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- J. P. Apruzese, J. L. Giuliani, M. F. Wolford, J. D. Sethian, G. M. Petrov, D. D. Hinshelwood, M. C. Myers, A. Dasgupta, F. Hegeler, and Ts. Petrova, *Optimizing the Ar-Xe infrared laser on the Naval Research Laboratory's Electra generator*, J. Appl. Phys. **104**, 013101 (2008).
- J. J. Barnard, R. O. Bangerter, E. Henestroza, I. D. Kaganovich, B. G. Logan, W. R. Meier, D. V. Rose, P. Santhanam, W. M. Sharp, D. R. Welch, and S. S. Yu, *A final focus model for heavy-ion fusion driver system codes*, Nucl. Inst. Meth. Phys. Res. A **544**, 243 (2005).
- J. H. Beall, J. Guillory, D. V. Rose, S. Schindler, and S. Colafrancesco, *Energetics of jet interactions with the intracluster medium*, Chinese J. Astron. Astro. **6**, Suppl. 1, 283 (2006).
- J. H. Beall, J. Guillory, D. V. Rose, S. Schindler, and S. Colafrancesco, *AGN jet interactions with the intracluster medium*, Chinese J. Astron. Astro. **3**, 137 (2003).
- N. Bruner, D. R. Welch, K. D. Hahn, and B. V. Oliver, *Anode plasma dynamics in the self-magnetic-pinch diode*, Phys. Rev. ST Accel. Beams **14**, 024401 (2011).
- N. Bruner, T. Genoni, E. Madrid, D. Welch, K. Hahn, and B. Oliver, *Excitation of voltage oscillations in an induction voltage adder*, Phys. Rev. ST Accel. Beams **12**, 070401 (2009).
- N. Bruner, T. Genoni, E. Madrid, D. Rose, D. Welch, K. Hahn, J. Leckbee, S. Portillo, B. Oliver, V. Bailey, and D. Johnson, *Modeling particle emission and power flow in pulsed-power driven, nonuniform transmission lines*, Phys. Rev. ST Accel. Beams **11**, 040401 (2008).
- R. B. Campbell, R. Kodama, T. A. Mehlhorn, K. A. Tanaka, and D. R. Welch, *Simulation of heating-compressed fast-ignition codes by petawatt laser-generated electrons*, Phys. Rev. Lett. **94**, 055001 (2005).
- R. B. Campbell, J. S. DeGroot, T. A. Mehlhorn, D. R. Welch, and B. V. Oliver, *Collimation of PetaWatt laser-generated relativistic beams propagating through solid matter*, Phys. Plasmas **10**, 4169 (2003).
- D. C. Carroll, P. McKenna, O. Lundh, F. Lindau, C.-G. Wahlstrom, S. Bandyopadhyay, D. Pepler, D. Neely, S. Kar, P. T. Simpson, K. Markey, M. Zepf, C. Bellei, R. G. Evans, R. Redaelli, D. Batani, M. H. Xu, and Y. T. Li, *Active manipulation of the spatial energy distribution of laser-accelerated proton beams*, Phys. Rev. E **76**, 065401 (2007).

- C. M. Celata, F. M. Bieniosek, E. Henestroza, J. W. Kwan, E. P. Lee, G. Logan, L. Prost, P. A. Seidl, J.-L. Vay, W. L. Waldron, S. S. Yu, J. J. Barnard, D. A. Callahan, R. H. Cohen, A. Friedman, D. P. Grote, S. M. Lund, A. Molvik, W. M. Sharp, G. Westenskow, R. C. Davidson, P. Efthimion, E. Gilson, L. R. Grisham, I. Kaganovich, H. Qin, E. A. Startsev, S. Bernal, Y. Cui, D. Feldman, T. F. Godlove, I. Haber, J. Harris, R. A. Kishek, H. Li, P. G. O'Shea, B. Quinn, M. Reiser, A. Valfells, M. Walter, Y. Zou, D. V. Rose, and D. R. Welch, *Progress in heavy ion fusion research*, Phys. Plasmas **10**, 2064 (2003).
- H. Chen, S. C. Wilks, J. D. Bonlie, S. N. Chen, K. V. Cone, L. N. Elberson, G. Gregori, D. D. Meyerhofer, J. Myatt, D. F. Price, M. B. Schneider, R. Shepherd, D. C. Stafford, R. Tommasini, R. Van Maren, and P. Beiersdorfer, *Making relativistic positrons using ultraintense short pulse lasers*, Phys. Plasmas **16**, 122702 (2009).
- R. E. Clark, D. R. Welch, W. R. Zimmerman, C. L. Miller, T. C. Genoni, D. V. Rose, D. W. Price, P. N. Martin, D. J. Short, A. W. P. Jones, and J. R. Threadgold, *Locally conformal finite-difference time-domain techniques for particle-in-cell plasma simulation*, J. Comp. Phys. **230**, 695 (2011).
- L. A. Cottrill, A. Kemp, M. Tabak, and R. P. J. Town, *Characterization of escaping electrons from simulations of hot electron transport for intense femtosecond laser-target scenarios*, Nucl. Fusion **50**, 095002 (2010).
- L. A. Cottrill, A. B. Langdon, B. F. Lasinski, S. M. Lund, K. Molvig, M. Tabak, R. P. J. Town, and E. A. Williams, *Kinetic and collisional effects on the linear evolution of fast ignition relevant beam instabilities*, Phys. Plasmas **15**, 082108 (2008).
- C. N. Danson, P. A. Brummitt, R. J. Clarke, J. L. Collier, B. Fell, A. J. Frackiewicz, S. Hawkes, C. Hernandez-Gomez, P. Holligan, M. H. R. Hutchinson, A. Kidd, W. J. Lester, I. O. Musgrave, D. Neely, D. R. Neville, P. A. Norreys, D. A. Pepler, C. J. Reason, W. Shaikh, T. B. Winstone, R. W. W. Wyatt, and B. E. Wyborn, *Vulcan petawatt: Design, operation and interactions at $5 \times 10^{20} \text{ Wcm}^{-2}$* , Laser and Particle Beams **23**, 87 (2005).
- R. C. Davidson, B. G. Logan, J. J. Barnard, F. M. Bieniosek, R. J. Briggs, D. A. Callahan, M. Kireeff Covo, C. M. Celata, R. H. Cohen, J. E. Coleman, C. S. Debonnel, D. P. Grote, P. C. Efthimion, S. Eylon, A. Friedman, E. P. Gilson, L. R. Grisham, E. Henestroza, I. D. Kaganovich, J. W. Kwan, E. P. Lee, W. W. Lee, M. Leitner, S. M. Lund, W. R. Meier, A. W. Molvik, C. L. Olson, G. E. Penn, H. Qin, P. K. Roy, D. V. Rose, A. Sefkow, P. A. Seidl, W. M. Sharp, E. A. Startsev, M. Tabak, C. Thoma, J.-L. Vay, W. L. Waldron, J. S. Wurtele, D. R. Welch, G. A. Westenskow, and S. S. Yu, *US heavy ion beam research for high energy density physics applications and fusion*, J. Phys. IV France **133**, 731 (2006).
- R. C. Davidson, I. Kaganovich, H. Qin, E. A. Startsev, D. R. Welch, D. V. Rose, and H. S. Uhm, *Collective instabilities and beam-plasma interactions in intense heavy ion beams*, Phys. Rev. ST Accel. Beams **7**, 114801 (2004).

