

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 09 April 2017

Object: Jupiter – Non-Io-C

Observer: Unattended

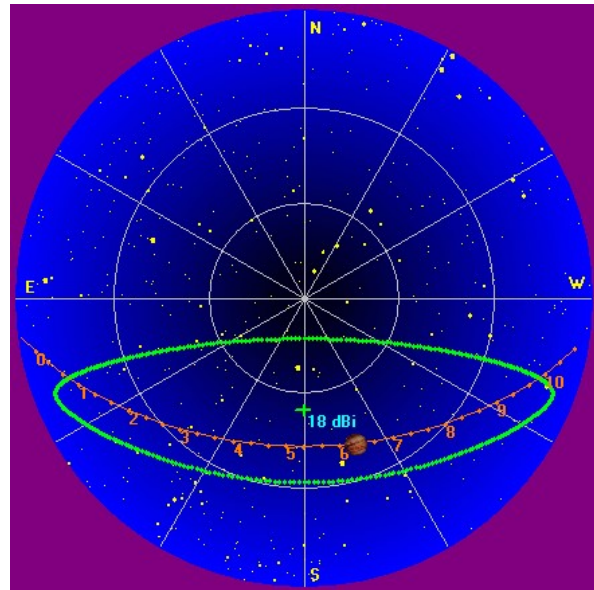
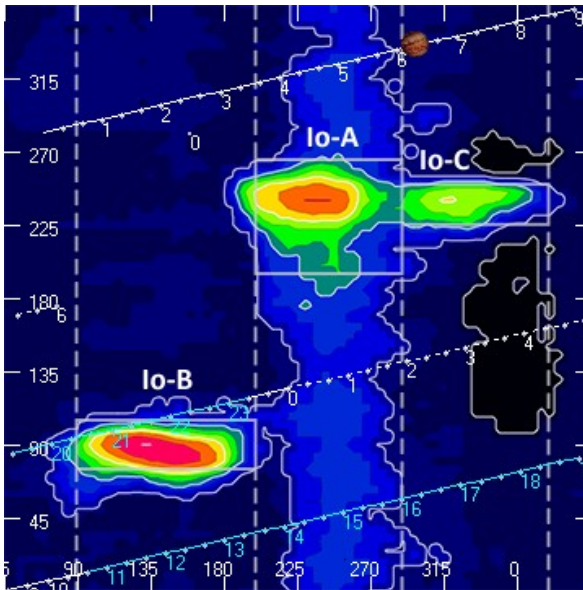
Start of pass:	0618 UT	Planetary K-index:	5
Jupiter Altitude:	41.8 degrees	Jupiter Azimuth:	199.6 degrees
Jupiter CML:	297.29	Jupiter Io Phase:	335.44
Jupiter RA:	13:09	Jupiter Dec:	-05:36
Hour Angle:	00:58	Polarization	RCP
Sun Altitude:	-40.3 degrees	Sun Azimuth:	020.2 degrees
Sun RA:	01:05	Sun Dec:	06.57

End of pass:	0633 UT		
Jupiter Altitude:	40.8 degrees	Jupiter Azimuth:	204.4 degrees
Jupiter CML:	306.36	Jupiter Io Phase	337.56
Hour Angle:	01:13		
Sun Altitude:	-39.2 degrees	Sun Azimuth:	024.9 degrees

