

## WHAT IS THE THREAT LAB GROUP?

The Threat Lab Group (TLG) consists of the Jam Lab, SIP Lab, and Worrell/Weeks Aircrew Protection Center. Each facility supports program work for threat analysis, countermeasures and algorithm development.

The skilled group of individuals supporting the TLG offer expertise in analysis, exploitation, simulation, and integration of threat management systems. The analysis and testing performed in the different facilities has helped protect aircraft for more than 50 years.



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# THREAT LAB GROUP

Staying ahead of the  
threat with advanced  
testing, analysis,  
and development

ELECTRONIC SYSTEMS

**BAE SYSTEMS**

INSPIRED WORK

## JAM LAB

The Infrared Countermeasures (IRCM) Jam Lab is a 15,000 square foot facility offering analysis and measurement tools for the simulated testing of classified systems. An extensive threat library, hardware-in-the-loop technology, software modeling expertise, and a team of innovative engineers and technicians support complex and precise technique and system development.



### Facility Capabilities

- Digital Scene and Reticle (DSARS) HITL simulators
- Five axis flight motion simulator table
- Government and industry recognized software tools
- Four optical labs for investigation of IR and EO systems
- Extensive threat library with EO, and IR signatures and RF threats
- Mobile testing with self-contained trailer

## SIGNAL AND IMAGE PROCESSING LAB

The Signal and Image Processing (SIP) Lab enables modeling and algorithm development for threat warning systems. These modeling and simulation efforts are the foundation for aircraft survivability offered by BAE Systems.



### Facility Capabilities

#### Threat warning system analysis

- Data collection and analysis
- Threat modeling and analysis
- Threat insertion in clutter
- Environmental analysis
- Performance prediction

#### Threat warning system design

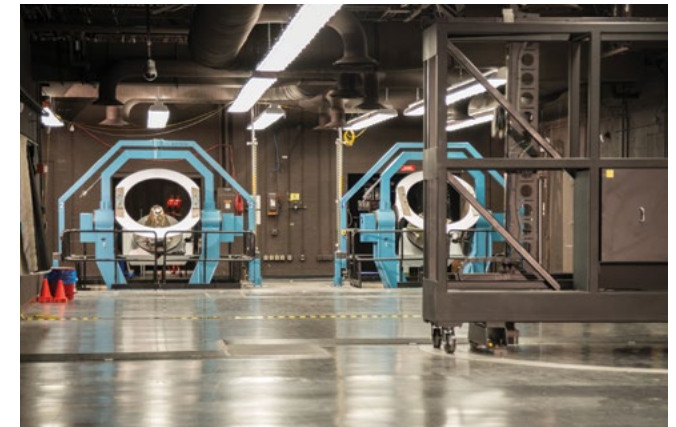
- Advanced concepts
- Trade studies
- Architecture design
- Algorithm design
- System test and analysis
- Digital simulations

## WORRELL WEEKS AIRCREW PROTECTION CENTER

The Worrell/ Weeks Aircrew Protection Center (WWAPC) allows for the testing and evaluation of complex survivability and protection systems. Previously, system testing was costly and time consuming, relying mainly on platform deployment. WWAPC enables in-depth analysis of equipment in an operationally representative environment.

Inside the range, the gantry acts as the missile or heat source. The products being tested are mounted to the flight motion simulator, which acts as the aircraft. The state-of-the-art testing center offers comprehensive analysis of various applications, preparing the products for integration and reducing overall program cost.

The facility is dedicated to the memory of Major Matthew Wade Worrell and Chief Warrant Officer 5 Jamie Dunbar Weeks, U.S. Army special operations soldiers who were killed in action when their helicopter was shot down by enemy fire during combat operations in Iraq.



### Facility Capabilities

- Two flight motion simulators
- Environmental test chamber
- 2 target gantries
- IR/UV threat simulator
- Rotary light source
- Outdoor range (600 m)
- Indoor range (43 m)
- Software to control range equipment
- Single point control room