

Subject: 02 Jan 2015 non-Io-A/C/D + Virgo A?

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Date: 01/03/2015 23:01

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Hi SUG-ers,

I think this post may be a too esoteric for the Jove data list -- certainly nothing anyone would have seen with a strip chart.

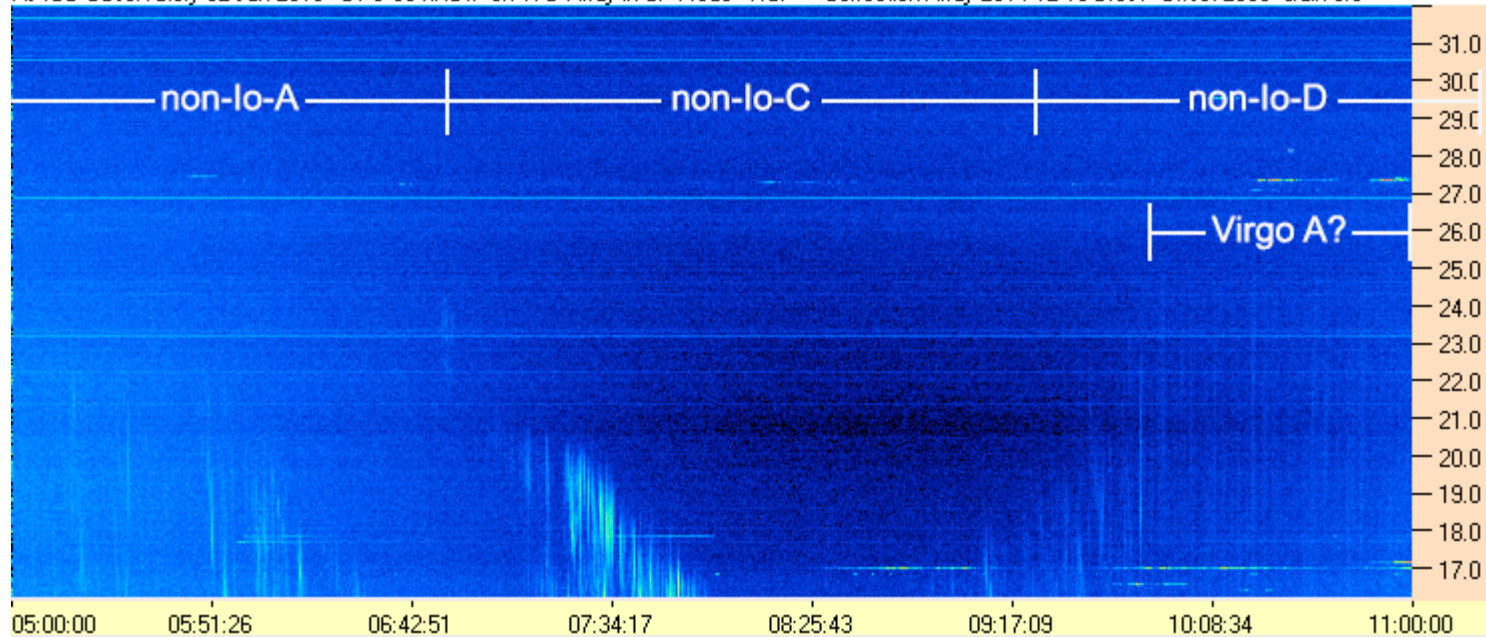
There was a whole slew of weak Jupiter on Friday morning before the Io-B that Tom and Jim saw. Plus some emission that might not be Jupiter.

Here's the overall six-hour spectrogram. The notations mark the times when Jupiter was in the phase plane zones as defined by the University of Florida. Each portion is discussed in more detail below.

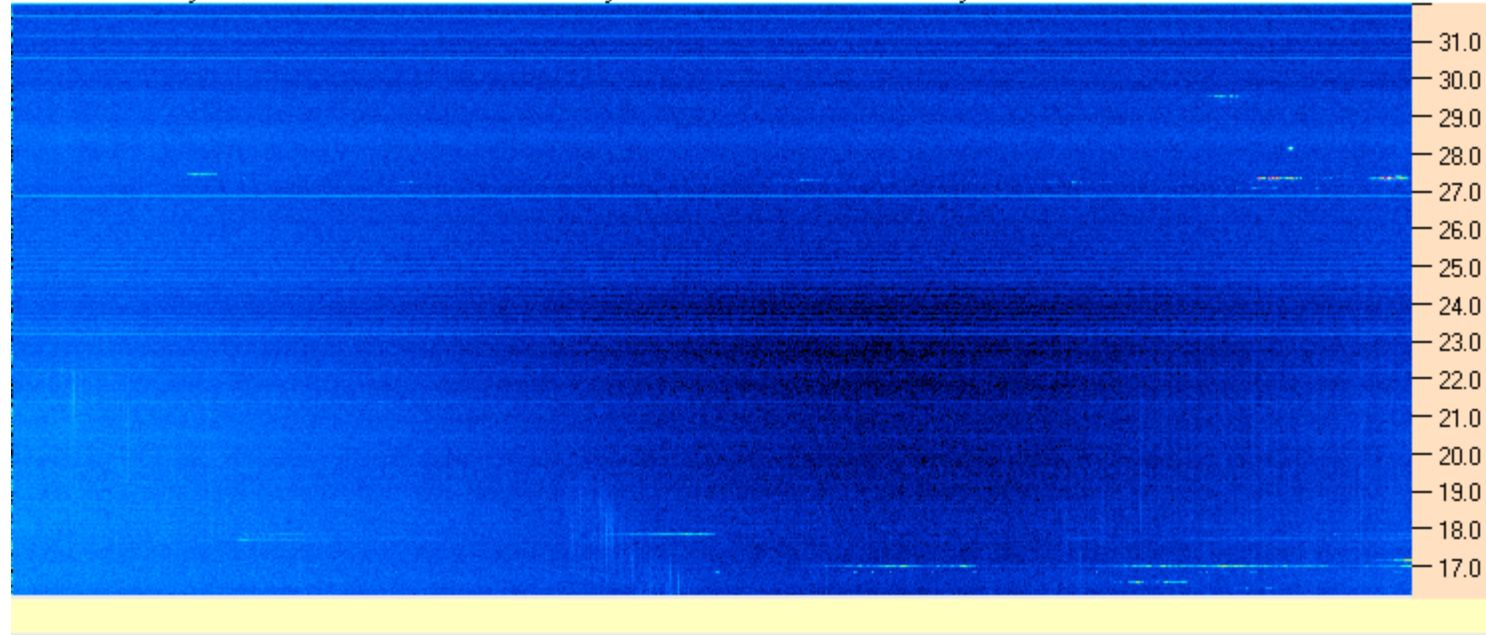
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Dave

