Weekly Report – September 20, 2024

Cooperative Institute for Satellite Earth System Studies (CISESS)

NOAA/NESDIS/STAR

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People

Graduate Fellow Keneshia Hibbert Arrives at STAR

Keneshia Hibbert, a PhD student at the City University of New York, began a one-year visit to NOAA/STAR. She is funded by the National Oceanic and Atmospheric Administration (NOAA) Educational Partnership Program with Minority Serving Institutions (EPP/MSI) Program under the Graduate Fellowship Program. She is one of only two fellows funded this year in recognition of the work she has done in her studies and its potential usefulness to NOAA. She works at College Park with CISESS Scientist/Visiting Research Scientist Tom Smith (NOAA/STAR) on marine heat waves and their influence on weather events, such as tropical cyclones. She also interacts with other NOAA personnel in the area to form connections with the organization. Hibbert has been asked by the NOAA Office of Education to represent the NOAA EPP/MSI Program and speak to Congress about her experiences, research, and impacts of NOAA education on her career. She will speak at the Russell Senate Office Building in Washington, DC, on 26 September 2024.

(Tom Smith, CISESS, tom.smith@noaa.gov; Funding: PDRA)

This item was submitted in the SOCD Weekly Report.

Jonathan Poterjoy Awarded Tenure

CISESS Scientist Jonathan Poterjoy is now an Associate Professor in the University of Maryland's Department of Atmospheric and Oceanic Science (AOSC). He also serves as the Graduate Program Director of AOSC. Poterjoy's research focuses on the development and application of advanced data assimilation techniques for geophysical research, with a particular interest in atmospheric dynamics, tropical cyclones, and mesoscale meteorology. He began work with CISESS in 2019 with a three-year Atlantic Oceanographic and Meteorological Laboratory-funded grant entitled "Improving Hurricane Predictions Through Advanced Data Assimilation, Ensemble Forecasting, and Observing System Design". His current project with CISESS entitled "Advancing NOAA Earth System Modeling

Efforts through Improvements in Model Physics and Sea Ice Data Assimilation" continues in the same vein, advancing the current NOAA Global Forecast System through improvements in sub-grid-scale physical parameterization, namely, cloud microphysics, planetary boundary layer physics, gravity-wave physics, and stochastic physics for probabilistic weather prediction. Poterjoy has also participated in the popular CISESS Intern program, mentoring a student in the summer of 2021.

(Jonathan Poterjoy, CISESS, poterjoy@umd.edu; Funding: EMC)

TRAVEL AND MEETING REPORTS

Guangyang Fang Upgrades the Mid-Atlantic Lightning Mapping Array Site at the University of Maryland Unmanned Aircraft Systems Test Site

On 11 September 2024, CISESS Scientist Guangyang Fang visited the University of Maryland (UMD) Unmanned Aircraft Systems (UAS) Test Site in California, MD to upgrade the Lightning Mapping Array (LMA) electronics box from Rev3 to Rev5. This site was overgrown with bushes and pine trees, obstructing the solar panels of the LMA system. Fang trimmed the bushes and cut off the pine trees in front of the system to ensure optimal solar panel exposure. Following four-hour maintenance, the very-high-frequency signal measured approximately -67 dB, indicating improved sensitivity with the new Rev5 electronics box. The GPS is now locked, detecting more than six satellites, and the battery voltage reads 12.6 V.

Figure: (Top left and right) The Mid-Atlantic Lightning Mapping Array site at the UMD UAS Test Site before and after tree trimming to unblock the solar panels. (Bottom) The upgraded LMA electronics are shown on the left. Photo credit: Guangyang Fang

(Guangyang Fang, gfang@umd.edu, CISESS, Funding: GOES-R AWG, GOES-R PGRR)

(Maureen Cribb, CISESS, mcribb@umd.edu, Funding: CISESS Task I)