Atmospheric Infrared Sounding at JPL: Current and Future Technologies

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ABSTRACT

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Brief Biography:
Thomas S. Pagano is the AIRS Calibration Team Lead and Deputy Project Manager. He was also manager of the SIRAS Instrument Incubator Program. Prior to joining JPL in 1997, he was the Chief Systems Engineer on the MODIS instrument development program at Raytheon SBRS. He has a BS in Physics from UC Santa Barbara, and an MS in Physics from Montana State University. He holds 2 US patents and is author of numerous papers on space remote sensing systems.

Abstract Text:
JPL is currently managing the instrument operations, calibration and data system for the Atmospheric Infrared Sounder (AIRS) on the EOS Aqua spacecraft. Aqua was launched on May 4, 2002 from Vandenburg Air Force Base. AIRS has 2378 infrared channels with high spectral resolution (1200) covering the 3.7 to 15.4 micron wavelength range. AIRS data is used to produce temperature and humidity profiles useful in predicting weather and monitoring long term climate. We discuss lessons learned on AIRS in the development and operations as well as plans for next generation systems including SIRAS, a wide field hyperspectral infrared imaging spectrometer which offers AIRS spectral performance at 24x the spatial resolution.

Key Words: Hyperspectral, infrared, atmospheric, sounding