AJ4CO Observatory 02 Jan 2015 - DPS 30 kHz IF on TFD Array in CP Mode - RCP Correction Array 2014 12 18 B.csv Offset 2050 Gain 5.0



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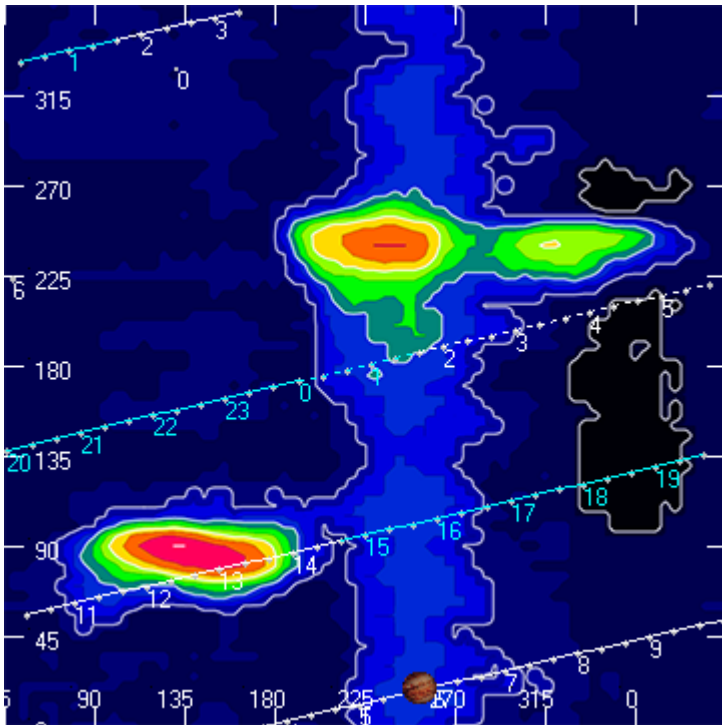
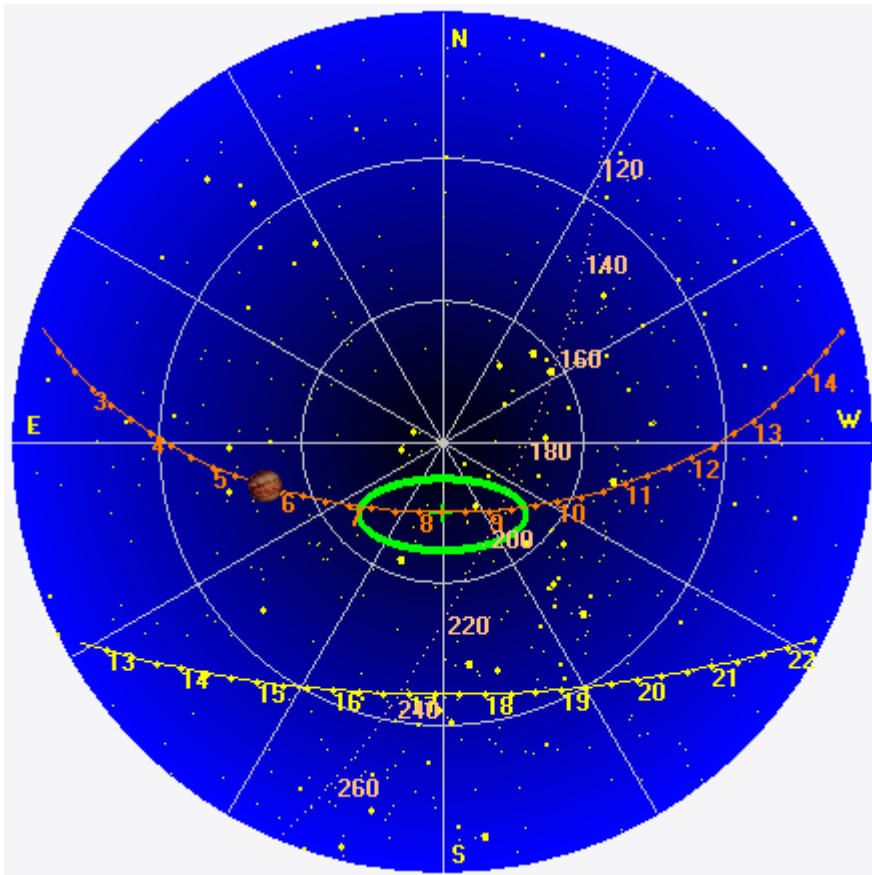
**Weak non-Io-A**

RCP dominant L bursting from 16 to 22 MHz. No modulation lanes visible.

