

Research Grants

Current Awards

- Fuelberg, Henry E (PI). (Sep 2021–Sep 2024). *Developing an Optimized NWP Model for the Cape Canaveral Area*. Funded by United States Space Force. (FA252121C0035). Total award \$205,448.
- Fuelberg, H. E. (Mar 2021–Mar 2024). *Combining Aircraft Observations and Lightning Assimilation in a Multiscale Model Framework to Study Deep Convective Transport during DC3 and SEAC4RS*. Funded by NASA Awarded to AER Corp. who subcontracted to FSU. Total award \$228,153.
- Fuelberg, Henry E (PI). (Jul 2020–Jul 2023). *Cumulus Electrification Study—Phase II*. Funded by United States Department of the Air Force. (FA252120P0042). Total award \$209,000.
- Fuelberg, Henry E (PI). (May 2020–Apr 2023). *Extending the Forecast Lead Time of Pulse Severe Storms using ProbSevere, GLM, and Radar Data*. Funded by National Oceanic and Atmospheric Association. (NA20NWS4680044). Total award \$255,595.

Previous Awards

- Fuelberg, Henry E (PI). (Aug 2020–Aug 2021). *NASA FSGC Masters Fellowship Program - Haiden Mersiovsky*. Funded by University of Central Florida. (FSGC-10 TO#01). Total award \$10,000.
- Fuelberg, Henry E (PI). (Sep 2018–Sep 2020). *Unexplained Nocturnally Forming Lightning in the CCAFS/KSC Area*. Funded by United States Department of the Air Force. (FA252118P0126). Total award \$86,384.
- Fuelberg, Henry E (Co-PI), & Holmes, Christopher D (PI). (Jul 2018–Jun 2022). *Flight Planning Services for FIREChem: Meteorological and Smoke Forecasts, Bias-Corrected Satellite Fire Observations, and Scheduled Prescribed Fires*. Funded by National Aeronautics & Space Administration. (80NSSC18K0625). Total award \$362,725.
- Fuelberg, Henry E (PI). (May 2017–May 2020). *Cumulus Electrification Study*. Funded by United States Department of the Air Force. (FA252117P0041). Total award \$124,322.
- Fuelberg, Henry E (Co-PI), & Hart, Robert E (PI). (May 2016–Apr 2020). *Collaborative Research On Improved Understanding & Prediction Of Warm-Season (Derecho) & Cold-Season (Mesoscale Snow Banding) High Impact Events*. Funded by National Oceanic and Atmospheric Association. (NA16NWS4680007). Total award \$449,019.
- Fuelberg, Henry E (PI). (Jan 2016–Mar 2017). *Numerically Modeling Extreme Rainfall Events Near Kennedy Space Center, FL: The Effects of Climate Change*. Funded by Embry-Riddle Aeronautical University. (61346-02). Total award \$57,270.
- Fuelberg, Henry E (PI), & Hart, Robert E (Co-PI). (Sep 2013–Aug 2017). *Improved Forecasting of Extreme Rainfall Events Associated with Tropical Cyclones*. Funded by National Oceanic and Atmospheric Association. (NA13NWS4680005). Total award \$299,307.
- Fuelberg, Henry E (Co-PI), & Hart, Robert E (PI). (Sep 2013–Aug 2016). *A Probabilistic TC Genesis Forecast Tool Utilizing an Ensemble of Global Models*. Funded by National Oceanic and Atmospheric Association. (NA13OAR4590185). Total award \$197,792.
- Fuelberg, Henry E (PI). (Sep 2013–Aug 2018). *Impacts of Asian Summer Monsoon Convection On the Chemical Composition of the Upper Troposphere and Lower Stratosphere*.

