
Publications and Conference Presentations

Publications

- R. Adam, R. Sobolewski, and M. Darula, "Subpicosecond Dynamics of the Switching Process in Y-Ba-Cu-O Josephson Junctions," in *Superconducting and Related Oxides: Physics and Nanoengineering IV*, edited by I. Bozovic and D. Pavuna (SPIE, Bellingham, WA, 2000), Vol. 4058, pp. 230–244.
- T. R. Boehly, A. Babushkin, D. K. Bradley, R. S. Craxton, J. A. Delettrez, R. Epstein, T. J. Kessler, J. P. Knauer, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, S. Regan, W. Seka, S. Skupsky, V. A. Smalyuk, R. P. J. Town, and B. Yaakobi, "Laser-Uniformity and Hydrodynamic-Stability Experiments at the OMEGA Laser Facility," *Laser Part. Beams* **18**, 11 (2000).
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- T. R. Boehly, J. A. Delettrez, J. P. Knauer, D. D. Meyerhofer, B. Yaakobi, R. P. J. Town, and D. Hoarty, "Effect of Shock Heating on the Stability of Laser-Driven Targets," *Phys. Rev. Lett.* **87**, 145003 (2001).
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- V. Yu. Glebov, D. D. Meyerhofer, C. Stoeckl, and J. D. Zuegel, "Secondary-Neutron-Yield Measurements by Current-Mode Detectors," *Rev. Sci. Instrum.* **72**, 824 (2001).
- W. Göb, W. Liebich, W. Lang, I. Puica, R. Sobolewski, R. Rössler, J. D. Pedarnig, and D. Bäuerle, "Double Sign Reversal of the Vortex Hall Effect in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films in the Strong Pinning Limit of Low Magnetic Fields," *Phys. Rev. B* **62**, 9780 (2000).
- G. N. Gol'tsman, O. Okunev, G. Chulkova, A. Dzardanov, A. Lipatov, A. Semenov, K. Smirnov, B. Voronov, C. Williams, and R. Sobolewski, "Picosecond Superconducting Single-Photon Optical Detector," *Appl. Phys. Lett.* **79**, 705 (2001).
- V. N. Goncharov, P. McKenty, S. Skupsky, R. Betti, R. L. McCrory, and C. Cherfils-Clérrouin, "Modeling Hydrodynamic Instabilities in Inertial Confinement Fusion Targets," *Phys. Plasmas* **7**, 5118 (2001).
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A. B. Shorey, S. D. Jacobs, W. I. Kordonski, and R. F. Gans, "Experiments and Observations Regarding the Mechanisms of Glass Removal in Magnetorheological Finishing," *Appl. Opt.* **40**, 20 (2001).

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R. Sobolewski, D. P. Butler, and Z. Celik-Butler, "Cooled and Uncooled Infrared Detectors Based on Yttrium Barium Copper Oxide," in *Smart Optical Inorganic Structures and Devices*, edited by S. P. Asmontas and J. Gradauskas (SPIE, Bellingham, WA, 2001), Vol. 4318, pp. 204–214 (invited).

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P. Amendt, A. I. Shestakov, O. L. Landen, D. K. Bradley, S. M. Pollaine, L. J. Suter, and R. E. Turner, "Thin-Shell Symmetry Surrogates for the National Ignition Facility: A Rocket Equation Analysis," *Phys. Plasmas* **8**, 2908 (2001).

J. L. Bourgade, B. Villette, J. L. Bocher, J. Y. Boutin, S. Chiche, N. Dague, D. Gontier, J. P. Jadaud, B. Savale, R. Wrobel, and R. E. Turner, "DMX: An Absolutely Calibrated Time-Resolved Broadband Soft X-Ray Spectrometer Designated for MJ-Class-Laser-Produced Plasmas," *Rev. Sci. Instrum.* **72**, 1173 (2001).

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J. O. Kane, H. F. Robey, B. A. Remington, R. P. Drake, J. Knauer, D. D. Ryutov, H. Louis, R. Teyssier, O. Hurricane, D. Arnett, R. Rosner, and A. Calder, "Interface Imprinting by a Rippled Shock Using an Intense Laser," *Phys. Rev. E* **63**, 055401/1 (2001).

