



2005 CALCON Technical Conference

cal con



August 22–25, 2005

Utah State University
Eccles Conference Center
Logan, UT, USA

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Program

Conference Agenda

1:00 PM–5:30 PM	<p>Monday, August 22, 2005 Pre-Conference Workshop at SDL: Calibration of Airborne (Aircraft) Sensor Systems</p>
7:00 AM–8:00 AM	<p>Tuesday, August 23, 2005 Registration/Continental Breakfast</p>
8:00 AM–8:15 AM	<p>Conference Welcome: Brent Miller—VP for Research, Utah State University Introduction of Keynote Speaker: Michael Pavich—Director, Space Dynamics Laboratory</p>
8:15 AM–9:15 AM	<p>Keynote Presentation: Dr. Ghassem Asrar—Science Deputy Associate Administrator, NASA Quantative Earth System Remote Sensing: Past, Present, and Future </p>
9:15 AM–9:45 AM	<p>Invited Speaker: Dr. Donald Hinsman, World Meteorological Organization The Global Satellite Observing System </p>
9:30 AM–4:30 PM	<p>Exhibits Open</p>
9:45 AM–10:15 AM	<p>Invited Speaker: Prof. James G. Anderson, Harvard University An Approach to the Absolute Calibration of the Global Satellite Observing System</p>
10:15 AM–10:45 AM	<p>Refreshment Break/Poster Viewing</p>
10:45 AM–11:15 AM	<p>Invited Speaker: Dr. W. Paul Menzel, NOAA/NESDIS Cross Calibration of Satellites in Orbit</p>
11:15 AM–11:45 AM	<p>Invited Speaker: Dr. Tillmann Mohr, Special Advisor to the Secretary-General (WMO) International Collaboration for Meeting the Requirements of the Global Satellite Observing System</p>
11:45 AM–12:15 PM	<p>Panel Discussion Moderator: William L. Smith, Hampton University and University of Wisconsin</p>
12:15 PM–1:15 PM	<p>Lunch Provided</p>
1:15 PM–3:40 PM	<p>Technical Session: Calibration of Operational Environmental Satellite Sensors: Part I</p> <ul style="list-style-type: none"> • On the Metrological Assurance and Traceability of GOESS Data • Inter-Calibration of Sensors on Polar and Geostationary Satellites • Long-term Characterization of AVHRR/3 Sensors Onboard NOAA-KLM Platforms for the NOAA/NESDIS Science Data Stewardship Program • Calibration and Validation of Microwave Sensors at NOAA • Terra and Aqua MODIS Inter-comparison Study Using a Third Earth-observing Sensor Microwave Sounding Unit (MSU) Post-Launch Calibrations Using Simultaneous Nadir Overpass Method
3:40 PM–4:10 PM	<p>Refreshment Break</p>

4:10 PM–6:30 PM

Technical Session: Calibration of Operational Environmental Satellite Sensors: Part II

- Use of the Moon to Meet Imaging Sensor Stability Requirements for Earth Monitoring
The Calibration of Historical AVHRR Visible Sensors using AM-PM Pair Inter-calibration and
Deep Convective Cloud Techniques
- Calibration of Operational Geostationary Satellite Visible Sensors using VIRS, TERRA and
AQUA-MODIS
- A Comprehensive Radiometric Validation Protocol for the CERES Earth Radiation Budget
- Climate Record Sensors
- Quantum Cascade Lasers and Applications for On-Board Calibration of Hyperspectral Imagers
Lessons Learned from the Vicarious Calibration of MISR

Free Evening

7:30 AM–8:00 AM

Wednesday, August 24, 2005

Continental Breakfast/Poster Viewing

8:00 AM–9:40 AM

Technical Session: Calibration of Operational Environmental Satellite Sensors: Part III

- Automated ground system for reflectance-based calibration
- A Satellite Coincident Reference Upper Air Network for the Long-term Monitoring of
Operational Measurements
- Surface-based and Aircraft-based Radiometric Measurements at Lake Tahoe to Assess
Terra MODIS TEB Accuracy
- Lessons Learned in Calibration Specsmanship

