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## Publications and Conference Presentations

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### Publications

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- S. R. Arrasmith, S. D. Jacobs, J. C. Lambropoulos, A. Maltsev, D. Golini, and W. I. Kordonski, "The Use of Magnetorheological Finishing (MRF) to Relieve Residual Stress and Subsurface Damage on Lapped Semiconductor Silicon Wafers," in *Optical Manufacturing and Testing IV*, edited by H. P. Stahl (SPIE, Bellingham, WA, 2001), Vol. 4451, pp. 286–294.
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## OMEGA External User Publications

- P. A. Amendt, J. D. Colvin, R. E. Tipton, D. E. Hinkel, M. J. Edwards, O. L. Landen, J. D. Ramshaw, L. J. Suter, W. S. Varnum, and R. G. Watt, "Indirect-Drive Noncryogenic Double-Shell Ignition Targets for the National Ignition Facility: Design and Analysis," *Phys. Plasmas* **9**, 2221 (2002).
- C. A. Back, J. Grun, C. Decker, L. J. Suter, J. Davis, O. L. Landen, R. J. Wallace, W. W. Hsing, J. M. Laming, U. Feldman, M. C. Miller, and C. Wuest, "Efficient Multi-keV Underdense Laser-Produced Plasma Radiators," *Phys. Rev. Lett.* **87**, 275003 (2001).
- D. K. Bradley, O. L. Landen, A. B. Bullock, S. G. Glendinning, and R. E. Turner, "Efficient 1–100-keV X-Ray Radiography with Spatial and Temporal Resolution," *Opt. Lett.* **27**, 134 (2002).
- A. C. Calder and E. Y. M. Wang, "Numerical Models of Binary Neutron Star System Mergers. II. Coalescing Models with Post-Newtonian Radiation Reaction Forces," *Astrophys. J.* **570**, 303 (2002).
- L. Disdier, A. Rouyer, D. C. Wilson, A. Fedotoff, C. Stoeckl, J.-L. Bourgade, V. Yu. Glebov, J.-P. Garçonnet, and W. Seka, "High-Resolution Neutron Imaging of Laser-Imploded DT Targets," *Nucl. Instrum. Methods Phys. Res. A* **489**, 496 (2002).
- R. P. Drake and P. A. Keiter, "Rayleigh–Taylor Growth in Decelerating Interfaces," *Phys. Plasmas* **9**, 382 (2002).
- R. P. Drake, H. F. Robey, O. A. Hurricane, Y. Zhang, B. A. Remington, J. P. Knauer, J. Glimm, D. Arnett, J. O. Kane, K. S. Budil, and J. Grove, "Experiments to Produce a Hydrodynamically Unstable Spherically Diverging System of Relevance to Instabilities in Supernovae," *Astrophys. J.* **564**, 896 (2002).
- R. K. Fisher, R. B. Stephens, L. Disdier, J. L. Bourgade, A. Rouyer, P. A. Jaanimagi, T. C. Sangster, R. A. Lerche, and N. Izumi, "High-Resolution Neutron Imaging of Laser Fusion Targets Using Bubble Detectors," *Phys. Plasmas* **9**, 2182 (2002).
- J. M. Foster, B. H. Wilde, P. A. Rosen, T. S. Perry, M. Fell, M. J. Edwards, B. F. Lasinski, R. E. Turner, and M. L. Gittings, "Supersonic Jet and Shock Interactions," *Phys. Plasmas* **9**, 2251 (2002).
- J. A. Frenje, C. K. Li, F. H. Séguin, D. G. Hicks, S. Kurebayashi, R. D. Petrasso, S. Roberts, V. Yu. Glebov, D. D. Meyerhofer, T. C. Sangster, J. M. Soures, C. Stoeckl, C. Chiritescu, G. J. Schmid, and R. A. Lerche, "Absolute Measurements of Neutron Yields from DD and DT Implosions at the OMEGA Laser Facility Using CR-39 Track Detectors," *Rev. Sci. Instrum.* **73**, 2597 (2002).
- D. H. Kalantar, A. M. Allen, F. Gregori, B. Kad, M. Kumar, K. T. Lorenz, A. Loveridge, M. A. Meyers, S. Pollaine, B. A. Remington, and J. S. Wark, "Laser-Driven, High-Pressure, High-Strain-Rate Materials Experiments," in *Shock Compression of Compressed Matter–2001*, AIP Conference Proceedings 620, edited by M. D. Furnish, N. N. Thadhani, and Y. Horie (American Institute of Physics, New York, 2002), pp. 615–618.
- O. L. Landen, S. H. Glenzer, M. J. Edwards, R. W. Lee, G. W. Collins, R. C. Cauble, W. W. Hsing, and B. A. Hammel, "Dense Matter Characterization by X-Ray Thomson Scattering," *J. Quant. Spectrosc. Radiat. Transf.* **7**, 465 (2001).
- A. B. Langdon and D. E. Hinkel, "Nonlinear Evolution of Stimulated Scatter in High-Temperature Plasmas," *Phys. Rev. Lett.* **89**, 015003 (2002).
- M. A. Meyers, F. Gregori, B. K. Kad, M. S. Schneider, D. H. Kalantar, B. A. Remington, J. S. Wark, T. Boehly, and G. Ravichandran, "Plastic Deformation in Laser-Induced Shock Compression of Monocrystalline Copper," in *Shock Compression of Compressed Matter–2001*, AIP Conference Proceedings 620, edited by M. D. Furnish, N. N. Thadhani, and Y. Horie (American Institute of Physics, New York, 2002), pp. 619–622.
- A. Nickroo, D. G. Czechowicz, E. R. Castillo, and J. M. Pontelandolfo, "Recent Progress in Fabrication of High-Strength Glow Discharge Polymer Shells by Optimization of Coating Parameters," *Fusion Sci. Technol.* **41**, 214 (2002).
- H. F. Robey, T. S. Perry, R. I. Klein, J. O. Kane, J. A. Greenough, and T. R. Boehly, "Experimental Investigation of the Three-Dimensional Interaction of a Strong Shock with a Spherical Density Inhomogeneity," *Phys. Rev. Lett.* **89**, 085001 (2002).

