for topic/theme: post-launch performance or JPSS spotlight

The Advanced Technology Microwave Sounder (ATMS): The First 10 Months On-Orbit

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The Advanced Technology Microwave Sounder (ATMS) is a new satellite microwave sounding sensor designed to provide operational weather agencies with atmospheric temperature and moisture profile information for global weather forecasting and climate applications. ATMS will continue the microwave sounding capabilities first provided by its predecessors, the Microwave Sounding Unit (MSU) and Advanced Microwave Sounding Unit (AMSU). The first ATMS was launched October 28, 2011 on board the NPOESS Preparatory Project (NPP) satellite. Microwave soundings by themselves are the highest-impact input data used by Numerical Weather Prediction (NWP) models, especially under cloudy sky conditions.

ATMS has 22 channels spanning 23—183 GHz, closely following the channel set of the MSU, AMSU-A1/2, AMSU-B, Microwave Humidity Sounder (MHS), and Humidity Sounder for Brazil (HSB). All this is accomplished with approximately ¼ the volume, ½ the mass, and ½ the power of the three AMSUs.

A description of ATMS cal/val activities will be presented followed by examples of its performance after its first 10 months on orbit.

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