UK HEL Prelim Agenda

June 12-16, 2017

Plenary

Kip Kendrick

Tuesday June 13

Joint Session- Laser Overarching Issues (Safety/ Legal/ Policy/ Doctrine)

13:00- **How much is that LDEW in the window? (A)** *Andrew Hodges, Arke Ltd.*

13:20**- Joint Laser Deconfliction Safety System (JLDSS) (C)** *Melissa Olson, NCWCDD*

13:40- **Outbrief on the Directed Energy Summit** *David Stoudt, Booz Allen Hamilton*

14:00- **NATO von KÃ¡rmÃ¡n Horizon Scanning: Laser DEW (C)** *Neil Eyre, MBDA*

14:20- **How should we treat LDEW hazards under operational conditions? (C)** *Kevin Burrett, DSTL*

14:40

Laser Weapon Concepts and Military Utility

15:00- **UK DragonFire Laser Directed Energy Programme (C)** *Dr. Mark Owen, MBDA UK Limited*

15:20- **Through Life Support of LDEW System (C)** *Kim Andrews, MBDA UK Limited*

15:40- **Self-Protect High Energy Laser Demonstrator (SHiELD) ATD (Secret)** *Richard Bagnell, AFRL/RD*

16:00- **USASDMC Participation in the Joint Improvised-threat Defeat Organization and Fires Center of Excellence Firing Exercises (C)** *Dr. Kip Kendrick, USASMDC/ ARSTRAT*

16:20-

Wednesday June 14

High Energy Laser Technologies

09:30- **High Temperature Operating Diode Pumps for Directed Energy Fiber Lasers (A)** *Dr. Manoj Kanskar, nLight, Inc.*

09:50- **Transverse-modal-instability (TMI)-free Yb-doped Chirally Coupled Core (3C) fiber MOPA (A)** *Dr. Manoj Kanskar, nLight, Inc.*

10:10- **HEL Gain Media Trade Study (F)** *Shane Johnson, AFRL/RDLE*

10:30- **Recent Progress on High Power Fiber Lasers (A)** *Scott Christensen, IPG Photonics*

10:50-

11:10- **Progress in the Development of Mid-IR Lasers (D)** *Peter Budni, BAE Systems*

11:30- **Advances in Diodes and Fiber Laser Amplifiers for Directed Energy Applications (A)** *Dr. Christopher Ebert, Coherent*

11:50- **Fiber Laser Power Scaling in the Eye-Safe Spectral Domain Using Double-Clad Er-Nanoparticle-Doped Fiber (A)** *Jun Zhang, U.S. Army Research Laboratory*

12:10- **An Assessment of a High Power Laser Amplifier for Coherent Combination (A)** *Dr. David Jones, QinetiQ Ltd*

12:30-

Beam Control Technologies

13:20- **Multi-Spectral Targeting System: AFRL Field Tests for Precision Tracking in Contested Environments (Secret)** *John-Paul Sena, AFRL*

13:40- **Active Imaging for LDEW systems (C)** *Andrew Sijan, Selex ES Ltd*

14:00- **Performance of a Low Power 19 Channel Coherently Combined Fiber Laser (A)** *Dr. David Jones, QinetiQ Ltd*

14:20- **Assessment of a Multichannel Image Motion Sensor for Assessing Turbulence (A)** *Simon Woods, QinetiQ Ltd*

14:40- **PAMCUT: Precision Aimpoint Maintenance for Directed Energy Systems (A)** *Andrew Scott, QinetiQ Ltd*

15:00

15:20- **Dstl Propagation Trials: Propagation 2 (C)** *David Gommon, DSTL*

15:40- **An Improved Optical Inertial Reference Unit and its Evaluation (D)** *Dr. James Lasche, AFRL*

HEL Systems Engineering and Integration

16:00- **On Modular Beam Control Systems (D)** *Dr. Robert Pawlak, NSWC*

16:20- **Modeling and Simulation Codes for Laser Architecture Analysis and Systems Integration (CLAASI) and Size, Weight, and Power (SWaP) Modeling (A)** *Dr. James Horkovich, Schafer Corporation*

16:40**- Advanced Beam Control for Locating and Engagement (ABLE) (A**) *Lawrence Grimes*

17:00

Thursday June 15

HEL Effects and Testing

09:30- **Elevated Temperature Failure of Ductile Metals with Applications to the Assessment of Target Vulnerability to Laser Damage (D)** *Darren Luke, AFRL/RDLE*

09:50- **Synergistic Laser and Kinetic Weapons Synergy: Testing and Modeling of Elevated Temperature Ballistic Limit Testing of Passive Armor Materials (D)** *Darren Luke, AFRL/RDLE*

10:10**- FLIP: Finite-elements for Laser Interaction and Penetration Simulations (D)** *Darren Luke, AFRL/RDLE*

10:30- **Laser Testing of an Air to Air Missile (Secret)** *Robert Ulibarri, AFRL/RDLE*

10:50

11:10**- Constructing Probabilistic Dynamic Bidirectional Reflectance Distribution (dBRDF) Functions from Reflection Screen Images (A)** *Dr. Semih Kumru, 711 HPW/RHDO*

11:30- **Feasibility Analysis for Direct Measurement of High Energy Laser for Intensity and Phase Parameters at the Aperture to Support Accurate Field Measurements (A)** *Maj James Bowers, AFIT*

11:50- **Navy Support to the US/UK Effects of High Energy Lasers Project Arrangement (EHEL PA) (C)** *Chris Von Hohenleiten, NSWCDD*

12:10- **Spectroscopic Observation of Plumes from Laser Irradiation of Porous Graphite (A)** *Dr. Grady Phillips, AFIT/ENP*

12:30- **Single Photon 3D Imaging Lidar for Tracking and Turbulence Measurement (C)** *Robert Lamb, Leonardo*

12:50-

Modeling and Simulation

13:40- **DSTL LDEW Lethality Models â€“ TARVIEW and WTI (C)** *Aidan Cookson, DSTL*

14:00- **Zap! - Low Fidelity Lethality Modelling (C)** *Alasdair Jones, DSTL*

14:20- **Analysis of DSTL Beam Propagation Trial Data (C)** *Robert Lamb, Leonardo*

14:40- **LaserFX: Status and Path Forward (F)** *Dr. Michael Sheyka, AFRL*

15:00- **Dynamic Engagement Modeling and Test Validation (F)** *Dr. Michael Sheyka, AFRL*

15:20

15:40- **High Energy Laser Review and Approval Process Team Methodology and Assessment Process (F)** *Dr. Michael Sheyka, AFRL*

16:00- **Multi-spectral Weather Cubes and 4D Visualizations of Atmospheric and Radiative Effects (A)** *Dr. Steven Fiorino, AFIT/ENP*

16:20- **Comparison between Wave Optics and Scaling Law Models for Coherent Laser Arrays (A)** *Jack McCrae, AFIT/ENP*

16:40- **A Comparison between a Parametric Performance Model and Detailed Modelling of Propagation through Turbulence (A)** *Simon Woods, QinetiQ Ltd*

17:00- **Dstl LDEW Trials Data and Modelling (C)** *Sobit Thapa, DSTL*