



**2008**  
**Directed Energy**  
**Test and Evaluation**  
**Conference**

**29 - 31 July 2008**  
**Albuquerque, New Mexico**

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### FRIDAY MORNING

Ktech Tours

### Session Restrictions

P = Public sessions. Can be attended by any registrant.

FOUO = Limited Attendance Sessions. Can be attended by U.S. citizens who are employees of the U.S. Government or its contractors.

S = Secret sessions. Can be attended by U.S. citizens with a classified visit request on file.

P/FOUO = Public/FOUO sessions have Public presentations followed by FOUO ones.

## TUESDAY

### Short Courses

- 0700 **Registration at Hyatt  
Breakfast for Morning Tutorial Students**
- 0800 **Short Tutorials Begin**
- 1. Introduction to High Energy Laser Systems**  
*Mr. Denny Boesen, Northrop Grumman*
  - 2. Introduction to High Power Microwave Systems**  
*Mr. Bob Antoine and Mr. Bob Richter-Sand, Northrop Grumman*
  - 3. Introduction to DoD T&E Process**  
*Mr. Bill Decker, Defense Acquisition University*
- 1200 **Lunch for Afternoon Tutorial Students**
- 1300 **Afternoon Tutorials Begin**
- 4. The Credible Use of Modeling and Simulation in Test and Evaluation**  
*Dr. Dave Cook, The AEgis Technologies Group, Inc.*
  - 5. Test and Evaluation of High Energy Laser Systems (FOUO)**  
*Dr. Larry McKee, Science Applications International Corporation*
  - 6. Test and Evaluation of High Power Microwave Systems (FOUO)**  
*Dr. J. Mark DelGrande, Science Applications International Corporation*

## WEDNESDAY MORNING

### Plenary Session (Public)

- 0700 **Registration at Hyatt Hotel**
- 0700 **Exhibits Open  
Continental Breakfast in the Exhibit Area  
Speakers'/Panel Members' Breakfast**
- 0800 **Welcome and Introductions**  
Conference Co-Chairs:  
*Mr. Patrick Cannon, ITEA and  
Mr. Rick Graber, DEPS*
- 0815 **Live Fire Test and Evaluation of Directed Energy**  
*Mr. Rick Sayre, Deputy for LFT&E DOT&E*
- 0900 **Innovative Directed Energy Test and Evaluation Methods at Boeing**  
*Mr. Jeff Waitkus, Deputy Program Manager, HEL Relay Systems, Boeing-SVS*
- 0945 **Break**
- 1015 **Directed Energy Defense Science Board Results**  
*Dr. Tom Spencer, Air Force Research Laboratory*
- 1100 **Directed Energy Test and Evaluation Capability**  
*Mr. Minh Young, Project Director, Directed Energy Test & Evaluation Capability (DETEC)*
- 1145 **Lunch**

## WEDNESDAY AFTERNOON

### SESSION 1

#### DET S&T (Public)

Chair: *Minh Young*, Directed Energy Test & Evaluation Capability (DETEC)

- 1300 **DET S&T Investments**  
*Minh Vuong*, Directed Energy Test & Evaluation Capability (DETEC)
- 1330 **Bistatic Optical Imaging Sensor (BOIS)**  
*Brett Bush*, Photon Research Associates
- 1400 **Multiple Waveband Temperature Sensor (MWTS)**  
*Sumith Bandara*, NASA Jet Propulsion Laboratory
- 1430 **Temperature and Irradiance Sensor Matrix (TISM)**  
*David Thomas*, AEGIS Technologies
- 1500 **Break**
- 1530 **Heat Flux Sensor Array (HFSA)**  
*Yuwen Zhang*, University of Missouri
- 1600 **HEL Target Board (HTB)**  
*David Roberts*, Georgia Tech Research Institute
- 1630 **Scanning Target Board (STB)**  
*Michael Zintl*, Scientific Applications & Research Associates
- 1730 **Reception in Exhibit Area  
Poster Session**

## WEDNESDAY AFTERNOON

### SESSION 2

#### DE Systems and DE Concepts of Operation (CONOPS) (FOUO)

Co-Chairs: *Chuck Ormsby*, Air Combat Command and *JD McCreary*, Pacific Command

- 1300 **Ultralight, Low Scatter, One Meter HEL Relay Mirror**  
*H. F. Blazek*, Bennett Optical Research
- 1330 **Advanced Tactical Laser Testing**  
*Dave DeYoung*, Boeing
- 1400 **Advanced Concepts Experiment**  
*Barry Prins*, MEI
- 1430 **Counter Electronics High Power Microwave Advanced Missile Project Joint Concept Technology Demonstration**  
*Bob Torres*, Air Force Research Laboratory
- 1500 **Break**
- 1530 **DE-IADS - Possibilities, Postulations and Pontifications**  
*Joseph Thill*, Air Command and Staff College
- 1600 **CAF DE Roadmap and Weapons Concerns**  
*Charles Ormsby*, Air Combat Command
- 1730 **Reception in Exhibit Area  
Poster Session**