- R. C. Davidson, I. D. Kaganovich, W. W. Lee, H. Qin, E. A. Startsev, S. Tzenov, A. Friedman, J. J. Barnard, R. H. Cohen, D. P. Grote, S. M. Lund, W. M. Sharp, C. M. Celata, M. DeHoon, E. Henestroza, E. P. Lee, S. S. Yu, J.-L. Vay, D. R. Welch, D. V. Rose, and C. L. Olson, *Overview of theory and modeling in the heavy ion fusion virtual national laboratory*, Lasers and Particle Beams **20**, 377 (2002).
- J. R. Davies, J. S. Green, and P. A. Norreys, *Electron beam hollowing in laser-solid interactions*, Plasma Phys. Control. Fusion **48**, 1181 (2006).
- C. S. Debonnel, D. R. Welch, D. V. Rose, S. S. Yu, and P. F. Peterson, *Gas transport and density control in the HYLIFE heavy-ion beam lines*, Fusion Science and Technology **43**, 408 (2003).
- M. A. Dorf, I. D. Kaganovich, E. A. Startsev, and R. C. Davidson, *Collective focusing of intense ion beam pulses for high-energy density physics applications*, Phys. Plasmas **18**, 033106 (2011)
- M. A. Dorf, I. D. Kaganovich, E. A. Startsev, and R. C. Davidson, *Whistler wave excitation and effects of self-focusing on ion beam propagation through a background plasma along a solenoidal magnetic field*, Phys. Plasmas **17**, 023103 (2010).
- M. A. Dorf, I. D. Kaganovich, E. A. Startsev, and R. C. Davidson, *Enhanced self-focusing of an ion beam pulse propagating through a background plasma along a solenoidal magnetic field*, Phys. Rev. Lett. **103**, 075003 (2009).
- C. Ekdahl, E. O. Abeyta, P. Aragon, R. Archuleta, R. Bartsch, H. Bender, R. Briggs, W. Broste, C. Carlson, K. C. D. Chan, D. Dalmas, S. Eversole, D. Frayer, R. Gallegos, J. Harrison, T. Hughes, E. Jacquez, D. Johnson, J. Johnson, B. Trent McCuistian, N. Montoya, C. Mostrom, S. Nath, D. Oro, L. Rowton, M. Sanchez, R. Scarpetti, M. Schauer, M. Schulze, Y. Tang, A. Tipton, and C. Y. Tom, *Long-pulse beam stability experiments on the DARHT-II linear induction accelerator*, IEEE Trans. Plasma Sci. **34**, 460 (2006).
- R. G. Evans, *Modelling electron transport for fast ignition*, Plasma Phys. Control. Fusion **49**, B87 (2007).
- R. G. Evans, *Modelling short pulse, high intensity laser plasma interactions*, High Energy Density Physics **2**, 35 (2006).
- R. G. Evans, E. L. Clark, R. T. Eagleton, A. M. Dunne, R. D. Edwards, W. J. Garbett, T. J. Goldsack, S. James, C. C. Smith, B. R. Thomas, R. Clarke, D. Neely, and S. J. Rose, *Rapid heating of solid density material by a petawatt laser*, Appl. Phys. Lett. **86**, 191505 (2005).
- M. E. Foord, A. J. Mackinnon, P. K. Patel, A. G. MacPhee, Y. Ping, M. Tabak, and R. P. J. Town, *Enhanced proton production from hydride-coated foils*, J. Appl. Phys. **103**, 056106 (2008).

- M. E. Foord, P. K. Patel, A. J. Mackinnon, S. P. Hatchett, M. H. Key, B. Lasinski, R. P. J. Town, M. Tabak, and S. C. Wilks, *MeV proton generation and efficiency from an intense laser irradiated foil*, High Energy Density Physics **3**, 365 (2007).
- R. R. Freeman, K. Akli, F. Beg, R. Betti, S. Chen, D. J. Clark, P. M. Gu, G. Gregori, S. P. Hatchett, D. Hey, K. Highbarger, J. M. Hill, N. Izumi, M. Key, J. A. King, J. A. Koch, B. Lasinski, B. Langdon, A. J. Mackinnon, D. Meyerhofer, N. Patel, P. Patel, J. Pasley, H. S. Park, C. Ren, R. A. Snavely, R. B. Stephens, C. Stoeckl, M. Tabak, R. Town, L. Van Woerkom, R. Weber, S. C. Wilks, and B. B. Zhang, *Overview of recent progress in US fast ignition research*, J. Phys. IV France **133**, 95 (2006).
- A. Friedman, *Simulation of intense beams for heavy ion fusion*, Nucl. Inst. Meth. Phys. Res. A **544**, 160 (2005).
- T. C. Genoni, D. V. Rose, D. R. Welch, and E. P. Lee, *Two-stream stability for a focusing charged particle beam*, Phys. Plasmas **11**, L73 (2004).
- T. C. Genoni and T. P. Hughes, *Ion-hose instability in a long-pulse linear induction accelerator*, Phys. Rev. ST Accel. Beams **6**, 030401 (2003). [Erratum: Phys. Rev. ST Accel. Beams **6**, 109901 (2003).]
- J. S. Green, K. L. Lancaster, K. U. Akli, C. D. Gregory, F. N. Beg, S. N. Chen, D. Clark, R. R. Freeman, S. Hawkes, C. Hernandez-Gomez, H. Habara, R. Heathcote, D. S. Hey, K. Highbarger, M. H. Key, R. Kodama, K. Krushelnick, I. Musgrave, H. Nakamura, M. Nakatsutsumi, N. Patel, R. Stephens, M. Storm, M. Tampo, W. Theobald, V. Van Woerkom, R. L. Weber, M. S. Wei, N. C. Woolsey, and P. A. Norreys, *Surface heating of wire plasmas using laser-irradiated cone geometries*, Nature Phys. **3**, 853 (2007).
- J. Guillory, D. V. Rose, and E. J. Lerner, *Theory of electron current filamentation instability and ion density filamentation in the early development of a DPF discharge*, Dense Z-Pinches: 7th International Conference, edited by D. A. Hammer and B. R. Kusse, American Institute of Physics, Melville, New York, 203 (2009).
- K. D. Hahn, N. Bruner, M. D. Johnston, B. V. Oliver, T. J. Webb, D. R. Welch, S. R. Cordova, I. Crotch, R. E. Gignac, J. J. Leckbee, I. Molina, S. Portillo, J. R. Threadgold, and D. Ziska, *Overview of self-magnetically pinched-diode investigations on RITS-6*, IEEE Trans. Plasma Sci. **38**, 2652 (2010).
- J. R. Harris, G. J. Caporaso, D. Blackfield, and Y.-J. Chen, *Displacement current and surface flashover*, Appl. Phys. Lett. **91**, 121504 (2007).
- F. Hegeler, J. L. Guiliani, J. D. Sethian, M. C. Myers, M. F. Wolford, P. M. Burns, and M. Friedman, *Forced convective cooling of foils in a repetitively pulsed electron-beam diode*, IEEE Trans. Plasma Sci. **36**, 778 (2008).

- F. Hegeler, D. V. Rose, M. C. Myers, J. D. Sethian, J. L. Giuliani, M. F. Wolford, and M. Friedman, *Efficient electron beam deposition in the gas cell of the Electra laser*, Phys. Plasmas **11**, 5010 (2004).
- E. Henestroza, S. Eylon, P. K. Roy, S. S. Yu, A. Anders, F. M. Bieniosek, W. G. Greenway, B. G. Logan, R. A. MacGill, D. B. Shuman, D. L. Vanecek, W. L. Waldron, W. M. Sharp, T. L. Houck, R. C. Davidson, P. C. Efthimion, E. P. Gilson, A. B. Sefkow, D. R. Welch, D. V. Rose, and C. L. Olson, *Design and characterization of a neutralized-transport experiment for heavy-ion fusion*, Phys. Rev. ST Accel. Beams **7**, 083501 (2004).
- D. S. Hey, M. E. Foord, M. H. Key, S. L. LePape, A. J. Mackinnon, P. K. Patel, Y. Ping, K. U. Akli, R. B. Stephens, T. Bartal, F. N. Beg, R. Fedosejevs, H. Friesen, H. F. Tiedje, and Y. Y. Tsui, *Laser-accelerated proton conversion efficiency thickness scaling*, Phys. Plasmas **16**, 123108 (2009).
- D. D. Hinshelwood, R. J. Allen, R. J. Commisso, G. Cooperstein, B. M. Huhman, D. Mosher, D. P. Murphy, P. F. Ottinger, J. W. Schumer, S. B. Swanekamp, S. J. Stephanakis, B. V. Weber, F. C. Young, I. Crotch, J. O'Malley, and J. R. Threadgold, *High-power self-pinch diode experiments for radiographic applications*, IEEE Trans. Plasma Sci. **35**, 565 (2007).
- D. Hinshelwood, G. Cooperstein, D. Mosher, D. M. Ponce, S. D. Strasburg, S. B. Swanekamp, S. J. Stephanakis, B. V. Weber, F. C. Young, A. Critchley, I. Crotch, and J. Threadgold, *Characterization of a self-magnetic-pinch diode*, IEEE Trans. Plasma Sci. **33**, 696 (2005).
- T. P. Hughes, R. E. Clark, and S. S. Yu, *Three-dimensional calculations for a 4 kA, 3.5 MV, 2 microsecond injector with asymmetric power feed*, Phys. Rev. ST Accel. Beams **2**, 110401 (1999).
- I. D. Kaganovich, R. C. Davidson, M. A. Dorf, E. A. Startsev, A. B. Sefkow, E. P. Lee, and A. Friedman, *Physics of neutralization of intense high-energy ion beam pulses by electrons*, Phys. Plasmas **17**, 056703 (2010).
- I. D. Kaganovich, E. A. Startsev, A. B. Sefkow, and R. C. Davidson, *Controlling charge and current neutralization of an ion beam pulse in a background plasma by application of a solenoidal magnetic field: Weak magnetic field limit*, Phys. Plasmas **15**, 103108 (2008).
- I. D. Kaganovich, E. A. Startsev, A. B. Sefkow, and R. C. Davidson, *Charge and current neutralization of an ion-beam pulse propagating in a background plasma along a solenoidal magnetic field*, Phys. Rev. Lett. **99**, 235002 (2007).
- I. D. Kaganovich, A. B. Sefkow, E. A. Startsev, R. C. Davidson, and D. R. Welch, *Effects of finite pulse length, magnetic field, and gas ionization on ion beam pulse neutralization by background plasma*, Nucl. Inst. Meth. Phys. Rev. A **577**, 93 (2007).

