

NEWS Integration: Potential Connections

***MEaSURES 2012 projects:**

Through MEaSURES, NASA is continuing its commitment to expand understanding the Earth system using consistent records.

*To view full abstracts go to:

http://science.nasa.gov/media/medialibrary/2012/11/16/MEaSURES_2012_Awards.pdf

*** View Project titles with contact emails directly below**

- Yehuda Bock (Scripps) ybock@ucsd.edu

Solid Earth Science ESDR System

- Mary Brodzik (NSIDC) brodzik@nsidc.org

An Improved, Enhanced-Resolution, Gridded Passive Microwave ESDR for Monitoring Cryospheric and Hydrologic Time Series

- Eric Fetzer (JPL) Eric.Fetzer@jpl.nasa.gov

A Multi-Sensor Water Vapor, Temperature and Cloud Climate Data Record

- Sean Buckley (JPL) james.l.buckley-1@nasa.gov

NASADEM: Creating a New NASA Digital Elevation Model and Associated Products

- Bryan Franz (GSFC), bryan.a.franz@nasa.gov

Production and Distribution of MERIS Data Products in Support of the Ocean Color Climate Data Record

- Joaquim Goes (Lamont Doherty Earth Observatory) jig@ldeo.columbia.edu

A Time Series of Sea Surface Nitrate and Nitrate Based New Production in the Global Oceans

- Matthew Hansen (UMD) mhansen@umd.edu

Vegetation Continuous Fields ESDR for the AVHRR and MODIS Records:1981- Present

- George Huffman (GSFC) george.j.huffman@nasa.gov

Next-Generation Global Precipitation Climatology Project (GPCP) Data Products

- Ian Joughin (Univ. of Washington) ian@apl.washington.edu

Greenland Ice Mapping Project Two: Measuring Rapid Changes in Ice Flow

- Seiji Kato (Langley Research Center) seiji.kato@nasa.gov

A Long-Term TOA and Constrained Surface Radiation Budget Dataset Using Merged CERES, ERBE and I SCCP/SRB Products from the Past 30 Years

- John Kimball (University of Montana) John.Kimball@umontana.edu

Continuity and Enhancement of the Global Earth System Data Record for Landscape Freeze/Thaw State Dynamics

- Nikolay Krotkov (GSFC) nickolay.a.krotkov@nasa.gov

Multi-Decadal Sulfur Dioxide Climatology from Satellite Instruments

- Ronald Kwok (JPL) ESDR of Small-Scale Kinematics of Sea Ice of the Arctic and Southern Oceans: A New Data Set Based on Envisat

- **Felix Landerer** (JPL) An Earth System Data Record of Earth's Surface Mass Variations from GRACE and Geodetic Satellites

- **Dennis Lettenmaier** (University of Washington) dennisl@uw.edu

Development of Pre-SWOT ESDRs for Global Surface Water Storage Dynamics

- Nathaniel Livesey (JPL) Nathaniel.J.Livesey@jpl.nasa

A Long-Term Record of Upper Stratospheric and Mesospheric Temperature Profiles

- David Long (Brigham Young University) david_long@byu.edu

Improved, Enhanced-Resolution, Gridded Passive Microwave ESDR for Monitoring Cryospheric and Hydrologic Time Series

- Stephane Maritorena (UC Santa Barbara) stephane@eri.ucsb.edu

Creating Unified Ocean Color Data Records with Uncertainties

- Eric Rignot, (UC/Irvine) erignot@uci.edu.

Ice Velocity Mapping of the Antarctic Ice Sheet

- **William Rossow** (CCNY) wbrossow@ccny.cuny.edu

Globally Merged, Reconciled and Gridded Observations of Near-Surface Atmospheric and Land Surface Properties and Their Diurnal-to-Decadal Variations

- David Roy (South Dakota State University) david.roy@sdsstate.edu.

Global Long-Term Multi-Sensor Web-Enabled Landsat Data Record

- Justin Sheffield (Princeton University) justin@princeton.edu.

Development of Consistent Global Long-Term Records of Atmospheric Evaporative Demand

- Martin Snow (University of Colorado) martin.snow@lasp.colorado.edu

Multi-Satellite Ultraviolet Solar Spectral Irradiance Composite (MUSSIC)

- Joao Teixeira (JPL) Joao.Teixeira@jpl.nasa.gov.