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S. M. Pollaine, D. K. Bradley, O. L. Landen, R. J. Wallace, O. S. Jones, P. A. Amendt, L. J. Suter, and R. E. Turner, "National Ignition Facility–Scale Hohlraum Asymmetry Studies by Thin Shell Radiography," *Phys. Plasmas* **8**, 2357 (2001).

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J. Seely, C. Back, R. Deslattes, L. Hudson, G. Holland, P. Bell, and M. Miller, "Hard X-Ray Spectrometers for the National Ignition Facility," *Rev. Sci. Instrum.* **72**, 2562 (2001).

Conference Presentations

S. D. Jacobs and S. R. Arrasmith “Magnetorheological Finishing of Optics,” ASME International Joint Tribology Conference, Seattle, WA, 1–4 October 2000.

R. L. McCrory, R. E. Bahr, R. Betti, T. R. Boehly, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, W. R. Donaldson, R. Epstein, J. Frenje, V. Yu. Glebov, V. N. Goncharov, O. V. Gotchev, R. Q. Gram, D. R. Harding, D. G. Hicks, P. A. Jaanimagi, R. L. Keck, J. Kelly, J. P. Knauer, C. K. Li, S. J. Loucks, L. D. Lund, F. J. Marshall, P. W. McKenty, D. D. Meyerhofer, S. F. B. Morse, R. D. Petrasso, P. B. Radha, S. P. Regan, S. Roberts, F. Séguin, W. Seka, S. Skupsky, V. A. Smalyuk, C. Sorce, J. M. Soures, C. Stoeckl, R. P. J. Town, M. D. Wittman, B. Yaakobi, and J. D. Zuegel, “OMEGA ICF Experiments and Preparation for Direct-Drive Ignition on NIF,” 18th IAEA Fusion Energy Conference, Sorrento, Italy, 4–10 October 2000.

The following presentations were made at the 16th Interdisciplinary Laser Science Conference (ILS-XVI), Providence, RI, 22–26 October 2000:

M. J. Guardalben, L. Ning, N. Jain, and D. J. Battaglia, “Investigation of Error Sources in the Liquid Crystal Point Diffraction Interferometer (LCPDI).”

J. H. Kelly, A. Babushkin, R. Boni, W. R. Donaldson, P. A. Jaanimagi, R. L. Keck, R. L. McCrory, S. F. B. Morse, A. V. Okishev, R. G. Peck, R. G. Roides, W. Seka, M. D. Skeldon, and K. A. Thorp, “Safely Operating a Large-Scale Laser Facility for Fusion Research.”

T. Z. Kosc, K. L. Marshall, and S. D. Jacobs, “Polymer Liquid Crystal Flakes for Switchable Optical Devices.”

K. L. Marshall, M. J. Guardalben, S. M. Corsello, M. S. Moore, I. A. Lippa, and R. P. Brecker, “Device Applications of Highly Soluble Near-Infrared Transition Metal Dyes in Liquid Crystal Hosts.”

The following presentations were made at the 42nd Annual Meeting of the APS Division of Plasma Physics, Quebec City, Canada, 23–27 October 2000:

R. Betti, M. Umansky, and V. Lobatchev, “Theory of the Deceleration-Phase Rayleigh–Taylor Instability.”

T. R. Boehly, “Optical and Plasma Smoothing of Laser Imprinting in Targets Driven by Lasers with SSD Bandwidths up to 1 THz” (invited).

T. R. Boehly, B. Yaakobi, J. P. Knauer, D. D. Meyerhofer, R. P. J. Town, D. Hoarty, and O. Willi, “Measurements of Shock Heating Al Absorption Spectroscopy in Planar Targets.”

T. J. B. Collins and S. Skupsky, “Imprint Reduction with Shaped Pulses.”

R. S. Craxton, J. A. Marozas, and S. Skupsky, “Two-Dimensional Hydrodynamic Simulations of SSD Laser Imprint.”

J. A. Delettrez, S. P. Regan, P. B. Radha, and R. P. J. Town, “A New Model for the Analysis of Burnthrough Experiments on OMEGA.”

R. Epstein, J. A. Delettrez, P. B. Radha, T. R. Boehly, S. P. Regan, B. Yaakobi, and J. J. MacFarlane, “Two-Dimensional Simulations of X-Ray Absorption Spectra from Nonuniformly Driven Planar Targets.”

