CLARREO Oral and Poster Presentations
2009 Fall American Geophysical Union Meeting
December 14-18, 2008
San Francisco, CA

GC43A Moscone South: Hall Thursday 1340h-Posters
SI-Traceable Climate Measurements From Space: Requirements, Methods, and Information Content of Proposed CLARREO Measurements I

Presiding: **S S Leroy,** Harvard University; **D F Young,** NASA Langley Research Center

Solar Intensity Distributing and Convolving Optic (SIDCO) Concept for the CLARREO Visible-Near Infra-Red (VNIR): G Matthews

Applicability of UV and Blue High- Flux Light Emitting Diodes as In-Flight Radiometric Sources for CLARREO: M Helmlinger, B Miller, J Barter, L Iwaki, M Frink

Calibration Lessons Learned from Hyperion Experience: S Casement, K Ho, S Sandor-Leahy, S Biggar, J Czapla-Myers, J McCorkel, K Thome

Modeling the Reflected Solar Spectrum for CLARREO: Z Jin, C Lukashin, B A Wielicki

Evaluating the Variability of Earth-reflected Hyperspectral Data Using Principal Component Analysis: Y Roberts, P Pilewskie, B C Kindel, G Kopp, Z Jin

Applicability of Spectral Longwave Radiative Kernels at Monthly/Daily Spatial Scale and Global/Zonal Temporal Scale: F G Rose, S Kato, X Liu

Simulation of a Retrieval Process of Atmospheric Changes from Spatially and Temporally Averaged Nadir View Spectral Changes: D P Kratz, S Kato, F G Rose, X Liu

Using the Multiangle Polarimetric Measuring Capabilities of the 2010 NASA/Glory Mission to Separate Stmospheric Scattering Contributions from Radiances Emerging from Open Oceans in the Visible Part of the Spectrum: J Chowdhary, B Cairns, M I Mishchenko, B E Carlson

Sampling Errors for the CLARREO GNSS Radio Occultation Instrument: S S Leroy, J Anderson

Assessment and Mitigation of Ionospheric Residual Errors in GPS Radio Occultation Retrievals: C O Ao, A Mannucci, X Pi, B A Iijima

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Design of a High Accuracy Blackbody for CLARREO: H M Latvakoski, D K Scott, M Watson, M D Wojcik, T S Topham, G E Bingham

Application of Phase Change Cells as Temperature Reference for Blackbody Thermometry: T S Topham, G E Bingham, D K Scott, D Ahlstrom

A New Class of Advanced Accuracy Satellite Instrumentation (AASI) for the CLARREO Mission: Interferometer Test-bed Tradestudies and Selection: J K Taylor, H E Revercomb, F J Grandmont, H Buijs, P J Gero, F A Best, D C Tobin, R O Knuteson, D D LaPorte

On-Orbit Absolute Temperature Calibration Using Multiple Phase Change Materials: F A Best, D P Adler, C Pettersen, H E Revercomb, J H Perepezko

High-Performance Quantum Detector Option for CLARREO Far-IR Interferometer: H H Hogue, M G Mlynczak, N Abedin, S A Masterjohn, M S Muzilla

On-orbit Traceable Blackbody Emissivity Measurement Using the Heated Halo Method: P J Gero, J K Taylor, F A Best, H E Revercomb, R O Knuteson, D C Tobin, D P Adler, N N Ciganovich, S Dutcher, R K Garcia

Establishing a New NIST Facility for the Primary Realization of Both Spectral Radiance and Reflectance in the Mid-and Far-Infrared: S Mekhontsev, V Khromchenko, A Prokhorov, B Wilthan, L Hanssen

Monte-Carlo Modeling of BB Emissivity and Its Monitoring Techniques in Support of the CLARREO Mission: L M Hanssen, A Prokhorov, B Wilthan, S Mekhontsev, V Khromchenko, J Zeng

CLARREO Observation Modes and Their Impact on Orbit Definition and On-Orbit Operations: P W Speth, C Roithmayr, D MacDonnell

Atmospheric Infrared Sounder (AIRS) High Spectral Resolution Radiance Climate-Quality Dataset for Validating Climate Analyses: M Goldberg, L Zhou, X Liu, Z Cheng

Using CLARREO for Spectral Calibration of NOAA Operational Satellite Sensors: Lessons Learned from Studies with AIRS and IASI: L Wang, C Cao

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Trends and Inter-Annual Variability of Outgoing Spectrally Resolved Infrared Emission in High, Middle, and Tropical Latitude Zones: Use of Recent AIRS and IASI Data Sets for CLARREO Mission Formulation: R O Knuteson, F A Best, S Dutcher, R K Garcia, P J Gero, R Holz, H E Revercomb, J K Taylor, D C Tobin

Information Content Analysis of CLARREO Far-IR and Mid-IR Spectral Regions: X Liu, B Wielicki, D F Young, M G Mlynczak, D G Johnson, S Kato, D P Kratz

Climate Signal Detection from Multiple Satellite Measurements: Y Jiang, H Aumann, Y L Yung, K Li

Comparison of Anomalies and Trends of OLR as Observed by CERES and Computed from Geophysical Parameters Derived from Analysis of AIRS/AMSU Data: J Susskind, G I Molnar

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GC51B Moscone West: 3001 Friday 0800h-Oral Presentations
SI-Traceable Climate Measurements From Space: Requirements, Methods, and Information Content of Proposed CLARREO Measurements II

Presiding: **D F Young,** NASA Langley Research Center; **A A Lacis,** NASA-GISS

CLARREO Mission Overview: B A Wielicki

Technology Investments Supporting Radiative Science: A L Walton, G Komar, K Murray

The Predicted CLARREO Sampling Error of the Inter-annual SW Variability: D R Doelling, D F Keyes, C Nguyen, D MacDonnell, D F Young

Information Content and Polarization of Light Reflected by the Earth: A A Lacis, B Cairns, M I Mishchenko

CLARREO Short-Wave Photopolarimeter: M I Mishchenko, B Cairns, A A Lacis

CLARREO/RSIS Reference Inter-Calibration Ability and Requirements: C Lukashin, D MacDonnell, C Roithmayr, P Speth, B Wielicki

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Detecting Aerosols and Greenhouse Gases Forcings using Shortwave CLARREO Spectra: D Feldman, W Collins

Detecting Land Surface and Cloud Feedbacks using Shortwave CLARREO Spectra: W Collins, D Feldman, C Algieri