

“Status and Results from the Day-1 Integrated Multi-Satellite Retrievals for GPM (IMERG)”

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The Integrated Multi-satellite Retrievals for GPM (IMERG) algorithm system provides a merged field of global precipitation from the international constellation of precipitation-relevant satellites and a surface precipitation gauge analysis (from Global Precipitation Climatology Centre). The constellation estimates are intercalibrated using GPM Core Observatory data. Groups at NASA Goddard Space Flight Center, NOAA Climate Prediction Center, and Univ. of California Irvine’s Center for Hydrometeorology and Remote Sensing contribute to the IMERG algorithm.

IMERG provides 0.1°x0.1° half-hourly data for successive runs at 4 hours, 8 hours, and 3 months after observation time, referred to as Early, Late, and Final Runs, respectively. In the Day-1 product, IMERG covers the latitude band 60°N-S, for the period March 2014 to the present. In early 2017 it will be extended to cover the period 1998 to the present, and later expanded to fully global. All passive microwave estimates are produced using the latest version of the Goddard Profiling algorithm, currently GPROF2014 and moving to GPROF2015 in late 2015. These new GPROF’s include application to microwave sounders for the first time. The presentation will briefly outline the various data fields provided in the IMERG data files, including precipitation estimates, time of observation and source of the current half hour’s microwave input data, and the current half hour’s IR precipitation estimate. The performance of the IMERG estimates will be discussed, including comparisons among the near-real-time “Early” and “Late” Runs and the research-quality “Final” Run. The talk will summarize the transition from the legacy TRMM multi-satellite product, TMPA, to IMERG, which will occur after IMERG is applied to the TRMM era. This reprocessing is expected in early 2017, with TMPA production ending about six months later.