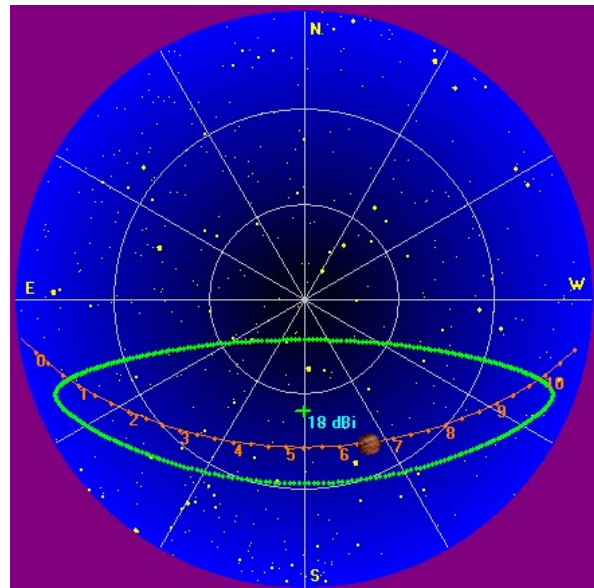
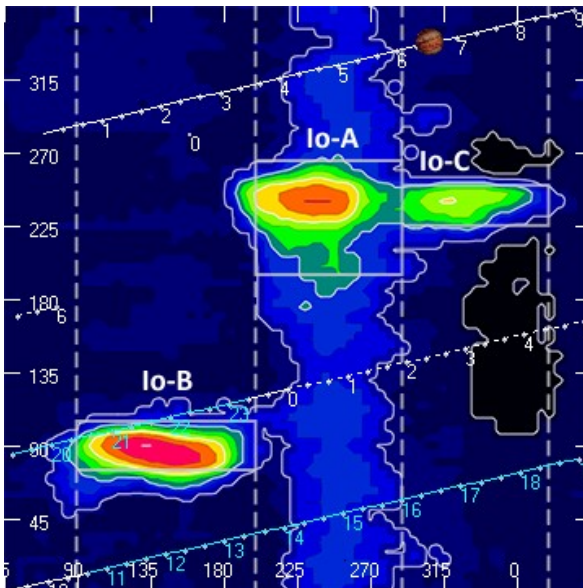
Observations made using:

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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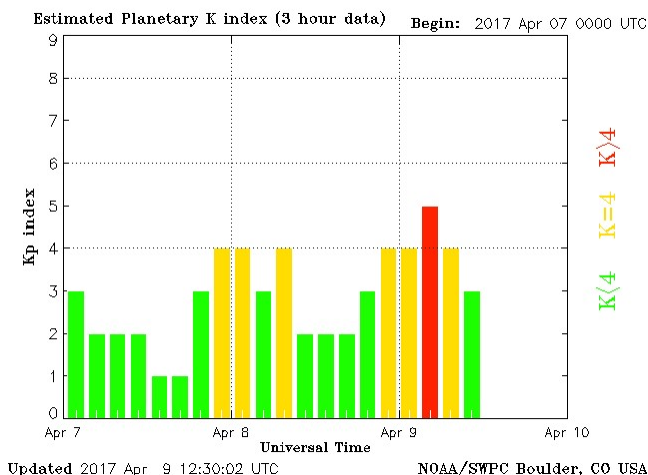
Beginning of Pass



End of Pass

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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

