

**HNRAO Observing Log**  
**40.673181 N – 80.437885 W**  
**EN90sq**



**Date: 13 March 2017**

**Object: Jupiter – Io-A**

**Observer: Unattended**

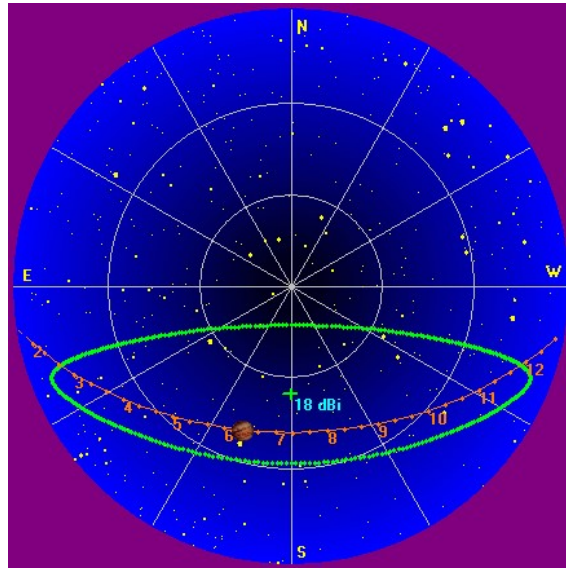
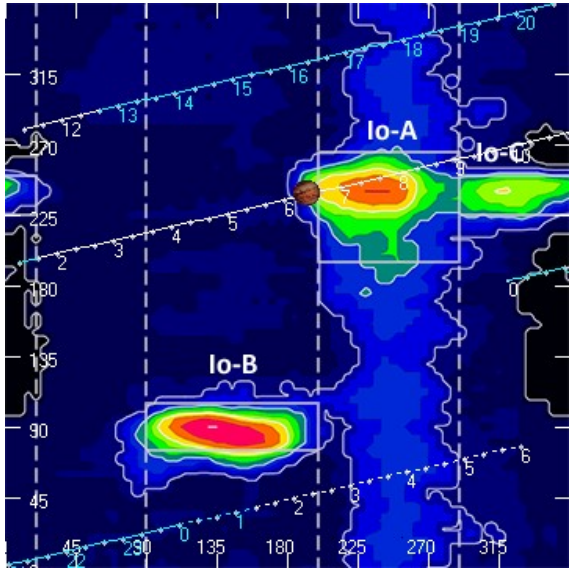
<b>Start of pass:</b>	<b>0624 UT</b>	<b>Planetary K-index:</b>	
<b>Jupiter Altitude:</b>	<b>40.9 degrees</b>	<b>Jupiter Azimuth:</b>	<b>162.1 degrees</b>
<b>Jupiter CML:</b>	<b>192.69</b>	<b>Jupiter Io Phase:</b>	<b>238.27</b>
<b>Jupiter RA:</b>	<b>13:21</b>	<b>Jupiter Dec:</b>	<b>-06:49</b>
<b>Hour Angle:</b>	<b>-00:54</b>	<b>Polarization</b>	<b>RCP</b>
<b>Sun Altitude:</b>	<b>-50.5 degrees</b>	<b>Sun Azimuth:</b>	<b>023.9 degrees</b>
<b>Sun RA:</b>	<b>23:27</b>	<b>Sun Dec:</b>	<b>-03:34</b>

<b>End of pass:</b>	<b>0841 UT</b>		
<b>Jupiter Altitude:</b>	<b>38.8 degrees</b>	<b>Jupiter Azimuth:</b>	<b>207.0 degrees</b>
<b>Jupiter CML:</b>	<b>275.53</b>	<b>Jupiter Io Phase</b>	<b>257.80</b>
<b>Hour Angle:</b>	<b>01:23</b>		
<b>Sun Altitude:</b>	<b>-32.3 degrees</b>	<b>Sun Azimuth:</b>	<b>063.4 degrees</b>

