

## PDV Workshop Agenda (preliminary)

**Wednesday, October 16 2024**

<b>08:00 a.m.</b> Scottsdale A&B	<b>Registration</b> Attendees pick up registration packets
<b>08:30 a.m.</b> Scottsdale A&B	<b>Welcome Announcements</b>
<b>09:00 a.m.</b>	<b>Technology and Time Scales in PDV</b> Dan Dolan, Washington State University
<b>09:20 a.m.</b>	<b>532-nm Photonic Doppler Velocimetry</b> Yohan Barbarin, CEA
<b>09:40 a.m.</b>	<b>How does the design of the oscilloscope impact PDV measurements?</b> Chris Rehorn, Keysight
<b>10:00 a.m.</b> Scottsdale C&D	<b>Break</b>
<b>10:30 a.m.</b> Scottsdale A&B	<b>Van der Waals loops or Maxwell constructs? Assessing EOS applicability using PDV of electrically thick metal driven by high lineal current density</b> Bruno Bauer, University of Nevada Reno
<b>10:50 a.m.</b>	<b>Laser-driven Flyer Visualization and Velocity Testbed</b> Eftihia Barnes, Los Alamos National Laboratory
<b>11:10 a.m.</b>	<b>Simultaneous PDV and VISAR measurements of the amplified shock delivered to an FLF fusion target</b> Joshua Read, First Light Fusion, Ltd.
<b>11:30 a.m.</b> ----	<b>Lunch</b> No host - see handout for nearby options
<b>01:30 p.m.</b> Scottsdale A&B	<b>Development and fielding of advanced fiber diagnostics for large-scale joint system tests with broad scale of requirements</b> Kate Rodriguez, Lawrence Livermore National Laboratory
<b>01:50 p.m.</b>	<b>PEC Spectra Software: a New Library and Application for PDV Signal Processing and Analysis</b> Alex Lakocy, Protection Engineering Consultants
<b>02:10 p.m.</b>	<b>Kalman filters for derivatives of noisy data</b> Shelly Rhodes, Lawrence Livermore National Laboratory
<b>02:30 p.m.</b> Scottsdale C&D	<b>Break</b>
<b>03:00 p.m.</b> Scottsdale A&B	<b>A New Way to Build Multi-Channel PDV Systems</b> Kevin Rainey, Micah Jakulewicz, Los Alamos National Laboratory
<b>03:20 p.m.</b>	<b>LWIR PDV system for shock and detonation sensing</b> Grégory Lefrère, CEA
<b>03:40 p.m.</b>	<b>PDV Profilometry</b> Brian Thurston, Ohio State University
<b>04:00 p.m.</b>	<b>Adjourn Sessions</b>

### Wednesday, October 16 2024

05:00 p.m.

Group Dinner

### Thursday, October 17 2024

08:00 a.m.

Scottsdale A&B

**Accessing terapascal pressures on a two-stage light gas gun using a novel shock amplification platform**

Tommy Ao, Sandia National Laboratories

08:20 a.m.

**Simulations and Experiments of Photon Doppler Velocimetry Diagnosed Wedge Tests**

Robert Ichiyama, NSWC IHD

08:40 a.m.

**Multipoint PDV Coupled with Post-Shot Recovery MicroCT for Investigating Orientation Effects on Spall Strength in High Strength Steel**

Gregory Kennedy, Georgia Institute of Technology

09:00 a.m.

Scottsdale C&D

Break

09:30 a.m.

Poster Session

10:30 a.m.

Scottsdale A&B

**Machine Learning based image segmentation for region of interest selection in PDV data**

Thomas Matthews, Lawrence Livermore National Laboratory

10:50 a.m.

**Effect of Operating Environment on Photonic Doppler Velocimetry (PDV) Data Quality**

Rohan Jillapalli, Los Alamos National Laboratory

11:10 a.m.

**PDV velocity perturbations and corrections in non-uniform window experiments**

Dan Champion, Nevada National Security Sites

11:30 a.m.

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Lunch

No host - see handout for nearby options

01:30 p.m.

Scottsdale A&B

**Dynamic tests with simultaneous Broadband Laser Ranging and Photonic Doppler Velocimetry**

Alex Cardy, AWE

01:50 p.m.

**SLAM! Seeing High-Speed, Visually-Obscured Projectiles**

Adam Susser, Los Alamos National Laboratory

02:10 p.m.

**Overpressure measurements by triature PDV**

Sébastien Maqueda, CEA

02:30 p.m.

Scottsdale C&D

Break

03:00 p.m.

Scottsdale A&B

**Asay Foiled**

Ed Daykin, Nevada National Security Sites

03:20 p.m.

**New PDV development at 830 nm**

Jacky Benier, CEA

03:40 p.m.

**Photometric Sensitivity Calculations for PDV**

Patrick Younk, Nevada National Security Sites

04:00 p.m.

Discussion

**Thursday, October 17 2024**

04:45 p.m.

Closing

05:00 p.m.

Adjourn

**Poster Session – Scottsdale C&D**

**Ejecta Cloud Holistic Observations (ECHO)**

Andrea Albert, Los Alamos National Laboratory

**Photon Doppler velocimetry surface return study for common surface preparations**

Nazila Black

**PDV Analysis: Human Error and Uncertainty for Explosives and Detonators**

Colton Cagle, Los Alamos National Laboratory

**Development of 1D PDV array with variable imaging for studies of inhomogeneous effects in laser-driven experiments**

Frank Jin, Lawrence Livermore National Laboratory

**PDI / PDV Diagnostics for Material Response and Survivability Experiments at the National Ignition Facility and the Development of an Optical Total Impulse Gauge**

Schayne Lees

**Enhanced PDV waveform search and analysis method using parallel circular-convolution / cross-correlation for improved dynamic surface velocity extraction**

Caleb Monoran, Nevada National Security Sites

**PDV's Role in Proton Radiography Capabilities**

Lauren O'Brien, Los Alamos National Laboratory

**Low Noise fiber laser systems for PDV applications**

Jens Pedersen, NKT Photonics

**High resolution Chirped Fiber Bragg grating diagnostics**

Christian Peterson, Los Alamos National Laboratory

**Development of an Isentropic Compression Facility based on the LOBO LTD Pulsed Power Accelerator and a Heterodyne PDV System**

Salvador Portillo, University of New Mexico

**Characterizing PDV System Accuracy**

William Shaw, Lawrence Livermore National Laboratory