ESSIC Current Grants & Awards

Sponsor	Responsible Person	End Date	Title
UMBC	Li, Zhanqing	05-14-2010	Spectral Absortion Properties of Aerosol in the UV Wavelengths
UMBC	Chen, Junye	06-30-2010	Roles of ENSO and Slowly Varying SST Modes in influencing development of drought over the United States
Harvard U.	De Goncalves, Luis	11-30-2010	Interactions Between Climate, Forests, and Land Use in the Amazon Basin: Modeling and Mitigating Large-Scale Savannization
Battelle	Busalacchi, Antonio J	01-31-2010	Joint Global Change Research Institute-FRA
CSU	Busalacchi, Antonio J	06-30-2011	Center for Multi-Scale Modeling of Atmospheric Processes
Battelle	Busalacchi, Antonio J	06-30-2010	JGCRI Model Code Development
NSF	Del vecchio, Rossana	01-31-2011	Collaborative Research: The Impact of Peligibralter
NSF	Del vecchio, Rossana	02-28-2011	Chromophoric Dissolved Organic Matter Photochemistry and photophysics: Testing the charge transfer model.
NSF	Tzortziou, Maria A	08-31-2010	Tidal Marsh Outwelling of dissolved organic matter into the Chesapeake Bay: Impact on the optical, chemical and microbial characteristics of estuarine waters.
NSF	Rancic, Miodrag	08-31-2010	Further Advancement and Implementation of a global framework to quasi-uniform rectangular grids
NSF	Fox-Rabinovitz, Michael S	09-30-2010	CMG Collaborative Research: Development of new statistical learning theory and techniques for improvement of atmospheric physics.
NSF	Zhang, Rong Hua	08-31-2010	Roles of Tropical Instability Waves (TIW) in modulating El Nino-southern oscillation (ENSO)
NASA	Murtugudde, Ragu	03-14-2010	Exploratory Quantitative analysis of physical controls of the optical properties of upper ocean water, and its application to climate modeling.
NASA	Murtugudde, Ragu	10-31-2010	Decadal Variability of the Mixed Layerheat budget in the equatorial pacific and atlantic oceans.
NASA	Zhao, Xuepeng	02-28-2010	Cloud Object Analysis and Modeling of Cloud-aerosols interactions and cloud-feedbacks with the combined CERES and CALIPSO data.
NASA	Romanov, Peter	04-14-2010	Continuous Fields of Snow Cover Characteritics derived through coupling satellite data with snowpack model
NASA	Birkett, Charon	09-11-2010	River Basin Dynamics and Lake Level Variability: Application of laser altimetry and enhanced radar altimetry.
NASA	Ji, Qiang	07-12-2010	SMART-COMMIT Supersite observations and analysis for NAMMA study
NASA	Busalacchi, Antonio J	05-16-2011	Collaborative Earth System Science Research between NASA/GSFC and University of Maryland
NASA	Li, Zhanqing	08-31-2010	Investigations of the Saharan Air Layer dust distribution and their implications for the AE and AHMC
NASA	Murtugudde, Ragu	08-30-2010	Impact of the Oceanic Intraseasonal Oscillations on the Madden-Julian oscillation in the coupled ocean-atmosphere system.
NASA	Li, Zhanqing	11-30-2013	East Asian Study of Tropospheric Aerosol: An international regional experiment.
NASA	Zhang, Rong Hua	02-18-2011	Using Satellite Observations to Derive TIW induced atmospheric feedback effects for climate and ecosystem modeling studies.
NASA	Busalacchi, Antonio J	02-18-2011	Implementation of Satellite Sea Surface Salinity data into ocean and coupled models.
NASA	Birkett, Charon	04-16-2011	The Global Reservoir and Lake Monitoring: Enhancing the USDA/FAS DSS with NASA, NRL and ESA satellite radar altimeter data.
NASA	Wang, Xiujun	06-08-2011	Reducing the Global Carbon Cycle Uncertainties: Understanding the tropical ocean-atmosphere CO2 fluxes.
