

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 17 May 2017

Object: Jupiter - Non-Io-A

Observer: Unattended

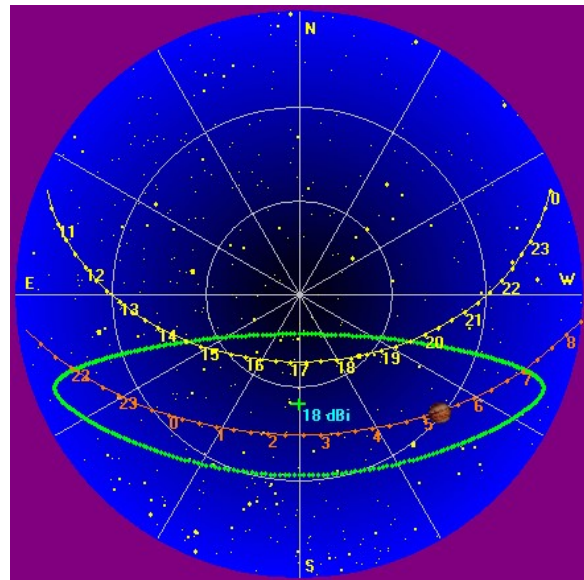
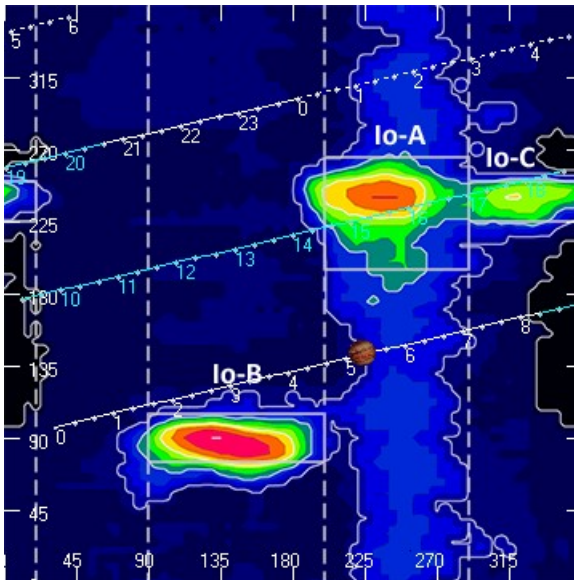
Start of pass:	0516 UT	Planetary K-index:	2
Jupiter Altitude (deg):	32.0	Jupiter Azimuth (deg):	229.6
Jupiter CML:	223.16	Jupiter Io Phase:	142.22
Jupiter RA (hr/min):	12:53	Jupiter Dec (hr/min):	-04:04
Hour Angle (hr/min):	02:41	Polarization	RCP
Sun Altitude (deg):	-30.4	Sun Azimuth (deg):	001.5
Sun RA (hr/min):	03:29	Sun Dec (hr/min):	18.56

End of pass:	0553 UT		
Jupiter Altitude (deg):	26.4	Jupiter Azimuth (deg):	223.0
Jupiter CML:	245.52	Jupiter Io Phase	147.47
Hour Angle (hr/min):	03:18		
Sun Altitude (deg):	-29.6	Sun Azimuth (deg):	011.6

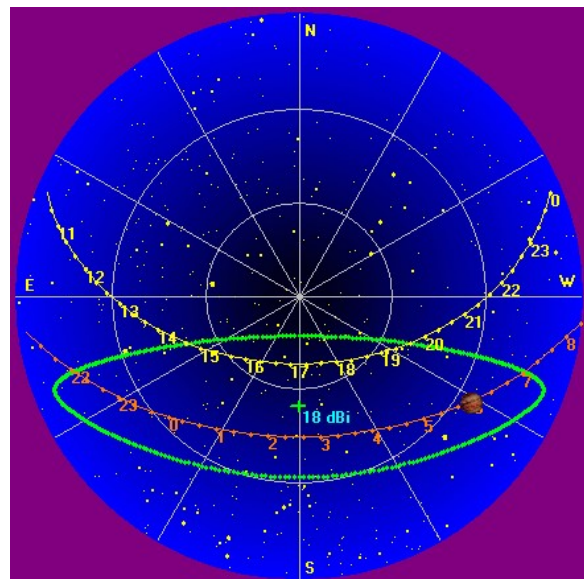
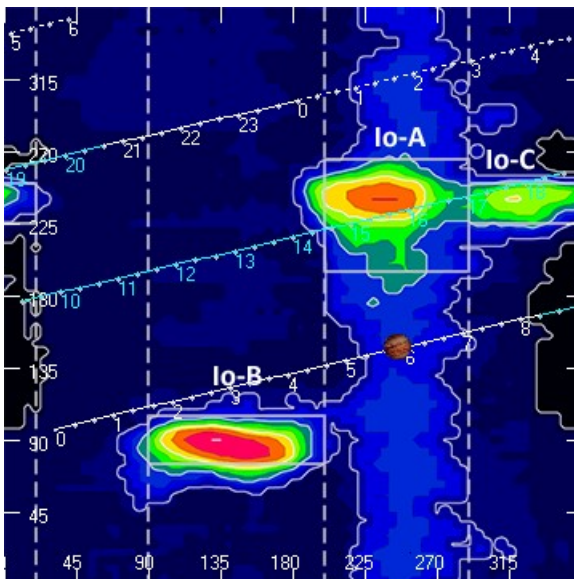
Observations made using:

