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## Publications and Conference Presentations

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### Publications

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### OMEGA External Users’ Publications

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## Conference Presentations

The following presentations were made at the SLAC High-Power Laser Workshop, Menlo Park, CA, 1–2 October 2013:

D. H. Froula, “Direct-Drive Fusion and High-Energy-Density Research at the Laboratory for Laser Energetics.”

R. J. Henchen, R. K. Follett, D. H. Edgell, V. N. Goncharov, J. S. Ross, J. Katz, C. Sorce, and D. H. Froula, “Collective Ultraviolet Thomson Scattering from High-Power Laser-Produced Plasmas.”

P. W. McKenty, “Current Status of NIF Polar-Drive–Ignition Designs,” ICF Burning Plasma Platforms, Livermore, CA, 2–3 October 2013.

R. Epstein, S. P. Regan, B. A. Hammel, L. J. Suter, H. A. Scott, M. A. Barrios, D. K. Bradley, D. A. Callahan, C. Cerjan, G. W. Collins, S. N. Dixit, T. Döppner, M. J. Edwards, D. R. Farley, K. B. Fournier, S. Glenn, S. H. Glenzer, I. E. Golovkin, A. Hamza, D. G. Hicks, N. Izumi, O. S. Jones, M. H. Key, J. D. Kilkenny, J. L. Kline, G. A. Kyrala, O. L. Landen, T. Ma, J. J. MacFarlane, A. J. Mackinnon, R. C. Mancini, R. L. McCrory,

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S. Salzman, H. J. Romanofsky, Y. I. Clara, L. J. Giannechini, G. West, J. C. Lambropoulos, and S. D. Jacobs, “Magneto-rheological Finishing with Chemically Modified Fluids for Studying Material Removal of Single Crystal ZnS,” Optifab 2013, Rochester, NY, 14–17 October 2013.

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J. Bromage, R. G. Roides, S.-W. Bahk, J. B. Oliver, C. Mileham, C. Dorrer, and J. D. Zuegel, “Noncollinear Optical Parametric Amplifiers for Ultra-Intense Lasers.”

D. D. Meyerhofer, “The University of Rochester is a Pioneer in Laser Fusion.”

W. T. Shmayda and N. Redden, “New Tritium Facilities at the University of Rochester’s Laboratory for Laser Energetics,” 10th International Conference on Tritium Science and Technology, Nice, France, 21–25 October 2013.

The following presentations were made at the 55th Annual Meeting of the APS Division of Plasma Physics, Denver, CO, 11–15 November 2013:

K. S. Anderson, P. W. McKenty, T. J. B. Collins, J. A. Marozas, and R. Betti, “An Implosion-Velocity Survey for Shock Ignition on the NIF.”

D. H. Barnak, P.-Y. Chang, G. Fiksel, R. Betti, and C. Taylor, “Increasing the Magnetic-Field Capability of MIFEDS Using an Inductively Coupled Coil.”

R. Betti, K. S. Anderson, M. Lafon, R. Nora, W. Theobald, J. A. Delettrez, A. Solodov, J. R. Davies, C. Stoeckl, R. Yan, J. Li, and C. Ren, “Electron Shock Ignition.”

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- B. R. Talbot, V. V. Ivanov, I. A. Begishev, A. L. Astanovitskiy, V. Nalajala, and O. Dmitriev, "Development of the Diagnostic Laser for Deep UV Probing of the Dense Z-Pinch."
- W. Theobald, R. Nora, M. Lafon, K. S. Anderson, J. R. Davies, M. Hohenberger, T. C. Sangster, W. Seka, A. A. Solodov, C. Stoeckl, B. Yaakobi, R. Betti, A. Casner, C. Reverdin, X. Ribeyre, and A. Vallet, "Demonstration of 200-Mbar Ablation Pressure for Shock Ignition."

H. Wen, A. V. Maximov, R. Yan, C. Ren, J. F. Myatt, and W. B. Mori, “Three-Dimensional Modeling of the Two-Plasmon–Decay Instability and Stimulated Raman Scattering Near the Quarter-Critical Density in Plasmas.”

J. Zhang, J. F. Myatt, R. W. Short, A. V. Maximov, H. X. Vu, D. A. Russell, and D. F. DuBois, “Two-Plasmon Decay Driven by Multiple Incoherent Laser Beams.”