- I. D. Kaganovich, E. A. Startsev, R. C. Davidson, and D. Welch, *Ion beam pulse neutralization by a background plasma in a solenoidal magnetic field*, Nucl. Inst. Meth. Phys. Res. A **544**, 383 (2005).
- I. D. Kaganovich, E. A. Startsev, and R. C. Davidson, *Analytical and numerical studies of heavy ion beam transport in the fusion chamber*, Laser and Particle Beams **20**, 497 (2002).
- M. H. Key, *Status of and prospects for the fast ignition inertial fusion concept*, Phys. Plasmas **14**, 055502 (2007).
- M. H. Key, K. Akli, F. Beg, M. H. Chen, H.-K. Chung, R. R. Freeman, M. E. Foord, J. S. Green, P. Gu, G. Gregori, H. Habara, S. P. Hatchett, D. Hey, J. M. Hill, J. A. King, R. Kodama, J. A. Koch, K. Lancaster, B. F. Lasinski, B. Langdon, A. J. Mackinnon, C. D. Murphy, P. A. Norreys, N. Patel, P. Patel, J. Pasley, R. A. Snavely, R. B. Stephens, C. Stoeckl, M. Tabak, W. Theobald, K. Tanaka, R. Town, S. C. Wilks, T. Yabuuchi, and B. Zhang, *Study of electron and proton isochoric heating for fast ignition*, J. Phys. IV France **133**, 371 (2006).
- R. Kodama, P. A. Norreys, Y. Sentoku, R. B. Campbell, *Fast heating of high-density plasmas with a reentrant cone concept*, Fusion Science and Technology **49**, 316 (2006).
- J. J. Leckbee, J. E. Maenchen, D. L. Johnson, S. Portillo, D. M. VanDeValde, D. V. Rose, and B. V. Oliver, *Design, simulation, and fault analysis of a 6.5-MV LTD for flash x-ray radiography*, IEEE Trans. Plasma Sci. **34**, 1888 (2006).
- S. Le Pape, D. Hey, P. Patel, A. Mackinnon, R. Klein, B. Remington, S. Wilks, E. Ryutov, S. Moon, and M. Foord, *Proton radiography of megagauss electromagnetic fields generated by the irradiation of a solid target by an ultraintense laser pulse*, Astrophys. Space Sci. **307**, 341 (2007).
- C. K. Li, F. H. Seguin, J. A. Frenje, M. Manuel, D. Casey, N. Sinenian, R. D. Petrasso, P. A. Amendt, O. L. Landen, J. R. Rygg, R. P. J. Town, R. Betti, J. Delettrez, J. P. Knauer, F. Marshall, D. D. Meyerhofer, T. C. Sangster, D. Shavarts, V. A. Smalyuk, J. M. Soures, C. A. Back, J. D.ilkenny, and A. Nikroo, *Proton radiography of dynamic electric and magnetic fields in laser-produced high-energy-density plasmas*, Phys. Plasmas **16**, 056304 (2009) [See caption of Fig. 5 for LSP callout and references].
- C. K. Li, J. R. Rygg, R. D. Petrasso, R. P. J. Town, P. A. Amendt, S. P. Hatchett, O. L. Landen, A. J. Mackinnon, P. K. Patel, M. Tabak, J. P. Knauer, T. C. Sangster, and V. A. Smalyuk, *Observation of the decay dynamics and instabilities of megagauss field structures in laser-produced plasmas*, Phys. Rev. Lett. **99**, 015001 (2007).
- C. K. Li, F. H. Seguin, J. A. Frenje, J. R. Rygg, R. D. Petrasso, R. P. J. Town, P. A. Amendt, S. P. Hatchett, O. L. Landen, A. J. Mackinnon, P. K. Patel, V. Z. Smalyuk, T. C. Sangster, and J. P. Knauer, *Measuring E and B fields in laser-produced plasmas with monoenergetic proton radiography*, Phys. Rev. Lett. **97**, 135003 (2006).

- B. G. Logan, J. J. Barnard, F. M. Bieniosek, R. H. Cohen, J. E. Coleman, R. C. Davidson, P. C. Efthimion, A. Friedman, E. P. Gilson, W. G. Greenway, L. Grisham, D. P. Grote, E. Henestroza, D. H. H. Hoffmann, I. D. Kaganovich, M. Kireeff Covo, J. W. Kwan, K. N. LaFortune, E. P. Lee, M. Leitner, S. M. Lund, A. W. Molvik, P. Ni, G. E. Penn, L. J. Perkins, H. Qin, P. K. Roy, A. B. Sefkow, P. A. Seidl, W. Sharp, E. A. Startsev, J.-L. Vay, W. L. Waldron, J. S. Wurtele, D. Welch, G. A. Westenskow, and S. S. Yu, *Heavy ion fusion science research for high energy density physics and fusion applications*, Journal of Physics: Conference Series **112**, 032029 (2008).
- B. G. Logan, F. M. Bieniosek, C. M. Celata, J. Coleman, W. Greenway, E. Henestroza, J. W. Kwan, E. P. Lee, M. Leitner, P. K. Roy, P. A. Seidl, J.-L. Vay, W. L. Waldron, S. S. Yu, J. J. Barnard, R. H. Cohen, A. Friedman, D. P. Grote, M. Kireeff Covo, A. W. Molvik, S. M. Lund, W. R. Meier, W. Sharp, R. C. Davidson, P. C. Efthimion, E. P. Gilson, L. Grisham, I. D. Kaganovich, H. Qin, A. B. Sefkow, E. A. Startsev, D. Welch, and C. Olson, *Recent US advances in ion-beam-driven high energy density physics and heavy ion fusion*, Nucl. Inst. Meth. Phys. Res. A **577**, 1 (2007).
- B. G. Logan, F. M. Bieniosek, C. M. Celata, E. Henestroza, J. W. Kwan, E. P. Lee, M. Leitner, P. K. Roy, P. A. Seidl, S. Eylon, J.-L. Vay, W. L. Waldron, S. S. Yu, J. J. Barnard, D. A. Callahan, R. H. Cohen, A. Friedman, D. P. Grote, M. Kireeff Covo, W. R. Meier, A. W. Molvik, S. M. Lund, R. C. Davidson, P. C. Efthimion, E. P. Gilson, L. R. Grisham, I. D. Kaganovich, H. Qin, E. A. Startsev, D. V. Rose, D. R. Welch, C. L. Olson, R. A. Kishek, P. O'Shea, I. Haber, and L. R. Prost, *Overview of US heavy ion fusion research*, Nucl. Fusion **45**, 131 (2005).
- G. Logan, F. Bieniosek, C. Celata, E. Henestroza, J. Kwan, E. P. Lee, M. Leitner, L. Prost, P. Roy, P. A. Seidl, S. Eylon, J.-L. Vay, W. Waldron, S. Yu, J. Barnard, D. Callahan, R. Cohen, A. Friedman, D. Grote, M. Kireeff Covo, W. R. Meier, A. Molvik, S. Lund, R. Davidson, P. Efthimion, E. Gilson, L. Grisham, I. Kaganovich, H. Qin, E. Startsev, D. Rose, D. Welch, C. Olson, R. Kishek, P. O'Shea, and I. Haber, *Overview of US heavy-ion fusion progress and plans*, Nucl. Inst. Meth. Phys. Res. A **544**, 1 (2005).
- A. J. Mackinnon, P. K. Patel, R. P. Town, M. J. Edwards, T. Phillips, S. C. Lerner, D. W. Price, D. Hicks, M. H. Key, S. Hatchett, S. C. Wilks, M. Borghesi, L. Romagnani, S. Kar, T. Toncian, G. Pretzler, and O. Willi, M. Koenig, E. Martinolli, S. Lepape, A. Benuzzi-Mounaix, P. Audebert, J. C. Gauthier, J. King, R. Snavely, R. R. Freeman, and T. Boehlly, *Proton radiography as an electromagnetic field and density perturbation diagnostic (invited)*, Rev. Sci. Instru. **75**, 3531 (2004).
- S. A. MacLaren, A. Faltens, P. A. Seidl, and D. V. Rose, *Results from a scaled final focus experiment for heavy ion fusion*, Phys. Plasmas **9**, 1712 (2002).
- J. Maenchen, G. Cooperstein, J. O'Malley, and I. Smith, *Advances in pulsed power-driven radiography systems*, Proc. IEEE **92**, 1021 (2004). [Paper does not call out LSP; but does include important results.]

