

# EW\_Drifts-Faraday-Imaging December 2017 Campaign Report

This is an analysis of RTIs during EW\_Drifts-Faraday-Imaging campaign from December 16 to 20, 2017. We show the RTIs and results.

## **EW\_DRIFT-FARADAY-IMAGING:**

December, 16:

- \_ Start the campaign from 07:30 hours.
- \_ Spread F from 19 to 24 hours.
- \_ Problem with transmitter at 12 and 17 hours.
- \_ % Operation/16h: 95.0

Log:

- \_ 16 Dec 07:49 Start campaign.
- \_ 16 Dec 08:25 Faraday restarts.
- \_ 16 Dec 09:38 and 10:05 Transmitter off by arcs in mesh of the antenna.
- \_ 16 Dec 12:15 Problem with Transmitter for 10 minutes.
- \_ 16 Dec 17:30 Problem with transmitter for 30 minutes.
- \_ 16 Dec 18:09 Start Imaging.

Staff in charge

08-20: K. Kuyeng. 20-24: A. Belleza.

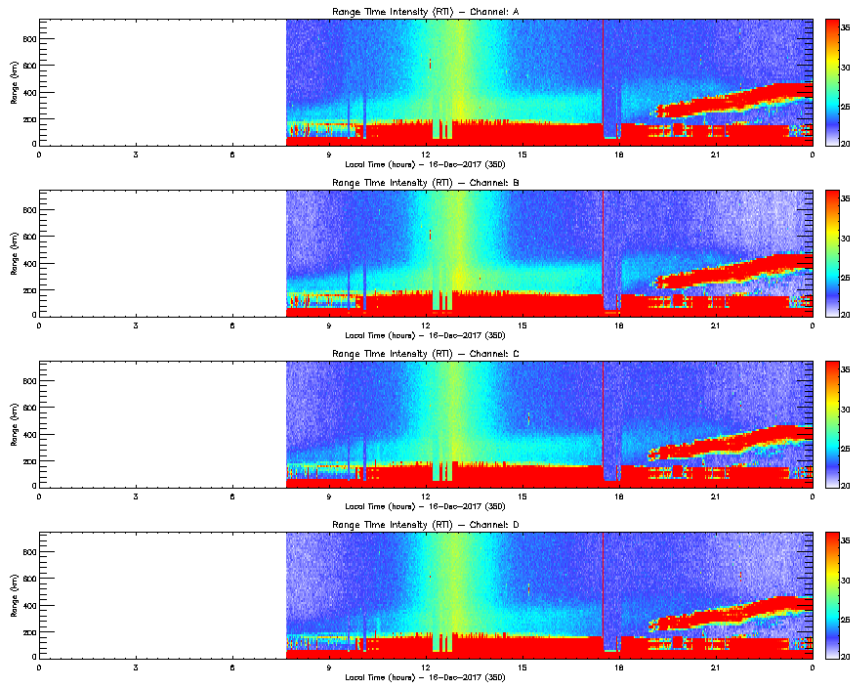


Figure 1. Rti EW\_DRIFT 2017-12-16.

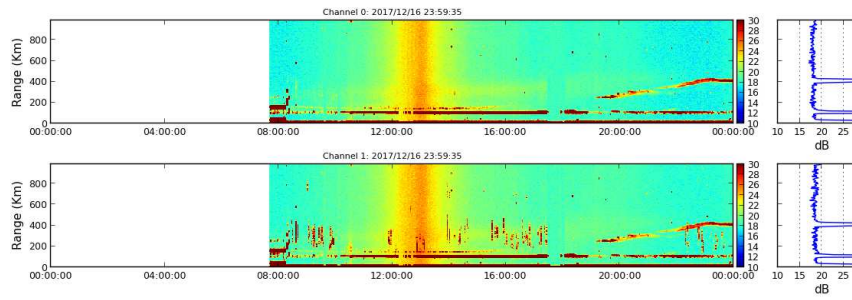


Figure 2. Rti FARADAY 2017-12-16.

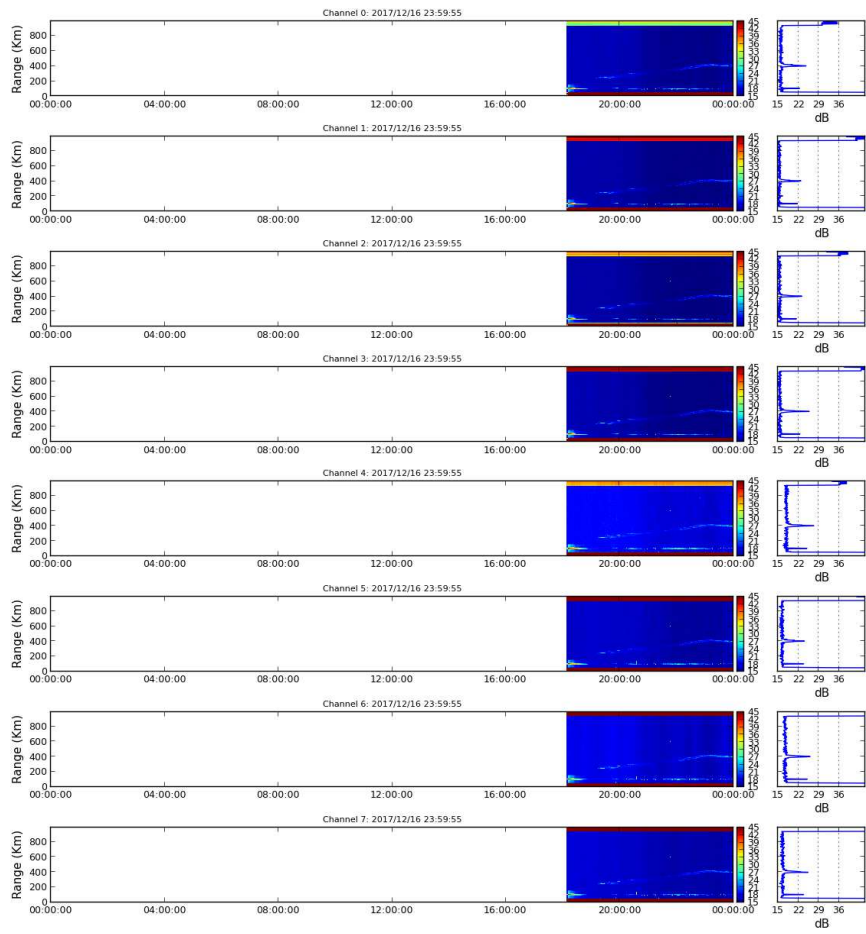
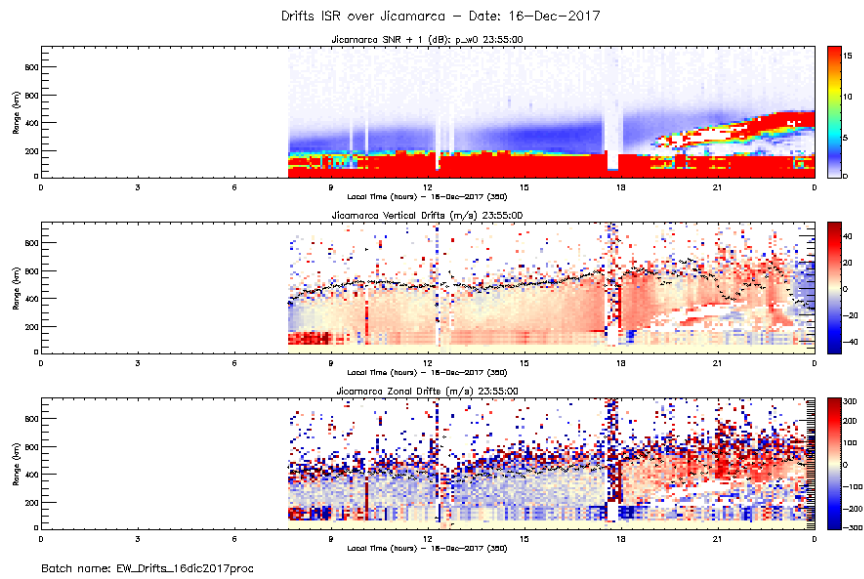