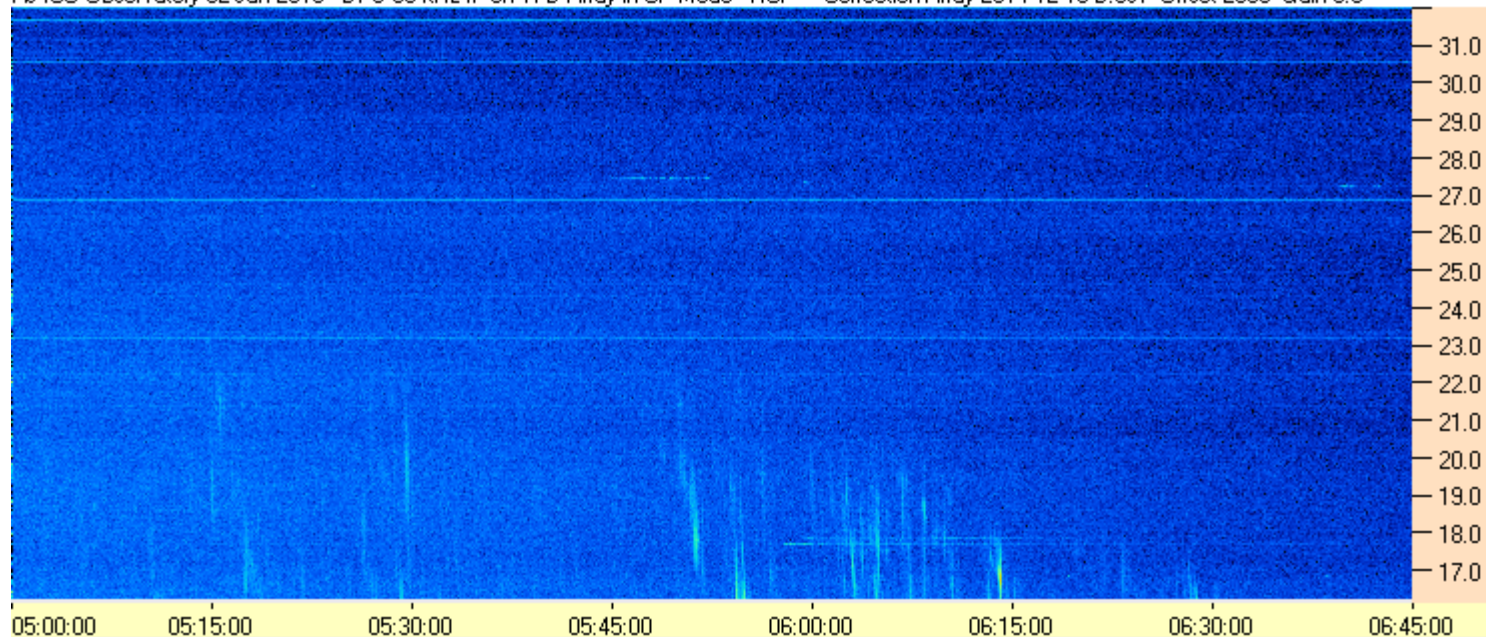
Jupiter was -46° to -27° off axis.

Jupiter was leading the Sun by 140° .

