

# NPOL Radar Scientist Report 0000 UTC 25 April 2011

Submitted by josephhardin on Sun, 04/24/2011 - 19:17

- [NPOL](#)

Flight Date:

Sunday, April 24, 2011

Status:

Green

Shift Summary 1200 UTC 24 Apr 2011 - 0000 UTC 25 Apr 2011:

The shift started with two possible issues for investigation:

1. RHI image data from earlier shift appears bad (examples: 1129 and 1925 UTC). The thinking was that the antenna was moving faster in the lower elevation angles and slower in the higher angles. Visibly watching the antenna revealed the opposite (slower through the lower angles, and faster as elevation increased). The IRIS manual states that antenna speed should increase in higher angles to maintain desired resolution. After much testing by Mike, the RHI scans look good. The maximum elevation angle was set to 40 degrees. Some of the issue may be related to the visualization display and maximum range setting.

2. Ray dropouts are occurring in sector scans. Raw data analysis shows that the data are missing in these rays. The dropouts are occurring near the edges of the sectors. After discussion with Tim, the plan is to choose 120 degree sectors (instead of 90), making sure that the storm of interest is well centered within the sector. This should minimize the chances of ray dropouts within the primary data.

At the request of Bringi and Thurai, Mike adjusted the PhiDP offset to 90 degrees.

A large area of rain and convection has persisted to the south and east of NPOL all day, however mainly beyond 100 km range. Between 17 and 19 UTC, showers built back to the west and several light to moderate showers occurred at the radar site.

During the 23 UTC hour, several RHI scans were performed on an isolated cell to the east and revealed a 70 dBZ core extending to near 7 km height. As the rain and convection have intensified to the east and south, the NWS has issued a severe thunderstorm watch and flash flood warnings for the OKC area.

End of Summary

David Marks