

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 12 April 12, 2017

Object: Jupiter – Non-Io-A

Observer: JB

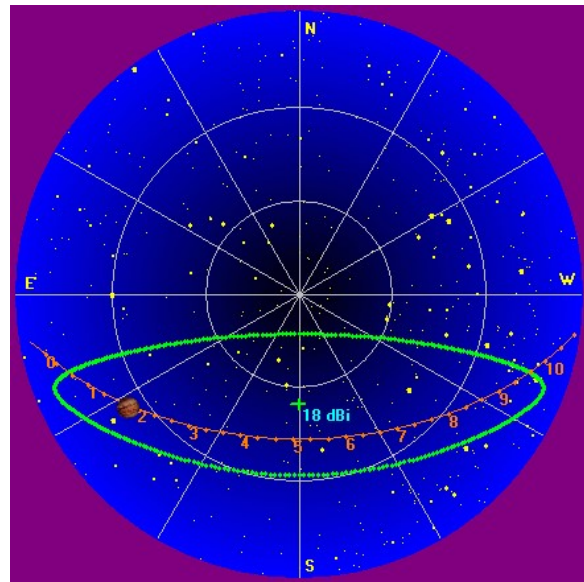
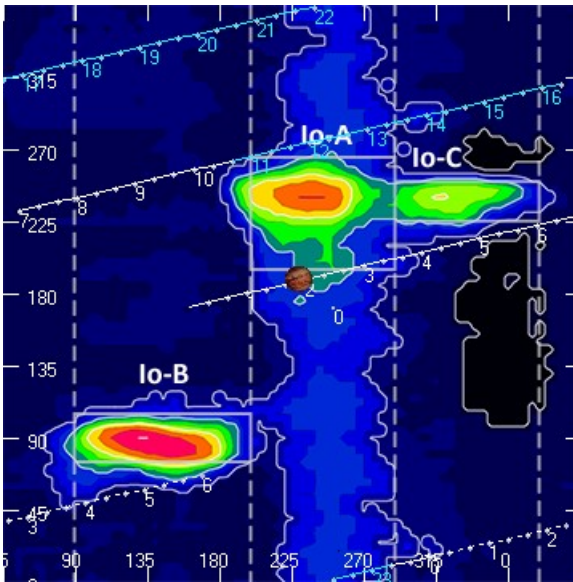
Start of pass:	0152 UT	Planetary K-index:	3
Jupiter Altitude:	25.9 degrees	Jupiter Azimuth:	123.9 degrees
Jupiter CML:	229.02	Jupiter Io Phase:	188.10
Jupiter RA:	13:07	Jupiter Dec:	-05:27
Hour Angle:	-03:14	Polarization	RCP
Sun Altitude:	-22.7 degrees	Sun Azimuth:	303.9 degrees
Sun RA:	01:16	Sun Dec:	08:00

End of pass:	0213 UT		
Jupiter Altitude:	29.0 degrees	Jupiter Azimuth:	128.3 degrees
Jupiter CML:	241.14	Jupiter Io Phase	190.96
Hour Angle:	-02:54		
Sun Altitude:	-25.7 degrees	Sun Azimuth:	308.2 degrees