D. R. Harding, H. Goodrich, A. Caveglia, and M. Anthamatten, “Properties and Fracture Behavior of Nanoliter Size Volumes of Acrylate Adhesives at Cryogenic Temperatures,” 2013 Materials Research Society Fall Meeting, Boston, MA, 1–6 December 2013.

The following presentations were made at the Fusion Power Associates 34th Annual Meeting, Washington, DC, 11 December 2013:

R. Betti and D. D. Meyerhofer, “Near-Term Issues for Inertial Confinement Fusion.”

R. L. McCrory, “Perspectives on Inertial Fusion Energy.”

A. V. Okishev, “Abnormal Beam-Profile Behavior in a Nd:YAG Ceramic Regenerative Amplifier,” Photonics West, San Francisco, CA, 1–6 February 2014.

D. H. Barnak, G. Fiksel, H. Chen, P.-Y. Chang, and D. D. Meyerhofer, “Positron Focusing Using Externally Applied Axially Symmetric Magnetic Fields,” NIF and JLF User Group Meeting, Livermore, CA, 9–12 February 2014.

T. Jacobs, M. Mayton, Z. Hobbs, and S. D. Jacobs, “Process Improvements and Future Work for Flint Creek Resources’ Cerium Oxide Reclamation Project,” The Institute of Optics Industrial Associates Meeting, Rochester, NY, 3 March 2014.

C. Stoeckl, R. Epstein, G. Fiksel, D. Guy, V. N. Goncharov, D. W. Jacobs-Perkins, R. K. Junquist, C. Mileham, P. M. Nilson, T. C. Sangster, M. J. Shoup III, and W. Theobald, “Soft X-Ray Backlighting of Cryogenic Implosions Using a Narrowband Crystal Imaging System,” COST LMJ Meeting, Bordeaux, France, 5–7 March 2014.

T. Jacobs, M. Mayton, Z. Hobbs, and S. D. Jacobs, “Cerium Oxide Polishing Slurry Reclamation: Process Improvements at Flint Creek Resources and Sydor Optics,” CEIS 14th Annual University Technology Showcase, Rochester, NY, 10 April 2014.

W. T. Shmayda, M. D. Wittman, J. Reid, N. Redden, R. Early, J. Magoon, K. Heung, S. Xiao, T. Sessions, and S. Redd, “Initial Operation of the  $\mu$ TCAP Using  $H_2$  and  $D_2$ ,” Tritium Focus Group, Aiken, SC, 22–24 April 2014.

The following presentations were made at the Sixth Omega Laser Facility Users Group Workshop, Rochester, NY, 23–25 April 2014:

W. J. Armstrong, J. Puth, and R. Rombaut, “Target Diagnostic Timing Manager (TDTM).”

A. Bose, K. Woo, R. Nora, and R. Betti, “Hydrodynamic Scaling of the Deceleration Phase from OMEGA to NIF Implosions.”

A. Christopherson, R. Betti, R. Epstein, F. J. Marshall, R. Nora, P. B. Radha, C. Stoeckl, J. A. Delettrez, and C. J. Forrest, “Comprehensive Analysis of a High Adiabatic Implosion on OMEGA.”

V. N. Goncharov, T. C. Sangster, R. Betti, T. R. Boehly, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, D. H. Edgell, R. Epstein, C. J. Forrest, D. H. Froula, V. Yu. Glebov, D. R. Harding, S. X. Hu, I. V. Igumenshchev, R. Janezic, J. H. Kelly, T. J. Kessler, T. Z. Kosc, S. J. Loucks, J. A. Marozas, F. J. Marshall, A. V. Maximov, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, D. T. Michel, J. F. Myatt, R. Nora, P. B. Radha, S. P. Regan, W. Seka, W. T. Shmayda, R. W. Short, A. Shvydky, S. Skupsky, C. Sorce, C. Stoeckl, B. Yaakobi, J. A. Frenje, M. Gatu Johnson, R. D. Petrasso, and D. T. Casey, “Demonstrating Ignition Hydrodynamic Equivalence in Cryogenic DT Implosions on OMEGA.”

S. Goodman, W. T. Shmayda, and N. Redden, "Evaluation of a Compact Cryotrap."

M. C. Gregor, R. Boni, A. Sorce, C. A. McCoy, M. Millot, J. H. Eggert, P. M. Celliers, T. R. Boehly, and D. D. Meyerhofer, "The Absolute Calibration of the Streaked Optical Pyrometer at the Omega Laser Facility."

