HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq

Date: 20 February 2017

Object: Jupiter

Observer: Unattended

Start of pass:	**0720 UT**	**Planetary K-index:**	**3**
Jupiter Altitude:	**38 degrees**	**Jupiter Azimuth:**	**152.5 degrees**
Jupiter CML:	**302.66**	**Jupiter Io Phase:**	**291.43**
Jupiter RA:	**13:26**	**Jupiter Dec:**	**-07:25**
Hour Angle:	**-01:26**	**Polarization**	**RCP**
Sun Altitude:	**-51.9 degrees**	**Sun Azimuth:**	**048.1 degrees**
Sun RA:	**22:08**	**Sun Dec:**	**-11:30**

End of pass:	**0745 UT**		
Jupiter Altitude:	**39.9 degrees**	**Jupiter Azimuth:**	**160.2 degrees**
Jupiter CML:	**317.77**	**Jupiter Io Phase**	**294.98**
Hour Angle:	**-01:01**		
Sun Altitude:	**-48.1 degrees**	**Sun Azimuth:**	**055.6 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 4 February 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 4 February 2017

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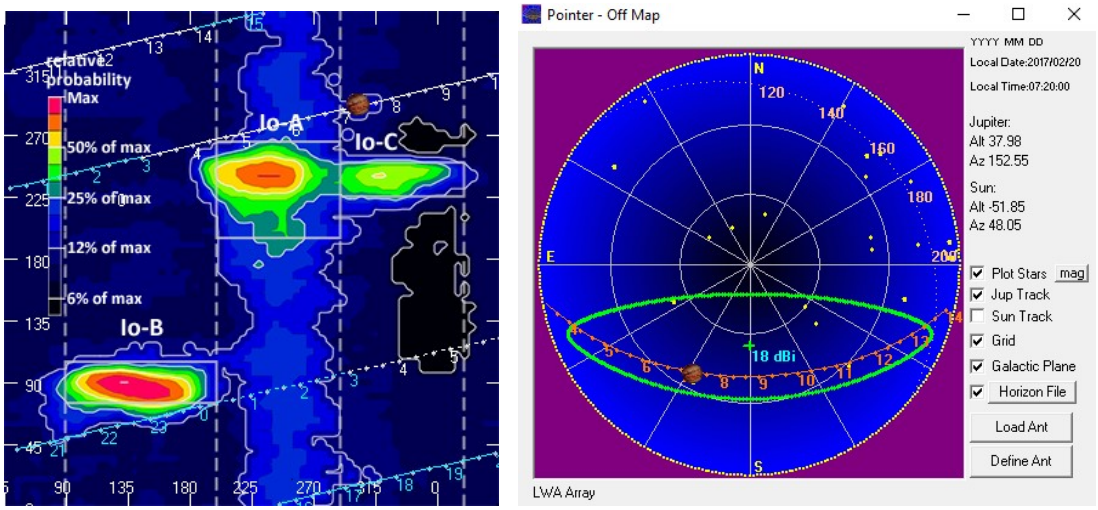
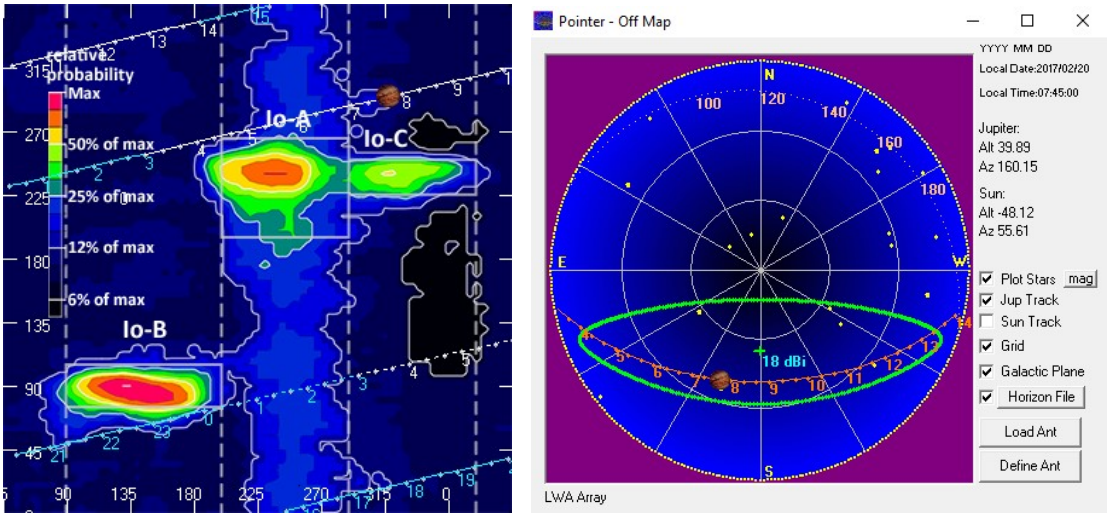


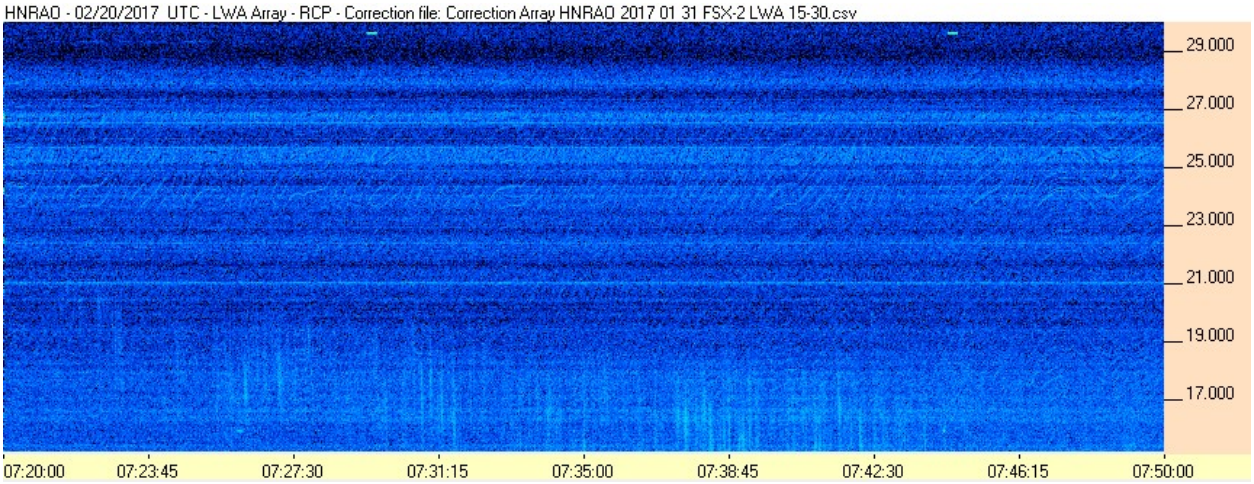
Beginning of Pass



End of Pass

A very weak, negative drift, late vertex emission, in the CML of Non-Io-C. Appear to be L-burst. No discernable modulation lanes. 19-15 MHz.

FSX-2/LWA Pair



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FSX-8S/TFD Pair