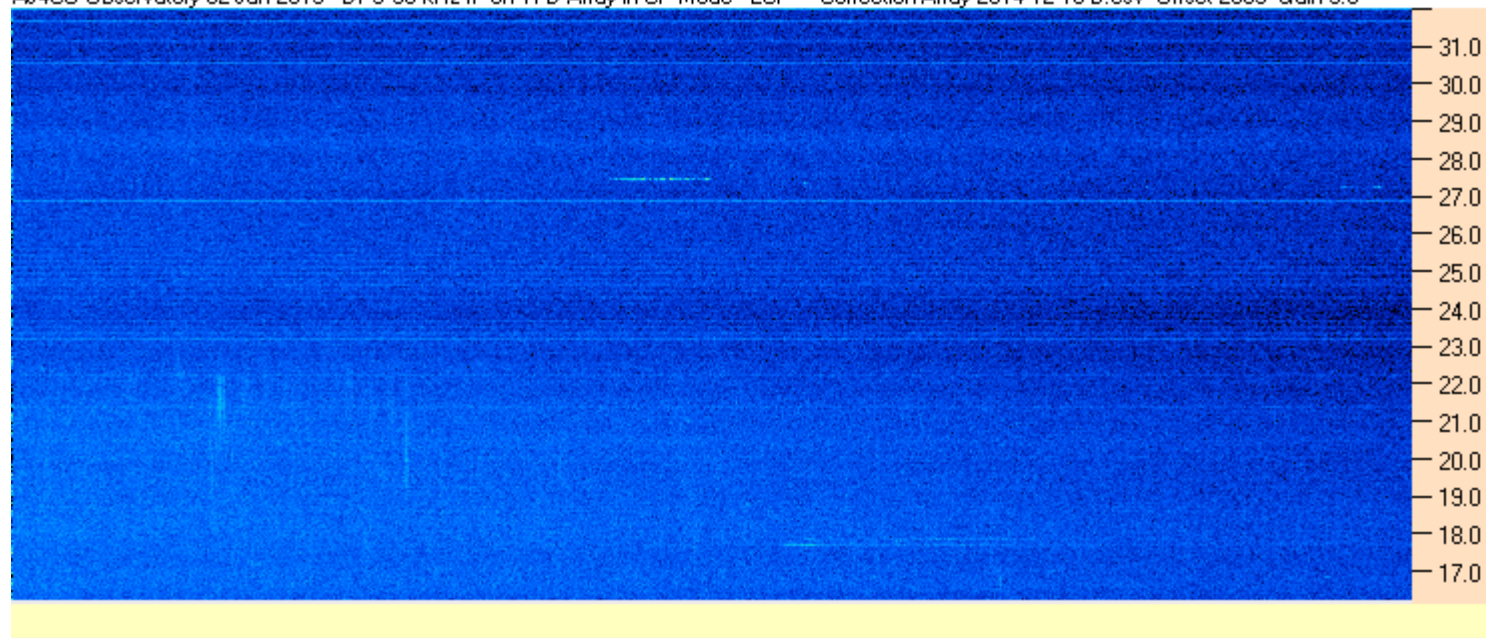
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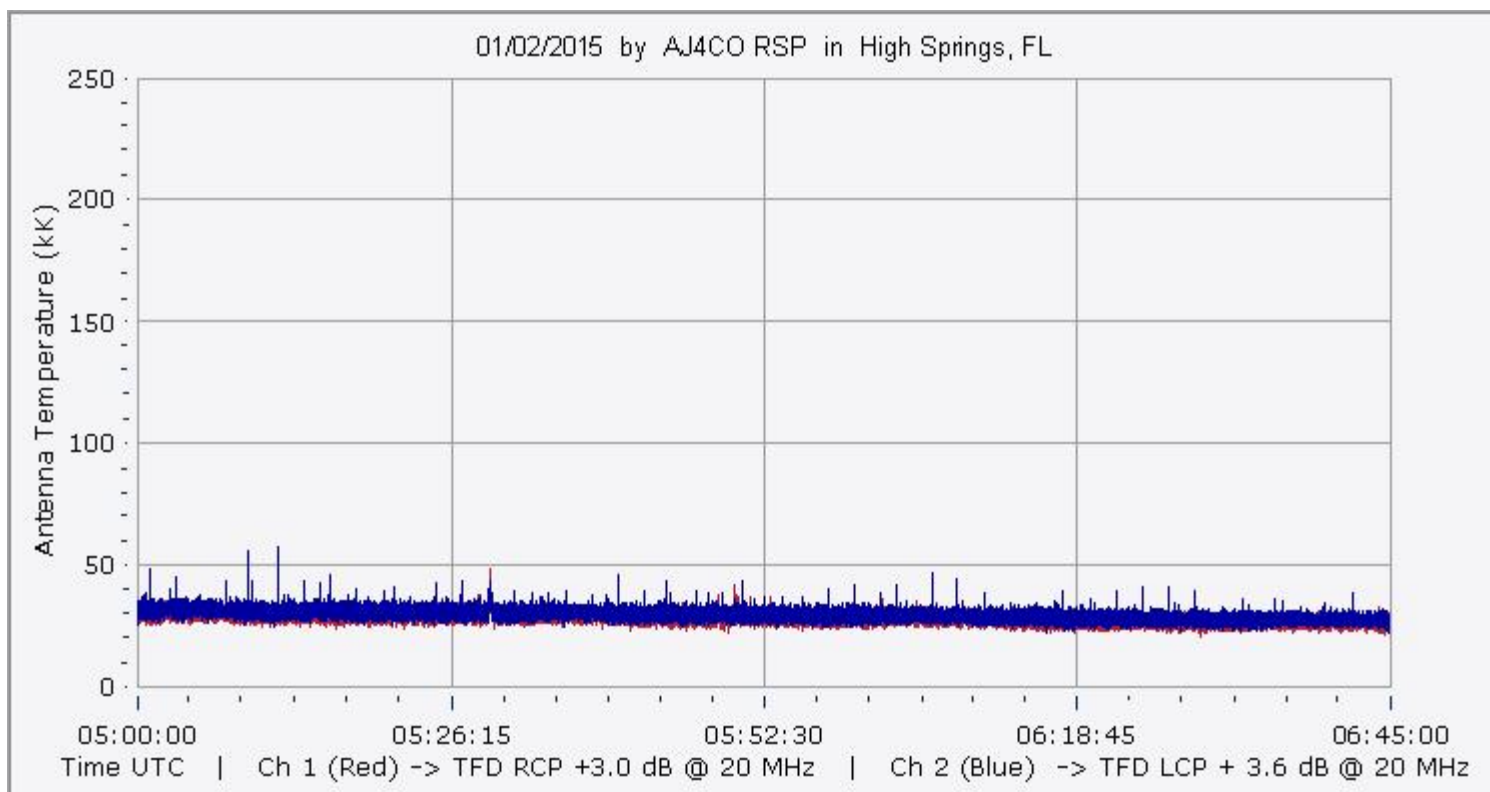


