
Publications and Conference Presentations

Publications

E. L. Alfonso, S.-H. Chen, R. Q. Gram, and D. R. Harding, “Properties of Polyimide Shells Made Using Vapor Phase Deposition,” *J. Mater. Res.* **13**, 2988 (1998).

A. Babushkin, R. S. Craxton, S. Oskoui, M. J. Guardalben, R. L. Keck, and W. Seka, “Demonstration of the Dual-Tripler Scheme for Increased-Bandwidth Third-Harmonic Generation,” *Opt. Lett.* **23**, 927 (1998).

A. Babushkin and W. Seka, “Efficient, End-Pumped, 1053-nm Nd:YLF Laser,” in *Advanced Solid State Lasers*, edited by W. R. Bosenberg and M. M. Fejer, OSA Trends in Optics and Photonics Series, Vol. 19 (Optical Society of America, Washington, DC, 1998), pp. 111–113.

A. Babushkin, W. Seka, S. A. Letzring, W. Bittle, M. Labuzeta, M. Miller, and R. Roides, “Multicolor Fiducial Laser for Streak Cameras and Optical Diagnostics for the OMEGA Laser System,” in *22nd International Congress on High-Speed Photography and Photonics*, edited by D. L. Paisley and A. M. Frank (SPIE, Bellingham, WA, 1997), Vol. 2869, pp. 540–544.

R. Betti, “Beta Limits for the $N=1$ Mode in Rotating-Toroidal-Resistive Plasmas Surrounded by a Resistive Wall,” *Phys. Plasmas* **5**, 3615 (1998).

R. Betti, V. N. Goncharov, R. L. McCrory, and C. P. Verdon, “Feedthrough and Dynamic Stabilization in Convergent Geometry,” in *Laser Interaction and Related Plasma Phenomena*, edited by G. H. Miley, E. M. Campbell, W. J. Hogan, C. Maille-Petersen, H. Coppedge, and E. Montoya (American Institute of Physics, New York, 1997), Vol. 406, pp. 294–302.

R. Betti, V. N. Goncharov, R. L. McCrory, and C. P. Verdon, “Growth Rates of the Ablative Rayleigh–Taylor Instability in Inertial Confinement Fusion,” *Phys. Plasmas* **5**, 1446 (1998).

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S. E. Bodner, D. G. Colombant, J. H. Gardner, R. H. Lehmburg, S. P. Obenschain, L. Phillips, A. J. Schmitt, J. D. Sethian, R. L. McCrory, W. Seka, C. P. Verdon, J. P. Knauer, B. B. Afeyan, and H. T. Powell, “Direct-Drive Laser Fusion: Status and Prospects,” *Phys. Plasmas* **5**, 1901 (1998).

T. R. Boehly, R. L. McCrory, C. P. Verdon, J. M. Soures, A. Babushkin, R. E. Bahr, R. Boni, D. K. Bradley, R. S. Craxton, J. A. Delettrez, W. R. Donaldson, R. Epstein, D. R. Harding, P. A. Jaanimagi, S. D. Jacobs, K. Kearney, R. L. Keck, J. H. Kelly, T. J. Kessler, R. L. Kremens, J. P. Knauer, S. A. Letzring, D. J. Lonobile, S. J. Loucks, L. D. Lund, F. J. Marshall, P. W. McKenty, D. D. Meyerhofer, S. F. B. Morse, A. Okishev, S. Papernov, G. Pien, T. Safford, W. Seka, R. W. Short, M. J. Shoup III, M. D. Skeldon, S. Skupsky, A. W. Schmid, D. J. Smith, S. Swales, M. D. Wittman, and B. Yaakobi, “The First Year of ICF Experiments at the OMEGA Laser Facility,” in *Fusion Energy 1996* (IAEA, Vienna, 1997), Vol. 3, pp. 31–42.

T. R. Boehly, V. A. Smalyuk, D. D. Meyerhofer, J. P. Knauer, D. K. Bradley, C. P. Verdon, and D. Kalantar, “The Effect of Increased Irradiation Uniformity on Imprinting by 351-nm Laser Light,” in *Laser Interaction and Related Plasma Phenomena*, edited by G. H. Miley, E. M. Campbell, W. J. Hogan, C. Maille-Petersen, H. Coppedge, and E. Montoya (American Institute of Physics, New York, 1997), Vol. 406, pp. 122–129.

