JOVIAN DAM OBSERVATION REPORT

Log Entry 870–872

12 Feb 2017 B/D/nA

Some Io-B and Io-D with a non-Io-A chaser.

RCP dominant L bursts 0557–0847 UTC from 16 to 21 MHz, vertex early arc. (Io-B)

LCP dominant L bursts 0729–0948 UTC from 16 to 21 MHz, vertex early arcs. (Io-D)

RCP dominant L bursts 0853–0912 UTC from 16 to 28 MHz, negative frequency drift emission envelope. (non-Io-A)

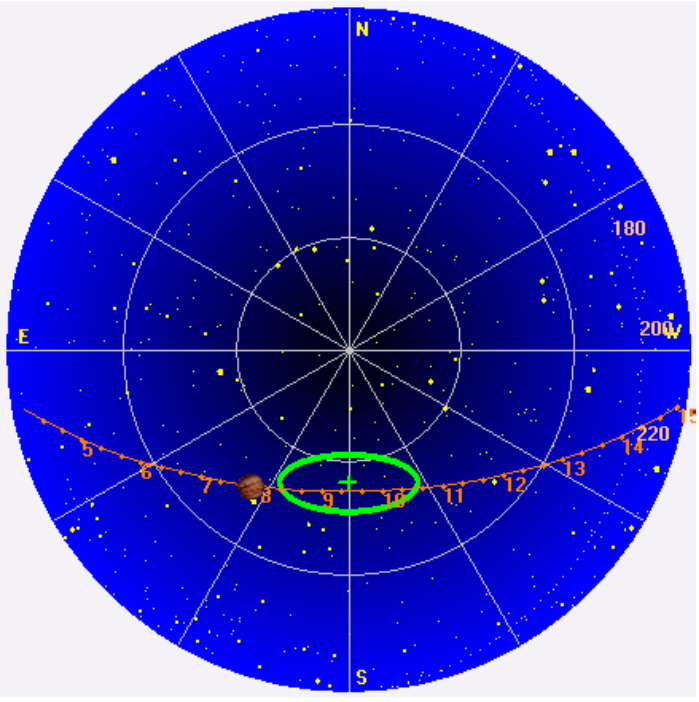
The presence of weak line noise throughout makes a small but noticeable difference in the background level observed between RCP and LCP.

Why is apparent Faraday banding showing up, especially in the non-Io-A, which occurred very near beam center? This must be a result of the beam steering and the array design – but why? How does this work? Interesting questions.

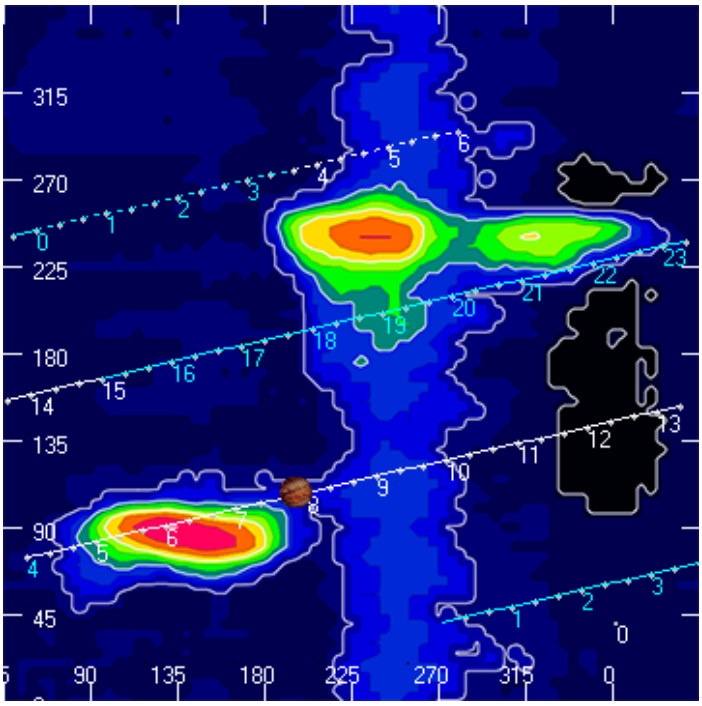
Jupiter was -53°(!) to +6° off axis.

Jupiter was leading the Sun by 121°.

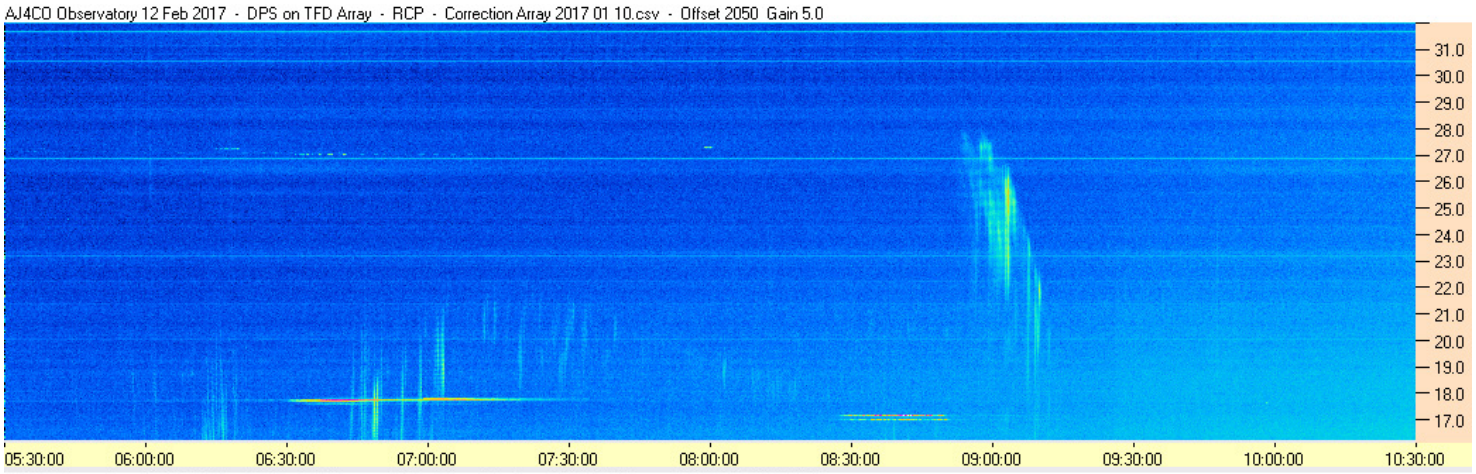
Jupiter's location at midpoint of observed emission (0752 UTC)



Sky map with array HPBW in green.



CML–Io phase plane.


