Publications and Conference Presentations

Publications

R. Betti, A. R. Christopherson, B. K. Spears, R. Nora, A. Bose, J. Howard, K. M. Woo, M. J. Edwards, and J. Sanz, "Alpha Heating and Burning Plasmas in Inertial Confinement Fusion," Phys. Rev. Lett. **114**, 255003 (2015).

A. Bose, K. M. Woo, R. Nora, and R. Betti, "Hydrodynamic Scaling of the Deceleration-Phase Rayleigh–Taylor Instability," Phys. Plasmas **22**, 072702 (2015).

L. Gao, P. M. Nilson, I. V. Igumenshchev, M. G. Haines, D. H. Froula, R. Betti, and D. D. Meyerhofer, "Precision Mapping of Laser-Driven Magnetic Fields and Their Evolution in High-Energy-Density Plasmas," Phys. Rev. Lett. **114**, 215003 (2015).

H. Habara, S. Ivancic, K. Anderson, D. Haberberger, T. Iwawaki, C. Stoeckl, K. A. Tanaka, Y. Uematsu, and W. Theobald, "Efficient Propagation of Ultra-Intense Laser Beam in Dense Plasma," Plasma Phys. Control. Fusion **57**, 064005 (2015).

M. Hohenberger, P. B. Radha, J. F. Myatt, S. LePape, J. A. Marozas, F. J. Marshall, D. T. Michel, S. P. Regan, W. Seka, A. Shvydky, T. C. Sangster, J. W. Bates, R. Betti, T. R. Boehly, M. J. Bonino, D. T. Casey, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, D. H. Edgell, R. Epstein, G. Fiksel, P. Fitzsimmons, J. A. Frenje, D. H. Froula, V. N. Goncharov, D. R. Harding, D. H. Kalantar, M. Karasik, T. J. Kessler, J. D. Kilkenny, J. P. Knauer, C. Kurz, M. Lafon, K. N. LaFortune, B. J. MacGowan, A. J. Mackinnon, A. G. MacPhee, R. L. McCrory, P. W. McKenty, J. F. Meeker, D. D. Meyerhofer, S. R. Nagel, A. Nikroo, S. Obenschain, R. D. Petrasso, J. E. Ralph, H. G. Rinderknecht, M. J. Rosenberg, A. J. Schmitt, R. J. Wallace, J. Weaver, C. Widmayer, S. Skupsky, A. A. Solodov, C. Stoeckl, B. Yaakobi, and J. D. Zuegel, "Polar-Direct-Drive Experiments on the National Ignition Facility," Phys. Plasmas **22**, 056308 (2015) (invited).

S. X. Hu, V. N. Goncharov, T. R. Boehly, R. L. McCrory, S. Skupsky, L. A. Collins, J. D. Kress, and B. Militzer, "Impact of First-Principles Properties of Deuterium–Tritium on Inertial Confinement Fusion Target Designs," Phys. Plasmas **22**, 056304 (2015) (invited).

S. Ivancic, D. Haberberger, H. Habara, T. Iwawaki, K. S. Anderson, R. S. Craxton, D. H. Froula, D. D. Meyerhofer, C. Stoeckl, K. A. Tanaka, and W. Theobald, "Channeling of Multikilojoule High-Intensity Laser Beams in an Inhomogeneous Plasma," Phys. Rev. E **91**, 051101(R) (2015).

A. Klimov, R. Puźniak, B. Aichner, W. Lang, E. Joon, R. Stern, W. Słysz, M. Guziewicz, M. Juchniewicz, M. A. Borysiewicz, R. Kruszka, M. Węgrzecki, A. Łaszcz, A. Czerwinski, and R. Sobolewski, "Superconducting and Ferromagnetic Properties of NbN/NiCu and NbTiN/NiCu Bilayer Nanostructures for Photon Detection," in *Photon Counting Applications 2015*, edited by I. Prochazka, R. Sobolewski, and R. B. James (SPIE, Bellingham, WA, 2015), Vol. 9504, Paper 950405.