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**Conference Presentations**


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S. Papernov and A. W. Schmid, "Establishing Links Between Single Gold Nanoparticles Buried Inside SiO<sub>2</sub> Thin Film and 351-nm Pulsed Laser Damage Morphology," XXXIII Annual Symposium on Optical Materials for High Power Lasers, Boulder, CO, 1–3 October 2001.

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K. L. Marshall, I. A. Lipka, S. Kinsella, M. S. Moore, S. M. Corsello, and A. Ayub, "Chiral Transition Metal Dithiolene Dye Complexes and Their Potential Applications in Liquid Crystal Devices," OSA Annual Meeting and Exhibit 2001, Long Beach, CA, 14–18 October 2001.

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B. Yaakobi, F. J. Marshall, T. R. Boehly, R. P. J. Town, D. D. Meyerhofer, and W. Seka, "EXAFS Detection of Laser Shock Heating," Applications of High Field and Short Wavelength Sources IX, Palm Springs, CA, 21–24 October 2001.

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The following presentations were made at the 43rd Annual Meeting of the APS Division of Plasma Physics, Long Beach, CA, 29 October–2 November 2001:

K. Anderson, R. Betti, and T. A. Gardiner, "Two-Dimensional Computational Model of Energy Gain in NIF Capsules."

R. Betti, V. N. Goncharov, J. P. Knauer, P. W. McKenty, D. D. Meyerhofer, R. L. McCrory, S. Skupsky, and R. P. J. Town, "Deceleration Phase of Inertial Confinement Fusion Implosions" (invited).

T. R. Boehly, T. J. B. Collins, D. D. Meyerhofer, W. J. Armstrong, D. K. Bradley, R. Cauble, P. M. Celliers, G. W. Collins, and S. G. Glendinning, "Measurements of the Equation of State of Carbon Foams."

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

J. A. Delettrez, V. A. Smalyuk, F. J. Marshall, P. B. Radha, and B. Yaakobi, "Simulations of the Effect of Nonuniformity on Shell Conditions in Implosions on the OMEGA Laser."

R. Epstein, J. A. Delettrez, V. N. Goncharov, P. W. McKenty, P. B. Radha, C. Stoeckl, and S. Skupsky, "One-Dimensional Simulation of the Effects of Unstable Mix on Laser-Driven Implosion Experiments."

J. A. Frenje, C. K. Li, F. H. Séguin, S. Kurebayashi, R. D. Petrasso, P. B. Radha, J. M. Soures, D. D. Meyerhofer, V. Yu. Glebov, S. Roberts, C. Stoeckl, and T. C. Sangster, "Studies of Fuel  $rR$  on OMEGA from DTH-Gas-Filled Capsules."