J. A. Frenje, K. M. Green, D. G. Hicks, C. K. Li, F. H. Séguin, R. D. Petrasso, T. C. Sangster, T. W. Phillips, V. Yu. Glebov, D. D. Meyerhofer, S. Roberts, J. M. Soures, C. Stoeckl, K. Fletcher, and S. Padalino, “A Neutron Spectrometer for Precise Measurements of DT Neutrons from 10 to 18 MeV at OMEGA and the National Ignition Facility.”

V. Yu. Glebov, D. D. Meyerhofer, and C. Stoeckl, “Measurement of Secondary Neutron Yield by Copper Activation.”

O. V. Gotchev, P. A. Jaanimagi, J. P. Knauer, F. J. Marshall, and D. D. Meyerhofer, “A High-Throughput, High-Resolution, Streaked Kirkpatrick-Baez Microscope for Planar Direct-Drive Experiments on OMEGA.”

D. G. Hicks, C. K. Li, F. H. Séguin, A. K. Ram, J. A. Frenje, R. D. Petrasso, J. M. Soures, V. Yu. Glebov, D. D. Meyerhofer, S. Roberts, C. Sorce, C. Stoeckl, T. C. Sangster, and T. W. Phillips, “Charged-Particle Acceleration and Energy Loss Measurements on OMEGA.”

A. V. Kanaev and C. J. McKinstrie, “Numerical Simulations of the SSD- and DPP-Smoothed Laser Beam Filamentation and Forward Stimulated Brillouin Scattering in Plasmas.”

R. L. Keck, W. R. Donaldson, P. A. Jaanimagi, W. Seka, and R. Boni, “Beam Power Matching on the OMEGA Laser.”

D. Keller, T. J. B. Collins, J. A. Delettrez, R. Epstein, P. W. McKenty, P. B. Radha, R. P. J. Town, G. A. Moses, P. P. H. Wilson, and J. J. MacFarlane, “Modeling Planar Burnthrough and Adiabatic Experiments Using *DRACO*.”

J. P. Knauer, R. Betti, T. R. Boehly, T. J. B. Collins, D. D. Meyerhofer, R. P. J. Town, and V. A. Smalyuk, “Measured Reduction of RT Growth at the Ablation Interface by Modification of the Isentrope.”

M. V. Kozlov and C. J. McKinstrie, “Nonlinear Sound Waves in Two-Ion Plasmas.”

C. K. Li, D. G. Hicks, F. H. Séguin, J. A. Frenje, K. M. Green, R. D. Petrasso, J. M. Soures, D. D. Meyerhofer, V. Yu. Glebov, C. Stoeckl, S. Roberts, T. C. Sangster, and T. W. Phillips, “Measurements of Areal Densities and Temperatures from DT Capsule Implosions on OMEGA.”

V. Lobatchev, M. Umansky, and R. Betti, “Growth Rates of the Deceleration-Phase Rayleigh–Taylor Instability.”

J. A. Marozas and J. D. Zuegel, “The Smoothing Performance of Various Picket-Fence Schemes on NIF.”

F. J. Marshall, J. A. Delettrez, D. D. Meyerhofer, T. A. Ohki, S. P. Regan, V. A. Smalyuk, B. Yaakobi, and J. A. Oertel, “Monochromatic Imaging of Direct-Drive Implosions on OMEGA.”

P. W. McKenty, V. N. Goncharov, R. P. J. Town, S. Skupsky, R. Betti, and R. L. McCrory, “Analysis of a Direct-Drive Ignition Capsule Designed for the NIF.”

C. J. McKinstrie and M. V. Kozlov, “SBS from Fast and Slow Waves in Two-Ion Plasmas.”

D. D. Meyerhofer, J. A. Delettrez, R. Epstein, V. Yu. Glebov, V. N. Goncharov, R. L. Keck, R. L. McCrory, P. W. McKenty, F. J. Marshall, P. B. Radha, S. P. Regan, S. Roberts, W. Seka, S. Skupsky, V. A. Smalyuk, J. M. Soures, C. Stoeckl, C. Sorce, R. P. J. Town, B. Yaakobi, J. D. Zuegel, R. D. Petrasso, S. Padalino, J. A. Frenje, D. G. Hicks, F. H. Séguin, C. K. Li,

N. Izumi, R. Lerche, T. C. Sangster, and T. W. Phillips, “Core Performance and Mix in Direct-Drive Spherical Implosions with High Uniformity” (invited).