NASA	Birkett, Charon	09-30-2012	The Application of Multiple Satellite Radar altimetry data sets to inland surface water projects
NASA	Wang, Xiujun	01-31-2012	Decadal Changes in the Equatorial Pacific ecosystem structure and functioning: Impact of Climate conditions.
NASA	Shen, Bo Wen	03-14-2012	Coupling NASA Advanced Multi-Scale Modeling and concurrent visualization system for improving predictions of tropical high-impact weather.
NASA	Busalacchi, Antonio J	02-28-2013	Application of Scatterometry, Satellite Sea Surface Temperature, and Altimetry Measurements to Improved Understanding and Prediction of Indo-Pacific.
NASA	Murtugudde, Ragu	02-28-2013	Physical-Biological Interactions Associated with tropical subseasonal variability and their impacts on SST.
NASA	Adler, Robert	03-29-2013	Global Precipitation Variations and Extremes
NASA	De Goncalves, Luis Goncalve	06-30-2012	The Data-Model Intercomparison Project for the large scale biosphere-atmosphere experiment of the Amazon
NASA	Chen, Junye	07-13-2012	Minimizing the Impact of Changes in the observing system on a new NASA reanalysis to advance the understanding of climate change.
NASA	Busalacchi, Antonio J	09-30-2013	Spatio-Temporal Variability and Error Structure of sea surface salinity in the tropics.
DOE	Li, Zhanqing	07-14-2010	Use of ARM Mobile Facility (AMF) Data to study aerosol indirect effects in China.
DOE	Fox-Rabinovitz, Michael S	07-31-2010	Development of Ensemble Neural Network convection parameterizations for climate models using ARM data.
NOAA	Busalacchi, Antonio J	05-31-2011	Advanced Study Institute for Environment
NOAA	Zhang, Rong Hua	06-30-2011	Modulation of Tropical Air-Sea Coupling by TIWs: Sources for Tropical Biases in the Pacific climate system.
NOAA	Arkin, Phillip Alan	06-30-2014	Cooperative Institute for Climate and Satellites
NOAA	Mittaz, Jhonathan	05-31-2012	A Recalibration of the AVHRR Data Record
NOAA	Arkin, Phillip Alan	06-30-2010	Cooperative Institute for Climate Studies

Project	Investigator Name	Sponsor	Control #	Brief Description
Task 100	Director's Account	Hildebrand, Peter		Director's Account
Task 101	Rabenhorst, Scott	Whiteman, David		Raman lidar data analysis software
Task 102	Bollasina, Massimo	Lau, William		Collaboration to study aerosol-monsoon water cycle interaction
Task 103	Arkin, Phil (GMAO)	Rienecker, Michele		GMAO atmospheric realysis
Task 104	Ricko, Martina	Smith, Eric	ESSIC-2-018	Meteorology and hydrology disciplines
Task 105	Dr. Zhanqing Li's Students	Chin, Mian		Using model and satellite data for aerosol studies
Task 106	Nowottnick, Edward	Colarco, Peter		Analysis of GEOS-5 aerosol model results
Task 107	Wolff Students	Wolff, Charles		Contribute to NASA's Lunar Exploration program
Task 108	Allen, Dale/Huntemann, Tabitha	Pickering, Kenneth	-	Support an Aura Validation project
Task 109	Allen, Dale	Pickering, Kenneth	ESSIC-2-019	EPA's Community Multiscale Air Quality
Task 110	Carty, Hezekiah (fellowship)	Smith, Eric	-	Graduate student fellowship
Task 111	Penny, Stephen	Wiscombe, Warren		Graduate student fellowship
Task 112	Carton, James	Rienecker, Michele		Impact of assimilation of altimeter sea level
