A Multi-Radar, Multi-Sensor-based Hail Climatology for the CONUS: 2000-2011
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Introduction
- This project uses data from Multi-Year Reanalysis of Remotely Sensed Storms (MYRORSS) for years 2000-2011.
- MYRORSS was a project that involved reprocessing the archive of WSR-88D level-II data for the contiguous United States.
- MYRORSS data combines WSR-88D radar data with RUC/RAP model analyses and produces Multi-Radar Multi-Sensor (MRMS) grids, such as Maximum Expected Size of Hail (MESH).

Quality Control (QC)
- Analyze daily accumulations of MESH.
- Errors in reflectivity data result in erroneous MESH values.
- The bad data were removed, if possible, then reprocessed the day.
- Once a full year was reprocessed, the data was accumulated.
- Accumulations ran through a series of smoothers to clean up the field.

Results

Issues
- Persistent QC problems (e.g. coastal interaction, radar spikes) affect the hail days per year climatology
- Cannot manually remove some errors due to other precipitation in the area

Future Work
- Explore variability of hail estimates per given near-storm environment
- Develop a climatology that estimates the likelihood of severe hail using coarser grid spacing
- Compare MESH to other MRMS grids to see if any major differences in a radar-derived hail climatology exist between products

This poster was prepared by Derek Rosseau with funding provided by NOAA/Office of Oceanic and Atmospheric Research under NOAA-University of Oklahoma Cooperative Agreement NNA120AR4320072, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.