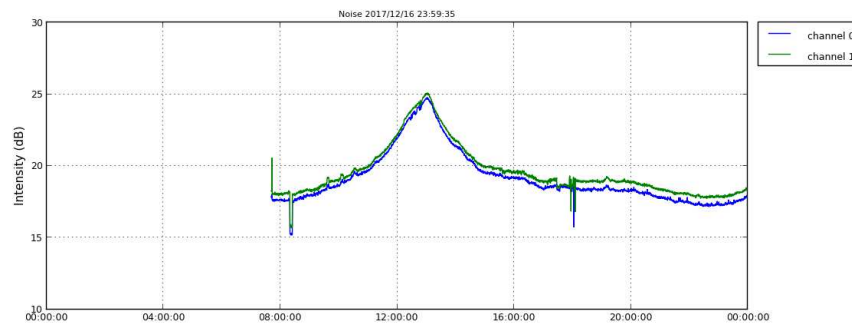
Figure 3. RTI IMAGING 2017-12-16.

Drifts obtained:



**Figure 4. Drifts 2017-12-16.**

Faraday Noise:



**Figure 5. Faraday Noise 2017-12-16.**

December, 17:

- \_ Spread F from 00 to 06 and 19 to 24 hours.
- \_ Transmitter is off at 12 hours for some minutes.
- \_ % operation/24h: 97.43.

Log:

- \_ 17 Dec 08:22 Transmitter off for 2 minutes.
- \_ 17 Dec 12:30 Transmitter off for system revision.
- \_ 17 Dec 18:00 Start Imaging.

Staff in charge

00-08: A. Belleza. 08-20: I. Manay. 20-24: P. Córdor.

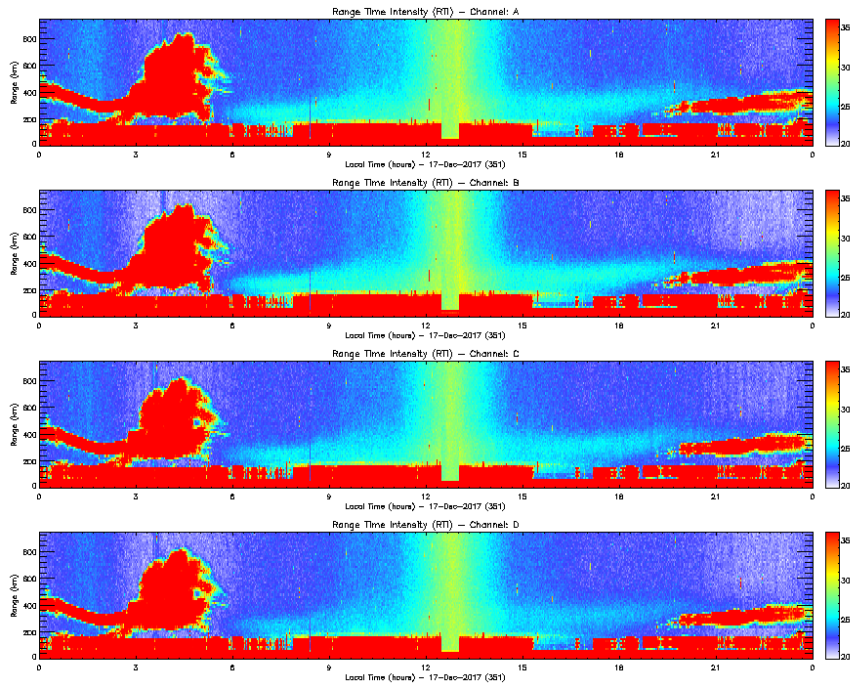


Figure 6. Rti EW\_DRIFT 2017-12-17.

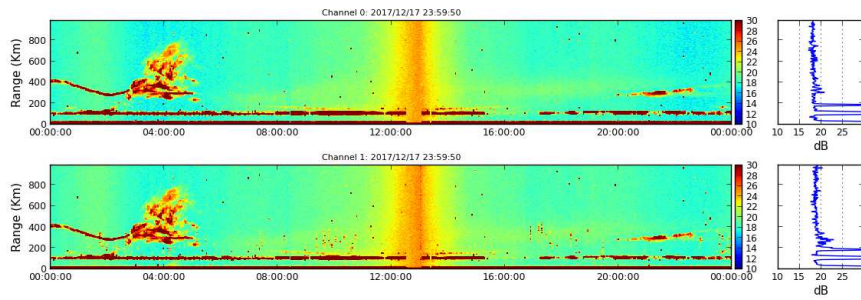


Figure 7. Rti FARADAY 2017-12-17.

