AJ4CO OBSERVATORY

JOVIAN DAM OBSERVATION REPORT

Log Entry 781–782

15 Sep 2016 A/nA

Some Io-A and non-Io-A from Thursday.

Also the obligatory line noise.

It seems from subjective past experience that Io-controlled emission usually has an arc shape (vertex early or late), while non-Io-controlled emission usually has a linear frequency drift; i.e., that a non-Io "arc" is not curved (at least not above 16 MHz), but rather a tilted triangle. Therefore, the two emission events seen in the spectrograms are logged as separate events.

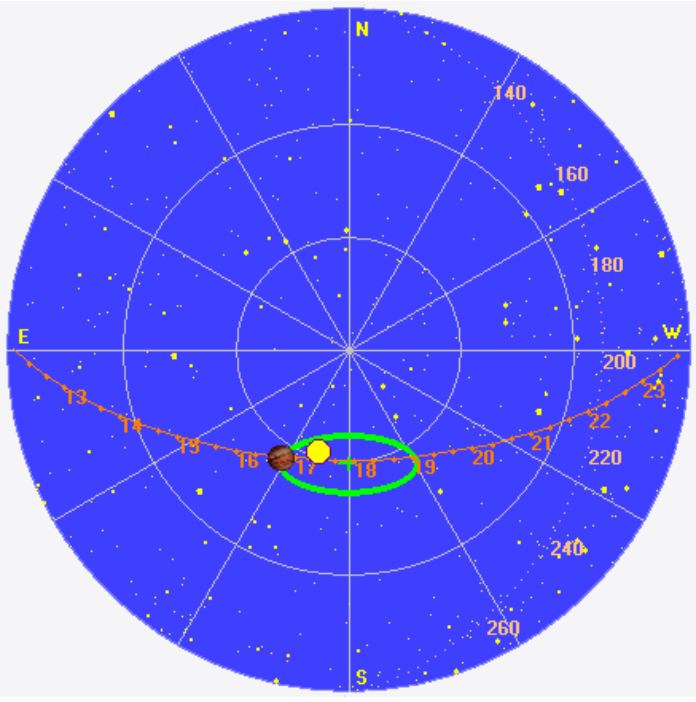
RCP dominant L bursting 1552–1612 UTC from 16 to 25 MHz, vertex late arc. (Io-A)

RCP dominant L bursting 1709–1745 UTC from 16 to 22 MHz, negative frequency drift emission envelope. (non-Io-A)

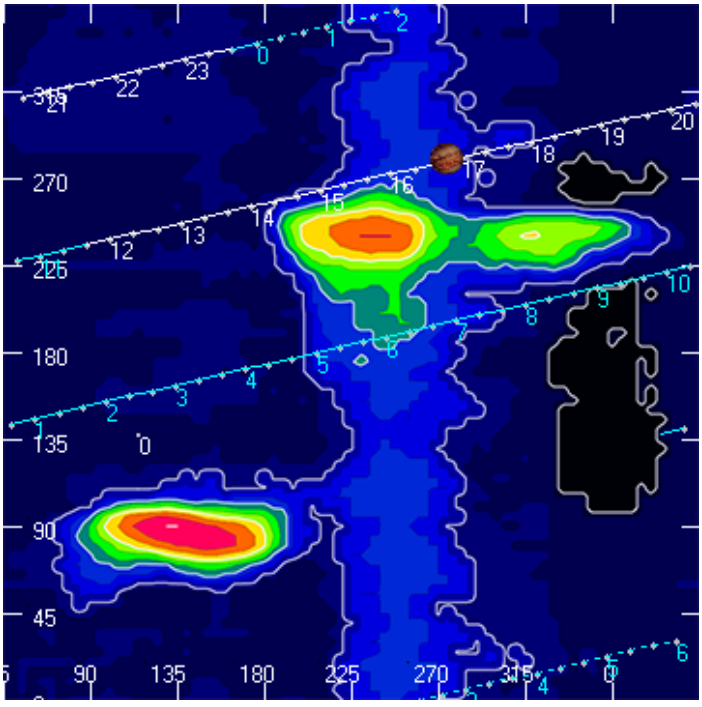
Jupiter was -31° to -3° off axis.

Jupiter was trailing the Sun by 8°.

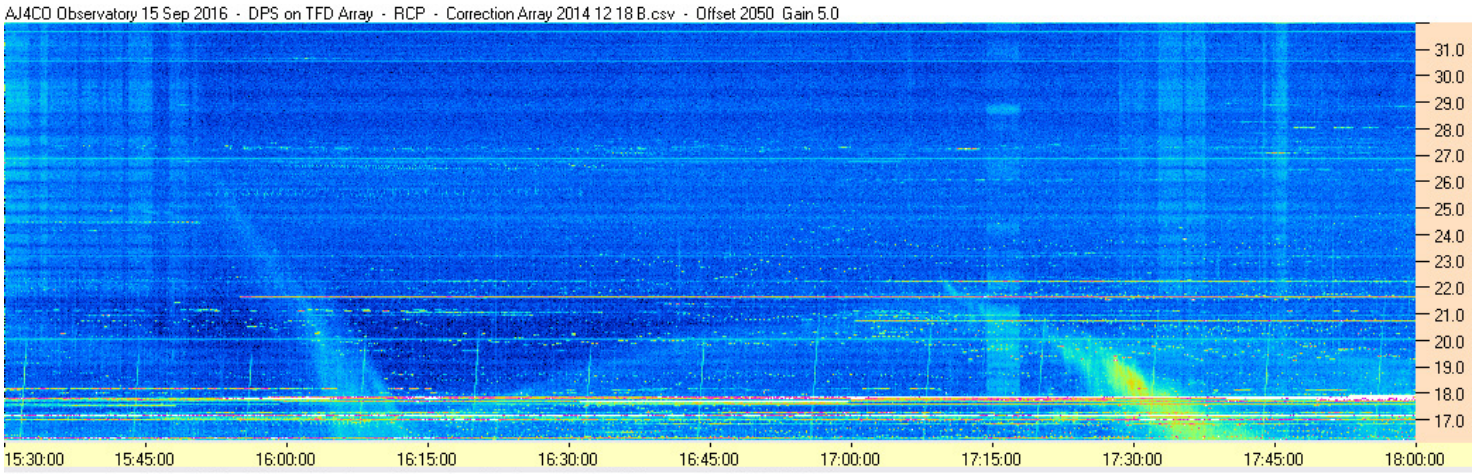
Jupiter's location at midpoint of observed emission (1648 UTC)



Sky map with array HPBW in green.



CML–Io phase plane.


