

Special Issue on
**Global and Regional Remote Sensing Precipitation
Estimation, Evaluation, and Applications**

CALL FOR PAPERS

Global and regional quantitative precipitation estimations (QPEs) are very important for understanding climate variability and hydrometeorological cycles, improving flash flood and weather forecast, effectively managing the usage of earth's freshwater resources, detecting the natural disasters, and other hydrometeorological applications. However, obtaining accurate QPEs is a big challenge in many areas of the world due to sparse gauge networks and complicated terrains. Recent advances in remote sensing have allowed us to retrieve QPEs information, representing one unprecedented contribution toward the global and regional mapping of precipitation.

Global QPEs right now are derived from both geostationary satellite thermal infrared (IR) indices and low-earth orbiting satellite microwave imagers/sounders observations. The past Tropical Rainfall Measuring Mission (TRMM) especially has led to significant improvements in global rainfall products, and the Global Precipitation Measurement (GPM) Core Observatory satellite with an advanced radar/radiometer system was launched by NASA and Japanese Aerospace Exploration Agency (JAXA) at the beginning of 2014 and promises continued innovation. The GPM international satellite constellation provides the next-generation of unified global precipitation products with accuracies and data latencies essential for research and applications. The challenges faced in improving precipitation products are not only in developing newer retrieval algorithms, but also in new approaches to integrate observations from the different sensors and then to assimilate them into various applications.

Furthermore, ground observations such as those from radar networks, gauge networks, and disdrometer observations are available, providing potentially more accurate measurements of precipitation on the ground than satellites. However, these observations cannot be provided over oceans, only overseas that are adjacent to land. Thus, this special issue will focus on improving precipitation products not only by developing newer retrieval algorithms, but also through new approaches to integrate observations from the different sensors for assimilation into various applications.

Potential topics include but are not limited to the following:

- ▶ Severe flash flood forecast/monitoring with the space-borne/ground precipitation retrievals
- ▶ Precipitation retrievals from the satellite/ground observations
- ▶ Validation of space borne precipitation retrievals with ground observations
- ▶ Analysis of the precipitation characteristics with satellite and ground observations
- ▶ Improving the weather forecast accuracy with satellite and ground observations

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/amete/rspv/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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