A Data Record of the Cloudy Boundary Layer

- Prasad Thenkabail (USGS) pthenkabail@usgs.gov.

Global Cropland Area Database (GCAD30) Through Landsat and MODIS Data Fusion for the Years 2010 and 1990 and its Dynamics over Four Decades Using AVHRR and MODIS

- Omar Torres (GSFC) omar.o.torres@nasa.gov

A 30-Year Record of Aerosol Properties over Land from TOMS and OMI Observations

- Josh Willis (JPL) joshua.k.willis@jpl.nasa.gov

A Climate Data Record of Altimetric Sea Level Change and Its Mass and Steric Components

* **GEWEX Projects: for more information go to <http://www.gewex.org/projects.html>**

- Chris Kummerow (christian.kummerow@colostate.edu)

(GDAP) Data and Assessments Panel

Guide production and evaluation of long term globally complete atmospheric and surface water and energy budget products, including radiation, clouds, aerosols, precipitation and including radiation, clouds, aerosols, precipitation and surface turbulent fluxes.

- TBD Peter van Oevelen, (gewex@gewex.org) **GEWEX Hydroclimatology Panel (GHP)**

Demonstrate skill in predicting changes in water resources and soil moisture on time scales up to seasonal and annual as an integral part of the climate system.

- **Stephen Klein** (klein21@llnl.gov)

Global Atmospheric System Studies (GASS) Panel

Facilitates the use of observations, process studies and numerical model experiments with the goal of developing and improving the representation of the atmosphere in weather and climate models.

- **Joseph Santanello** (joseph.a.santanello@nasa.gov)

Global Land/Atmosphere System Study (GLASS) Panel

Supports the improvement of estimates and representation of land-surface states and fluxes in models, the interaction with the overlying atmosphere, and maximizing the fraction of inherent predictability.

***PMM (2012 Precipitation Measurement Mission (PMM))**

To view full abstracts: [PMM12+selections.pdf](#)

*Project titles with contact emails, directly below

- **Robert Adler**, UMD, radler@umd.edu

A TRMM/GPM Composite Climatology of Surface Precipitation

- **Emmanouil Anagnostou**, (Univ. Connecticut) manos@engr.uconn.edu

Use of GV Data to Evaluate and Improve Uses of Satellite-Rainfall in Hydrologic Modeling of Complex Terrain Basin Floods

- **Ana Barros** (Duke University) barros@duke.edu

Characterizing the Spatial and Temporal Structure of Orographic Precipitation and Its Relationship to Hydrologic Extremes in Mountain Landscapes Category 2: Process Studies Integrating Ground Validation Observations, Satellite Products and Models in the Southern Appalachians

- Wesley Berg (Colorado State University) berg@atmos.colostate.edu
Intercalibration and Rainfall Intensity Characterization for a Diverse GPM Radiometer Constellation

- **Rafael Bras** (Georgia Institute of Technology) provost@gatech.edu
Downscaling and Improvement of Rainfall and Soil Moisture by Assimilating GPM and SMAP Data Using a Coupled Hydro-Meteorological Modeling System

- Daniel Cecil (University of Alabama in Huntsville) (cecild@uah.edu)
Precipitation Retrieval Evaluations and Science Investigations Using TRMM, GPM, and Constellation Precipitation Features

- Chandra V. Chandrasekar (Colorado State Univ.) chandra@engr.colostate.edu
TRMM and GPM Observations and precipitation Microphysics: Interpretation, Algorithms, Precipitation Estimation and Application to GPM

- Brian Colle (Stony Brook University) colle@stonybrook.edu
Using Field and Satellite Measurements to Improve Snow and Riming Processes in Cloud Resolving Models

- Anthony Del Genio (NASA GISS) anthony.d.delgenio@nasa.gov
Satellite and Ground Validation Precipitation Constraints on GCM Simulations of Storm Dynamics and Microphysics

- Stephen Durden (JPL) mailto:durden@fringc.jpl.nasa.gov.
GPM Path Attenuation Estimation and Validation