AJ4CO Observatory 15 Sep 2016 - DPS on TFD Array - RCP - Correction Array 2014 12 18 B.csv - Offset 2050 Gain 5.0
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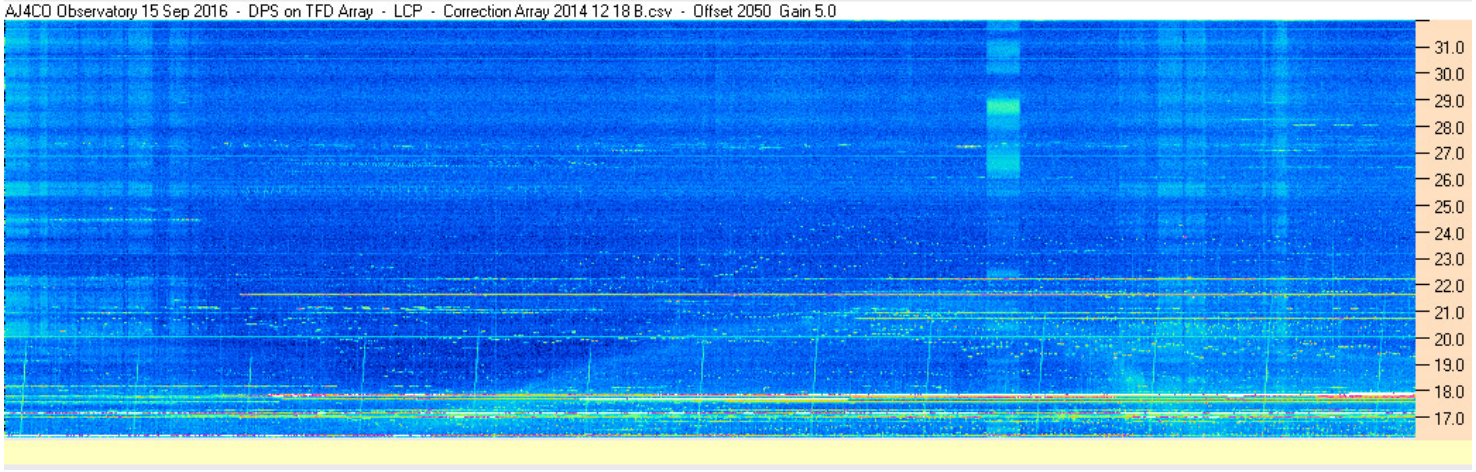
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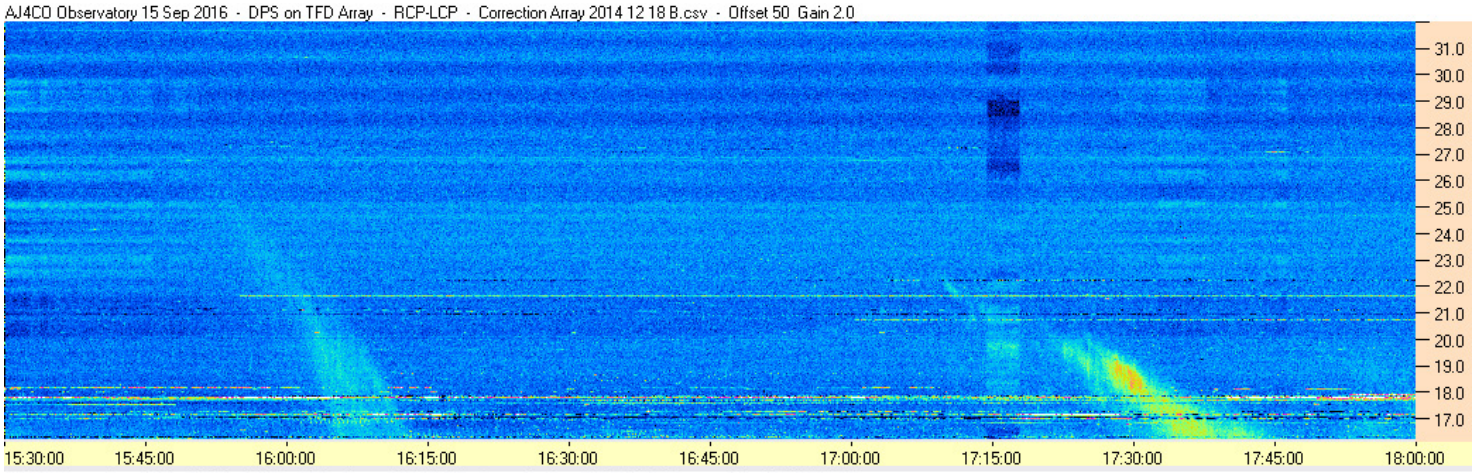
AJ4CO Observatory 15 Sep 2016 - DPS on TFD Array - RCP-LCP - Correction Array 2014 12 18 B.csv - Offset 50 Gain 2.0
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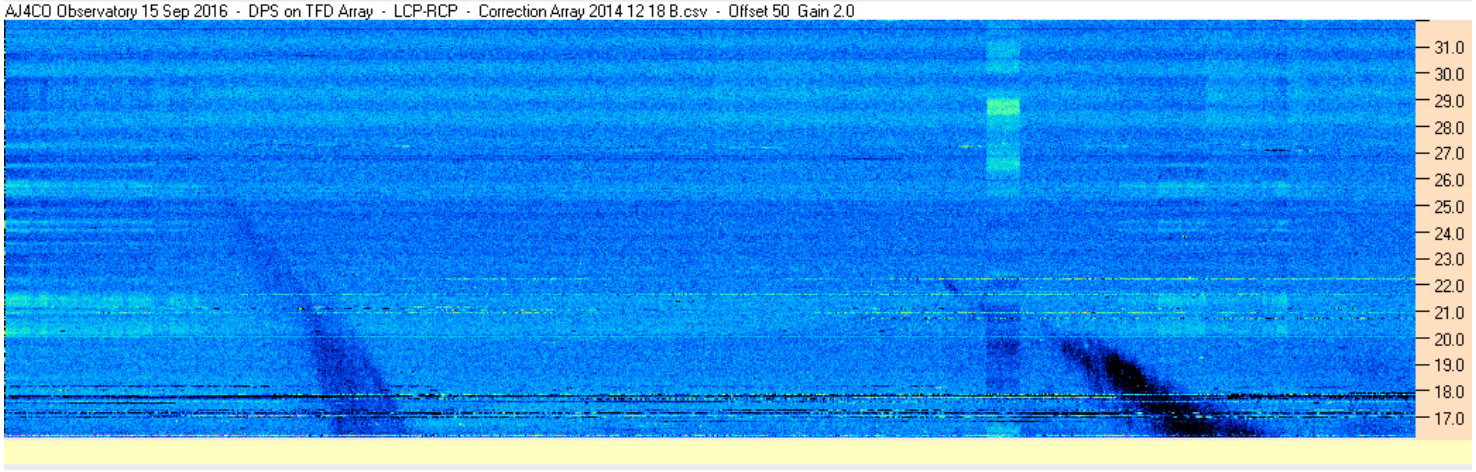