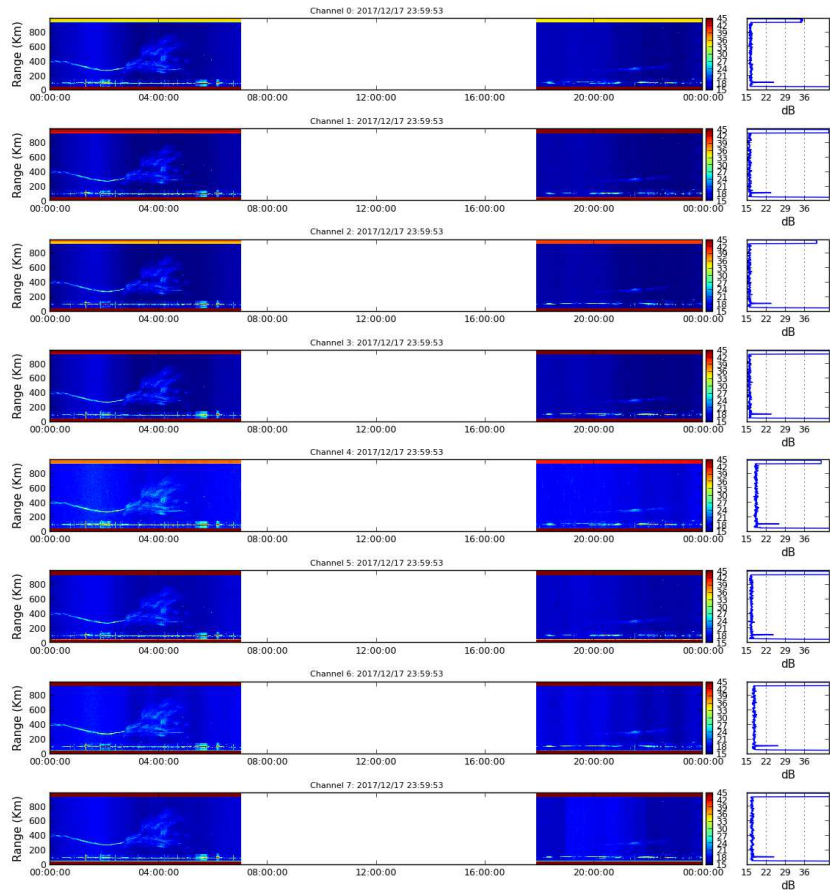


Figure 8. Rti IMAGING 2017-12-17.

Drifts obtained:

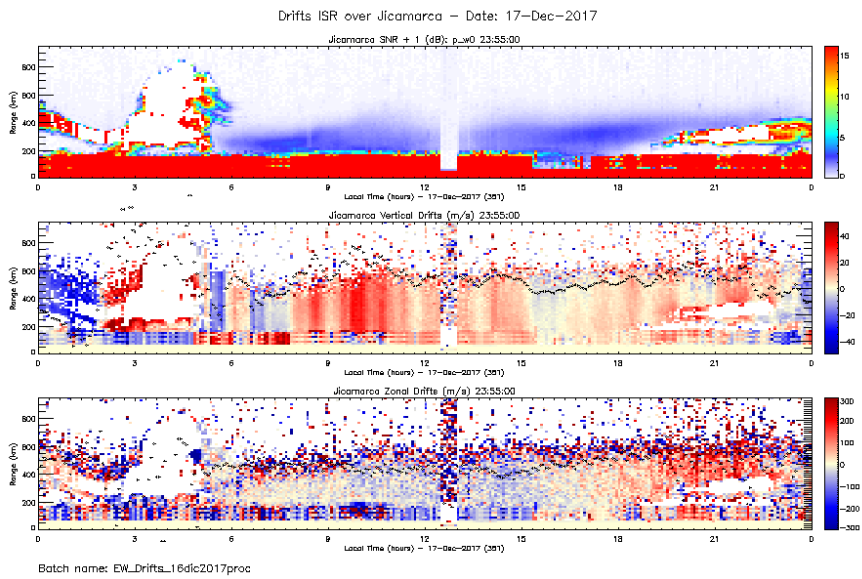


Figure 9. Drifts 2017-12-17.

Faraday Noise:

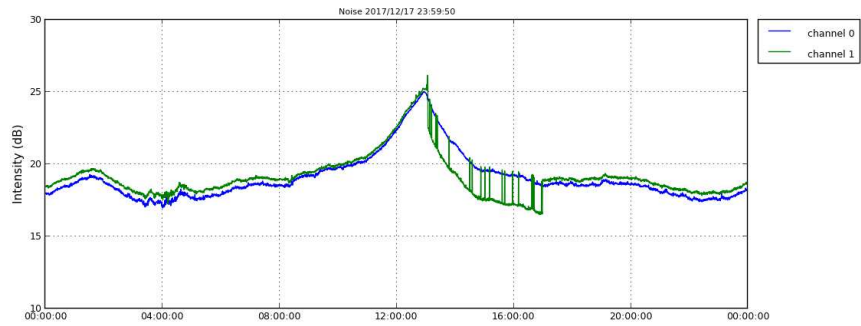


Figure 10. Faraday Noise 2017-12-17.

December, 18:

- \_ There is Spread F from 00 to 05 and from 19 to 24 hours.
- \_ Problems with transmitter from 09 to 11 hours.
- \_ Transmitter is off at 12 hours for few minutes.
- \_ % operation/24h: 98.19.

Log:

- \_ 18 Dec 06:06 Imaging off.

Staff in charge:

00:08: P. C6ndor 08-20: J. Rojas. 20-24: A. Belleza.