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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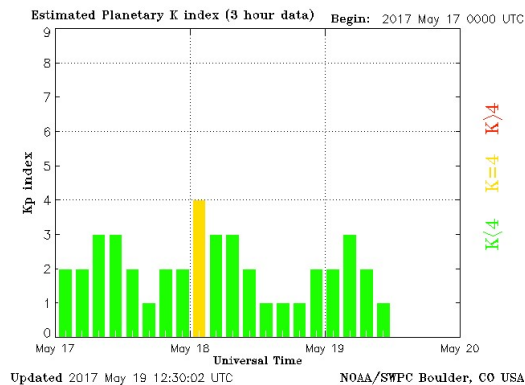


Beginning of Pass



End of Pass

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MODE	CML RANGE	Io RANGE	MAX F	POLAR	ARC	NOTES
Io-D	0-200	95-130	18	LH	Early	Also called "fourth source"
Io-B	(105 - 185)	(80-110)	39.5	RH	Early	Also called "early source"
non Io-B	80-200	0-360	38	RH	Early	Voyager info
Io-A	(200-270)	(205-260)	38	RH	Late	Also called "main source"
non-Io-A	(230-280)	0-360	38	RH	Late	
Io-C	(300-20)	(225-260)	36	RH&LH	Late	Also called "third source"
non-Io-C	300-360	0-360	32	RH&LH	Late	Voyager info

<https://www.radiosky.com/jupmodes.html>

A brief, weak, Non-Io-A storm. Positive drift L-bursts with negative drift modulation lanes. Emissions spanned 16 MHz to 20 MHz. A single modulation was measured at -86 kHz/sec drift.

Nothing remarkable or noteworthy in this storm.

Both FSX spectrographs could resolve the burst at 0525 UT but would have been missed without confirmation with the SDRPlay RSP2 spectrograph.

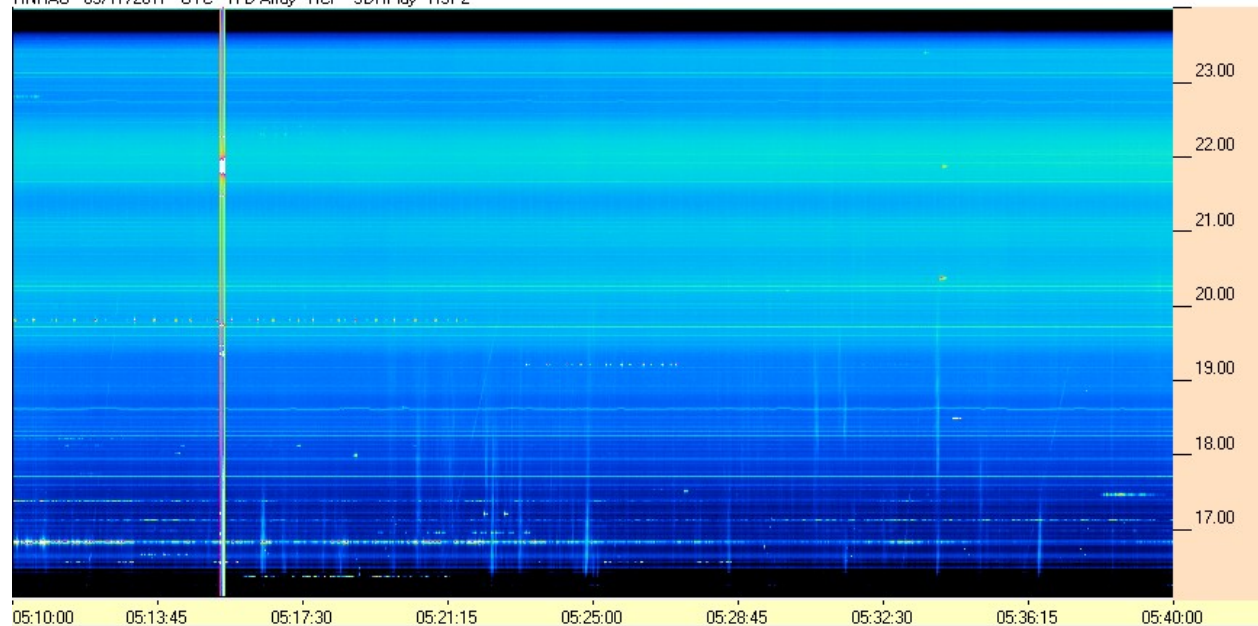
No emissions were strong enough to have been observed with the Radio JOVE/dipole pair.