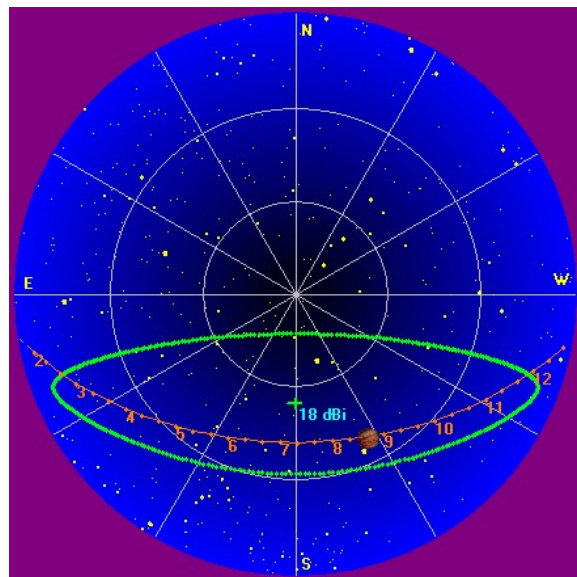
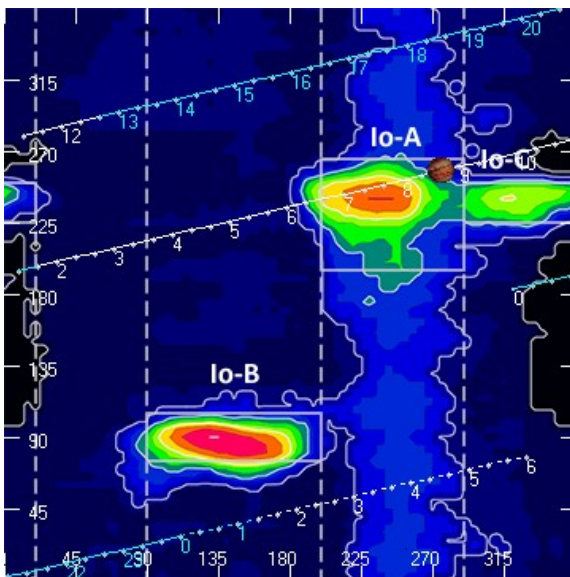
Observations made using:

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 and RSP2

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**Beginning of Pass**



**End of Pass**

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An Io-A storm of respectable strength. Late vertex arc with negative drift L-burst emissions. Negative slope modulation lanes of about -100 kHz/sec throughout the pass. At 0757 UT, cross hatched modulation lanes appear. At about 0800 UT, the negative drift modulation lanes were intersected by horizontal modulation lanes.

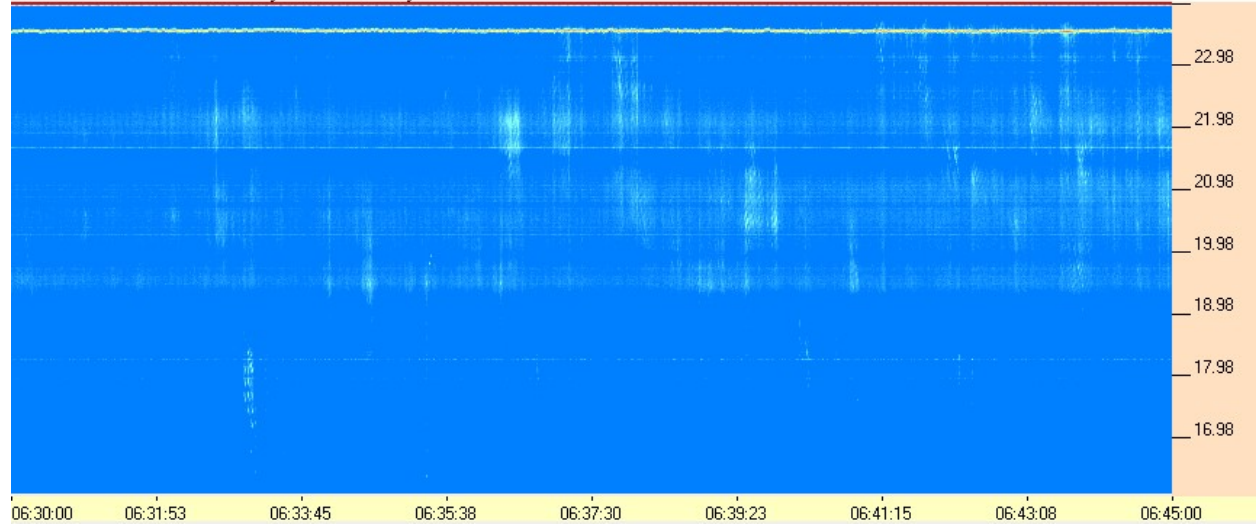
There was undoubtedly activity at the Radio JOVE frequency of 20.1 MHz, but do to a computer failure, was unable to record this. Other observers will need to fill in this data.