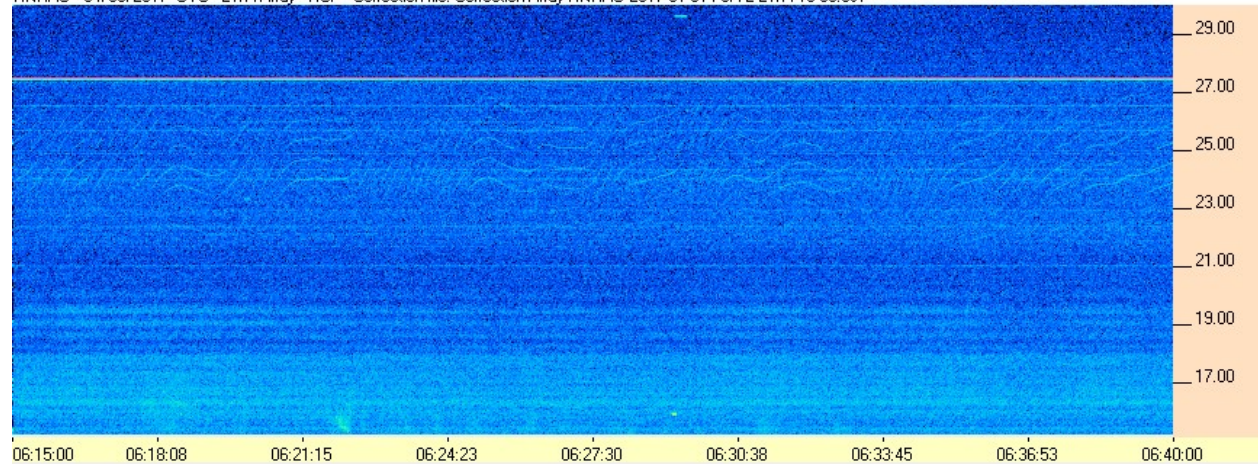
The CML and Io Phase makes this a Non-Io-C event. Very brief at this observatory and below the frequency scanned by the SDRPlay RSP2 unit. Only the FSX-2/LWA and FSX-8S could observe this emission. Power line noise was minimal otherwise this event would have gone unnoticed. The emission was so weak and so brief that it's only certain to be RCP L-bursts from 15 MHz to 17 MHz. There was no apparent LCP component to this event.

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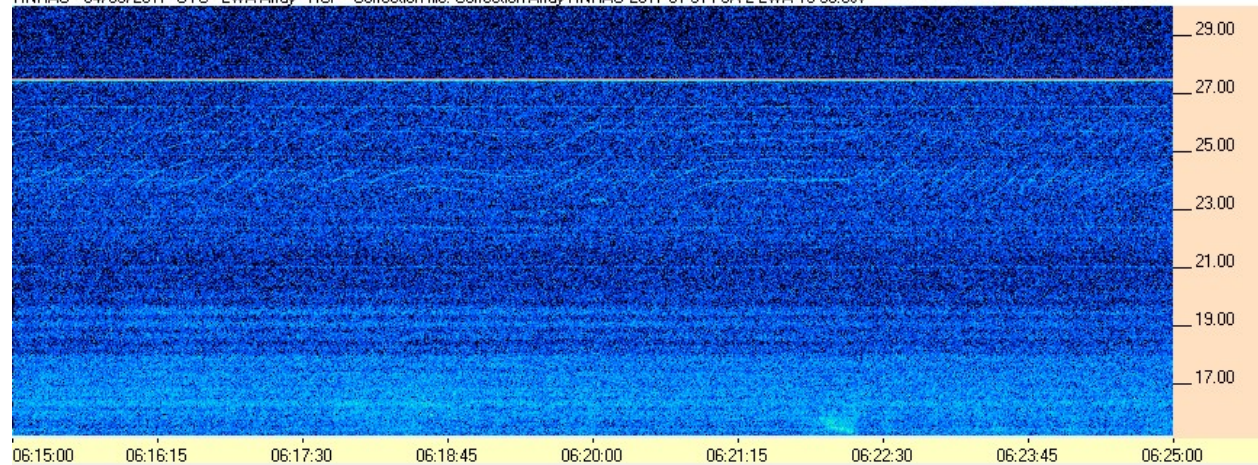