T. A. Gardiner, R. Betti, and L. Guazzotto, "Two-Dimensional MHD Simulation of Tokamak Plasmas with Poloidal Flow."

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

V. N. Goncharov, R. Betti, J. A. Marozas, P. W. McKenty, S. Skupsky, and R. P. J. Town, "Optimization of Direct-Drive Target Designs for the NIF."

O. V. Gotchev, V. N. Goncharov, P. A. Jaanimagi, J. P. Knauer, and D. D. Meyerhofer, "Streaked X-Ray Imager for Observation of Oscillations of Perturbed Ablation Fronts in Planar ICF Targets During Shock Transit."

D. R. Harding, M. D. Wittman, L. Elasky, L. S. Iwan, and L. D. Lund, "Forming Uniform Deuterium Ice Layers in Cryogenic Targets: Experiences Using the OMEGA Target Handling System."

C. K. Li, F. H. Séguin, J. A. Frenje, S. Kurebayashi, R. D. Petrasso, D. D. Meyerhofer, J. M. Soures, V. Yu. Glebov, P. B. Radha, S. P. Regan, S. Roberts, S. Skupsky, C. Stoeckl, and T. C. Sangster, "Direct-Drive, Spherical Implosions of OMEGA Capsules with 3 to 15 atm of Gas Fill."

J. A. Marozas, "A Reduced-Autocorrelation Phase-Plate Design for OMEGA and NIF."

F. J. Marshall, J. A. Delettrez, R. L. Keck, J. H. Kelly, P. B. Radha, and L. J. Waxer, "Direct-Drive Implosion Experiments with Enhanced Beam Balance on the OMEGA Laser."

D. D. Meyerhofer, B. Yaakobi, F. J. Marshall, T. R. Boehly, and R. P. J. Town, "EXAFS Detection of Laser Shock Heating."

R. D. Petrasso, C. K. Li, F. H. Séguin, J. A. Frenje, S. Kurebayashi, P. B. Radha, D. D. Meyerhofer, J. M. Soures, J. A. Delettrez, C. Stoeckl, S. Roberts, V. Yu. Glebov, W. Seka, C. Chiritescu, and T. C. Sangster, "Experimental Inferences of  $rR$  Evolution and the Spatial Extent of Mix from the  $D^3He$ , 14.7-MeV Proton Line Structure."

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. A. Frenje, C. K. Li, R. D. Petrasso, F. H. Séguin, K. Fletcher, S. Padalino, C. Freeman, N. Izumi, R. A. Lerche, T. W. Phillips, and T. C. Sangster, "Inferences of Mix in Direct-Drive Spherical Implosion on OMEGA" (invited).

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

F. H. Séguin, R. D. Petrasso, C. K. Li, J. A. Frenje, S. Kurebayashi, J. A. Delettrez, J. M. Soures, D. D. Meyerhofer, F. J. Marshall, V. A. Smalyuk, S. Roberts, and T. C. Sangster, "Charged-Particle Measurements of Shell Asymmetries in Imploded Capsules on OMEGA."

W. Seka, S. P. Regan, D. D. Meyerhofer, B. Yaakobi, C. Stoeckl, R. S. Craxton, R. W. Short, H. Baldis, J. Fuchs, and C. Labaune, "Stimulated Brillouin Sidescatter and Backscatter in NIF-Scale Direct-Drive Plasmas."

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

V. A. Smalyuk, J. A. Delettrez, V. N. Goncharov, F. J. Marshall, D. D. Meyerhofer, S. P. Regan, and B. Yaakobi, "Measurements of the Growth of Shell Nonuniformities in the Deceleration Phase of Spherical Implosions."

J. M. Soures, D. D. Meyerhofer, J. A. Delettrez, V. Yu. Glebov, J. A. Marozas, F. J. Marshall, P. B. Radha, S. P. Regan, S. Roberts, S. Seka, S. Skupsky, V. A. Smalyuk, C. Stoeckl, R. D. Petrasso, C. K. Li, F. H. Séguin, J. A. Frenje, and T. C. Sangster, "Comparison of the Effect of Different SSD Beam-Smoothing Configurations on Direct-Drive Capsule Implosions."

C. Stoeckl, C. Chiritescu, 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, D. D. Meyerhofer, S. F. B. Morse, S. P. Regan, P. B. Radha, S. Roberts, W. Seka, S. Skupsky, V. A. Smalyuk, C. Sorce, J. M. Soures, R. P. J. Town, J. A. Frenje, C. K. Li, R. D. Petrasso, F. H. Séguin, K. Fletcher, S. Padalino, C. Freeman, N. Izumi, R. A. Lerche, T. W. Phillips, and T. C. Sangster, "First Results from Cryogenic-Target Implosions on OMEGA" (invited).