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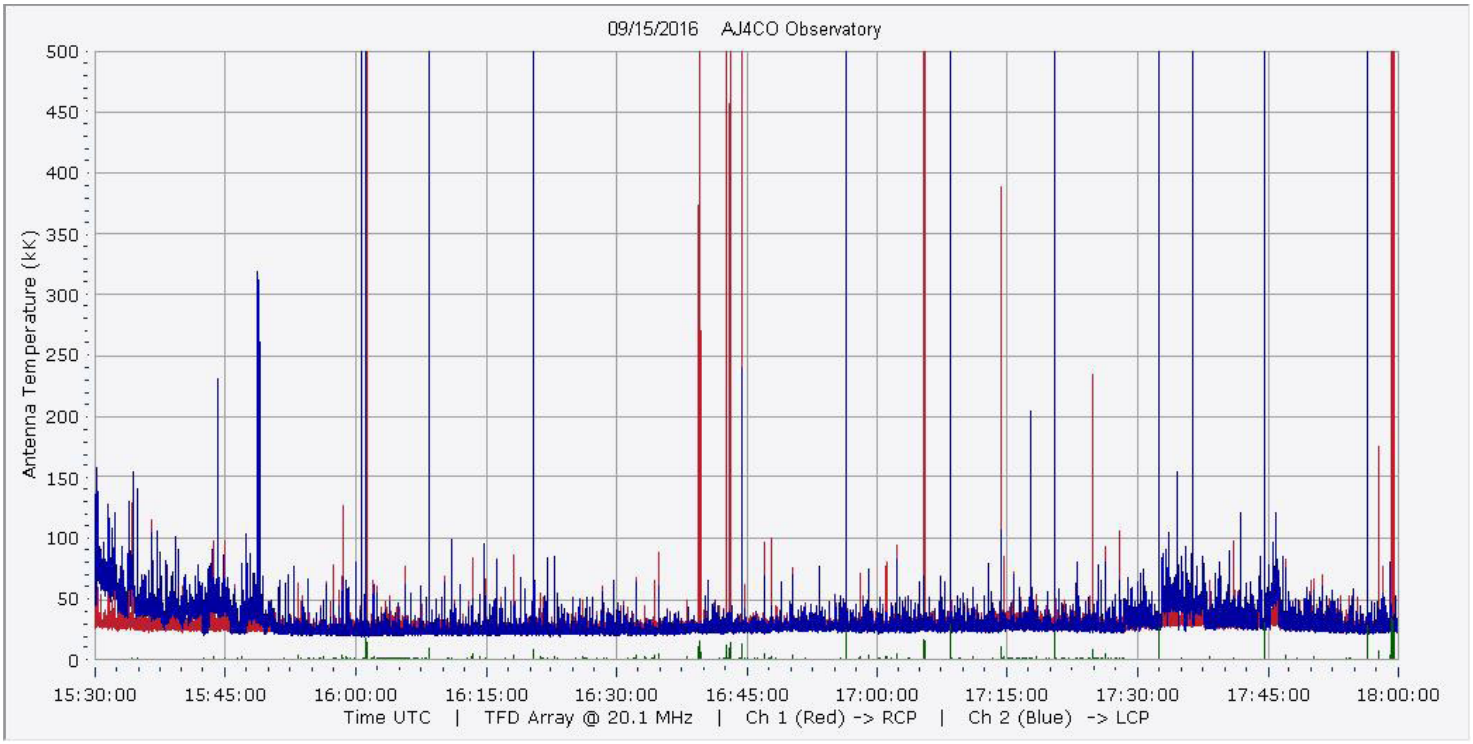
09/15/2016 AJ4CO Observatory
Antenna Temperature (kK)
500
450
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350
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15:30:00
15:45:00
16:00:00
16:15:00
16:30:00
16:45:00
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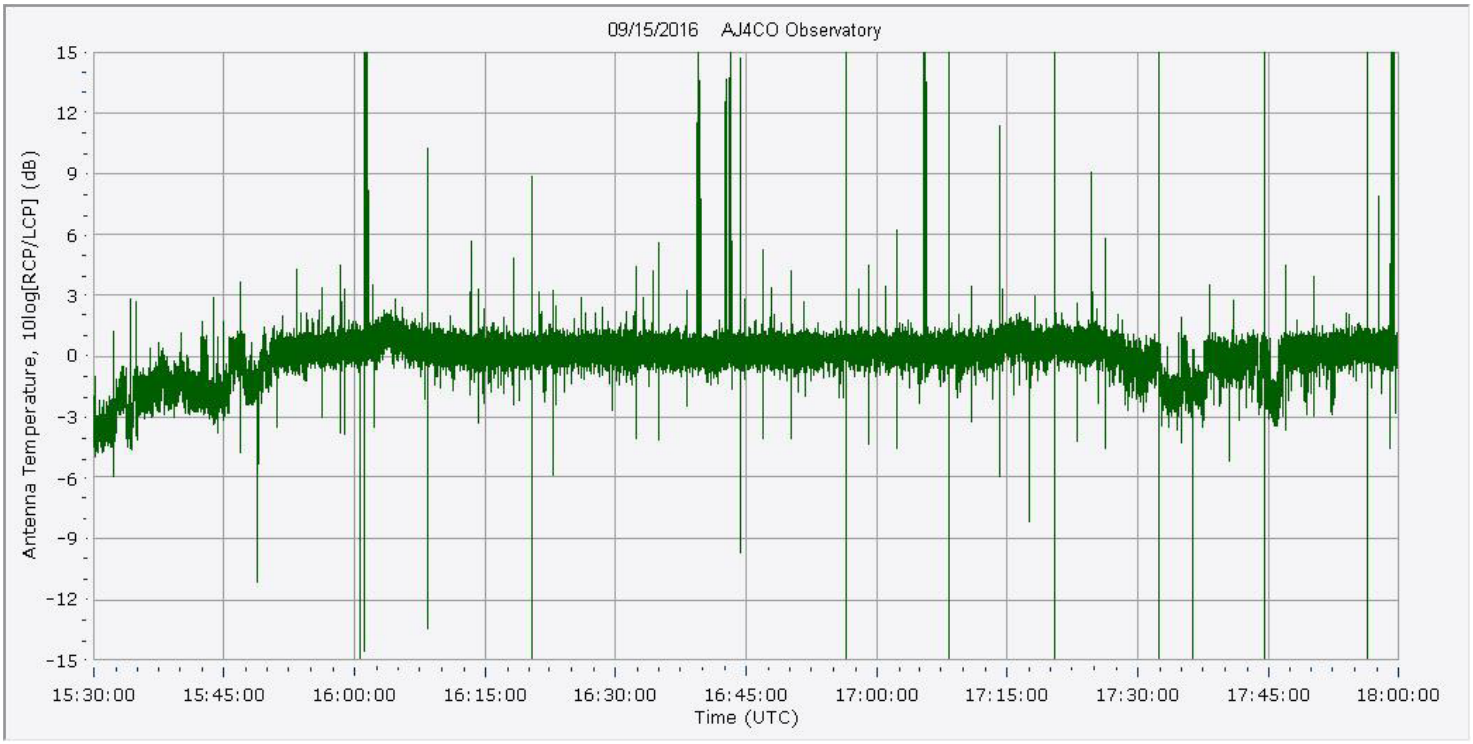
18:00:00
Time UTC | TFD Array @ 20.1 MHz | Ch 1 (Red) -> RCP | Ch 2 (Blue) -> LCP


