

# PUBLICATIONS AND CONFERENCE PRESENTATIONS

## December, 1979 - February, 1980

### Publications

1. "Focusing X-Ray Spectrograph for Laser Fusion Experiments," B. Yaakobi, R.E. Turner, H.W. Schnopper, and P.O. Taylor; *Rev. of Sci. Instr.* **50**, 1609 (1979).
2. "Effect of Electrostatic Fields on Charged Reaction Products in 6-Beam Symmetrical Implosion Experiments," Y. Gazit, J. Delettrez, T.C. Bristow, A. Entenberg, J. Soures; *Phys. Rev. Lett.* **43**, 1943 (1979).
3. "A Simple Rezoning Technique for Use with the Flux-Corrected Transport Algorithm," R.S. Craxton and R.L. McCrory; *J. Comp. Physics* **33**, 432 (1979).
4. "Measurements of Brillouin-Backscatter Dependence on Density-Scale Lengths Near Critical Density," Robert E. Turner and Leonard M. Goldman; *Phys. Rev. Letters* **44**, 400 (1980).
5. "High-Power Phosphate-Glass Laser System: Design and Performance Characteristics," W. Seka, J. Soures, O. Lewis, J. Bunkenburg, D. Brown, S. Jacobs, G. Mourou, and J. Zimmerman; *App. Opt.* **19**, 409 (1980).
7. "High Density Effects on Thermonuclear Ignition for Inertially Confined Fusion," Stanley Skupsky; submitted to *Phys. Rev. Letters*.

### Conference Presentations

1980 Topical Meeting of Inertial Confinement Fusion, February 26-28, 1980. San Diego, California.

1. "Microradiography and Microdensitometry Using the Scanning Electron Microscope," H.W. Deckman and J. Dunsmuir.
2. "Microfabrication of Hemispheres from Microspheres for Structured Fusion Targets," I.S. Goldstein.
3. "A Drill and Plug Technique for Filling Laser Fusion Targets," H.W. Deckman, J. Dunsmuir, and G.M. Halpern.
4. "Self-Consistent, Non-Destructive Measurements of Tritium Content and Wall Thickness of Glass Microballoon Laser Fusion Targets," G.M. Halpern.
5. "The Coating of Fusion Targets Using Inorganic and Organic Colloidal Systems," D.G. Peiffer, H.W. Deckman, J. Dunsmuir, and T.J. Corley.
6. "Physical Vapor Deposition Coating of Gas-Levitated Fusion Targets at Low Pressures," I.S. Goldstein and J. Varon.
7. "Improvements on Parylene Coating of Fusion Targets by Molecular Structure Changes," D.G. Pfeiffer and T.J. Corley.
8. "Short-Pulse, High Power, Target Designs to Achieve Ignition Threshold Conditions," S. Skupsky, R.L. McCrory, S. Craxton, and B. Yaakobi.
9. "A Fluid First Wall/Fluid Blanket ICF Fusion-Fission Hybrid Reactor," R.T. McGrath, D.H. Berwald and J.A. Maniscalco.
10. "Computerized Analysis of Microballoon Wavefront Data," Thomas F. Powers and Gerald M. Halpern.
11. "A Dynamic Model of Optically Pumped Large Aperture Amplifiers," John H. Kelly, David C. Brown, and Kenneth Teegarden.
12. "OMEGA Booster Staging Options," D.C. Brown, J. Abate, J. Kelly, J. Hoose, and J. Waldbillig.
13. "Type II/Type II Angle Tuned Third Harmonic Generation in KDP," Stephen D. Jacobs, Joseph E. Rizzo, and Robert Boni.

### Submitted for Publication

1. "Laser Fusion Breeder Fueled Electricity Generation Systems," David H. Berwald, James A. Maniscalco; submitted to *Nuclear Technology*.
2. "An Economics Method for Symbiotic Fusion-Fission Electricity," David H. Berwald and James A. Maniscalco; submitted to *Nuclear Technology*.
3. "A Simple Silicon Switch-Driven Psec. Streak Camera," W. Knox, W. Friedman, G. Mourou; accepted by *App. Phys. Lett.*
4. "Two-Dimensional Calculations of Non-Spherical Laser Fusion Implosions," R.S. Craxton and R.L. McCrory; submitted to *Nuclear Fusion*.
5. "Laser Cross Linking of RNA Polymerase and DNA," Catherine A. Harrison, Douglas H. Turner, Jack Wilson, Mark A. DeWyngaert, and David C. Hinkle; submitted to *Journal of American Chem. Society*.
6. "Symmetric Laser Compression of Argon-Filled Shells to Densities of 4-6 g/cm<sup>3</sup>," B. Yaakobi, S. Skupsky, R.L. McCrory, C.F. Hooper Jr., H. Deckman, P. Bourke, J.M. Soures; submitted to *Phys. Rev. Letters*.

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14. "Active Mirror Amplifier Multi-Unit Performance," J. Abate, L. Lund, D. Brown, S. Reformat, and S. Jacobs.
15. "Plastic-Coated Glass Microballon Implosion Experiments," E. Thorsos, W. Seka, R. McCrory, T. Bristow, J. Delettrez, A. Entenberg, W. Friedman, S. Letzring, J. Rizzo, J. Soures, and B. Yaakobi.
16. "Direct Measurement of High Density Achieved in Symmetric Compression of Radiationally Cooled Targets," B. Yaakobi, R.L. McCrory, S. Skupsky, H. Deckman, C.F. Hooper Jr., P. Bourke, T.C. Bristow, W. Seka, J. Delettrez, and J. Soures.
17. "Symmetrical Implosion Experiments with Exploding Pusher Targets at the University of Rochester," T.C. Bristow, J. Delettrez, A. Entenberg, W. Friedman, Y. Gazit, S. Letzring, W. Seka, J. Soures, E. Thorsos, and B. Yaakobi.
18. "Liquid Crystal Isolator for Fusion Lasers," Stephen D. Jacobs, Karen A. Bauer, Richard P. Bossert, and James M. Rinefierd.
19. "New Saturable Absorbers at 1  $\mu\text{m}$ ," Stephen D. Jacobs, Joseph A. Abate, and Karen A. Bauer.