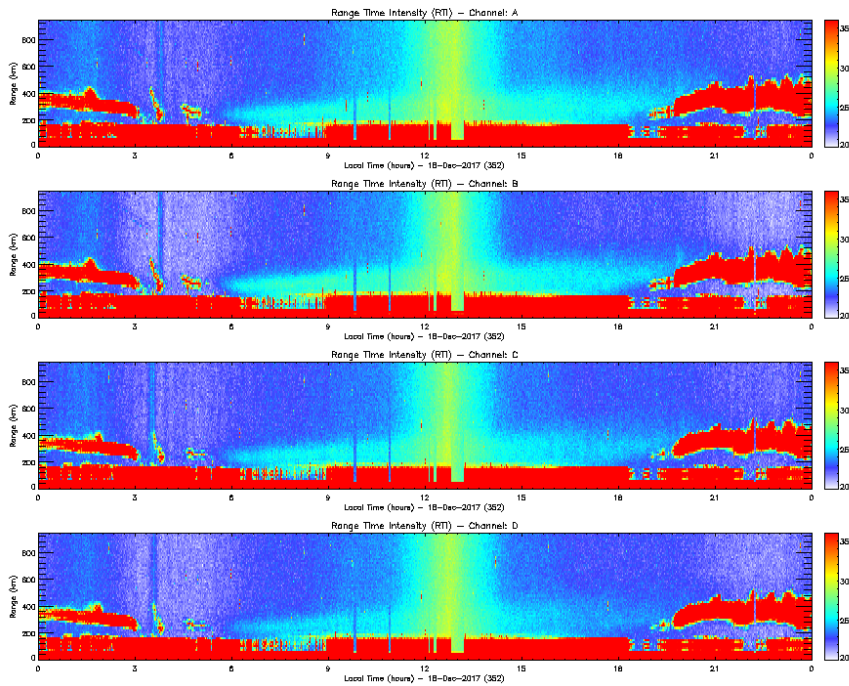
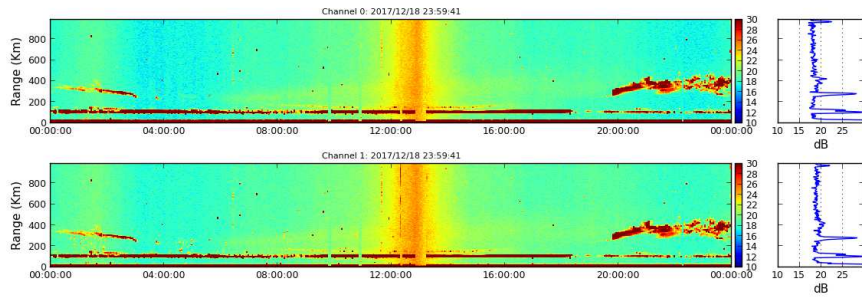
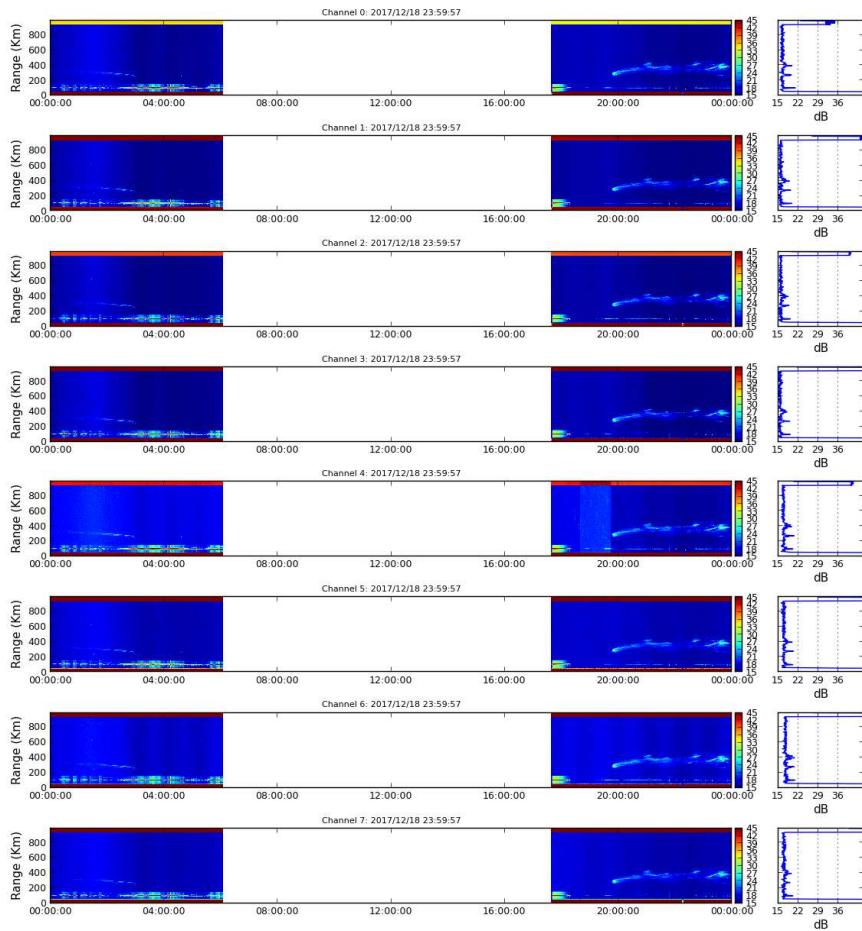


Figure 11. Rti EW\_DRIFT 2017-12-18.



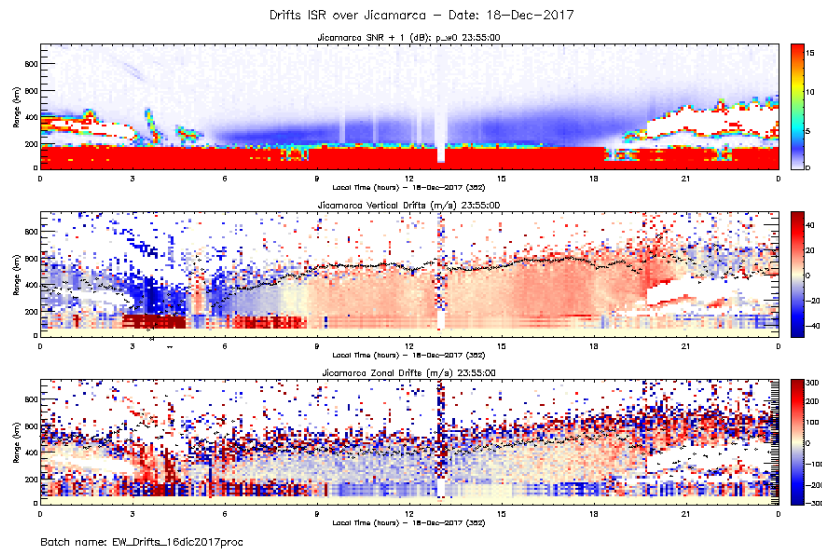
**Figure 12. Rti FARADAY 2017-12-18.**



**Figure 13. Rti IMAGING 2017-12-18.**

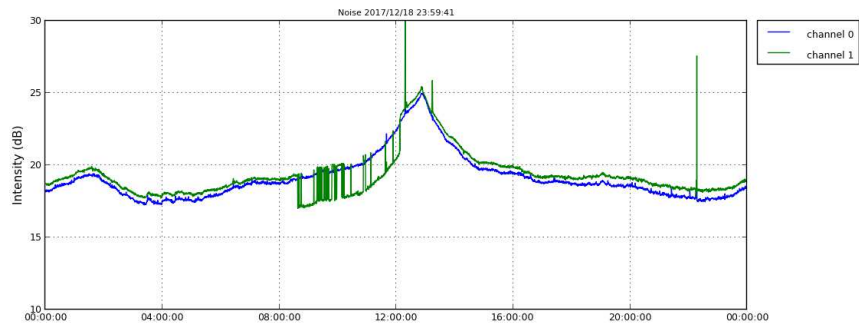
Drifts obtained:





**Figure 14. Drifts 2017-12-18.**

Faraday Noise:



**Figure 15. Faraday Noise 2017-12-18.**

December, 19:

\_ There is Spread F from 00 to 06 hours and 19 to 24 hours.