09/15/2016 AJ4CO Observatory
Antenna Temperature, 10log[RCP/LCP] (dB)
15
12
9
6
3
0
-3
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-9
-12
-15
15:30:00
15:45:00
16:00:00
16:15:00
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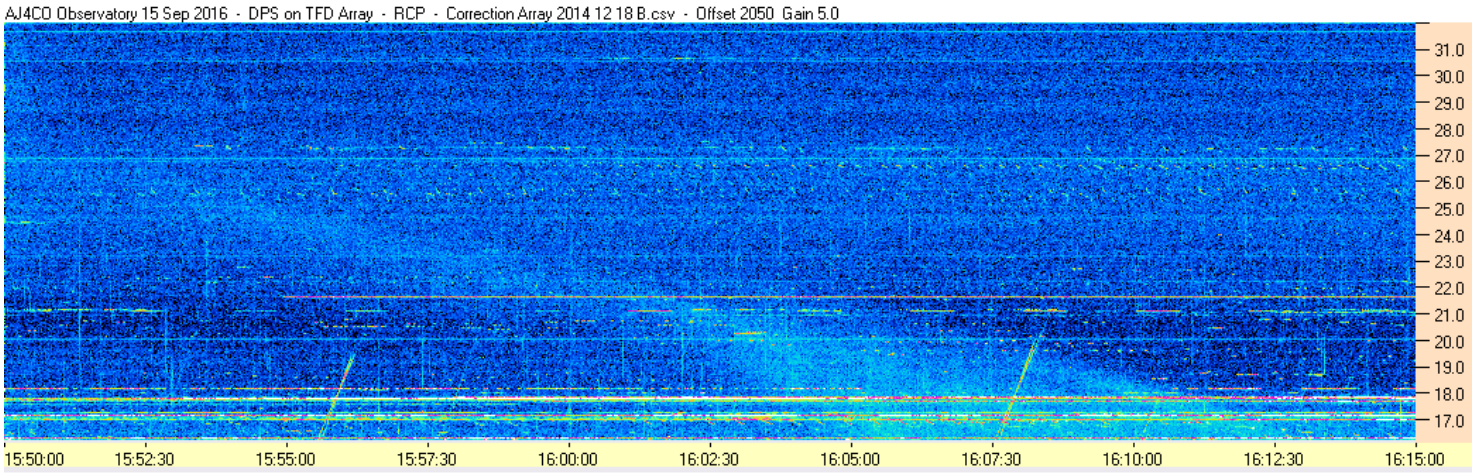