S. L. Sublett, J. P. Knauer, D. D. Meyerhofer, S. Skupsky, A. Frank, and A. Y. Poludenenko, "Properties of  $SiO_2$  Aerogels Suitable for Astrophysical Experiments."

A. Sunahara, J. A. Delettrez, R. W. Short, and S. Skupsky, "Fokker-Planck Calculation of the ICF Implosion."

R. P. J. Town, J. A. Delettrez, R. Epstein, V. N. Goncharov, R. L. McCrory, P. W. McKenty, P. B. Radha, and S. Skupsky, "OMEGA Direct-Drive Cryogenic-Target Physics."

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The following presentations were made at the 6th International Conference on Tritium Science and Technology, Tsukuba, Japan, 6–11 November 2001:

H. Brunnader, W. T. Shmayda, D. R. Harding, L. D. Lund, and R. Janezic, "Advanced Tritium Recovery System."

W. T. Shmayda, A. Bruggeman, J. Braet, and S. Vanderbiesen, "Treatment of Tritiated Solvents."

W. T. Shmayda and R. D. Gallagher, "Recovery of Tritium from Pharmaceutical Mixed Waste Liquids."

C. R. Shmayda, W. T. Shmayda, and N. P. Kherani, "Monitoring Tritium Activity on Surfaces: Recent Developments."

W. T. Shmayda, S. Zukotynski, D. Yeghikyan, and F. Gaspari, "Properties of Amorphous Carbon Films."

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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 Implosion Experiments," 8th International Workshop on the Physics of Compressible Turbulent Mixing, Pasadena, CA, 9–14 December 2001.

A. Sunahara, J. A. Delettrez, R. W. Short, S. Skupsky, and H. Takabe, "Nonlocal Electron Thermal Conduction in Laser Implosions," 15th Computational Fluid Dynamics Symposium, Tokyo, Japan, 19–21 December 2001.

D. D. Meyerhofer, B. Yaakobi, T. R. Boehly, F. J. Marshall, and R. P. J. Town, "EXAFS Detection of Heating of Metals by Shocks and Radiation," JOWOG 37, Lawrence Livermore National Laboratory, 28 January–1 February 2002.

A. V. Okishev, D. Battaglia, I. Begishev, and J. D. Zuegel, "Highly Stable, Diode-Pumped, Cavity-Dumped Nd:YLF Regenerative Amplifier for the OMEGA Laser Fusion Facility," OSA Advanced Solid-State Lasers, Quebec City, Canada, 3–6 February 2002.

W. Seka, "Laser-Plasma Interaction Studies on OMEGA Relevant to Direct-Drive NIF Ignition Targets," LULI Seminar, St. Lary, France, 4 March 2002.

W. T. Shmayda and R. D. Gallagher, "Recovery of Tritium from Pharmaceutical Mixed Waste Liquids and Solid Absorbents," 4th International Conference on Isotopes, Cape Town, South Africa, 10–14 March 2002.

J. D. Kilkenny, R. L. McCrory, D. D. Meyerhofer, S. F. B. Morse, J. H. Kelly, T. J. Kessler, S. J. Loucks, P. W. McKenty, C. Stoeckl, R. P. J. Town, L. J. Waxer, and J. D. Zuegel, "OMEGA EP: Extended-Performance Capability for the OMEGA Laser System, Including Short-Pulse Capability," Workshop on Ultra-High Field Laser Physics, Chilton, Oxford, 10–12 April 2002.

The following presentations were made at the 2002 International Sherwood Fusion Theory Conference, Rochester, NY, 22–24 April 2002:

T. Gardiner and R. Betti, "Magnetohydrodynamic Equilibria with Pedestals Induced by Poloidal Flow."

L. Guazzotto and R. Betti, "Stabilization of the Resistive Wall Mode by Differentially Rotating Walls in a High- $b$  Tokamak."

D. D. Meyerhofer, "Direct-Drive Inertial Confinement Fusion Research: Theory and Experiments."

R. W. Short, "Linear Undamped Waves in Near-Maxwellian Plasmas with Applications to Stimulated Raman Scattering in Laser-Produced Plasmas."

The following presentations were made at the CLEO/QELS 2002, Long Beach, CA, 19–24 May 2002:

S. G. Lukishova, R. W. Boyd, N. Lepeshkin, R. S. Bennik, and K. L. Marshall, "Feedback-Free Kaleidoscope of Patterns from Nanosecond Laser-Irradiated Nematic Liquid."

