Publications and Conference Presentations

Publications

A. Antikainen and G. P. Agrawal, "Soliton Supermode Transitions and Total Red Shift Suppression in Multi-Core Fibers," Opt. Lett. **44**, 4159 (2019).

S. Bucht, D. Haberberger, J. Bromage, and D. H. Froula, "Methodology for Designing Grism Stretchers for Idler-Based Optical Parametric Chirped-Pulse-Amplification Systems," J. Opt. Soc. Am. B **36**, 2325 (2019).

D. Cao, R. C. Shah, S. P. Regan, R. Epstein, I. V. Igumenshchev, V. Gopalaswamy, A. R. Christopherson, W. Theobald, P. B. Radha, and V. N. Goncharov, "Interpreting the Electron Temperature Inferred from X-Ray Continuum Emission for Direct-Drive Inertial Confinement Fusion Implosions on OMEGA," Phys. Plasmas **26**, 082709 (2019).

M. Chorel, S. Papernov, A. A. Kozlov, B. N. Hoffman, J. B. Oliver, S. G. Demos, T. Lanternier, É. Lavastre, L. Lamaignère, N. Roquin, B. Bousquet, N. Bonod, and J. Néauport, "Influence of Absorption-Edge Properties on Subpicosecond Intrinsic Laser-Damage Threshold at 1053 nm in Hafnia and Silica Monolayers," Opt. Express **27**, 16,922 (2019).

A. Colaïtis, R. K. Follett, J. P. Palastro, I. Igumenshchev, and V. Goncharov, "Adaptive Inverse Ray-Tracing for Accurate and Efficient Modeling of Cross Beam Energy Transfer in Hydrodynamics Simulations," Phys. Plasmas **26**, 072706 (2019).

C. N. Danson, C. Haefner, J. Bromage, T. Butcher, J.-C. F. Chanteloup, E. A. Chowdhury, A. Galvanauskas, L. A. Gizzi, J. Hein, D. I. Hillier, N. W. Hopps, Y. Kato, E. A. Khazanov, R. Kodama, G. Korn, R. Li, Y. Li, J. Limpert, J. Ma, C. H. Nam, D. Neely, D. Papadopoulos, R. R. Penman, L. Qian, J. J. Rocca, A. A. Shaykin, C. W. Siders, C. Spindloe, S. Szatmári, R. M. G. M. Trines, J. Zhu, P. Zhu, and J. D. Zuegel, "Petawatt and Exawatt Class Lasers Worldwide," High Power Laser Sci. Eng. **7**, e54 (2019).

J. DeGroote Nelson, T. Z. Kosc, and P. C. Nelson, "The Optics Suitcase: Educational Outreach Tool for Inspiring Careers in Light," Proc. SPIE **11143**, 111432N (2019).

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C. Dorrer, "Spatiotemporal Metrology of Broadband Optical Pulses," IEEE J. Sel. Top. Quantum Electron. **25**, 3100216 (2019).

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T. Filkins and J. Katz, "Design of a Free-Space Image-Relay Optical Time Domain Reflectometer to Measure Fiber-Optic Time Delays at Inertial Confinement Fusion Relevant Wavelengths," Proc. SPIE **11114**, 1111417 (2019).

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L. Guazzotto and R. Betti, "Two-Fluid Burning-Plasma Analysis for Magnetic Confinement Fusion Devices," Plasma Phys. Control. Fusion **61**, 085028 (2019).

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I. V. Igumenshchev, A. L. Velikovich, V. N. Goncharov, R. Betti, E. M. Campbell, J. P. Knauer, S. P. Regan, A. J. Schmitt, R. C. Shah, and A. Shvydky, "Rarefaction Flows and Mitigation of Imprint in Direct-Drive Implosions," Phys. Rev. Lett. **123**, 065001 (2019).

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C. A. McCoy, M. C. Marshall, D. N. Polsin, D. E. Fratanduono, P. M. Celliers, D. D. Meyerhofer, and T. R. Boehly, "Hugoniot, Sound Velocity, and Shock Temperature of MgO to 2300 GPa," Phys. Rev. B **100**, 014106 (2019).

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B. S. Rice, J. Ulreich, and M. J. Shoup III, "Prediction of Deuterium–Tritium Ice-Layer Uniformity in Direct-Drive Confinement Fusion Target Capsules," in *Proceedings of NAFEMS World Congress 2019* (NAFEMS, Glasgow, Scotland 2019).