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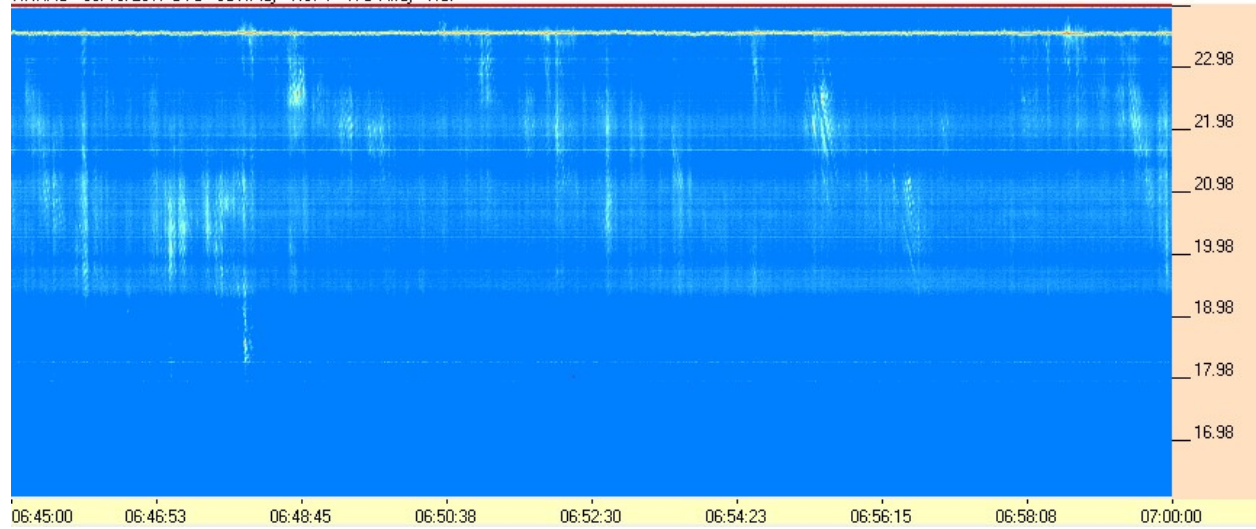


**SDRPlay/RSP1 TFD Pair**

HNRAO - 03/13/2017 UTC - SDRPlay - RSP1 - TFD Array - RCP



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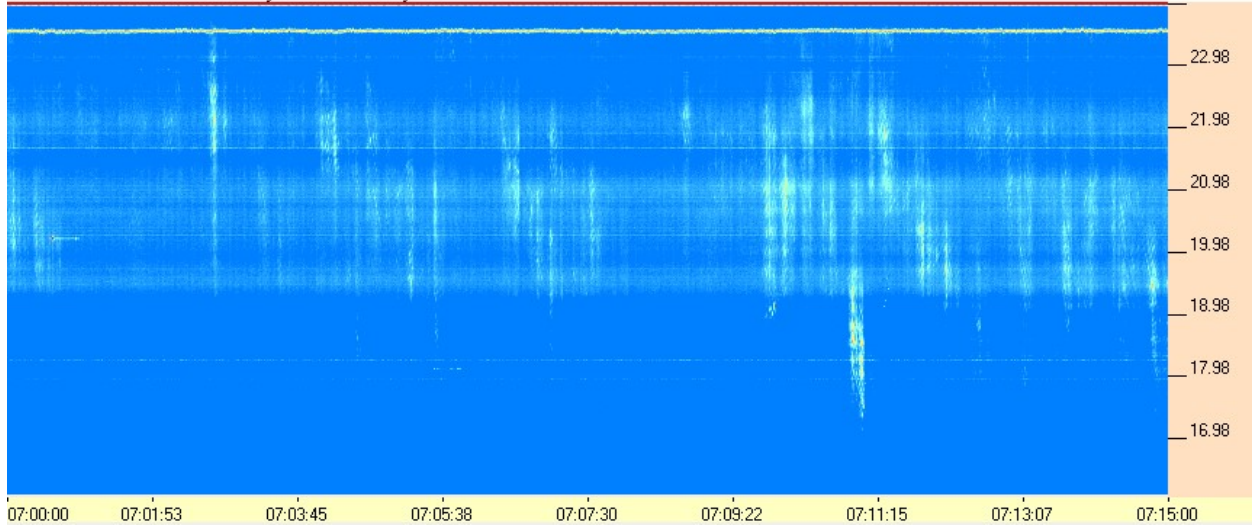