Task 113	Wurster, Karl	Imhoff, Marc		Forest degradation studies using spaceborne remote sensing
Task 114	Cipriani, James/Cummings, Kristin	Pickering, Kenneth	-	Support an Aura Validation project
Task 115	Birkett, Charon	Peters-Lidard, Christa	ESSIC-2-001	Data analysis and product evaluation pertaining to the Naval Research Lab's altimetry data
Task 116	Richards TBD	Richards, Jack	ESSIC-2-002	Ensemble forecasting, data assimilation
Task 117	Arkin, Phillip	Rodell, Matthew	ESSIC-2-004	Evaluate High Resolution Precipitation Products
Task 118	Zhang, Wu	Tsay, Si-Chee	ESSIC-2-005	Retrievals and analyses of global aerosol properties
Task 119	Huang, Shih-Jen	Tsay, Si-Chee	ESSIC-2-006	Retrievals and analyses of global aerosol properties
Task 120	Adler, Robert/010	Braun, Scott	ESSIC-2-010/042	Global and tropical precipitation analysis at monthly and finer scales
Task 121	Adler, Robert	Policelli, Frederick	ESSIC-2-011	Development and testing of global and regional flood
Task 122	Tang, Yu	Abshire, James/Yu, Anthony	ESSIC-2-016	Interaction of the laser light
Task 123	Adler, Robert/017	Heymsfield, Gerald	ESSIC-2-017	Support a senior scientist working with NASA scientists
Task 124	Ehrman, Sheryl	Pickering, Kenneth	ESSIC-2-020	Emissions fields incorporating natural sources
Task 125	Canty, Timothy	Pickering, Kenneth	ESSIC-2-021	Monitoring Air Quality Effects
Task 126	Yatheendradas, Soni	Peters-Lidard, Christa	ESSIC-2-022	Development of the Land Information System (LIS) framework
Task 127	Hofton, Michelle	Ranson, K. Jon	ESSIC-2-025	DESDynI Mission concept definition study

Project	Investigator Name	Sponsor	Control #	Brief Description
Task 128	Busalacchi-CBFS Task	Bryson, Jonathan	ESSIC-2-030	Applications of the Chesapeake Bay Forecast System (CBFS)
Task 129	Ganeshan, Manisha	Richards, Jack	ESSIC-2-033	Global to regional modeling
Task 130	Carty, Hezekiah	Smith, Eric	ESSIC-2-035/041/046	TRMM Precipitation Radar (PR) and CloudSat Cloud Profiling Radar (CPR)
Task 131	ESSIC-2-037/GRA Lee	Tao, Wei-Kuo	ESSIC-2-037	Analyze field experiment
Task 132	Wang, Nai-Yu	Schwaller, Matthew	ESSIC-2-038	Scientific analysis of the ground- and space-based data
Task 133	Boisevert, Linette	Markus, Thorsten	ESSIC-2-040	Analysis of the various data sets produced from the EOS Aqua
Task 134	Murtugudde, Ragu	Imhoff, Marc	ESSIC-2-043	Chesapeake Bay Forecast System
Task 135	Stehr, Jeffrey	Pickering, Kenneth	ESSIC-2-047	Improved Hypoxia Modeling
Task 200	Kato, Hiroko	Rodell, Matthew		Data management and land surface modeling
Task 201	Garrigues, Sebastien	Morisette, Jeffrey		MODLAND
Task 202	Ji, Qiang	Tsay, Si-Chee		Studies on the microphysical, optical and radiative properties
Task 203	Tzortziou, Maria	Rodriguez, Jose		Absorbing and scattering material in the atmosphere
Task 204	Chen, Junye	Bosilovich, Michael		Analysis of global climate and weather data sets
Task 205	Santanello, Joseph	Peters-Lidard, Christa		Collaborative land-atmosphere modeling
Task 206	Sun, Guoging	Ranson, K. Jon		Satellite data and field data collection and analyses
