

Poster Presentations at DZP 2017 (total of 49 posters)

Monday, Aug. 14 (1:15 – 3:30 pm)

Poster session –I

26 posters

Z-PINCH FUSION (5)

Pre-Magnetized Liner Stagnation Studies on Z.

M. R. Martin, P. F. Knapp, D.H. Dolan, C.J. Jennings, M.R. Weis

Assessing Thermonuclear Conditions For Fusion Sources On Z.

K.D. Hahn, G.A. Chandler, P.F. Knapp, C.L. Ruiz, B. Lahmann, J. Frenje, N. Price, B. Jones, G.W. Cooper, J.D. Styron, J.A. Torres, and P.J. Alberto

Recent Results of the MagLIF Peak Load Current Diagnostic.

M. H. Hess, K. J. Peterson, D. J. Ampleford, B. T. Hutsel, C. A. Jennings, D. H. Dolan, W. A. Stygar, M. R. Gomez, M. R. Martin, G. K. Robertson, and D. B. Sinars

Experimental Investigation of Micrometer Scale features in Cylindrical Metal Liners Driven by a 1 MA Pulsed Power Generator.

L. Atoyán, D. A. Hammer, J. T. Banasek, T. Byvank, J. B. Greenly, N. Hamlin, B. R. Kusse, S. V. Rocco, and C. E. Seyler

UM. Pulsed Laser Gate Experiment For Magnetized Liner Inertial Fusion (MagLIF).

S.M. Miller, S.A. Slutz, P.C. Campbell, J.M. Woolstrum, M.R. Gomez, D.A. Yager-Elorriaga, N.M. Jordan, Y.Y. Lau, R.M. Gilgenbach, and R.D. McBride

WIRE ARRAYS & X-PINCHES (6)

Comparative Study of Electron Beams and Hard X-rays Emission in Double Planar Wire Arrays at UM LTD MAIZE and UNR Zebra Generators.

I. Shrestha, V.L. Kantsyrev, A.S. Safronova, V.V. Shlyaptseva, M. T. Schmidt-Petersen, C.J. Butcher, A. Stafford, K.A. Schultz, A. M. Steiner, D.A. Yager-Elorriaga, P.C. Campbell, N.M. Jordan, R. D. McBride, R.M. Gilgenbach

Comparison of X-rays Bursts from pure and mixed Double Planar Wire Arrays at UM LTD MAIZE Generator.

C.J. Butcher, V.L. Kantsyrev, A.S. Safronova, V.V. Shlyaptseva, I.K. Shrestha, M. T. Schmidt-Petersen, A. Stafford, K.A. Schultz, A. M. Steiner, D.A. Yager-Elorriaga, P.C. Campbell, N.M. Jordan, R. D. McBride, R.M. Gilgenbach

Study of the Precursor Dynamics and Collapse in Wire Arrays with End-on Laser Diagnostics.

V.V. Ivanov, D. Papp, A. A. Anderson

Particle Acceleration In Magnetised Plasma Outflows From An Inverse Wire Array.

J. W. D. Halliday, S. V. Lebedev, S. N. Bland, G. C. Burdiak, T. Clayson, J. D. Hare, L. Suttle, F. Suzuki-Vidal, S. A. Pikuz, and T. A. Shelkovenko.

Copper X-Pinch As Backlighting Source For Talbot-Lau X-Ray Deflectometry.

M P Valdivia, F Veloso, M Vescovi, D Stutman, G Muñoz-Cordovez, V Valenzuela-Villaseca, M Favre and E Wyndham

The Hybrid X-pinch As a Source of XUV radiation.

Evgeniy A. Bolkhovitinov, Ivan N. Tilikin, Tatiana A. Shelkovenko, Albert R. Mingaleev, Vera M. Romanova, Alexey E. Ter-Oganesyan, Alexandr A. Rupasov, Sergey A. Pikuz

FACILITIES & LOADS (4)

Linear Transformer Drivers for Z-pinch Based Propulsion.

Robert Adams, William Seidler, Patrick Giddens, Leo Fabisinski, Jason Cassibry

1 Mega Ampere LTD Generator for High Energy Density Physics experiments at UCSD.

J. C. Valenzuela, F. Conti, M. P. Ross, G. W. Collins IV, F. N. Beg

Construction of a Compact, Low-Inductance, 300 J Dense Plasma Focus for Yield Optimization Studies.