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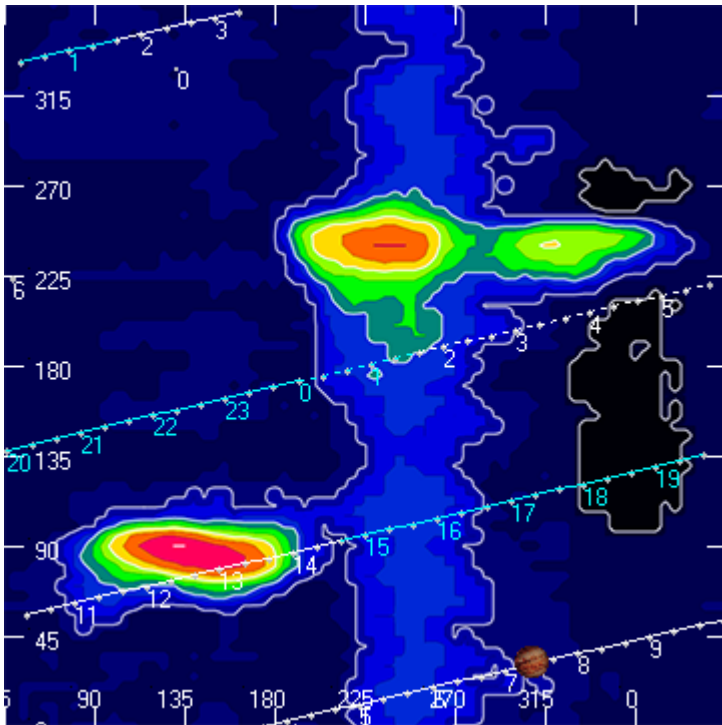
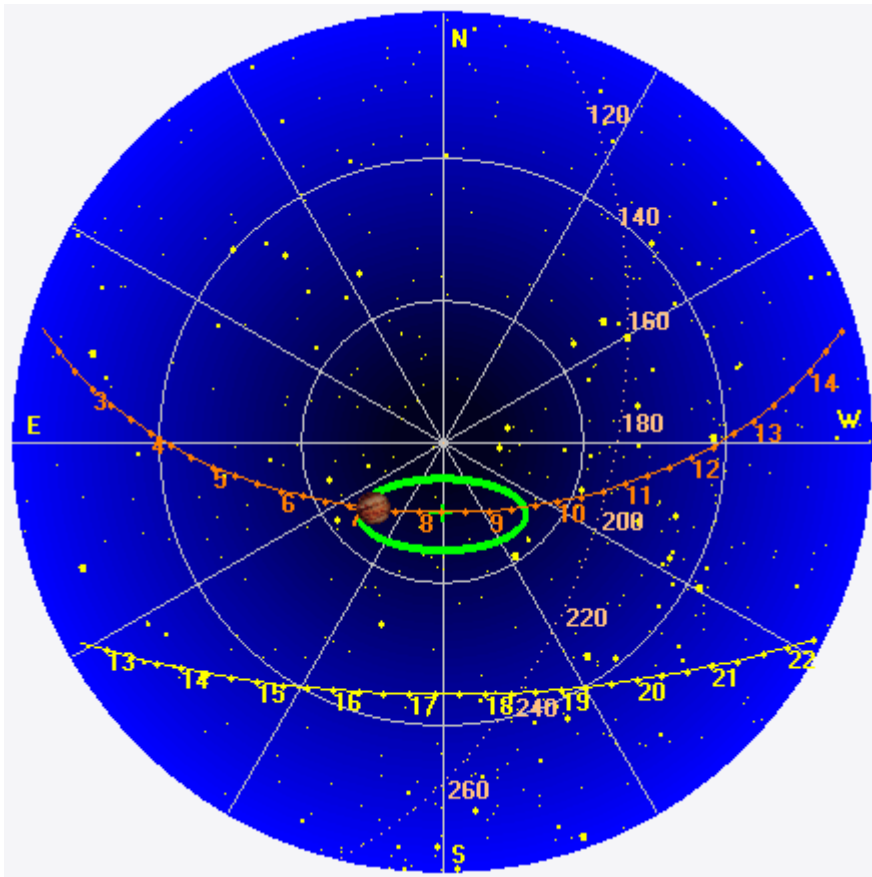
Non-Io-C

RCP dominant L bursting from 16 to 24 MHz. No modulation lanes visible.

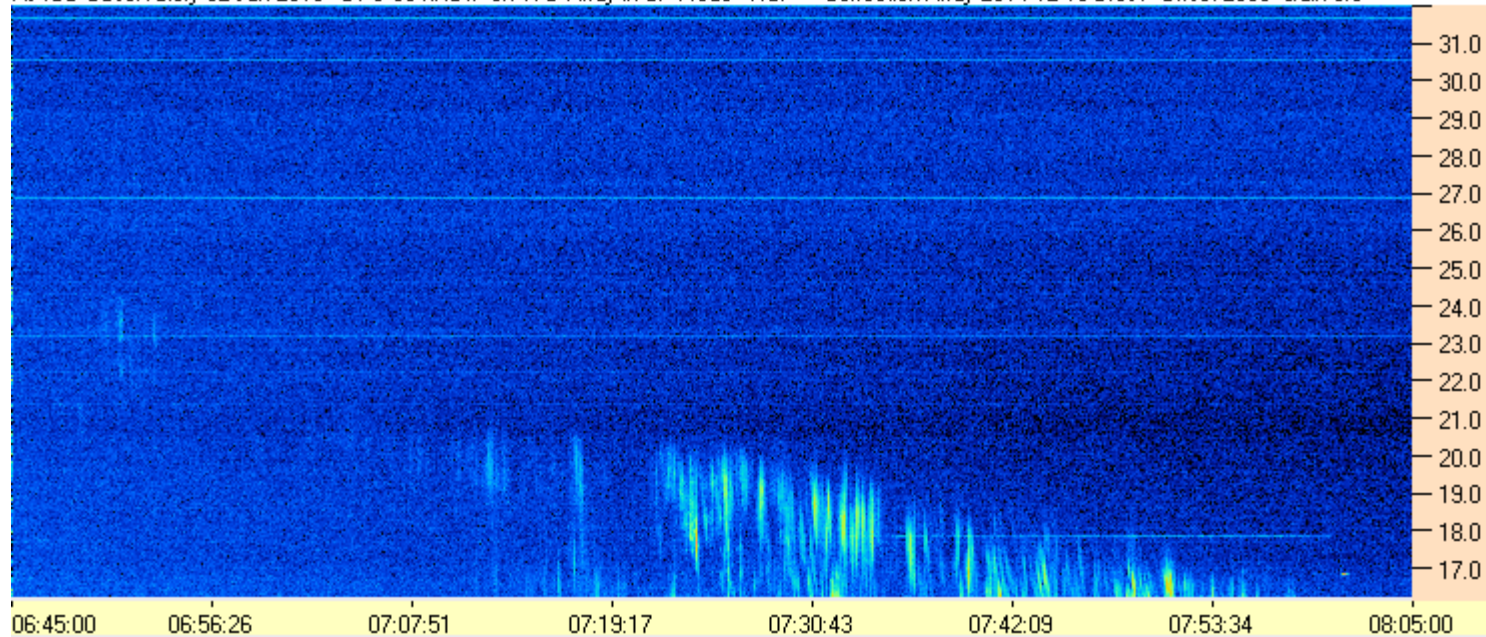
Jupiter was -22° to -6° off axis.

