

## **Polar Orbiting Satellite Direct Broadcast Activities at the University of Wisconsin—Madison**

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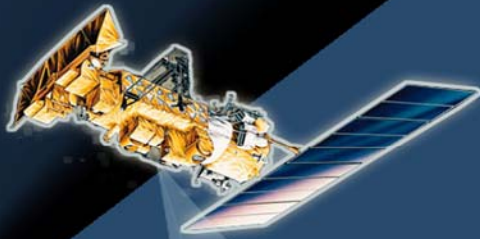
The direct broadcast facility for acquiring and processing Aqua and Terra EOS downlinked data located at the University of Wisconsin-Madison is now being used for a wide ranging set of purposes. It is being used in support of the International MODIS and AIRS Processing Package (IMAPP), an effort to provide direct broadcast data users software to calibrate, geolocate and generate science products from Aqua and Terra data. The number of products is increasing and now includes AMSR-E rain rate, AIRS Level 2 retrievals as well as MODIS cloud mask, cloud top properties, atmospheric profiles, aerosol optical depth, sea surface temperatures and near-infrared water vapor. These IMAPP products generated in near real-time are being imported into the US National Weather Service AWIPS system to assist forecasters in now casting. The products are also being used to provide Sea Surface Temperatures for high resolution model initialization at the Florida Institute of Technology, as well as to assist researchers in turtle migration studies in and around the Delaware Bay. True color MODIS images in TIF format are being produced in near real-time and used by NOAA's Coastwatch Program to support environmental science, decision making, and supporting research of the Great Lakes. MODIS aerosol and cloud products are being used as part of the Infusing Satellite Data into Environmental Applications (IDEA) program, whose goal is an effort to improve air quality assessment, management, and prediction by infusing satellite measurements (from NASA) into analyses (by EPA and NOAA) for public benefit. The aerosol optical depth product is used to initialize the trajectory forecast model, which is timely enough to be useful for forecasters. AIRS retrievals are being used to simulate future GOES bandwidths. The high spectral resolution data can be convolved using proposed ABI spectral response functions to created ABI like channels. This will be useful in determining the best spectral range needed to meet ABI goals. Finally, global interest in MODIS and AIRS data has led to MODIS/AIRS radiative transfer workshops being held in China, Australia, Taiwan, Norway and South Africa. Here students learn more about the MODIS and AIRS instruments, algorithms and products. Future workshop sites planned include Argentina and India.

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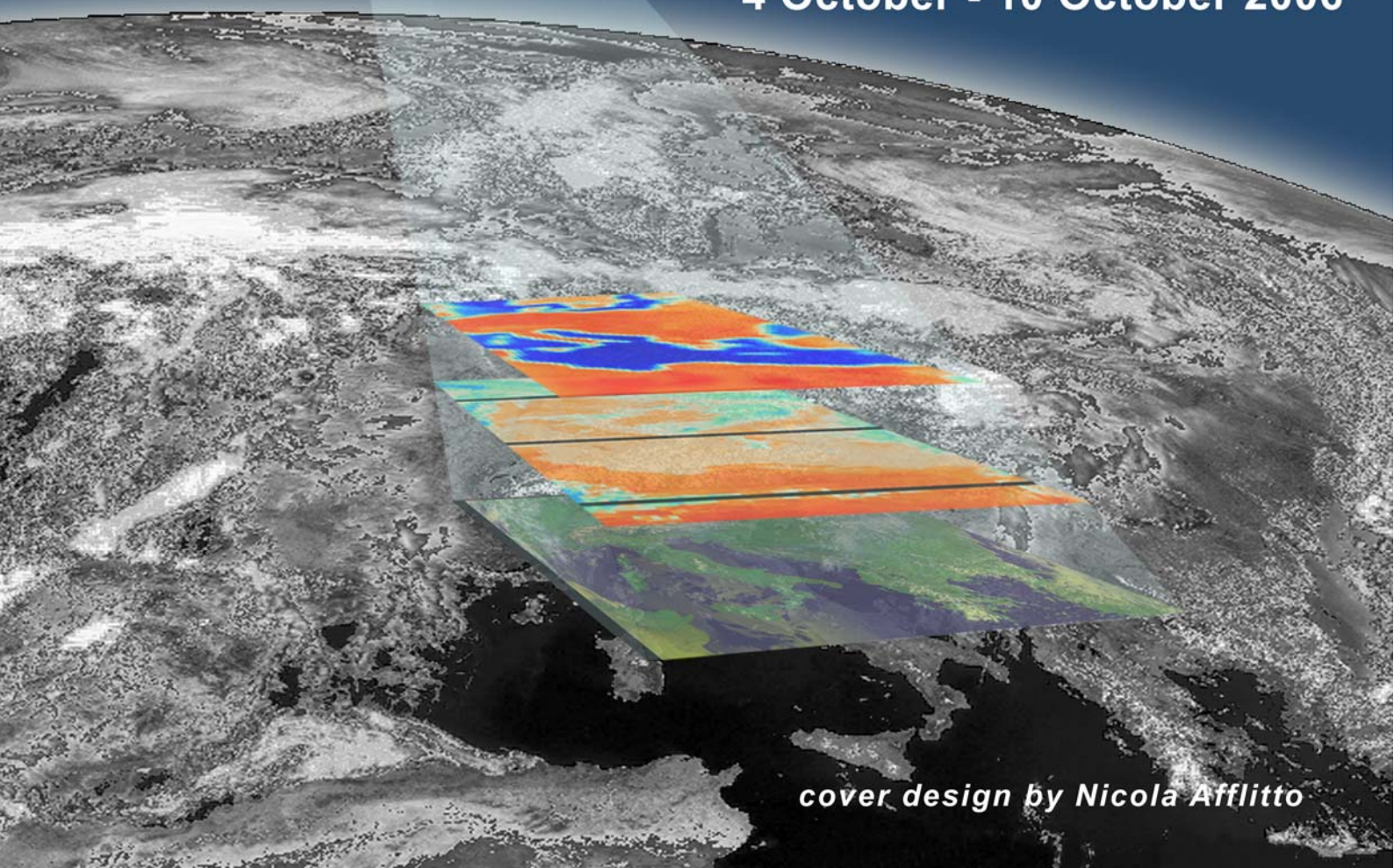
*using space-based observations*



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