- P. McKenna, D. C. Carroll, R. J. Clarke, R. G. Evans, K. W. D. Ledingham, F. Lindau, O. Lundh, T. McCanny, D. Neely, A. P. L. Robinson, L. Robson, P. T. Simpson, C.-G. Wahlstrom, and M. Zepf, *Lateral electron transport in high-intensity laser-irradiated foils diagnosed by ion emission*, Phys. Rev. Lett. **98**, 145001 (2007).
- T. A. Mehlhorn, R. B. Campbell, R. Kodama, K. A. Tanaka, D. R. Welch, S. A. Slutz, R. A. Vessey, D. L. Hanson, M. E. Cuneo, and J. L. Porter, *Simulation of heating-compressed fast-ignition cores by petawatt laser-generated electrons*, J. Phys. IV France **133**, 391 (2006).
- P. R. Menge, D. L. Johnson, J. E. Maenchen, D. C. Rovang, B. V. Oliver, D. V. Rose, and D. R. Welch, *Optimization of a rod pinch diode radiography source at 2.3 MV*, Rev. Sci. Instru. **74**, 3628 (2003).
- C. L. Miller, D. R. Welch, D. V. Rose, and B. V. Oliver, *Detailed simulation of the CYGNUS rod pinch radiographic source*, IEEE Trans. Plasma Sci. **38**, 2507 (2010).
- C. L. Miller, D. R. Welch, D. V. Rose, and B. V. Oliver, *Detailed simulation of the CYGNUS rod pinch radiographic source*, Proc. of the 17th IEEE Pulsed Power Conf., F. Peterkin and R. Curry, Editors, Washington, DC, 23 (2009).
- J. Myatt, W. Theobald, J. A. Delettrez, C. Stoeckl, M. Storm, T. C. Sangster, A. V. Maximov, and R. W. Short, *High-intensity laser interactions with mass-limited solid targets and implications for fast-ignition experiments on OMEGA EP*, Phys. Plasmas **14**, 056301 (2007).
- M. C. Myers, S. B. Swanekamp, M. Friedman and F. Hegeler, *Measurement of the energy distribution of an intense electron beam in an external magnetic field*, Rev. Sci. Instru. **80**, 023504 (2009).
- M. C. Myers, J. D. Sethian, J. L. Giuliani, R. Lehmborg, P. Kepple, M. F. Wolford, F. Hegeler, M. Friedman, T. C. Jones, S. B. Swanekamp, D. Weidenheimer, and D. Rose, *Repetitively pulsed, high energy KrF lasers for inertial fusion energy*, Nucl. Fusion **44**, S247 (2004).
- F. Najmabadi, A. R. Raffray, ARIES-IFE Team: S. I. Abdel-Khalik, L. Bromberg, L. A. El-Guebaly, D. Goodin, D. Haynes, J. Latkowski, W. Meier, R. Moore, S. Neff, C. L. Olson, J. Perkins, D. Petti, R. Petzoldt, D. V. Rose, W. M. Sharp, P. Sharpe, M. S. Tillack, L. Waganer, D. R. Welch, M. Yoda, S. S. Yu, and M. Zaghoul, *Operational windows for dry-wall and wetted-wall IFE chambers*, Fusion Science and Technology **46**, 401 (2004).
- P. M. Nilson, A. A. Solodov, J. F. Myatt, W. Theobald, P. A. Jaanimagi, L. Gao, C. Stoeckl, R. S. Craxton, J. A. Delettrez, B. Yaakobi, J. D. Zuegel, B. E. Kurschwitz, C. Dorrer, J. H. Kelly, K. U. Akli, P. K. Patel, A. J. Mackinnon, R. Betti, T. C. Sangster, and D. D.

- Meyerhofer, *Scaling hot-electron generation to long-pulse, high-intensity laser-solid interactions*, Phys. Plasmas **18**, 056703 (2011).
- P. M. Nilson, A. A. Solodov, J. F. Myatt, W. Theobald, P. A. Jaanimagi, L. Gao, C. Stoeckl, R. S. Craxton, J. A. Delettrez, B. Yaakobi, J. D. Zuegel, B. E. Kruschwitz, C. Dorrer, J. H. Kelly, K. U. Akli, P. K. Patel, A. J. Mackinnon, R. Betti, T. C. Sangster, and D. D. Meyerhofer, *Scaling hot-electron generation to high-power, kilojoule-class laser-solid interactions*, Phys. Rev. Lett. **105**, 235001 (2010).
- P. M. Nilson, W. Theobald, J. F. Myatt, C. Stoeckl, M. Storm, J. D. Zuegel, R. Betti, D. D. Meyerhofer, and T. C. Sangster, *Bulk heating of solid-density plasmas during high-intensity-laser plasma interactions*, Phys. Rev. E **79**, 016406 (2009). [Cites D. R. Welch et al., Phys. Plasmas **13**, 063105 (2006).]
- P. M. Nilson, W. Theobald, J. Myatt, C. Stoeckl, M. Storm, O. V. Gotchev, J. D. Zuegel, R. Betti, D. D. Meyerhofer, and T. C. Sangster, *High-intensity laser-plasma interactions in the refluxing limit*, Phys. Plasmas **15**, 056308 (2008).
- P. A. Norreys, F. N. Beg, Y. Sentoku, L. O. Silva, R. A. Smith, and R. M. G. M. Trines, *Intense laser-plasma interactions: New frontiers in high energy density physics*, Phys. Plasmas **16**, 041002 (2009).
- P. A. Norreys, J. S. Green, J. R. Davies, M. Tatarakis, E. L. Clark, F. N. Beg, A. E. Dangor, K. L. Lancaster, M. S. Wei, M. Zepf, and N. Krushelnick, *Observation of annular electron beam transport in multi-TeraWatt laser-solid interactions*, Plasma Phys. Control. Fusion **48**, L11 (2006).
- P. A. Norreys, K. L. Lancaster, H. Habara, J. R. Davies, J. T. Mendonca, R. J. Clarke, B. Dromey, A. Gopal, S. Karsch, R. Kodama, K. Krushelnick, S. D. Moustazis C. Stoeckl, M. Tatarakis, M. Tampo, N. Vakakis, M. S. Wei, and M. Zepf, *Observation of ion temperatures exceeding background electron temperatures in petawatt laser-solid experiments*, Plasma Phys. Control. Fusion **47**, L49 (2005).
- P. A. Norreys, K. L. Lancaster, C. D. Murphy, H. Habara, S. Karsch, R. J. Clarke, J. Collier, R. Heathcote, C. Hernandez-Gomez, S. Hawkes, D. Neeley, M. H. R. Hutchinson, R. G. Evans, M. Borghesi, L. Romagnani, M. Zepf, K. Akli, J. A. King, B. Zhang, R. R. Freeman, A. J. Mackinnon, S. P. Hatchett, P. Patel, R. Snavely, M. H. Key, A. Nikroo, R. Stephens, C. Stoeckl, K. A. Tanaka, T. Norimatsu, Y. Toyama, and R. Kodama, *Integrated implosion/heating studies for advanced fast ignition*, Phys. Plasmas **11**, 2746 (2004).
- P. A. Norreys, K. M. Krushelnick, and M. Zepf, *PW lasers: matter in extreme laser fields*, Plasma Phys. Control. Fusion **46**, B13 (2004).
- D. T. Offermann, R. R. Freeman, L. D. Van Woerkom, M. E. Foord, D. Hey, M. H. Key, A. J. Mackinnon, A. G. MacPhee, P. K. Patel, Y. Ping, J. J. Sanchez, N. Shen, T. Bartal, F. N.

