

Monday, 3 April

Short Courses

0630 Breakfast at Sheraton Hotel

0700 Registration at Sheraton Hotel

0800 Short Courses Begin

All courses are half day unless otherwise noted.

1. *High Power Microwave Fundamentals*, 0.35 CEU

Classification: Unclassified, Public Release

Sheraton Hotel

Dr. David Abe, NRL

2. *High Power Microwave Systems*, 0.7 CEU

FULL DAY COURSE

Classification: Limited Distribution, US Only

Sheraton Hotel

Lead Instructor: Dr. William Bailey, AFIT

1200 Lunch at Sheraton for short course students

1300 Afternoon Courses Begin and Full Day Course Resumes

3. *High Power Microwave Effects*, 0.35 CEU

Classification: SECRET, US Only

Army Research Laboratory

4. *Engagement and Source Modeling*, 0.35 CEU

Classification: Limited Distribution, US Only

Sheraton Hotel

Lead Instructor: Dr. David Dietz, AFRL/Univ of New Mexico

1700 Short Courses Adjourn

Tuesday, 4 April

Plenary Session

0630 Breakfast at Sheraton Hotel

0700 Registration at Sheraton Hotel

Buses to ARL - Buses will run between ARL and Sheraton Hotel continuously throughout the day.

0800 Welcome

0820 Keynote Address

0850 Army Program Overview

0920 Navy Program Overview

0950 Air Force Program Overview

1020 Break

1050 UK Program Overview

1120 HPM Threat Overview

1150 Future Naval Capabilities Program for Directed Energy

1200 Lunch at ARL

Sources - Theory and Experiment

- 1300 Sources Overview
- 1330 MBDA Trials Sources
- 1350 HPM Research at Strathclyde
- 1410 Results from Advanced Cathode Experiments on the AFRL/DEH Relativistic Magnetron
- 1430 High Power Microwave Sources
- 1450 Experimental Observation of RF Radiation Generated by an Explosively-Driven Voltage Generator
- 1510 Break
- 1530 Magnetic Priming of the UM/Titan Relativistic Magnetron
- 1550 Recent Developments in Mesoband Microwave Source Technology
- 1610 The OSD Energy and Power Technology Initiative
- 1640 DETEC Overview
- 1710 Adjourn
- 1730 Reception at Sheraton

Wednesday, 5 April

Bio-Effects and Effects on IEDs

- 0630 Breakfast at Sheraton Hotel
- 0700 Registration at Sheraton Hotel; Buses to ARL
- 0800 Bioeffects Overview
- 0830 Effects of RF on Complex Activity in Brain Slices
- 0850 Active Denial Program
- 0910 RF DE Against IED (RAID) Technology
- 0930 Effects of RF on Electro-Explosive Devices
- 0950 Direct RF Injection Tests on Electro-Explosive Devices
- 1010 Break
- 1040 The NIRF System
- 1100 SPARROW Portal Protection System
- 1120 Electromagnetic Analysis of Blasting Caps Using the Finite Element Method
- 1140 Experimental Method of Characterizing RF Temperature Response of Inert Blasting Caps
- 1200 Lunch at ARL

Effects - Tools and Models

- 1300 Probability of Effect Curves for High Power Microwave Effects on Electronics
- 1320 HPM Counter-MANPADS Effects
- 1400 Effect of Pulse Repetition Frequency on Range-To-Target for a Notional HPM Airborne Electronic Attack System
- 1420 Dahlgren Trial Results
- 1440 Models and Predictive Capabilities for Assessing Computer Network Performance /Dysfunction
- 1500 Using Modeling and Simulation to Assess the Potential for Collateral Effects from HPM Weapons
- 1520 Technology Assistance Provided by the Results of the RF Effects MURI
- 1540 Break

- 1600 Prediction and Measurement of Induced Voltages and Currents in Complicated Metallic Enclosures
- 1620 Crosstalk Characterizations of Unshielded Twisted-Pair Cables
- 1640 Round to Round Comparison of Susceptibility Measurements for a Missile Seeker
- 1700 HPM Effects Modeling
- 1720 Adjourn

Thursday, 6 April

Effects on Engines

- 0630 Breakfast at Sheraton Hotel
- 0700 Registration at Sheraton Hotel; Buses to ARL
- 0800 Vehicle Engine Stopper-Historical Effects Summary
- 0820 Vehicle Engine Stopper Outdoor Experimental Results
- 0840 Analysis of HPM Effects on Marine Engines
- 0900 Effects Research at QinetiQ
- 0920 A Specific Asset Vulnerability Programme
- 0940 Break

Hardening

- 1000 HPM R&D Efforts at NRL
- 1020 DTRA Counter HPM Program
- 1040 RF Environment Investigation Tool
- 1100 NCO (Network-Centric Ops) Needs DE Testing
- 1120 The HEMP Threat
- 1140 Navy EMI Database
- 1200 Lunch at ARL
- 1300 Elemental Modeling
- 1320 Elemental Testing at AFRL's System Integration Lab (SIL)

Systems and Components

- 1340 Waveguide Sidewall-Emitting Antennas for HPM Application
- 1400 Small Boat Attacks and DE Non-Lethal Weapons
- 1420 Repetitive Pulsed Power Research and Development for HPM Sources at AFRL
- 1440 Virtual Prototyping of a HPM System (Pulse Power, Source, and Antenna) Using ICEPIC
- 1500 Break
- 1520 RFDE System Design Tool (RFSDT)
- 1540 Concepts for Super-Power Mobile HPM Systems
- 1620 Long Range Thermal Imaging Using a mm-wave Heating Source
- 1640 Adjourn