

Atmospheric and Environmental Remote Sensing Data Processing and Utilization IV: Readiness for GEOSS II (OP405)

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Conference Chairs: **Mitchell D. Goldberg**, National Oceanic and Atmospheric Administration; **Hal J. Bloom**, National Polar-orbiting Operational Environmental Satellite System

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The Fifth-year focus of this conference is to continue the full scope of end-to-end atmospheric and environmental remote sensing data utilization in areas key to preparation for the Integrated Earth Observations System (IEOS), the US component of the Global Earth Observing System of Systems (GEOSS). The conference goals are to discuss and focus on those preparations needed for improved IEOS information and services. These include five basic areas: (1) calibration, intercalibration, and characterization of the observing system, (2) development of integrated products and data fusion, (3) data utilization in Numerical Weather Prediction (NWP) and environmental forecasting models, (4) advanced information systems and decision support tools, and (5) data access and archive activities. Furthermore data management and common system architecture of the existing and new polar and geostationary remote sensing systems will also be the focal point of the presentation and discussion.

To achieve the stated goals, papers are solicited in, but not limited to, the following areas:

- * current and future experimental, research, and operational atmospheric and environmental remote sensing programs and experiments
- * program and experiment concepts and plans, including implementation, strategic partnerships, policy connections, and measures of success leading to the optimal utilization of remote sensing data
- * the survey and understanding of users' requirements for programs and experiments
- * multiple interfaces among communities of data providers, algorithm developers, product producers, and data assimilation, NWP, and environmental monitoring end users
- * remote sensing interactive visualization tools
- * intercalibration strategies and activities
- * integrated product solutions using multiple systems
- * measurement noise characterization; specifically, aspects and methods for solidifying satellite instrument calibration and intercalibration requirements needed to measure small-scale signals associated with long-term global climate change

- * identification of key satellite remote sensing validation problems/issues and methods for solving these issues
- * common system architecture design and implementation
- * data management including access and archive strategies and plans.

Special Session

Operational Satellite Observations of Land Surface Properties and their Scientific and Societal Applications.

Organizers: Xiwu Zhan, Yunyue Yu, Cheng-Zhi Zou, NOAA-NESDIS Center for Satellite Applications and Research; Jeffrey Privette, NOAA National Climate Data Center

This session solicits papers on current developments of land surface data products from space-bourn observations and their applications in scientific research and societal applications. In recent years, several Earth observing operational and research satellite systems have been launched or planned for launch. Various land surface property data products have become continuously available. These land properties include, but not limited to: land surface temperature, snow cover, surface albedo, surface soil moisture, land cover and land use changes, and vegetation dynamics. Satellite sensors currently available and capable of observing these land surface properties include AMSR-E on NASA Aqua, WindSat of NRL, MODIS on both NASA Terra and Aqua satellites, AVHRR on NOAA-18 and EUMETSAT's MetOp-A, SSM/I and SSMIS on DMSP satellites, and NOAA GOES-N imager. Future operational sensors include VIIRS on NPP and NPOESS program, MIS on NPOESS program, and ABI on GOES-R program. Example scientific applications of these land surface satellite observations include: the search for long term trends of global climate, vegetation carbon stock/cycle, water and hydrological cycle, and improvement of numerical weather, climate and hydrological predictions. Example societal applications of these satellite observations include agricultural efficiency, aviation, wild fire monitoring, flood and drought monitoring among many others. Contributions to this session on data product development, quality assessment, and application methodology and benefits are all invited.

Submission of Abstracts for Optical Engineering + Applications

Abstract Due Date: 28 January 2008

Manuscript Due Date: 14 July 2008

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- Accepted abstracts may be published in printed and web programs promoting the conference. Please submit only 250-word abstracts that are suitable for publication.
- A full-length manuscript (8-12 pages) for any accepted oral or poster presentation will be submitted for publication in the SPIE Digital Library and conference Proceedings.

2. Prepare to submit:

- Have all contact information (full names, affiliations, addresses, phone numbers, and emails) for your coauthors ready.
- Only original material should be submitted.
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