

Status of the GPM Mission and the NASA Atmosphere Observing System (AOS)

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The joint NASA-JAXA Global Precipitation Measurement (GPM) mission has been in operations for 8 years. This talk will provide a status update on GPM's health, longevity, and updates to data processing. Beyond GPM, NASA has announced its new Earth System Observatory (ESO), which will provide key information related to understanding climate change processes, mitigating natural hazards, fighting forest fires, and improving real-time agricultural processes. The Atmosphere Observing System (AOS) represents the atmospheric portion of the ESO, including aerosols, which determine air quality and affect the global energy balance; and clouds, convection, and precipitation, whose processes are a large source of uncertainty in future projections of climate change as well as predictions of severe weather. AOS, currently in the concept investigation phase, is made up of two projects, one in an inclined orbit and the other in a polar orbit, with both projects addressing synergistic aerosol, cloud, and precipitation science. Suborbital science is also a significant element of AOS. This talk will describe the science objectives of AOS and summarize the orbital architecture and major science activities during the concept investigation phase.