- Efi Foufoula-Georgiou (University of Minnesota) efi@umn.edu
Towards the Next Generation of Multi-sensor Multi-Scale Precipitation Fusion Products for the GPM Era: A Variational Approach in Wavelet Domain

- Mircea Grecu (GSFC) Mircea.Grecu-1@nasa.gov
Expectation Maximization Analysis to Improve the Consistency and Accuracy of GPM Combined Retrievals

- Ziad Haddad (JPL) zsh@jpl.nasa.gov
Using GV Observations and Forward Databases to Improve Radar/Radiometer Retrievals for GPM

- Andrew Heymsfield (UCAR) heyms1@ucar.edu
Further Development and REFINEMENT of Ice and Snow Precipitation Algorithms for GPM: Incorporation of New GPM-FUNDED In-SITU Data Sets

- Gerald Heymsfield (GSFC) gerald.heymsfield@nasa.gov
Using Airborne Radar Measurements to Improve Physical Assumptions in DPR and GMI Algorithms

- Yang Hong (University of Oklahoma) yanghong@ou.edu
A Research Framework to Bridge GPM Core and Constellation Sensors Using Polarimetric National Mosaic QPE (NMQ)
- Robert Houze (University of Washington) house@u.washington.edu
Global Precipitation Processes
- George Huffman (GSFC) george.j.huffman@nasa.gov
Advancing the TMPA and IMERG Multi-Sensor Level 3 Precipitation Products in the TRMM-GPM Transition Era
- Richard Johnson (Colorado State University) johnson@atmos.colostate.edu
Forcing Fields and Diagnostic Studies Related to PMM Latent Heating Algorithms
- W. Linwood Jones (Univ of Central Florida) ljones@ucf.edu
On-Orbit Inter-satellite Radiometric Calibration for GPM
- Eugenia Kalnay (UMD) ekalnay@atmos.umd.edu
Effective Assimilation of TRMM/GPM Precipitation in the NCEP Global Model with an Ensemble Kalman Filter
- Christopher Kidd (GSFC) chris.kidd@nasa.gov
Quantifying Errors and Uncertainties in Precipitation Estimates
- Witold Krajewski (University of Iowa) witold-krajewski@uiowa.edu
Data-Based Hydrologic Validation of GPM Rainfall Products
- Tiruvalam Krishnamurti (Florida State University) tnk@met.fsu.edu
Use of TRMM and GPM Data Sets for Improving Forecasts of Weather, Seasonal Climate and Extreme Events
- Mark Kulie (Univ. Wisconsin-Madison) mkulie@wisc.edu
Improving GPM Era Higher Latitude Precipitation Retrievals Using Enhanced Microphysical Modeling Tools and Multi Frequency Radar Observations
- Christian Kummerow (Colorado State Univ.) christian.kummerow@colostate.edu
Improving the Physical Foundation for the GPM Day-1 Radiometer Algorithm
- John Kwiatkowski (George Mason University) jkwiatko@gmu.edu
TRMM Precipitation Radar Retrieval Algorithms in the GPM Dual-Frequency Radar Era
- **William Lau** (GSFC) William.K.Lau@nasa.gov
Extreme Rainfall and Climate
- Dennis Lettenmaier (University of Washington) dennisl@uw.edu
Evaluation of the Utility of PMM Products for Hydrologic Prediction in Topographically Complex Regions

- Liang Liao (UMBC) liang.liao-1@nasa.gov
Development of Scattering Tables for Snow, Rain and Mixed-Phase Hydrometeors for Physically Consistent DPR and GMI Retrievals

- Chuntao Liu (University of Utah) liu.c.t@utah.edu
Precipitation Features in the GPM Era: Development of a Long Record of the Precipitation Feature Database Using Multiple Satellite Observations

- Guosheng Liu (Florida State University) gliu@fsu.edu
Development of Radiometer Algorithm for Snowfall Detection and Retrieval over Land and Ocean

- W. Timothy Liu (JPL) w.timothy.liu@jpl.nasa.gov
Linking Ocean Water Balance to Land Rainfall and Climate Change

- Clifford Mass (University of Washington) cliff@atmos.washington.edu
Application of TRMM and GPM Observations for High-Resolution Data Assimilation, Model Improvement, and Mesoscale Studies