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- D. J. Smith, J. F. Anzellotti, S. Papernov, and Z. R. Chrzan, "High Laser-Induced-Damage Threshold Polarizer Coatings for 1054 nm," in *Laser-Induced Damage in Optical Materials: 1996*, edited by H. E. Bennett, A. H. Guenther, M. R. Kozlowski, B. E. Newnam, and M. J. Soileau (SPIE, Bellingham, WA, 1997), Vol. 2966, p. 250.
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- M. Yu, C. J. McKinstry, and G. P. Agrawal, "Temporal Modulational Instabilities of Counterpropagating Light Waves in a Finite Dispersive Kerr Medium, Part I: Theoretical Model and Analysis," *J. Opt. Soc. Am. B* **15**, 607 (1998).
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Conference Presentations

The following presentations were made at the XXIX Annual Symposium on Optical Materials for High Power Lasers, Boulder, CO, 6–8 October 1997:

S. Papernov, D. Zaksas, and A. W. Schmid, “A Nonlinear UV-Damage Mechanism in Polymer Thin Films Observed from Below to Above Damage Threshold.”

S. Papernov, D. Zaksas, and A. W. Schmid, “Perfluorinated Polymer Films with Extraordinary UV-Laser-Damage Resistance.”

S.-H. Chen, J. C. Mastrangelo, B. M. Conger, and D. Katsis, “Design, Synthesis, and Potential Application of Glass-Forming Functional Organic Materials,” 6th International Polymer Conference, Kusatsu, Japan, 20–24 October 1997 (invited).

The following presentations were made at the 39th Annual Meeting, APS Division of Plasma Physics, Pittsburgh, PA, 17–21 November 1997:

R. Betti and E. Fedutenko, “Beta Limits in Rotating-Toroidal Plasmas.”

T. R. Boehly, V. A. Smalyuk, D. D. Meyerhofer, J. P. Knauer, D. K. Bradley, C. P. Verdon, and D. Kalanter, “The Reduction of Laser Imprinting Produced by Distributed Polarization Rotators—A New Beam-Smoothing Technique.”

D. K. Bradley, “Measurements of Fuel-Pusher Mixing in Spherical Imploding Targets on the OMEGA Laser System” (invited).

J. J. Carroll III, R. P. Drake, T. B. Smith, N. A. Maslov, W. Seka, D. D. Meyerhofer, and R. S. Craxton, “Optical Spectroscopy System for Use on OMEGA Long-Scale-Length Plasma Experiments.”

A. V. Chirokikh, R. S. Craxton, D. D. Meyerhofer, A. Simon, W. Seka, and R. P. Drake, “Stimulated Brillouin Scattering in Plasmas with Long-Density-Scale Lengths on OMEGA.”

R. S. Craxton, D. K. Bradley, A. V. Chirokikh, D. D. Meyerhofer, W. Seka, B. Yaakobi, and R. P. Drake, “Design of Long-Scale-Length Plasma Experiments on OMEGA.”

J. A. Delettrez, D. K. Bradley, R. Epstein, and C. P. Verdon, “Two-Dimensional Modeling of Imprint and Feedthrough in OMEGA Mix Spherical Experiments.”

R. Epstein, J. A. Delettrez, D. K. Bradley, and C. P. Verdon, “Simulations in One Dimension of Unstable Mix in Laser-Driven Implosion Experiments.”

E. Fedutenko and R. Betti, “Second Stability Region for Low- n External Kinks.”

V. N. Goncharov, R. Betti, R. L. McCrory, and C. P. Verdon, “Linear Evolution of the Outer and Inner Surfaces of Imploding Spherical Shells.”

A. V. Kanaev, C. J. McKinstry, V. T. Tikhonchuk, R. E. Giaccone, and H. X. Vu, “Three-Dimensional Analysis of the Power Transfer Between Crossed Laser Beams.”

J. P. Knauer, C. P. Verdon, R. Betti, D. D. Meyerhofer, T. R. Boehly, D. K. Bradley, and V. A. Smalyuk, “Comparison of Experimentally Measured Rayleigh–Taylor Growth to Hydrodynamic Simulations.”

V. Lobatchev, R. Betti, V. N. Goncharov, R. L. McCrory, and C. P. Verdon, “Dynamic Stabilization of Imploding Cryogenic Capsules.”

