Session 2
Key Processes Critical to Precipitation Biases

- This session will discuss key processes relevant to precipitation in observations and in global models and identify the deficiencies and missing physics in current models to gain insights for further improving the prediction and simulations
- Speakers:
  - Keynote: Chris Bretherton (UW)
  - Panelists: Shaocheng Xie (DOE/LLNL)
    Ming Zhao (NOAA/GFDL)
    Steve Nesbitt (UIUC)
    Courtney Schumacher (TAMU)

Questions for discussion

- What are the leading sources of model precipitation biases over the U.S. (locations, seasons, remote versus local factors, ...)?
- How can one distill process-level understanding of model-simulated Earth System phenomena such as regional precipitation and extremes (hierarchical modeling, model intercomparisons, process-level diagnostics, …)?
- What are the bottleneck issues in applying observations to evaluate model performance and guide model development at the process level (processes versus phenomena, gaps in spatial and temporal scales, steady states versus fluxes, emergent constraints, ...)?
- What are the new observational and modeling capabilities needed for making progress (super-high resolution models, satellites, field campaigns, ML/AI, ...)?