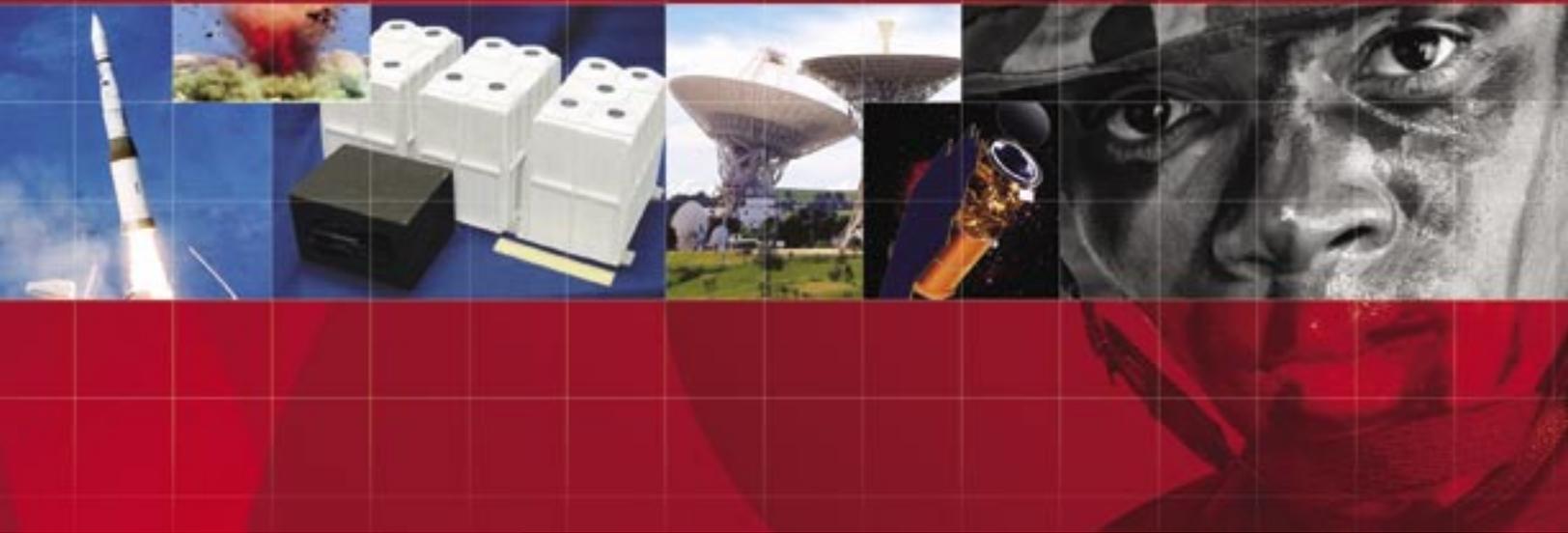




CSE

Cooperative Space Experiment Program



Summary

- Evaluate low power acquisition and tracking of spacecraft
- Laser data will be collected and tested in the full atmosphere-to-space environment
- Army Space hands-on experiments will be used to mature training and tactics, techniques, and procedures
- Army and USAF Ground-based acquisition and tracking laser material developers are data customers

Truth data will be used by CSE to develop ground-based acquisition and tracking laser systems and validate simulation models.

The Cooperative Space Experiment will demonstrate Army and Air Force ground-based acquisition and tracking laser technology for transition to operational fielding. Low powered laser propagation data in the full atmosphere-to-space-environment will be collected and tested and Army Space data requirements will be validated through a Joint instrumented space test range experiment.

Overview

The Cooperative Space Experiment (CSE) will evaluate low power acquisition and tracking lasing of spacecraft by current and future Army and Joint space surveillance systems. The capability to evaluate low power ground-based pulsed lasing of spacecraft on orbit will be demonstrated. Low powered laser propagation data will be collected and tested in the full atmosphere-to-space environment. Army space data requirements will be validated via the Joint instrumented space test range experiment. The CSE payload is the Air Force Research Laboratory Laser Threat Warning and Attack Reporting (LTWAR) System-integrated time history calibrated dosimeter. Army SMDC is working with MIT Lincoln Laboratory for experiment definition and to design laser propagation codes for the experiment.

Benefits for Tomorrow's Defense

CSE data will be used to develop ground-based acquisition and tracking laser systems and perform Space Battle Lab experimentation for the Future Force Warfighter. Hands-on experiments will be used by the Army Space combat developers to mature training and tactics, techniques, and procedures for system operators. The CSE technology will be used by the Army Space and Missile Defense Command (SMDC) Technical Center Directed Energy Division, SMDC Space Battle Lab, Army Training and Doctrine Command, Army Test and Evaluation Command, SMDC Force Development integration Center, and other service laser material and concept developers.

Technical Concept

The CSE program resulted when SMDC teamed with the Air Force Research Lab Sensors Directorate (SNJT) LTWAR to integrate Army experimental low-power laser data collection requirements in an AFRL sensor system program for on orbit space experiment instrumentation. The key technology in use by CSE in Space is the AFRL/SNJT Laser Threat Warning and Attack Reporting, and on the Ground it is the Army and Joint ground-based acquisition and tracking laser systems. LTWAR/CSE was rated #3 on the DoD 2004 Space Experiment Review Board for satellite bus integration and launch services.



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