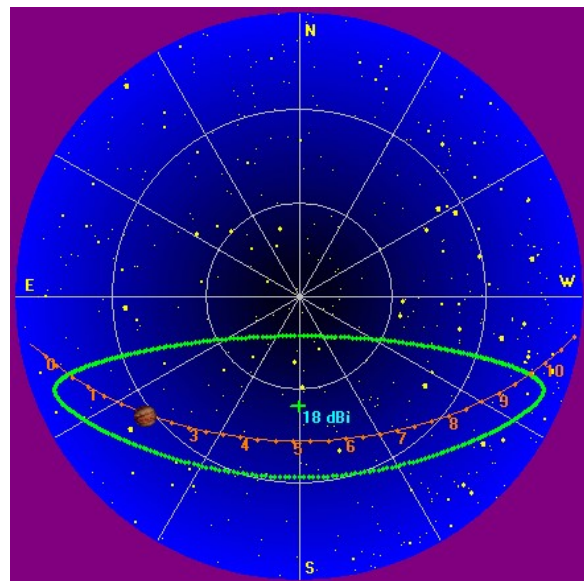
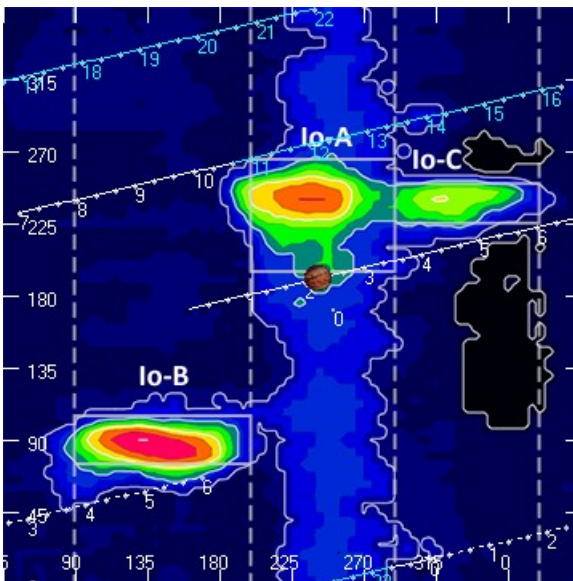
Observations made using:

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 @ 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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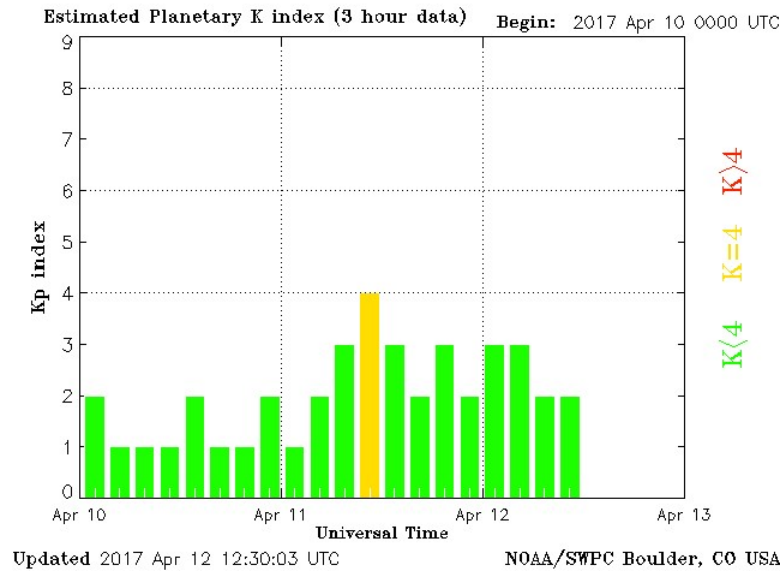


Beginning of Pass



End of Pass

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A roughly 20 minute RCP Non-Io-A pass with emissions barely above the galactic background. Negative drift L-bursts with negative drift modulation lanes. The strongest single emissions occurred at 0201:15 UT.

Emissions were observed to span from 17 MHz to 24 MHz with the SDRPlay RSP2/TFD pair and 19 MHz to 24 MHz with the FSX-2/LWA pair

The brief pass was detected with the FSX-2 and FSX-8S units, but modulation lanes were not visible. The FSX-2/LWA pair detected it slightly better than the FSX-8S/TFD pair. It was only detectable by the FSX-8S/TFD pair by referencing the other two spectrographs.

Two modulation lanes were measured when the lanes were clearly identifiable. -93 kHz/sec and -99 kHz/sec with an average of -96 kHz/sec

No other emissions were observed in either polarizations for the remainder of the time until sunrise.

