

SSDLTR Preliminary Schedule

Tuesday, 13 June 2006

Tuesday Morning

Plenary Session (Chair: Gerald Uyeno)

PLENARY-1

Dr. Jeffrey Cavins, Northrop Grumman
Laser Target Designators and Rangefinders: Integration and Production, a Merchant Suppliers Perspective

PLENARY-2

Dr. Iain McKinnie, Lockheed Martin
Lockheed Martin Coherent Airborne LIDAR

PLENARY-3

Mr. Dan Nieuwsma, Raytheon
Diode Pumped Solid State Laser Integration for Raytheon's Advanced Targeting Forward Looking Infrared Pod

PLENARY-4

Dr. Rob Afzal Rob, Aculight
NASA Geoscience Laser Altimeter System (GLAS)

PLENARY-5

Dr. Floyd Hovis, Fibertek
Qualification and Integration of the Laser Transmitter for the CALIPSO Aerosol Lidar Mission

PLENARY-6

Dr. David Tratt, NASA
NASA Initiative Toward Reliable Long-Duration Operation of Diode Laser Arrays in Space

Tuesday Afternoon

**High Power Lasers (Chair: Dennis Harris)
LIMITED DISTRIBUTION**

LASER-1

Dr. Alex Mandl, Textron Systems
Nd:YAG Ceramic ThinZag High Power Laser Development

LASER-2

Dr. Randy St. Pierre, Northrop Grumman
Strategic Illuminator Laser (SILL) Program Produces the Highest Power Continuously Pulsed Device and Achieves All MDA Advanced Technology Development Goals

LASER-3

Dr. Hans Bruesselbach, HRL Laboratories, LLC
The Destiny of Multi-kW High-Brightness Yb:YAG Single-Rod Lasers

LASER-4

Dr. Alan Karpinski, Laser Diode Array, Inc.
Pump Donuts Simplify Side Pumping of Solid State Lasers

LASER-5

Dr. Huai-Chuan Lee, Onyx Optics, Inc.
Stress Relief of Adhesive-Free-Bond (AFB®) Laser Crystal Composites at Elevated and Cryogenic Temperatures

LASER-6

Dr. Ove Lyngnes, Precision Photonics

LASER-7

Jeff Sollee, Northrop Grumman
Joint High Power Solid-State Laser

Tuesday Afternoon (Continued)

LASER-8

Matthew Kendall and Michael Perry, General Atomic & Donald Woodbury, DARPA
HELLADS Overview

Alternate Wavelength Sources (Chair: Paul Rudy)

ALT-1

Dr. Timothy Day, Daylight Solutions, Inc.
Tunable External Cavity Quantum Cascade Lasers for Molecular Detection and Imaging in the Mid Infrared

ALT-2

Dr. Mahmoud Fallahi, University of Arizona
Tunable High-Power High-Brightness Diode-Pumped VECSELS and Their Applications

ALT-3

Dr. Jerome Moloney, University of Arizona
Power Scalable, Kilowatt-Class, Wavelength Agile OPSLs

ALT-4

Dr. Andrew Ongstad, AFRL/DELS
High-Brightness from an Unstable Resonator Mid-IR Semiconductor Laser

ALT-5

Dr. M Osowski, Quintessence Photonics Corporation
Advances in High Brightness Semiconductor Lasers in the 1400 – 1600 nm Wavelength Regime

ALT-6

Dr. Steve Patterson, nLight
Record High-Power and High-Efficiency InP-based Diode Lasers

ALT-7

Dr. Manijeh Razeghi, Northwestern University
High Power, High Reliability Quantum Cascade Lasers at the Center for Quantum Devices

Wednesday, 14 June 2006

Wednesday Morning

Diode Pump Lasers I (Chair: Jason Farmer)

DIODE1-1

Mr. Jason Carter, Pennsylvania State University
In-Situ Spatially and Temporally Resolved Temperature Measurement of Laser Diode Arrays as a Predictive Failure Analysis Tool

DIODE1-2

Dr. Boris Volodin, PD-LD Inc.
High-Brightness Laser Diode Arrays for Eye-Safe Lasers Enabled by Volume Bragg Gratings