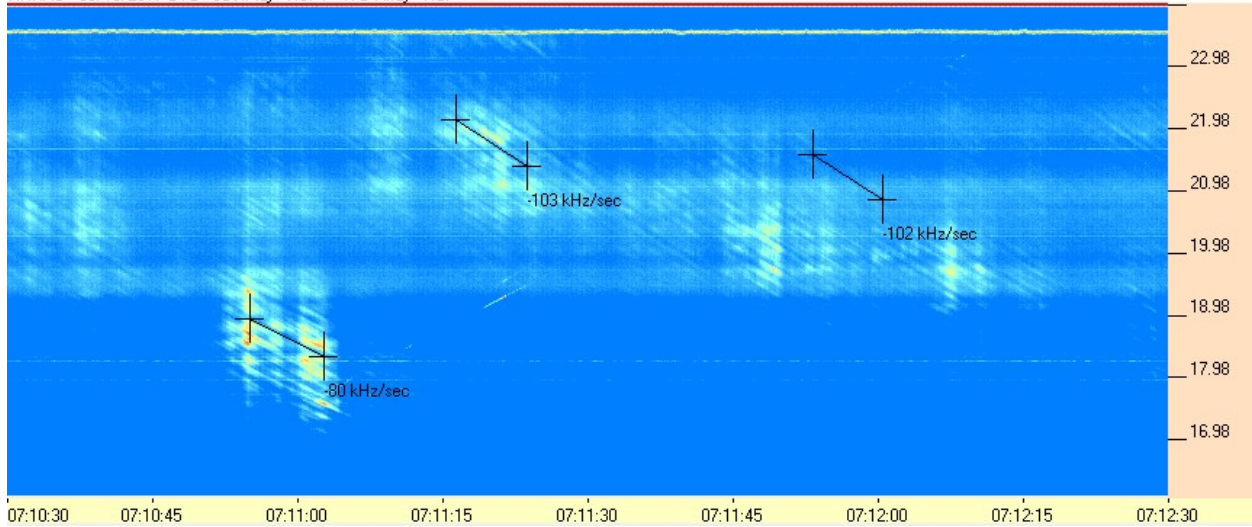
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HNRAO - 03/13/2017 UTC - SDRPlay - RSP1 - TFD Array - RCP



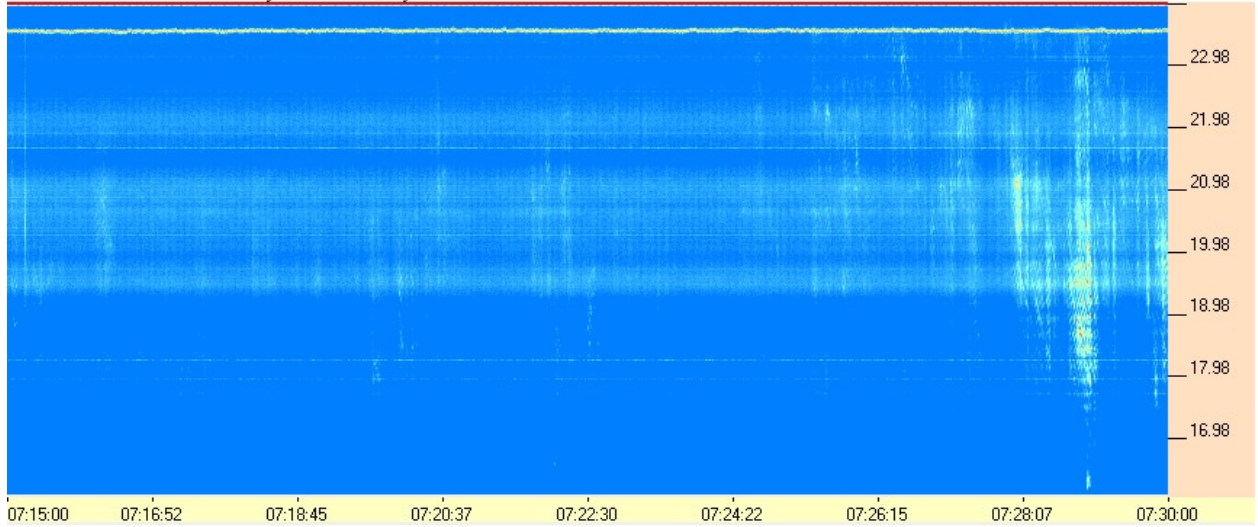
HNRAO - 03/13/2017 UTC - SDRPlay - RSP1 - TFD Array - RCP



