Mission Scientist Summary for Monday 20 May 2013

Submitted by rutledge on Tue, 05/21/2013 - 13:06
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Discussion:

Another excellent case was obtained for IFLOODS. The activity began in the form of strong, tornadic storms near KDSM, arranged in a short NE-SW line splitting across I-35. This activity slowly translated towards N-pol, eventually getting to the radar around 0145 UTC (20 May). The storms weakened prior to arriving at N-pol, but did have strong mesocyclones within 50 km of the radar. Near 0200 Turkey R. sector scans were mixed in with IFLOODS_rain. About one hour of narrow 130 deg. sector scans were carried out after that. Weak convective cells with some stratiform occurred in this sector at that time. A significant gust front was generated by this activity but the strong winds did not arrive at the surface until the system passed to the east of N-pol.

During the peak time of mesoscyclone activity, the Turkey R. 90 deg. sector was rotated to cover the storm(s) of interest. This served two purposes. First, better vertical coverage of the mesocyclone was afforded compared to that provided by IFLOODS_rain, to assess the threat of severe weather at the N-pol site. Second, when isolated storms like this are present (and they are not over the Turkey R. basin), the 90 deg. sector provides better coverage of the storms vertical structure compared to IFLOODS_rain. This can help with understanding reasons for DSD variations, rain rate fluctuations, etc to tie into the IFLOODS_rain scans.