T. Z. Kosc, J. H. Kelly, E. M. Hill, C. Dorrer, L. J. Waxer, and W. R. Donaldson, "The Multiple-Pulse Driver Line on the OMEGA Laser," in *High Power Lasers for Fusion Research III*, edited by A. A. S. Awwal and M. A. Lane (SPIE, Bellingham, WA, 2015), Vol. 9345, Paper 93450H.

D. T. Michel, A. K. Davis, W. J. Armstrong, R. E. Bahr, R. Epstein, V. N. Goncharov, M. Hohenberger, I. V. Igumenshchev, R. K. Jungquist, D. D. Meyerhofer, P. B. Radha, T. C. Sangster, C. Sorce, and D. H. Froula, "Measurements of the Ablation-Front Trajectory and Low-Mode Nonuniformity in Direct-Drive Implosions Using X-Ray Self-Emission Shadowgraphy," High Power Laser Science and Engineering **3**, e19 (2015).

U. Nasti, L. Parlato, M. Ejrnaes, R. Cristiano, T. Taino, H. Myoren, R. Sobolewski, and G. Pepe, "Thermal Fluctuations in Superconductor/Ferromagnet Nanostripes," Phys. Rev. B **92**, 014501 (2015).

P. M. Nilson, L. Gao, I. V. Igumenshchev, G. Fiksel, R. Yan, J. R. Davies, D. Martinez, V. A. Smalyuk, M. G.

Haines, E. G. Blackman, D. H. Froula, R. Betti, and D. D. Meyerhofer, "Magnetic-Field Generation by the Ablative Nonlinear Rayleigh–Taylor Instability," J. Plasma Phys. **81**, 365810201 (2015).

H.-S. Park, C. M. Huntington, F. Fiuza, R. P. Drake, D. H. Froula, G. Gregori, M. Koenig, N. L. Kugland, C. C. Kuranz, D. Q. Lamb, M. C. Levy, C. K. Li, J. Meinecke, T. Morita, R. D. Petrasso, B. B. Pollock, B. A. Remington, H. G. Rinderknecht, M. Rosenberg, J. S. Ross, D. D. Ryutov, Y. Sakawa, A. Spitkovsky, H. Takabe, D. P. Turnbull, P. Tzeferacos, S. V. Weber, and A. B. Zylstra, "Collisionless Shock Experiments with Lasers and Observation of Weibel Instabilties," Phys. Plasmas **22**, 056311 (2015).

L. Parlato, U. Nasti, M. Ejrnaes, R. Cristiano, H. Myoren, R. Sobolewski, and G. Pepe, "Dark Counts in Superconducting Single-Photon NbN/NiCu Detectors," in *Photon Counting Applications 2015*, edited by I. Prochazka, R. Sobolewski, and R. B. James (SPIE, Bellingham, WA, 2015), Vol. 9504, Paper 950404.

G. P. Pepe, L. Parlato, M. Ejrnaes, R. Cristiano, R. Arpaia, F. Tafuri, D. Golubev, T. Bauch, F. Lombardi, and R. Sobolewski, "Y-Ba-Cu-O Nanostripes for Optical Photon Detection," in *Photon Counting Applications 2015*, edited by I. Prochazka, R. Sobolewski, and R. B. James (SPIE, Bellingham, WA, 2015), Vol. 9504, Paper 950406 (invited).

B. W. Plansinis, W. R. Donaldson, and G. P. Agrawal, "Spectral Changes Induced by a Phase Modulator Acting as a Time Lens," J. Opt. Soc. Am. B **32**, 1550 (2015).

W. Theobald, R. Nora, W. Seka, M. Lafon, K. S. Anderson, M. Hohenberger, F. J. Marshall, D. T. Michel, A. A. Solodov, C. Stoeckl, D. H. Edgell, B. Yaakobi, A. Casner, C. Reverdin, X. Ribeyre, A. Shvydky, A. Vallet, J. Peebles, F. N. Beg, M. S. Wei, and R. Betti, "Spherical Strong-Shock Generation for Shock-Ignition Inertial Fusion," Phys. Plasmas **22**, 056310 (2015) (invited).

A. N. Tsypkin, S. E. Putilin, A. V. Okishev, and S. A. Kozlov, "Ultrafast Information Transfer Through Optical Fiber by Means of Quasidiscrete Spectral Supercontinuums," Opt. Eng. **54**, 056111 (2015).