- Funded by National Aeronautics & Space Administration. (NNX13AM90H). Total award \$70,005.
- Fuelberg, Henry E (PI). (Aug 2013–Jul 2014). *Year 2 of 2 -Master's Degree Fellowship 2013 (Brannon Seay)*. Funded by University of Central Florida. (0000271292). Total award \$12,000.
- Fuelberg, Henry E (PI). (Oct 2012–Dec 2017). *Upward Lightning Flash Structure at Kenedy Space Center*. Funded by National Aeronautics & Space Administration. (NNX13AB95G). Total award \$152,303.
- Fuelberg, Henry E (PI). (Aug 2012–Jul 2013). *Nasa Earth-Space Science Fellowship 2012*. Funded by University of Central Florida. (UCF01-0000257650). Total award \$12,000.
- Fuelberg, Henry E (PI). (Dec 2011–Dec 2015). *Diagnostic Studies and Numerical Simulations of Chemical Transport to the Upper Troposphere/Lower Stratosphere in the South Asian Monsoon during SEAC4RS*. Funded by National Aeronautics & Space Administration. (NNX12AC07G). Total award \$404,972.
- Fuelberg, Henry E (PI). (Dec 2011–Aug 2012). *Understanding the Significance of Fluctuations in the Ar*. Funded by The Citadel Group. Total award \$8,923.
- Fuelberg, Henry E (PI). (Dec 2011–Dec 2013). *Meteorological Modeling and Tracer Capabilities Study*. Funded by United States Department of the Air Force. (FA7022-12-C-0004). Total award \$96,876.
- Fuelberg, Henry E (PI), & Hart, Robert E (Co-PI). (Nov 2011–Sep 2012). *Determining the Abilities of Operational Numerical Models to Forecast Tropical Cyclogenesis*. Funded by University Corporation for Atmospheric Research. (Z12-93225). Total award \$11,880.
- Fuelberg, Henry E (PI). (Sep 2011–Sep 2013). *Lightning Cessation with Dual Polarization Radar*. Funded by United States Department of the Air Force. (FA2521-11-P-0091). Total award \$55,979.
- Fuelberg, Henry E (PI). (Sep 2010–Sep 2011). *Lightning Cessation with Dual Polarization Radar*. Funded by United States Department of the Air Force. (FA2521-10-P-0153). Total award \$48,975.
- Fuelberg, Henry E (PI). (Sep 2010–Sep 2011). *Lightning Launch Commit Criteria Improvement (LLCC) - Radar/Lightning Climatology*. Funded by United States Department of the Air Force. (FA2521-10-P-0149). Total award \$52,965.
- Navon, Ionel M (Co-PI), & Fuelberg, Henry E (PI). (Jun 2010–May 2014). *Data Assimilation of Lightning in WRF 4-D VAR Using Observation Operators*. Funded by National Oceanic and Atmospheric Association. (NA10NES4400008). Total award \$443,461.
- Fuelberg, Henry E (PI). (Nov 2009–Nov 2011). *Modeling Uncertainties of Atmospheric Transport - the WRF Numerical Model with In-Line Transport Capabilities*. Funded by United States Department of the Air Force. (FA2521-10-C-8004). Total award \$116,265.
- Fuelberg, Henry E (PI). (Nov 2008–Nov 2009). *Sensitivity Studies on Atmospheric Transport*. Funded by United States Department of the Air Force. (FA2521-09-P-0005). Total award \$53,999.
- Fuelberg, Henry E (PI). (Aug 2008–Aug 2009). *Space Grant Fellowship Program*. Funded by University of Central Florida. (UCF01-0000157916). Total award \$12,000.
- Fuelberg, Henry E (PI). (Mar 2008–Feb 2009). *Use of NEXRAD Data to Develop climatologically Homogeneous*. Funded by University of Florida. (UF-EIES-0804003-FSU). Total award \$5,000.

- Fuelberg, Henry E (PI). (Feb 2008–Jan 2013). *Research on Arctic Transport Using a Synthesis of Satellite Data, In-Situ Data, and Numerical Models*. Funded by National Aeronautics & Space Administration. (NNX08AH72G). Total award \$490,619.
- Fuelberg, Henry E (PI). (Jan 2008–Sep 2008). *Use of NEXRAD Data to Develop Climatologically Homogeneous Rainfall Areas for the SFWMD*. Funded by South Florida Water Management. (4500020199). Total award \$17,000.
- Fuelberg, Henry E (PI). (Nov 2007–Nov 2008). *Sensitivity Studies On Atmospheric Transport--The WRF Numerical Model and FLEXPART Transport Model*. Funded by United States Department of the Air Force. (FA2521-08-P-0021). Total award \$52,000.
- Fuelberg, Henry E (PI). (Aug 2007–May 2010). *Development and Evaluation of Mesoscale Lightning Threat Guidance for Operational Use at NWS Forecast Offices*. Funded by University Corporation for Atmospheric Research. (S07-66809). Total award \$77,498.
- Fuelberg, Henry E (PI). (Jan 2007–Feb 2008). *A Comparison Of FSU/NWS And OneRain Precipitation Data And Their Insertion Into The WAM Hydrologic Model*. Funded by South Florida Water Management. (4500007892). Total award \$15,000.
- Fuelberg, Henry E (PI). (Jan 2007–Jun 2008). *Determining Surface Winds from Doppler Radar Data During*. Funded by Florida Power and Light Company. (PO 4500363513). Total award \$83,468.
- Fuelberg, Henry E (PI). (Jun 2006–May 2007). *Documenting the Spatial, Temporal, and Electrical Characteristics of Positive Cloud-to-Ground Lightning Over the Florida*