AJ4CO Observatory 12 Feb 2017 - DPS on TFD Array - RCP - Correction Array 2017 01 10.csv - Offset 2050 Gain 5.0
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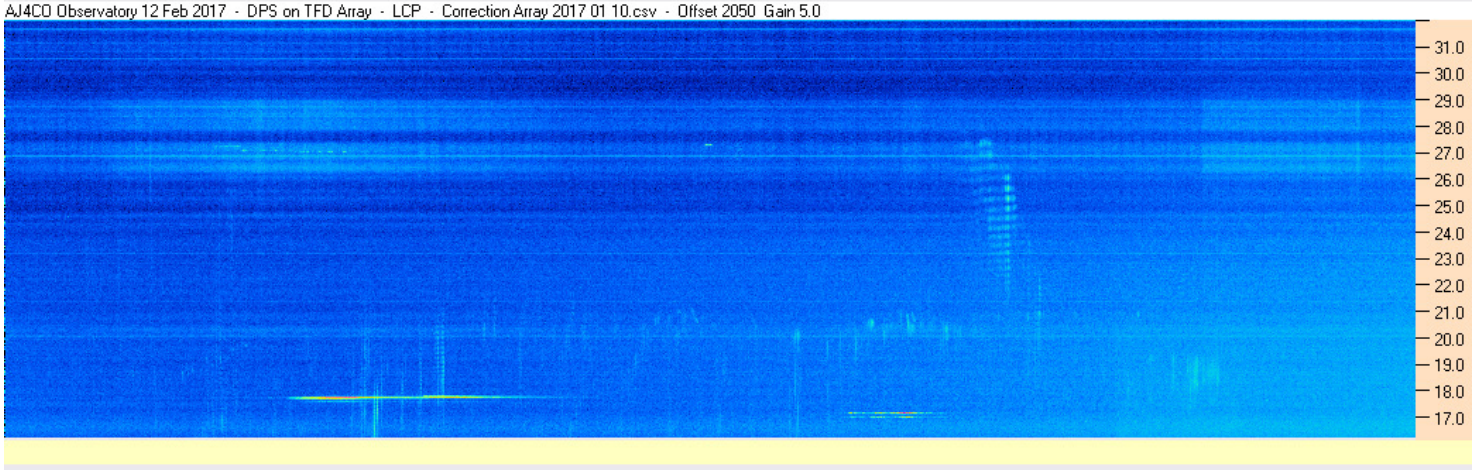
AJ4CO Observatory 12 Feb 2017 - DPS on TFD Array - LCP - Correction Array 2017 01 10.csv - Offset 2050 Gain 5.0
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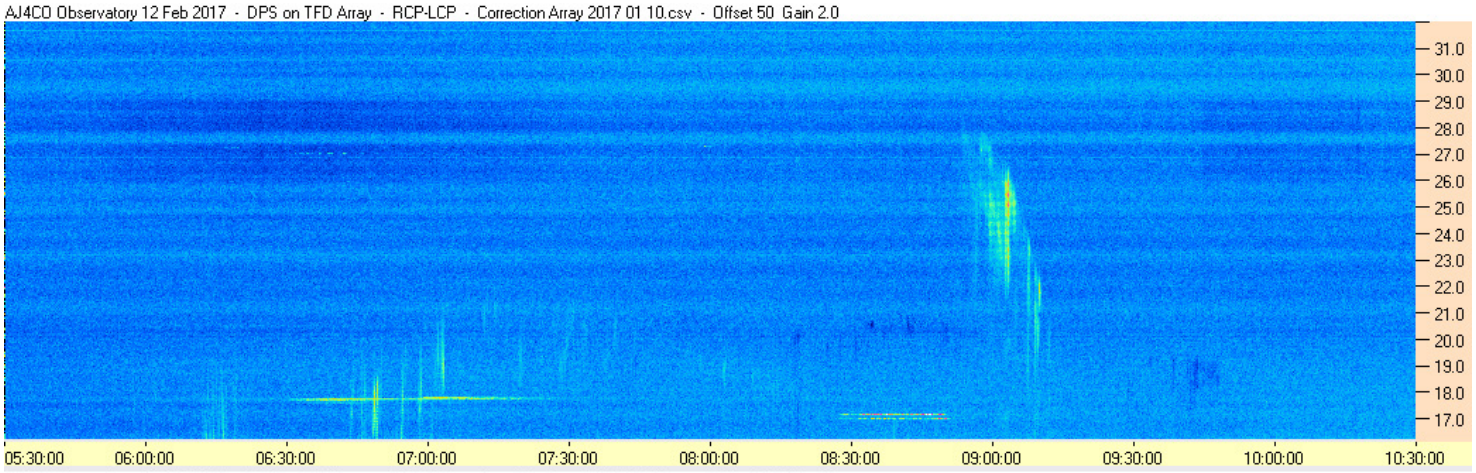
AJ4CO Observatory 12 Feb 2017 - DPS on TFD Array - RCP-LCP - Correction Array 2017 01 10.csv - Offset 50 Gain 2.0