P. B. Radha, V. Yu. Glebov, F. J. Marshall, D. D. Meyerhofer, R. D. Petrasso, S. P. Regan, W. Seka, S. Skupsky, V. A. Smalyuk, J. M. Soures, C. Stoeckl, and B. Yaakobi, “A Measurement-Based Picture of Core Conditions in OMEGA Implosions.”

S. P. Regan, J. A. Delettrez, B. Yaakobi, R. Epstein, D. D. Meyerhofer, W. Seka, P. B. Radha, and R. P. J. Town, “Laser-Driven Burnthrough Experiments on OMEGA with 1-THz SSD.”

F. H. Séguin, J. A. Frenje, C. K. Li, D. G. Hicks, K. M. Green, R. D. Petrasso, V. Yu. Glebov, C. Stoeckl, P. B. Radha, J. M. Soures, D. D. Meyerhofer, S. Roberts, C. Sorce, T. C. Sangster, M. D. Cable, S. Padalino, and K. Fletcher, “Secondary-Proton Spectra from D_2 -Filled OMEGA Targets.”

W. Seka, D. D. Meyerhofer, R. S. Craxton, S. P. Regan, R. E. Bahr, R. W. Short, B. Yaakobi, J. Fuchs, D. Montgomery, and B. Afeyan, “Stimulated Brillouin Scattering in Very Long Velocity Scale-Length NIF Plasmas.”

R. W. Short, “The Effects of Beam-Intensity Structure on Two-Plasmon Decay in Direct-Drive Laser Fusion Targets.”

R. W. Short and A. Simon, “Propagation of Plasma Waves in Weakly Collisional Plasmas.”

A. Simon, R. W. Short, R. Betti, and V. N. Goncharov, “The Effect of Weak Collisions on Plasma Oscillations.”

V. A. Smalyuk, J. A. Delettrez, F. J. Marshall, D. D. Meyerhofer, S. P. Regan, R. P. J. Town, and B. Yaakobi, “Time-Resolved Measurements of Compressed Shell Temperature and Areal Density with Titanium-Doped Targets on OMEGA.”

C. Stoeckl, J. A. Delettrez, V. Yu. Glebov, P. W. McKenty, and D. D. Meyerhofer, “Comparison of Neutron Burn History Measurements with One- and Two-Dimensional Hydrodynamic Simulations.”

R. P. J. Town, J. A. Delettrez, V. N. Goncharov, D. R. Harding, P. W. McKenty, and R. L. McCrory, “The Effect of Elevated Internal Gas Pressure on Direct-Drive Cryogenic Target Performance.”

M. Umansky, J. P. Freidberg, and R. Betti, "Stability of the Resistive Wall Mode in the Presence of Moving Walls."

The following presentations were made at the Annual Symposium on Optical Materials for High Power Lasers, Boulder, CO, 16–18 October 2000:

S. Papernov, A. W. Schmid, R. Krishnan, and L. Tsybeskov, "Using Colloidal Gold Nanoparticles for Studies of Laser Interaction with Defects in Thin Films."

A. L. Rigatti, D. J. Smith, G. L. Mitchell, J. Dirmyer, A. W. Schmid, and S. Papernov, "Moisture Barrier Coatings to Prevent Environmental Degradation of KDP Crystals."

D. J. Smith, J. B. Oliver, J. Howe, C. Stolz, and A. Rigatti, "The Use of Hafnia/Silica Multilayer Coatings on Large Mirrors and Polarizers for the National Ignition Facility."

J. Taniguchi, N. LeBarron, J. Howe, D. Smith, C. Stolz, C. Weinzapfel, and J. Kimmons, "Functional Damage Thresholds of Hafnia/Silica Coating Designs for the NIF Laser."

A. V. Okishev, "High-Energy Solid-State Lasers for ICF Applications" International Congress on "Optics-XXI Century," St. Petersburg, Russia, 16–18 October 2000.

S. P. Regan, J. A. Delettrez, B. Yaakobi, V. A. Smalyuk, F. J. Marshall, D. D. Meyerhofer, W. Seka, D. A. Haynes, Jr., and C. F. Hooper, Jr., "Characterization of Direct-Drive-Implosion Core Conditions on OMEGA with Time-Resolved Ar *K*-Shell Spectroscopy Radiative Properties of Hot Dense Matter," Santa Barbara, CA, 30 October–3 November 2000.