DIODE1-3

Dr. Nels Ostrom, Nuvonyx, Inc.
Multi-Kilowatt High Brightness Fiber Coupled Diode Laser Systems

DIODE1-4

Dr. Manoj Kanskar, Alfalight Inc.
970 nm High Power Conversion Efficiency and Wavelength Stabilized Diode Laser Pumps

DIODE1-5

Dr. Paul Crump, nLight
400-W Peak CW Power per Bar from 1-cm GaAs Bars For Emission Wavelengths From 800-nm to 980-nm, 90-W per bar at 660-nm

DIODE1-6

Dr. Eliot Geathers, Pennsylvania State University
Laser Diode Array Performance in Vacuum

Wednesday Morning (Continued)

High Power Fiber Lasers I (Chair: Eric Honea)

FIBER1-1

Mr. Tim Lauterborn, Fraunhofer USA
System Integration Aspects of Pulsed Fiber Lasers in MOPA Configuration

FIBER1-2

Dr. Kai-Chung Hou, University of Michigan
Multi-MW Peak Power Scaling of Single-Transverse Mode Pulses Using 80- μ m Core Yb-Doped LMA Fibers

FIBER1-3

Dr. Fabio Teodoro, Aculight Corporation
Multi-MW Peak Power, Multi-mJ Pulse Energy in Spectrally Narrow, Diffraction-Limited Output from an Yb-doped Photonic Crystal Rod Amplifier

FIBER1-4

Dr. John McCarthy, BAE Systems
Near Diffraction-Limited, 1064nm, All-Fiber Master Oscillator Fiber Amplifier (MOFA) Architecture with Enhanced SRS Suppression for Pulsed Nanosecond Applications

FIBER1-5

Dr. Pavel Polynkin, University of Arizona
Development of Watts-Level Sources of Ultra-Short Pulses at 1.5 μ m Using Heavily-Doped Phosphate Glass Fibers

FIBER1-6

Dr. Ming-Yuan Cheng, University of Michigan
High Power Compact Fiber Chirped Pulse Amplifiers at 1558-nm using Er/Yb LMA Fibers and Chirped Volume Bragg Grating Compressors

Wednesday Noon

Poster Session (Chair: Sean Ross)

P-1

Dr. Mark Culpepper, AFRL/DELO
Coherent Fiber Array for Active Satellite Imaging

P-2

Dr. Iulian Petrescu-Prahova, High Power Devices
High Modal Selectivity in Periodic Gain Diode Laser Arrays with Lateral Margin Control

P-3

Dr. Oleg Smolski, University of Central Florida
Hybrid Master Oscillator Power Amplifier Assembly based on Grating Coupled Laser Diodes

P-4

Dr. Eric Bochove, Air Force Research Laboratory/DELO
A New Relation for Mode Losses of Dense Laser Arrays coupled to an External Cavity

P-5

Dr. Julien Lumeau, University of Central Florida
Tunable Narrow Band-Pass Filters for Laser Applications

P-6

Dr. David Westerfeld, Power Photonic Corp
Effect of Increased Quantum Well Strain on GaSb Based 2.3-2.4 μ m High Power Diode Lasers

P-7

Dr. G. Alex Newburgh, Army Research Laboratory
Silicon Carbide: A New Optical Heatspreader Material for Cooling of High Power Solid State Laser Gain Media

P-8

Dr. Anatoliy Khizhnyak, MetroLaser, Inc.
Multiple-Fiber Channels Beam Coupling Inside a Stable Configuration Laser Cavity

Wednesday Afternoon

Diode Pump Lasers II (Chair: Jason Farmer)

DIODE2-1

Dr. R Lammert, Quintessence Photonics Corporation
Advances in High Brightness Semiconductor Lasers

DIODE2-2

Mr. Ryan Feeler, Northrop Grumman Cutting Edge Optronics
Minimization of Diode Array Degradation via Emitter-Level Screening of
Laser Diode Subassemblies

DIODE2-3

Dr. Rajiv Pathak, Lasertel Inc.
Qualification of High Power Laser Bars for Space Applications