FSX-2/LWA Pair

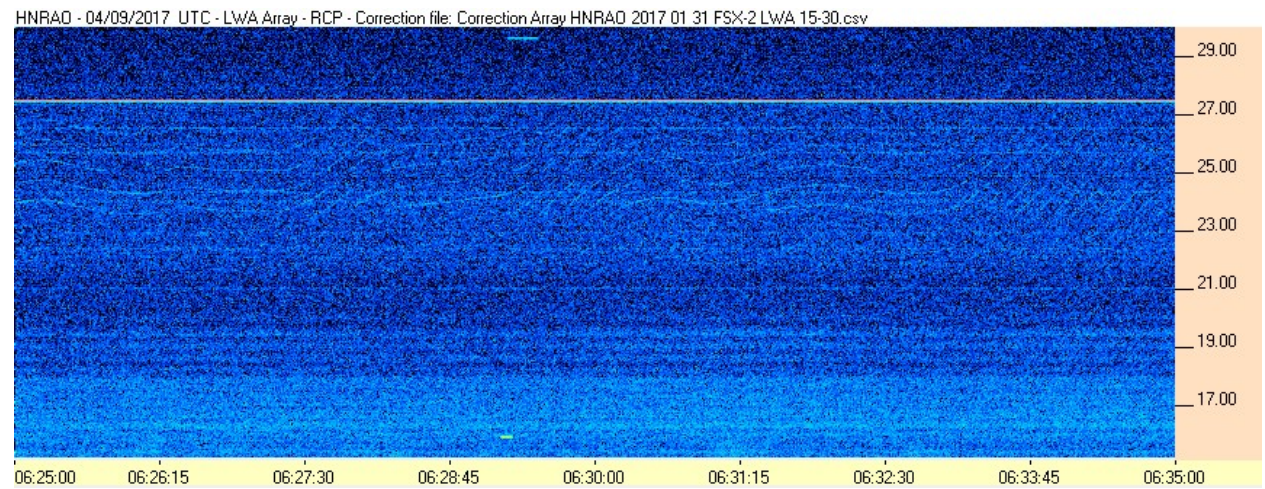
HNRAO - 04/09/2017 UTC - LWA Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-2 LWA 15-30.csv



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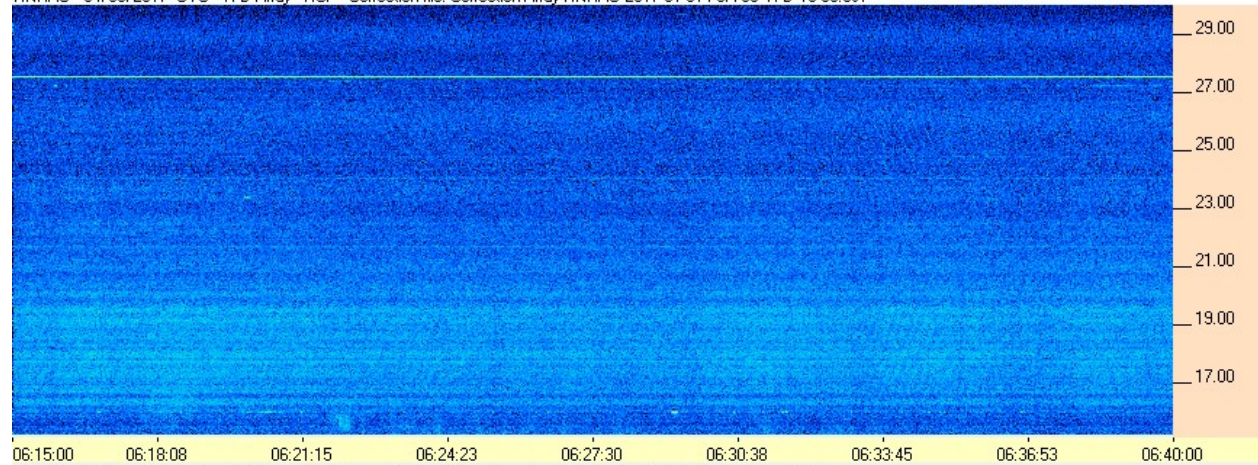