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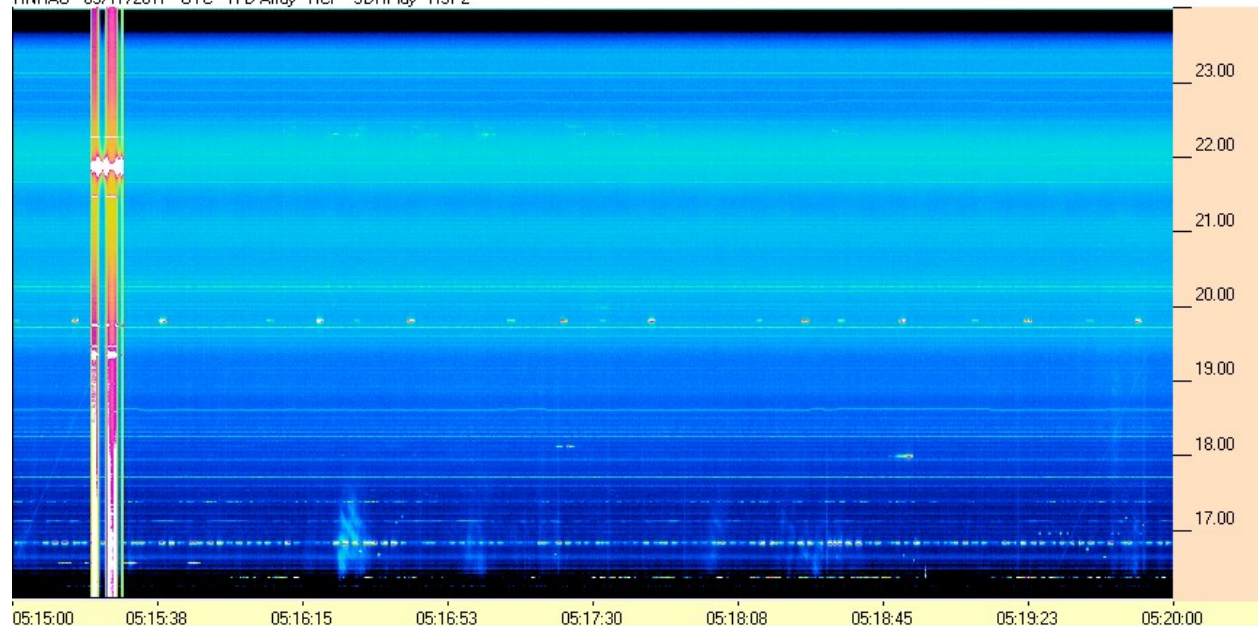


SDRPlay RSP2/TFD Pair

HNRAO - 05/17/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



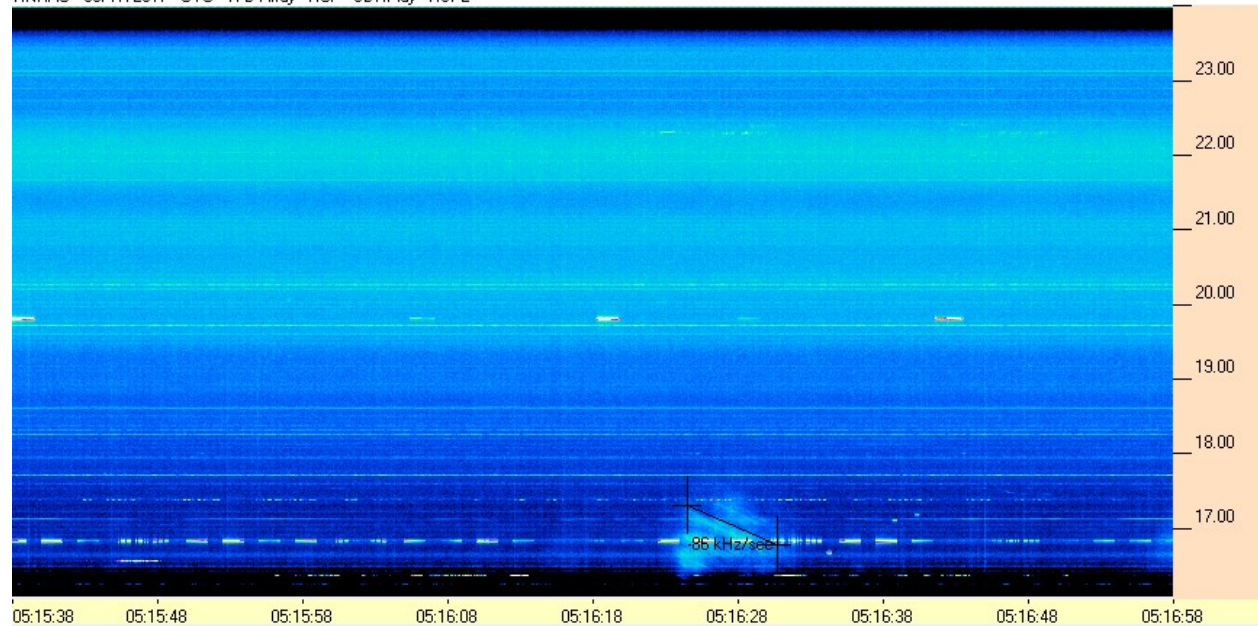
HNRAO - 05/17/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