H. Wen, R. Yan, A. V. Maximov, and C. Ren, "Linear Regime of Two-Plasmon Decay and Stimulated Raman Scattering Instability Near the Quarter-Critical Density in Plasmas," Phys. Plasmas **22**, 052704 (2015).

Forthcoming Publications

J. Bromage, C. Dorrer, and J. D. Zuegel, "Temporal-Contrast Measurements of a White-Light–Seeded Noncollinear Optical Parametric Amplifier," to be published in the Journal of Optics.

R. S. Craxton, K. S. Anderson, T. R. Boehly, V. N. Goncharov, D. R. Harding, J. P. Knauer, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, J. F. Myatt, A. J. Schmitt, J. D. Sethian, R. W. Short, S. Skupsky, W. Theobald, W. L. Kruer, K. Tanaka, R. Betti, T. J. B. Collins, J. A. Delettrez, S. X. Hu, J. A. Marozas, A. V. Maximov, D. T. Michel, P. B. Radha, S. P. Regan, T. C. Sangster, W. Seka, A. A. Solodov, J. M. Soures, C. Stoeckl, and J. D. Zuegel, "Direct-Drive Inertial Confinement Fusion: A Review," to be published in Physics of Plasmas.

C. Dorrer, A. Consentino, D. Irwin, J. Qiao, and J. D. Zuegel, "OPCPA Front End and Contrast Optimization for the OMEGA EP Kilojoule, Picosecond Laser," to be published in the Journal of Optics.

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, D. D. Meyerhofer, N. B. Meezan, A. Nikroo, H.-S. Park, P. K. Patel, J. E. Ralph, B. A. Remington, T. C. Sangster, V. A. Smalyuk, P. T. Springer, R. P. J. Town, and J. L. Tucker, "Applications and Results of X-Ray Spectroscopy in Implosion Experiments on the National Ignition Facility," to be published in Proceedings of Atomic Processes in Plasmas (invited).

P. M. Nilson, A. A. Solodov, J. R. Davies, W. Theobald, C. Mileham, C. Stoeckl, I. A. Begishev, J. D. Zuegel, D. H. Froula, R. Betti, and D. D. Meyerhofer, "Time-Resolved K_α Spectroscopy Measurements of Hot-Electron Equilibration Dynamics in Thin-Foil Solid Targets: Collisional and Col-

lective Effects," to be published in the Journal of Physics B: Atomic, Molecular and Optical Physics.

P. B. Radha, V. N. Goncharov, M. Hohenberger, T. C. Sangster, R. Betti, R. S. Craxton, D. H. Edgell, R. Epstein, D. H. Froula, J. A. Marozas, F. J. Marshall, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, D. T. Michel, S. X. Hu, W. Seka, A. Shvydky, S. Skupsky, J. A. Frenje, M. Gatu Johnson, R. D. Petrasso, T. Ma, S. Le Pape, and A. J. Mackinnon, "Direct-Drive–Implosion Physics: Results from OMEGA and the National Ignition Facility," to be published in the Journal of Physics: Conference Series.

Conference Presentations

The following presentations were made at ILOW 2015, Bordeaux, France, 7–9 April 2015:

D. Canning, B. E. Kruschwitz, M. Barczys, J. Kwiatkowski, K. Gibney, and D. Weiner, "UV Stray-Light Management on OMEGA EP."

E. M. Hill, J. H. Kelly, T. Z. Kosc, C. Dorrer, C. Stoeckl, and W. R. Donaldson, "Operational Challenges and Advances in the Generation and Co-Timing of High-Precision, Low-Jitter Pulse Shapes."

T. Z. Kosc, J. H. Kelly, E. M. Hill, and L. J. Waxer, "Design and Operation of the Multiple-Pulse Driver Line on the OMEGA Laser."

