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Status and Update of the International Precipitation Working Group

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A wide range of climate modeling, data assimilation, nowcasting, and hydrological applications requires satellite-based daily and sub-daily precipitation analyses along with their associated uncertainties. The International Precipitation Working Group (IPWG) was initiated as a permanent Working Group of the Coordination Group for Meteorological Satellites (CGMS) to provide a focus in the scientific community on operational and research satellite-based quantitative precipitation analysis issues and challenges. The primary challenge is to build on existing precipitation products that utilize blended active and passive microwave sensors and geostationary-based imagers to provide analyses of the precipitation field across a variety of spatial and temporal scales in near real time. Another challenge is to develop standards for validation and independent verification of precipitation measurements derived from satellite data.

In support of these activities, the IPWG community convenes a workshop every two years. The most recent workshop (Sixth IPWG Workshop: IPWG6) was hosted by the Center for Weather Forecast and Climate Studies (CPTEC) at the National Institute for Space Research (INPE) headquarters, in São José dos Campos, Brasil from 15-19 October 2012. IPWG6 was attended by about 52 scientists, with 14 countries represented. There was a mix of oral presentations, posters, and working group sessions that focused on international projects and satellite programmes, IPWG programmatic activities, climatology of precipitation, precipitation datasets, algorithms, applications, validation, new technologies and NWP data. A training program was conducted in conjunction with the IPWG6 Workshop. A total of 12 participants completed the training course. The training course was entitled, “New and Emerging Technologies, Sensors, and Datasets for Precipitation” and was held on first three days (15-17 October 2012) the IPWG6 Workshop. The training focused on five topic areas that ranged from new and upcoming satellite sensors, applications, precipitation datasets, and verification and validation.

Several key outcomes were recommended at the IPWG6 Workshop. One key recommendation included the provision of in situ precipitation validation data is critical for the improvement of satellite estimates of precipitation, particularly over data sparse regions. Another recommendation is the long-term continuity of conically-scanning microwave imagers as well as space based radars. Additionally, IPWG recommends that the satellite agencies continue with the implementation of new technology, such as geostationary microwave and advanced radar instrumentation to advance the capability to measure precipitation from space. The presentation will provide a status update of IPWG activities and discuss the recommendations in further detail.