F. J. Marshall, D. K. Bradley, J. A. Delettrez, P. A. Jaanimagi, R. L. Kremens, C. P. Verdon, B. Yaakobi, and M. D. Cable, “Further Surrogate Cryogenic Target Experiments on OMEGA.”

P. W. McKenty, R. L. Keck, R. L. Kremens, K. J. Kearney, C. P. Verdon, J. D. Zuegel, M. D. Cable, T. J. Ognibene, R. A. Lerche, and R. L. Griffith, “Initial Neutron Burn Truncation Experiments on OMEGA.”

D. D. Meyerhofer, D. K. Bradley, A. V. Chirokikh, R. S. Craxton, W. Seka, R. P. J. Town, B. Yaakobi, and R. P. Drake, “Characterization of Long-Scale-Length Plasmas Created Using the OMEGA Laser System.”

- T. J. Murphy, J. Wallace, K. A. Klare, J. A. Oertel, C. W. Barnes, N. D. Delamater, P. Gobby, A. A. Hauer, E. Lindman, G. Magelssen, O. L. Landen, S. Pollaine, P. Amendt, C. Decker, L. Suter, B. Hammel, R. Turner, R. Wallace, R. S. Craxton, F. J. Marshall, D. Bradley, D. Harding, K. Kearney, R. Keck, J. Knauer, R. Kremens, W. Seka, M. Cable, and J. Schnittman, "Experiments Utilizing Spherical Hohlraums with Tetrahedral Illumination on OMEGA."
- W. Seka, D. D. Meyerhofer, A. V. Chirokikh, D. K. Bradley, R. S. Craxton, and A. Simon, "Laser-Plasma-Interaction Physics on OMEGA Implosion Experiments."
- R. W. Short and A. Simon, "Collisionless Damping of Localized Plasma Waves and Stimulated Raman Scattering in Laser-Produced Plasmas."
- A. Simon and R. W. Short, "Transit-Time Damping, Landau Damping, and Perturbed Orbits."
- V. A. Smalyuk, T. R. Boehly, D. D. Meyerhofer, J. P. Knauer, D. Bradley, W. Seka, and C. P. Verdon, "Studies of the 3-D Evolution of Imprinting in Planar Targets Accelerated by UV Light."
- R. P. J. Town, R. W. Short, C. P. Verdon, B. B. Afeyan, S. H. Glenzer, and L. J. Suter, "The Role of Nonlocal Heat Flow in Hohlraums."
- E. J. Turano, C. J. McKinstry, and A. V. Kanaev, "Oblique Stimulated Raman Scattering of a Short Laser Pulse in a Plasma Channel."
- J. M. Wallace, K. A. Klare, T. J. Murphy, N. D. Delamater, E. L. Lindman, G. R. Magelssen, A. A. Hauer, S. M. Pollaine, R. E. Turner, R. S. Craxton, and J. D. Schnittman, "Analysis of Indirect-Drive, Tetrahedral-Hohlraum Experiments at OMEGA."
- J. D. Zuegel, R. L. Kremens, K. J. Kearney, P. W. McKenty, C. P. Verdon, and M. D. Cable, "Wide-Dynamic-Range, Neutron Bang Time Detector on OMEGA."
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- S. D. Jacobs, H. M. Pollicove, W. I. Kordonski, and D. Golini, "Magnetorheological Finishing (MRF) in Deterministic Optics Manufacturing," ICPE '97, Taipei, Taiwan, 20–22 November 1997.
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- D. Katsis, S.-H. Chen, H. Shi, and A. W. Schmid, "Circular Dichroism Induced in Chiral-Nematic Films," Materials Research Society 1997 Fall Meeting, Boston, MA, 1–5 December 1997.
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- A. Babushkin and W. Seka, "Efficient End-Pumped 1053-nm YLF:Nd Laser," Advanced Solid-State Lasers—Thirteenth Topical Meeting, Coeur D'Alene, Idaho, 2–4 February 1998.
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- S. J. Loucks, R. L. McCrory, S. F. B. Morse, W. Seka, T. R. Boehly, R. Boni, T. H. Hinterman, R. L. Keck, J. H. Kelly, T. J. Kessler, L. D. Lund, D. D. Meyerhofer, A. V. Okishev, G. Pien, M. J. Shoup III, D. J. Smith, and K. A. Thorp, "OMEGA Architecture, Capabilities, and Operations," JOWOG 37, Los Alamos, NM, 2–5 February 1998.
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- W. Kordonski, D. Golini, P. Dumas, S. Hogan, and S. Jacobs, "Magnetorheological Suspension-Based Finishing Technology (MRF)," SPIE's 5th Annual International Symposium on Smart Structures and Materials, San Diego, CA, 1–5 March 1998.
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- A. Chirokikh, D. D. Meyerhofer, W. Seka, R. S. Craxton, and A. Simon, "Stimulated Brillouin Scattering in Long-Scale-Length Plasmas on the OMEGA Laser System," XXV Zvenigorod Conference on Plasma Physics and Fusion, Zvenigorod, Russia, 2–6 March 1998.
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- A. Simon, "Transit-Time Damping and a New Physical Picture for Landau Damping," Physics Department of the National Cheng Kung University, Taiwan, China, 9 March 1998.
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- The following presentations were made at the Second International Workshop on Laboratory Astrophysics with Intense Lasers, Tucson, AZ, 19–21 March 1998:
- T. R. Boehly, D. D. Meyerhofer, J. P. Knauer, D. K. Bradley, T. Collins, J. A. Delettrez, R. L. Keck, S. Regan, V. A. Smalyuk, W. Seka, and R. P. J. Town, "Laser-Driven Hydrodynamic Instability Experiments of Interest to Inertial Confinement Fusion."

