# NSSL Hydro-Meteorology Research Summary

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# Summary

- ✓ Hydro-Meteorology at NSSL is built on the application of radar technology and expertise to address NOAA water concerns.

- ✓ Hydro-Meteorology at NSSL depends heavily on partnering with NWS, other NOAA labs, USGS, FAA, and University (NSF) collaborators.

- ✓ NWS metrics are our metrics (e.g., flash flood warning lead times, accuracy, etc.)

# Relevance, Quality & Performance

## Relevance

✓ Water is a growing concern to the Nation – NSSL strives to improve QPE through applications of radar and now multi-sensor technologies

# Relevance, Quality & Performance

## <span style="color:red">Quality</span>

✓ Examples of Published Papers (>20 last 5 years):

- Vasiloff, S. V., D. J. Seo, K. W. Howard, J. Zhang, D. H. Kitzmiller, M. G. Mullusky, W. F. Krajewski, E. A. Brandes, R. M. Rabin, D. S. Berkowitz, H. E. Brooks, J. A. McGinley, R. J. Kuligowski, B. G. Brown, 2007: Improving QPE and Very Short Term QPF: An Initiative for a Community-Wide Integrated Approach. *Bulletin of the American Meteorological Society*, **88**, 1899-1911, doi:10.1175/BAMS-88-12-1899.

- Restrepo, P., D. P. Jorgensen, S. H. Cannon, J. Costa, J. Laber, J. Major, B. Martner, J. Purpura, K. Werner, 2008: Joint NOAA/NWS/USGS Prototype Debris Flow Warning System for Recently Burned Areas in Southern California. *Bulletin of the American Meteorological Society*, **89**, 1845-1851, doi:10.1175/2008BAMS2416.1.

✓ Awards:

- 2008 NOAA Administrator's Award - *Design of Prototype Debris Flow Warning System for Southern California*
- 2003 NWS Award - *Basin Delineation*
- 2002 - Federal Aviation Administration - *Excellence in Aviation Award*

# Relevance, Quality & Performance

## Performance

✓ Basin delineation technology delivered to NWS and is now integrated into their Flash Flood Monitoring and Prediction system.

✓ Q2 technology beginning its transition to NWS operations

✓ CI-FLOW supports NWS *Integrated Water Resource Service*

✓ Supports NWS/USGS prototype warning system

✓ Continued Grant Awards (2008: $949k) from FAA, Taiwan, NWS/AHPS, Salt River Project, etc.