- Darren McKague (University of Michigan) dmckague@umich
Intercalibration of the GPM Constellation Radiometers: Sounder Intercalibration, Post-Launch Calibration of GMI, and Assessment of the Effect of Intercalibration on Derived Products

- Robert Meneghini (GSFC) robert.meneghini-1@nasa.gov
Development and Testing of Algorithms for the Dual-Frequency Precipitation Radar

- Stephen Nesbitt (Univ. Illinois at Urbana-Champaign) snesbitt@uiuc.edu
GPM Field Campaign Aircraft and Radar Data Synergy for Algorithm Improvement and Error Characterization

- William Olson (UMBC/JCET/NASA/GSFC) bill.olson@nasa.gov
Development and Evaluation of Improved Ice and Mixed-Phase Precipitation Models for GPM Combined Radar-Radiometer Retrieval Algorithm Applications

- Vivienne Payne (JPL) vivienne.h.payne@jpl.nasa.gov
Inter-Calibration of Microwave Sensors: Water Vapor Sounding Channels and Window Channels over Land

- Walter Petersen (GSFC) walt.petersen@nasa.gov
Synthesis of GPM GV Hydrometeor Datasets for Combined Precipitation Retrieval Algorithms

- Christa Peters-Lidard(GSFC) christa.d.peters-lidard@nasa.gov
Dynamic Emissivity Estimates to Support Physical Precipitation Retrievals for GPM

- Grant Petty (Univ. Wisconsin-Madison) gpetty@aos.wisc.edu
Radar-Enhanced Passive Microwave Retrievals of Precipitation over Spatially and Temporally Variable Land Surfaces

- Anita Rapp (Texas A&M University) arapp@tamu.edu

Local and Remote Effects of Subtropical Cumulus Convection

- Steven Rutledge (Colorado State University) Steven.Rutledge@ColoState.edu

Radar Studies of Convection and Precipitation Physics in Support of PMM

- Carl Schreck (North Carolina State University) carl.schreck@noaa.gov

Role of Kelvin Waves in Tropical Cyclogenesis

- Courtney Schumacher (Texas A&M University) cschu@tamu.edu

Multi-Scale Interactions in the Tropics: TRMM PR Observations + 8 Reanalysis Data Sets

- James Shepherd (University of Georgia) marshgeo@uga.edu

Urban-Snow Relationships: Process Studies and a New Framework for Optimizing and Managing Global Urban Water Systems in the GPM Era

- Gail Skofronick Jackson (GSFC) gail.s.jackson@nasa.gov

Radiometer Retrieval Algorithm Evaluation and Enhancement for Falling Snow and Light Rain Detection and Estimation

Simone Tanelli (JPL) simone.tanelli@jpl.nasa.gov

Advanced Datasets to Diagnose Higher-Order Features Embedded in Expected GPM Measurements and their Impact on Retrieval Algorithms

- Wei-Kuo Tao(GSFC) Wei-Kuo.Tao-1@nasa.gov

A Robust Multi-Scale Modeling System for the Study of Cloud and Precipitation Processes for PMM

- Francis Turk (JPL) jturk@jpl.nasa.gov

Microwave Surface Emissivity Variability Under Clear and Precipitating Conditions

- Thomas Wilheit (Texas A&M University) wilheit@tamu.edu

Consistent Radiances for GPM

- Christopher Williams (Univ. Colorado Boulder) Christopher.Williams@colorado.edu

Vertical Correlation of DSD Parameters: Incorporating GV Data into Integral Tables to Improve GPM Precipitation Retrieval Algorithms

- Eric Wood (Princeton University) efwood@princeton.edu

Multi-Sensor Enhancement of Real-Time Satellite Precipitation Retrievals for Improved Drought Monitoring

- Edward Zipser(University of Utah) ed.zipser@utah.edu

Entering the GPM Era: How do Microphysical Properties of Precipitation and Convection Affect Algorithm Performance in Different Weather Regimes?

- Milija Zupanski (Colorado State University) ZupanskiM@cira.colostate.edu
Ensemble-Based Assimilation and Downscaling of the GPM Satellite Precipitation Information:
Further Development and Improvements of WRF-EDAS