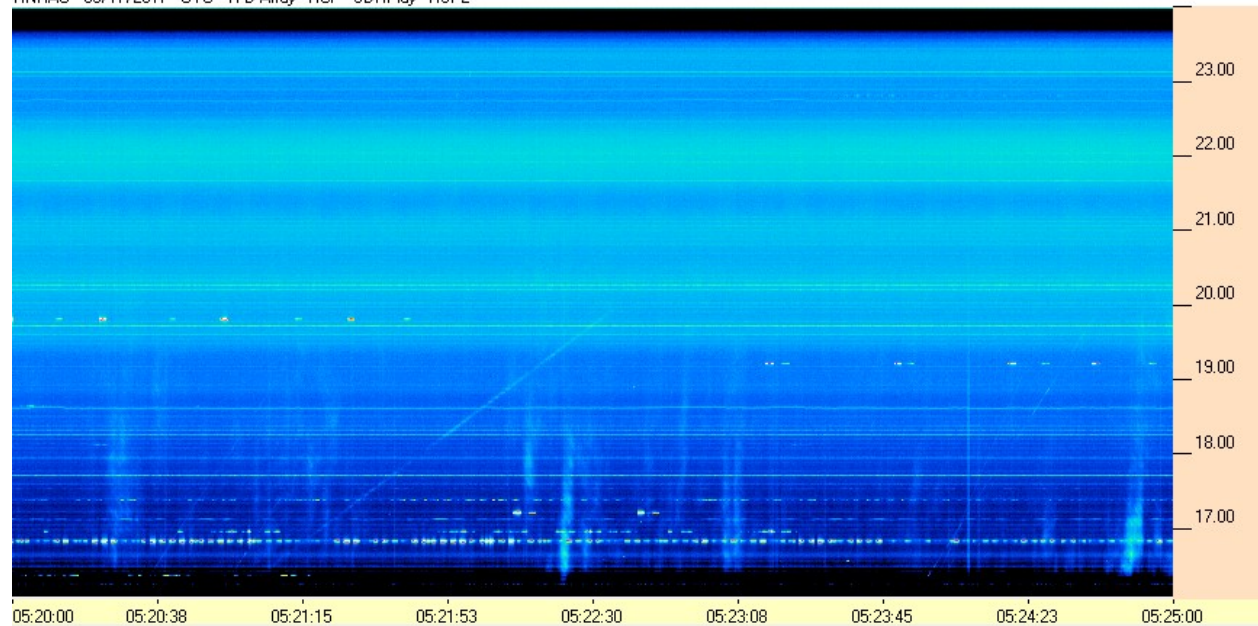
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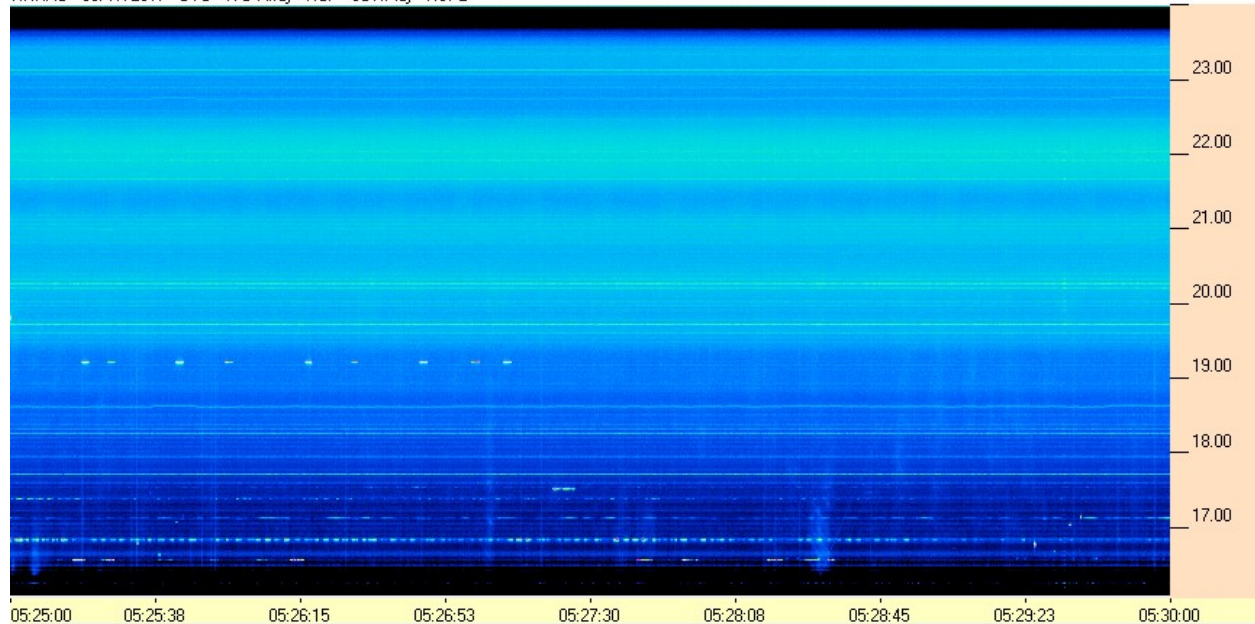
HNRAO - 05/17/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