A. V. Okishev, D. Battaglia, I. Begishev, and J. Zuegel, "All Solid-State Diode-Pumped Regenerative Amplifier for the OMEGA Laser System."

L. J. Waxer, J. H. Kelly, J. A. Marozas, A. Babushkin, J. Rothenburg, C. Bibeau, A. Bayramian, R. Beach, and S. Payne, "Precision Spectral Shaping Applied to FM Pulses."

T. R. Boehly, T. J. B. Collins, D. D. Meyerhofer, D. K. Bradley, R. Cauble, P. M. Celliers, C. W. Collins, S. G. Glendinning, and D. G. Hicks, "Measurements of the Equation of State of Carbon Foams," International Conference on Warm, Dense Matter, Hamburg, Germany, 3–5 June 2002 (invited).

J. Li, W. R. Donaldson, and T. Y. Hsiang, "Packaging for a High-Speed Interdigitated GaN UV Photodetector," The 8th International Conference on Electronic Materials, IUMRS-ICEM2002, Xi'an, China, 10–14 June 2002.

S. G. Lukishova, R. W. Boyd, N. Lepeshkin, R. S. Bennink, and K. L. Marshall, "Feedback-Free Hexagon Pattern Formation with Nematic Liquid Crystals," IQEC 2002 International Quantum Electronics Conference, Moscow, Russia, 22–28 June 2002.

T. Z. Kosci, K. L. Marshall, S. D. Jacobs, and J. C. Lambropoulos, "Electric Field-Induced Rotation of Polymer Cholesteric Liquid Crystal Flakes: Mechanisms and Applications," International Symposium on Optical Science and Technology, Seattle, WA, 7–11 July 2002.

The following presentations were made at the 14th Topical Conference on High-Temperature Plasma Diagnostics, Madison, WI, 8–11 July 2002:

V. Yu. Glebov, C. Stoeckl, T. C. Sangster, D. D. Meyerhofer, P. B. Radha, S. Padalino, L. Baumgart, R. Coburn, and J. Fuschino, "Carbon Activation Diagnostic for Tertiary Neutron Measurements."

O. V. Gotchev, P. A. Jaanimagi, J. P. Knauer, F. J. Marshall, D. D. Meyerhofer, N. Bassett, and J. B. Oliver, "High-Throughput, High-Resolution, Kirkpatrick-Baez Microscope for Advanced Streaked Imaging of ICF Experiments on OMEGA."

D. L. McCrorey, R. C. Mancini, V. A. Smalyuk, S. P. Regan, and B. Yaakobi, "Spectroscopic Determination of Compressed-Shell Conditions in OMEGA Implosions Based on Ti *K*-Shell Line Absorption Analysis."

C. Stoeckl, V. Yu. Glebov, S. Roberts, T. C. Sangster, R. A. Lerche, and C. Sorce, "A TIM-Based Neutron Diagnostic for Cryogenic Experiments on OMEGA."

The following presentations were made at the 32nd Anomalous Absorption Conference, Oahu, HI, 21–26 July 2002:

J. A. Delettrez, J. P. Knauer, P. A. Jaanimagi, W. Seka, and C. Stoeckl, "Numerical Investigation of Recent Laser Absorption and Drive Experiments of CH Spherical Shells on the OMEGA Laser."

V. N. Goncharov, J. P. Knauer, P. W. McKenty, S. Skupsky, T. C. Sangster, R. Betti, and D. D. Meyerhofer, "Adiabatic Shaping of Direct-Drive Inertial Confinement Fusion (ICF) Implosions Using a High-Intensity Picket."

C. K. Li, F. H. Séguin, J. A. Frenje, S. Kurebayashi, R. D. Petrasso, D. D. Meyerhofer, J. M. Soures, J. A. Delettrez, V. Yu. Glebov, F. J. Marshall, P. B. Radha, S. P. Regan, S. Roberts, T. C. Sangster, and C. Stoeckl, "Effects of Fuel-Shell Mix on Direct-Drive, Spherical Implosions on OMEGA."

A. Maximov, J. Myatt, and R. W. Short, "Nonlinear Propagation of Laser Beams in Plasmas Near a Critical-Density Surface."

J. Myatt, A. Maximov, and R. W. Short, "Modeling Laser-Plasma Interaction Physics Under Direct-Drive Inertial Confinement Fusion Conditions."