DIODE2-4

Dr. Andreas Brandt, Visotek, Inc.
Compact High Power, High Brightness Diode Laser for Pumping of Solid
State Lasers

High Power Fiber Lasers II (Chair: Eric Honea)

FIBER2-1

Dr. O Shkurikhin, IPG Photonics
400W+ Yb and 100W+ Er CW Single-Frequency, Single-Mode, Linearly
Polarized All-Fiber Format Amplifiers

FIBER2-2

Dr. F Corbin, Nufern
Component Testing and Amplifier Design for 200W, Narrow Linewidth,
Monolithic PM-LMA Fiber Amplifiers

FIBER2-3

Dr. N Peyghambarian, University of Arizona
Ultra-Compact High Power Fiber Lasers with Phosphate Microstructured
Optical Fibers

Wednesday Afternoon

Thermal and Power Management (Chair: Kirk Yerkes)

TP-1

Dr. Kevin Kelly, International Mezzo Technologies
Ultra Compact Heat Exchangers for Thermal Management of High Power
Laser Systems

TP-2

Dr. Jessie Shi, Northrop Grumman
Modeling & Simulation for Optimization of a Mobile SSL Thermal
Management System

TP-3

Mr. Don Deaton, DRS TEM Inc.
High Power Density Pulse Generator for Laser Diode Applications

TP-4

Dr. Jennifer Lindauer, Rini Technologies, Inc.
Lightweight Cooling System for a 100kW SSL

Thursday, 15 June 2006

Thursday Morning

Beam Combination and Control (Chair: Iain McKinnie)

BC-1

Dr. Thomas Loftus, Aculight Corporation
High Power Spectrally Beam Combined Fiber Laser System with Near-Diffraction Limited Beam Quality

BC-2

Dr. Steve Augst, MIT Lincoln Laboratory
Wavelength Beam Combining of Three 30-watt Fiber Amplifiers

BC-3

Mr. Oleksiy Andrusyak, University of Central Florida
Dense Spectral Beam Combining With Volume Bragg Gratings in PTR Glass

BC-4

Dr. Scott Christensen, Lockheed Martin Coherent Technologies
Novel Coherent Beam Combiner

BC-5

Dr. Chi Liu, University of Michigan
Beam Quality of Spontaneously-Phasing, Multi-Core Fiber Laser with Structural Defects

BC-6

Dr. Eric Bochove, Air Force Research Laboratory/DELO
Spatial and Temporal Stability of an N-Core Evanescently Coupled Fiber Amplifier Ring

BC-7

Dr. Chris Corcoran, Corcoran Engineering, Inc.
Stable Operation of a Phase-Locked laser Array in a Self-Fourier Cavity

BC-8

Dr. Eric Bochove, Air Force Research Laboratory/DELO
Novel Applications of a Self Fourier Cavity to High Power Phased Laser Arrays

Thursday Morning

Solid State Lasers (Chair: Santanu Basu)

SS-1

Dr. Bhabana Pati, Q-Peak, Inc.
400-W Cryo-Cooled Yb:YAG Laser with 56% Efficiency

SS-2

Dr. Bert Callicoatt, Lockheed Martin Coherent Technologies
Power-Scaling in a Re-Imaging Waveguide MOPA

SS-3

Dr. Mark Dubinskii, Army Research Laboratory
Laser Potential of Diode Pumped Yb-Doped Y2O3 Ceramics

SS-4

Dr. Santanu Basu, Sparkle Optics Corporation
Recent Advances in Rotary Disk Laser Technology

SS-5

Dr. Alex Dergachev, Q-Peak, Inc
113-W, 115-mJ Ho:YLF MOPA System Pumped with Tm: fiber Lasers

SS-6

Dr. Allen Tracy, Lockheed Martin Coherent Technologies
High-power Sodium Guidestars Laser Systems for Current and Future Adaptive Optic Telescopes

SS-7

Dr. Te-yuan Chung, University of Central Florida
Stabilization, Spectral Narrowing and Optimization of Solid State Lasers Using Volumetric PTR Bragg Grating Cavity Mirrors

SS-8

Dr. Al Paxton,
Spinning Disk Laser – Computer Simulations