The Mid-Atlantic Lightning Mapping Array (MALMA) Deployment

Authors

Dr. Mason Quick - University of Maryland

Dr. Scott Rudlosky - NOAA/NESDIS/STAR

Mr. Daniel Rodeheffer - Langmuir Laboratory for Atmospheric Research, New Mexico Institute of Mining and Technology

Prof. William Rison - Langmuir Laboratory for Atmospheric Research, New Mexico Institute of Mining and Technology

Dr. Richard Blakeslee - NASA Marshal Space Flight Center

Mr. Matthew Wingo - NASA Marshall Space Flight Center

Abstract

This study introduces the Mid-Atlantic Lightning Mapping Array (MALMA) by describing network deployment, data validation, and product generation. Lightning Mapping Array (LMA) networks use VHF antennas separated by 10s of km to detect the radio frequency impulses produced by lightning. These networks use well established time-of-arrival algorithms to solve for source locations, detect lightning with a high detection efficiency, and map the lightning channel geometry in 3-dimensions. The MALMA combines two recently updated LMA networks, including the Washington D.C. LMA (DCLMA; 9 stations at 195 Mhz) and the Wallops Flight Facility LMA (WFFLMA; 8 stations at 60 MHz). This presentation describes the network deployment and provides an initial look at the combined network sensitivity. Data validation efforts are summarized along with methods for distributing this performance information to the science community and operational users.

Topic Areas

Lightning Detection Systems Technology and Performance

Submission Format

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