**SESSION 3****Modeling and Simulation  
(Public/FOUO)**

Chair: *Robin Ritter*, Tau Technologies

- 1300 **Simple Model for Flow Effect on Laser Target Heating and Melting**  
*R. Mark Rennie*, University of Notre Dame
- 1330 **Live/Virtual/Constructive Simulation Environments as a T&E Tool**  
*Eric Parker*, Sandia National Laboratories
- 1400 **Advanced Concepts Event (ACE 07) Directed Energy Modeling and Simulation Experiment Results**  
*Joe Sorroche*, ASRC Communications, Ltd.
- 1430 **Predictive Avoidance Methodologies for Satellite Safety During Directed Energy Test and Evaluation**  
*Andrew Riter*, U.S. Army
- 1500 **Break**
- 1530 **Tactical Aerospace Laser Optical Simulator (TALOS) (FOUO)**  
*Jack Parker*, Air Force Research Laboratory
- 1600 **Worst-Case Reflected Laser Hazard Analysis Methodology to Support HEL Test and Evaluation (FOUO)**  
*Ted Early*, Northrop Grumman
- 1730 **Reception in Exhibit Area  
Poster Session**

**POSTER SESSION (Public)****High Energy Laser Airborne Target Irradiance and Imagery Measurement (HEL ATIM)**

*Mike Bertin*, Directed Energy Test & Evaluation Capability (DETEC)

**High Energy Laser Ground Target Irradiance Measurement (HEL GTIM)**

*Mike Bertin*, Directed Energy Test & Evaluation Capability (DETEC)

**Thermal Laser Field Evaluation**

*Semih Kumru*, Air Force Research Laboratory

**Bi-directional Reflectance Distribution Function Results from Outdoor High Energy Laser Testing**

*Larry McKee*, Directed Energy Test & Evaluation Capability (DETEC)

**A Highly Automated and Integrated DETEC HPM Sensor Suite Instrumentation System**

*Jeff Schleher*, Directed Energy Test & Evaluation Capability (DETEC)

## THURSDAY MORNING

### Plenary Session and Panel (Public)

- 0700 **Registration at Hyatt Hotel**
- 0700 **Exhibits Open**  
**Continental Breakfast in Exhibit Area**  
**Speakers'/Panel Members' Breakfast**
- 0800 **Welcome and Introductions**  
Conference Co-Chairs: *Mr. Pat Cannon*,  
*ITEA* and *Mr. Rick Graber*, *DEPS*
- 0815 **High Power Microwave Test and**  
**Evaluation Capabilities in France**  
*Mr. Dominique Serafin*, *Délégation*  
*Générale pour l'Armement*
- 0900 **Mil-STD-464**  
*Mr. John Crim*, *Naval Air Systems Command*
- 0930 **Break**
- 1015 **Plenary Panel: Directed Energy**  
**Operational Testing Issues**  
Panel Chair: *Dr. Marion Williams*,  
*Institute for Defense Analyses*
- Opening remarks:**  
*Dr. Marion Williams*, *IDA*
- Implications of Directed Energy**  
**Weapons Development on Testing**  
*Mr. Jim Forrest*, *IDA*
- T&E: The Materiel Developer's**  
**Perspective - Testing for Operational**  
**Utility and Suitability**  
*Mr. Scott McPheeters*, *Redstone Arsenal*
- The Status and Challenges of ABL's T&E**  
*Capt Steve Medeiros & Capt Daren*  
*Gillespie*, *MDA/AL*, *Kirtland AFB NM*
- Panel Discussion:**  
*Dr. Marion Williams*, *IDA*  
*Mr. Rick Sayre*, *Deputy for LFT&E, DOT&E*  
*Mr. Scott McPheeters*, *Redstone Arsenal*  
*Col. Andrew Debrot*, *Deputy Director, ABL*  
*Program Office*  
*Col (ret) James Forrest*, *IDA*