D. D. Meyerhofer, "Observation of Positron Production by Multiphoton Light by Light Scattering."

A. R. Staley, D. J. Smith, R. C. Eriksson, and R. P. Foley, "Counter-Rotating Planetary Design Increases Production Capacity for Large Rectangular Substrates," 41st Annual Technical Conference of the Society of Vacuum Coaters, Boston, MA, 18–23 April 1998.

The following presentations were made at the Target Fabrication Meeting 1998, Jackson Hole, WY, 19–23 April 1998:

E. L. Alfonso, S.-H. Chen, R. Q. Gram, D. R. Harding, and F. Y. Tsai, "Fabrication of Polyimide Shells by Vapor Phase Deposition for Use as ICF Targets."

D. R. Harding, "Using Ion Beam Techniques to Determine the Elemental Composition of ICF Targets."

P. W. McKenty, "Direct-Drive Capsule Requirements for the National Ignition Facility and OMEGA Laser Systems" (invited).

P. W. McKenty and M. D. Wittman, "Characterization of Thick Cryogenic Layers Using an Interferometric Imaging System."

M. D. Wittman, S. Scarantino, and D. R. Harding, "Controlling the Permeability of Shinethrough Barriers on Inertial Fusion Targets."

The following presentations were made at CLEO/IQEC 1998, San Francisco, CA, 3–8 May 1998:

A. Babushkin, R. S. Craxton, S. Oskoui, M. J. Guardalben, R. L. Keck, and W. Seka, "Demonstration of the Dual-Tripler Scheme for Increased-Bandwidth Frequency Tripling."

A. Babushkin and W. Seka, "Efficient 1053-nm Nd:YLF Laser End Pumped by a 100-W Quasi-cw Diode Array."

A. V. Okishev, M. D. Skeldon and W. Seka, "New Dual-Regime, Diode-Pumped Master Oscillator for the OMEGA Pulse-Shaping System."

M. D. Skeldon, A. Okishev, R. Keck, W. Seka and S. A. Letzring, "A High-Bandwidth Electrical-Waveform Generator Based on Aperture-Coupled Striplines for OMEGA Pulse-Shaping Applications."

The following presentations were made at the 25th European Conference on Laser Interaction with Matter (25th ECLIM), Formia, Italy, 4–8 May 1998:

R. Betti, V. N. Goncharov, and R. L. McCrory, "Hydrodynamic Stability Theory of Unsteady Ablation Fronts."

T. R. Boehly, D. D. Meyerhofer, J. P. Knauer, D. K. Bradley, T. Collins, J. A. Delettrez, V. N. Goncharov, R. L. Keck, S. Regan, V. A. Smalyuk, W. Seka, and R. P. J. Town, "Laser-Uniformity and Hydrodynamic-Stability Experiments at the OMEGA Laser Facility."

D. K. Bradley, J. A. Delettrez, R. Epstein, F. J. Marshall, S. Regan, R. P. J. Town, B. Yaakobi, D. A. Haynes, Jr., C. F. Hooper, Jr., and C. P. Verdon, "Spherical Rayleigh–Taylor Experiments on the 60-Beam OMEGA Laser System."

