

# Comparison of Dual-Polarization Radar Estimators of Rain

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# Overview

- ◆ Motivation and Background Info
  - Motivation behind improved rainfall estimates.
  - Past studies
- ◆ Relations between polarimetric variables and rain amounts.
  - Simulated drop size distributions (DSD)
- ◆ Compare different rain rate ( $R$ ) and liquid water content ( $M$ ) measurements.
  - Simulation
  - Errors
  - Comparison with rain gauges
- ◆ Conclusions

# Motivation:

- ◆ Why do we need improved accuracy in rainfall estimation?
  - Safety: Flooding (high rainfall rates).
  - Improved initialization of hydrological models.
  - Agriculture: Highlight areas where crop shortfalls or flooding is likely.