- Beg, L. Espada, and C. D. Chen, *Observations of proton beam enhancement due to erbium hydride on gold foil targets*, Phys. Plasmas **16**, 093113 (2009).
- B. V. Oliver, D. Short, G. Cooper, J. McLean, and J. O'Malley, *Paraxial gas-cell focusing of relativistic electron beams for radiography*, IEEE Trans. Plasma Sci. **33**, 704 (2005).
- B. V. Oliver, P. F. Ottinger, T. C. Genoni, J. W. Schumer, S. Strasburg, S. B. Swanekamp, and G. Cooperstein, *Magnetically insulated electron flow with ions with application to the rod-pinch diode*, Phys. Plasmas **11**, 3976 (2004).
- B. V. Oliver, T. C. Genoni, D. V. Rose, and D. R. Welch, *Space-charge limited currents in coaxial diodes with electron backscatter*, J. Appl. Phys. **90**, 4951 (2001).
- C. Olson, G. Rochau, S. Slutz, C. Morrow, R. Olson, M. Cuneo, D. Hanson, G. Bennett, T. Sanford, J. Bailey, W. Stygar, R. Vesey, T. Mehlhorn, K. Struve, M. Mazarakis, M. Savage, T. Pointon, M. Kiefer, S. Rosenthal, K. Cochrane, L. Schneider, S. Glover, K. Reed, D. Schroen, C. Farnum, M. Modesto, D. Oscar, L. Chhabildas, J. Boyes, V. Vigil, R. Keith, M. Turgeon, B. Cipiti, E. Lindgren, V. Dandini, H. Tran, D. Smith, D. McDaniel, J. Quintenz, M. K. Matzen, J. P. VanDevender, W. Gauster, L. Shephard, M. Walck, T. Renk, T. Tanaka, M. Ulrickson, W. Meier, J. Latkowski, R. Moir, R. Schmitt, S. Reyes, R. Abbott, R. Peterson, G. Pollock, P. Ottinger, J. Schumer, P. Peterson, D. Kammer, G. Kulcinski, L. El-Guebaly, G. Moses, I. Sviatoslavsky, M. Sawan, M. Anderson, R. Bonazza, J. Oakley, P. Meekunasombat, J. DeGroot, N. Jensen, M. Abdou, A. Ying, P. Calderoni, N. Morley, S. Abdel-Khalik, C. Dillon, C. Lascar, D. Sadowski, R. Curry, K. McDonald, M. Barkey, W. Szaroletta, R. Gallix, N. Alexander, W. Rickman, C. Charman, H. Shatoff, D. Welch, D. Rose, P. Panchuk, D. Louie, S. Dean, A. Kim, S. Nedoseev, E. Grabovsky, A. Kingsep, and V. Smirnov, *Development path for z-pinch IFE*, Fusion Science and Technology **47**(3), 633 (2005).
- P. F. Ottinger and J. W. Schumer, *Self-consistent modeling of power flow in a recyclable transmission line for a Z-pinch-driven IFE system*, IEEE Trans. Plasma Sci. **35**, 154 (2007).
- P. F. Ottinger and J. W. Schumer, *Rescaling of equilibrium magnetically insulated flow theory based on results from particle-in-cell simulations*, Phys. Plasmas **13**, 063109 (2006).
- P. F. Ottinger and J. W. Schumer, *Magnetically insulated ion flow theory*, Phys. Plasmas **13**, 063101 (2006).
- B. S. Paradkar, M. S. Wei, T. Yabuuchi, R. B. Stephens, M. G. Haines, S. I. Krasheninnikov, and F. N. Beg, *Numerical modeling of fast electron generation in the presence of preformed plasma in laser-matter interaction at relativistic intensities*, Phys. Rev. E **83**, 046401 (2011).

- B. S. Paradkar, M. S. Wei, T. Yabuuchi, R. B. Stephens, J. T. Larsen, and F. N. Beg, *Numerical modeling of fast electron transport in short pulse laser-solid interactions with long scale-length pre-formed plasma*, Plasma Phys. Control. Fusion **52**, 125003 (2010).
- H.-S. Park, D. M. Chambers, H.-K. Chung, R. J. Clarke, R. Eagleton, E. Giraldez, T. Goldsack, R. Heathcote, N. Izumi, M. H. Key, J. A. King, J. A. Koch, O. L. Landen, A. Nikroo, P. K. Patel, D. F. Price, B. A. Remington, H. F. Robey, R. A. Snavely, D. A. Steinman, R. B. Stephens, C. Stoeckl, M. Storm, M. Tabak, W. Theobald, R. P. J. Town, J. E. Wickersham, and B. B. Zhang, *High-energy Ka radiography using high-intensity, short-pulse lasers*, Phys. Plasmas **13**, 056309 (2006).
- G. M. Petrov, J. L. Giuliani, J. P. Apruzese, A. Dasgupta, Tz. Petrova, K. Bartschat, and D. Rose, *Electron kinetics of the e-beam pumped Ar-Xe laser*, J. Phys. D: Appl. Phys. **40**, 4532 (2007).
- O. Polomarov, I. Kaganovich, and G. Shvets, *Merging of super-Alfvénic current filaments during collisionless Weibel Instability of relativistic electron beams*, Phys. Rev. Lett. **101**, 175001 (2008).
- O. Polomarov, A. B. Sefkow, I. Kaganovich, and G. Shvets, *Computationally efficient description of relativistic electron beam transport in collisionless plasma*, Phys. Plasmas **14**, 043103 (2007).
- D. V. Rose, T. C. Genoni, R. E. Clark, D. R. Welch, and W. A. Stygar, *Electron flow stability in magnetically insulated vacuum transmission lines*, Phys. Plasmas **18**, 033108 (2011).
- D. V. Rose, C. L. Miller, D. R. Welch, R. E. Clark, E. A. Madrid, C. B. Mostrom, W. A. Stygar, K. R. LeChien, M. A. Mazarakis, W. L. Langston, J. L. Porter, and J. R. Woodworth, *Circuit models and three-dimensional electromagnetic simulations of a 1-MA linear transformer driver stage*, Phys. Rev. ST Accel. Beams **13**, 090401 (2010).
- D. V. Rose, D. R. Welch, C. L. Miller, R. E. Clark, E. A. Madrid, C. B. Mostrom, T. C. Wagoner, J. K. Moore, W. A. Stygar, J. E. Bailey, T. J. Nash, G. A. Rochau, and D. B. Sinars, *10^7 -A load-current B-dot monitor: Simulations, design, and performance*, Phys. Rev. ST Accel. Beams **13**, 040401 (2010).
- D. V. Rose, D. R. Welch, E. A. Madrid, C. L. Miller, R. E. Clark, W. A. Stygar, M. E. Savage, G. A. Rochau, J. E. Bailey, T. J. Nash, M. E. Sceiford, K. W. Struve, P. A. Corcoran, and B. A. Whitney, *Three-dimensional electromagnetic model of the pulsed-power Z-pinch accelerator*, Phys. Rev. ST Accel. Beams **13**, 010402 (2010).
- D. V. Rose, T. C. Genoni, D. R. Welch, R. E. Clark, R. B. Campbell, T. A. Mehlhorn, and D. G. Flicker, *Particle-in-cell and hypernetted chain models of two-component, two-temperature coupled classical plasmas*, Phys. Plasmas **16**, 102105 (2009).

- D. V. Rose, D. R. Welch, E. A. Madrid, C. L. Miller, R. E. Clark, W. A. Stygar, K. Struve, P. A. Corcoran, and B. Whitney, *Electromagnetic wave propagation through the ZR Z-pinch accelerator*, Dense Z-Pinches: 7th International Conference, edited by D. A. Hammer and B. R. Kusse, American Institute of Physics, Melville, New York, 263 (2009).
- D. V. Rose, D. R. Welch, T. P. Hughes, R. E. Clark, and W. A. Stygar, *Plasma evolution and dynamics in high-power vacuum-transmission-line post-hole convolutes*, Phys. Rev. ST Accel. Beams **11**, 060401 (2008).
- D. V. Rose, T. C. Genoni, D. R. Welch, E. A. Startsev, and R. C. Davidson, *Two-stream instability analysis for propagating charged particle beams with a velocity tilt*, Phys. Rev. ST Accel. Beams **10**, 034203 (2007).
- D. V. Rose, T. C. Genoni, D. R. Welch, T. A. Mehlhorn, J. L. Porter, and T. Ditmire, *Flute instability growth on a magnetized plasma column*, Phys. Plasmas **13**, 092507 (2006).
- D. V. Rose, D. R. Welch, B. V. Oliver, J. J. Leckbee, J. E. Maenchen, D. L. Johnson, A. A. Kim, B. M. Kovalchuk, and V. A. Sinebryukhov, *Numerical analysis of a pulsed compact LTD system for electron beam-driven radiography*, IEEE Trans. Plasma Sci. **34**, 1879 (2006).
- D. V. Rose, T. C. Genoni, D. R. Welch, and E. P. Lee, *Two-stream stability assessment of intense heavy ion beams propagating in a plasma immersed in an axial magnetic field*, Nucl. Inst. Meth. Phys. Res. A **544**, 389 (2005).
- D. V. Rose, J. Guillory, and J. H. Beall, *Enhanced Landau damping of finite amplitude electrostatic waves in the presence of suprathermal electron tails*, Phys. Plasmas **12**, 014501 (2005).
- D. V. Rose, T. C. Genoni, and D. R. Welch, *Ion-hose instability growth and saturation for counterstreaming electron and ion beams in an applied magnetic field*, Phys. Plasmas **11**, 4990 (2004).
- D. V. Rose, D. R. Welch, C. L. Olson, S. S. Yu, S. Neff, W. M. Sharp, and the ARIES Team, *Impact of beam transport method on chamber and driver design for heavy ion inertial fusion energy*, Fusion Science and Technology **46**, 470 (2004).
- D. V. Rose, D. R. Welch, F. Hegeler, S. B. Swanekamp, M. C. Myers, and J. D. Sethian, *Numerical modeling of large-area electron-beams diodes for KrF lasers*, J. Appl. Phys. **94**, 5343 (2003).
- D. V. Rose, D. R. Welch, B. V. Oliver, R. E. Clark, D. L. Johnson, J. E. Maenchen, P. R. Menge, C. L. Olson, and D. C. Rovang, *Coupled particle-in-cell and Monte Carlo transport modeling of intense radiographic sources*, J. Appl. Phys. **91**, 3328 (2002).
- D. V. Rose, T. C. Genoni, and D. R. Welch, *Steady-state erosion of propagating ion beams*, Phys. Plasmas **9**, 1053 (2002).