D. Haberberger, R. Boni, M. Barczys, J. Brown, R. Huff, S. X. Hu, S. Ivancic, R. G. Roides, M. Bedzyk, R. S. Craxton, F. Ehrne, C. Stoeckl, E. Hill, R. K. Jungquist, J. Magoon, D. Mastrosimone, J. Puth, W. Seka, M. J. Shoup III, W. Theobald, D. Weiner, J. D. Zuegel, D. H. Froula, J. Moody, D. Turnbull, B. Pollock, S. Ross, and A. Harvey-Thompson, "Optical Probing Measurements on OMEGA EP."

R. A. Hamilton, W. T. Shmayda, and N. Redden, "X-Ray Emission from DT-Filled Targets."

E. Hill, G. Balonek, R. Cuffney, J. H. Kelly, and T. Z. Kosc, "OMEGA SSD Arbitrary Waveform Generation Installation and Activation."

E. Hwang, R. Boni, and W. R. Donaldson, "Testing of the OMEGA Beam-Timing System."

R. W. Kidder and C. Kingsley, "LLE Resources are Established to Provide Access to Information for External Users."

Y. Kong, R. S. Craxton, P. W. McKenty, and C.-K. Li, "Beam-Pointing Optimization for Proton Backlighting at the National Ignition Facility."

B. E. Kruschwitz, A. Kalb, J. Kwiatkowski, and T. Nguyen, "Co-Propagation of Short-Pulse Beams on OMEGA EP."

J. Kwiatkowski, E. Hill, B. Ehrich, M. Heimbueger, and F. J. Marshall, "OMEGA EP Pointing, Focusing, and Timing."

D. Mastrosimone, G. Fiksel, J. Magoon, A. Agliata, P.-Y. Chang, and D. Barnak, "Fielding MIFEDS on OMEGA."

S. F. B. Morse, "Omega Facility Update: OLUG Recommendations and Items of General Interest."

G. Pien, W. J. Armstrong, and M. Labuzeta, "Diagnostic Effectiveness and Availability at the Omega Laser Facility."

C. Sorce, A. Sorce, J. Katz, R. E. Bahr, and P. M. Nilson, "Omega Laser Facility Diagnostic Highlights."

M. D. Wittman, N. Redden, J. Reid, and W. T. Shmayda, "Initial Operation of the Isotope Separation System Using Protium and Deuterium."

The following presentations were made at the Cryo Workshop, Rochester, NY, 29–30 April 2014:

D. H. Froula, A. K. Davis, D. H. Edgell, G. Fiksel, R. K. Follett, V. N. Goncharov, R. J. Henchen, H. Hu, S. X. Hu, I. V. Igumenshchev, T. J. Kessler, D. D. Meyerhofer, D. T. Michel, J. F. Myatt, P. B. Radha, T. C. Sangster, C. Stoeckl, and B. Yaakobi, "Mitigation of Cross-Beam Energy Transfer in Direct-Drive Implosions on OMEGA."

V. N. Goncharov, T. C. Sangster, R. Betti, T. R. Boehly, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, D. H. Edgell, R. Epstein, C. J. Forrest, D. H. Froula, V. Yu. Glebov, D. R. Harding, S. X. Hu, I. V. Igumenshchev, R. Janezic, J. H. Kelly, T. J. Kessler, T. Z. Kosc, S. J. Loucks, J. A. Marozas, F. J. Marshall, A. V. Maximov, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, D. T. Michel, J. F. Myatt, R. Nora, P. B. Radha, S. P. Regan, W. Seka, W. T. Shmayda, R. W. Short, A. Shvydky, S. Skupsky, C. Sorce, C. Stoeckl, B. Yaakobi, J. A. Frenje, M. Gatu Johnson, R. D. Petrasso, and D. T. Casey, "Demonstrating Ignition Hydrodynamic Equivalence in Cryogenic DT Implosions on OMEGA."

R. L. McCrory, "Direct-Drive Cryogenic Implosion Workshop: Goals and Charge."

P. W. McKenty, "Hydrodynamic Modeling in 2-D and 3-D: Plans and Challenges."

J. F. Myatt, D. F. DuBois, H. X. Vu, and D. A. Russell, "Hot-Electron Production and Preheat at the Omega Laser Facility."

