# Transitioning GPM GPROF to a Community Algorithm

Christian Kummerow and David Randel

Colorado State University, Atmospheric Science, Fort Collins, United States (kummerow@atmos.colostate.edu)

The Global Precipitation Measurement (GPM) mission was launched in February 2014 as a joint mission between JAXA from Japan and NASA from the United States. GPM carries a state of the art dual-frequency precipitation radar and a multi-channel passive microwave radiometer that acts not only to enhance the radar's retrieval capability, but also as a reference for a constellation of existing satellites carrying passive microwave sensors. In May of 2017, GPM released Version 5 of its precipitation products starting with GMI and continuing with the constellation of radiometers. The precipitation products from these sensors are consistent by design and show relatively minor differences in the mean global sense. Since this release, the Combined Algorithm hydrometeor profiles have shown good consistency with surface observations and computed brightness temperatures agree reasonably well with GMI observations in precipitating regions. The same is true for MIRS profiles in non-precipitating regions. Version 6 of the GPROF code will therefore make use of these operational products to construct it's a-priori databases. This will allow continuous improvements in the a-priori database as these operational products are reprocessed with newer versions, while allowing the user community to better focus on the algorithm's error covariance matrix and its validation. Results from early versions of this algorithm will be presented.