Update on NOAA's National Weather Service (NWS)
WSR-88D Level II Data Collection and Distribution Network

Updated 10 June 2009

PURPOSE:
Update Weather Surveillance Radar-1988 Doppler (WSR-88D) Level II data users, real-time and archive, on WSR-88D changes that may impact data format, data reliability, and data quality. **This update provides the status of Build 12 and Dual Pol projects, Build 11 deployment, and the plan to update the Level II data collection and distribution architecture.**

CURRENT STATUS:
Transmission of Super Resolution WSR-88D Level II Data Additions. The NWS began sending Super Resolution data from the DoD WSR-88Ds at Vance AFB, OK; Altus AFB, OK; and Dyess AFB, TX in early May 2009. At this time, neither Level II nor Super Resolution data will be added from other DoD or FAA radars, though the NWS is exploring options for adding sites. The list of sites on the network is at: http://www.roc.noaa.gov/NWS_Level_2/.

Build 11: Deployment of RPG Build 11 software began on 18 May 2009. Sites have 65 days to load the software after receipt. As of 10 June, 36 sites have loaded Build 11. The link to the Warning Decision Training Branch Build 11 training site is: http://www.wdtb.noaa.gov/buildTraining/Build11/index.html.

FUTURE CHANGES:
Build 11.1: During the Build 11.0 Beta Test the Clutter Mitigation Decision (CMD) algorithm did not fully suppress ground clutter in some small areas in higher terrain. These areas usually existed where the terrain abruptly changes, e.g., jagged mountains. This effect was primarily observed in the lowest elevation segment. This unsuppressed clutter leads to "hot spots" in the reflectivity products and corresponding overestimates in precipitation products. This issue should not be a problem at field sites that have little or no higher terrain within radar range. The ROC is in the process of devising a change to the CMD algorithm to deal with this issue. We plan to include this change in RDA Software Update 11.1, which would also include security updates. The ROC plans to perform a Beta Test of Build 11.1 with at least one of the Build 11.0 Beta Test sites that has observed the CMD issue. The current plan is to begin this Beta Test in mid- to late-June 2009 and begin release of the software to field sites in late July.

Build 12: RPG Build 12 software will be installed during a site's dual polarization (Dual Pol) modification. The CMD Algorithm will not be in the first Dual Pol RDA software build, but is expected to return in the first government-developed RDA build near the end of the Dual Pol deployment.

Dual Pol Modification. The first Beta Test, and operational use, of the Dual Pol modification is scheduled for June 2010. The 2-year deployment of the modification is scheduled to begin in October 2010. The ROC will provide sample Level II data that includes Dual Pol data beginning

in the fall of 2009. The first Dual Pol retrofit of a WSR-88D starts this week on one of the two test WSR-88Ds in Norman.

Update the Level II Data Collection and Distribution Architecture. The NWS is planning to change the architecture of the Level II data collection and distribution beginning this fall. The regional aggregation points will be replaced by a central aggregation point (staffed 24/7) with full redundancy at an off-site location. NOAANet communications will be used to send the data to the central aggregation point(s). This will result in a much increased reliability of data flow.

ADDITIONAL INFORMATION:
Family of Services Briefing. There will be a WSR-88D briefing at the 25 June Partners and Family of Services meeting in Silver Spring, MD. I'll post the slides in advance of the presentation. The slides used at the 15 January 2009 Family of Services meeting are available at: http://www.roc.noaa.gov/NWS_Level_2/FOS_011509.pdf.

Those who use CODE (Common Operations and Development Environment) to process Level 2 data can update to Build 11 at http://weather.gov/code88d/. The ROC web site (http://www.roc.noaa.gov/ssb/cm/sbuilds/) provides a list of all changes.

The Build 11.0 deployment schedule may be viewed by going to http://www.roc.noaa.gov/ssb/cm/csw_notes/compsw.asp and selecting SW 55.

New NWS-Maintained Level II Status Monitoring Site Available: The following web site provides the status of Level II data flow to the NWS Telecommunications Operations Center: http://weather.noaa.gov/monitor/radar2/. The site contains a color-coded display of radars on the Level II network, by NWS region. The colors help the user differentiate between radars with just a Level II outage and radars with both Level II and III outages (implying the radar is inoperable). In addition, users can click on the site of interest and view any applicable Operator Notes/Recent Free Text Messages, which provide more information on the radar's status. Apparent data latencies are also provided.

The Radar Operations Center (ROC) has a URL (http://www.roc.noaa.gov/ops/ssm.asp) for users to obtain:

1. A list of all radars and the RPG software build the radar is using, and
2. A list of all radars and the volume coverage pattern the radars are in, during the last automated hourly ROC call to the RPG.

Information about the Level II network is at: http://www.roc.noaa.gov/NWS_Level_2/.

Send comments/questions on this update to Tim.D.Crum@noaa.gov