J. P. Knauer, C. P. Verdon, T. J. B. Collins, V. N. Goncharov, R. Betti, T. R. Boehly, D. D. Meyerhofer, and V. A. Smalyuk, "Interpretation of X-Ray Radiographic Images of Rayleigh–Taylor Unstable Interfaces."

R. L. McCrory, "Strategy for Direct-Drive Ignition on the NIF."

D. D. Meyerhofer, D. K. Bradley, A. V. Chirokikh, R. S. Craxton, S. Regan, W. Seka, R. W. Short, A. Simon, B. Yaakobi, J. Carroll, and R. P. Drake, "Laser–Plasma Interaction Experiments in NIF Direct-Drive-Scale Plasmas."

W. Seka, T. R. Boehly, D. K. Bradley, V. Glebov, P. A. Jaanimagi, J. P. Knauer, F. J. Marshall, D. D. Meyerhofer, R. Petrasso, S. Regan, J. M. Soures, B. Yaakobi, J. D. Zuegel, R. Bahukutumbi, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, R. L. McCrory, P. W. McKenty, R. W. Short, A. Simon, S. Skupsky, and R. P. J. Town, "Experimental Program at LLE in Support of the Direct-Drive Approach to Ignition for the NIF."

S. J. McNaught and D. D. Meyerhofer, "Photoelectron Initial Conditions for Tunneling Ionization in an Elliptically Polar-

ized Laser," 1998 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics (DAMOP), Santa Fe, NM, 27–30 May 1998.

The following presentations were made at the 12th Topical Conference on High-Temperature Plasma Diagnostics, Princeton, NJ, 7–11 June 1998:

F. J. Marshall and G. R. Bennett, "A High-Energy X-Ray Microscope for ICF."

V. A. Smalyuk, T. R. Boehly, D. K. Bradley, J. P. Knauer, and D. D. Meyerhofer, "Characterization of an X-Ray Radiographic System Used for Laser-Driven Planar Target Experiments."

The following presentations were made at Solid State Lasers for Application (SSLA) to Inertial Confinement Fusion, 3rd Annual International Conference, Monterey, CA, 7–12 June 1998:

A. Babushkin, W. Bittle, S. A. Letzring, M. D. Skeldon, and W. Seka, "Regenerative Amplifier for the OMEGA Laser System."

A. Babushkin, R. S. Craxton, S. Oskoui, M. J. Guardalben, R. L. Keck, and W. Seka, "Experimental Verification of the Dual-Tripler Scheme for Efficient Large-Bandwidth Frequency Tripling."

A. Babushkin, J. H. Kelly, C. T. Cotton, M. Labuzeta, M. Miller, T. A. Safford, R. G. Roides, W. Seka, I. Will, M. D. Tracy, and D. L. Brown, "Compact Nd³⁺-Based Laser System with Gain $G_{SS} \leq 10^{13}$ and 20-J Output Energy."

K. Green, W. Seka, M. D. Skeldon, R. L. Keck, A. V. Okishev, and R. Sobolewski, "Improving the Microwave Bandwidth of Photoconductive Switches Used in the OMEGA Pulse-Shaping System."

J. A. Marozas, "The Cross-Phase Modulation Between Two Intense Orthogonally Polarized Laser Beams Co-Propagating Through a Kerr-like Medium."

A. V. Okishev, M. D. Skeldon, and W. Seka, "Multipurpose, Diode-Pumped Nd:YLF Laser for OMEGA Pulse Shaping and Diagnostics Applications."

M. D. Skeldon, A. V. Okishev, R. L. Keck, W. Seka, and S. A. Letzring, "An Optical Pulse-Shaping System Based on Aperture-Coupled Stripline for OMEGA Pulse-Shaping Applications."

J. D. Zuegel, E. Michaels, S. Skupsky, S. Craxton, J. Kelly, and S. Letzring, "Plans to Achieve 1-THz Bandwidth with Two-Dimensional Smoothing by Spectral Dispersion on OMEGA."

