SCIENCE & TECHNOLOGY
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U.S. Space Force SMC Awards STC Team EO/IR Mission to Support US Warfighter

The U.S. Space Force's (USSF) Space and Missile Systems Center (SMC) has selected Science and Technology Corporation, Inc., as part of the team primed by Atmospheric & Space Technology Research Associates (ASTRA), LLC., to develop and demonstrate an Electro-Optical / Infrared (EO/IR) LEO-based cloud characterization solution that supports U.S. warfighter operations.

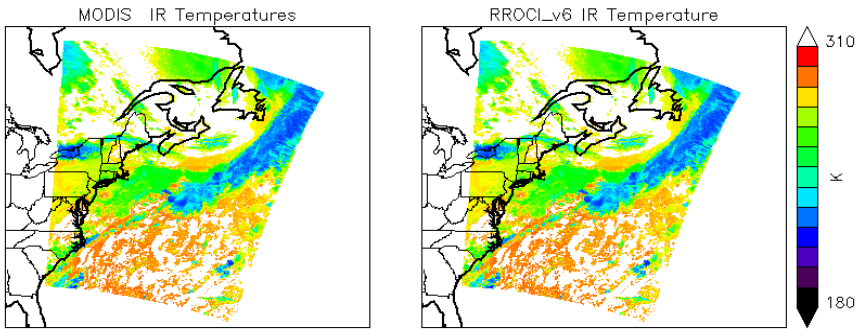
Striving to bridge gaps and improve functionality of Space-Based Environmental Monitoring (SBEM) systems, USSF SMC sought a commercial prototype EO/IR Weather System (EWS) mission capable of characterizing global clouds in near real-time to support Department of Defense operations.

ASTRA selected STC, Lockheed Martin, Pumpkin Inc., and Atmospheric & Environmental Research (AER), for the first phase of the EWS mission to design, develop, and demonstrate its 8-channel RROCI prototype. The team will utilize commercial off-the-shelf systems to produce cloud characterization, mitigate weather risk, provide theater weather, and comparison of payload outputs to existing satellite data from a 12U satellite that meets USSF mission requirements.

STC was selected to provide support to the team during all phases of the project to include mission management, Systems engineering, design the prototype EO/IR system requirements and design, the algorithm and ground processing development, build, and delivery, as well as preparation, testing, and finalization of launch. STC has AER as its main subcontractor to assist with the ground segment development, and performanc testing.

The team's proposed solution will provide a cost-effective and agile demonstration mission, reducing risk and demonstrating readily available commercial technology that meets USSF's required operational mission capabilities. The initial contract is a six (6) month task to take the project to the critical design.

We hope to have a successful launch at the end of 2021! We are excited to be a part of such an innovative and groundbreaking project in the weather community. We look forward to more projects similar to this in the future!



Preliminary Performance results of the RROCI design for Cloud Top Temperature During the Daytime.