



WEATHER PROGRAM OFFICE

National Oceanic and Atmospheric Research

2019 Joint Technology Transfer Initiative

Projects funded under the NOAA Office of Weather and Air Quality

Air Quality Forecasting

Development of the National Global Data Assimilation Ensemble-based System for Forecasting of Aerosols

Mariusz Pagowski

University of Colorado/CIRES

6/1/2019

5/31/2022

627,501.00

Air Quality Forecasting

NAQFC Community Emission Testbed (NCET): Accelerating anthropogenic emission updates for NAQFC FV3-CMAQ through community collaboration

Bok Baek & Daniel Tong

University of North Carolina at Chapel Hill and George Mason University

6/1/2019

5/31/2022

727,209.00

Air Quality Forecasting

A novel method for improving fine particulate matter air quality forecasts during wildfires

Rajesh Kumar & James Wilczak

NCAR and NOAA/OAR/ESRL/PSD

6/1/2019

5/31/2022

584,732.00



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Air Quality Forecasting

Towards Optimal Configurations of NAQFC Chemistry and Aerosol Representations

Yang Zhang & Daniel Tong

North Carolina State University and George Mason University

6/1/2019

5/31/2022

749,999.00

Hazardous Weather Testbed

Using convective mode information for hazard prediction with convection-allowing models

Ryan Sobash

NCAR

7/1/2019

6/30/2022

731,555.00

Hazardous Weather Testbed

Implementation and testing of stochastic perturbations within a stand-alone regional (SAR) FV3 ensemble using the Common Community Physics Package (CCPP)

Jeff Beck & Jamie Wolff

CIRA, NOAA/OAR/ESRL and NCAR

7/1/2019

6/30/2022

749,985.00

Hazardous Weather Testbed

Improved Diagnosis of Severe Wind Occurrence through Machine Learning

William Gallus

Iowa State University

7/1/2019

6/30/2022

652,194.00



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Hazardous Weather Testbed

Improving National Weather Service Convection Allowing Hazardous Weather Prediction by Using a Cost-Effective Large Background Ensemble in a Regional FV3 Hybrid EnVar Data Assimilation System

Xuguang Wang

University of Oklahoma

7/1/2019

6/30/2022

685,223.00

Hazardous Weather Testbed

Assessing Increased Vulnerability Knowledge and High Temporal Resolution Guidance on Forecaster and Emergency Manager Decision Making

Jack Friedman

University of Oklahoma

7/1/2019

6/30/2022

698,293.00

Joint Hurricane Testbed

Transitioning Ensemble-based TC Track and Intensity Sensitivity to Operations

Ryan Torn & Sim Aberson

University at Albany, SUNY and NOAA/OAR/AOML

7/1/2019

6/30/2021

176,758.00

Joint Hurricane Testbed

Upgrades to the M-PERC and PERC Models to Improve Short Term Tropical Cyclone Intensity Forecasts

Derrick Herndon

University of Wisconsin - Madison

7/1/2019

6/30/2021

90,526.00



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Joint Hurricane Testbed

Further improvements and extensions to the tropical cyclone logistical guidance for genesis (TCLOGG)

Robert Hart & Daniel Halperin

Florida State University and Embry-Riddle Aeronautical University

7/1/2019

6/30/2022

344,991.00

Hydrometeorology Testbed

Advancing Probabilistic Prediction of High-Impact Winter Storms through Ensemble NWP and Post-Processing

Justin Minder & James Steenburgh

University at Albany, SUNY and University of Utah

7/1/2019

6/30/2022

619,602.00

Hydrometeorology Testbed

Improving Lake-Effect Snow Forecasting Capabilities via Advanced Coupling Techniques in NOAA's Unified Forecast System (UFS)

Christiane Jablonowski

University of Michigan/Cooperative Institute for Great Lakes Research

7/1/2019

6/30/2022

750,000.00

Hydrometeorology Testbed

Enhancing CAM Ensemble Forecast System and Improving Ensemble Forecast Products in Support of HMT Winter Weather and Heavy Precipitation Forecasting

Keith Brewster

University of Oklahoma

7/1/2019

6/30/2022

748,286.00