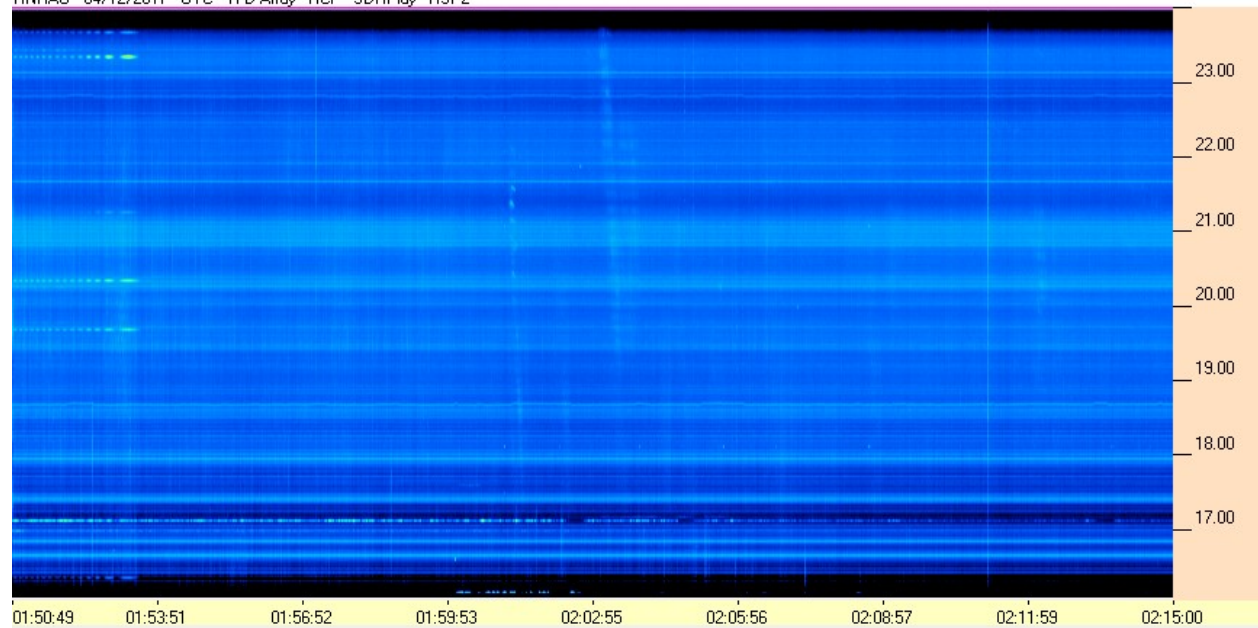
No emissions were observed with the Radio JOVE/JOVE dipoles pair.

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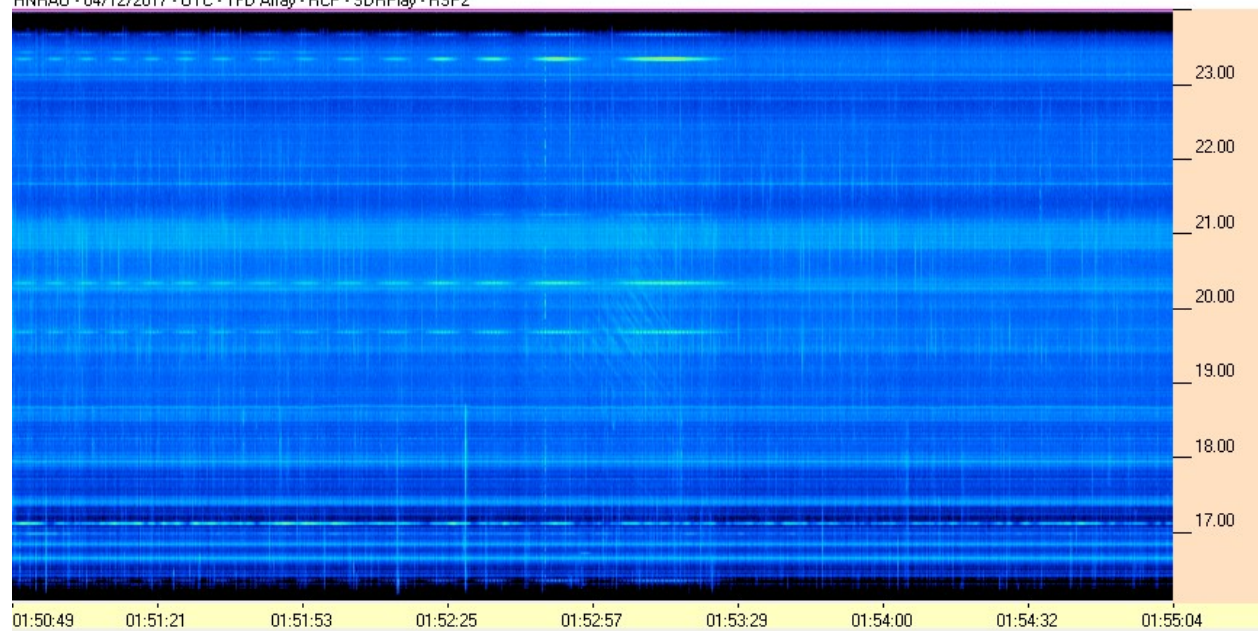