Jupiter was leading the Sun by 140° .

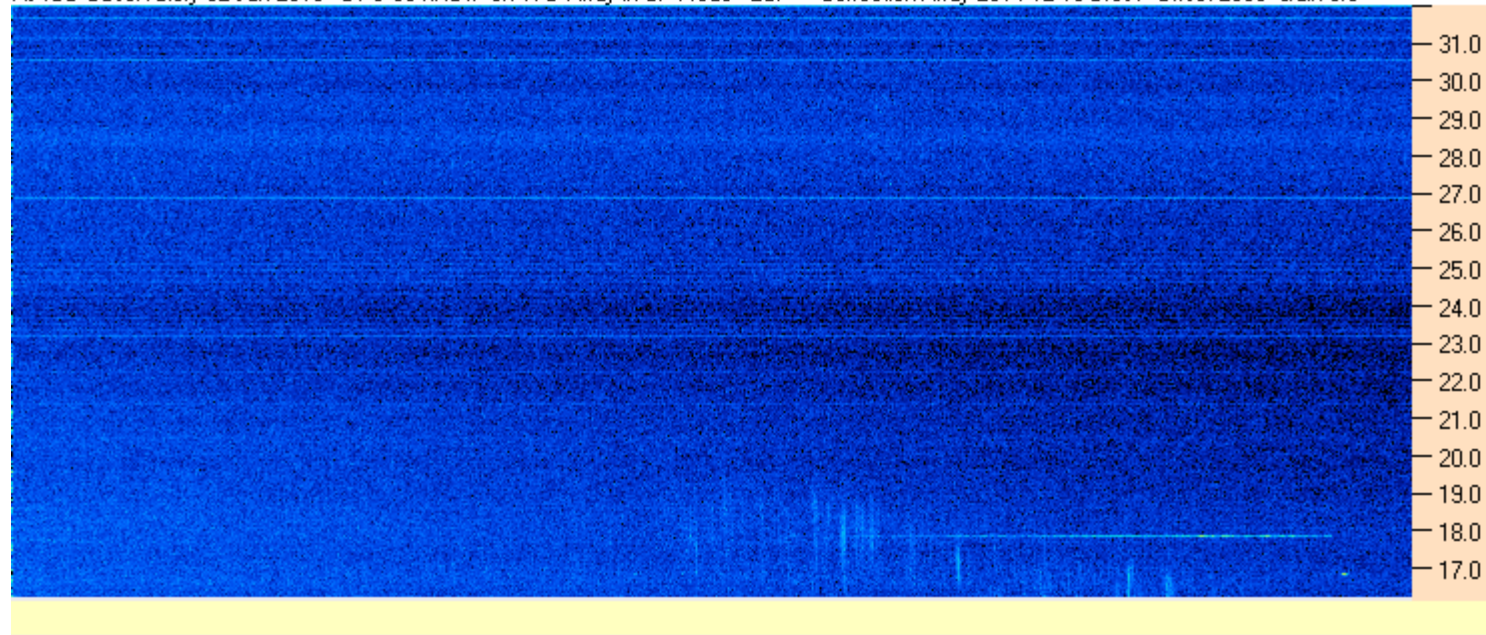
AJ4CO Observatory 02 Jan 2015, log entry 260