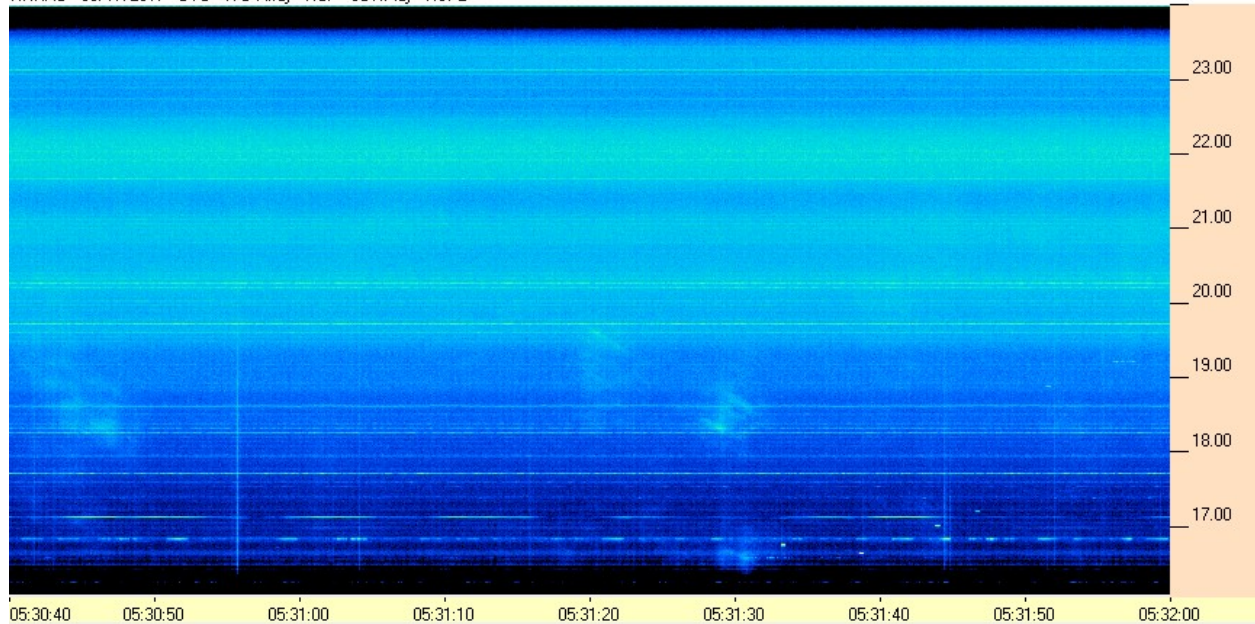
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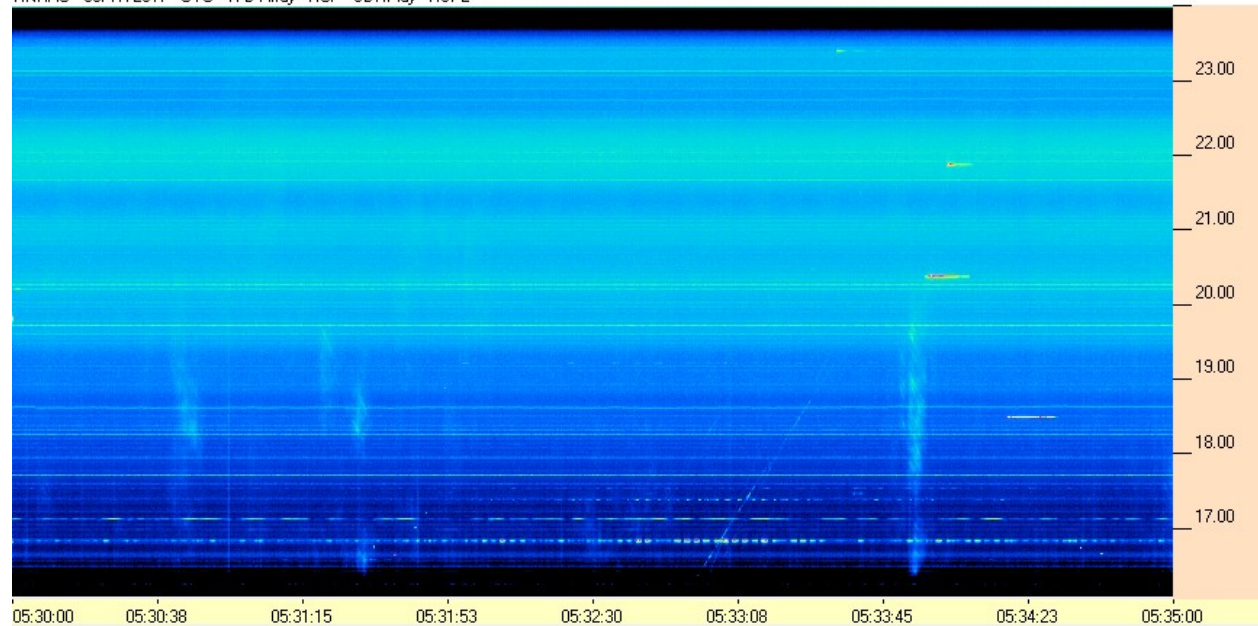
HNRAO - 05/17/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



