Satellites and Precipitation

Christian Kummerow
Colorado State University

After nearly 25 years of spaceborne radar and radiometer measurements of precipitation from the Tropical and then Global Precipitation Missions, there are now a number of high resolution, rapid refresh products available to the public that are being used in disaster recovery, agriculture, water management, and nearly all fields that require timely precipitation input. Climate data records of precipitation have also matured significantly and the first glimpses of climate trends in regional precipitation are now visible. Despite these successes, there are still a number of issues. Chief among, these, and the focus of this talk, is the lack of credible precipitation uncertainties. The uncertainties are difficult to quantify because they are strongly coupled to cloud morphology and microphysics, and thus coupled to meteorological regimes and their correlation structures. By comparing regional atmospheric water budget closures (Evaporation, Precipitation and Moisture Divergence) over a set of tropical ocean domains, an interesting interaction between convective organization and apparent biases in precipitation products can be seen.

Thursday, 26 October 2023, 2:00pm

Refreshments 1:45pm
Please also join colleagues for refreshments and informal discussion after the seminar until 3:30pm

NCAR-Foothills Laboratory, 3450 Mitchell Lane
FL2-1022, Large Auditorium

Seminar will also be live webcast
https://operations.ucar.edu/live-mmm
Participants may ask questions during the seminar via Slido.