1145 **Lunch**

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## THURSDAY AFTERNOON

### SESSION 4A

#### DE Threat Update (SECRET)

- Chair: *Cyndi Mora*, *Directed Energy Test &*  
*Evaluation Capability (DETEC)*
- 1230 **Buses to Classified Sessions**
- 1300 **Proposed In-band HPM Testing Against**  
**Military Targets**  
*Luis Hernandez*, *BAE Systems*
- 1325 **High Power Microwave Narrowband**  
**Threat Systems A, A-Prime and**  
**C Subsystems**  
*Peter Duselis*, *Ktech Corporation*
- 1345 **Design of the High Power Microwave**  
**Narrow Band Threat Systems -**  
**B Subsystem**  
*Donald Sullivan*, *Ktech Corporation*
- 1405 **Corrugated Pyramidal Horn Design for**  
**the High Power Microwave Narrow Band**  
**Threat Systems Capability**  
*Earl Dressel*, *Ktech Corporation*
- 1425 **High Power Microwave Wideband**  
**Threat System**  
*Cyndi Mora*, *Directed Energy Test &*  
*Evaluation Capability (DETEC)*
- 1445 **Mil-STD-464**  
*John Crim*, *Naval Air Systems Command*
- 1505 **Break**

**Session Continued on Next Page**

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**SESSION 4B****DE Technologies (SECRET)**

Chair: *James Keith*, 46th Test Group/OL-AA

- 1535 **Counter UAV Testing Utilizing MEGA**  
*Greg Nelson*, Air Force Research  
Laboratory
- 1600 **Laser Countermeasure Susceptibility**  
**Testing of Tactical Airborne EO/IR**  
**Sensors**  
*Anthony Cain*, Air Force Research  
Laboratory
- 1625 **Laser Area Defense Testing against**  
**MANPADS and UAVs**  
*Luke Lilevjen*, Air Force Research  
Laboratory
- 1700 **Buses Return from Secret Sessions**  
**Conference Adjourns**

**FRIDAY MORNING**

**Ktech Tours of DETEC Equipment**  
**Buses leave hotel at 8:30 and 9:00**  
**Space is Limited**  
**Sign up at Registration Desk**

**SESSION 5****Present and Future DE Range**  
**Capabilities (Public)**

Chair: *Mike Bertin*, Directed Energy Test &  
Evaluation Capability (DETEC)

- 1300 **Variation of the Dynamic Bi-directional**  
**Reflectance Distribution Function**  
**Across High Energy Laser Spots**  
*Larry McKee*, Directed Energy Test &  
Evaluation Capability (DETEC)
- 1330 **Testing of LIDAR System for Turbulence**  
**Profiles**  
*Gary Gimmestad*, Georgia Tech Research  
Institute
- 1400 **Instrumentation for Sampling and**  
**Remote Sensing of High Energy Laser**  
**Beams Using Space Shuttle Heat Tiles**  
*Ron Phillips*, University of Central Florida
- 1430 **High Energy Laser Optical Hazard**  
**Monitoring System (LOHAZ)**  
*Adam White*, USAF, 417 FLTS
- 1500 **Break**
- 1530 **High Power Microwave Target Surrogate**  
**Materials (HPM TSM)**  
*Jerry Pavlinko*, Directed Energy Test &  
Evaluation Capability (DETEC)
- 1600 **Leaky Coaxial Cable as a Transmitting**  
**Antenna for HEMP Shielding**  
**Effectiveness Testing**  
*Tom Podlesak*, Army Research Laboratory
- 1630 **High Power Microwave Test Target**  
**Subsystems Surety (HPM TTSS)**  
*Cyndi Mora*, Directed Energy Test &  
Evaluation Capability (DETEC)
- 1700 **Conference Adjourns**

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## THURSDAY AFTERNOON

### SESSION 6

#### Airborne Laser Testing and Lessons Learned (SECRET)

Chair: *Matthew Zuber*, USAF, Airborne Laser Combined Test Force

- 1230 Buses to Classified Sessions
- 1300 ABL Low Power System Integration - Active Flight Test Results  
*Harold Schall*, The Boeing Company
- 1330 Predictive Avoidance Planning  
*Carlos Matos-Ramos*, USAF, 771 TS/EWAI
- 1400 Range Safety Situational Awareness Tool (RSSAT) Utilization  
*Peter Schmick*, USAF, 771 TS/412th EWG
- 1430 Modeling & Simulation of Targets for the Airborne Laser  
*Roger Packham*, USAF, 771st TS/412th EWG
- 1500 Break
- 1530 Laser Target Development Considerations  
*Justin Wodarck*, USAF, 771st TS/412th EWG
- 1600 Airborne Laser Flight Test CONOPS  
*Jason Vap*, 417th FLTS/412th OG
- 1630 Laser Fuel Management for ABL Testing  
*Sarah Shaw*, 417th FLTS/412th OG
- 1700 Buses Return from Secret Sessions  
Conference Adjourns

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## Thanks to our Exhibitors:

**AEgis Technologies Group, Inc.**

**AFRL-Det15**

**Applied Companies**

**Atlantic Positioning Systems**

**CALCULEX, Inc.**

**DEPS**

**DETEC**

**ITEA**

**Ktech**

**Knox**

**NM Tech**

**Photonics**

**Protective Systems**

**Sandia National Laboratory**

**SAIC**

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