T. C. Sangster, V. N. Goncharov, R. Betti, T. R. Boehly, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, D. H. Edgell, R. Epstein, C. J. Forrest, D. H. Froula, V. Yu. Glebov, D. R. Harding, M. Hohenberger, S. X. Hu, I. V. Igumenshchev, R. T. Janezic, J. H. Kelly, T. J. Kessler, J. P. Knauer, T. Z. Kosc, S. J. Loucks, J. A. Marozas, F. J. Marshall, A. V. Maximov, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, D. T. Michel, J. F. Myatt,

P. B. Radha, S. P. Regan, W. Seka, W. T. Shmayda, R. W. Short, A. Shvydky, S. Skupsky, C. Sorce, C. Stoeckl, B. Yaakobi, J. A. Frenje, M. Gatu Johnson, R. D. Petrasso, A. Nikroo, and M. Farrell, “Overview of Cryogenic Target Experiments.”

J. B. Oliver, T. J. Kessler, B. Charles, and C. Smith, “Fabrication of a Continuous-Enfolded Grating by Ion-Beam-Sputter Deposition,” SVC Techcon 2014, Chicago, IL, 3–8 May 2014.

R. Betti, “Status and Prospects for High-Energy-Density Science on High-Power Lasers in the U.S.,” International Symposium on Status and Prospects of High Energy Density Science by Giant Lasers, Tokyo, Japan, 1–4 June 2014.

The following presentations were made at the 20th High-Temperature Plasma Diagnostics, Atlanta, GA, 1–5 June 2014:

P.-Y. Chang, A. Agliata, D. H. Barnak, R. Betti, G. Fiksel, D. Hassett, D. J. Lonobile, J. Magoon, M. J. Shoup III, and C. S. Taylor, “Magnetized High-Energy-Density-Physics Platform on OMEGA.”

A. Davies, R. Boni, S. Ivancic, R. Brown, D. H. Froula, D. Haberberger, J. D. Moody, B. Pollock, S. Ross, and D. Turnbull, “Polarimetry Diagnostic on OMEGA EP Using a 10-ps, 263-nm Probe Beam.”

A. K. Davis, D. T. Michel, S. X. Hu, R. S. Craxton, R. Epstein, V. N. Goncharov, I. V. Igumenshchev, T. C. Sangster, and D. H. Froula, “Mass Ablation Rate Measurements in Direct-Drive Cryogenic Implosions Using X-Ray Self-Emission Images.”

V. Yu. Glebov, C. J. Forrest, K. L. Marshall, M. Romanofsky, T. C. Sangster, M. J. Shoup III, and C. Stoeckl, “A New Neutron Time-of-Flight Detector for Fuel Areal-Density Measurements on OMEGA.”

M. C. Gregor, R. Boni, A. Sorce, C. A. McCoy, T. R. Boehly, D. D. Meyerhofer, M. Millot, J. H. Eggert, and P. M. Celliers, “The Absolute Calibration of the OMEGA Streaked Optical Pyrometer at the Omega Laser Facility.”

M. Hohenberger, F. Albert, N. E. Palmer, J. J. Lee, T. Döppner, L. Divol, E. L. Dewald, B. Bachmann, A. G. MacPhee, G. LaCaille, D. K. Bradley, and C. Stoeckl, “Time-Resolved Measurements of the Hot-Electron Population in Ignition-Scale Experiments on the National Ignition Facility” (invited).

F. J. Marshall and P. B. Radha, “Masked Backlighter Technique Used to Simultaneously Image X-Ray Absorption and X-Ray Emission from an ICF Plasma.”

C. Stoeckl, M. Bedzyk, G. Brent, R. Epstein, G. Fiksel, D. Guy, V. N. Goncharov, S. X. Hu, S. Ingraham, D. W. Jacobs-Perkins, R. K. Jungquist, F. J. Marshall, C. Mileham, P. M. Nilson, T. C. Sangster, M. J. Shoup III, and W. Theobald, “Soft X-Ray Backlighting of Cryogenic Implosions Using a Narrowband Crystal Imaging System” (invited).

S. X. Hu, “Attosecond Control of Photoabsorption Through Manipulating the Electron–Electron Correlation,” 45th Annual DAMOP Meeting, Madison, WI, 2–6 June 2014.