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R. V. Shapovalov, G. Brent, R. Moshier, M. Shoup, R. B. Spielman, and P.-A. Gourdain, "Design of 30-T Pulsed Magnetic Field Generator for Magnetized High-Energy-Density Plasma Experiments," Phys. Rev. Accel. Beams **22**, 080401 (2019).

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M. Stoeckl and A. A. Solodov, "Refining Instrument Response Functions with 3-D Monte Carlo Simulations of Differential Hard X-Ray Spectrometers," Nucl. Instrum. Methods Phys. Res. A **931**, 162 (2019).

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Forthcoming Publications

A. S. Davies, D. Haberberger, J. Katz, S. Bucht, J. P. Palastro, R. K. Follett, and D. H. Froula, "Investigation of Picosecond Thermodynamics in a Laser-Produced Plasma Using Thomson Scattering," to be published in Plasma Physics and Controlled Fusion.

C. Fagan, M. Sharpe, W. T. Shmayda, and W. U. Schröder, "Thin-Alumina Film as a Tritium Adsorption Inhibitor for Stainless-Steel 316," to be published in Fusion Science and Technology.

C. Fagan, M. Sharpe, W. T. Shmayda, and W. U. Schröder, "Tritium Retention in Hexavalent Chromate-Conversion–Coated Aluminum Alloy," to be published in Fusion Science and Technology.

S. R. Fairchild, Y. Liu, J. Palastro, and J. Peñano, "Laser Filamentation and Applications: Introduction," to be published in the Journal of the Optical Society of America B.

P. Franke, D. Turnbull, J. Katz, J. P. Palastro, I. A. Begishev, J. Bromage, J. L. Shaw, R. Boni, and D. H. Froula, "Measurement and Control of Large Diameter Ionization Waves of Arbitrary Velocity," to be published in Optics Express.

D. Haberberger, A. Shvydky, J. P. Knauer, S. X. Hu, S. T. Ivancic, J. Carroll-Nellenback, D. Cao, V. V. Karasiev, A. V. Maximov, V. N. Goncharov, and D. H. Froula, "Density Measurements of the Inner Shell Release," to be published in Physical Review Letters.

A. M. Hansen, D. Turnbull, J. Katz, and D. H. Froula, "Mitigation of Self-Focusing in Thomson Scattering Experiments," to be published in Physics of Plasmas.

S. X. Hu, R. Epstein, W. Theobald, H. Xu, H. Huang, V. N. Goncharov, S. P. Regan, P. W. McKenty, R. Betti, E. M. Campbell, and D. S. Montgomery, "Direct-Drive Double-Shell Implosion: A Platform for Burning-Plasma Physics Studies," to be published in Physical Review E.

T. Z. Kosc, A. A. Kozlov, S. Papernov, K. R. P. Kafka, K. L. Marshall, and S. G. Demos, "Investigation of Parameters Governing Damage Resistance of Nematic Liquid Crystals for High-Power or Peak-Intensity Laser Applications," to be published in Scientific Reports.

J. F. Myatt, J. G. Shaw, R. K. Follett, D. H. Edgell, D. H. Froula, and V. N. Goncharov, "*LPSE*: A 3-D Wave-Based Model of Cross-Beam Energy Transfer in Laser-Irradiated Plasmas," to be published in the Journal of Computational Physics.

J. M. Ngoko Djiokap, A. V. Meremianin, N. L. Manakov, L. B. Madsen, S. X. Hu, and A. F. Starace, "Molecular Symmetry-Mixed Dichroism in Double Photoionization of H_2," to be published in Physical Review Letters.

C. E. Parker, J. A. Frenje, O. H. W. Siegmund, C. J. Forrest, V. Yu. Glebov, J. D. Kendrick, C. W. Wink, M. Gatu Johnson, T. J. Hilsabeck, S. T. Ivancic, J. Katz, J. D. Kilkenny, B. Lahmann, C. K. Li, F. H. Séguin, C. M. Sorce, C. Trosseille, and R. D. Petrasso, "Response of a Lead-Free Borosilicate-Glass Microchannel Plate to 14-MeV Neutrons and γ Rays," to be published in Review of Scientific Instruments.

R. Paul, S. X. Hu, and V. V. Karasiev, "Crystalline Phase Transitions and Vibrational Spectra of Silicon up to Multiterapascal Pressures," to be published in Physical Review B.

