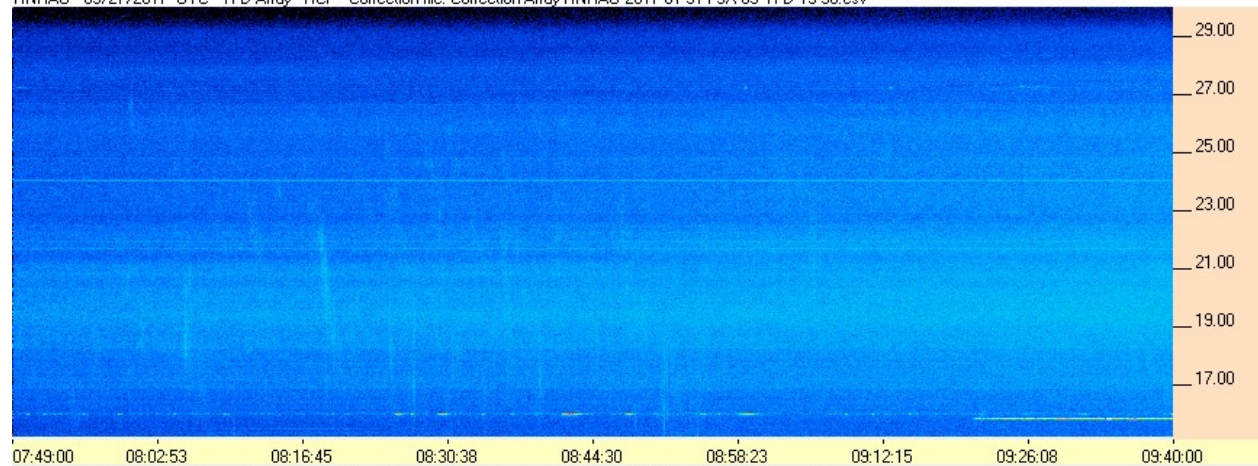


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FSX-8S/TFD Pair

HNRAO - 03/27/2017 UTC - TFD Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv



HNRAO - 03/27/2017 UTC - TFD Array - LCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv