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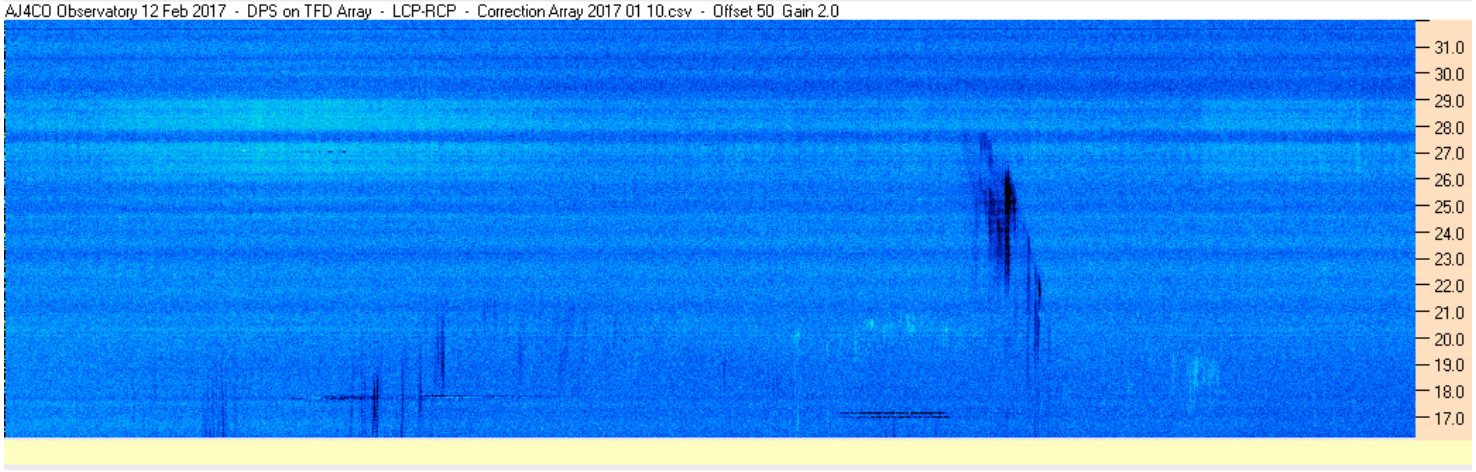
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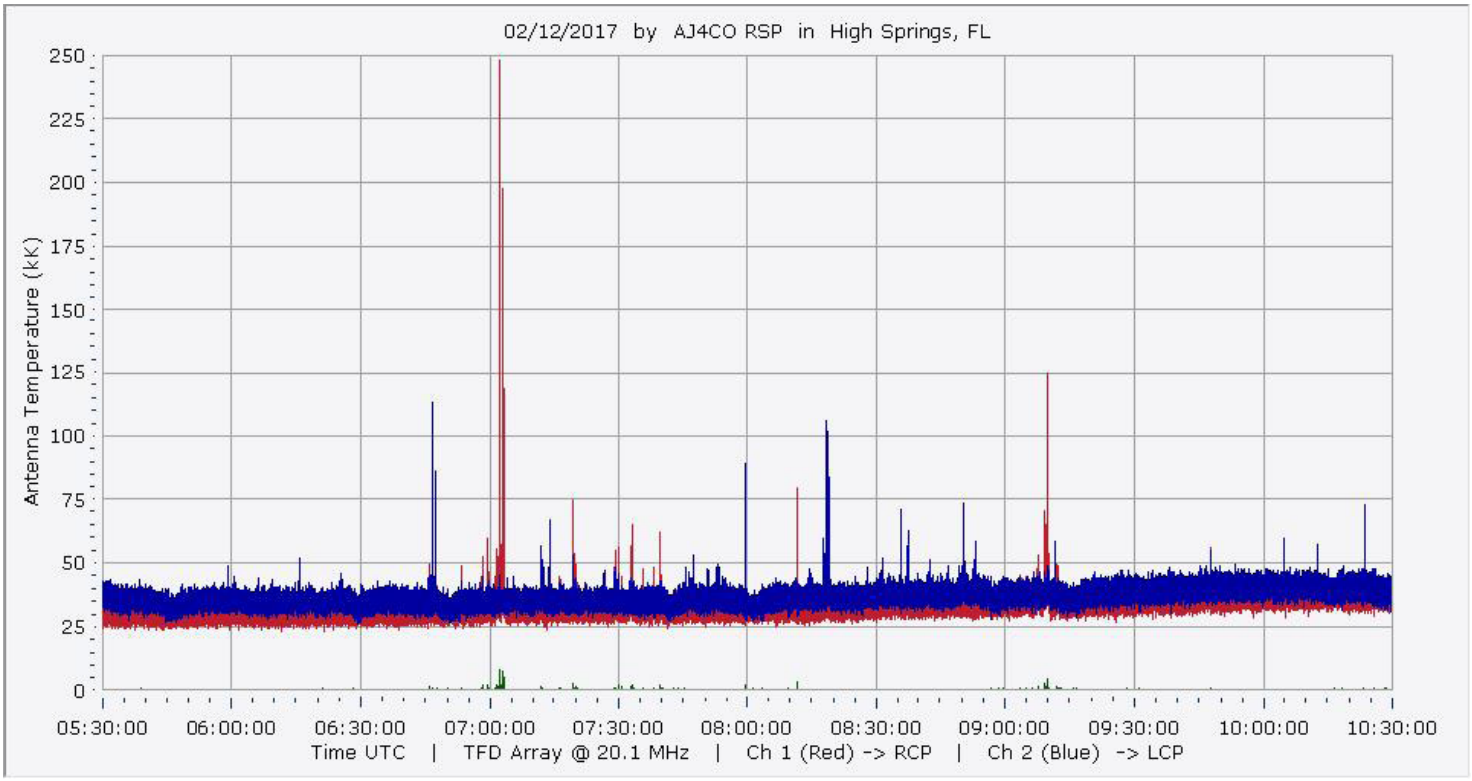
02/12/2017 by AJ4CO RSP in High Springs, FL
Antenna Temperature (kK)
250
225
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175
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125
100
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05:30:00
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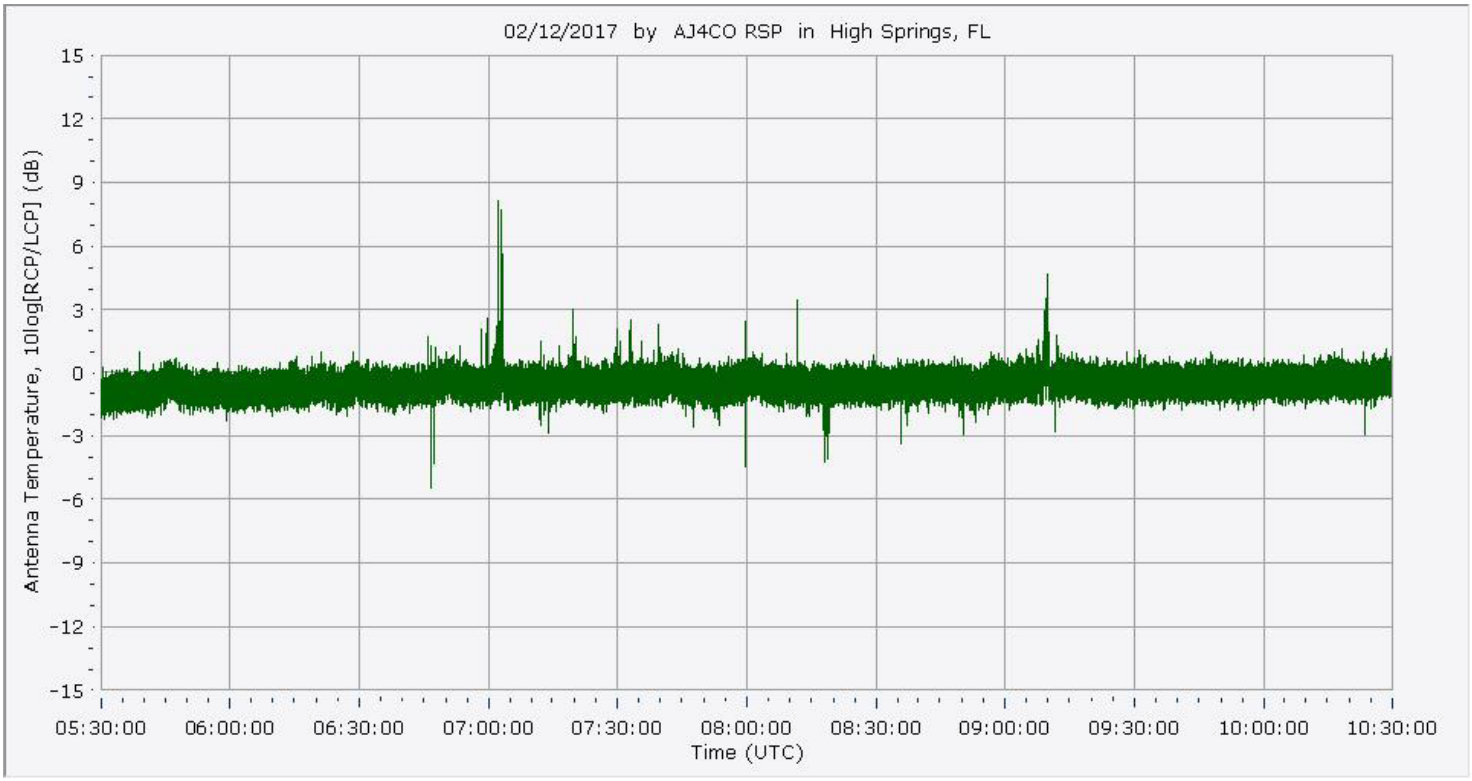
Time UTC | TFD Array @ 20.1 MHz | Ch 1 (Red) -> RCP | Ch 2 (Blue) -> LCP


02/12/2017 by AJ4CO RSP in High Springs, FL
Antenna Temperature, 10log[RCP/LCP] (dB)
15
12
9
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-3
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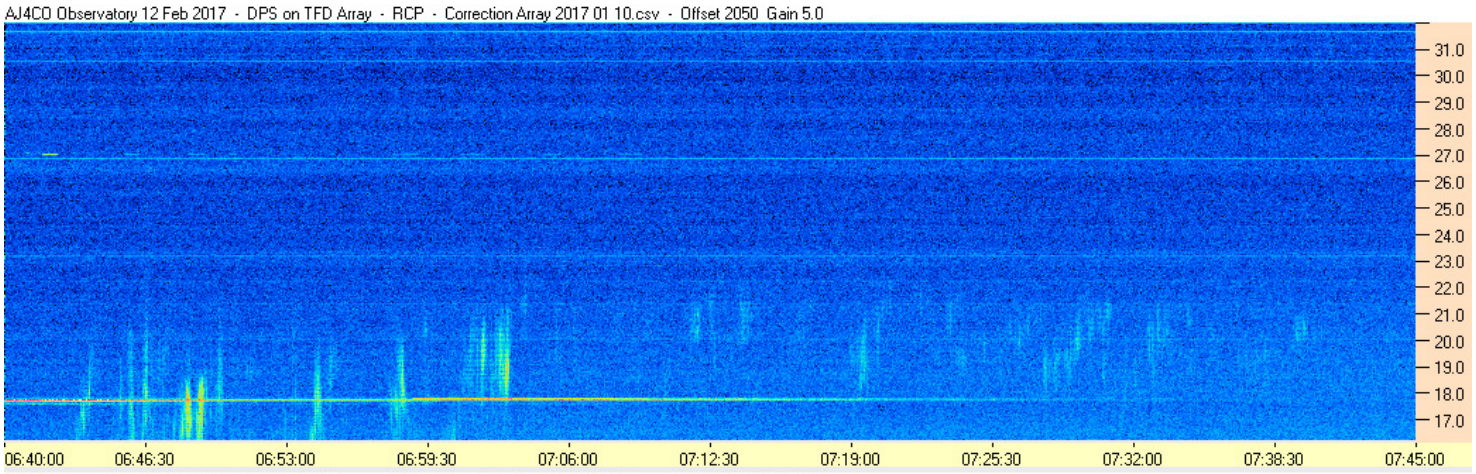
Time (UTC)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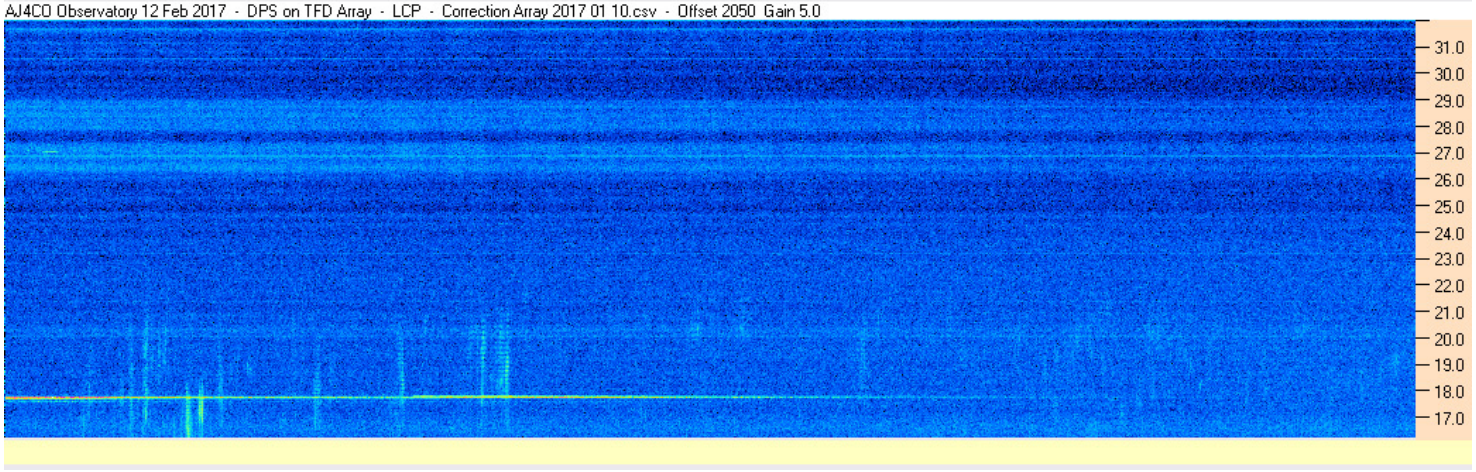
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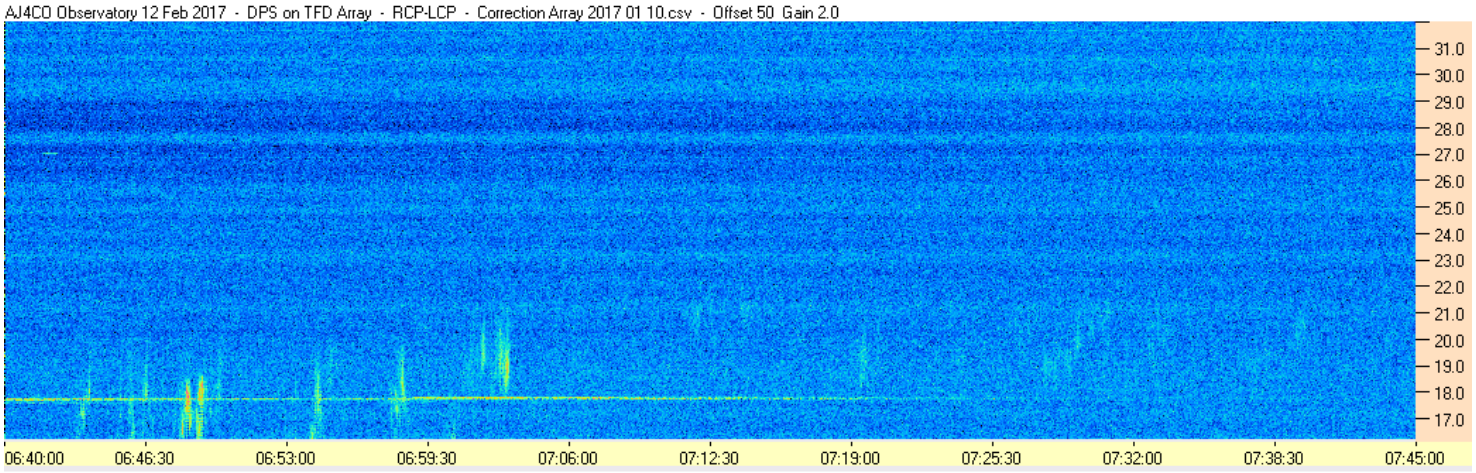
