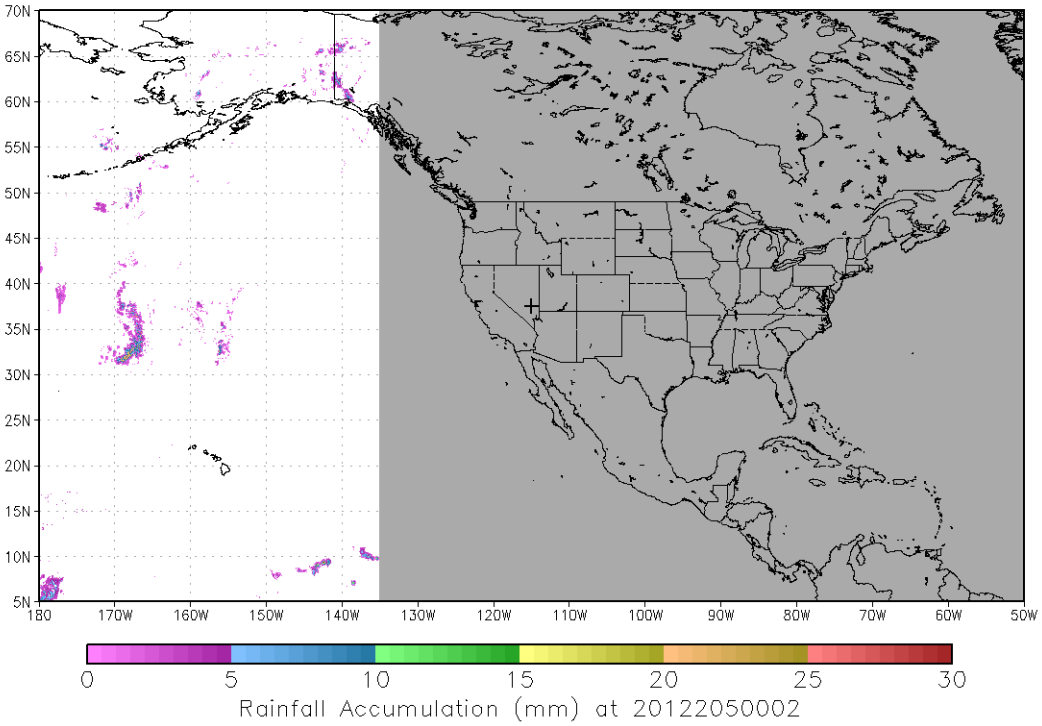
Improving Real-time GOES-R Rainfall Rate Estimates through Infusion of Ground Radar and Gauge Data and Evaluating the Impacts on NWS Flash and River Flood Prediction

- Low-latency, high-resolution quantitative precipitation estimates (QPE) are critical for NWS river and flash flood forecast operations
- Integrating satellite data into the operational QPE data stream will improve coverage, especially OCONUS
- FY 14/15 GOES-R3 project will add radar data to the calibration of the GOES-R Rainfall Rate algorithm (which currently calibrates against microwave rain rates) and optimally merge the satellite QPE with radar and gauges
- Output will be provided to the NWS via the Multi-Radar Multi-Sensor System (MRMS) becoming operational at NCEP Central Operations (NCO)



Current-GOES version of the GOES-R Rainfall Rate algorithm (no radar input; calibrated against MW only)

Low-latency multi-sensor QPE will be provided to NWS field offices for hydrologic forecasting

Y. Zhang (NWS/OHD), R. Kuligowski (NESDIS/STAR), and J. J. Gourley (OAR/NSSL)