E. M. Schiesser, S.-W. Bahk, J. Bromage, and J. P. Rolland "Design and Alignment of an All-Spherical Unobscured Four-Mirror Image Relay for an Ultra-Broadband Subpetawatt Laser," to be published in Applied Optics.

M. Sharpe, C. Fagan, and W. T. Shmayda, "Distribution of Tritium in the Near Surface of Type 316 Stainless Steel," to be published in Fusion Science and Technology.

W. T. Shmayda, C. R. Shmayda, and J. Torres, "Tritium Extraction from Water," to be published in Fusion Science and Technology.

R. Sobolewski, "Optical Detectors and Sensors," to be published in the *Handbook of Superconducting Materials*.

D. Turnbull, A. Colaïtis, A. M. Hansen, A. L. Milder, J. P. Palastro, J. Katz, C. Dorrer, B. E. Kruschwitz, D. J. Strozzi, and D. H. Froula, "Impact of the Langdon Effect on Cross-Beam Energy Transfer," to be published in Nature Physics.

H. Wen, A. V. Maximov, R. Yan, J. Li, C. Ren, and F. S. Tsung, "Three-Dimensional Particle-in-Cell Modeling of Parametric Instabilities Near the Quarter-Critical Density in Plasmas," to be published in Physical Review E.

Conference Presentations

V. N. Goncharov, "High-Energy-Density Physics Research at the Laboratory for Laser Energetics," presented at JOWOG 37, Aldermaston, UK, 8–11 July 2019.

A. S. Davies, J. Katz, S. Bucht, D. Haberberger, J. P. Palastro, J. L. Shaw, D. Turnbull, R. Boni, I. A. Begishev, S.-W. Bahk, J. Bromage, A. Sorce, J. Konzel, B. Cuffney, J. D. Zuegel, D. H. Froula, W. Rozmus, J. D. Sadler, R. Trines, R. Bingham, and P. A. Norreys, "Investigation of Electron Plasma Waves and Picosecond Thermodynamics in a Laser-Produced Plasma Using Thomson Scattering," presented at the 46th European Physical Society Conference on Plasma Physics, Milan, Italy, 8–12 July 2019.

D. H. Froula, "Lessons from Glenzer: Measuring Electron Distribution Functions with Thomson Scattering," presented at the Workshop on High-Energy-Density Physics, Rostock, Germany, 12 July 2019.

M. S. Wei, H. G. Rinderknecht, J. D. Zuegel, J. Bromage, P. M. Nilson, S. X. Hu, D. H. Froula, F. Albert, B. M. Hegelich, M. Roth, and E. M. Campbell, "Frontiers in High-Energy-Density and Relativistic Plasma Physics Enabled by EP-OPAL: A Multibeam Ultrahigh-Intensity Laser User Facility," presented at the First Community Workshop for High Energy, College Park, MD, 16–17 July 2019.

H. G. Rinderknecht, J. D. Zuegel, J. Bromage, M. S. Wei, P. M. Nilson, S. X. Hu, D. H. Froula, F. Albert, B. M. Hegelich, M. Roth, and E. M. Campbell, "Frontiers in High-Energy-Density and Relativistic Plasma Physics Enabled by EP-OPAL: A Multibeam Ultrahigh-Intensity Laser User Facility," presented at the Discovery Plasma Science Community Planning Workshop, Madison, WI, 23–25 July 2019.

The following presentations were made at High-Energy-Density Science Summer School, La Jolla, CA, 28 July–10 August 2019:

A. Kish and A. B. Sefkow, "Preliminary Work Toward an Investigation of Burn-Wave Propagation in Magnetized Cylindrical Targets."

T. T. Simpson, D. H. Froula, J. Vieira, and J. P. Palastro, "Nonlinear Self-Focusing of Flying Focus Pulses."

J. Wilson, V. N. Goncharov, C. Dorrer, A. Shvydky, and J. P. Palastro, "Broadband Smoothing of Laser Pulses for Imprint Reduction in Direct-Drive Inertial Confinement Fusion."

M. S. Wei, "LaserNetUS–OMEGA EP Laser System and Experimental Capability," presented at LaserNetUS, Virtual Meeting, 29 July 2019.

G. W. Collins, "Extreme Matters: Pressure to Explore Planets and Revolutionary Materials," presented at the 27th Interna-

tional Conference on High Pressure Science and Technology (AIRAPT27), Rio de Janeiro, Brazil, 4–9 August 2019.