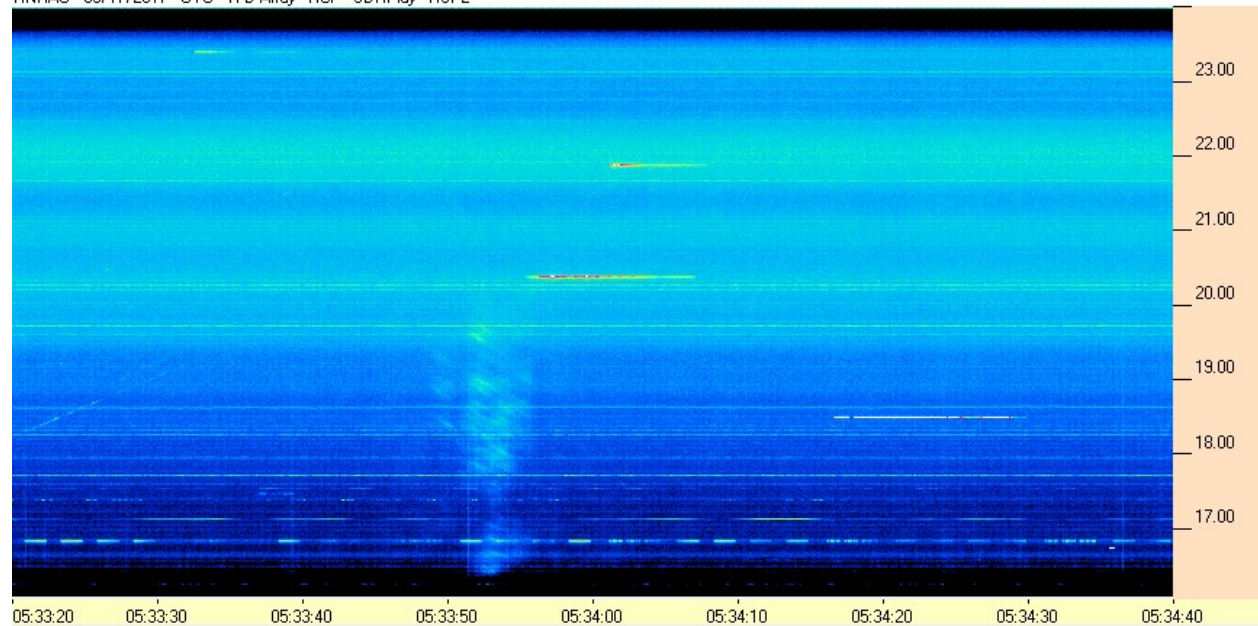
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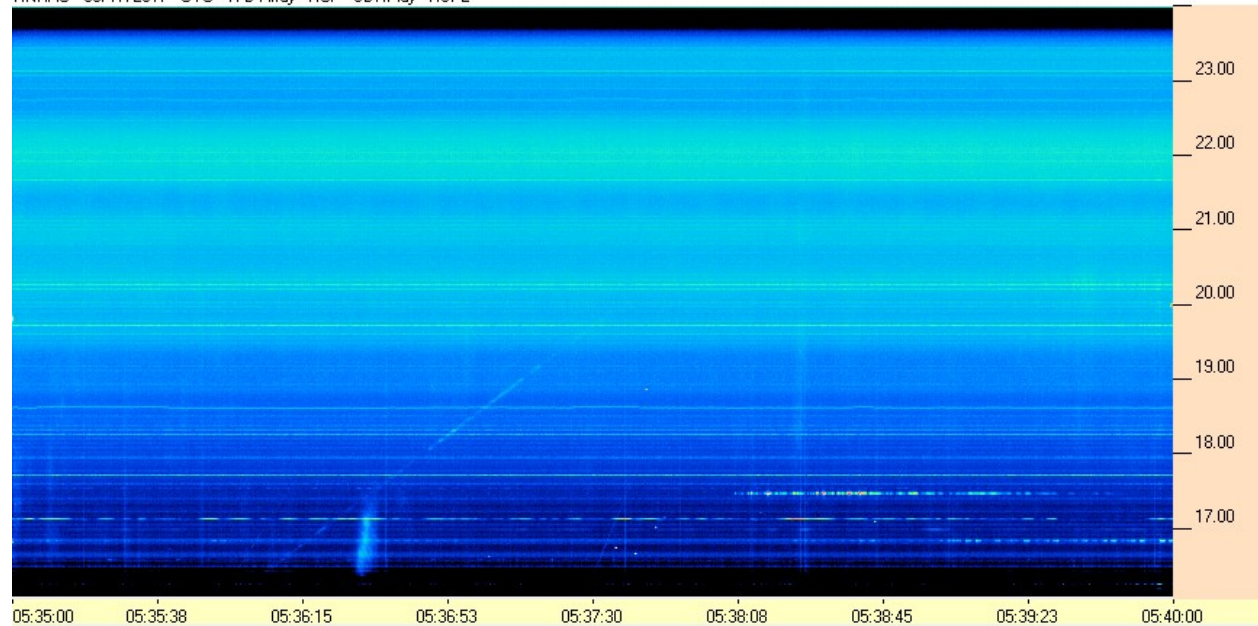
HNRAO - 05/17/2017 - UTC - TFD Array - RCP - SDRPlay - RSP2