S. F. B. Morse, R. L. McCrory, S. J. Loucks, T. C. Sangster, S. Skupsky, D. D. Meyerhofer, J. D. Zuegel, J. H. Kelly, B. E. Kruschwitz, T. Z. Kosc, M. Barczys, L. J. Waxer, M. J. Guardalben, W. T. Shmayda, R. T. Janezic, J. C. Puth, S. Stagnitto, D. Canning, E. M. Hill, C. Sorce, C. Stoeckl, M. J. Shoup III, W. R. Donaldson, C. Dorrer, M. D. Wittman, R. Earley, J. Bromage, S. P. Regan, B. S. Rice, J. Ulrich, D. R. Harding, and D. H. Froula, "Omega: Capability Improvements and National Ignition Facility Enhancements for Polar Direct Drive."

C. Sorce, R. E. Bahr, R. Boni, J. Katz, D. Mastrosimone, M. McCluskey, C. Mileham, A. Sorce, and N. Whiting, "The Experimental Support Group's Role at the Omega Laser Facility."

The following presentations were made at the Undergraduate Research Exposition, Rochester, NY, 10 April 2015:

P. Angland, D. Haberberger, S. Ivancic, and D. H. Froula, "An Iterative Program to Find Plasma Density Profiles from Angular-Filter-Refractometry Images."

J. Hassett, R. Boni, and D. H. Froula, "Diffracted Efficiencies for Optical Wavelength Gratings with Arbitrary Groove Shapes are Predicted and Compared to Measurements."

J. D. Zuegel, S.-W. Bahk, J. Bromage, M. J. Guardalben, B. E. Kruschwitz, J. B. Oliver, C. Robillard, M. J. Shoup III, C. Stoeckl, and L. J. Waxer, "Technology Development and Prospects for Multi-10-PW OPCPA Pumped by OMEGA EP," Research Using Extreme Light, Prague, Czech Republic, 13–16 April 2015.

The following presentations were made at the 2015 University Technology Showcase, Rochester, NY, 16 April 2015:

W. R. Donaldson, "High-Dynamic-Range, Single-Shot, 10-GHz Signal Processing."

K. Tinkham, T. Jacobs, M. Mayton, Z. Hobbs, and K. L. Marshall, "Cerium Oxide Polishing Slurry Reclamation Project: Characterization Techniques and Results."

The following presentations were made at the Seventh Omega Laser Facility Users Group Workshop, Rochester, NY, 22–24 April 2015:

P. Angland, D. Haberberger, S. Ivancic, and D. H. Froula, "An Iterative Program to Find Plasma Density Profiles from Angular-Filter-Refractometry Images."

E. M. Garcia and R. S. Craxton, "Optimization of Uniformity for Current Polar-Direct-Drive Implosion Experiments at the National Ignition Facility."

J. Hassett, R. Boni, and D. H. Froula, "Diffracted Efficiencies for Optical Wavelength Gratings with Arbitrary Groove Shapes are Predicted and Compared to Measurements."

J. Katz, C. Stoeckl, J. Magoon, R. Taylor, D. Guy, M. Couch, F. Ehrne, D. J. Lonobile, D. Weiner, E. C. Cost, C. Rees, M. H. Romanofsky, J. Szczepanski, C. Abbott, T. Lewis, and M. Maslyn, "Commissioning the P11 Neutron Temporal Diagnostic for High-Neutron-Yield Implosions."

R. W. Kidder, A. Zeller, T. Meyer, P. Stoeckl, R. Pasols, and R. Hoderried, "External User Access Through the LLE PI Portal."

J. Kwiatkowski, M. Barczys, M. Bedzyk, A. Kalb, B. E. Kruschwitz, C. McMahon, T. Nguyen, A. L. Rigatti, and M. Sacchitella, "OMEGA EP Short-Pulse-Transmission Study Status Report."

D. Mastrosimone, A. Agliata, T. Buczek, D. J. Lonobile, M. J. Shoup III, and C. Sorce, "Enhanced Gas-Filled Capabilities for Ten-Inch–Manipulator–Based Target Positioners."