SDRPlay RSP2/TFD Pair

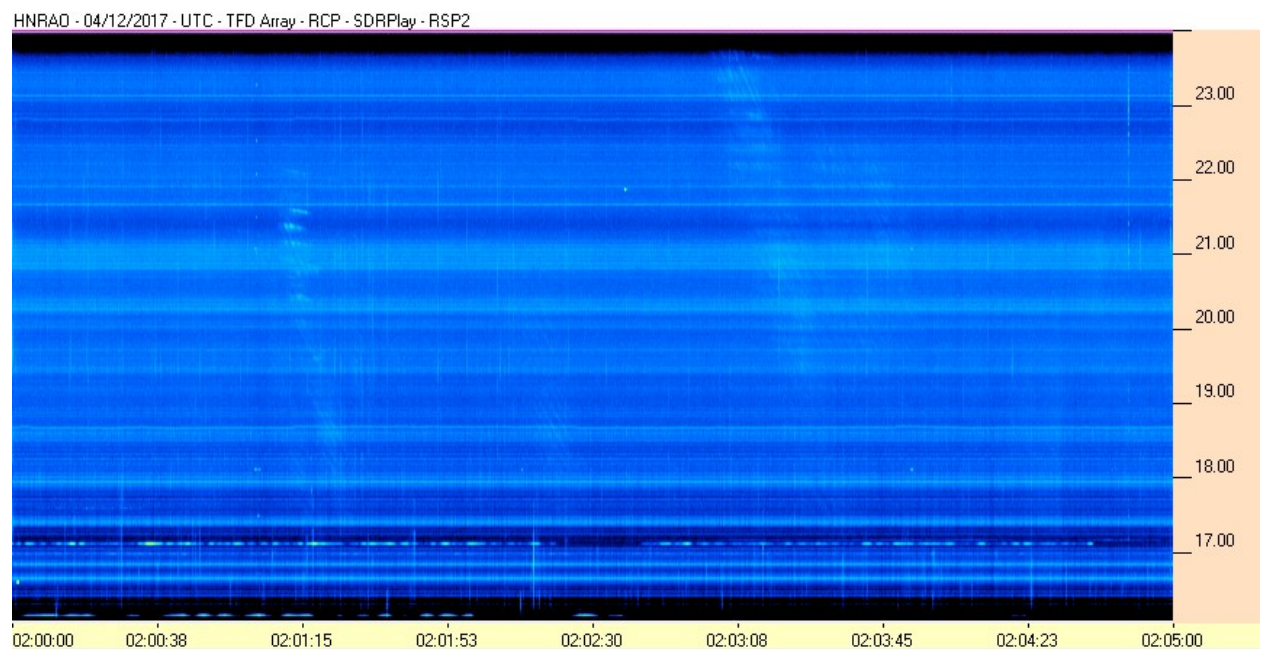
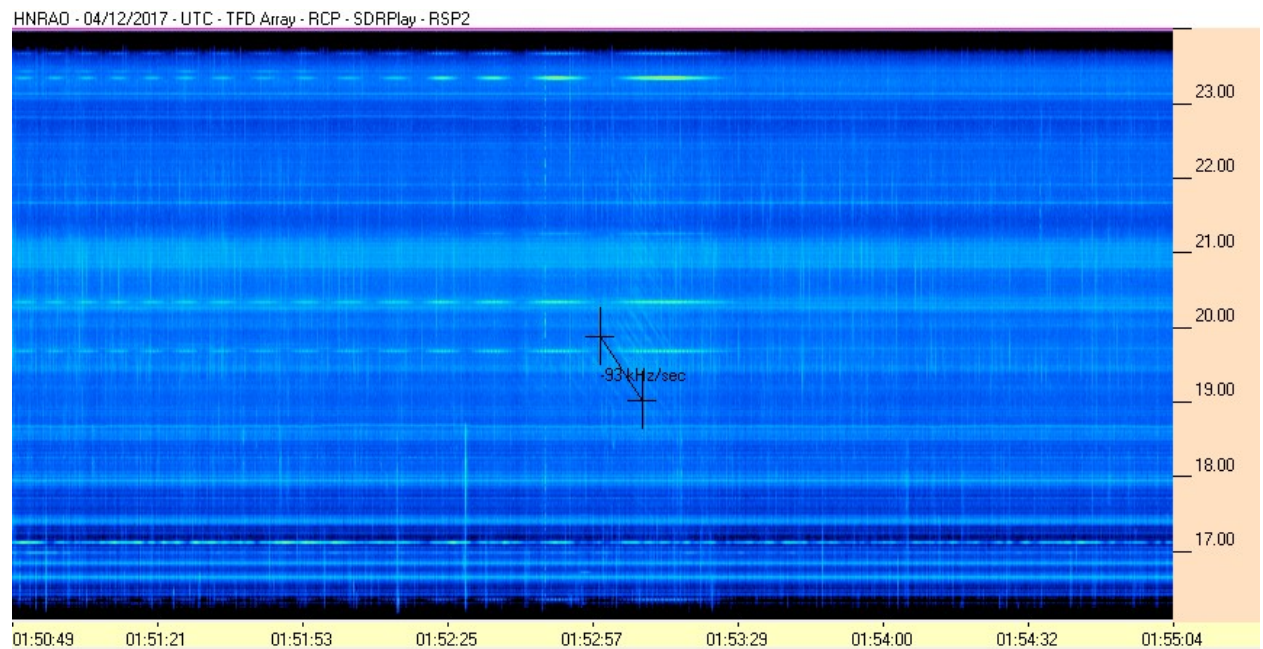
HNRAO - 04/12/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