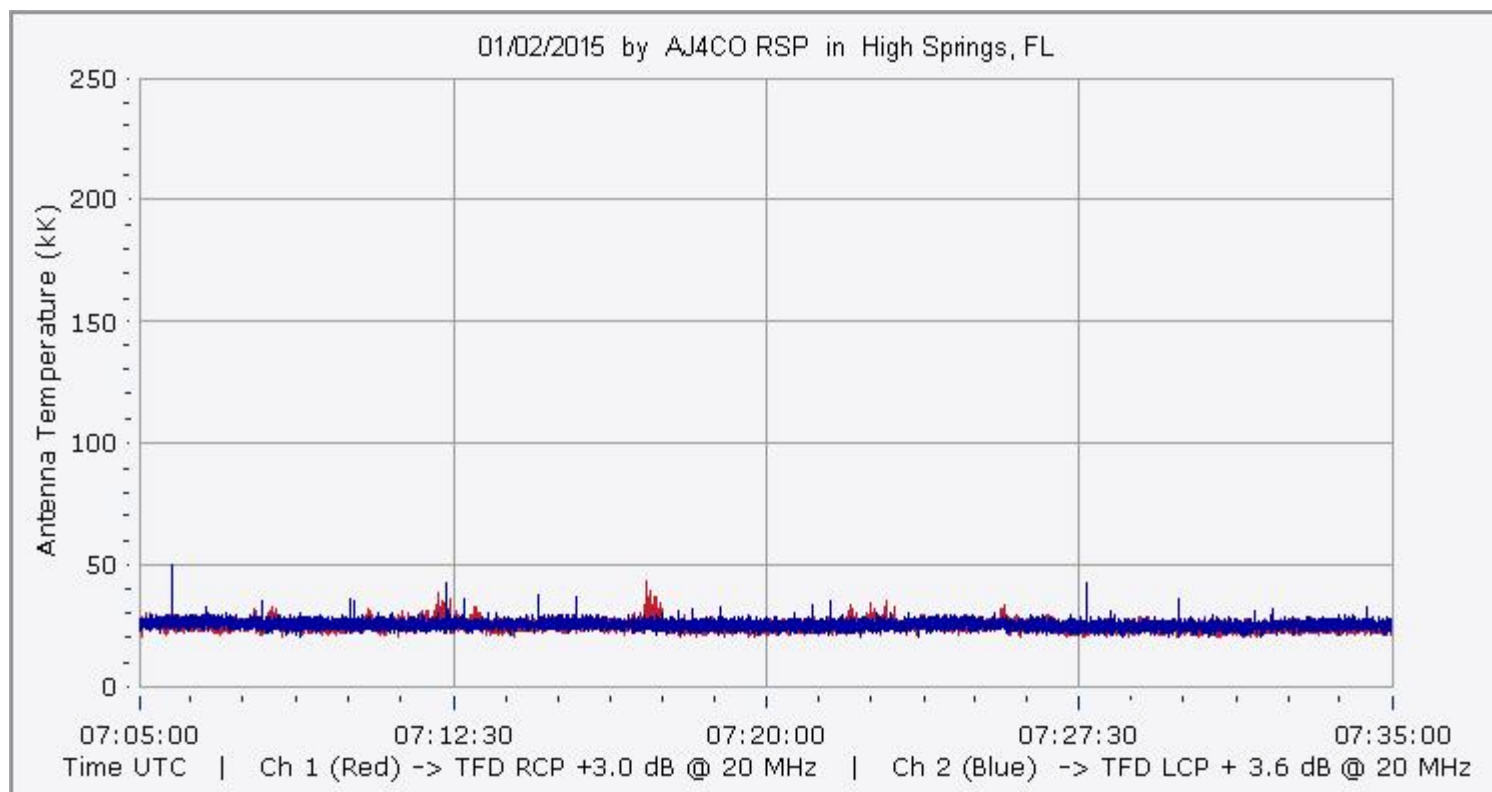


AJ4CO Observatory 02 Jan 2015 - DPS 30 kHz IF on TFD Array in CP Mode - RCP Correction Array 2014 12 18 B.csv Offset 2050 Gain 5.0



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Non-Io-D + possible Virgo A scintillation?

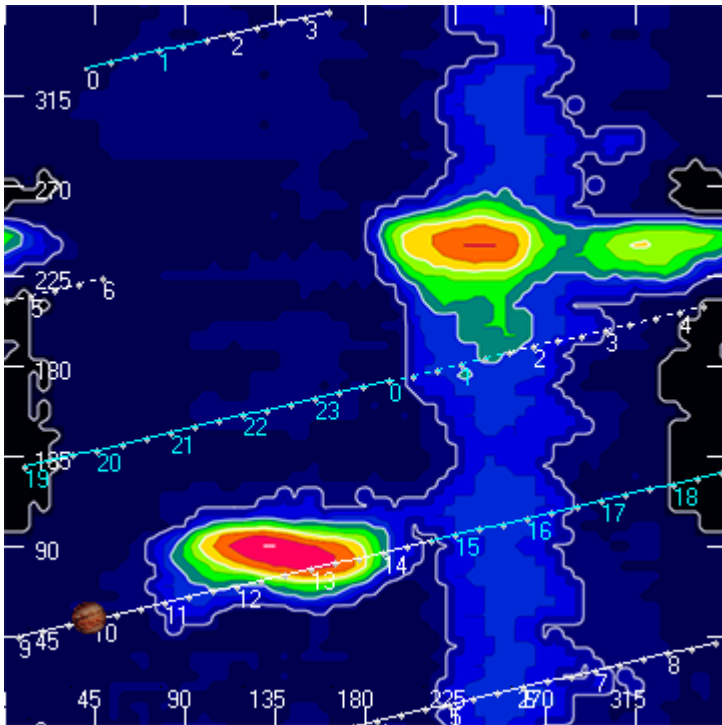
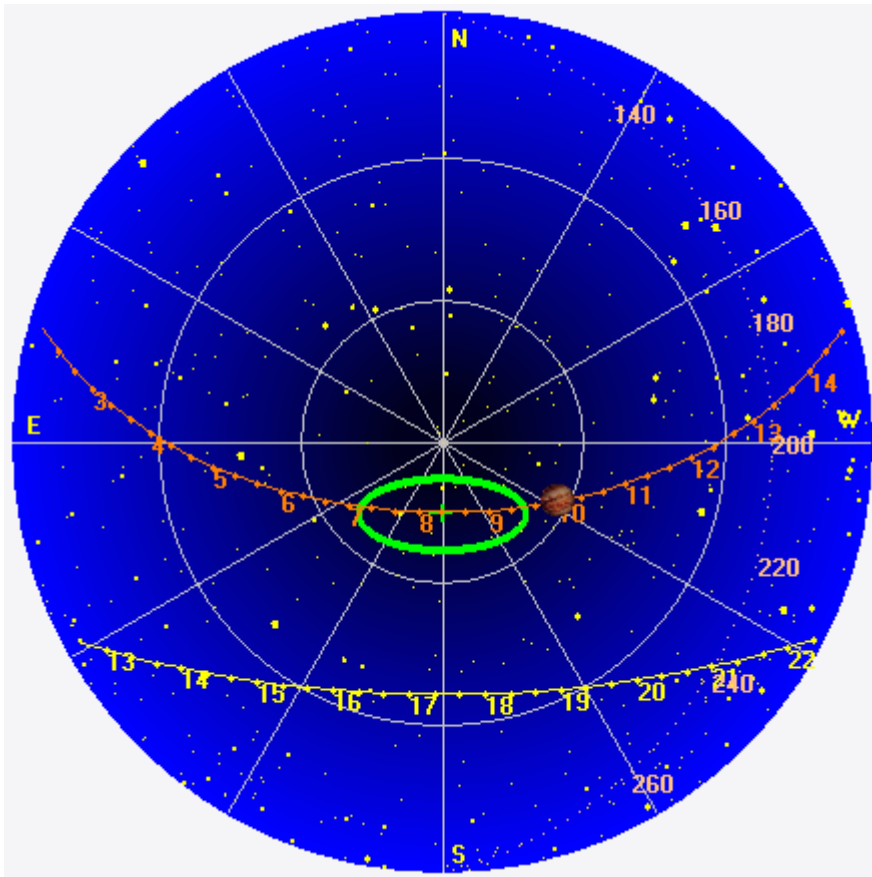
RCP dominant L bursting from 16 to 25 MHz. No modulation lanes visible.