The following presentations were made at CLEO 2014, San Jose, CA, 8–13 June 2014:

S.-W. Bahk, J. Bromage, and J. D. Zuegel, “A Linear Phase-Conjugation Imaging (LPCI) System.”

J. Bromage and C. Dorrer, “Pump-to-Signal Spatial Modulation Transfer in Noncollinear Optical Parametric Amplifiers.”

J. Bromage, R. G. Roides, S.-W. Bahk, C. Mileham, L. E. McIntire, C. Dorrer, and J. D. Zuegel, “A White-Light-Seeded Front End for Ultra-Intense Optical Parametric Chirped-Pulse Amplification.”

C. Dorrer, “Spectral and Temporal Properties of Optical Signals with Multiple Sinusoidal Phase Modulations.”

C. Dorrer, R. G. Roides, J. Bromage, and J. D. Zuegel, “Self-Phase Modulation Compensation in a Regenerative Amplifier Using Cascaded Second-Order Nonlinearities.”

J. D. Zuegel, J. Bromage, S.-W. Bahk, I. A. Begishev, J. Bunkenburg, T. Conley, C. Dorrer, D. H. Froula, H. Huang, R. K. Jungquist, C. Kellogg, T. J. Kessler, E. Kowaluk, M. Millecchia, S. F. B. Morse, A. V. Okishev, J. B. Oliver, T. Petersen, and J. Qiao, “Status of High-Energy OPCPA at LLE and Future Prospects” (invited).

The following presentations were made at the 44th Annual Anomalous Absorption Conference, Estes Park, CO, 8–13 June 2014.

K. S. Anderson, P. W. McKenty, T. J. B. Collins, J. A. Marozas, M. Lafon, and R. Betti, “An Implosion-Velocity Survey for Shock Ignition at the National Ignition Facility.”

D. H. Edgell, V. N. Goncharov, I. V. Igumenshchev, D. T. Michel, J. F. Myatt, and D. H. Froula, “Two-Plasmon–Decay Scaling for Improved-Performance Cryogenic Implosion Strategies.”

R. K. Follett, D. H. Edgell, R. J. Henchen, S. X. Hu, D. T. Michel, J. F. Myatt, H. Wen, and D. H. Froula, “Observation of Two-Plasmon–Decay Common Plasma Waves Using Ultra-violet Thomson Scattering.”

D. H. Froula, T. J. Kessler, G. Fiksel, I. V. Igumenshchev, V. N. Goncharov, H. Huang, S. X. Hu, J. H. Kelly, D. T. Michel, and A. Shvydky, “Mitigation of Cross-Beam Energy Transfer in Direct-Drive Implosions on OMEGA.”

J. A. Marozas, T. J. B. Collins, J. D. Zuegel, P. B. Radha, F. J. Marshall, and W. Seka, “Cross-Beam Energy Transfer Mitigation Strategy for NIF Polar Drive.”

J. F. Myatt, J. Shaw, J. Zhang, A. V. Maximov, R. W. Short, W. Seka, D. H. Edgell, D. H. Froula, D. F. DuBois, D. A. Russell, and H. X. Vu, “A Numerical Investigation of Two-Plasmon–Decay Localization in 60-Beam Spherical Implosion Experiments on OMEGA.”

S. P. Regan, R. Epstein, B. A. Hammel, L. J. Suter, H. A. Scott, M. A. Barrios, D. K. Bradley, D. A. Callahan, C. Cerjan, G. W. Collins, T. Dittrich, S. N. Dixit, T. Doepfner, M. J. Edwards, K. B. Fournier, S. Glenn, S. H. Glenzer, I. E. Golovkin, S. W. Haan, A. Hamza, D. Hinkel, H. Huang, O. A. Hurricane, C. A. Iglesias, N. Izumi, J. Jaquez, O. S. Jones, J. D. Kilkenny, J. L.

Kline, G. A. Kyrala, O. L. Landen, T. Ma, J. J. MacFarlane, A. J. Mackinnon, R. C. Mancini, R. L. McCrory, N. B. Meezan, D. D. Meyerhofer, A. Nikroo, A. Pak, H. S. Park, P. K. Patel, J. Ralph, B. A. Remington, T. C. Sangster, V. A. Smalyuk, P. T. Springer, R. P. J. Town, and B. G. Wilson, “X-Ray Spectroscopy of Implosions at the National Ignition Facility” (invited).

