

**LIST OF COLLABORATIVE PUBLICATIONS
LABORATORY FOR LASER ENERGETICS**

1614. G. F. Swadling, J. S. Ross, D. Manha, J. Galbraith, P. Datte, C. Sorce, J. Katz, D. H. Froula, K. Widman, O. S. Jones, L. Divol, O. L. Landen, J. D. Kilkenny, and J. D. Moody, “Initial Experimental Demonstration of the Principles of a Xenon Gas Shield Designed to Protect Optical Components from Soft X-Ray Induced Opacity (Blanking) in High Energy Density Experiments,” *Phys. Plasmas* **24** (3), 032705 (2017).
1613. J. D. Sadler, M. Sliwa, T. Miller, M. F. Kasim, N. Ratan, L. Ceurvorst, A. Savin, R. Aboushelbaya, P. A. Norreys, D. Haberberger, A. S. Davies, S. Bucht, D. H. Froula, J. Vieira, R. A. Fonseca, L. O. Silva, R. Bingham, K. Glize, and R. M. G. M. Trines, “Robustness of Raman Plasma Amplifiers and Their Potential for Attosecond Pulse Generation,” *High Energy Density Phys.* **23**, 212–216 (2017).
1612. J. S. Ross, D. P. Higginson, D. Ryutov, F. Fiuza, R. Hatarik, C. M. Huntington, D. H. Kalantar, A. Link, B. B. Pollock, B. A. Remington, H. G. Rinderknecht, G. F. Swadling, D. P. Turnbull, S. Weber, S. Wilks, D. H. Froula, M. J. Rosenberg, T. Morita, Y. Sakawa, H. Takabe, R. P. Drake, C. Kuranz, G. Gregori, J. Meinecke, M. C. Levy, M. Koenig, A. Spitkovsky, R. D. Petrasso, C. K. Li, H. Sio, B. Lahmann, A. B. Zylstra, and H.-S. Park, “Transition from Collisional to Collisionless Regimes in Interpenetrating Plasma Flows on the National Ignition Facility,” *Phys. Rev. Lett.* **118** (18), 185003 (2017).
1611. J. D. Sadler, R. M. G. M. Trines, M. Tabak, D. Haberberger, D. H. Froula, A. S. Davies, S. Bucht, L. O. Silva, E. P. Alves, F. Fiúza, L. Ceurvorst, N. Ratan, M. F. Kasim, R. Bingham, and P. A. Norreys, “Optimization of Plasma Amplifiers,” *Phys. Rev. E* **95** (5), 053211 (2017).
1610. J. M. Ngoko Djiokap, A. V. Meremianin, N. L. Manakov, S. X. Hu, L. B. Madsen, and A. F. Starace, “Kinematical Vortices in Double Photoionization of Helium by Attosecond Pulses,” *Phys. Rev. A* **96** (1), 013405 (2017).
1609. T. P. Bernat, N. Petta, B. Kozioziemski, S. J. Shin, and D. R. Harding, “Zinc-Nucleated D₂ and H₂ Crystal Formation from Their Liquids,” *Fusion Sci. Technol.* **70** (2), 196–205 (2016).
1608. T. S. Perry, R. F. Heeter, Y. P. Opachich, P. W. Ross, J. L. Kline, K. A. Flipppo, M. E. Sherrill, E. S. Dodd, B. G. DeVolder, T. Cardenas, T. N. Archuleta, R. S. Craxton, R. Zhang, P. W. McKenty, E. M. Garcia, E. J. Huffman, J. A. King, M. F. Ahmed, J. A. Emig, S. L. Ayers, M. A. Barrios, M. J. May, M. B. Schneider, D. A. Liedahl, B. G. Wilson, T. J. Urbatsch, C. A. Iglesias, J. E. Bailey, and G. A. Rochau, “Replicating the Z Iron Opacity Experiments on the NIF,” *High Energy Density Phys.* **23**, 223–227 (2017).