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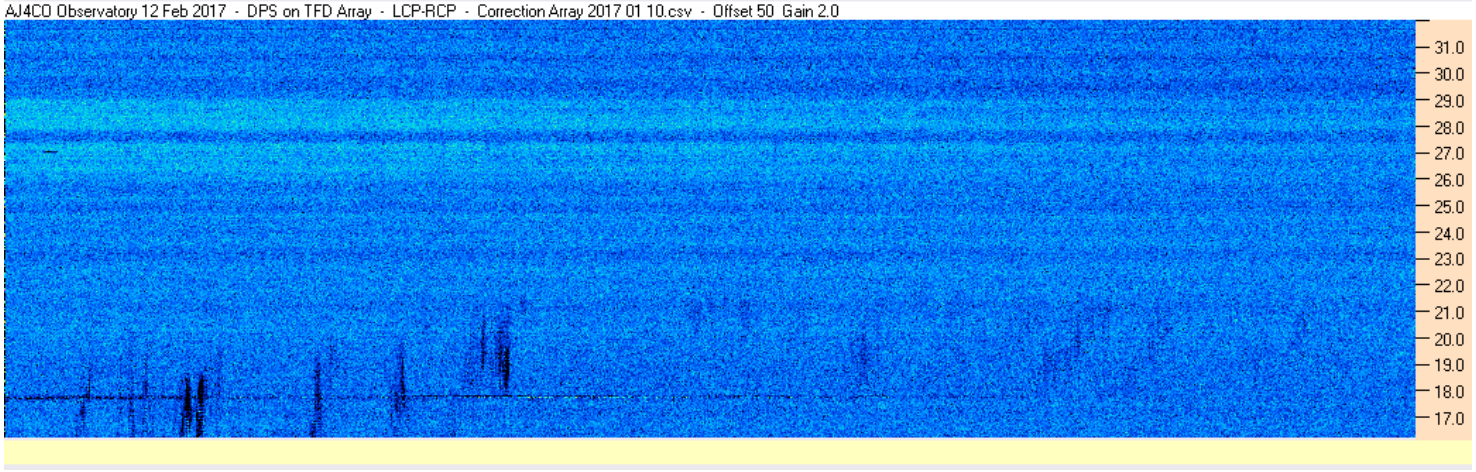
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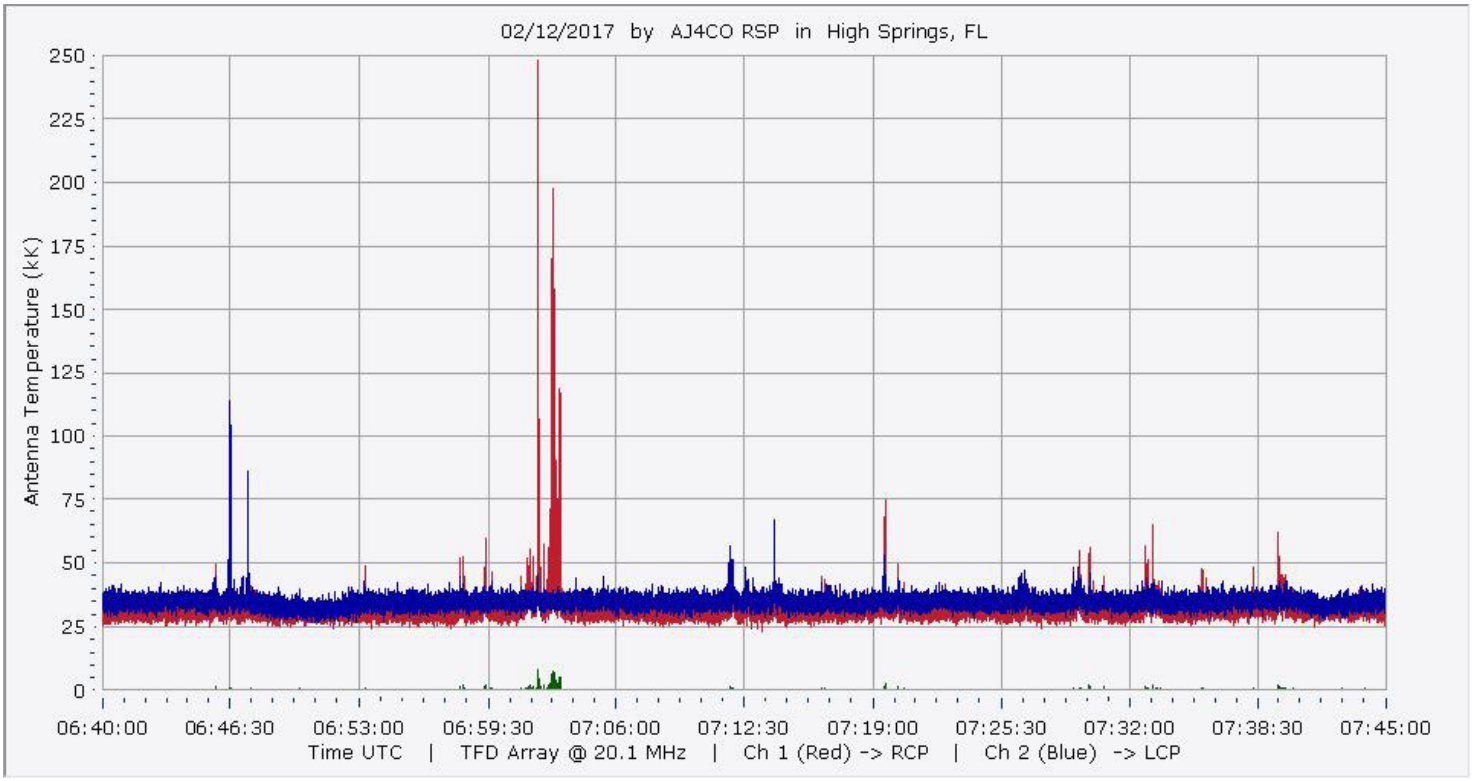
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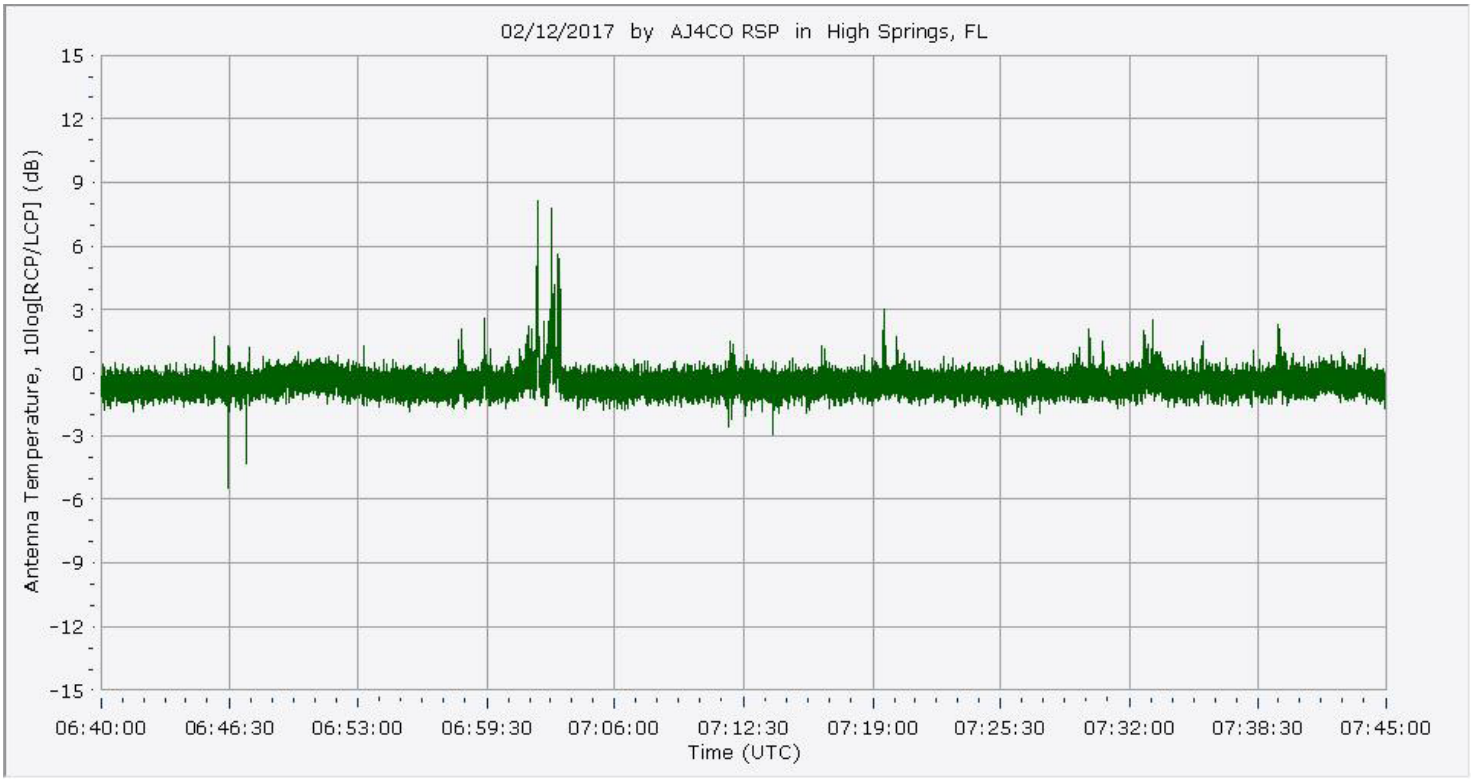
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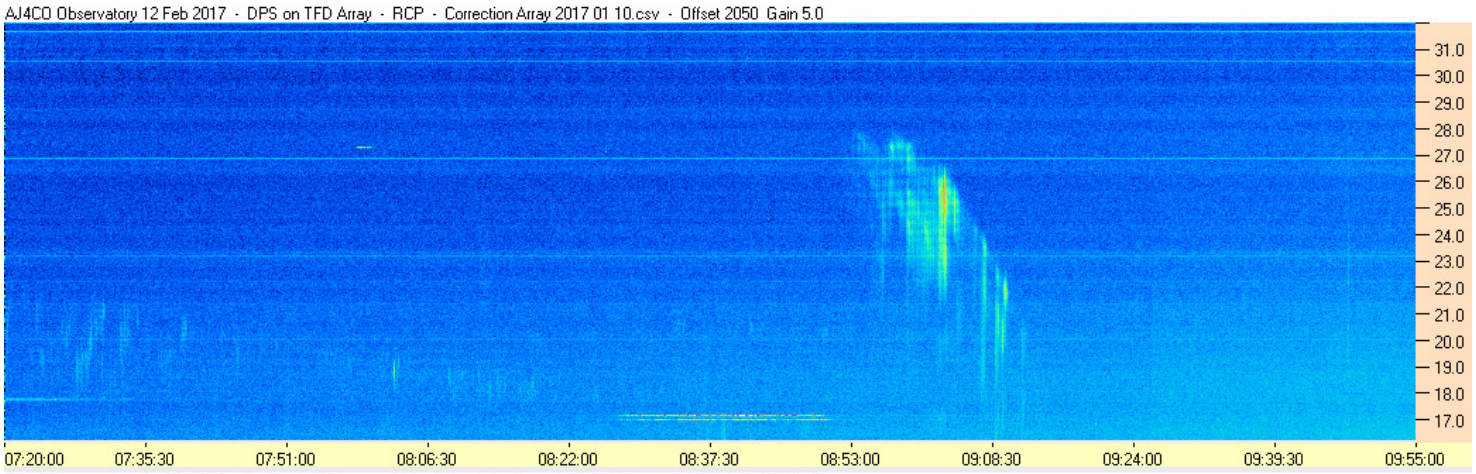