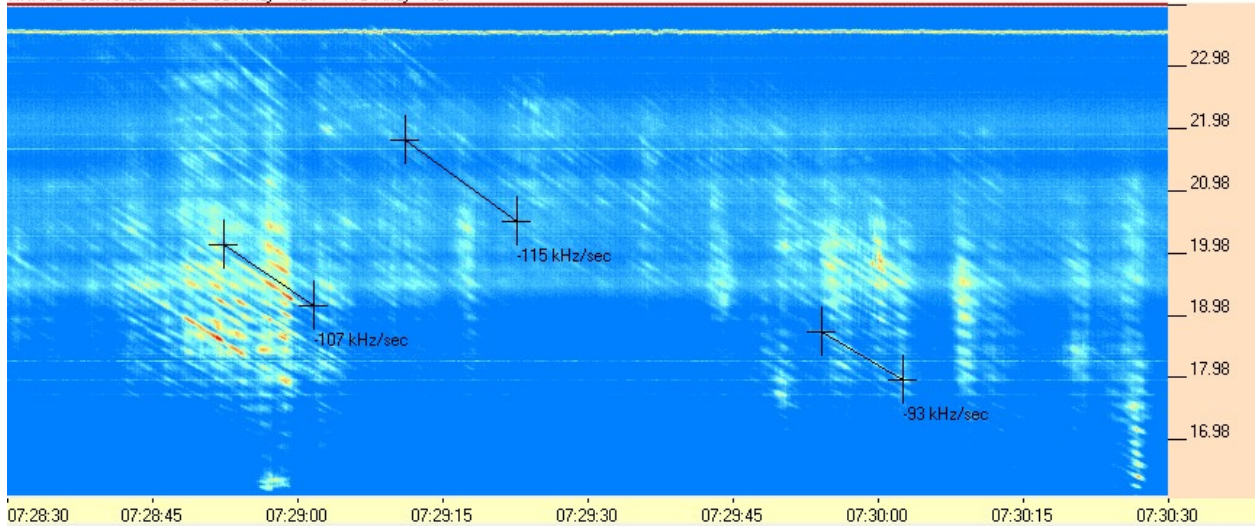
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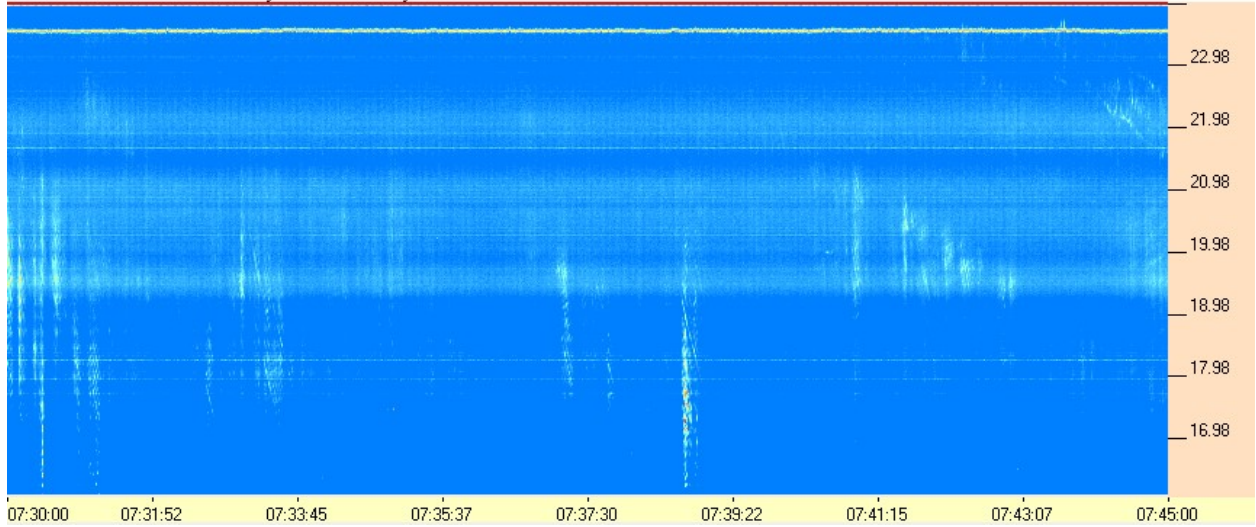