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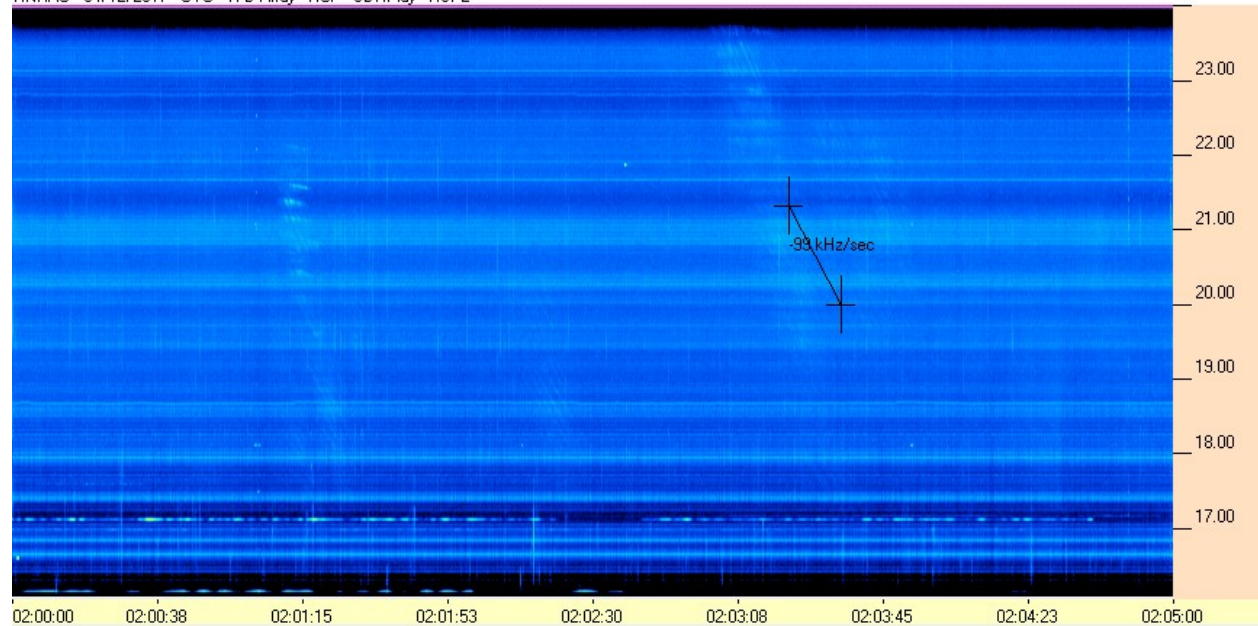
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