PUBLICATIONS AND CONFERENCE PRESENTATIONS

Publications

R. S. Marjoribanks, M. C. Richardson, J. Delettrez, S. Letzring, W. Seka, and D. M. Villeneuve, "Time-Resolved X-Ray Spectrometry of UV-Laser-Produced Plasmas," *Opt. Commun.* **44**, 113-116 (1982).

S. D. Jacobs, Y. Asahara, and T. Izumitani, "Optical Glass Wave Plates," *Appl. Opt.* **21**, 4526-4532 (1982).

R. W. Short, R. Bingham, and E. A. Williams, "Filamentation of Laser Light in Flowing Plasmas," *Phys. Fluids* **25**, 2302-2303 (1982).

B. Yaakobi, D. M. Villeneuve, M. C. Richardson, J. M. Soures, R. Hutchison, and S. Letzring, "X-Ray Spectroscopy Measurements of Laser-Compressed, Argon-Filled Shells," *Opt. Commun.* **43**, 343-346 (1982).

Forthcoming Publications

K. Lee, "Comments on 'Transverse Electromagnetic Waves with $\vec{E} \parallel \vec{B}$,'" accepted for publication by *Physical Review Letters.*

J. Reynolds, "Information Management Data Base for Fusion Target Fabrication Processes," accepted for publication by *Journal of Vacuum Science and Technology.*

T. F. Powers and J. R. Miller, "Rotational-Shearing Interferometric

Characterization of Inertial Fusion Targets," accepted for publication by *Journal of Vacuum Science and Technology.*

H. Kim, J. Mason, and J. R. Miller, "High-Z-Doped Laser Fusion Target Ablation Layers Using Metal Colloids and Metal-Substituted Sulfonated Polystyrene," accepted for publication by *Journal of Vacuum Science and Technology.*

B. A. Brinker, J. M. Cavese, J. R. Miller, S. G. Noyes, S. Sheble, and L. T. Whitaker, "Inertial Fusion Target Mounting Methods: New Fabrication Procedures Reduce the Mounting Support Perturbation," accepted for publication by *Journal of Vacuum Science and Technology.*

S. P. Sarraf, E. A. Williams, and L. M. Goldman, "Ion-Ion Two-Stream Instability in Multispecies Laser-Produced Plasma," accepted for publication by *Physical Review A: General Physics.*

Conference Presentations

S. Skupsky, R. L. McCrory, R. S. Craxton, J. Delettrez, R. Epstein, K. Lee, and C. P. Verdon, "Irradiation Uniformity for Laser-Driven Fusion," presented at the Sixth International Workshop on Laser Interaction and Related Plasma Phenomena, Monterey, California, October 1982.

B. Yaakobi, J. Delettrez, R. L. McCrory, R. Marjoribanks, M. C. Richardson, D. Shvarts, S. Skupsky, J. M. Soures, C. Verdon, D. M. Villeneuve, T. Boehly, R. Hutchison, and S. Letzring, "Thermal Transport Measurements in 1.05-μm Laser Irradiation of Spherical Targets," presented at the Sixth International Workshop on Laser Interaction and Related Plasma Phenomena, Monterey, California, October 1982.

L. Forsley, "Recursive Defining Words," presented at the 1982 Forth Laboratory Conference, Asilomar, California, October 1982.

R. L. Keck, "Forth in the Laboratory," presented at the 1982 Forth Laboratory Conference, Asilomar, California, October 1982.

J. D. Kafka, I. N. Duling III, T. Sizer II, C. W. Gabel, and G. A. Mourou, "Design and Operation of Synchronous Amplifiers for Subpicosecond Pulses," presented at the Optical Society of America Conference, Tucson, Arizona, October 1982.

J. H. Kelly, L. Iwan, and K. Walsh, "Preliminary Results in Stress-Induced Birefringence in the Nearly Athermal Glass LHG-8," presented at the Optical Society of America Conference, Tucson, Arizona, October 1982.

R. Bossert, S. Jacobs, and L. Lund, "Monolithic Cell for Frequency Conversion," presented at the Fourteenth Annual Symposium on Optical Materials for High-Power Lasers, Boulder, Colorado, November 1982.

J. A. Abate, R. Roides, S. D. Jacobs, W. Piskorowski, and T. Chipp, "Laser-Damage Thresholds of Optical Coatings at 351 nm," present-

ed at the Fourteenth Annual Symposium on Optical Materials for High-Power Lasers, Boulder, Colorado, November 1982.

The following presentations were made at the Twenty-Ninth National Symposium of the American Vacuum Society, Baltimore, Maryland, November 1982:

R. L. McCrory, "Target Requirements for Direct-Drive UV-Laser Fusion: Irradiation Uniformity and Hydrodynamic Stability."

D. Glocker, "Biased Ion Beam and Magnetron Sputtering of ICF Target Pusher Layers."

H. Kim, J. Mason, and J. Miller, "Homogeneous Metal Incorporation into Ablation Layer of Inertial Fusion Targets Using Sulfonated Polystyrene."