Time (UTC)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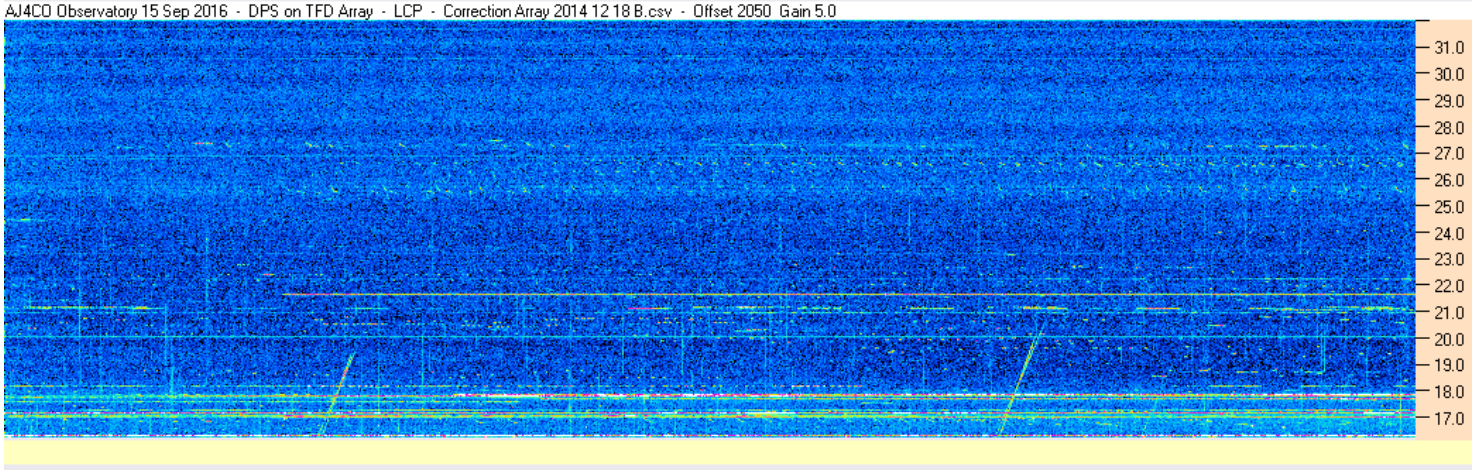
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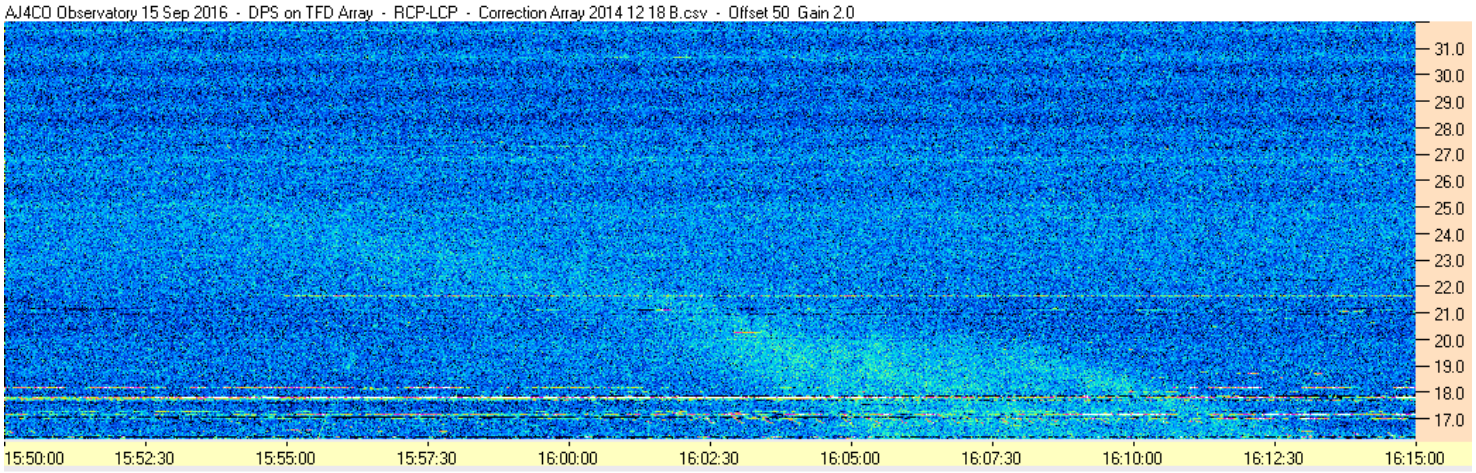
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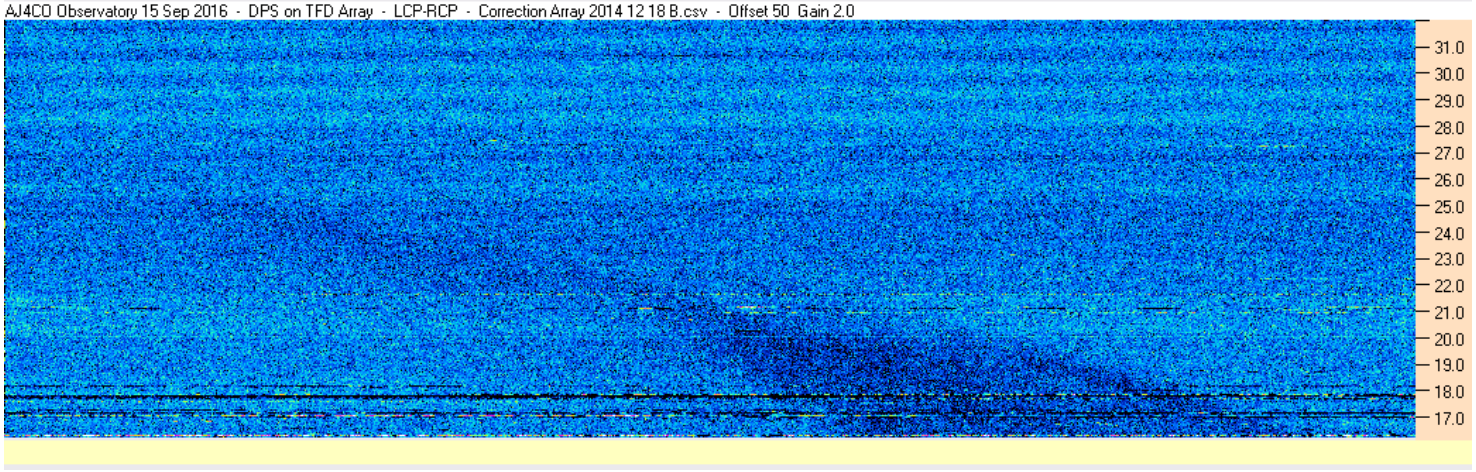