L. Waxer and J. Kelly, "Spectral Sculpting for NIF Demonstration Project," Third Annual Joint US-JAPAN Workshop on Laser-Driven Inertial Fusion Energy (IFE), Livermore, CA, 25–27 January 2001.

W. Seka, S. P. Regan, D. D. Meyerhofer, B. Yaakobi, C. Stoeckl, R. S. Craxton, R. W. Short, H. A. Baldis, and J. Fuchs, "Multibeam Interaction Experiments Under Direct-Drive NIF Conditions," 4th International Workshop on Laser-Plasma Interaction Physics, Banff, Alberta, Canada, 21–24 February 2001.

The following presentations were made at OPTO Northeast and Imaging 2001, Rochester, NY, 10–11 April 2001:

J. E. DeGroot, S. D. Jacobs, L. L. Gregg, and A. E. Marino, "Exploring Optical Polishing Pitch."

L. L. Gregg and S. D. Jacobs, "The Optics Suitcase—A Tool for Learning."

M. J. Guardalben, L. Ning, N. Jain, D. J. Battaglia, and K. L. Marshall, "Comparison of a Liquid Crystal Point Diffraction Interferometer (LCPDI) and a Commercial Phase-Shifting Interferometer."

S. D. Jacobs, S. R. Arrasmith, I. A. Kozhinova, L. L. Gregg, H. J. Romanofsky, and A. B. Shorey, "Magnetorheological Finishing: MRF of Optical Glasses and Crystals."

A. E. Marino, S. R. Arrasmith, L. L. Gregg, S. D. Jacobs, G. Chen, and Y. Duc, "Developing a Durable Phosphate Glass with a Low Glass Transition Temperature."

J.-R. Park, W. R. Donaldson, R. Boni, and R. Sobolewski, "Optical Properties of a Dual Diffusing Sphere Fiber Optic Detector."

The following presentations were made at the Conference on Lasers and Electro-Optics, Baltimore, MD, 6–11 May 2001:

W. R. Donaldson, J. H. Kelly, R. L. Keck, and R. Boni, "Predicting and Measuring Optical Pulse Shapes on the OMEGA Laser System."

M. J. Guardalben, A. Babushkin, R. S. Craxton, R. L. Keck, W. R. Donaldson, and K. A. Thorp, "Obtaining UV Energy Balance with 1-THz Spectral Bandwidth on the 60-Beam OMEGA Laser."

J. Li, T. Y. Hsiang, and W. R. Donaldson, "High-Speed Bragg Modulator on AlGaAs Waveguides."

T. Z. Kosc, K. L. Marshall, S. D. Jacobs, and B. Klehn, "Polymer Cholesteric Liquid Crystal Flakes for Display and Other Electro-Optic Applications," *Novel Optical Materials and Applications*, NOMA Cetraro, Italy, 20–27 May 2001.

The following presentations were made at the 31st Anomalous Absorption Conference, Sedona, AZ, 3–8 June 2001:

R. S. Craxton, D. D. Meyerhofer, W. Seka, R. W. Short, and R. P. J. Town, "Design of Long-Scale-Length Plasmas for Interaction Physics Experiments on OMEGA."

J. A. Delettrez, C. Stoeckl, S. P. Regan, P. W. McKenty, D. D. Meyerhofer, and J. P. Knauer, "Precision One-Dimensional *LILAC* Simulations of CH-Shell Implosions on the OMEGA Laser."

R. Epstein, J. A. Delettrez, V. Yu. Glebov, V. N. Goncharov, P. W. McKenty, P. B. Radha, S. Skupsky, V. A. Smalyuk, and C. Stoeckl, "One-Dimensional Simulation of the Effects of Unstable Mix on Neutron and Charged-Particle Yield from Laser-Driven Implosions Experiments."

V. Yu. Glebov, D. D. Meyerhofer, P. B. Radha, W. Seka, S. Skupsky, J. M. Soures, C. Stoeckl, S. Padalino, L. Baumgart, R. Colburn, J. Fuschino, and T. C. Sangster, "Current Status of Tertiary Neutron Diagnostic by Carbon Activation."

Y. A. Kholodov, "A Comparison of Monotone Schemes of High-Order Accuracy for Hyperbolic Problems."

V. N. Goncharov, S. Skupsky, R. Betti, J. A. Marozas, P. W. McKenty, and R. P. J. Town, "Hydrodynamic Stability of Moderate- to High-Gain Direct-Drive Target Designs for the NIF."