The following presentations were made at the Optical Interference Coating Sixth Topical Meeting, Tucson, AZ, 7–12 June 1998:

M. B. Campanelli and D. J. Smith, "A Wideband Optical Monitor for a Planetary Coating System."

K. L. Marshall, A. L. Rigatti, G. L. Mitchell, J. A. Pathak, A. R. Staley, and J. A. Warner, "An Aqueous Sol-Gel Coating for Epoxy Surfaces."

D. J. Smith, J. A. Warner, and N. LeBarron, "Uniformity Model for Energetic Ion Process Using a Kaufman Ion Source."

The following presentations were made at the 28th Annual Anomalous Absorption Conference, Bar Harbor, ME, 14–19 June 1998:

R. Betti, V. Lobatchev, and R. L. McCrory, "Perturbation Transfer in an Accelerated Shell: Feed-In and Feed-Out."

R. S. Craxton, D. D. Meyerhofer, and W. Seka, "Interpretation of Long-Scale-Length Plasma Characterization Experiments on OMEGA."

J. A. Delettrez, D. K. Bradley, S. Regan, T. R. Boehly, J. P. Knauer, and V. A. Smalyuk, "Mix Experiments on the 60-Beam OMEGA Laser System Using Smoothing by Spectral Dispersion (SSD)."

R. Epstein, J. A. Delettrez, R. P. J. Town, D. K. Bradley, D. Hayes, C. F. Hooper, and C. P. Verdon, "Simulations in One Dimension of the Effects of Fuel-Pusher Mix in Laser-Driven Implosions on Core Temperatures and Densities Determined from Core Emission Spectroscopy."

Y. Fisher, T. R. Boehly, D. K. Bradley, D. R. Harding, D. D. Meyerhofer, and M. D. Wittman, "Shinethrough of Various Barrier-Layer Materials."

R. E. Giaccone and C. J. McKinstry, "Angular Dependence of Stimulated Brillouin Scattering."

V. Lobatchev, R. Betti, and R. L. McCrory, "Theory of the Linear Feed-Out in Planar Geometry."

C. J. McKinstry and E. A. Startsev, "Forward and Backward Stimulated Brillouin Scattering of Crossed Laser Beams."

D. D. Meyerhofer, T. R. Boehly, D. K. Bradley, T. Collins, J. A. Delettrez, V. N. Goncharov, J. P. Knauer, R. P. J. Town, V. A. Smalyuk, D. Oron, Y. Szebro, and D. Shvarts, "Late-Time Evolution of Broad-Bandwidth, Laser-Imposed Non-uniformities in Accelerated Foils."

S. P. Regan, D. K. Bradley, A. V. Chirokikh, R. S. Craxton, D. D. Meyerhofer, W. Seka, R. P. J. Town, B. Yaakobi, R. P. Drake, and J. J. Carroll III, "Electron Temperature and Density Measurements of Long-Scale-Length, Laser-Produced Plasmas on OMEGA."

J. D. Schnittman, R. S. Craxton, N. D. Delamater, K. A. Klare, T. J. Murphy, J. M. Wallace, E. I. Lindman, G. R. Magelssen, J. A. Oertel, and S. M. Pollaine, "Radiation Drive Symmetry in OMEGA Tetrahedral Hohlraums."

W. Seka, D. K. Bradley, A. V. Chirokikh, R. S. Craxton, S. Regan, D. D. Meyerhofer, R. W. Short, A. Simon, B. Yaakobi, J. J. Carroll III, and R. P. Drake, "Stimulated Brillouin Backscattering in NIF Direct-Drive Scale Plasmas."

R. W. Short, "Simulated Brillouin Scattering in High-Intensity, Self-Focused Filaments: The Effects of Sound Wave Diffraction and Plasma Flow."

A. Simon, "Return-Current Electrons and Their Generation of Electron Plasma Waves."

A. Simon, "The 'Return' of the Electron Beam."

V. A. Smalyuk, T. R. Boehly, D. K. Bradley, J. P. Knauer, D. D. Meyerhofer, D. Oron, Y. Azebro, and D. Shvarts, "Nonlinear Evolution of the 3-D Broad-Bandwidth Spectrum of Imprinting in Planar Targets Accelerated by UV Light."

E. A. Startsev, C. J. McKinstry, and R. E. Giaccone, "Accurate Formulas for the Landau Damping Rates of Electrostatic Waves."

R. P. J. Town, R. P. Bahukutumbi, J. A. Delettrez, R. Epstein, F. J. Marshall, P. W. McKenty, D. D. Meyerhofer, and S. Skupsky, "Simulations of OMEGA Spherical Implosions."