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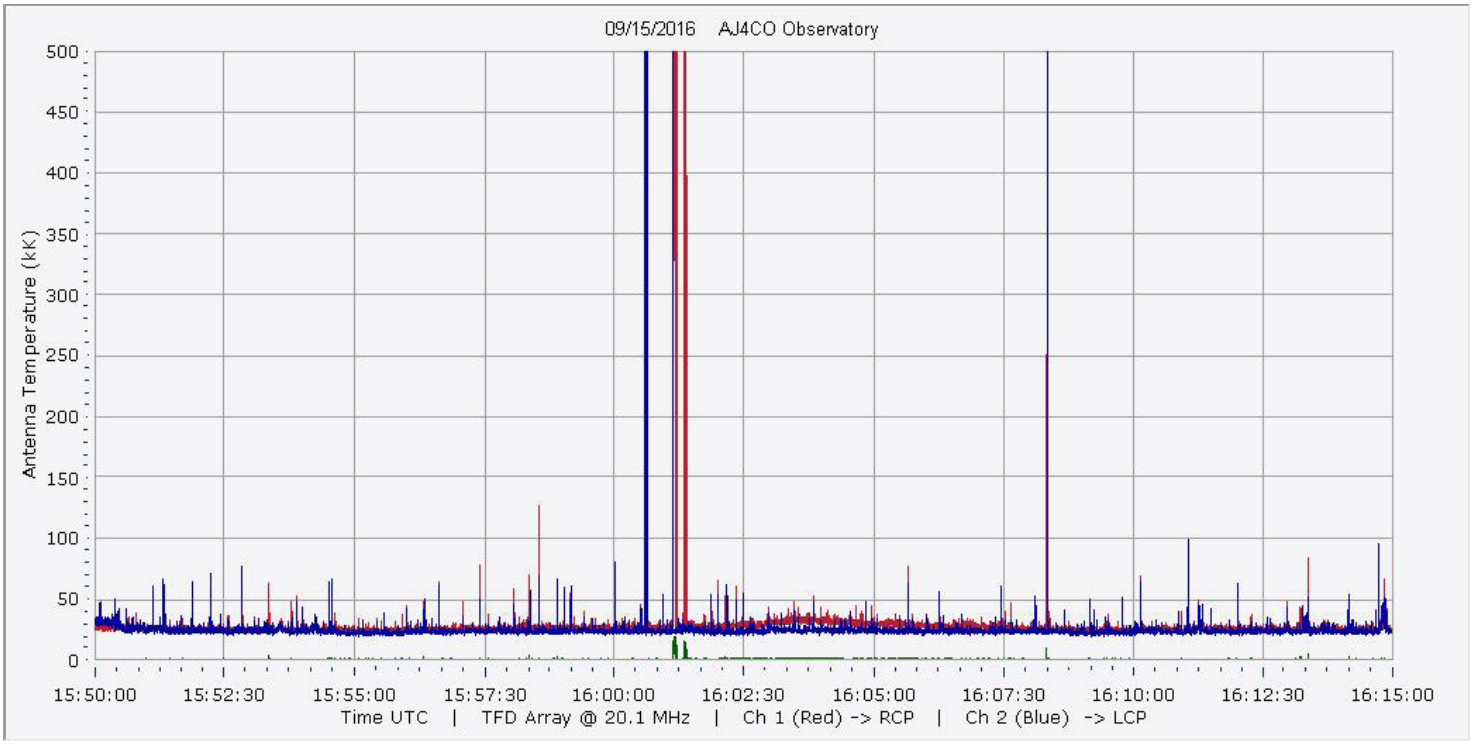
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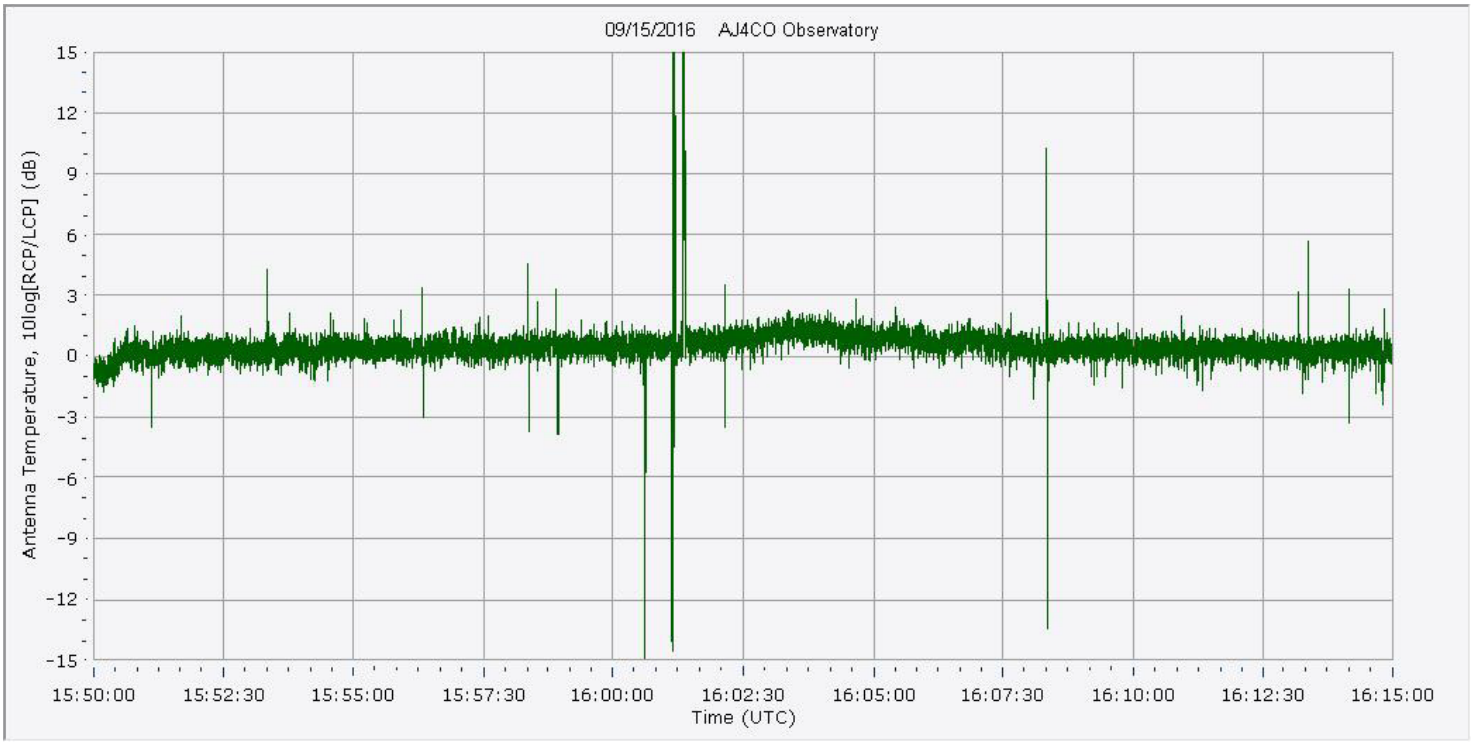
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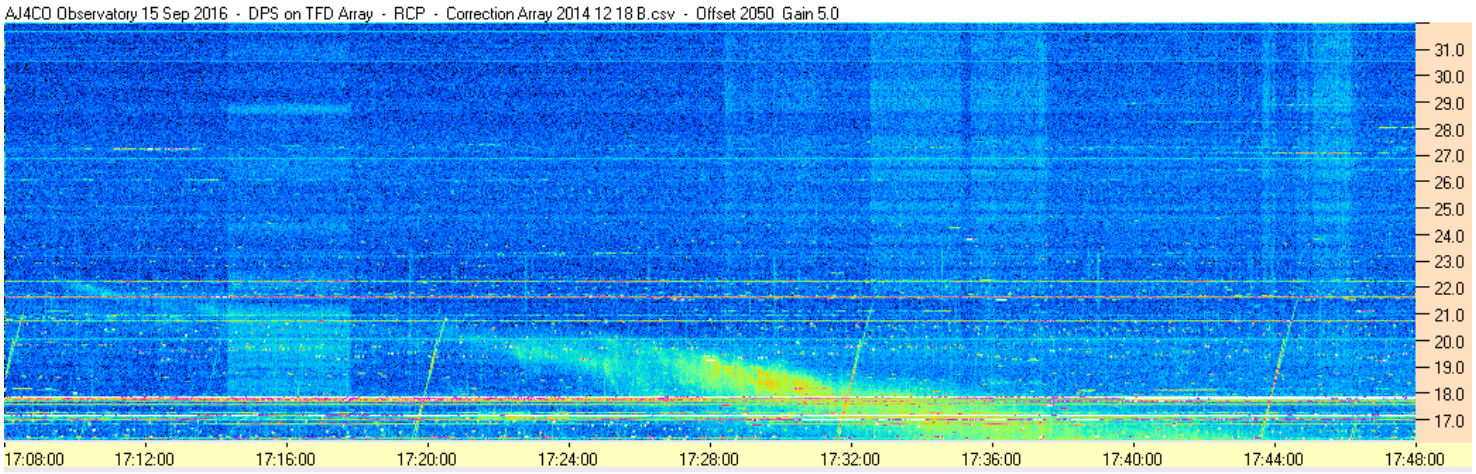