C.M. Cooper, I. Holod, A. Povilus, S. Chapman, E. Koh, S. Falabella, B. Shaw, Y.A. Podpaly, A. Link, J. Liu, A. Schmidt

Development of a university-scale pulsed-power system.

Po-Yu Chang, Mei-Feng Huang, Sheng-Hua Yang

MODELING (5)

Verification of the NRL DZAPP MHD Code for the Nernst & Ettingshausen Effects.

J.L. Giuliani, A.L. Velikovich, N.D. Ouart

Simulations Of Xenon Doped Gas Puff Z-Pinch Implosions.

V. Tangri, J. L. Giuliani, A. L. Velikovich, N. D. Ouart, A. Dasgupta, J. P. Apruzese, A. J. Harvey-Thompson, C.A. Jennings, B. Jones

MHD Simulations of Pulsed-Power Driven Magnetised Plasma Flows.

D. C. Garcia, J. P. Chittenden, G. C. Burdiak, T. Clayson, J. Hare, S. V. Lebedev, L. G. Suttle, F. Suzuki-Vidal.

Building a Hyperbolic 13-Moment Plasma Model with Improved Transport.

Jason Hamilton, Charles E. Seyler

Simulations of fast collisionless counter-propagating plasma sheets.

J. Caplinger, V. Sotnikov, G. Sarkisov, M. Malkov

PLASMA JETS, FLOWS, AND BASIC SCIENCE (6)

Axial Plasma Jet Characterization on a Microsecond X-Pinch.

G.S. Jaar, R.K. Appartaim

Streaked Thomson Scattering on Laboratory Plasma Jets.

Jacob T. Banasek, Tom Byvank, Bruce R. Kusse

Bow Shocks In Magnetised Plasma Flows.

E. R. Tubman, S. V. Lebedev, G. C. Burdiak, L. Suttle, M. Berboucha, D. Russell, T. Clayson, J. Hare, S. N. Bland, J. W. D. Halliday, F. Suzuki-Vidal

The study of the mechanisms of generation of plasma jets in plasma focus devices.

S.N. Polukhin, V.Ya. Nikulin

Electrothermal Instability Growth on Ohmically Ablated Thin Foils.

Adam M. Steiner, Paul C. Campbell, David A. Yager-Elorriaga, Nicholas M. Jordan, S.M. Miller, Y. Y. Lau, Ryan D. McBride, Ronald M. Gilgenbach

Phase Transformations Of Copper Alloys 145 & 101 Pulsed To Multi-Megagauss Surface Magnetic Field.

B.S. Bauer, K.C. Yates, S. Fuelling, V.V. Ivanov, T.M. Hutchinson, T.J. Awe

Wednesday, Aug. 16 (1:15 – 3:30 pm)

Poster Session – II

23 posters

DENSE PLASMA FOCUS AND GAS PUFFS (14)

Kinetic Simulations of Breakdown and Sheath Formation in a kJ-Level Dense Plasma Focus.

Justin R. Angus, Drew P. Higginson, Anthony J. Link, Andrea E.W. Schmidt

Using Solid Targets to Enhance Neutron Yield in a Deuterium Gas-filled Dense Plasma Focus.

I. Holod, Y.A. Podpaly, A. Link, A. Povilus, C.M. Cooper, S. Chapman, B. H. Shaw, D.P. Higginson, S. Falabella, A.E. Schmidt

Anode Interior Shape Study On A Kilojoule-Scale Dense Plasma Focus.

S. Chapman, B. Shaw, S. Falabella, A. Pankin, J. Liu, A. Link, A. Schmidt

Replacement of AmBe Sources Using Dense Plasma Focus.

B. H. Shaw, A. Povilus, S. Chapman, Y. Podpaly, C. Cooper, A. Schmidt

Solving the Polarity Riddle of the Dense Plasma Focus.

S. Jiang, D. Higginson , A. Link, A. Schmidt

Optimization of a Mega-Ampere DPF for Increased Fusion Yield with Monolithic Tungsten Electrodes and Pre-ionization.

S.M. Hassan, J.I. Karamitsos, F. von Roessel, E.J. Lerner

2D Kinetic Particle-in-Cell Simulations of a Flow-Shear Stabilized Z-Pinch.

