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Status and Examples for the Version 06 IMERG Multi-Satellite Products

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After five years of development following the launch of the Global Precipitation Measurement (GPM) mission Core Observatory, the GPM data products are now being extended across the joint Tropical Rainfall Measuring Mission (TRMM) and GPM eras. Version 06 of the U.S. GPM team's Integrated Multi-satellitE Retrievals for GPM (IMERG) merged precipitation product provides a consistent intercalibration for all precipitation products computed from individual satellites with the TRMM and GPM Core Observatory sensors as the TRMM- and GPM-era calibrators, respectively, and incorporates monthly surface gauge data. One major change in the basic IMERG algorithm for V06 is that precipitation motion vectors (used to drive the quasi-Lagrangian interpolation, or "morphing") are computed by tracking vertically integrated vapor (TQV) fields analyzed in MERRA2 and GEOS5. This innovation provides globally complete coverage, expanding IMERG's coverage beyond the 60N-S latitude band previously provided by IR-based vectors, although precipitation over snowy/icy surfaces is still masked out as unreliable. A second innovation is that the Quality Index (QI) data field computed for the half-hourly datasets has been refined to include estimates of correlation at microwave overpass times.

We will summarize the processing status for V06 IMERG, for which the retrospective processing should be actively advancing at meeting time. We will show early examples of performance. For example, the TQV motion vectors are typically slightly better than the IR-based vectors at all latitudes. The transition across the TRMM/GPM data boundary will be discussed, including the necessity of filling in the TRMM-based calibrations over the latitude band 35-65 in each hemisphere. The notional schedule for the eventual retirement of the predecessor TRMM Multi-satellite Precipitation Analysis (TMPA) multi-satellite dataset will be updated as well.