\_ Transmitter is off at 12 hours for some minutes.

Log:

\_ 19 Dec 10:17 Faraday restart.

\_ 19 Dec 12:06 Transmitter off for some minutes.

\_ 19 Dec 17:32 Transmitter off for little minutes.

\_ 19 Dec 17:33 Start Imaging.

\_ 19 Dec 17:39 Faraday restart.

\_ % operation/24h: 98.68.

Staff in charge:

00-08: A. Belleza. 08-20: R. Yanque. 20-24: I. Manay.

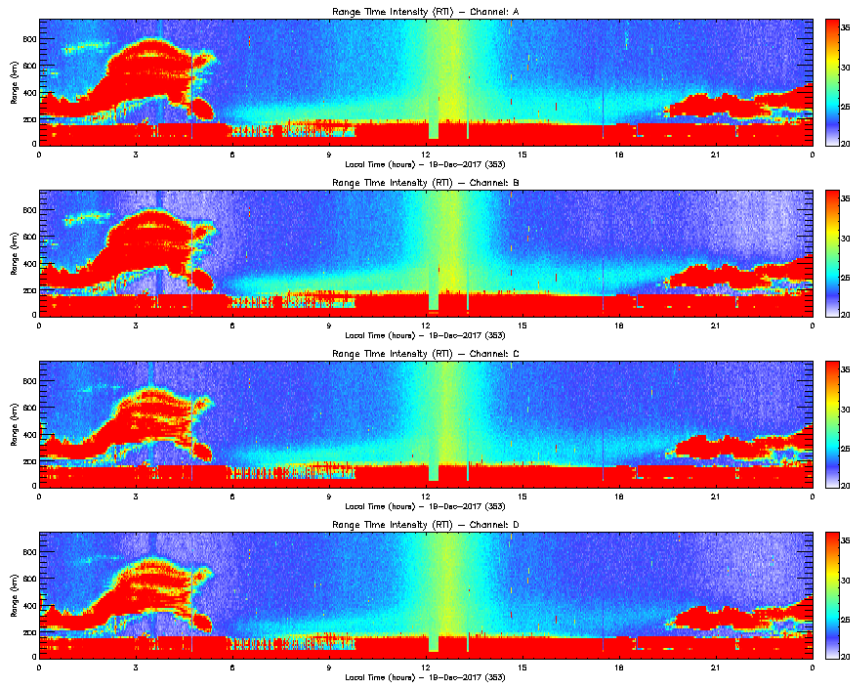


Figure 16. Rti EW\_DRIFT 2017-12-19.

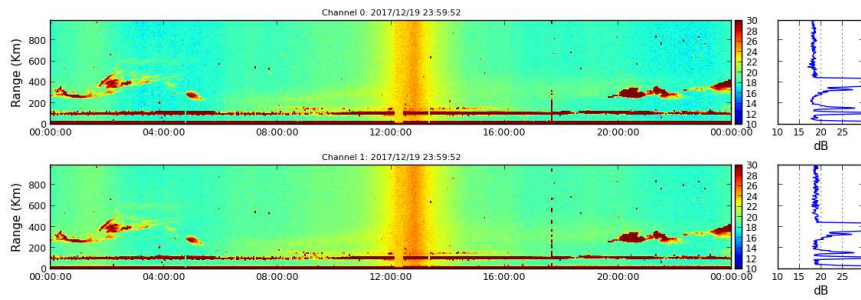


Figure 17. Rti FARADAY 2017-12-19.

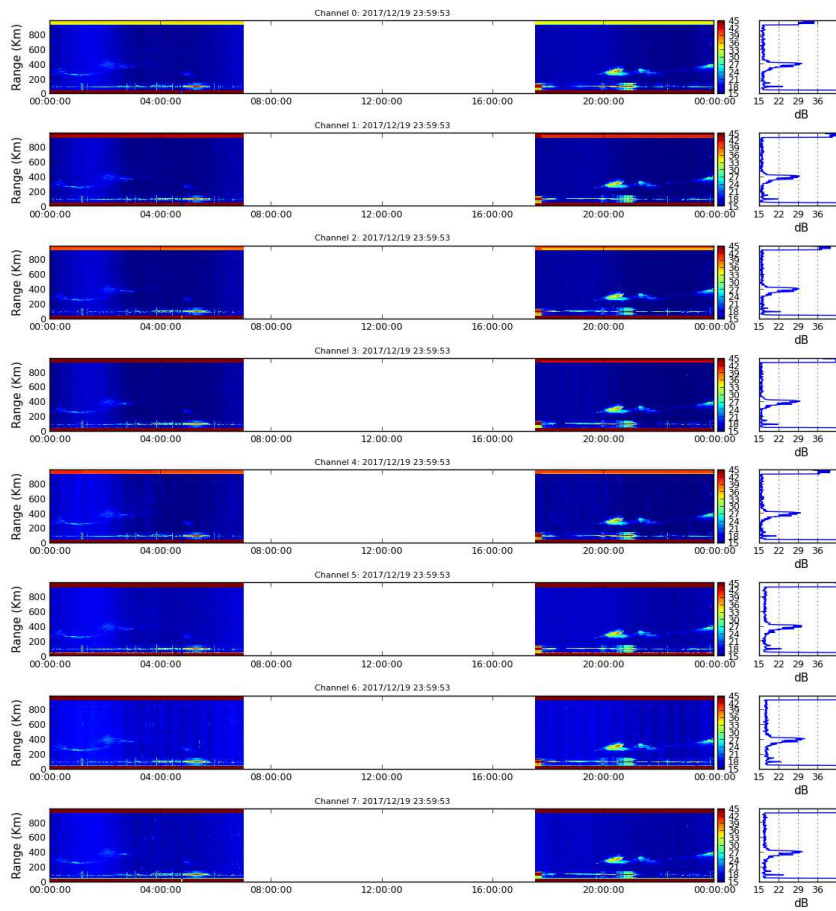


Figure 18. Rti IMAGING 2017-12-19.