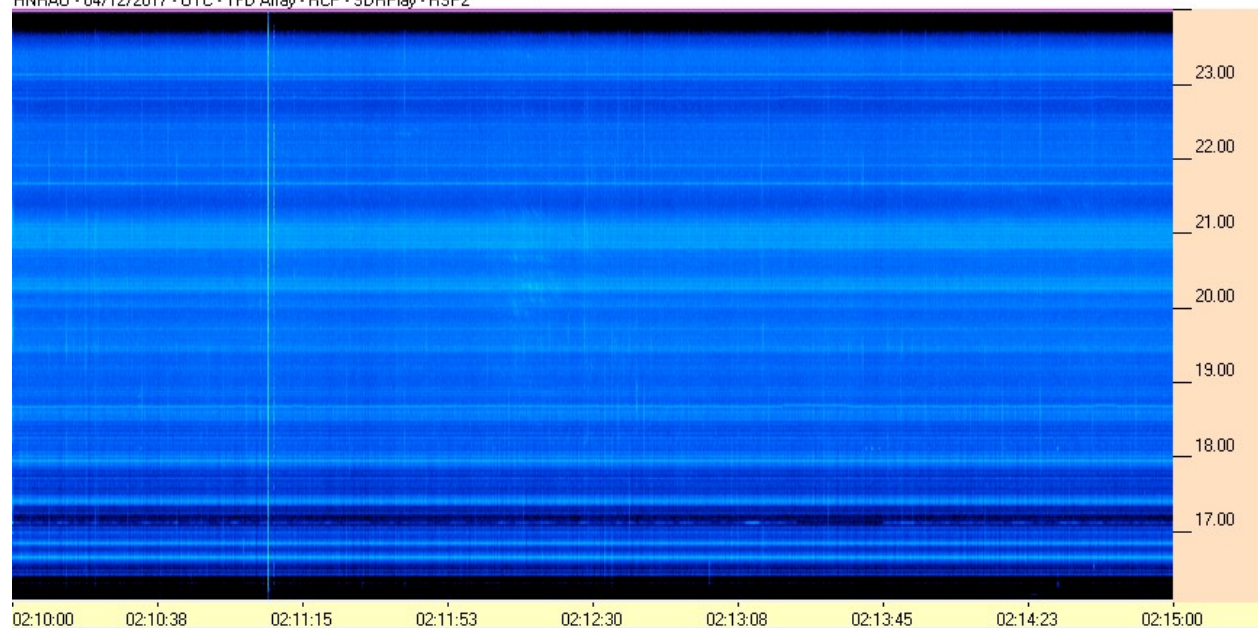
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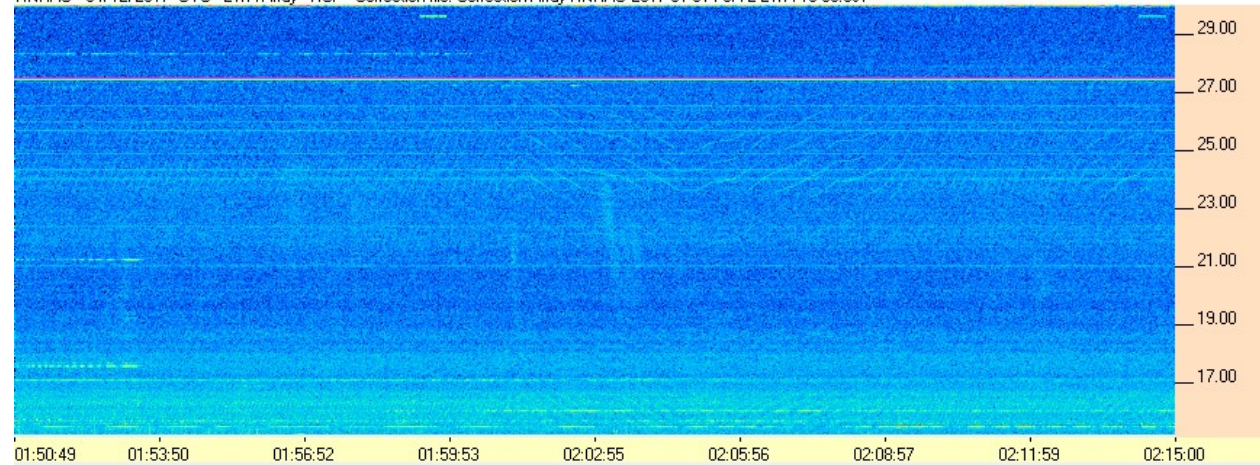