W. Seka, J. F. Myatt, J. Zhang, R. W. Short, J. A. Delettrez, D. H. Froula, D. T. Michel, A. V. Maximov, V. N. Goncharov, and I. V. Igumenshchev, “Multibeam Interaction Processes Relevant to Direct-Drive Inertial Confinement Fusion.”

R. W. Short, J. F. Myatt, J. Zhang, and W. Seka, “Absolute and Convective Two-Plasmon Decay Driven by Multiple Laser Beams.”

A. A. Solodov, W. Theobald, K. S. Anderson, A. Shvydky, R. Epstein, P. M. Nilson, R. Betti, J. F. Myatt, C. Stoeckl, L. C. Jarrott, C. McGuffey, B. Qiao, F. N. Beg, M. S. Wei, and R. B. Stephens, “Simulations of Integrated Fast-Ignition Experiments on OMEGA.”

W. Theobald, R. Nora, M. Lafon, K. S. Anderson, A. Casner, M. Hohenberger, F. J. Marshall, D. T. Michel, C. Reverdin, X. Ribeyre, T. C. Sangster, W. Seka, A. A. Solodov, C. Stoeckl, A. Vallet, J. Peebles, M. S. Wei, B. Yaakobi, and R. Betti, “Strong-Shock Generation and Laser–Plasma Interactions for Shock-Ignition Inertial Fusion” (invited).

R. Yan, J. Li, and C. Ren, “Intermittent Laser–Plasma Interactions and Hot-Electron Generation in Shock Ignition.”

The following presentations were made at Research at High Pressure, Biddeford, ME, 22–27 June 2014:

M. C. Gregor, C. A. McCoy, T. R. Boehly, D. E. Fratanduono, and P. M. Celliers, “The Release Behavior of High-Density Carbon.”

C. A. McCoy, M. C. Gregor, T. R. Boehly, D. E. Fratanduono, and P. M. Celliers, “Sound-Speed Measurements with Non-Steady Wave Correction.”

D. T. Michel, R. S. Craxton, A. K. Davis, R. Epstein, V. Yu. Glebov, V. N. Goncharov, S. X. Hu, I. V. Igumenshchev, D. D. Meyerhofer, P. B. Radha, T. C. Sangster, W. Seka, C. Stoeckl, and D. H. Froula, “Implosion Dynamics in Direct-Drive Experiments,” 41st EPS Conference on Plasma Physics, Berlin, Germany, 23–27 June 2014 (invited).

K. S. Anderson, “A Conceptual Summary of Basic Mathematics in Laser Fusion,” Toyota-RIT Applied Math Initiative, Rochester, NY, 30 June–3 July 2014.

D. H. Froula, J. F. Myatt, A. Shvydky, S. H. Glenzer, L. Divol, O. L. Landen, O. S. Jones, C. H. Still, S. Langer, A. J. Mackinnon, J. S. Ross, B. B. Pollock, M. J. Edwards, R. P. J. Town, L. J. Suter, G. R. Tynan, and G. Gregori, “Effects of Thermal Transport and Laser-Beam Smoothing on Beam Propagation Through Long-Scale-Length Plasmas,” Fundamental Science with Pulsed Power Workshop, Albuquerque, NM, 20–23 July 2014.

The following presentations were made at Turbulent Mixing and Beyond, Trieste, Italy, 4–9 August 2014:

I. V. Igumenshchev, L. Gao, and P. M. Nilson, “Self-Generated Magnetic Fields in Rayleigh–Taylor Unstable Laser-Produced Plasma.”

S. P. Regan, R. Epstein, R. L. McCrory, D. D. Meyerhofer, T. C. Sangster, B. A. Hammel, L. J. Suter, H. A. Scott, M. A. Barrios, D. K. Bradley, D. A. Callahan, C. Cerjan, G. W. Collins, T. Dittrich, S. N. Dixit, T. Doepfner, M. J. Edwards, K. B. Fournier, S. Glenn, S. W. Haan, A. Hamza, D. E. Hinkel, O. A. Hurricane, C. A. Iglesias, N. Izumi, O. S. Jones, O. L. Landen, T. Ma, A. J. Mackinnon, N. B. Meezan, A. Pak, H.-S. Park, P. K. Patel, J. Ralph, B. A. Remington, V. A. Smalyuk, P. T. Springer, R. P. J. Town, B. G. Wilson, S. H. Glenzer, I. E. Golovkin, J. J. MacFarlane, H. Huang, J. Jaquez, J. D. Kilkenny, A. Nikroo, J. L. Kline, G. A. Kyrala, and R. C. Mancini, “Diagnosing Hot-Spot Mix with X-Ray Spectroscopy.”