- D. V. Rose, J. U. Guillory, and J. H. Beall, *Comparison of particle-in-cell simulations and a wave-population model of electron-beam-plasma interactions*, Phys. Plasmas **9**, 1000 (2002).
- D. V. Rose, D. R. Welch, B. V. Oliver, R. E. Clark, W. M. Sharp, and A. Friedman, *Ballistic-neutralized chamber transport of intense heavy ion beams*, Nucl. Inst. Meth. Phys. Res. A **464**, 299 (2001).
- D. C. Rovang, N. Bruner, J. E. Maenchen, B. V. Oliver, S. Portillo, E. Puetz, D. V. Rose, and D. R. Welch, *The role of ions during stable impedance operation of the immersed- B_z diode at 4 to 5 MV*, Phys. Plasmas **14**, 113107 (2007). [Erratum: Phys. Plasmas **15**, 019902 (2008).]
- P. K. Roy, S. S. Yu, W. L. Waldron, A. Anders, D. Baca, J. J. Barnard, F. M. Bieniosek, J. Coleman, R. C. Davidson, P. C. Efthimion, S. Eylon, A. Friedman, E. P. Gilson, W. G. Greenway, E. Henestroza, I. Kaganovich, M. Leitner, B. G. Logan, A. B. Sefkow, P. A. Seidl, W. M. Sharp, C. Thoma, and D. R. Welch, *Neutralized drift compression experiments with a high-intensity ion beam*, Nucl. Inst. Meth. Phys. Res. A **577**, 223 (2007).
- P. K. Roy, S. S. Yu, S. Eylon, E. Henestroza, A. Anders, E. P. Gilson, F. M. Bieniosek, W. G. Greenway, B. G. Logan, W. L. Waldron, D. B. Shuman, D. L. Vanecek, D. R. Welch, D. V. Rose, C. Thoma, R. C. Davidson, P. C. Efthimion, I. Kaganovich, A. B. Sefkow, and W. M. Sharp, *Neutralized transport experiment*, Nucl. Inst. Meth. Phys. Res. A **544**, 225 (2005).
- P. K. Roy, S. S. Yu, S. Eylon, E. Henestroza, A. Anders, F. M. Bieniosek, W. G. Greenway, B. G. Logan, W. L. Waldron, D. L. Vanecek, D. R. Welch, D. V. Rose, R. C. Davidson, P. C. Efthimion, E. P. Gilson, A. B. Sefkow, and W. M. Sharp, *Results on intense beam focusing and neutralization from the neutralized beam experiment*, Phys. Plasmas **11**, 2890 (2004).
- D. W. Schumacher, G. E. Kemp, A. Link, R. R. Freeman, and L. D. Van Woerkom, *The shaped critical surface in high intensity laser plasma interactions*, Phys. Plasmas **18**, 013102 (2011).
- J. W. Schumer, P. F. Ottinger, and C. L. Olson, *Power flow design constraints for a recyclable transmission line for Z-pinch IFE*, Fusion Science and Technology **52**, 901 (2007).
- J. W. Schumer, P. F. Ottinger, and C. L. Olson, *Power flow in a magnetically insulated recyclable transmission line for a Z-pinch-driven inertial-confinement-fusion energy system*, IEEE Trans. Plasma Sci. **34**, 2652 (2006).
- A. B. Sefkow, R. C. Davidson, E. P. Gilson, I. D. Kaganovich, A. Anders, J. E. Coleman, M. Leitner, S. M. Lidia, P. K. Roy, P. A. Seidl, W. L. Waldron, S. S. Yu, and D. R. Welch,

- Simulations and experiments of intense ion beam current density compression in space and time*, Phys. Plasmas **16**, 056701 (2009).
- A. B. Sefkow and S. A. Cohen, *Particle-in-cell modeling of magnetized argon plasma flow through small mechanical apertures*, Phys. Plasmas **16**, 053501 (2009).
- A. B. Sefkow, R. C. Davidson, and E. P. Gilson, *Advanced plasma flow simulations of cathodic-arc and ferroelectric plasma sources for neutralized drift compression experiments*, Phys. Rev. ST Accel. Beams **11**, 070101 (2008).
- A. B. Sefkow and R. C. Davidson, *Advanced numerical studies of the neutralized drift compression of intense ion beam pulses*, Phys. Rev. ST Accel. Beams **10**, 100101 (2007).
- A. B. Sefkow, R. C. Davidson, I. D. Kaganovich, E. P. Gilson, P. K. Roy, P. A. Seidl, S. S. Yu, D. R. Welch, D. V. Rose, and J. J. Barnard, *Optimized simultaneous transverse and longitudinal focusing of intense ion beam pulses for warm dense matter applications*, Nucl. Inst. Meth. Phys. Res. A **577**, 289 (2007).
- A. B. Sefkow and R. C. Davidson, *Theoretical models for describing longitudinal bunch compression in the neutralized drift compression experiment*, Phys. Rev. ST Accel. Beams **9**, 090101 (2006).
- A. B. Sefkow, R. C. Davidson, P. C. Efthimion, E. P. Gilson, S. S. Yu, P. K. Roy, F. M. Bieniosek, J. E. Coleman, S. Eylon, W. G. Greenway, E. Henestroza, J. W. Kwan, D. L. Vanecek, W. L. Waldron, and D. R. Welch, *Fast Faraday cup to measure neutralized drift compression in intense ion charge bunches*, Phys. Rev. ST Accel. Beams **9**, 052801 (2006).
- P. A. Seidl, J. Armijo, D. Baca, F. M. Bieniosek, J. Coleman, R. C. Davidson, P. C. Efthimion, A. Friedman, E. P. Gilson, D. Grote, I. Haber, E. Henestroza, I. Kaganovich, M. Leitner, B. G. Logan, A. W. Molvik, D. V. Rose, P. K. Roy, A. B. Sefkow, W. M. Sharp, J.-L. Vay, W. L. Waldron, D. R. Welch, and S. S. Yu, *Plans for longitudinal and transverse neutralized beam compression experiments, and initial results from solenoid transport experiments*, Nucl. Inst. Meth. Phys. Res. A **577**, 215 (2007).
- J. D. Sethian, M. C. Myers, J. L. Giuliani, Jr., R. H. Lehmberg, P. C. Kepple, S. P. Obenschain, F. Hegeler, M. Friedman, M. F. Wolford, R. V. Smilgys, S. B. Swanekamp, D. Weidenheimer, D. Giorigi, D. R. Welch, D. V. Rose, and S. Searles, *Electron beam pumped Krypton Fluoride lasers for fusion energy*, Proceedings of the IEEE **92**(7), 1043 (2004).
- J. D. Sethian, M. Friedman, J. Giuliani, R. H. Lemberg, M. Myers, S. P. Obenschain, P. Kepple, M. Wolford, F. Hegeler, S. B. Swanekamp, D. Weidenheimer, D. Welch, D. V. Rose, and S. Searles, *Electron beam pumped KrF lasers for fusion energy*, Phys. Plasmas **10**, 2142 (2003).