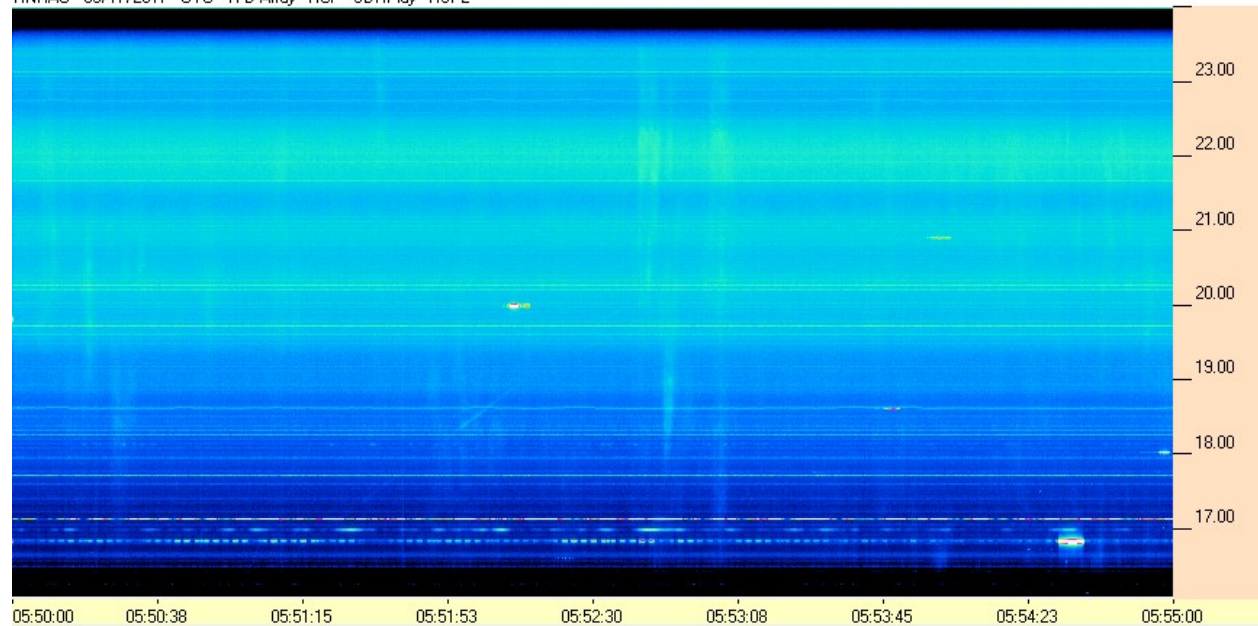
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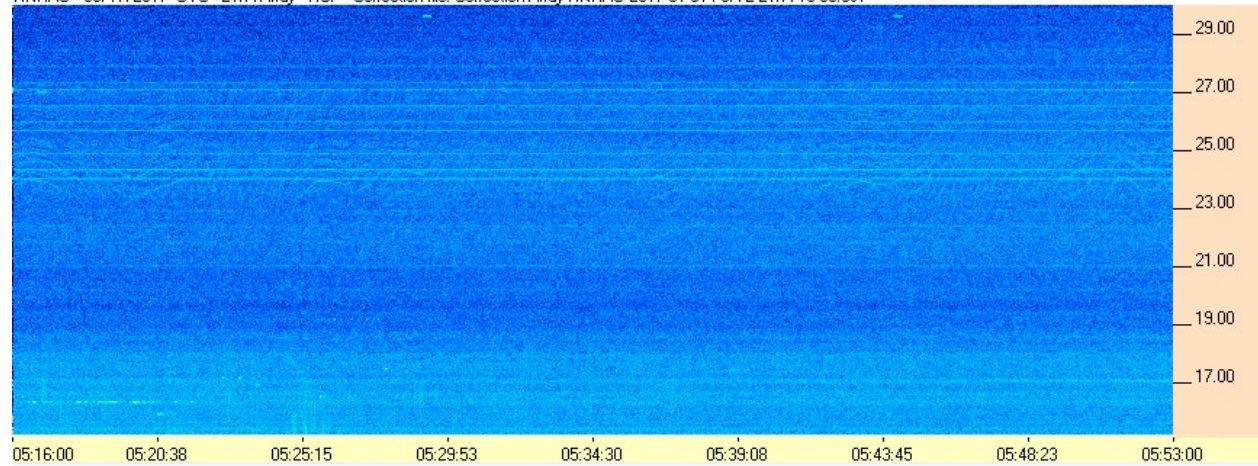