The following presentations were made at Optics and Photonics, San Diego, CA, 17–21 August 2014:

K. L. Marshall, O. Didovets, and D. Saulnier, “Contact-Angle Measurements as a Means of Probing the Surface Alignment Characteristics of Liquid Crystal Materials on Photoalignment Layers.”

S. P. Regan, M. Bedzyk, M. J. Shoup III, R. K. Jungquist, C. Abbott, A. Agliata, F. J. Marshall, R. A. Hamilton, B. Yaakobi, C. Sorce, R. E. Bahr, N. Whiting, E. Kowaluk, J. M. Schoen, W. Byrne, P. Mittermeyer, A. L. Rigatti, J. Hettrick, K. L. Marshall, T. Lewis, T. Clark, S. Lombardo, R. Callari, R. Fellows, S. Gross, C. DeBottis, S. Ross, G. Pien, J. DeWandel, T. C. Sangster, D. D. Meyerhofer, R. Epstein, J. Magoon, B. Staerker, J. Rodas, J. Church, M. Callahan, J. Kendrick, H. Beck, M. Schleigh, B. Ruth, T. Davlin, D. Neyland, D. Walker, S. Dent, C. Lucas, M. Rowland, S. Stagnitto, D. Mastrosimone, W. J. Armstrong, M. Labuzeta, T. Klingenberg, C. Kingsley, M. J. Bonino, J. Fooks, D. R. Harding, S. F. B. Morse, R. L. McCrory, K. B. Fournier, M. A. Barrios, H. Chen, F. Perez, S. Ayers, N. Izumi, A. G. MacPhee, P. Bell, J. D. Kilkenny, D. K. Bradley, J. Emig, B. Ehrlich, D. H. Kalantar, R. Wood, C. Bailey, G. E. Kemp, J. Pino, D. Larson, J. Celeste, B. W. Hatch, J. Jaquez, M. Farrell, A. Nikroo, C. Shipbaugh, S. C. Wilks, and A. Dalton, “Streaked X-Ray Spectrometer for the National Ignition Facility.”

C. M. Sorce, R. Boni, S. Ingraham, C. Mileham, A. Sorce, and P. Jaanimagi, “Streak Camera Usage at the Laboratory for Laser Energetics: Past, Present, and Future,” Streak Camera Workshop, Albuquerque, NM, 26–27 August 2014.

The following presentations were made at Laser Damage 2014, Boulder, CO, 14–17 September 2014:

K. Mikami, S. Papernov, S. Motokoshi, S. D. Jacobs, and T. Jitsuno, “Detection of the Laser-Damage Onset in Optical Coatings by the Photothermal-Deflection Method.”

J. B. Oliver, J. Bromage, C. Smith, and D. Sadowski, “Large-Aperture Plasma-Ion-Assisted Coatings for Femtosecond-Pulsed Laser Systems” (invited).

J. B. Oliver, T. J. Kessler, S. Papernov, C. Smith, B. Taylor, V. Gruschow, J. Hettrick, and B. Charles, “Electron-Beam-Deposited Distributed-Polarization Rotator for High-Power Laser Applications.”

S. Papernov, A. A. Kozlov, and J. B. Oliver, “Interface Absorption Versus Film Absorption in  $\text{HfO}_2/\text{SiO}_2$  Thin-Film Pairs in the Near-Ultraviolet and Relation to Pulsed-Laser Damage.”

A. A. Solodov, W. Theobald, K. S. Anderson, A. Shvydky, C. Stoeckl, R. Epstein, G. Fiksel, V. Yu. Glebov, S. Ivancic, F. J. Marshall, G. McKiernan, C. Mileham, P. M. Nilson, T. C. Sangster, L. C. Jarrott, C. McGuffey, B. Qiao, F. N. Beg, E. Giraldez, R. B. Stephens, M. S. Wei, H. Habara, K. Tanaka, H. McLean, H. Sawada, and J. Santos, “Hydrodynamics of Cone-in-Shell Implosions on OMEGA,” 13th International Fast Ignition Workshop, Oxford, UK, 14–18 September 2014.