- Power & Light Service Territory*. Funded by Florida Power and Light Company. (PO NUMBER 4500313630). Total award \$42,001.
- Fuelberg, Henry E (PI). (Mar 2006–Feb 2008). *Comparing Radar Derived Precipitation Values*. Funded by University of Florida. (UF-EIES-0604009-FSU). Total award \$10,000.
- Fuelberg, Henry E (PI). (Mar 2006–Mar 2007). *A comparison of NW/FSU and OneRain Precipitation Data and their insertion into the WAM Hydrologic model*. Funded by South Florida Water Management. (PC P601207). Total award \$15,000.
- Fuelberg, Henry E (PI). (Mar 2006–Feb 2008). *Statistical Forecasting Of Lightning Cessation At The Kennedy Space Center*. Funded by National Aeronautics & Space Administration. (NNK06EB17G). Total award \$59,470.
- Fuelberg, Henry E (PI). (Jan 2006–Jul 2008). *WAM-MPE Modeling*. Funded by Florida Department of Environmental Protection. (WM902). Total award \$106,020.
- Fuelberg, Henry E (PI). (Oct 2005–Feb 2009). *Analysis of DATA from INTEX-A and B in Support of Aura and Aqua Validation*. Funded by National Aeronautics & Space Administration. (NNG06GB43G). Total award \$283,809.
- Fuelberg, Henry E (PI). (Oct 2004–Oct 2005). *Adding Two Additional Years to the High Resolution Historical Precipitation Database for Florida*. Funded by Florida Department of Environmental Protection. (WM874). Total award \$51,220.
- Fuelberg, Henry E (PI). (Aug 2004–Sep 2005). *Completion of Tasks for Contract WM-849*. Funded by Florida Department of Environmental Protection. (S 3700 210946). Total award \$10,691.
- Fuelberg, Henry E (PI). (Jan 2004–Dec 2004). *Analysis of 3,6,12, and 24 Hour Precipitation Freq*. Funded by University Corporation for Atmospheric Research. (S04 44685). Total award \$7,172.
- Fuelberg, Henry E (PI). (Jan 2004–Jan 2008). *Diagnostic and Numerical Studies of Atmospheric Tr*. Funded by National Aeronautics & Space Administration. (NNG04GC33G). Total award \$365,779.
- Fuelberg, Henry E (Co-PI), Ahlquist, Jon E (PI), & Cooper, Henry J (Co-PI). (Oct 2003–Sep 2007). *Improvements in the Operational Forecasting of Pre*. Funded by National Oceanic and Atmospheric Association. (NA03NWS4680018). Total award \$371,290.
- Foo, Simon (PI), Kwan, Bing W (Co-PI), Elsner, James B (Co-PI), & Fuelberg, Henry E (Co-PI). (Feb 2003–Aug 2004). *Development of a Road Weather Information System f*. Funded by University of North Florida. (002-079). Total award \$126,090.
- Fuelberg, Henry E (PI). (Oct 2002–May 2004). *Completing the High Resolution Seven Year Historic*. Funded by Florida Department of Environmental Protection. (WM849). Total award \$71,590.
- Fuelberg, Henry E (PI). (Oct 2002–May 2007). *Statistical Tools for Forecasting Warm Season Afte*. Funded by Florida Power and Light Company. (PO#4500120225). Total award \$206,995.
- Fuelberg, Henry E (PI). (Nov 2001–Oct 2003). *Determining Precipitation Frequencies Over the Sou*. Funded by University Corporation for Atmospheric Research. (S02-32804). Total award \$7,302.
- Foo, Simon (PI), Kwan, Bing W (Co-PI), Elsner, James B (Co-PI), & Fuelberg, Henry E (Co-PI). (Sep 2001–Jun 2003). *Utilizing FDOT Meteorological Data to Investigate*. Funded by University of North Florida. (001-008). Total award \$123,200.

Fuelberg, Henry E (PI). (Aug 2000–Dec 2020). *FUEL-PI RESEARCH SUPPORT*. Funded by FSU. Total award \$17,106.

Ruscher, Paul H (Co-PI), & Fuelberg, Henry E (PI). (Jun 2000–May 2003). *Joint Research between Florida State University and*. Funded by University Corporation for Atmospheric Research. (S00-19127). Total award \$116,327.