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FSX-2/LWA Pair

HNRAO - 05/17/2017 UTC - LWA Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-2 LWA 15-30.csv

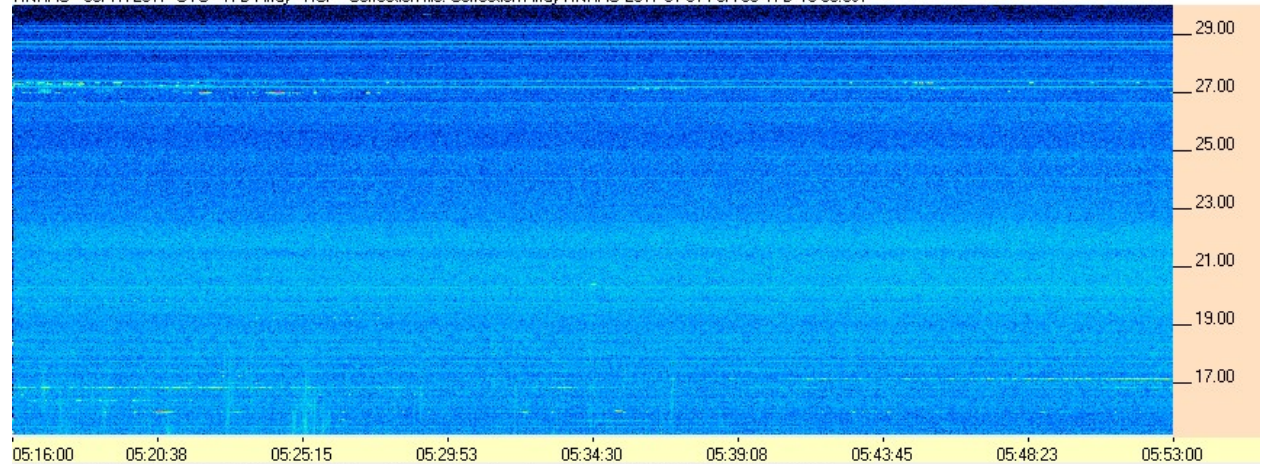


FSX-8S/TFD Pair

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HNRAO - 05/17/2017 UTC - TFD Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv



HNRAO - 05/17/2017 UTC - TFD Array - LCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv