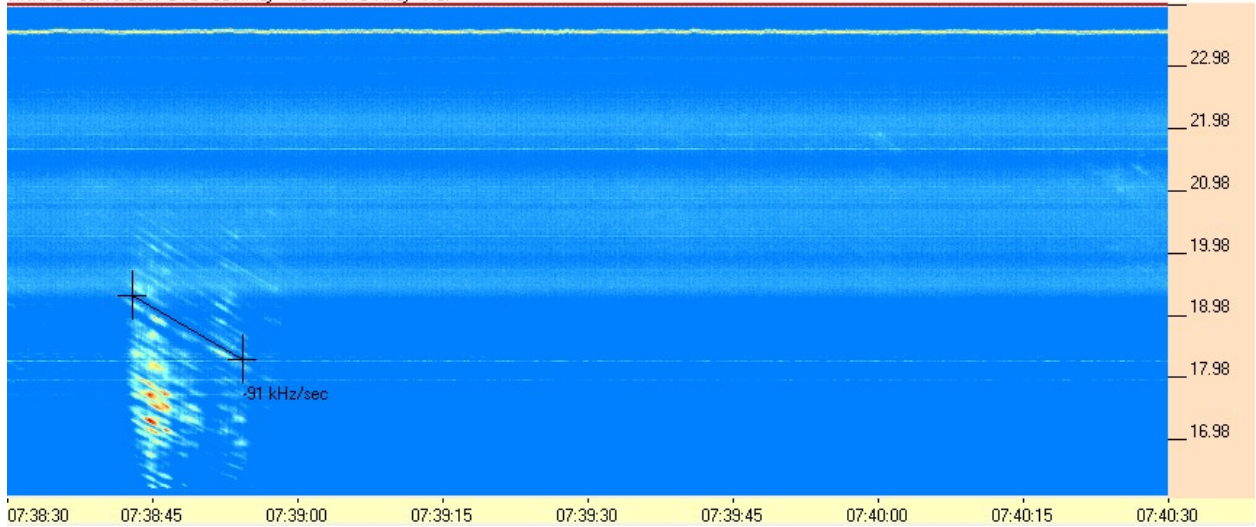
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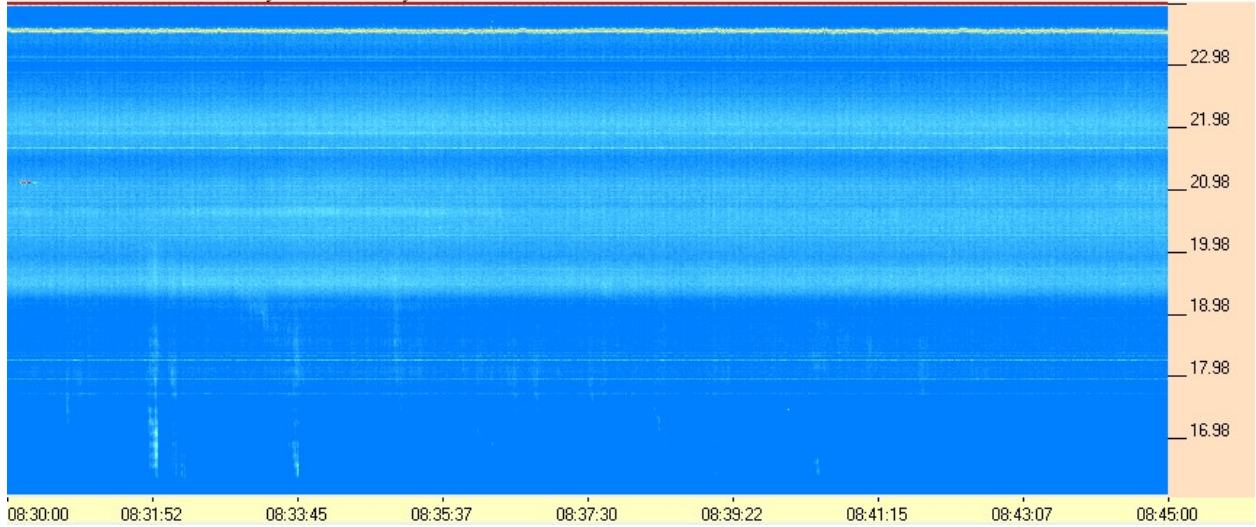
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