S. F. B. Morse, "Omega Facility OLUG 2015 Update: Progress on Recommendations and Items of General Interest."

S. P. Regan, T. C. Sangster, V. N. Goncharov, R. Epstein, P. B. Radha, R. Betti, T. R. Boehly, R. Earley, C. J. Forrest, D. H. Froula, V. Yu. Glebov, E. M. Hill, S. X. Hu, I. V. Igumenshchev, R. T. Janezic, J. H. Kelly, T. J. Kessler, T. Z. Kosc, J. Kwiatkowski, J. A. Marozas, F. J. Marshall, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, D. T. Michel, J. F. Myatt, J. C. Puth, N. P. Redden, J. Reid, W. Seka, W. T. Shmayda, A. Shvydky, C. Stoeckl, M. D. Wittman, J. A. Frenje, M. Gatu Johnson, and R. D. Petrasso, "OMEGA Layered DT Cryogenic Implosions" (invited).

R. Zhang, C. Kingsley, and R. T. Janezic, "Statistical Investigation of Cryogenic Target Defects."

N. D. Viza and D. R. Harding, "Using Lab-on-Chip Technology to Mass Produce Inertial Fusion Energy Targets," 5th Energy for the 21st Century Symposium, Rochester, NY, 1 May 2015.

The following presentations were made at CLEO 2015, San Jose, CA, 10–15 May 2015:

S.-W. Bahk, C. Dorrer, R. G. Roides, and J. Bromage, "A Spectrally Resolved Lateral-Shearing Interferometer to Measure Relative Group Delay Using a Periodic Entrance Slit in a Spectrometer."

C. Dorrer, W. A. Bittle, R. Cuffney, M. Spilatro, E. M. Hill, J. H. Kelly, T. Z. Kosc, and J. D. Zuegel, "A Time-Multiplexed Pulse-Shaping System for Generating Multiple High-Bandwidth, Low-Jitter Optical Waveforms."

C. Dorrer, L. Waxer, A. Kalb, E. M. Hill, and J. Bromage, "Single-Shot Characterization of Optical Pulses Below the Resolution Limit by Phase-Diversified Photodetection."

P. Fiala, C. Dorrer, and K. L. Marshall, "Twisted-Nematic Liquid Crystal Polarization Rotators for Broadband Laser Applications."

L. E. McIntire, M. Divoky, W. H. Knox, S.-W. Bahk, and J. D. Zuegel, "High-Contrast, Closed-Loop Control of Laser-Beam Profiles."

M. Sharpe, W. T. Shmayda, and W. U. Schröder, "Modeling Tritium Migration into the Adsorbed Water Layers on Metal Surfaces," Symposium on Fusion Engineering, Austin, TX, 31 May–4 June 2015.

S.-W. Bahk, R. G. Roides, J. Bromage, and J. D. Zuegel, "Laser-Beam Shaping and Imaging Using Adaptive Quasi-Phase Conjugation," Computational Optical Sensing and Imaging, Arlington, VA, 7–11 June 2015.

The following presentations were made at the 19th Biennial APS Conference on Shock Compression of Condensed Matter, Tampa, FL, 14–19 June 2015:

T. R. Boehly, M. C. Gregor, C. A. McCoy, D. N. Polsin, and D. E. Fratanduono, "High-Energy-Density Studies at the Omega Laser Facility."

D. N. Polsin, C. A. McCoy, M. C. Gregor, T. R. Boehly, T. C. Sangster, D. E. Fratanduono, and P. M. Celliers, "Probing the Release of Shocked Material."

The following presentations were made at the 45th Anomalous Absorption Conference, Ventura, CA, 14–19 June 2015:

R. Betti, K. S. Anderson, A. Bose, M. Lafon, R. Nora, and W. Theobald, "Electron Shock Ignition of Thermonuclear Fuel."

A. Bose, R. Betti, K. M. Woo, A. R. Christopherson, and D. Shvarts, "Effects of Long- and Intermediate-Wavelength Asymmetries on Hot-Spot Energetics."

A. K. Davis, D. Cao, D. T. Michel, R. Epstein, V. N. Goncharov, S. X. Hu, I. V. Igumenshchev, M. Lafon, J. Marozas, D. D. Meyerhofer, P. B. Radha, T. C. Sangster, and D. H. Froula, "Quantifying the Growth of Cross-Beam Energy Transfer in Polar-Direct-Drive Implosions."