E. J. Turano and C. J. McKinstry, "Oblique Stimulated Raman Scattering of a Short Laser Pulse in a Plasma Channel."

The following presentations were made at the IXth Conference on Laser Optics (LO '98), St. Petersburg, Russia, 22–26 June 1998:

J. H. Kelly, S. F. B. Morse, R. Boni, W. R. Donaldson, P. A. Jaanimagi, R. L. Keck, T. J. Kessler, A. V. Okishev, A. Babushkin, A. L. Rigatti, W. Seka, and S. J. Loucks, "Performance of the OMEGA Laser for Direct-Drive ICF."

A. V. Okishev, M. D. Skeldon, J. H. Kelly, A. Babushkin, J. D. Zuegel, R. G. Roides, and S. F. B. Morse, "Front-End Laser System for the 60-Beam, 30-kJ (UV) OMEGA Laser Facility."

S. J. McNaught and D. D. Meyerhofer, "Precision Measurement of Electron Initial Conditions for Tunneling Ionization in an Elliptically Polarized Laser," Sixteenth International Conference on Atomic Physics, Windsor, Ontario, Canada, 3–7 August 1998.

D. T. Goodin, N. B. Alexander, I. Anteby, W. A. Baugh, G. E. Besenbruch, K. K. Boline, L. C. Brown, W. Engli, J. F. Follin, C. R. Gibson, D. R. Harding, E. H. Hoffmann, W. Lee, L. Lund, J. E. Nasise, A. Nobile, K. R. Schultz, and R. Stemke, "Status of the Design and Testing of the OMEGA Cryogenic Target System (OCTS)," 20th Symposium on Fusion Technology, Marseille, France, 7–11 September 1998.

The following presentations were made at the 1998 Applied Superconductivity Conference, Palm Springs, CA, 13–18 September 1998:

R. Adam, R. Sobolewski, W. Markowitsch, C. Stockinger, W. Lang, J. D. Pedarnig, and D. Bauerle, “Time and Temperature Evolution of the Photodoping Effect in Y-Ba-Cu-O Josephson Junctions and Thin Films.”

R. Adam, M. Currie, R. Sobolewski, O. Harnack, and M. Darula, “Subpicosecond Measurements of Y-Ba-Cu-O Josephson Junction and Microbridge Integrated Structures.”

M. Currie, D. Jacobs-Perkins, R. Sobolewski, and T. Y. Hsiang, “Subpicosecond Measurements of Single-Flux-Quantum Pulse Interactions.”

M. Currie, D. Jacobs-Perkins, R. Sobolewski, and T. Y. Hsiang, “High-Frequency Crosstalk in Superconducting Microstrip Waveguide Interconnects.”

K. S. Il'in, I. I. Milostnaya, A. A. Verevkin, G. N. Gol'tsman, M. Currie, and R. Sobolewski, “Quantum Efficiency and Time-Domain Response of NbN Superconducting Hot-Electron Photodetectors.”

The following presentations were made at the CEA-DOE Meeting, Bruyeres-le-Chatel, France, 14 September 1998:

R. L. McCrory, “The LLE Program Tests Critical Concepts of the Direct-Drive Ignition Demonstration Effort.”

D. D. Meyerhofer, “Charged Particle Spectrometer (CPS) as Core Diagnostic for OMEGA Implosions.”

W. Seka, “Beam Smoothing and Laser Imprinting.”

The following presentations were made at the XXX Annual Symposium on Optical Materials for High Power Lasers, Boulder, CO, 28 September–1 October 1998:

F. Dahmani, J. C. Lambropoulos, S. Burns, S. Papernov, and A. W. Schmid, “How Small Stresses Affect 351-nm Damage Onset in Fused Silica.”

O. M. Efimov, L. B. Glebov, S. Papernov, A. W. Schmid, and E. Van Stryland, “Laser-Induced Damage of Photo-Thermo-Refractive Glasses for Optical Holographic Elements Writing.”

A. L. Rigatti, D. J. Smith, A. W. Schmid, S. Papernov, and J. H. Kelly, “Damage in Fused-Silica Spatial-Filter Lenses on the OMEGA Laser System.”

D. J. Smith, J. A. Warner, N. LeBarron, and S. LaDelia, “Production of Distributed Phase Plates Using an Energetic Ion Process.”