1607. M. P. Valdivia, D. Stutman, C. Stoeckl, C. Mileham, I. A. Begishev, W. Theobald, J. Bromage, S. P. Regan, S. R. Klein, G. Muñoz-Cordovez, M. Vescovi, V. Valenzuela-Villasaca, and F. Veloso, "Talbot-Lau X-Ray Deflectometer Electron Density Diagnostic for Laser and Pulsed Power High Energy Density Plasma Experiments," *Rev. Sci. Instrum.* **87** (11), 11D501 (2016) (invited).
1606. H. W. Herrmann, Y. H. Kim, A. M. McEvoy, A. B. Zylstra, C. S. Young, F. E. Lopez, J. R. Griego, V. E. Fatherley, J. A. Oertel, W. Stoeffl, H. Khater, J. E. Hernandez, A. Carpenter, M. S. Rubery, C. J. Horsfield, S. Gales, A. Leatherland, T. Hilsabeck, J. D. Kilkenny, R. M. Malone, J. D. Hares, J. Milnes, W. T. Shmayda, C. Stoeckl, and S. H. Batha, "Next generation gamma-ray Cherenkov detectors for the National Ignition Facility," *Rev. Sci. Instrum.* **87** (11), 11E732 (2016).
1605. P. Tzeferacos, A. Rigby, A. Bott, A. R. Bell, R. Bingham, A. Casner, F. Cattaneo, E. M. Churazov, J. Emig, N. Flocke, F. Fiuza, C. B. Forest, J. Foster, C. Graziani, J. Katz, M. Koenig, C.-K. Li, J. Meinecke, R. Petrasso, H.-S. Park, B. A. Remington, J. S. Ross, D. Ryu, D. Ryutov, K. Weide, T. G. White, B. Reville, F. Miniati, A. A. Schekochihin, D. H. Froula, G. Gregori, and D. Q. Lamb, "Numerical Modeling of Laser-Driven Experiments Aiming to Demonstrate Magnetic Field Amplification via Turbulent Dynamo," *Phys. Plasmas* **24** (4), 041404 (2017).
1604. Y. Kim, H. W. Herrmann, N. M. Hoffman, M. J. Schmitt, P. A. Bradley, S. Gales, C. J. Horsfield, M. Rubery, A. Leatherland, M. Gatu Johnson, J. A. Frenje, and V. Yu. Glebov, "Direct-Drive DT Implosions with Knudsen Number Variations," *J. Phys.: Conf. Ser.* **717**, 012030 (2016).
1603. K. D. Hahn, G. A. Chandler, C. L. Ruiz, G. W. Cooper, M. R. Gomez, S. Slutz, A. B. Sefkow, D. B. Sinars, S. B. Hansen, P. F. Knapp, P. F. Schmit, E. Harding, C. A. Jennings, T. J. Awe, M. Geissel, D. C. Rovang, J. A. Torres, J. A. Bur, M. E. Cuneo, V. Yu. Glebov, A. J. Harvey-Thompson, M. C. Herrman, M. H. Hess, O. Johns, B. Jones, D. C. Lamppa, J. S. Lash, M. R. Martin, R. D. McBride, K. J. Peterson, J. L. Porter, J. Reneker, G. K. Robertson, G. A. Rochau, M. E. Savage, I. C. Smith, J. D. Styron, and R. A. Vesey, "Fusion-Neutron Measurements for Magnetized Liner Inertial Fusion Experiments on the Z Accelerator," *J. Phys.: Conf. Ser.* **717**, 012020 (2016).
1602. C. B. Yeamans, W. S. Cassata, J. A. Church, D. N. Fittinghoff, M. Gatu Johnson, N. Gharibyan, R. Határik, D. B. Sayre, H. W. Sio, R. M. Bionta, D. L. Bleuel, J. A. Caggiano, C. J. Cerjan, G. W. Cooper, M. J. Eckart, E. R. Edwards, S. A. Faye, C. J. Forrest, J. A. Frenje, V. Yu. Glebov, P. M. Grant, G. P. Grim, E. P. Hartouni, H. W. Herrmann, J. D. Kilkenny, J. P. Knauer, A. J. Mackinnon, F. E. Merrill, K. J. Moody, M. J. Moran, R. D. Petrasso, T. W. Phillips, H. G.