From about 1000 UTC onward, the emission is reminiscent of Cas A scintillation. The Radio Eyes sky map shows Virgo A was in the beam at the time. On the other hand, Virgo A is about 10 dB down in flux density compared to Cas A, and Cas A scintillation was barely detectable. On the third hand, the emission looks more like scintillation than something from Jupiter. On the fourth hand, the non-Io-D emission does lead right up into it, looking at the emission frequency envelope. On the fifth hand, the non-Io-D emission early on is definitely RCP dominant, while the later emission after 1000 UTC has some components that are about equal in polarization sense, although it also has other components that are more RCP. So I just don't know. I think it's probably Jupiter, but Virgo A can't be completely ruled out either. Maybe some of both. Or maybe a really early start to Io-B. Or all three.

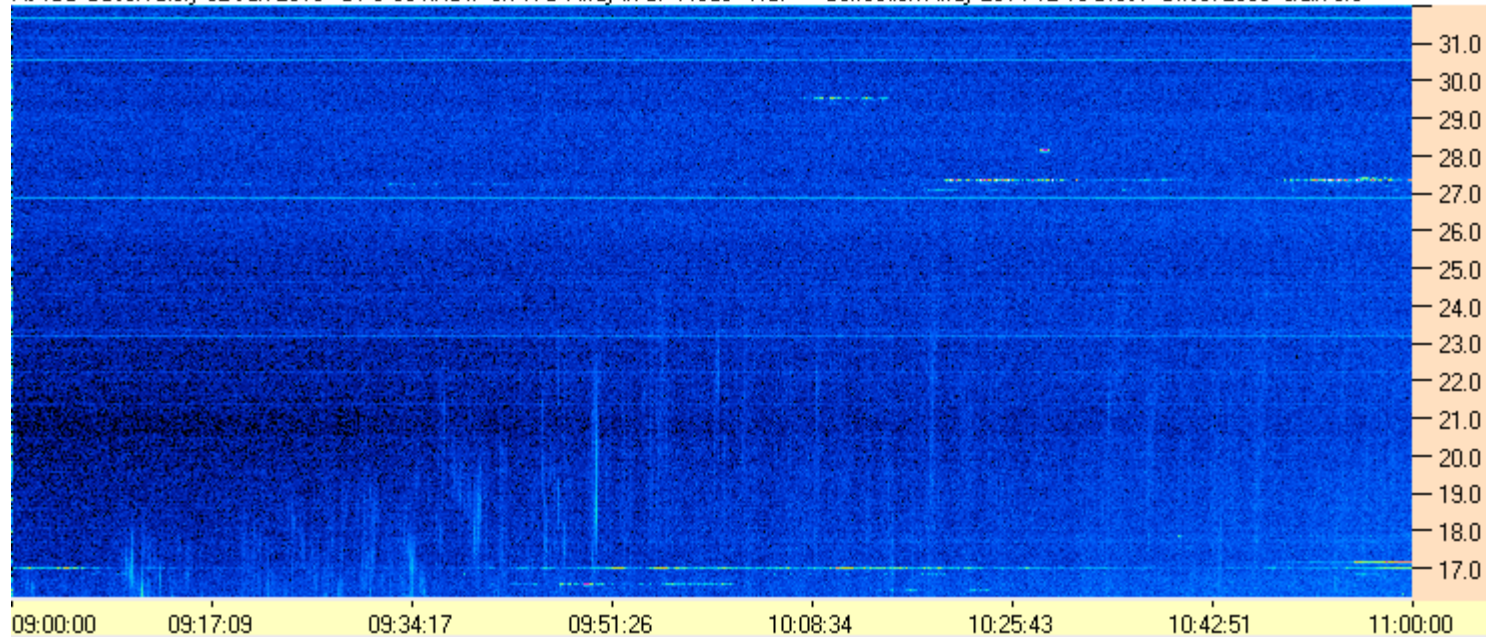
I must admit to some wishful thinking. Cas A is relatively nearby at "only" 11,000 light years away, pretty much in our back yard on a cosmic scale. Virgo A, on the other hand, is a more impressive 53 million light years away. More importantly, it's about 7,000 Jy at 20 MHz. If we can see scintillation in Virgo A, then that might open the door to a few other sources.

Jupiter was +10° to +37° off axis. At 1030 UTC, Virgo A was -11° off axis.

Jupiter was leading the Sun by 140°.



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