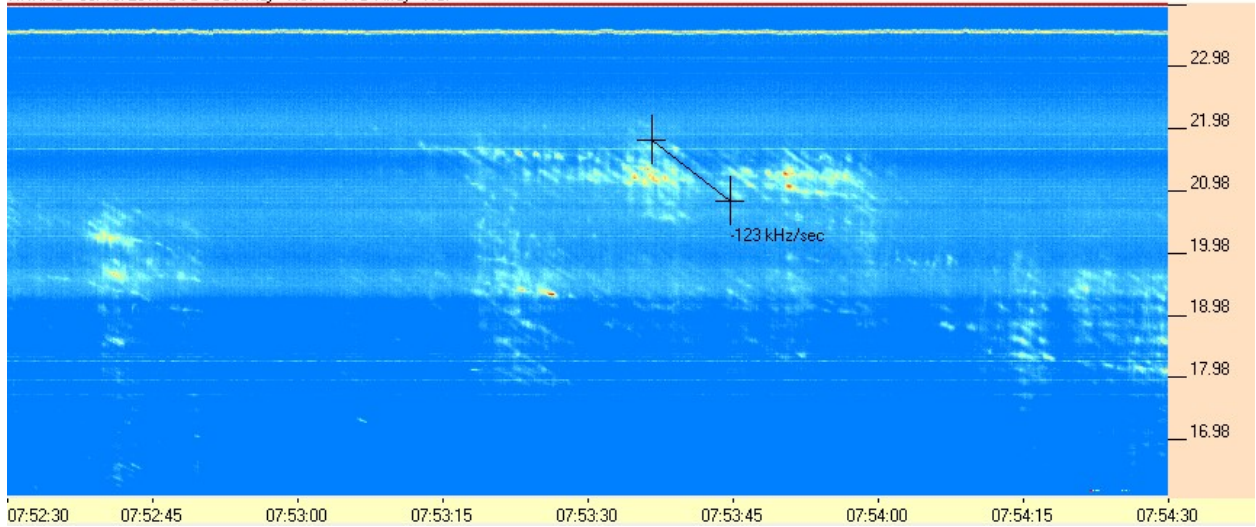
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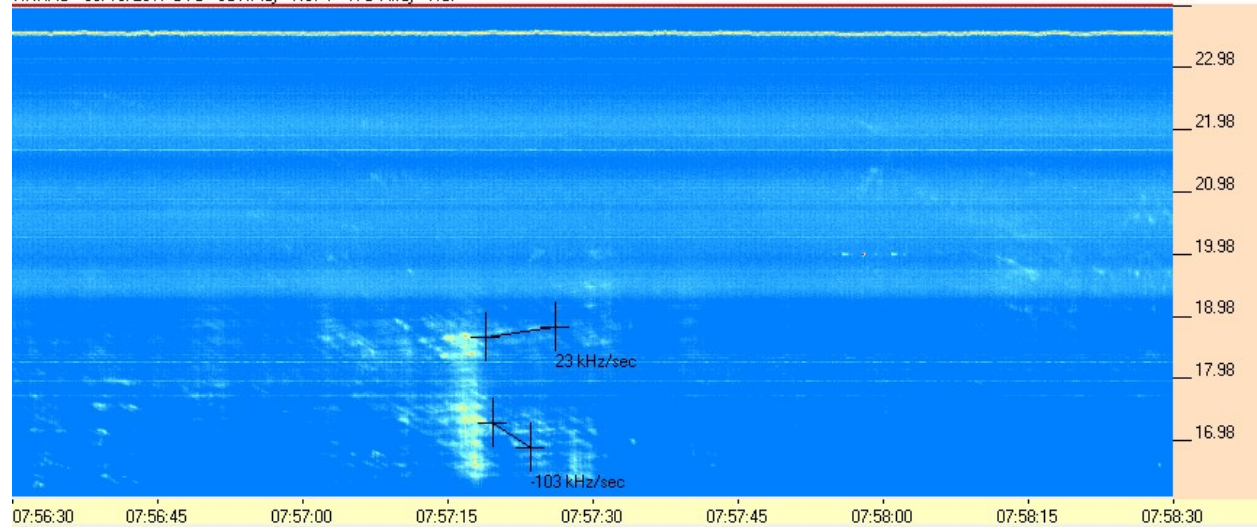