S. P. Regan, J. A. Delettrez, V. A. Smalyuk, B. Yaakobi, F. J. Marshall, R. Epstein, V. Yu. Glebov, P. A. Jaanimagi, D. D. Meyerhofer, P. B. Radha, W. Seka, S. Skupsky, J. M. Soures, C. Stoeckl, R. P. J. Town, D. A. Haynes, Jr., C. F. Hooper, Jr., C. K. Li, R. D. Petrasso, and F. H. Séguin, "Core-Mix Measurements of Direct-Drive Implosions on OMEGA."

W. Seka, S. P. Regan, D. D. Meyerhofer, B. Yaakobi, C. Stoeckl, R. S. Craxton, R. W. Short, H. Baldis, and J. Fuchs, "Multibeam SBS Interaction Experiments in OMEGA Long-Scale-Length Plasmas."

R. W. Short, R. S. Craxton, W. Seka, and D. D. Meyerhofer, "Theoretical Interpretation of SBS Observations in OMEGA Long-Scale-Length Plasma Experiments."

A. Simon and R. W. Short, "Damping and Spatial Propagation of Oscillations in Weakly Collisional Plasma."

C. Stoeckl, R. E. Bahr, V. Yu. Glebov, D. D. Meyerhofer, W. Seka, R. W. Short, and B. Yaakobi, "Measurements on the Two-Plasmon-Decay Instability on OMEGA."

A. Sunahara, J. A. Delettrez, R. W. Short, and S. Skupsky, "Electron Thermal Conduction in Inertial Confinement Fusion."

R. L. McCrory, J. A. Delettrez, R. Epstein, V. Yu. Glebov, R. L. Keck, P. W. McKenty, F. J. Marshall, D. D. Meyerhofer, P. B. Radha, S. P. Regan, S. Roberts, W. Seka, S. Skupsky, V. A. Smalyuk, C. Sorce, C. Stoeckl, J. M. Soures, R. P. J. Town, B. Yaakobi, J. D. Zuegel, J. A. Frenje, C. K. Li, R. D. Petrasso, F. H. Séguin, K. Fletcher, S. Padalino, C. Freeman, N. Izumi, R. Lerche, T. W. Phillips, and T. C. Sangster, "Core Performance in Direct-Drive Spherical Implosions on OMEGA," *Pulsed Power Plasma Science 2001*, Las Vegas, NV, 17–22 June 2001.

D. D. Meyerhofer, R. Betti, T. R. Boehly, J. A. Delettrez, R. Epstein, V. Yu. Glebov, V. N. Goncharov, D. R. Harding, R. L. Keck, R. L. McCrory, P. W. McKenty, F. J. Marshall, P. B. Radha, S. P. Regan, S. Roberts, W. Seka, S. Skupsky, V. A. Smalyuk, C. Sorce, C. Stoeckl, J. M. Soures, R. P. J. Town, B. Yaakobi, J. A. Frenje, C. K. Li, R. D. Petrasso, F. H. Séguin, K. Fletcher, S. Padalino, C. Freeman, N. Izumi, R. Lerche, T. W. Phillips, and T. C. Sangster, "Interferences of Mix in Direct-Drive Spherical Implosions with High Uniformity," 28th EPS Conference on Controlled Fusion and Plasma Physics, Madeira, Portugal, 18–22 June 2001.

D. D. Meyerhofer, J. H. Kelly, R. P. J. Town, L. J. Waxer, S. J. Loucks, R. L. McCrory, W. Seka, and S. Skupsky, "An Integrated Fast Ignitor Experiment for OMEGA," 5th Workshop on Fast Ignitor of Fusion Targets, Madeira, Portugal, 18–22 June 2001.

T. R. Boehly, B. Yaakobi, J. P. Knauer, D. D. Meyerhofer, and R. P. J. Town, "Measurements of Shock Heating in Laser-Driven Targets," 12th Biennial International Conference of the APS Topical Group on Shock Compression of Condensed Matter, Atlanta, GA, 24–29 June 2001.

G. Chen, Y. Du, A. Marino, L. L. Gregg, S. R. Arrasmith, and S. D. Jacobs, "Effect of SnO on Chemical Durability of Phosphate Glasses," The International Congress on Glass ICG 2001, Edinburgh, Scotland, 2–6 July 2001.