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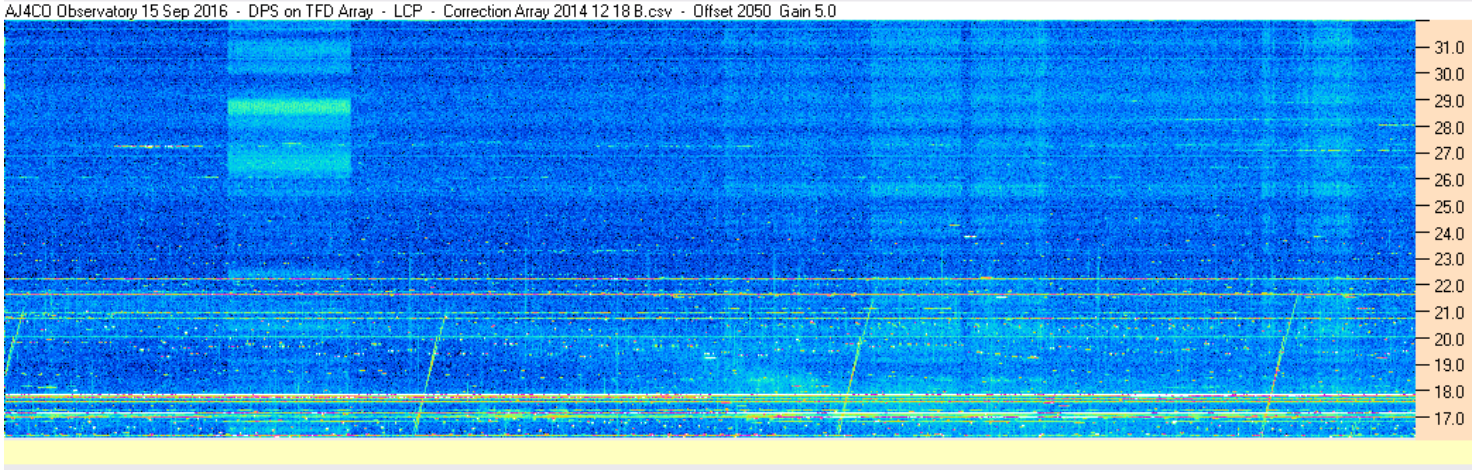
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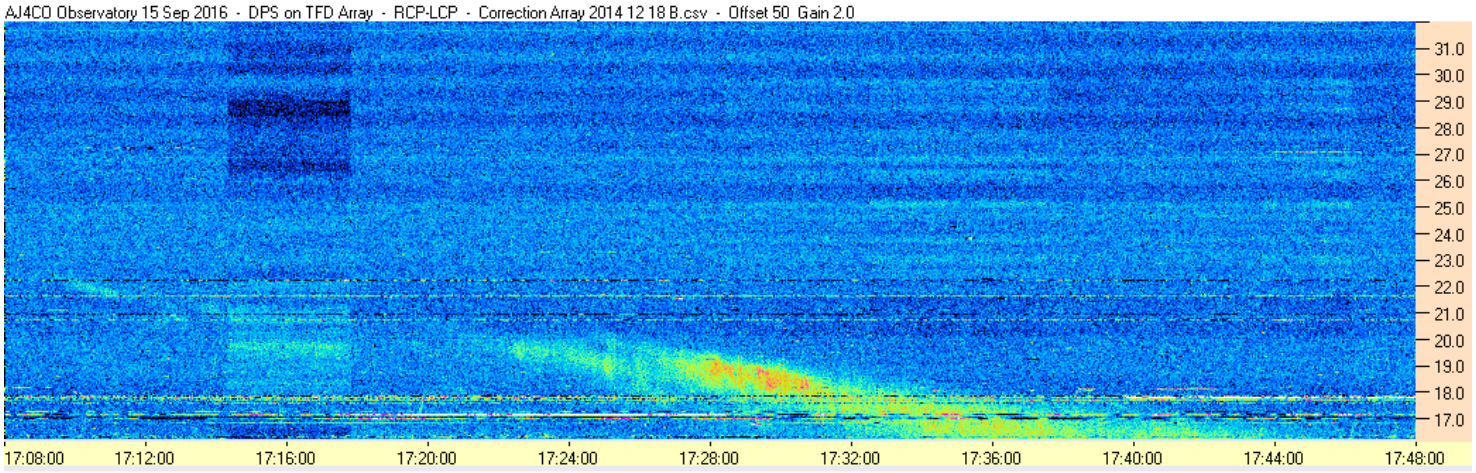
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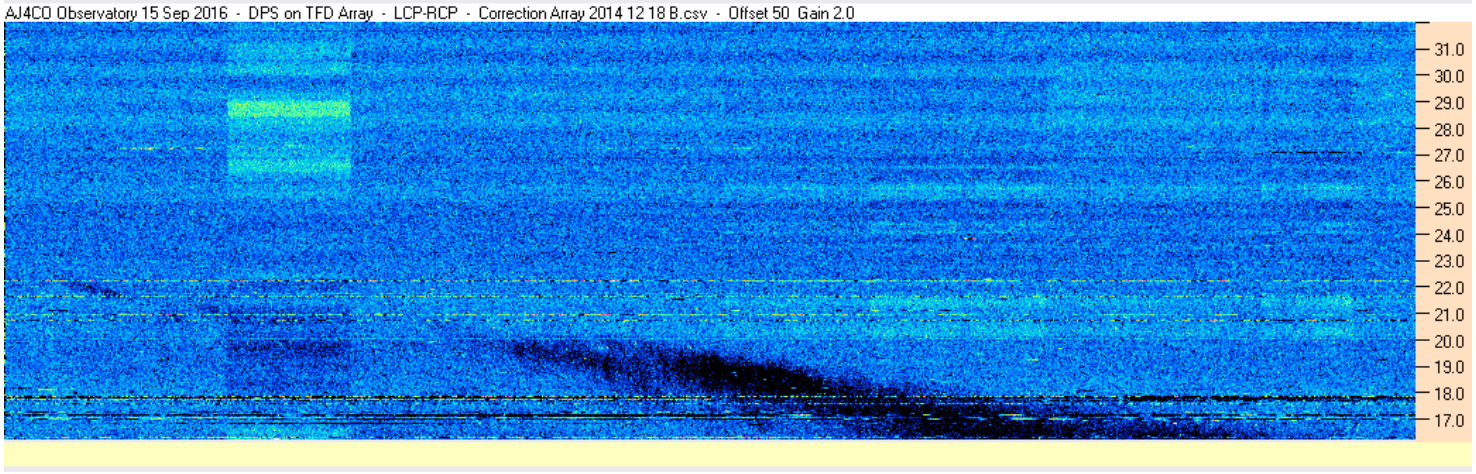