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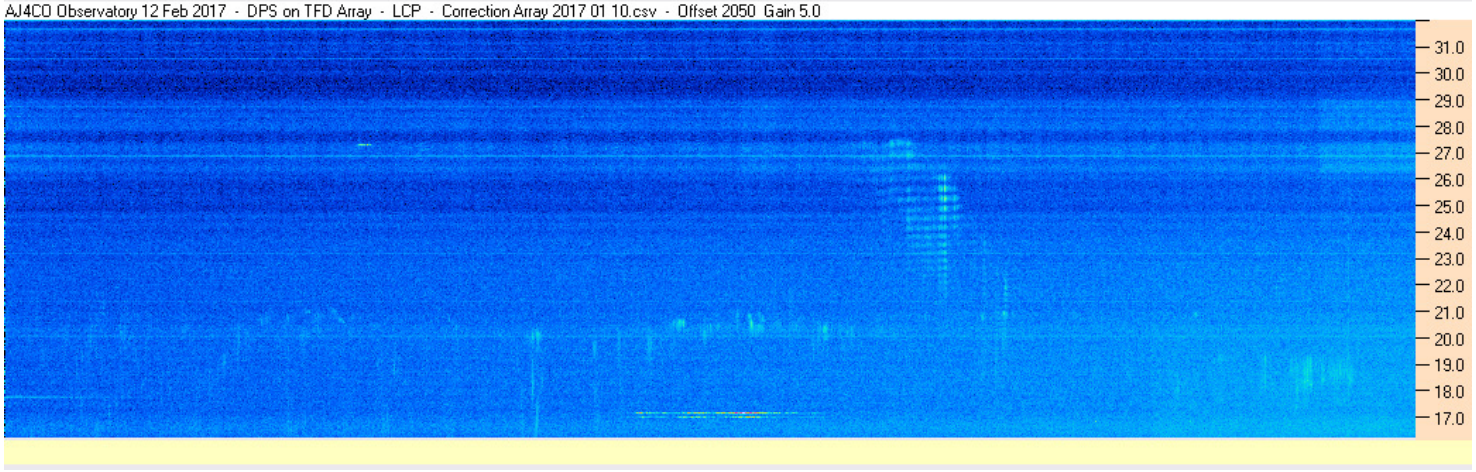
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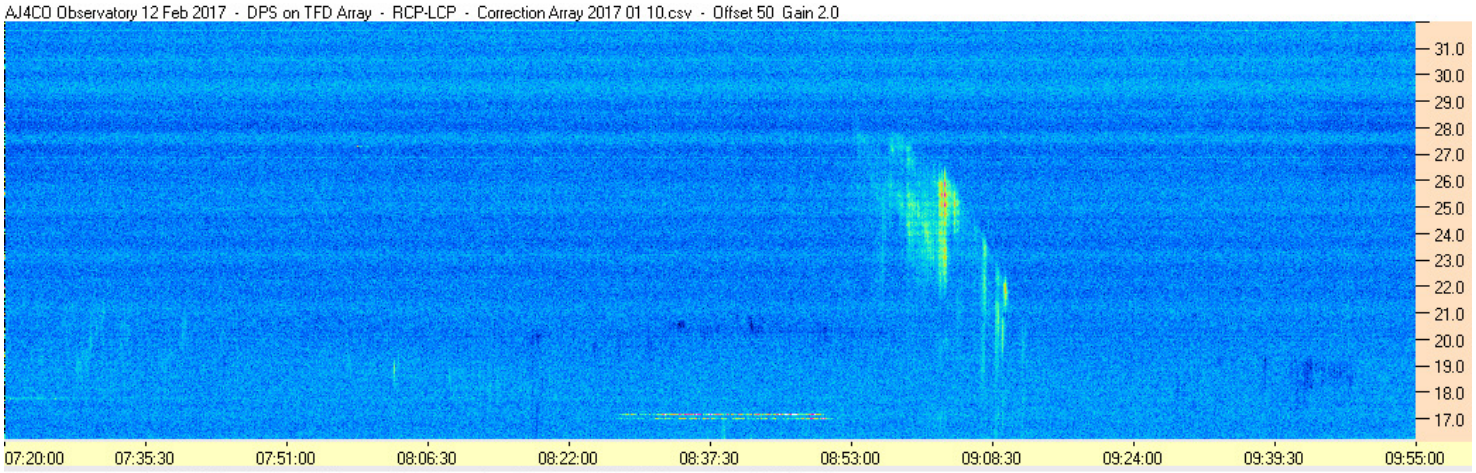
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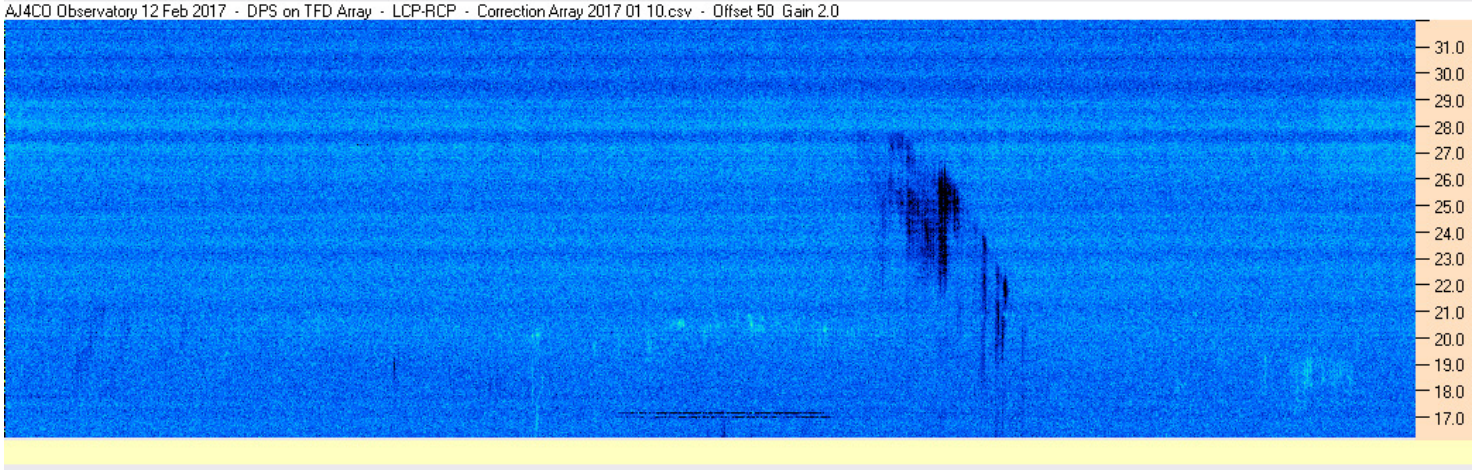
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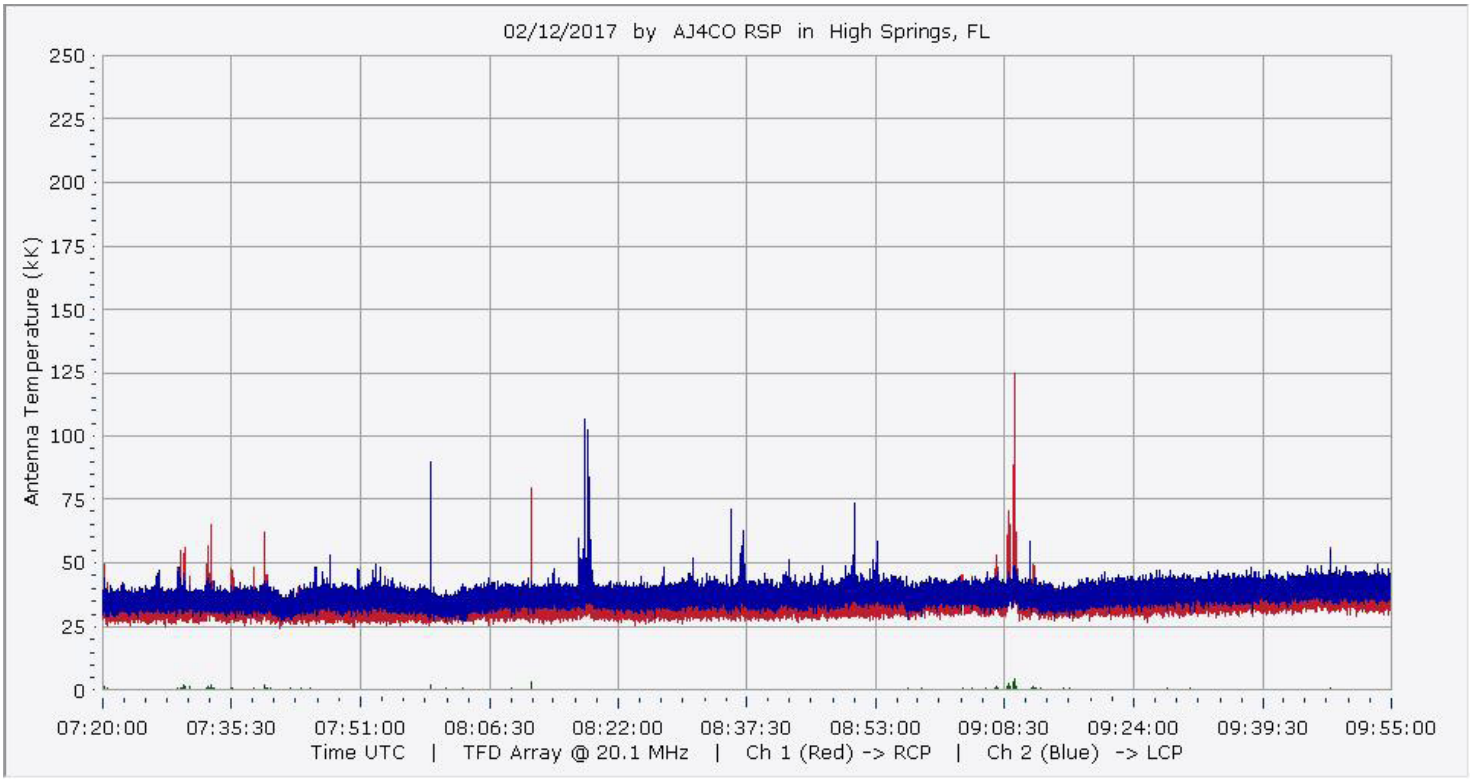
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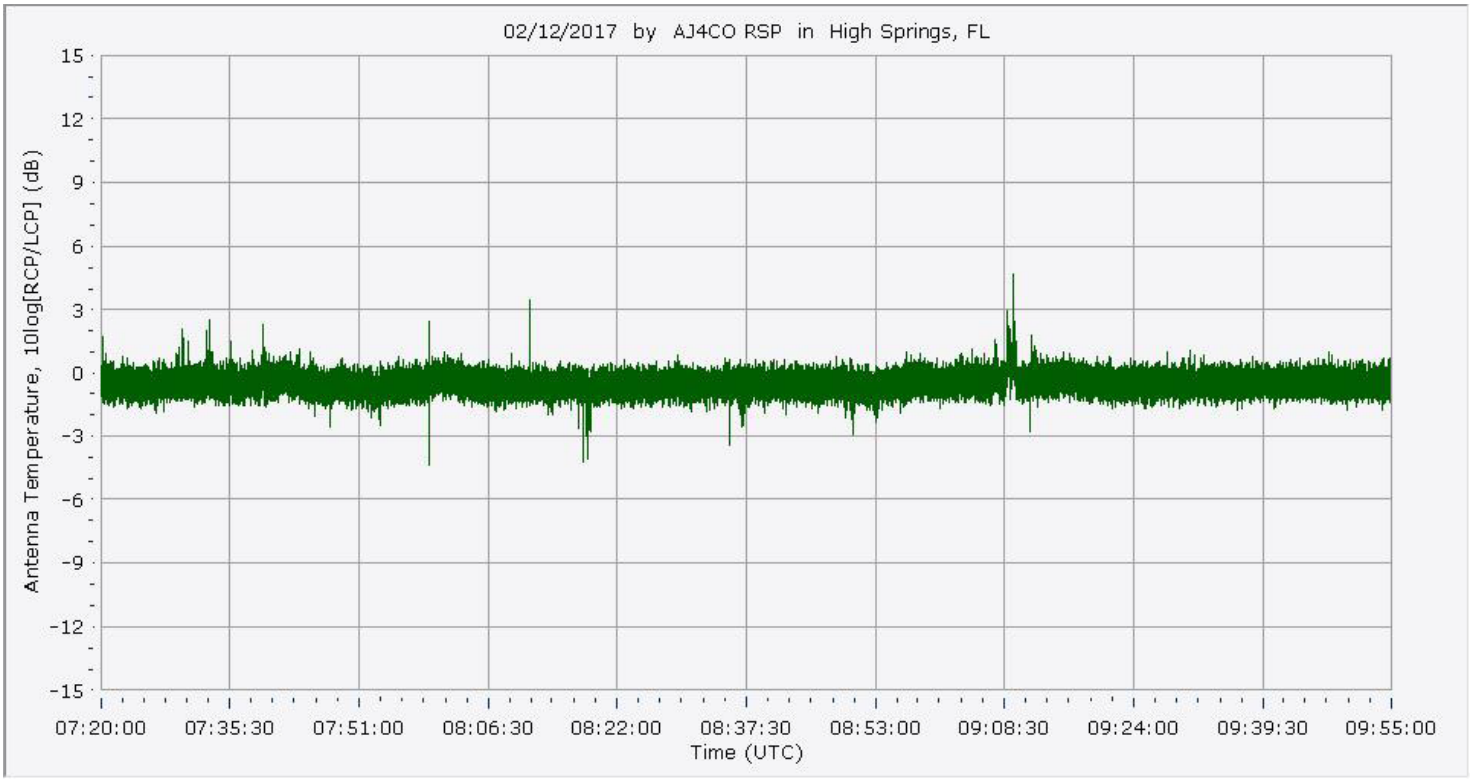