The following presentations were made at the 14th Target Fabrication Meeting, West Point, NY, 15–19 July 2001:

E. L. Alfonso, R. Q. Gram, and D. R. Harding, "CFD Modeling of Temperature/Pressure Gradients While Cooling Thin-Walled Direct-Drive Capsules."

R. Q. Gram and D. R. Harding, "Filling and Cooling Thin-Walled Cryogenic Targets."

L. D. Lund, D. R. Harding, D. J. Lonobile, D. Jacobs-Perkins, and T. Hinterman, "Alignment, Vibration, and Shroud Retraction: Initial Performance of the OMEGA Cryogenic Target Handling System."

P. W. McKenty, C. Stoeckl, V. N. Goncharov, M. J. Bonino, V. Yu. Glebov, D. R. Harding, D. D. Meyerhofer, and R. L. McCrory, "The Role of Improved Target Surface Roughness in Recent OMEGA Gas-Filled Implosion Experiments."

D. D. Meyerhofer, C. Chiritescu, T. J. B. Collins, J. A. Delettrez, R. Epstein, V. Yu. Glebov, D. R. Harding, R. L. Keck, S. J. Loucks, L. D. Lund, R. L. McCrory, P. W. McKenty, F. J. Marshall, S. F. B. Morse, S. P. Regan, P. B. Radha, S. Roberts, W. Seka, S. Skupsky, V. A. Smalyuk, C. Sorce, C. Stoeckl, J. M. Soures, R. P. J. Town, J. A. Frenje, C. K. Li, R. D. Petrasso, F. H. Séguin, K. Fletcher, C. Padalino, C. Freeman, N. Izumi, R. Lerche, T. W. Phillips, and T. C. Sangster, "Cryogenic-Target Experiments on OMEGA."

S. G. Noyes, M. J. Bonino, D. Turner, J. Tidu, and D. R. Harding, "Target Fabrication Techniques at LLE."

S. Skupsky, R. Betti, V. N. Goncharov, R. L. McCrory, P. W. McKenty, R. P. J. Town, D. D. Meyerhofer, and D. R. Harding, "Wetted-Foam Target Designs for the NIF and OMEGA."

F.-Y. Tsai, E. L. Alfonso, S. H. Chen, D. R. Harding, and T. N. Blanton, "Effects of Processing Conditions on the Quality and Properties of Vapor-Deposited Polyimide Shells."

M. D. Wittman, D. R. Harding, P. W. McKenty, H. Huang, L. S. Iwan, T. J. Kessler, L. Elasky, and J. Sailer, "Layering and Characterization of Solid Deuterium Fuel Layers in Permeation-Filled Cryogenic Targets for OMEGA."

A. V. Tikhonravov, M. K. Trubetskov, I. V. Kockikov, J. B. Oliver, and D. J. Smith, "Real-Time Characterization and Optimization of *E*-Beam Evaporated Optical Coatings," Optical Interference Coatings, Topical Meeting and Tabletop Exhibit, Banff, Alberta, Canada, 15–20 July 2001.

S. D. Jacobs, S. R. Arrasmith, I. A. Kozhinova, S. R. Gorodkin, L. L. Gregg, H. J. Romanofsky, and T. D. Bishop II, "Effects of Changes in Fluid Composition on Magnetorheological Finishing of Glasses and Crystals," 10th International Conference on Precision Engineering (ICPE), Yokohama, Japan, 18–20 July 2001.

The following presentations were made at SPIE's 46th Annual Meeting, The International Symposium on Optical Science and Technology, San Diego, CA, 29 July–3 August 2001:

S. R. Arrasmith, S. D. Jacobs, J. Lambropoulos, A. Maltsev, W. Kordonski, D. Golini, and E. Cleaveland, "The Use of Magnetorheological Finishing (MRF) to Relieve Residual Stress and Subsurface Damage on Lapped Semiconductor Silicon Wafers."

J. E. DeGroot, S. D. Jacobs, L. L. Gregg, and A. E. Marino, "Quantitative Characterization of Optical Polishing Pitch."

I. A. Kozhinova, S. R. Arrasmith, J. C. Lambropoulos, S. D. Jacobs, and H. J. Romanofsky, "Anisotropy in MRF Removal Rate for a Sapphire Single Crystal."