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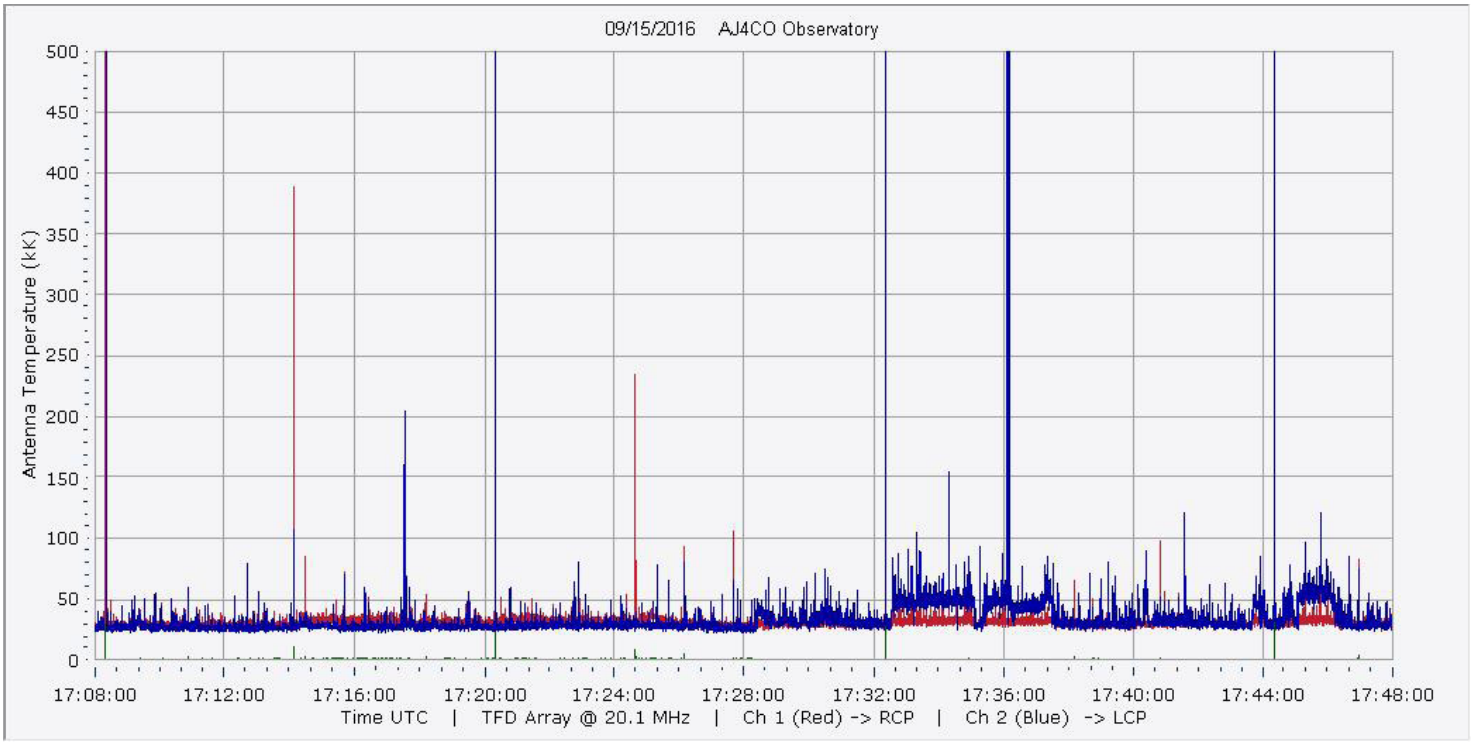
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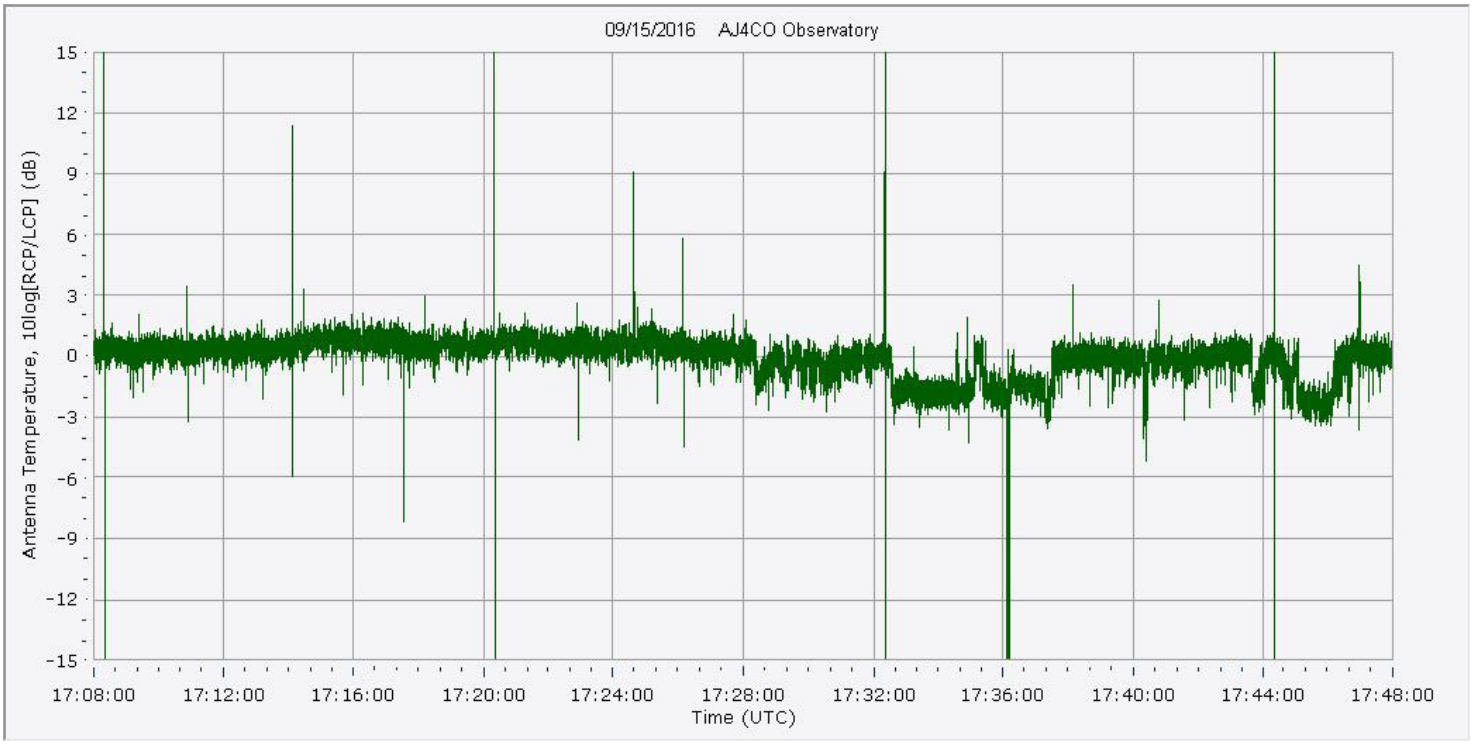
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