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Antenna Temperature, 10log[RCP/LCP] (dB)
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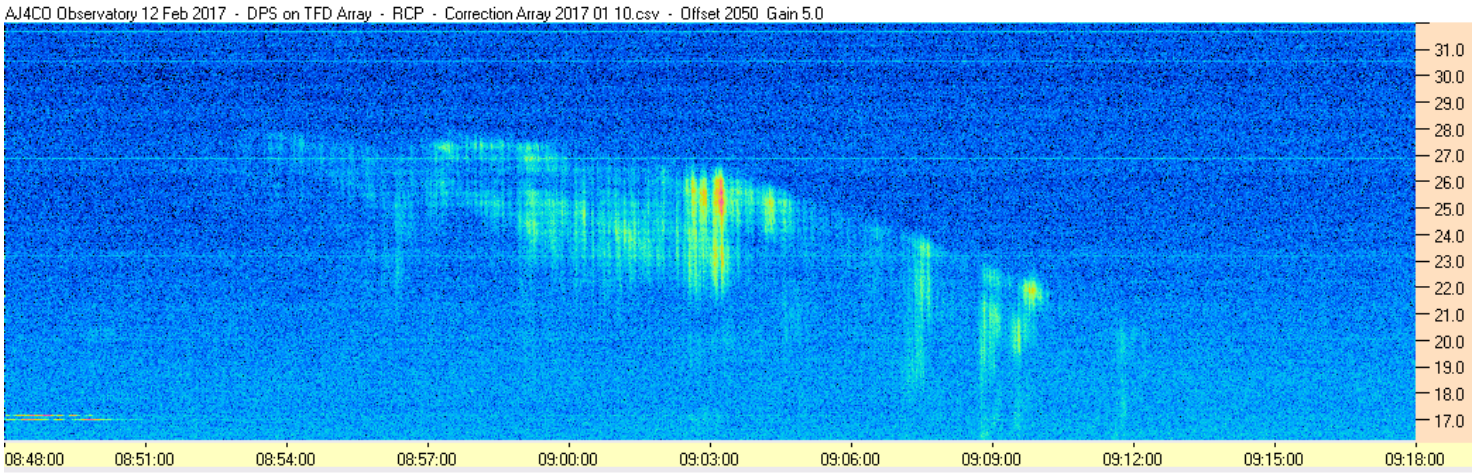
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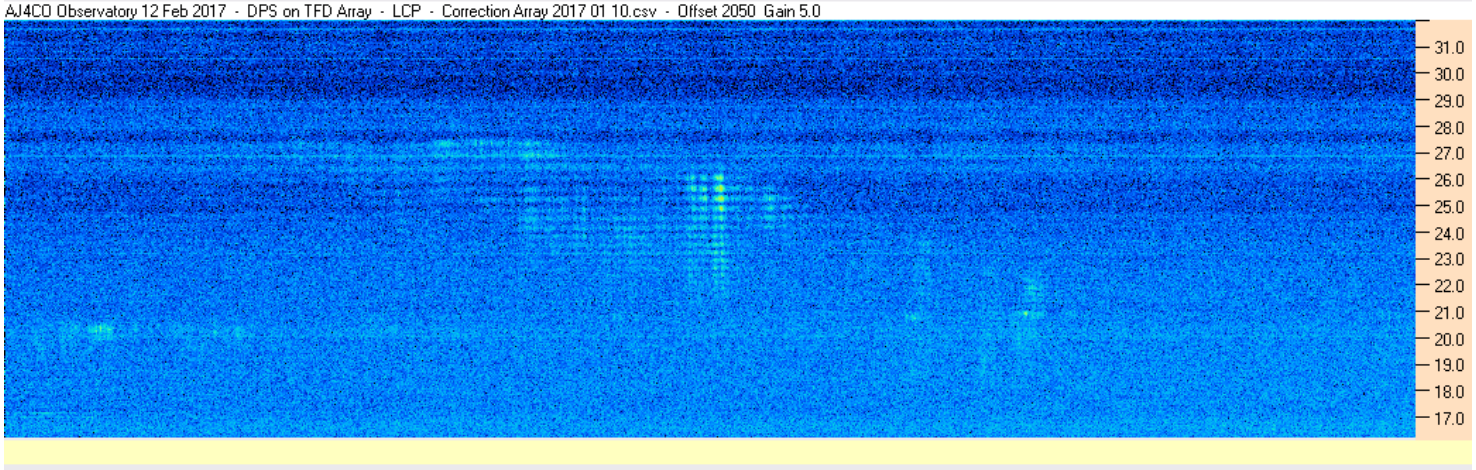
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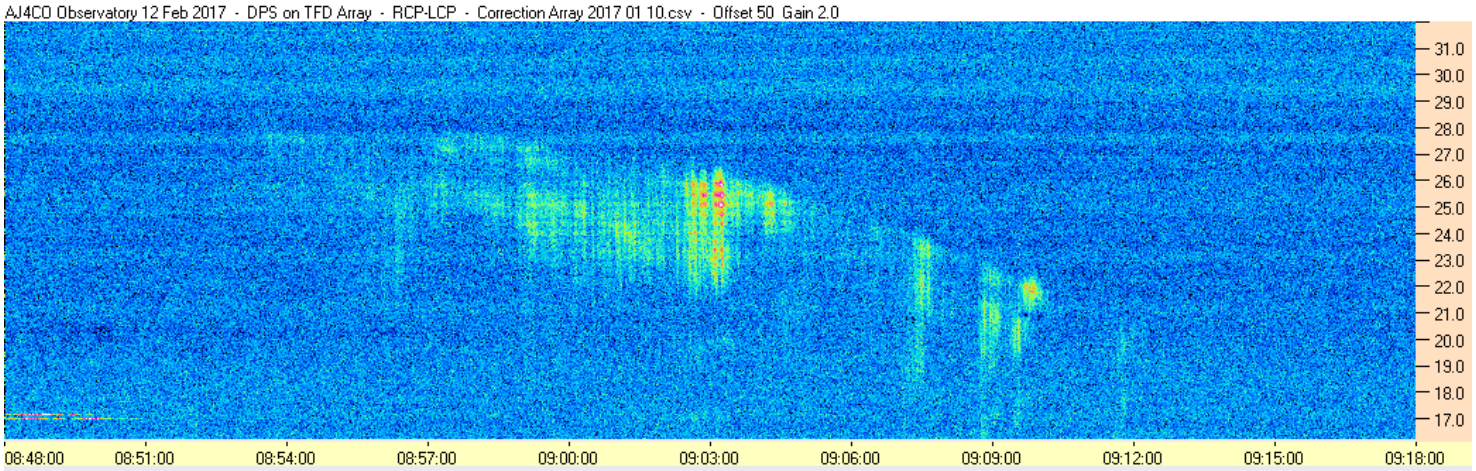