D. H. Edgell, R. K. Follett, V. N. Goncharov, I. V. Igumenshchev, J. Katz, J. F. Myatt, W. Seka, and D. H. Froula, "Diagnosing Cross-Beam Energy Transfer Using Beamlets of Unabsorbed Light from Direct-Drive Implosions."

R. K. Follett, J. G. Shaw, D. H. Edgell, R. J. Henchen, S. X. Hu, J. Katz, D. T. Michel, J. F. Myatt, A. A. Solodov, C. Stoeckl, B. Yaakobi, and D. H. Froula, "Zakharov Modeling of Thomson-Scattering Measurements of Multibeam Two-Plasmon Decay."

D. H. Froula, J. A. Delettrez, G. Fiksel, V. N. Goncharov, S. X. Hu, H. Huang, I. V. Igumenshchev, T. J. Kessler, D. D. Meyerhofer, D. T. Michel, S. P. Regan, T. C. Sangster, A. Shvydky, and J. D. Zuegel, "A Pathway to Ignition-Hydrodynamic-Equivalent Implosions in OMEGA Direct Drive Through the Reduction of Cross-Beam Energy Transfer."

M. C. Gregor, T. R. Boehly, C. A. McCoy, D. N. Polsin, D. D. Meyerhofer, D. E. Fratanduono, P. M. Celliers, and G. W. Collins, "The Release Behavior of Diamond Shocked to 15 Mbar."

R. J. Henchen, S. X. Hu, R. K. Follett, J. Katz, D. H. Froula, and W. Rozmus, "Heat-Flux Measurements from Thomson-Scattering Spectra."

S. X. Hu, L. A. Collins, V. N. Goncharov, and S. Skupsky, "Extended Equation of State of Polystyrene (CH) Based on First-Principles Calculations."

S. Ivancic, D. Haberberger, C. Stoeckl, K. S. Anderson, C. Ren, W. Theobald, J. Fienup, D. H. Froula, D. D. Meyerhofer, T. Iwawaki, H. Habara, and K. A. Tanaka, "Optical Probing of Laser-Produced Plasma Experiments on the OMEGA EP Laser System" (invited).

J. Li, C. Ren, and R. Yan, "Two-Plasmon–Decay Instabilities in a Plasma with Ion-Density Fluctuations."

A. V. Maximov, J. F. Myatt, R. W. Short, I. V. Igumenshchev, and W. Seka, "The Effects of Beam Incoherence and Colors on Cross-Beam Energy Transfer."

D. T. Michel, T. C. Sangster, V. N. Goncharov, A. K. Davis, R. Epstein, V. Yu. Glebov, S. X. Hu, I. V. Igumenshchev, D. D. Meyerhofer, S. P. Regan, W. Seka, A. Shvydky, C. Stoeckl, and D. H. Froula, "Measurements of the Conduction-Zone Length and Mass Ablation Rate in Cryogenic Direct-Drive Implosions on OMEGA."

J. F. Myatt, J. G. Shaw, V. N. Goncharov, J. Zhang, A. V. Maximov, R. W. Short, W. Seka, D. H. Edgell, D. H. Froula, D. F. DuBois, D. A. Russell, and H. Vu, "A Numerical Model for Hot-Electron Generation in Direct-Drive Implosions."

M. J. Rosenberg, A. A. Solodov, W. Seka, R. Epstein, J. F. Myatt, S. P. Regan, M. Hohenberger, T. J. B. Collins, J. E. Ralph, D. P. Turnbull, J. D. Moody, and M. A. Barrios, "Planar Two-Plasmon–Decay Experiments at Polar-Direct-Drive Ignition-Relevant Scale Lengths at the National Ignition Facility."

W. Seka, S. P. Regan, P. B. Radha, J. A. Marozas, M. J. Rosenberg, M. Hohenberger, V. N. Goncharov, J. F. Myatt, D. H. Edgell, D. T. Michel, D. H. Foula, J. E. Ralph, J. D. Moody, and D. P. Turnbull, "The Current *LILAC* Model for Cross-Beam Energy Transfer (CBET) has been Extended to *DRACO* and Non-Symmetrical Illumination."