L. S. Leal, A. V. Maximov, R. Betti, A. B. Sefkow, and V. Ivanov, "*HYDRA* Modeling of Laser-Ablated Plasma in Megagauss Magnetic Fields," presented at the Tenth Workshop on Fundamental Science with Pulsed Power and User Meeting, Albuquerque, NM, 11–14 August 2019.

R. B. Spielman and E. M. Campbell, "OMEGA-Z: A 15-TW Pulsed-Power Facility for High-Energy-Density Physics," presented at the Z Fundamental Science Program Workshop, Albuquerque, NM, 11–14 August 2019.

T. Filkins, J. Katz, and S. T. Ivancic, "Design of an Image-Relay Optical Time-Domain Reflectometer to Measure Fiber-Optic Time Delays at Inertial Confinement Fusion Relevant Wavelengths," presented at SPIE Optical Engineering and Applications, San Diego, CA, 11–15 August 2019.

K. L. Marshall, D. J. Batesky, J. U. Wallace, L. Garrett, T. Z. Kosc, S. Papernov, B. N. Hoffman, and J. Shojaie, "UV-Transmissive Glassy Liquid Crystals Employing Chiral Synthons Based on Natural Products," presented at SPIE Optics and Photonics, Liquid Crystals XXIII, San Diego, CA, 11–15 August 2019 (invited).

The following presentations were made at the International Workshop on Optical Thomson Scattering, Rochester, NY, 13–14 August 2019:

A. S. Davies, J. Katz, S. Bucht, D. Haberberger, J. P. Palastro, J. L. Shaw, D. Turnbull, R. Boni, I. A. Begishev, S.-W. Bahk, J. Bromage, A. Sorce, J. Konzel, R. Cuffney, J. D. Zuegel, D. H. Froula, and W. Rozmus, "Investigation of Electron Plasma Waves and Picosecond Thermodynamics in a Laser-Produced Plasma Using Thomson Scattering."

R. K. Follett, J. A. Delettrez, D. H. Edgell, R. J. Henchen, J. Katz, J. F. Myatt, and D. H. Froula, "Subtleties to Fitting Thomson-Scattering Spectra."

A. M. Hansen, D. Turnbull, J. Katz, A. L. Milder, J. P. Palastro, D. Mastrosimone, and D. H. Froula, "Phase Plates in Thomson-Scattering Experiments."

J. Katz, "Lessons Learned from the Implementation and Operation of the OMEGA Thomson Scattering System."

A. L. Milder, J. Katz, R. Boni, D. Nelson, J. P. Palastro, K. Daub, R. K. Follett, and D. H. Froula, "Measurements of Arbitrary Distribution Functions Using Angularly Resolved Thomson Scattering."

H. G. Rinderknecht, H. S. Park, J. S. Ross, P. A. Amendt, D. P. Higginson, S. C. Wilks, R. K. Follett, D. Haberberger, J. Katz, D. H. Froula, N. M. Hoffman, G. Kagan, B. Keenan, A. Simakov, L. Chacon, and E. Vold, "Imaging Thomson Scattering: Measuring Plasma Conditions in a Strong Shock."

H. G. Rinderknecht, D. H. Froula, S. X. Hu, P. M. Nilson, and J. D. Zuegel, "Frontiers in Physics Enabled by EP-OPAL: A Multibeam Ultra-Intense Laser User Facility," presented at ExHILP 2019, Stanford, CA, 3–6 September 2019.

J. D. Zuegel, "The Brightest Light Initiative (BLI): A Path Forward for Ultra-Intense Ultrafast Lasers in the U.S.," presented at Frontiers in Optics, Washington, DC, 15–19 September 2019.

The following presentations were made at the 41st Tritium Focus Group Meeting, Augusta, GA, 17–19 September 2019:

D. Bassler, "Making an Optimal Hafnium Oxide Film as a Hydrogen Diffusion Barrier."

C. Fagan, M. Sharpe, W. T. Shmayda, and W. U. Schröder, "Distribution of Tritium in the Near Surface of 316 Stainless Steel."

M. Sharpe and W. T. Shmayda, "Measurement of Palladium Hydride Isotherms Between 130 K and 393 K Using Pure H_2, Pure D_2, and HD Mixtures."

