

PUBLICATIONS AND CONFERENCE PRESENTATIONS

Publications

S. D. Jacobs, "Liquid Crystals as Large Aperture Wave Plates and Circular Polarizers," *SPIE Vol. 307 Polarizers and Applications*, 98-105 (1982).

G. Mourou, W. Knox, and S. Williamson, "Advances in Picosecond Optoelectronics," *SPIE Vol. 322 Picosecond Lasers and Applications*, 107-114 (1982).

J. A. Valdmanis, G. Mourou, and C. W. Gabel, "Picosecond Electro-Optic Sampling System," *Appl. Phys. Lett.* **41**, 211-212 (1982).

G. M. Weyl, D. I. Rosen, J. Wilson, and W. Seka, "Laser-Induced Breakdown of Argon at $0.35\ \mu\text{m}$," *Phys. Rev. A* **26**, 1164-1167 (1982).

S. Kacenjar, S. Skupsky, A. Entenberg, L. Goldman, and M. Richardson, "Direct Measurement of the Fuel Density-Radius Product in Laser-Fusion Experiments," *Phys. Rev. Lett.* **49**, 463-467 (1982).

C. P. Verdon, R. L. McCrory, R. L. Morse, G. R. Baker, D. I. Meiron, and S. A. Orszag, "Nonlinear Effects of Multifrequency Hydrodynamic Instabilities on Ablatively Accelerated Thin Shells," *Phys. Fluids* **25**, 1653-1674 (1982).

H. Kim, T. Powers, and J. Mason, "Real-Time Parylene Coating-Thickness Measurement Using Optical Reflectometry," *J. Vac. Sci. Technol.* **21**, 900-901 (1982).

G. Mourou and S. Williamson, "Picosecond Electron Diffraction," *Appl. Phys. Lett.* **41**, 44-45 (1982).

Forthcoming Publications

B. Yaakobi, D. Villeneuve, M. Richardson, J. Soures, R. Hutchison, and S. Letzring, "X-Ray Spectroscopy Measurements of Laser-Compressed, Argon-Filled Shells," accepted for publication by *Optics Communications*.

R. Short, R. Bingham, and E. Williams, "Filamentation of Laser Light in Flowing Plasmas," accepted for publication by *Physics of Fluids*.

S. Jacobs, Y. Asahara, and T. Izumitani, "Optical Glass Wave Plates," accepted for publication by *Applied Optics*.

R. Marjoribanks, M. Richardson, J. Delettrez, S. Letzring, W. Seka, and D. Villeneuve, "Time-Resolved X-Ray Spectrometry of UV-Laser-Produced Plasmas," accepted for publication by *Optics Communications*.

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

R. Frankel and J. Forsyth, "Application of Nanosecond X-Ray Diffraction Techniques to Bacteriorhodopsin," accepted for publication by *Methods in Enzymology*.

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

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

G. Albrecht, L. Lund, and D. Smith, "Building a Simple, Reliable, and Low-Cost Mode-Locker System," accepted for publication by *Applied Optics*.

T. Sizer II, "Synchronous Amplification of Subpicosecond Pulses," accepted for publication by *IEEE Journal of Quantum Electronics*.

Conference Presentations

W. Knox, G. Mourou, and S. Letzring, "Jitter-Free Signal-Averaging Streak Camera," presented at the Fifteenth International Congress on High-Speed Photography, San Diego, August 1982.

S. A. Letzring, R. S. Marjoribanks, and M. C. Richardson, "Time-Resolved X-Ray Spectrometry for Laser Fusion Studies," presented at the Fifteenth International Congress on High-Speed Photography, San Diego, August 1982.

R. S. Marjoribanks, M. C. Richardson, S. A. Letzring, and D. M. Villeneuve, "Time-Resolved X-Ray Spectroscopy of Symmetrically Imploded Targets," presented at the Fifteenth International Congress on High-Speed Photography, San Diego, August 1982.

G. Mourou, S. Letzring, and S. Williamson, "Picosecond Electron Diffraction," presented at the Fifteenth International Congress on High-

Speed Photography, San Diego, August 1982.

S. Kacendar, S. Skupsky, A. Entenberg, L. Goldman, M. Richardson, and G. Korn, "Technique for Direct Measurement of Fuel Density-Radius Product in Laser Fusion," presented at the Fourth Topical Conference on High-Temperature Plasma Diagnostics, Boston, August 1982.

W. Knox and G. Mourou, "Jitter-Free Signal-Averaging Streak Camera and Applications in Picosecond Fluorescence Spectroscopy," presented at the American Chemical Society Meeting, Kansas City, Missouri, September 1982.

M. C. Richardson, T. Boehly, R. S. Craxton, J. Delettrez, G. D. Enright, A. Entenberg, R. Epstein, W. Friedman, J. Hoose, R. Hutchison, S. Kacendar, K. Lee, S. Letzring, R. S. Marjoribanks, R. L. McCrory, J. Rizzo, W. Seka, R. Short, S. Skupsky, J. M. Soures, C. Verdon, D. M. Villeneuve, E. A. Williams, and B. Yaakobi, "Direct-Drive Laser Fusion Experiments with the OMEGA Laser System," presented at the International Atomic Energy Agency Ninth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Baltimore, September 1982.

W. Seka, L. M. Goldman, M. C. Richardson, J. M. Soures, D. M. Villeneuve, B. Yaakobi, R. S. Craxton, J. Delettrez, R. L. McCrory, R. Short, E. A. Williams, T. Boehly, R. L. Keck, K. Tanaka, and R. Boni, "Characteristics of UV-Laser-Matter Interactions," presented at the International Atomic Energy Agency Ninth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Baltimore, September 1982.

The work described in this volume includes ongoing research at the Laboratory for Laser Energetics which is supported in part by Empire State Electric Energy Corporation (ESEERCO), General Electric Company, New York State Energy Research and Development Authority (NYSERDA), Northeast Utilities, The Standard Oil Co. (OHIO), University of Rochester, and various United States Government agencies, including Department of Energy, Air Force Office of Scientific Research, National Institutes of Health, and National Science Foundation.