K.K. Tummel, D.P. Higginson, A. Link, A.E. Schmidt, H.S. McLean, U. Shumlak, B.A. Nelson, R.P. Golingo, E.L. Claveau, T.R. Weber, A.D. Stepanov, Y. Zhang

Optimizing Dense Plasma Focus Neutron Yields With Fast Gas Jets.

M. McMahon, C. Kueny, E. Stein, D. P. Higginson, A. Link, A. E. Schmidt

Optimization of Neutron Yield in High-Pressure Dense Plasma Focus Devices.

A.Y. Pankin, I. Holod, C.S. Kueny, A.J. Link, A.E. Schmidt

New Diagnostics for the Livermore DPF Devices.

J.M. Mitrani, R.R. Prasad, Y.A. Podpaly, A.P. Povilus, A. Schmidt

1-MA, 200-ns Implosion Ar Gas Puff Z-Pinches on COBRA.

N. Qi, S. Rocco, J. Engelbercht, J. Banasek, L. Atoyian, T. Byvank, W. Potter, J. B. Greenly, D. A. Hammer, B. R. Kusse

Time-Resolved Thomson Scattering On Gas-Puff Z-Pinch Plasmas At Pinch Time.

Sophia V.R. Rocco, Jacob Banasek, William Potter, Bruce Kusse, David Hammer

Spectroscopic Studies of Ar, Kr, and Xe Gas-Puff Plasmas on a Z-pinch Generator with Reversed Polarity.

V. V. Shlyaptseva, K. Takasugi, T. Shikone, S. Hakamatsuka, A.S. Safronova, V.L. Kantsyrev, E.E. Petkov

Spectral Analysis of Ar, Kr, and Xe HED Plasmas and Applications to a 3-kJ DPF.

E.E. Petkov, A.S. Safronova, R.S. Rawat, K.S. Tan, V.L. Kantsyrev, V.V. Shlyaptseva

DIAGNOSTICS (9)

Visible Spectroscopy Measurements of Plasmas and Fields on the Z-Machine at Sandia National Laboratories.

M.D. Johnston, S.G. Patel, R.E. Falcon, D.E. Bliss, G.R. Laity, M.L. Kiefer, M.E. Cuneo, Y. Maron

Diagnosing Z Machine Current Loss using Anode-Side Charged Particle Diagnostics.

D. C. Lamppa, J. P. VanDevender, B. T. Hutsel, M. R. Jobe, C. R. Aragon, G. K. Robertson, G. R. Laity, M. R. Gomez, D. A. Ampleford, M. E. Cuneo

New Diagnostics For Magnetically Driven Implosions On The 1-MA MAIZE Facility.

P.C. Campbell, D.A. Yager-Elorriaga, S.M. Miller, J.M. Woolstrum, M. Jones, N.M. Jordan, Y.Y. Lau, R.M. Gilgenbach, R.D. McBride

X-Ray Diagnostic And Low Inductance Current Feed Development For A 1-MA LTD-Driven Z-Pinch.

J. M. Woolstrum, A. P. Rao, F. B. Darby, N. M. Jordan, P. C. Campbell, S. M. Miller, D. A. Yager-Elorriaga, Y. Y. Lau, R. M. Gilgenbach, R. D. McBride

Characterization of Supersonic Gas Jets Driven by a Broadband X-Ray Flux.

K. J. Swanson, V. V. Ivanov, R. C. Mancini, D. C. Mayes

Development of Photoionization Experiments at the 1MA Zebra Pulsed Power Generator.

V.V. Ivanov, R. C. Mancini, K. J. Swanson, D. C. Mayes, A. L. Astanovitskiy

Calibration of neutron diagnostics for use in Z-pinch experiments at the Nevada Terawatt Facility.

W.A. Angermeier, A. Anderson, T. Darling, E.C. Dutra, A.M. Covington

Spectroscopic Measurement Of Magnetic Fields In Laser Ablation Z-pinch Experiments.

E.C. Dutra, W.A. Angermeier, T. Darling, R.C. Mancini, R. Presura, A.M. Covington

Ne and Ar Dopants as a Spectroscopic Diagnostics in D₂ Pinches.

A. Dasgupta, R.W. Clark, N.D. Ouart, J.L. Giuliani, V. Tangri