The following presentations were made at the EuroConference on Advanced Diagnostics for Magnetic and Inertial Fusion, Varenna, Italy, 3–7 September 2001:

R. L. Keck, W. R. Donaldson, V. Yu. Glebov, P. A. Jaanimagi, F. J. Marshall, P. W. McKenty, D. D. Meyerhofer, S. P. Regan, W. Seka, C. Stoeckl, and R. Boni, "Laser and X-Ray Irradiation Diagnostics That Have Paved the Path Toward Significantly Improved ICF Target Performance."

W. Seka, R. S. Craxton, R. L. Keck, J. P. Knauer, D. D. Meyerhofer, S. P. Regan, C. Stoeckl, B. Yaakobi, R. E. Bahr, D. Montgomery, B. Baldis, and R. Kirkwood, "Laser-Plasma Interaction Diagnostics for ICF Fusion Research."

C. Stoeckl, J. A. Delettrez, R. Epstein, V. Yu. Glebov, R. L. Keck, R. L. McCrory, P. W. McKenty, F. J. Marshall, D. D. Meyerhofer, P. B. Radha, S. P. Regan, S. Roberts, W. Seka, S. Skupsky, V. A. Smalyuk, C. Sorce, J. M. Soures, R. P. J. Town, B. Yaakobi, J. A. Frenje, C. K. Li, R. D. Petrasso, F. H. Séguin, K. Fletcher, S. Padalino, C. Freeman, N. Izumi, R. Lerche, T. W. Phillips, and T. C. Sangster, "Measuring Core Performance and Mix in Direct-Drive Spherical Implosions on OMEGA."

The following presentations were made at the Second International Conference on Inertial Fusion Sciences and Applications, Kyoto, Japan, 9–14 September 2001:

C. K. Li, F. H. Séguin, J. A. Frenje, S. Kurebayashi, R. D. Petrasso, J. M. Soures, D. D. Meyerhofer, V. Yu. Glebov, P. B. Radha, S. Roberts, W. Seka, C. Stoeckl, and T. C. Sangster, "Charged-Particle Spectroscopy on OMEGA and Recent Results of Capsule Implosion Studies."

D. D. Meyerhofer, J. H. Kelly, R. P. J. Town, L. J. Waxer, S. J. Loucks, R. L. McCrory, W. Seka, and S. Skupsky, "An Integrated Fast Ignitor Experiment for OMEGA."

P. B. Radha, J. A. Delettrez, R. Epstein, V. Yu. Glebov, V. N. Goncharov, R. L. Keck, R. L. McCrory, P. W. McKenty, F. J. Marshall, D. D. Meyerhofer, S. P. Regan, S. Roberts, W. Seka, S. Skupsky, V. A. Smalyuk, C. Sorce, C. Stoeckl, J. M. Soures, R. P. J. Town, B. Yaakobi, J. D. Zuegel, J. A. Frenje, C. K. Li, C. K. Petrasso, F. H. Séguin, K. Fletcher, S. Padalino, C. Freeman, N. Izumi, R. Lerche, T. W. Phillips, and T. C. Sangster, "Compressed Core Conditions in Direct-Drive Spherical Implosions on OMEGA."

S. P. Regan, B. Yaakobi, J. A. Delettrez, V. A. Smalyuk, F. J. Marshall, R. Epstein, V. Yu. Glebov, P. A. Jaanimagi, D. D. Meyerhofer, P. B. Radha, W. Seka, S. Skupsky, J. M. Soures, C. Stoeckl, R. P. J. Town, D. A. Haynes, Jr., C. F. Hooper, C. K. Li, R. D. Petrasso, and F. H. Séguin, "High-Density, Direct-Drive Implosions on OMEGA."

S. Skupsky, R. Betti, T. J. B. Collins, V. N. Goncharov, D. R. Harding, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, and R. P. J. Town, "High-Gain, Direct-Drive Target Designs for the National Ignition Facility."

R. P. J. Town, V. N. Goncharov, P. W. McKenty, J. A. Delettrez, R. Epstein, R. L. McCrory, P. B. Radha, S. Skupsky, V. Yu. Glebov, D. R. Harding, D. D. Meyerhofer, F. J. Marshall, S. P. Regan, W. Seka, V. A. Smalyuk, C. Stoeckl, J. M. Soures, B. Yaakobi, and J. D. Zuegel, "OMEGA Direct-Drive Cryogenic Target Physics."