

## Poster Presentations at DZP 2017 (total of 48 posters)

**Monday, Aug. 14 (1:15 – 3:30 pm)**

**Poster session –I**

**25 posters**

### Z-PINCH FUSION (4)

#### **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

#### **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

**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

**Non-LTE Kr Simulations For Gas-Puff Implosions On Z**

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

**Time-Dependent Non-LTE Model For An Argon Z-Pinch Implosion.**

N.D. Ouart, A. Dasgupta, J.L. Giuliani, B.M. Jones, D.J. Ampleford, A. Harvey-Thompson, Y. Maron, R.W. Clark, V. Tangri

**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. Povlius, 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

### **A Pulsed, High Intensity Source of UV Radiation Based on Ferrite Surface Breakdown at High Current.**

I. N. Tilikin, S. N. Tzhai, T. A. Shelkovenko, S. Yu. Savinov, S. A. Pikuz