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1601. M. Gatu Johnson, J. P. Knauer, C. J. Cerjan, M. J. Eckart, G. P. Grim, E. P. Hartouni, R. Hatarik, J. D. Kilkenny, D. H. Munro, D. B. Sayre, B. K. Spears, R. M. Bionta, E. J. Bond, J. A. Caggiano, D. Callahan, D. T. Casey, T. Döppner, J. A. Frenje, V. Yu. Glebov, O. Hurricane, A. Kritcher, S. LePape, T. Ma, A. Mackinnon, N. Meezan, P. Patel, R. D. Petrasso, J. E. Ralph, P. T. Springer, and C. B. Yeamans, "Indications of Flow Near Maximum Compression in Layered Deuterium-Tritium Implosions at the National Ignition Facility," *Phys. Rev. E* **94** (2), 021202(R) (2016).
1600. G. D. Sutcliffe, L. M. Milanese, D. Orozco, B. Lahmann, M. Gatu Johnson, F. H. Séguin, H. Sio, J. A. Frenje, C. K. Li, R. D. Petrasso, H.-S. Park, J. R. Rygg, D. T. Casey, R. Bionta, D. P. Turnbull, C. M. Huntington, J. S. Ross, A. B. Zylstra, M. J. Rosenberg, and V. Yu. Glebov, "A Novel Method to Recover DD Fusion Proton CR-39 Data Corrupted by Fast Ablator Ions at OMEGA and the National Ignition Facility," *Rev. Sci. Instrum.* **87** (11), 11D812 (2016).
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1598. H. Sio, J. A. Frenje, J. Katz, C. Stoeckl, D. Weiner, M. Bedyk, V. Glebov, C. Sorce, M. Gatu Johnson, H. G. Rinderknecht, A. B. Zylstra, T. C. Sangster, S. P. Regan, T. Kwan, A. Le, A. N. Simakov, W. T. Taitano, L. Chacòn, B. Keenan, R. Shah, G. Sutcliffe, and R. D. Petrasso, "A Particle X-ray Temporal Diagnostic (PXTD) for Studies of Kinetic, Multi-Ion Effects, and Ion-Electron Equilibration Rates in Inertial Confinement Fusion Plasmas at OMEGA," *Rev. Sci. Instrum.* **87** (11), 11D701 (2016) (invited).
1597. H. G. Rinderknecht, P. A. Amendt, M. J. Rosenberg, C. K. Li, J. A. Frenje, M. Gatu Johnson, H. Sio, F. H. Séguin, R. D. Petrasso, A. B. Zylstra, G. Kagan, N. M. Hoffman, D. Svyatsky, S. C. Wilks, V. Yu. Glebov, C. Stoeckl, and T. C. Sangster, "Ion Kinetic Dynamics in Strongly-Shocked Plasmas Relevant to ICF," *Nucl. Fusion* **57** (6), 066014 (2017).
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1595. J. R. Fein, J. P. Holloway, M. R. Trantham, P. A. Keiter, D. H. Edgell, D. H. Froula, D. Haberberger, Y. Frank, M. Fraenkel, E. Raicher, D. Shvarts, and R. P. Drake, “Mitigation of Hot Electrons from Laser-Plasma Instabilities in High-Z, Highly Ionized Plasmas,” *Phys. Plasmas* **24** (3), 032707 (2017).
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1593. K. W. Hill, M. Bitter, L. Delgado-Aparicio, P. C. Efthimion, R. Ellis, L. Gao, J. Maddox, N. A. Pablant, M. B. Schneider, H. Chen, S. Ayers, R. L. Kauffman, A. G. MacPhee, P. Beiersdorfer, R. Bettencourt, T. Ma, R. C. Nora, H. A. Scott, D. B. Thorn, J. D. Kilkenny, D. Nelson, M. Shoup III, and Y. Maron, “Development of a High Resolution X-Ray Spectrometer for the National Ignition Facility (NIF),” *Rev. Sci. Instrum.* **87** (11), 11E344 (2016).
1592. M. Gatu Johnson, A. B. Zylstra, A. Bacher, C. R. Brune, D. T. Casey, C. Forrest, H. W. Herrmann, M. Hohenberger, D. B. Sayre, R. M. Bionta, J.-L. Bourgade, J. A. Caggiano, C. Cerjan, R. S. Craxton, D. Dearborn, M. Farrell, J. A. Frenje, E. M. Garcia, V. Yu. Glebov, G. Hale, E. P. Hartouni, R. Hatarik, M. Hohensee, D. M. Holunga, M. Hoppe, R. J. Janezic, S. F. Khan, J. D. Kilkenny, Y. H. Kim, J. P. Knauer, T. R. Kohut, B. Lahmann, O. Landoas, C. K. Li, F. J. Marshall, L. Masse, A. McEvoy, P. McKenty, D. P. McNabb, A. Nikroo, T. G. Parham, M. Paris, R. D. Petrasso, J. Pino, P. B. Radha, B. Remington, H. G. Rinderknecht, H. Robey, M. J. Rosenberg, B. Rosse, M. Rubery, T. C. Sangster, J. Sanchez, M. Schmitt, M. Schoff, F. H. Séguin, W. Seka, H. Sio, C. Stoeckl and R. E. Tipton, “Development of an Inertial Confinement Fusion Platform to Study Charged-Particle-Producing Nuclear Reactions Relevant to Nuclear Astrophysics,” *Phys. Plasmas* **24** (4), 041407 (2017).
1591. G. F. Swadling, J. S. Ross, D. Manha, J. Galbraith, P. Datte, C. Sorce, J. Katz, D. H. Froula, K. Wildmann, O. S. Jones, L. Divol, O. L. Landen, J. D. Kilkenny, and J. D. Moody, “Initial Experimental Demonstration of the Principles of a Xenon Gas Shield Designed to Protect Optical Components from Soft X-Ray Induced Opacity (Blanking) in High Energy Density Experiments,” *Phys. Plasmas* **24** (3), 032705 (2017).

1590. J. K. Crane, B. Kruschwitz, S. T. Yang, M. Bowers, D. Browning, T. Budge, D. Canning, J. Chou, A. Consentino, J. M. Di Nicola, S. Dixit, C. Dorrer, G. Erbert, R. Hackel, J. Heebner, E. Hill, M. Johnston, J. Kelly, J. Kwiatkowski, M. Shaw, L. Smith, P. Wegner, and J. Zuegel, "Performance Measurements on NIF Beamlines for Future Experiments to Support Polar Direct Drive," *J. Phys.: Conf. Ser.* **717**, 012088 (2016).
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