The following presentations were made at the U.S.–Japan Workshop on Theory and Simulations of High Energy Density Physics with Extreme Fields, Osaka, Japan, 21–22 September 2019:

D. H. Froula, S.-W. Bahk, I. A. Begishev, R. Boni, J. Bromage, A. Davies, R. K. Follett, D. Haberberger, A. Howard, G. Jenkins, J. Katz, T. J. Kessler, L. Nguyen, J. P. Palastro, D. Ramsey, J. L. Shaw, D. Turnbull, N. Vafaei-Najafabadi, J. Vieira, and F. Quéré, "Flying Focus: Spatiotemporal Control of Intensity for Laser-Based Applications."

H. G. Rinderknecht, M. S. Wei, J. P. Palastro, G. Bruhaug, A. Arefiev, T. Wang, T. Toncian, H. J. Quevedo, T. Ditmire, and J. Williams, "Megatesla Magnetic Fields and Efficient Gamma-Ray Generation Using Microstructured Targets: Preparations for Experiments at TPW."

The following presentations were made at Laser Damage 2019, Boulder, CO, 22–25 September 2019:

B. N. Hoffman, A. A. Kozlov, J. B. Oliver, T. J. Kessler, A. L. Rigatti, S. G. Demos, A. Shestopalov, and N. Liu, "Damage Morphology and Damage-Initiation Mechanisms in Multilayer Dielectric Gratings at Different Pulse Durations."

K. R. P. Kafka, S. G. Demos, and B. N. Hoffman, "Short-Pulse Laser Irradiation of Microparticle Contamination on Reflective Optics."

A. A. Kozlov, D. Canning, B. N. Hoffman, B. E. Kruschwitz, A. L. Rigatti, and L. J. Waxer, "Review of Decade-Long Monitoring Damage Resistance of Multilayer Dielectric Gratings Inside the Vacuum Compressor Chamber on OMEGA EP."

L. Lamaignère, A. Ollé, M. Chorel, N. Roquin, A. A. Kozlov, B. N. Hoffman, J. B. Oliver, L. Gallais, and S. G. Demos, A. Melninkaitis, "Round-Robin Measurements of Optical Monolayer Laser-Induced–Damage Threshold in the Subpicosecond Range."

J. B. Oliver, "Coatings for Large-Aperture Laser Systems."

A. A. Shestopalov, N. Liu, B. N. Hoffman, A. A. Kozlov, and S. G. Demos, "Chemical Composition, Structure Morphology, Contaminant Cleaning and Laser-Induced–Damage Threshold in Coarse Fused-Silica Gratings."

J. U. Wallace, K. L. Marshall, T. Z. Kosc, D. J. Batesky, B. N. Hoffman, S. Papernov, L. Garrett, J. Shojaie, and S. G. Demos, "Laser-Induced–Damage Behavior of Novel Glassy Liquid Crystal Materials at 1 ns and Multiple Wavelengths."

A. Milder, J. Katz, R. Boni, D. Nelson, J. P. Palastro, A. M. Hansen, D. Turnbull, P. Franke, S. T. Ivancic, J. L. Shaw, K. Daub, R. K. Follett, D. H. Froula, H. Le, M. Sherlock, and W. Rozmus, "Novel Techniques and Uses of Collective Thomson Scattering," presented at Laser Aided Plasma Diagnostics 2019, Whitefish, MT, 22–26 September 2019.

The following presentations were made at 11th International Conference on Inertial Fusion Science and Applications, Osaka, Japan, 22–27 September 2019:

A. R. Christopherson, R. Betti, S. Miller, V. Gopalaswamy, D. Cao, and O. M. Mannion, "Theory of Ignition and Burn Propagation in Inertially Confined Plasmas."

D. H. Froula, C. Dorrer, E. M. Hill, J. Bromage, T. J. Kessler, J. D. Zuegel, R. K. Follett, L. Nguyen, A. A. Solodov, J. P. Palastro, D. Turnbull, D. H. Edgell, J. G. Shaw, A. M. Hansen, A. L. Milder, J. Katz, R. Boni, V. N. Goncharov, M. Sherlock, H. Le, D. J. Strozzi, P. Michel, L. Divol, J. F. Myatt, W. Rozmus, J. Bates, A. Schmitt, J. Weaver, A. Colaïtis, L. Yin, and B. Albright, "A Path to an Expanded Inertial Confinement Fusion Design Space Through a Better Understanding and Mitigation of Laser–Plasma Instabilities."

F. García Rubio, R. Betti, and H. Aluie, "The Effect of Self-Generated Magnetic Fields on the Ablative Rayleigh–Taylor Instability Dynamics."