- J. D. Sethian, M. Friedman, R. H. Lemberg, M. Myers, S. P. Obenshain, J. Giuliani, P. Kepple, A. J. Schmitt, D. Colombant, J. Gardner, F. Hegeler, M. Wolford, S. B. Swanekamp, D. Weidenheimer, D. Welch, D. Rose, S. Payne, C. Bibeau, A. Baraymian, R. Beach, K. Schaffers, B. Freitas, W. Skulina, W. Meier, J. Latkowski, L. J. Perkins, D. Goodin, R. Petzoldt, E. Stephens, F. Naimabadi, M. Tillack, R. Raffray, Z. Dragojlovic, D. Haynes, R. Peterson, G. Kulcinski, J. Hoffer, D. Geller, D. Schroen, J. Streit, C. Olson, T. Tanaka, T. Renk, G. Rochau, L. Snead, N. Ghoneim, and G. Lucas, *Fusion energy research with lasers, direct drive targets, and dry wall chambers*, Nucl. Fusion **43**, 1693 (2003).
- W. M. Sharp, D. A. Callahan, M. Tabak, S. S. Yu, P. F. Peterson, D. V. Rose, and D. R. Welch, *Chamber-transport simulation results for heavy-ion fusion drivers*, Nucl. Fusion **44**, S221 (2004).
- W. M. Sharp, D. A. Callahan, M. Tabak, S. S. Yu, P. F. Peterson, D. R. Welch, D. V. Rose, and C. L. Olson, *Modeling chamber transport for heavy-ion fusion*, Fusion Science and Technology **43**, 393 (2003).
- G. Shvets, O. Polomarov, V. Khudik, C. Siemon, and I. Kaganovich, *Nonlinear evolution of the Weibel instability of relativistic electron beams*, Phys. Plasmas **16**, 056303 (2009).
- N. J. Sircombe, B. R. Thomas, and E. Kerswill, *Energy deposition models for short-pulse laser-solid interaction experiments*, Journal of Physics: Conference Series **112**, 022106 (2008).
- I. D. Smith, *Induction voltage adders and the induction accelerator family*, Phys. Rev. ST Accel. Beams **7**, 064801 (2004).
- A. A. Solodov, M. Storm, J. F. Myatt, R. Betti, D. D. Meyerhofer, P. M. Nilson, W. Theobald, and C. Stoeckl, *Simulations of electron-beam transport in solid-density targets and the role of magnetic collimation*, Journal of Physics: Conference Series **244**, 022063 (2010).
- A. A. Solodov, K. S. Anderson, R. Betti, V. Gotcheva, J. Myatt, J. A. Delettrez, S. Skupsky, W. Theobald, and C. Stoeckl, *Integrated simulations of implosion, electron transport, and heating for direct-drive fast-ignition targets*, Phys. Plasmas **16**, 056309 (2009).
- A. A. Solodov, K. S. Anderson, R. Betti, V. Gotcheva, J. Myatt, J. A. Delettrez, S. Skupsky, W. Theobald, and C. Stoeckl, *Simulations of electron transport and ignition for direct-drive fast-ignition targets*, Phys. Plasmas **15**, 112702 (2008).
- E. A. Startsev, R. C. Davidson, and M. Dorf, *Streaming instabilities of intense charged particle beams propagating along a solenoidal magnetic field in a background plasma*, Phys. Plasmas **15**, 062107 (2008).
- C. Stoeckl, K. S. Anderson, R. Betti, T. R. Boehly, J. A. Delettrez, J. A. Frenje, V. N. Goncharov, V. Yu Glebov, J. H. Kelly, A. J. Mackinnon, R. L. McCrory, D. D. Meyerhofer, S. F. B. Morse, J. F. Myatt, P. A. Norreys, P. M. Nilson, R. D. Petrasso, T. C. Sangster, A. A. Solodov, R. B. Stephens, M. Storm, W. Theobald, B. Yaakobi, L. J.

- Waxer, and C. D. Zhou, *Fast-ignition target design and experimental-concept validation on OMEGA*, Plasma Phys. Control. Fusion **50**, 124044 (2008).
- M. Storm, A. A. Solodov, J. F. Myatt, D. D. Meyerhofer, C. Stoeckl, C. Mileham, R. Betti, P. M. Nilson, T. C. Sangster, W. Theobald, and C. Guo, *High-current, relativistic electron-beam transport in metals and the role of magnetic collimation*, Phys. Rev. Lett. **102**, 235004 (2009).
- S. Strasburg, D. D. Hinshelwood, J. W. Schumer, D. Mosher, P. F. Ottinger, R. F. Fernsler, and S. P. Slinker, *Intense electron-beam ionization physics in air*, Phys. Plasmas **10**, 3758 (2003).
- S. Strasburg, D. D. Hinshelwood, P. F. Ottinger, J. W. Schumer, R. Comisso, S. Stephanakis, V. Chorny, and D. V. Rose, *Grad-B drift transport and focusing of high-current electron beams*, Phys. Plasmas **10**, 2527 (2003).
- D. J. Strozzi, D. P. Grote, M. Tabak, B. I. Cohen, R. P. J. Town, and A. J. Kemp, *Fast ignition transport simulations for NIF*, Journal of Physics: Conference Series **244**, 022065 (2010).
- S. B. Swanekamp, B. V. Weber, S. J. Stephanakis, D. Mosher, and R. J. Comisso, *Bremsstrahlung target optimization for reflex triodes*, Phys. Plasmas **15**, 083105 (2008).
- S. B. Swanekamp and J. W. Schumer, *Comment on "Relation between space charge limited current and power loss in open drift tubes" [Phys. Plasmas 13, 073101 (2006)]*, Phys. Plasmas **14**, 094705 (2007).
- S. B. Swanekamp and P. F. Ottinger, *Comment on "Power loss in open cavity diodes and a modified Child-Langmuir law" [Phys. Plasmas 12, 093102 (2005)]*, Phys. Plasmas **14**, 094701 (2007).
- S. B. Swanekamp, G. Cooperstein, J. W. Schumer, D. Mosher, F. C. Young, P. F. Ottinger, and R. J. Comisso, *Evaluation of self-magnetically pinched diodes up to 10 MV as high-resolution flash x-ray sources*, IEEE Trans. Plasma Sci. **32**, 2004 (2004).
- M. Tabak, D. Clark, R. P. J. Town, M. H. Key, P. Amendt, D. Ho, D. J. Meeker, H. D. Shay, B. F. Lasinski, A. Kemp, L. Divol, A. J. Mackinnon, P. Patel, D. Strozzi, and D. P. Grote, *Features of a point design for fast ignition*, Journal of Physics: Conference Series **244**, 022066 (2010).
- M. Tabak, D. S. Clark, S. P. Hatchett, M. H. Key, B. F. Lasinski, R. A. Snavely, S. C. Wilks, R. P. J. Town, R. Stephens, E. M. Campbell, R. Kodama, K. Mima, K. A. Tanaka, S. Atzeni, and R. Freeman, *Review of progress in fast ignition*, Phys. Plasmas **12**, 057305 (2005).
- C. Thoma, D. V. Rose, C. L. Miller, R. E. Clark, and T. P. Hughes, *Electromagnetic wave propagation through an overdense magnetized collisional plasma layer*, J. Appl. Phys. **106**, 043301 (2009).