Drifts obtained:

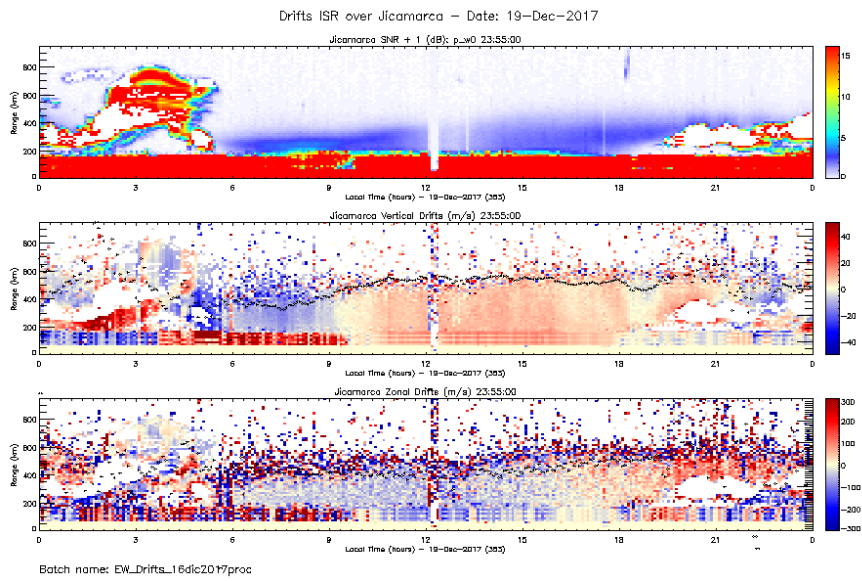


Figure 19. Drifts 2017-12-19.

Faraday Noise:

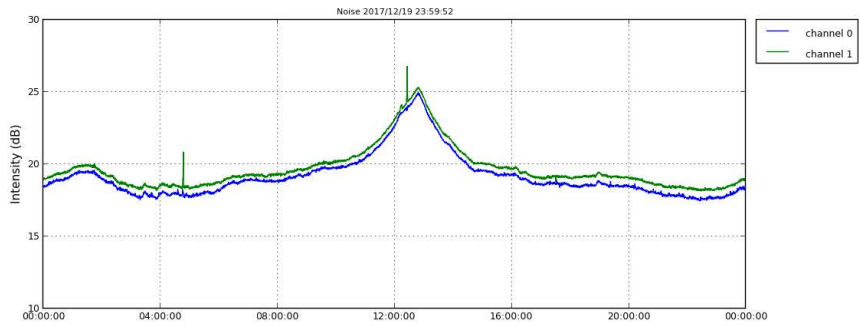


Figure 20. Faraday Noise 2017-12-19.

December, 20:

\_ There is Spread F from 00 to 05 hours.

\_ End of campaign at 08 hours.

Log:

\_ 20 Dec 06:00 Imaging off.

\_ 20 Dec 08:00 End experiment.

\_ % operation/8h: 100.

Staff in charge:

00-08: I. Manay.

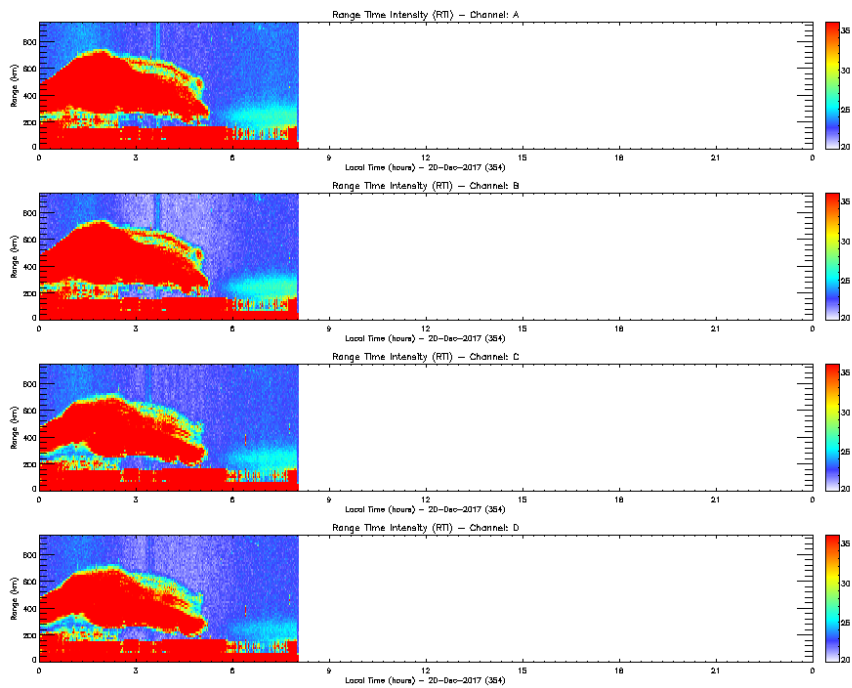


Figure 21. Rti EW\_DRIFT 2017-12-20.

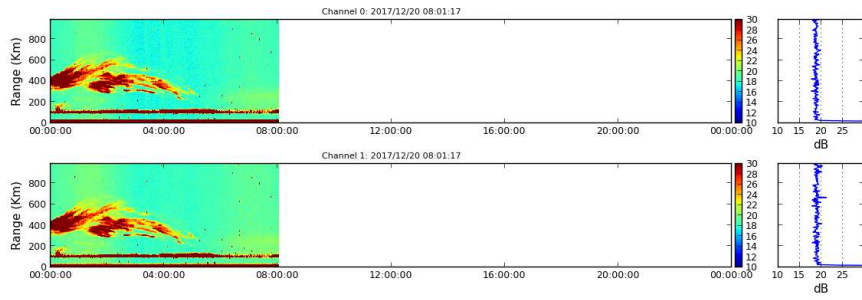


Figure 22. Rti FARADAY 2017-12-20.