V. N. Goncharov, "Progress Toward the Demonstration of Burning Plasma in the U.S. Inertial Confinement Fusion Program."

V. Gopalaswamy, R. Betti, J. P. Knauer, A. Lees, D. Patel, A. R. Christopherson, K. M. Woo, O. M. Mannion, Z. L. Mohammed, F. J. Marshall, C. Stoeckl, V. Yu. Glebov, S. P. Regan, R. C. Shah, D. H. Edgell, D. Cao, V. N. Goncharov, I. V. Igumenshchev, P. B. Radha, T. J. B. Collins, T. C. Sangster, E. M. Campbell, M. Gatu Johnson, R. D. Petrasso, C. K. Li, and J. A. Frenje, "Statistically Guided Design of Direct-Drive Inertial Confinement Fusion Experiments."

S. X. Hu, R. Epstein, W. Theobald, V. N. Goncharov, S. P. Regan, P. W. McKenty, R. Betti, E. M. Campbell, H. Xu, H. Huang, and D. S. Montgomery, "Direct-Drive Double-Shell (D^3S) Implosion: A Platform for Burning-Plasma Studies."

P. B. Radha, M. J. Rosenberg, A. Shvydky, A. A. Solodov, R. Betti, E. M. Campbell, T. J. B. Collins, R. S. Craxton, V. N. Goncharov, J. A. Marozas, F. J. Marshall, S. P. Regan, T. C. Sangster, and D. Turnbull, "Direct-Drive Physics at the National Ignition Facility."

S. P. Regan, V. N. Goncharov, T. C. Sangster, R. Betti, E. M. Campbell, K. A. Bauer, T. R. Boehly, M. J. Bonino, D. Cao, A. R. Christopherson, G. W. Collins, T. J. B. Collins, R. S. Craxton, D. H. Edgell, R. Epstein, C. J. Forrest, R. K. Follett, D. H. Froula, V. Yu. Glebov, V. Gopalaswamy, D. R. Harding, S. X. Hu, I. V. Igumenshchev, S. T. Ivancic, D. W. Jacobs-Perkins, R. T. Janezic, J. H. Kelly, T. J. Kessler, J. P. Knauer, T. Z. Kosc, O. M. Mannion, J. A. Marozas, F. J. Marshall, P. W. McKenty, Z. L. Mohamed, S. F. B. Morse, P. M. Nilson, J. P. Palastro, D. Patel, J. L. Peebles, P. B. Radha, H. G. Rinderknecht, M. J. Rosenberg, S. Sampat, W. Seka, R. C. Shah, J. R. Rygg, J. G. Shaw, W. T. Shmayda, M. J. Shoup III, A. Shvydky, A. A. Solodov, C. Sorce, C. Stoeckl, W. Theobald, D. Turnbull, J. Ulreich, M. D. Wittman, K. M. Woo, J. D. Zuegel, J. A. Frenje, M. Gatu Johnson, R. D. Petrasso, M. Karasik, S. P. Obenschain, A. J. Schmitt, T. J. Hilsabeck, K. Englehorn, J. D. Kilkenny, J. D. Hares, A. K. L. Dymoke-Bradshaw, P. Bell, A. Carpenter, D. K. Bradley, S. Nagel, G. Rochau, and L. Claus, "Multidimensional Effects on Hot-Spot Formation in OMEGA DT Cryogenic Implosions."

H. Rinderknecht, C. J. Forrest, J. P. Knauer, W. Theobald, S. P. Regan, R. Simpson, and J. A. Frenje, "Knock-On Deuteron Imaging to Diagnose Hot-Spot Fuel and ρR Symmetry in Directly Driven Inertial Confinement Fusion Implosions."

M. Zaghoo, T. R. Boehly, J. R. Rygg, P. M. Celliers, S. X. Hu, and G. W. Collins, "Breakdown of Fermi Degeneracy in Shocked Deuterium."

J. D. Zuegel, "Laboratory for Laser Energetics," presented at the Visit of the Honorable Carl Heastie, Speaker of the NYS Assembly, Rochester, NY, 23 September 2019.

M. S. Wei, "Opportunities for U.S.–ELI Collaborations: Laboratory for Laser Energetics Perspective," presented at the U.S.–ELI Joint Workshop, Washington, DC, 25 September 2019.

R. Betti, "Status and Prospects for Nuclear Fusion with Lasers," presented at FisMat 2019, Catania, Italy, 30 September–4 October 2019 (invited).