- C. Thoma, D. R. Welch, and T. P. Hughes, *Ballistic and snowplow regimes in JxB plasma acceleration*, Phys. Plasmas **16**, 032103 (2009).
- C. Thoma, T. P. Hughes, N. L. Bruner, T. C. Genoni, D. R. Welch, and R. E. Clark, *Monte Carlo versus bulk conductivity modeling of RF breakdown of helium*, IEEE Trans. Plasma Sci. **34**, 910 (2006).
- C. Thoma, D. R. Welch, S. S. Yu, E. Henestroza, P. K. Roy, S. Eylon, and E. P. Gilson, *Comparison of experimental data and three-dimensional simulations of ion beam neutralization from the Neutralized Transport Experiment*, Phys. Plasmas **12**, 043102 (2005).
- R. P. J. Town, C. Chen, L. A. Cottrill, M. H. Key, W. L. Kruer, A. B. Langdon, B. F. Lasinski, R. A. Snavely, C. H. Still, M. Tabak, D. R. Welch, S. C. Wilks, *Simulations of electron transport for fast ignition using LSP*, Nucl. Inst. Meth. Phys. Res. A **544**, 61 (2005).
- C. Vermare, H. A. Davis, and D. C. Moir, *Ion emission from solid surfaces induced by intense electron beam impact*, Phys. Plasmas **10**, 277 (2003).
- R. A. Vesey, R. B. Campbell, S. A. Slutz, D. L. Hanson, M. E. Cuneo, T. A. Mehlhorn, and J. L. Porter, *Z-pinch-driven fast ignition fusion*, Fusion Science and Technology **49**, 384 (2009).
- B. V. Weber, R. J. Comisso, G. Cooperstein, D. D. Hinshelwood, D. Mosher, P. F. Ottinger, D. M. Ponce, J. W. Schumer, S. J. Stephanakis, S. D. Strasburg, S. B. Swanekamp, and F. C. Young, *Ultra-high electron beam power and energy densities using a plasma-filled rod-pinch diode*, Phys. Plasmas **11**, 2916 (2004).
- M. S. Wei, A. A. Solodov, J. Pasley, R. B. Stephens, D. R. Welch, and F. N. Beg, *Study of relativistic electron beam production and transport in high-intensity laser interaction with a wire target by integrated LSP modeling*, Phys. Plasmas **15**, 083101 (2008).
- D. R. Welch, D. V. Rose, C. Thoma, R. E. Clark, C. B. Mostrom, W. A. Stygar, and R. J. Leeper, *Kinetic simulations of a deuterium-tritium Z pinch with $<10^{16}$ neutron yield*, Phys. Plasmas **18**, 056303 (2011).
- D. R. Welch, T. C. Genoni, S. A. Cohen, and A. H. Glasser, *Particle-in-cell modeling of field reversed configuration formation by odd-parity rotating magnetic fields*, J. Fusion Energy **29**, 584 (2010).
- D. R. Welch, D. V. Rose, C. Thoma, R. E. Clark, C. B. Mostrom, W. A. Stygar, and R. J. Leeper, *Kinetic simulation of thermonuclear-neutron production by a 10^7 -A deuterium Z pinch*, Phys. Plasmas **17**, 072702 (2010).

- D. R. Welch, S. A. Cohen, T. C. Genoni, and A. H. Glasser, *Formation of field-reversed-configuration plasma with punctuated-betatron-orbit electrons*, Phys. Rev. Lett. **105**, 015002 (2010).
- D. R. Welch, D. V. Rose, R. E. Clark, C. B. Mostrom, W. A. Stygar, and R. J. Leeper, “*Fully kinetic particle-in-cell simulations of a deuterium gas puff z-pinch*,” Phys. Rev. Lett. **103**, 255002 (2009).
- D. R. Welch, D. V. Rose, N. Bruner, R. E. Clark, B. V. Oliver, K. D. Hahn, and M. D. Johnston, *Hybrid simulation of electrode plasmas in high-power diodes*, Phys. Plasmas **16**, 123102 (2009).
- D. R. Welch, J. E. Coleman, P. A. Seidl, P. K. Roy, E. Henestroza, E. P. Lee, A. B. Sefkow, E. P. Gilson, T. C. Genoni, and D. V. Rose, *Source-to-target simulation of simultaneous longitudinal and transverse focusing of heavy ion beams*, Phys. Rev. ST Accel. Beams **11**, 064701 (2008).
- D. R. Welch, T. C. Genoni, D. V. Rose, N. L. Bruner, and W. A. Stygar, *Optimized transmission-line impedance transformers for petawatt-class pulsed-power accelerators*, Phys. Rev. ST Accel. Beams **11**, 030401 (2008).
- D. R. Welch, T. C. Genoni, R. E. Clark, and D. V. Rose, *Adaptive particle management in a particle-in-cell code*, J. Comp. Phys. **227**, 143 (2007).
- D. R. Welch, D. V. Rose, C. Thoma, A. B. Sefkow, I. D. Kaganovich, P. A. Seidl, S. S. Yu, J. J. Barnard, and P. K. Roy, *Integrated simulation of an ion-driven warm dense matter experiment*, Nucl. Inst. Meth. Phys. Res. A **577**, 231 (2007).
- D. R. Welch, T. C. Genoni, D. V. Rose, B. V. Oliver, K. D. Hahn, and E. Schamiloglu, *Bernstein mode generated anomalous resistivity in a current carrying plasma focusing cell*, Phys. Plasmas **13**, 103106 (2006).
- D. R. Welch, D. V. Rose, M. E. Cuneo, R. B. Campbell, and T. A. Mehlhorn, *Integrated simulation of the generation and transport of proton beams from laser-target interaction*, Phys. Plasmas **13**, 063105 (2006).
- D. R. Welch, D. V. Rose, T. C. Genoni, S. S. Yu, and J. J. Barnard, *Simulations of neutralized final focus*, Nucl. Inst. Meth. Phys. Res. A **544**, 236 (2005).
- D. R. Welch, D. V. Rose, R. E. Clark, T. C. Genoni, and T. P. Hughes, *Implementation of a non-iterative implicit electromagnetic field solver for dense plasma simulation*, Comp. Phys. Comm. **164**, 183 (2004).
- D. R. Welch, D. V. Rose, B. V. Oliver, E. Schamiloglu, K. D. Hahn, and J. E. Maenchen, *Transport of a relativistic electron beam in gas and plasma-filled focusing cells for x-ray radiography*, Phys. Plasmas **11**, 751 (2004).

- D. R. Welch, D. V. Rose, W. M. Sharp, C. L. Olson, and S. S. Yu, *Effects of preneutralization on heavy ion fusion chamber transport*, *Lasers and Particle Beams* **20**, 621 (2002).
- D. R. Welch, D. V. Rose, B. V. Oliver, T. C. Genoni, R. E. Clark, C. L. Olson, and S. S. Yu, *Simulations of intense heavy ion beams propagating through a gaseous fusion target chamber*, *Phys. Plasmas* **9**, 2344 (2002).
- D. R. Welch, D. V. Rose, B. V. Oliver, and R. E. Clark, *Simulation techniques for heavy ion fusion chamber transport*, *Nucl. Inst. Meth. Phys. Res. A* **464**, 134 (2001).
- T. Yabuuchi, B. S. Paradkar, M. S. Wei, J. A. King, F. N. Beg, R. P. Stephens, N. Nakanii, M. Hatakeyama, H. Habara, K. Mima, K. A. Tanaka, and J. T. Larsen, *Transport study of intense-laser-produced fast electrons in solid targets with a preplasma created by a long pulse laser*, *Phys. Plasmas* **17**, 060704 (2010).
- S. S. Yu, B. G. Logan, J. J. Barnard, F. M. Bieniosek, R. J. Briggs, R. H. Cohen, J. E. Coleman, R. C. Davidson, A. Friedman, E. P. Gilson, L. R. Grisham, D. P. Grote, E. Henestroza, I. D. Kaganovich, M. Kireeff Covo, R. A. Kishek, J. W. Kwan, E. P. Lee, M. A. Leitner, S. M. Lund, A. W. Molvik, C. L. Olson, H. Qin, P. K. Roy, A. Sefkow, P. A. Seidl, E. A. Startsev, J.-L. Vay, W. L. Waldron, and D. R. Welch, *Heavy-ion-fusion-science: summary of US progress*, *Nucl. Fusion* **47**, 721 (2007).
- S. S. Yu, J. J. Barnard, R. J. Briggs, D. Callahan-Miller, L. L. Chao, R. Davidson, C. S. Debonnel, S. Eylon, A. Friedman, E. Henestroza, I. Kaganovich, J. W. Kwan, E. P. Lee, M. Leitner, B. G. Logan, W. Meier, P. F. Peterson, L. Reginato, D. Rose, P. Roy, W. Waldron, and D. R. Welch, *Towards a modular point design for heavy ion fusion*, *Fusion Science and Technology* **47**(3), 621 (2005).
- S. S. Yu, R. P. Abott, R. O. Bangerter, J. J. Barnard, R. J. Briggs, D. Callahan, C. M. Celeta, R. Davidson, C. S. Debonnel, S. Eylon, A. Faltens, A. Friedman, D. P. Grote, P. Heitzenroeder, E. Henestroza, I. Kaganovich, J. W. Kwan, J. F. Latowski, E. P. Lee, B. G. Logan, P. F. Peterson, D. Rose, P. K. Roy, G.-L. Sabbi, P. A. Seidl, W. M. Sharp, and D. R. Welch, *Heavy ion fusion (HIF) driver point designs*, *Nucl. Inst. Meth. Phys. Res. A* **544**, 294 (2005).
- S. S. Yu, W. R. Meier, R. P. Abbott, J. J. Barnard, T. Brown, D. A. Callahan, C. Debonnel, P. Heitzenroeder, J. F. Latowski, B. G. Logan, S. J. Pemberton, P. F. Peterson, D. V. Rose, G.-L. Sabbi, W. M. Sharp, and D. R. Welch, *An updated point design for heavy ion fusion*, *Fusion Science and Technology* **44**, 266 (2003).