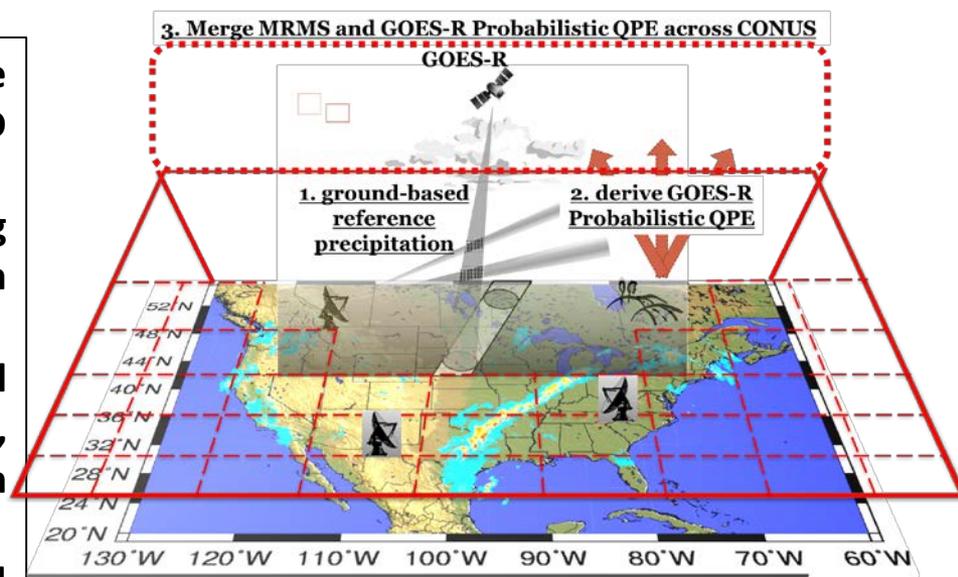


Probabilistic precipitation rate estimates from GOES-R for hydrologic applications

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The goal of this research project is to derive consistent, accurate and fine resolution precipitation rates with uncertainties over the CONUS by merging the GOES-R precipitation estimates with the Multi-Radar/Multi-Sensor. It will provide seamless QPEs suited for flash flood monitoring and forecasting by the National Weather Service (NWS).

- GOES-R observations can complement the degraded weather radar coverage of the NEXRAD network specifically in the Western U.S.
- GOES-R QPEs will be advanced by deriving distributions of QPE uncertainties associated with the GOES-R deterministic retrievals.
- GOES-R probabilistic precipitation estimates will be fused with MRMS QPE to provide seamless, high-resolution and low latency precipitation estimates across the CONUS.
- The new precipitation product will be incorporated into ensemble hydrologic forecast applications for the monitoring and prediction of floods and flash floods



Research framework and overview flowchart of the project