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FSX-2/LWA Pair

HNRAO - 04/12/2017 UTC - LWA Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-2 LWA 15-30.csv

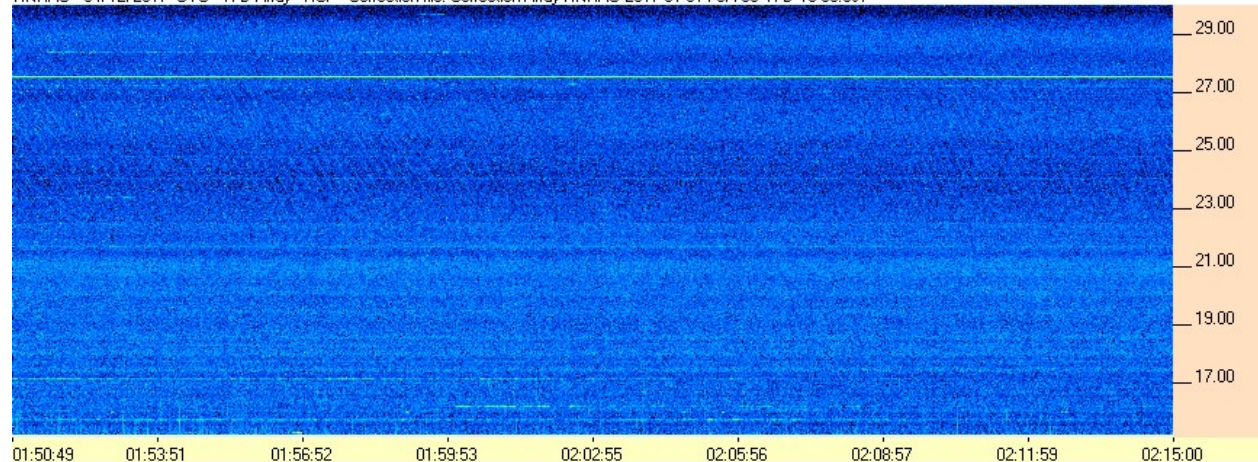


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FSX-8S/TFD Pair

HNRAO - 04/12/2017 UTC - TFD Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv



HNRAO - 04/12/2017 UTC - TFD Array - LCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv