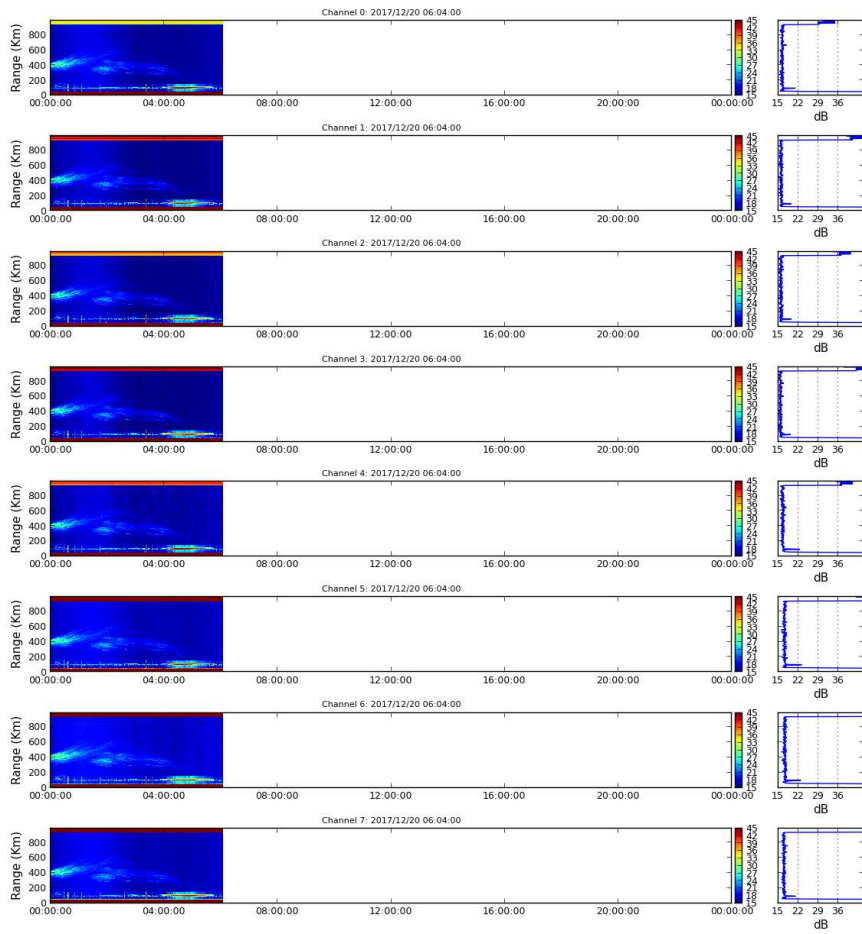
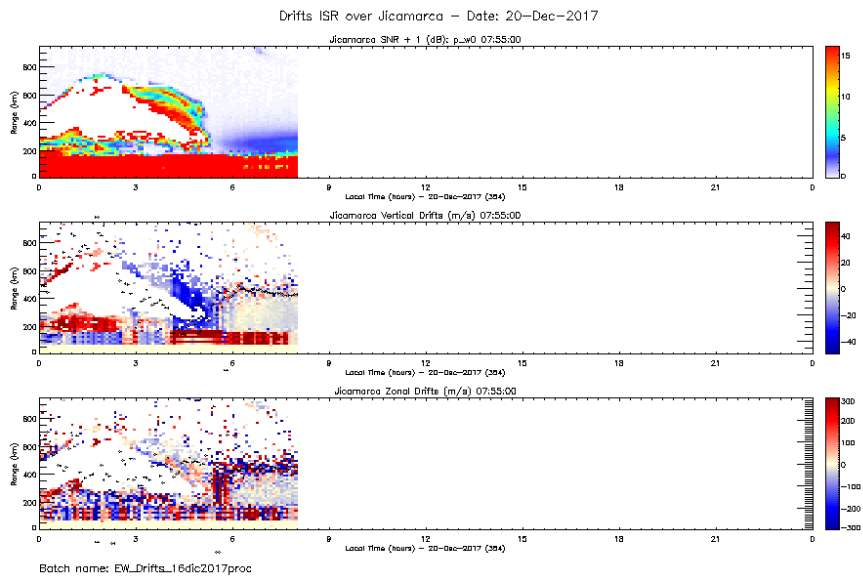


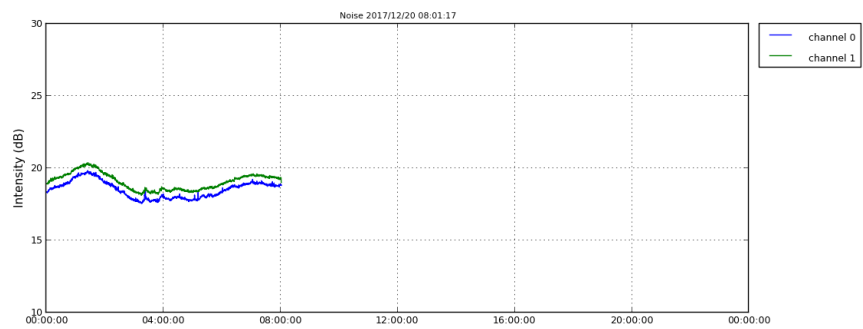
Figure 23. Rti IMAGING 2017-12-20.

Drifts obtained:



**Figure 24. Drifts 2017-12-20.**

Faraday Noise:



**Figure 25. Faraday Noise 2017-12-20.**

**Observations:**

Two days there was interference in the ATR, due to bad calibration

**Annex:**

Sky noise for December 16, 2017:

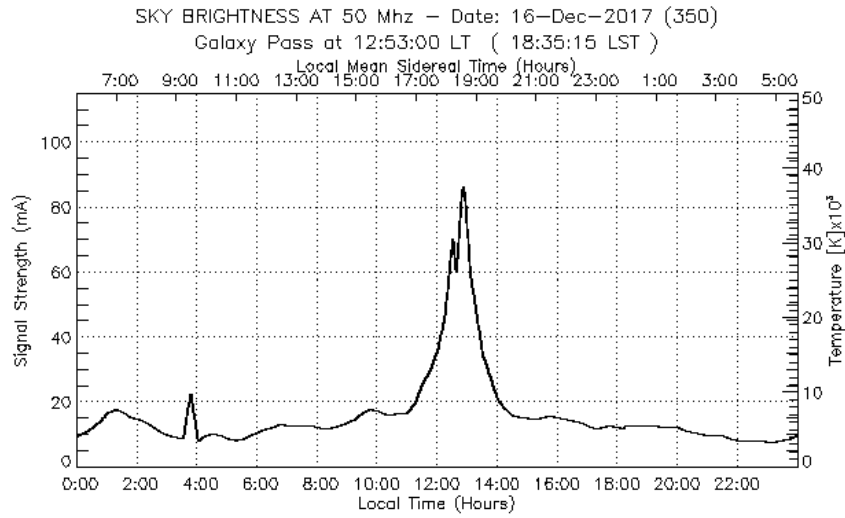


Figure 26. Sky noise.

Antenna pattern

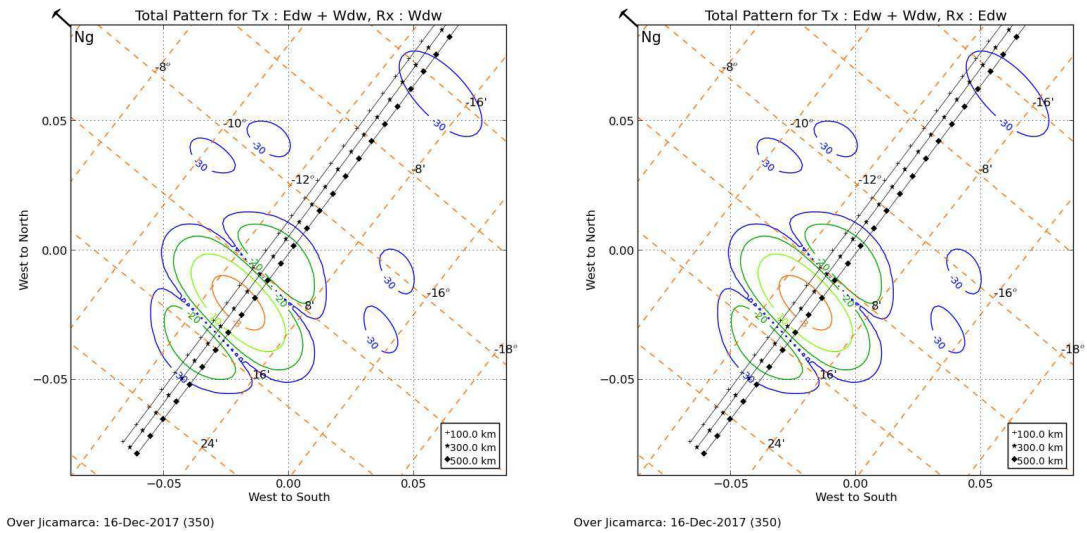
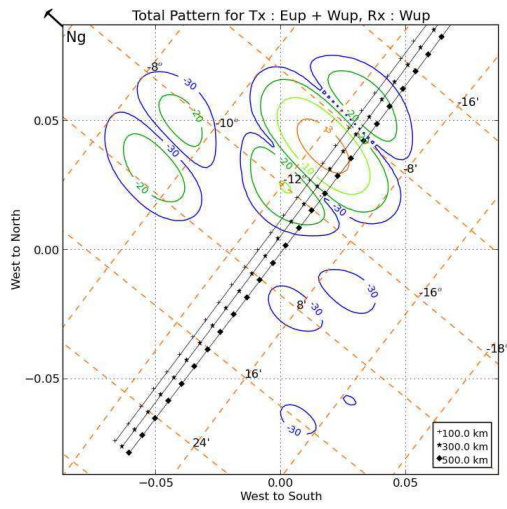
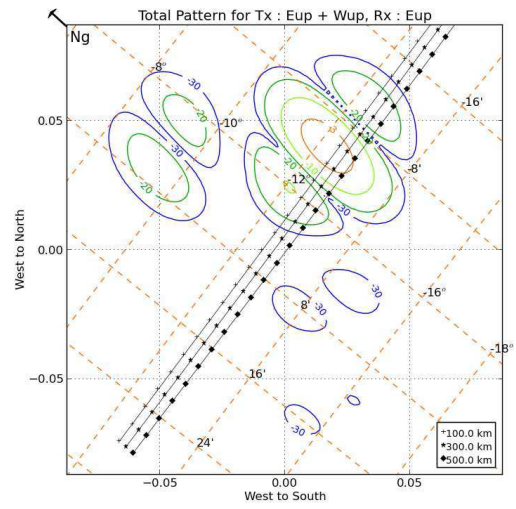


Figure 27. Antennas pattern EW\_Drifts: Ch A and Ch B.

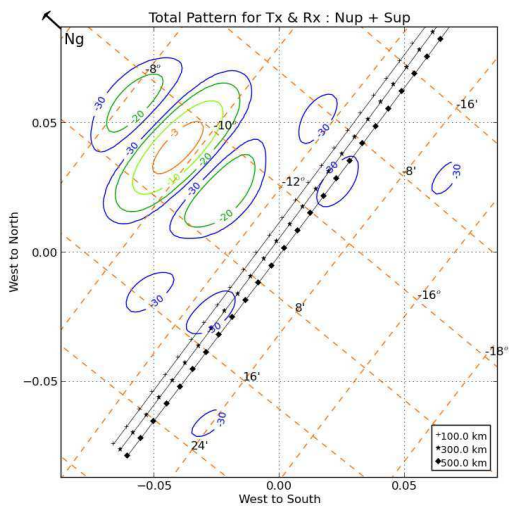


Over Jicamarca: 16-Dec-2017 (350)

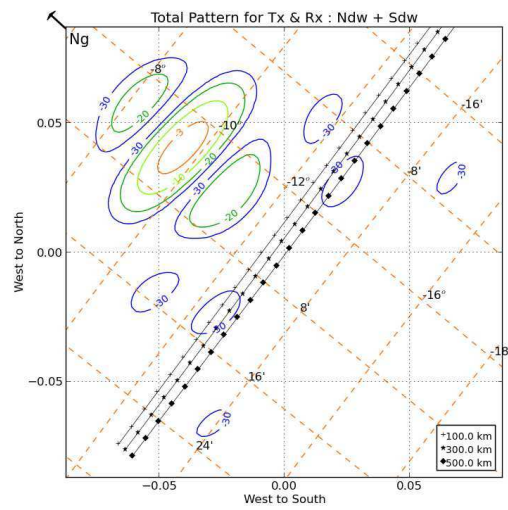


Over Jicamarca: 16-Dec-2017 (350)

**Figure 28. EW\_Drifts: Ch C and Ch D.**



Over Jicamarca: 16-Dec-2017 (350)



Over Jicamarca: 16-Dec-2017 (350)

**Figure 29. Faraday: Ch A and Ch B.**