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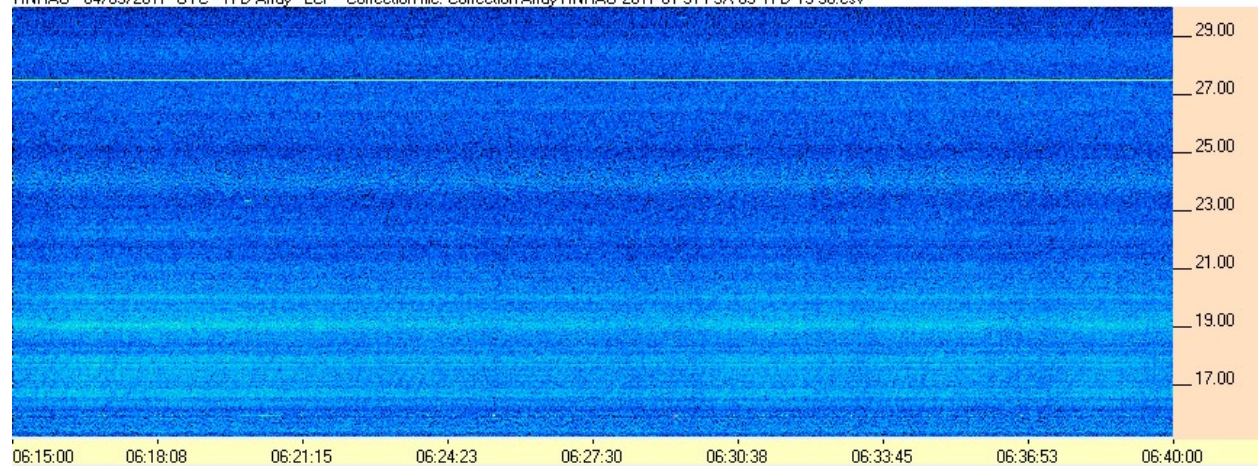


FSX-8S/TFD Pair

HNRAO - 04/09/2017 UTC - TFD Array - RCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv



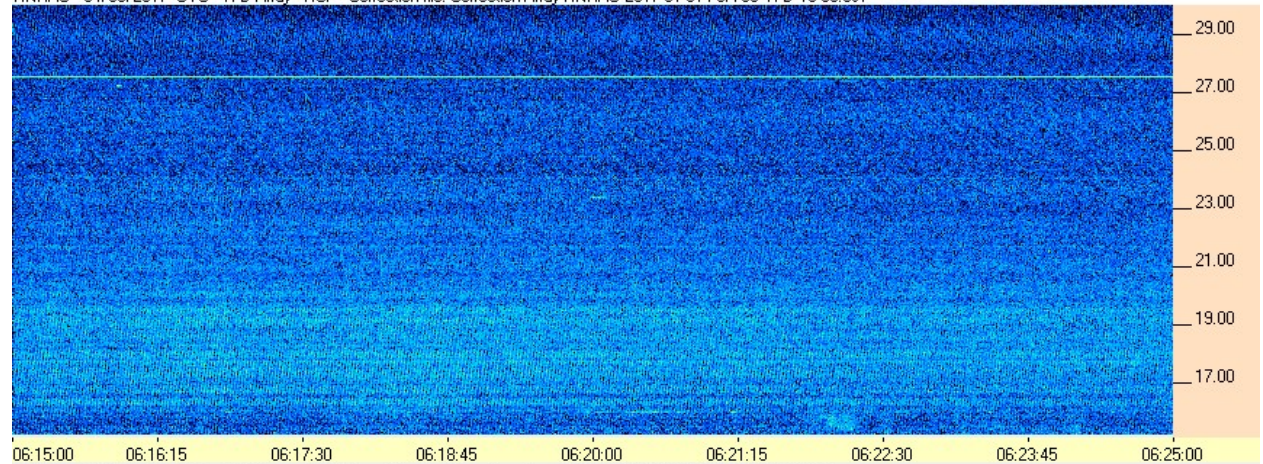
HNRAO - 04/09/2017 UTC - TFD Array - LCP - Correction file: Correction Array HNRAO 2017 01 31 FSX-8S TFD 15-30.csv