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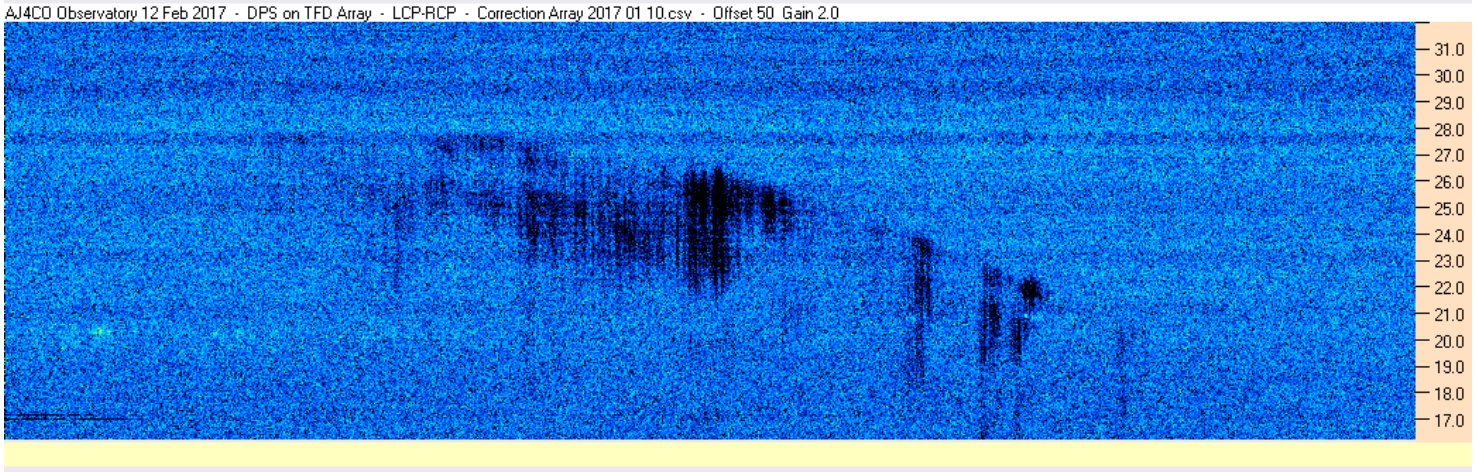
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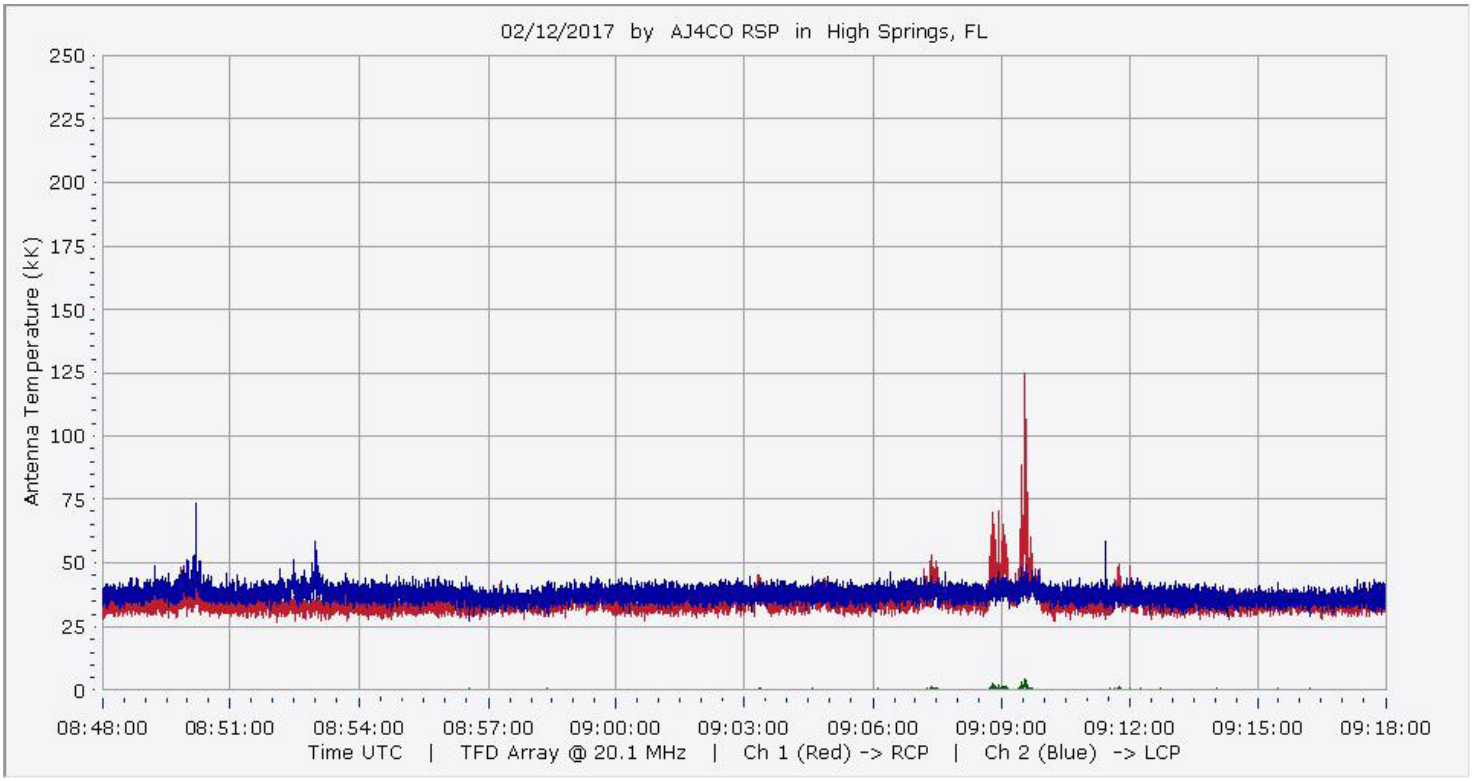
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Antenna Temperature (kK)
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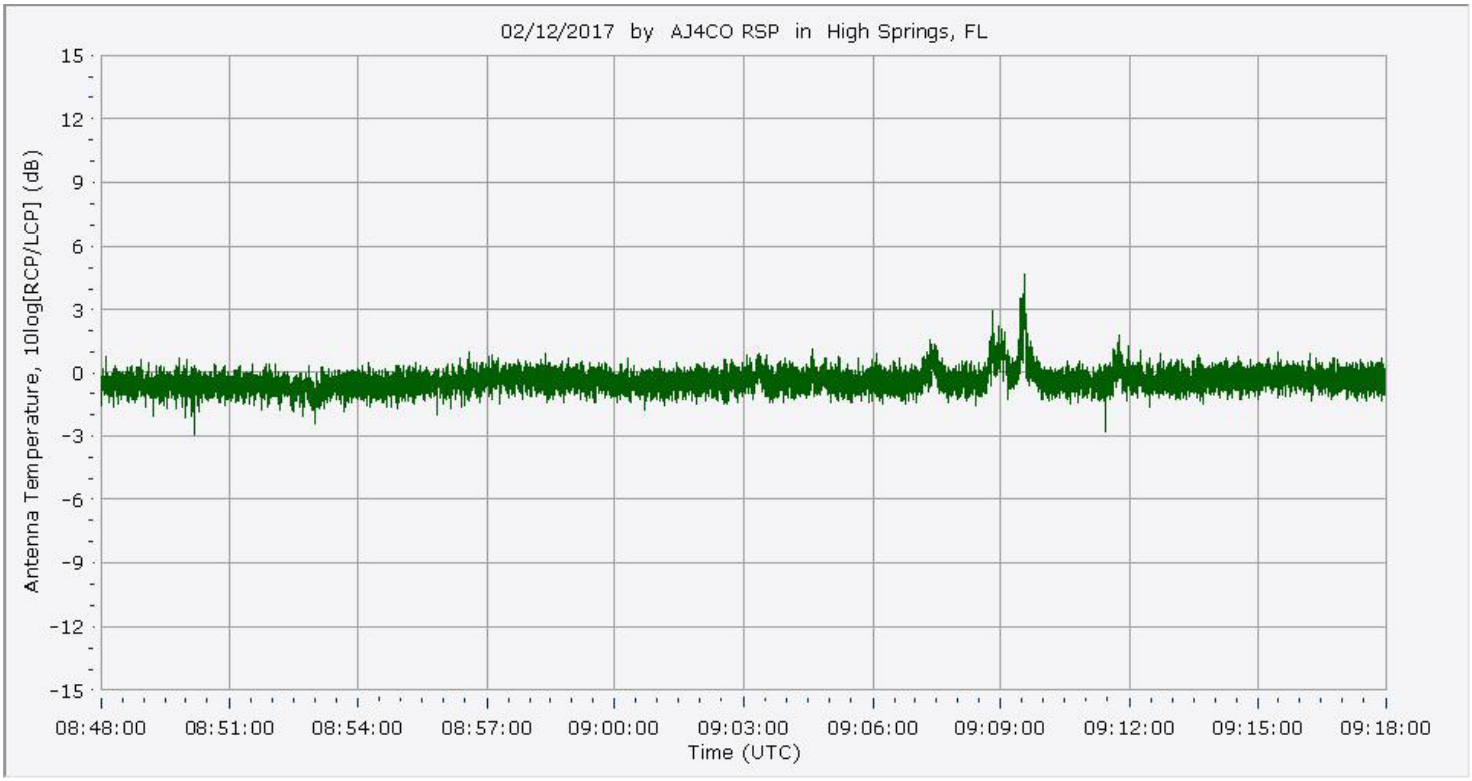
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