R. D. Petrasso, R. Rygg, J. A. Frenje, C. K. Li, F. H. Séguin, S. Kurebayashi, B.-E. Schwartz, P. B. Radha, J. M. Soures, J. A. Delettrez, V. Yu. Glebov, D. D. Meyerhofer, S. Roberts, T. C. Sangster, C. Stoeckl, and S. Hatchett, "Capsule Areal-Density Nonuniformities and Evolution Inferred from 14.7-MeV Proton Line Structure in OMEGA D<sup>3</sup>He Implosions."

S. P. Regan, R. S. Craxton, J. A. Delettrez, D. D. Meyerhofer, T. C. Sangster, W. Seka, and B. Yaakobi, "Experimental Investigation of Expansion Velocity and Gradients in Long-Scale-Length Plasmas on OMEGA."

W. Seka, C. Stoeckl, B. Yaakobi, R. S. Craxton, R. W. Short, and H. Baldis, "Fast-Electron Preheat of Direct-Drive Targets Due to the Two-Plasmon-Decay Instability."

R. W. Short, "A Linear Model of Anomalous Stimulated Raman Scattering and Electron-Acoustic Waves in Laser-Produced Plasmas."

V. A. Smalyuk, J. A. Delettrez, R. Epstein, V. N. Goncharov, F. J. Marshall, D. D. Meyerhofer, S. P. Regan, T. C. Sangster, B. Yaakobi, D. L. McCrorey, and R. C. Mancini, "Measurements of Heat Propagation in Compressed Shells in Direct-Drive Spherical Implosions on OMEGA."

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V. A. Smalyuk, P. B. Radha, J. A. Delettrez, V. Yu. Glebov, V. N. Goncharov, J. P. Knauer, D. D. Meyerhofer, S. P. Regan, S. Roberts, T. C. Sangster, S. Skupsky, J. M. Soures, C. Stoeckl, R. P. J. Town, J. A. Frenje, C. K. Li, R. D. Petrasso, and F. H. Séguin, "Areal-Density-Growth Measurements with Proton Spectroscopy in Spherical Implosions on OMEGA."

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S. G. Lukishova, A. W. Schmid, and R. W. Boyd, "Near-Field Optical Microscopy of Cholesteric Oligomer Liquid Crystal Layers," 7th International Conference on Near-Field Optics and Related Techniques, Rochester, NY, 11–15 August 2002.

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D. W. Griffin and K. L. Marshall, "Phase-Shifting Liquid Crystal Interferometers for Microgravity Fluid Physics," 6th Microgravity Fluid Physics and Transport Phenomena Conference, Cleveland OH, 14–16 August 2002.

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S. Papernov and A. W. Schmid, "Damage Behavior of SiO<sub>2</sub> Thin Films Containing Gold Nanoparticles Lodged on a Pre-determined Distance from the Film Surface," XXXIV Annual Symposium on Optical Materials for High-Power Lasers, Boulder, CO, 16–19 September 2002.

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S. P. Regan, J. A. Delettrez, F. J. Marshall, J. M. Soures, V. A. Smalyuk, B. Yaakobi, R. Epstein, V. Yu. Glebov, P. A. Jaanimagi, D. D. Meyerhofer, P. B. Radha, T. C. Sangster, W. Seka, S. Skupsky, C. Stoeckl, D. A. Haynes, Jr., I. E. Golovkin, J. A. Frenje, C. K. Li, R. D. Petrasso, and F. H. Séguin, "Experimental Investigation of Shell Mix in the Compressed Core of Spherical Implosions Involving Hot, Dense Spectroscopy," 10th International Workshop on Radiative Properties of Hot Dense Matter, Saint-Malo, Brittany, France, 16–20 September 2002.

S. D. Jacobs, H. M. Pollicove, E. M. Fees, and J. Schoen, "Aspheric Optics Manufacturing for Commercial and Military Systems," First Symposium for Explosive Materials, Weapons, and Military Technology, Ohrid, Republic of Macedonia, 25–28 September 2002.

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The following presentations were made at the 2002 OSA Annual Meeting, Orlando, FL, 29 September–3 October 2002:

M. J. Guardalben, J. Keegan, L. J. Waxer, and J. D. Zuegel, "Stability of Optical Parametric Amplification: Spatiotemporal Considerations in the Design of an OPCPA System."

S. G. Lukishova, R. W. Boyd, N. Lepeshkin, A. W. Schmid, and K. L. Marshall, "Feedback-Free Pattern Formation in Dye-Doped Liquid Crystals and Isotropic Liquids."

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