

**Weekly Report – May 17, 2024**  
Cooperative Institute for Satellite Earth System Studies (CISESS)  
NOAA/NESDIS/STAR

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## HIGHLIGHTS FOR NESDIS LEADERSHIP

### Data and Information

**First International Workshop to Advance Ocean Carbon and Acidification Data Management and Interoperability:** CISESS Scientists Liqing Jiang and Alex Kozyr were members of the Steering Committee of the hybrid in-person/virtual by-invitation-only workshop that took place in Venice, Italy on 7–8 May 2024. The main objectives of the workshop were (1) to determine the data management needs of the ocean carbon and acidification research community, with specific reference to synthesis (product) data needs, along with United Nations decade requirements and (2) to identify criteria for optimal data management systems and workflows from data collection to synthesis products. Other topics included coming to a consensus on common metadata and data standards to use to meet scientific and data management objectives. The proceedings of this workshop will be made available to the ocean carbon and acidification research community, as well as to the broader research community.

*(Liqing Jiang, CISESS, [liqing.jiang@noaa.gov](mailto:liqing.jiang@noaa.gov); Funding: NCEI & OCADS) (Alexander Kozyr, CISESS, [alex.kozyr@noaa.gov](mailto:alex.kozyr@noaa.gov); Funding: NCEI)*

### TRAVEL AND MEETING REPORTS

**Mid-Atlantic Lightning Mapping Array Site Visit at Anne Arundel Community College:** On 22 April 2024, CISESS Scientist Guangyang Fang conducted a site visit at the Anne Arundel Community College (AACC) in Arnold, MD, to assess the suitability of a potential site for a new mobile Lightning Mapping Array (LMA) station. Professor Tim Tumelty from AACC provided Fang with a campus tour. During the visit, noise-level testing was conducted at two selected sites: the backyard of the Clauson Center and the area behind the pond. Channel-3 noise levels at each site were measured at -61 dBm and -73 dBm, respectively. Both noise levels were acceptable, but the pond site emerged as the preferred option. Professor Tumelty will complete a preliminary site report to the AACC Facilities Planning and Construction Department. A response from the review and approval process is anticipated by late summer at the earliest. This upgraded mobile LMA sensor is state of the art, with upgraded electronics, solar panel power generation, and data transmission over the cellular network. Given AACC's strategic location between the DC Lightning Mapping Array and NASA Wallops Flight Facility Lightning Mapping Array networks, the selection of this site will foster closer integration

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between the two systems, culminating in the development of a more comprehensive Mid-Atlantic Lightning Mapping Array. (Guangyang Fang, [gfang@umd.edu](mailto:gfang@umd.edu), CISESS, Funding: LVUI)



Figure: Carrying out noise-level tests at the campus of Anne Arundel Community College.

## PUBLICATIONS

### CISESS Scientists Participate in AiRMAPS Activities

Oil and natural gas production has increased substantially in the past two decades in the United States. This increase has raised concerns about greenhouse gas emissions and air quality/climate impacts. The Airborne and Remote sensing Methane and Air Pollutant Surveys (AiRMAPS) is a NOAA Office of Oceanic and Atmospheric Research and National Environmental Satellite, Data, and Information Service investigation into greenhouse gas and air pollutant emissions from oil and gas production basins and their impacts. CISESS Scientists Paul Kelley and Phillip Stratton are coauthors of two white papers describing upcoming AiRMAPS field campaigns that they will participate in: the Airborne Methane Mass Balance Emissions in Colorado (AMMBEC, July 2024) and the Baltimore Air Quality and Marcellus Methane Survey (BAQMMS, summer 2025). Both field campaigns will involve comprehensive aircraft and mobile measurements of air pollutants and greenhouse gases. For more details, these are the links to the two white papers:



**AMMBEC:** <https://csl.noaa.gov/projects/airmaps/2024/ammbec.pdf>

**BAQMMS:** <https://csl.noaa.gov/projects/airmaps/2025/baqmms.pdf>



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*Figure: Some of the observation platforms to be used in the AMMBEC and BAQMMS field campaigns: (from left to right) the NOAA Twin Otter, NOAA's Air Resources Car mobile lab, and the University of Maryland's Cessna 402.*

*(Paul Kelley, [paul.kelley@noaa.gov](mailto:paul.kelley@noaa.gov), CISESS, Funding: OAR/ARL)*

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