9:30 AM–4:30 PM

Exhibits Open

9:40 AM–10:10 AM

Refreshment Break/Poster Viewing: Authors Present

10:10 AM–12:10 PM

Technical Session: Traceability of Absolute Radiometry and Remote Sensing: Part I

- Environmental Effects in the IR Spectroradiometry of Blackbody Sources
- Establishing NIST Traceability for Satellite-Derived Measurements of the Sea-Surface
Temperature
- Improved Spectral Irradiance Responsivity Calibrations of InSb Radiometers
BXR-I Measurements and Calibration
- Low Temperature Background Blackbody Calibrations at the LBIR Facility: Four Year
Summary and the Spread in Blackbody Performance

12:10 PM–1:10 PM

Lunch Provided

1:10 PM–2:00 PM

Technical Session: Traceability of Absolute Radiometry and Remote Sensing: Part II

- Calibration of the Geostationary Imaging Fourier Transform Spectrometer (GIFTS)
On-board Blackbody Calibration System
- Spectral Irradiance Calibration of Deuterium Lamps Using the NIST Synchrotron, SURF III

2:00 PM–2:50 PM

**Technical Session: Critical Calibrations and Novel Characterizations of Components, Subsystems,
and Systems: Part I**

- Calibration of FIRST
- Characterization and Correction for Terra MODIS SWIR Bands Crosstalk

2:50 PM–3:20 PM

Refreshment Break

3:20 PM–5:20 PM

Technical Session: Critical Calibrations and Novel Characterizations of Components, Subsystems, and Systems: Part II

- Spectrally Tunable Light Engine for Ocean-Color Radiometric Characterization
- Stray Light Characterization and Correction of Hyperspectral Imaging Systems
- Development of Programmable Spectral Scene Generators for Validation of Spectroradiometric Calibration
- Radiometric Calibration Capability and Uncertainty Estimates Associated with IR Sources in the AEDC Sensor Test Chambers
- The Effect of Fixed Pattern Noise on Imaging Stokes Vector Microgrid Polarimeters

5:20 PM–5:45 PM

Technical Session: Update on EO/IR Calibration/Certification Standards

- Update on EO/IR Calibration/Certification Standards

6:15 PM–9:00 PM

Barbeque: Logan Canyon

Thursday, August 25, 2005 No Exhibits Available

7:30 AM–8:00 AM

Continental Breakfast/Poster Viewing

7:30 AM–10:00 AM

Special US Classified Session

8:00 AM–10:45 AM

Technical Session: Pre-launch to On-Orbit Calibration and Characterization—AIRS, A Case Study

- Pre-Launch and Post-Launch Radiometric Characterization Of the Atmospheric Infrared Sounder (AIRS)
- AIRS Radiometric Calibration Validation for Climate Research
- Spectral Calibration of AIRS: Building a Climate Record
- ~~AIRS On-Orbit Spectral Calibration~~
- On-orbit Radiometric and Spectral Evaluation of AIRS with the Aircraft Based Scanning-HIS and Comparisons with MODIS
- Pre-flight and In-flight Spatial Characterization of AIRS
- Pre-flight and In-flight Polarization Characteristics of AIRS

10:45 AM–11:00 AM

Refreshment Break/Poster Viewing: Authors Present

11:00 AM–1:15 PM

Technical Session: Solar, Lunar, and Stellar Radiometric Measurements

- Improved Accuracy in the Absolute Infrared Spectra of Standard Calibration Stars
- Ultraviolet Absolute Stellar Irradiances from SORCE SOLSTICE
- Solar Spectral Variability as Measured by the SORCE SIM Instrument
- ~~Calibration of ACRIM Instruments and Science Results~~
- MODIS Calibration Results from Lunar Observations

1:15 PM–2:00 PM

Lunch Provided

2:00 PM–4:15 PM

Technical Session: Radiometric, Spatial, and Geometric Calibration of Operational Remote Sensing Systems

- Vicarious Calibration of AVHRR
- An Overview of Four Decades of Landsat Data Calibration
- IKONOS Radiometric Calibration and Performance after 5 Years on Orbit
- NASA IKONOS Multispectral Radiometric Calibration and 5-year Temporal Stability Assessment
- High Spatial Resolution Commercial Imaging Characterization

4:15 PM–4:45 PM

Conference Conclusion