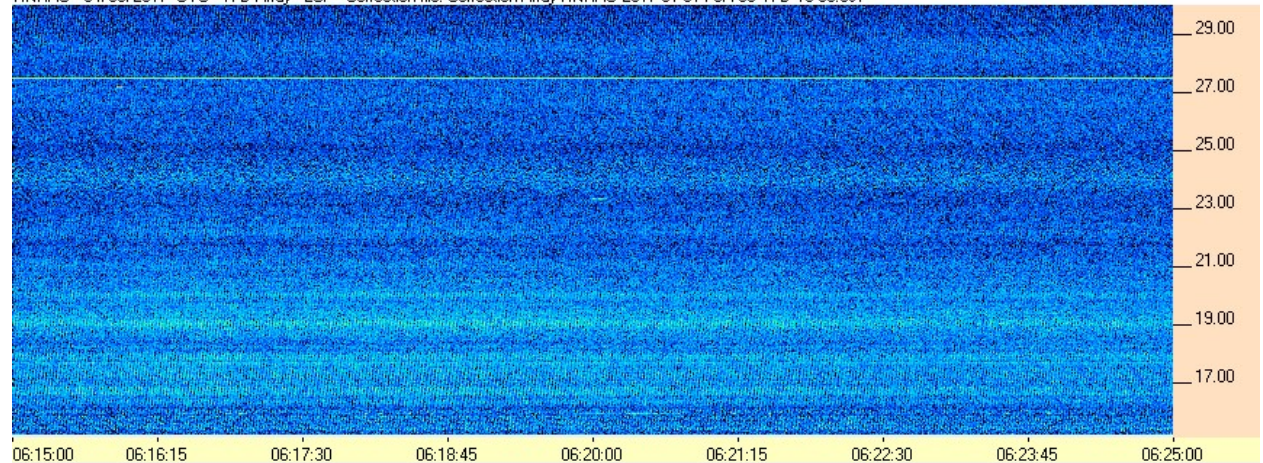
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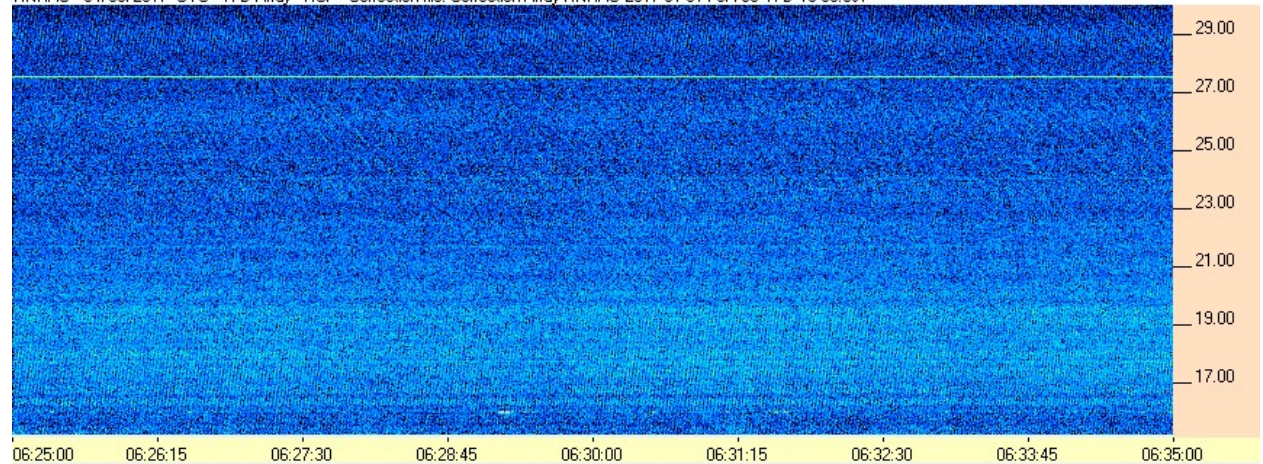
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