Task 207	LeMarshall, John	Richards, Jack/Kaye, Jack		Utilization of meteorological satellite observations
Task 208	Sun, Guoging/024	Nelson, Ross	ESSIC-2-024	Estimate forest biomass and carbon
Task 209	Yang, Shu-Chih	Rienecker, Michele		Dev of coupled breeding techniques
Task 210	Cede, Alexander	Rodriguez, Jose		Analysis of spectroscopic data
Task 211	Jeong, Myeong-Jae	Tsay, Si-Chee		Land Data Assimulations
Task 212	Zaitchik, Benjamin	Rodell, Matthew/Peters-Lidard, Christa		Satellite data assimilation
Task 213	Shen, Bo-Wen	Tao, Wei-Kuo		Multi-Scale Modeling of Atmospheric Processes
Task 214	Jin, Minglin	Heymsfield, Gerald		Satellite data sets related to research
Task 215	Ichoku, Charles	Remer, Lorraine		Remote sensing of aerosols and fires
Task 216	Nightingale, Joanne M.	Morisette, Jeffrey	ESSIC-2-013	Integrating MODIS gap-filled Leaf Area Index
Task 217	Ichoku, Charles/032	Habib, Shahid	ESSIC-2-014	Participate in the acitvities of the Office of Science Utilization
Task 218	de Goncalves, Luis Gustavo	Toll, David		Remote Sensing and Modeling of Land Surface Hydrology
Task 219	Lee, Joonsuke	Tsay, Si-Chee	ESSIC-2-003	Retrievals and analyses of global aerosol properties
Task 220	Wang, Sheng-Hsiang	Tsay, Si-Chee	ESSIC-2-007	Retrievals and analyses of global aerosol
Task 221	Hansell, Richard	Tsay, Si-Chee	ESSIC-2-008	Retrievals and analyses of global dust aerosol
Task 222	Yilmaz, Koray/tbd	Policelli, Frederick	ESSIC-2-012	Development and testing of global and regional flood and landslide detection

Project	Investigator Name	Sponsor	Control #	Brief Description
Task 223	Gu, Guojon	Bosilovich, Michael	ESSIC-2-015	Global precipitation data and analyses
Task 224	Yatheendradas, Soni (2)	Peters-Lidard, Christa	ESSIC-2-022	Development of the Land Information System (LIS) framework
Task 225	ESSIC-2-023/Res Sci	Ranson, K. Jon	ESSIC-2-023	DESDynI Mission concept definition study
Task 226	Harrison, Kenneth	Peters-Lidard, Christa	ESSIC-2-026	Development of the Land Information System (LIS) framework
Task 227	ESSIC-2-027/Post Doc	Tao, Wei-Kuo	ESSIC-2-027	Microphysical processes of atmospheric convective systems
Task 228	Houborg, Rasmus	Rodell, Matthew/Peters-Lidard, Christa	ESSIC-2-028	Global Land Data Assimilation System
Task 229	Kumar, Anil	Peters-Lidard, Christa	ESSIC-2-029	Land Information System (LIS) framework
Task 230	Li, Can	Tsay, Si-Chee	ESSIC-2-031	Global dust and mega-city aerosols
Task 231	Iguchi, Takamichi	Tao, Wei-Kuo	ESSIC-2-032	Utilizing the NASA satellite data
Task 232	Choi, Ildae	Tao, Wei-Kuo	ESSIC-2-034/049	Utilizing the NASA satellite data
Task 233	Cullather, Richard	Bosilovich, Michael	ESSIC-2-036	Scientific analysis of the MERRA water cycle
Task 234	Petrenko, Makseym	Ichoku, Charles	ESSIC-2-039	Research on aerosol remote sensing
Task 235	Farrell, Sinead	Markus, Thorsten	ESSIC-2-044	ICEsat-2 Science Definition Team (SDT) project
Task 236	Tzortziou, Maria (2)	Habib, Shahid	ESSIC-2-045	Hypo-G projec
Task 237	Li, Bailing	Toll, David	ESSIC-2-048	Remote sensing and land surface hydrology
Task 238	Visiting Assistant Research Scientist	Peters-Lidard, Christa	ESSIC-2-050	Applications of remotely sensed precipitation