R. W. Short, A. V. Maximov, J. F. Myatt, W. Seka, and J. Zhang, "Absolute Two-Plasmon Decay and Stimulated Raman Scattering in Direct-Drive Irradiation Geometries."

A. A. Solodov, B. Yaakobi, J. F. Myatt, C. Stoeckl, and D. H. Froula, "Hot-Electron Temperature Measurements with Laser Irradiation at 10^{14} to 10^{15} W/cm^2."

R. Yan, R. Betti, J. Sanz, B. Liu, and A. Frank, "Three-Dimensional Single-Mode Nonlinear Ablative Rayleigh–Taylor Instability."

The following presentations were made at the 21st Target Fabrication Meeting, Las Vegas, NV, 21–25 June 2015:

M. J. Bonino, D. R. Harding, D. W. Turner, H. Goodrich, A. Caveglia, M. Dorward, and M. Anthamatten, "The Mechanical Properties of the Adhesives Used for Cryogenic Targets."

B. Chock, T. B. Jones, and D. R. Harding, "Effect of a Surfactant on the Electric-Field Assembly of Oil/Water Emulsions for Making Foam Targets."

D. R. Harding, R. Q. Gram, K. Arean-Raines, J. Du, T. P. Bernat, and N. Petta, "Calorimetry Measurement of Supercooling in Liquid D_2, Suppression of Supercooling, and the Controlled Growth of a D_2 Crystal."

D. R. Harding, M. D. Wittman, N. P. Redden, C. Fella, and D. C. Whitaker, "How Interfacial Surface Energy Affects the Growth of the DT Ice Layer and the Fuel Content in Fill-Tube Targets."

N. P. Redden, D. R. Harding, and M. D. Wittman, "Controlling the D_2 and H_2/D_2 Fuel Content in Cryogenic Direct-Drive National Ignition Facility Targets."

T. C. Sangster, V. N. Goncharov, P. B. Radha, M. Hohenberger, S. P. Regan, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, D. H. Edgell, R. Epstein, P. Fitzimmons, C. J. Forrest, J. A. Frenje, D. H. Froula, M. Gatu Johnson, V. Yu. Glebov, D. R. Harding, S. X. Hu, I. V. Igumenshchev, R. T. Janezic, M. Karasik, J. H. Kelly, T. J. Kessler, J. P. Knauer, T. Z. Kosc, C. Kurz, S. LePape, A. J. Mackinnon, J. A. Marozas, F. J. Marshall, R. L. McCrory, P. W. McKenty, D. T. Michel, J. F. Myatt, A. Nikroo, S. P. Obenschain, R. D. Petrasso, H. G. Rinderknecht, M. J. Rosenberg, A. J. Schmitt, W. Seka, W. T. Shmayda, A. Shvydky, C. Stoeckl, S. Skupsky, J. Weaver, and A. Zylstra, "Progress with Direct-Drive Inertial Confinement Fusion."

D. W. Turner, M. J. Bonino, S. G. Noyes, and D. R. Harding, "Assembly of Direct-Drive Fill-Tube Targets."

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J. B. Oliver, T. J. Kessler, C. Smith, B. Taylor, V. Gruschow, J. Hettrick, B. Charles, J. Spaulding, T. Noll, A. L. Rigatti, S. Papernov, K. A. Sharma, G. Mitchell, and J. Foster, "Development of a Glancing-Angle–Deposited Distributed Polarization Rotator," Novel Optical Materials and Applications, Boston, MA, 26 June–1 July 2015.

The following presentations were made at the 19th International Conference on Electron Dynamics, Optoelectronics, and Nanostructures, Salamanca, Spain, 29 June–2 July 2015:

Y. Akbas, A. Stern, L. Q. Zhang, Y. Alimi, A. M. Song, I. Iñiguez-de-la-Torre, J. Mateos, T. González, G. W. Wicks, and R. Sobolewski, "Ultrahigh Responsivity of Optically Active Semiconducting Asymmetric Nanochannel Diodes."

J. Serafini, Y. Akbas, L. Crandall, R. Bellman, C. K. Williams, and R. Sobolewski, "Time-Resolved, Nonequilibrium Carrier Dynamics in Si-on-Glass Thin-Film Absorbers for Photovoltaic Cells."