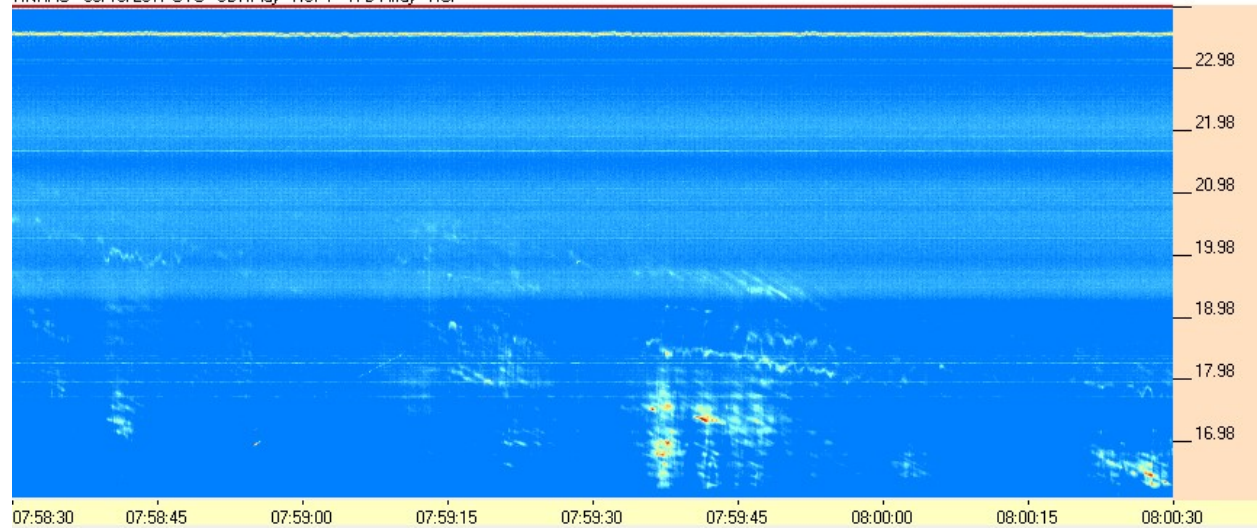
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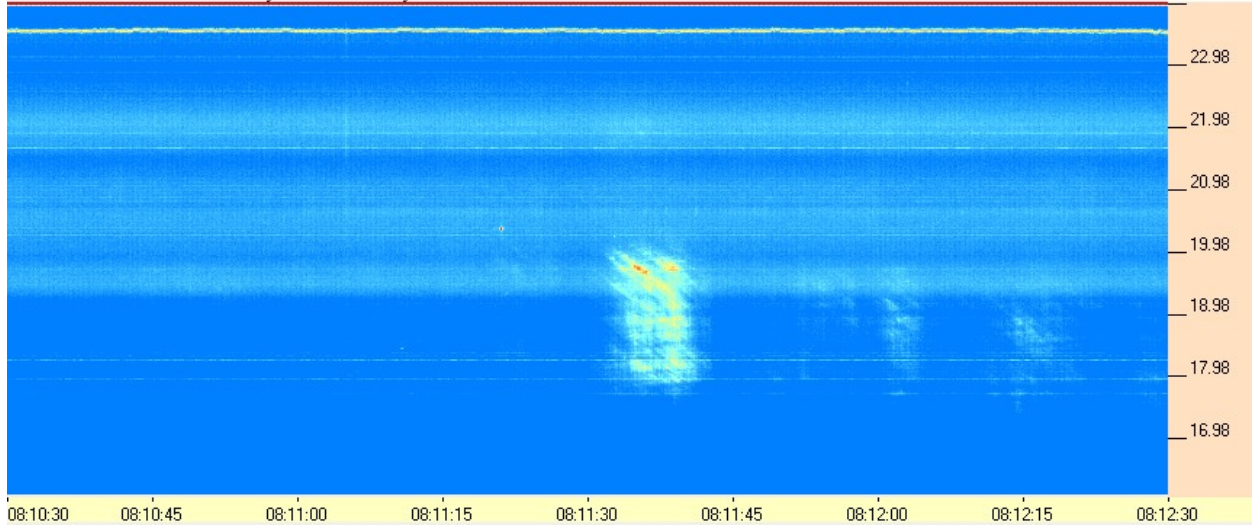
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