T. F. Powers and J. R. Miller, "Rotational-Shearing Interferometric Characterization of Inertial Fusion Targets."

J. R. Miller, "Inertial Fusion Target Mounting-Methods: New Fabrication Procedures Reduce the Mounting Support Perturbation."

H. Kim, T. Powers, and J. Mason, "Inertial Fusion Target Fabrication Using Polystyrene Mandrels."

J. P. Drumheller, "A Drill, Fill, and Plug Technique for Fabrication of Glass-Sealed Inertial Fusion Targets Containing Non-Permeable Gases."

J. Mason and H. Kim, "Metal Incorporation into Inertial Fusion Target Ablation Layers: 1. Polymer Stabilized Transition Metal Colloidal Dispersions."

J. Reynolds, "An Interactive Data Base for Fusion Target Fabrication Processes."

The following presentations were made at the Twenty-Fourth Annual Meeting of the APS Division of Plasma Physics, New Orleans, Louisiana, November 1982:

R. S. Marjoribanks, M. C. Richardson, and S. A. Letzring, "X-Ray Transmission-Grating Streak Spectrograph."

M. C. Richardson, B. Yaakobi, J. Delettrez, A. Entenberg, S. Kacenjar, S. Letzring, R. Marjoribanks, D. M. Villeneuve, and J. M. Soures, "24-Beam Implosion of Large-Aspect-Ratio Ar-DT Targets."

J. Rizzo, S. Letzring, M. C. Richardson, and R. S. Craxton, "Spatial and Spectral Features of Harmonic Emission from Multibeam Irradiated Spherical Targets."

R. S. Marjoribanks, M. C. Richardson, S. A. Letzring, and J. Delettrez, "Time-Resolved X-Ray Spectroscopy (1-25 Å) of Symmetrically Driven Targets."

W. D. Friedman, S. A. Letzring, and M. C. Richardson, "Streaked X-Ray Backlighting Diagnostic for OMEGA."

K. Tanaka, L. M. Goldman, W. Seka, and J. M. Soures, "Scattered Light Measurements around ω_0 from UV-Laser Plasmas."

A. Simon, R. W. Short, E. A. Williams, and T. Dewandre, "Improved Evaluation of the Inhomogeneous $2\omega_p$ Instability Threshold."

W. Seka, L. M. Goldman, J. M. Soures, K. Tanaka, and E. A. Williams, "Spectral Splitting of 3/2 ω_0 and $\omega_0/2$ Scattered Light from UV-Laser Plasmas."

R. L. McCrory, C. P. Verdon, and J. Delettrez, "Numerical Simulations of Low-Intensity, 1.054-μm Glass Microballoon Implosions."

B. Afeyan, E. Williams, R. Short, and A. Simon, "Oblique Incidence and Pump Polarization Effects on the $2\omega_p$ Instability in an Inhomogeneous Plasma."

R. S. Craxton and R. L. McCrory, "Refractive Effects in Laser-Plasma Interaction Experiments."

J. Delettrez, B. Yaakobi, M. C. Richardson, T. Boehly, R. S. Marjoribanks, S. Letzring, R. Hutchison, R. L. McCrory, and J. M. Soures, "Energy Transport and Partitioning in Nanosecond 1-μm Spherical Target Irradiation Experiments."

R. L. Keck, L. M. Goldman, W. Seka, J. M. Soures, and E. A. Williams, "Continuum X-Ray Measurements of 1.06- and 0.35-μm Laser-Produced Plasmas."

R. W. Short and E. A. Williams, "Spectral Broadening Arising from Filamentation in Laser-Plasma Interactions."

B. Yaakobi, A. J. Burek, J. Boles, J. Hoose, O. Barnouin, R. Boni, L. M. Goldman, M. C. Richardson, W. Seka, and J. M. Soures, "Focusing X-Ray Crystal Devices for Target Implosion Diagnosis."

J. Hoose, L. Iwan, J. Kelly, K. Lee, L. Lund, R. L. McCrory, M. C. Richardson, S. Skupsky, J. M. Soures, D. M. Villeneuve, and C. Verdon, "Progress in the Study of Uniformity Requirements for Direct-Drive Laser Fusion."

S. Letzring, B. Yaakobi, J. Delettrez, R. Hutchison, R. Marjoribanks, R. L. McCrory, M. C. Richardson, J. M. Soures, and D. Villeneuve, "Transport Measurements on Symmetrically Irradiated Spherical Targets."

M. C. Richardson, "Progress Toward Direct-Drive Laser Fusion."

C. P. Verdon, R. L. McCrory, S. Skupsky, K. L. Lee, D. Villeneuve, and M. C. Richardson, "Two-Dimensional Numerical Simulations of Implosions Subject to Imposed Laser Nonuniformities."

E. Williams, R. Short, and A. Simon, "Phase Integral Techniques in the Solution of Coupled-Wave Instability Problems in Inhomogeneous Plasmas."

D. M. Villeneuve, W. Friedman, J. Hoose, S. Letzring, M. C. Richardson, K. Lee, S. Skupsky, and J. M. Soures, "Irradiation Uniformity of Spherical Targets on OMEGA."

S. Skupsky and K. Lee, "Uniformity of Illumination for Laser-Driven Fusion."

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