

Technical Session	Technical Session Organizer
4.1 Fusion (Inertial, Magnetic and Alternate Concepts)	Peter Stoltz (pstoltz@txcorp.com)

Session WE 1.1: Fusion

Wednesday, May 24, 2017 from 10:00-12:00, Wildwood 9

Session Chair: Justin R Angus, Lawrence Livermore National Laboratory

10:00 WE 1.1-1 (invited) FORMATION AND CHARACTERIZATION OF A CONICAL SECTION OF A SPHERICALLY IMPLoding PLASMA LINER

S. C. Hsu¹, S. J. Langendorf¹, J. P. Dunn¹, K. C. Yates², M. A. Gilmore², F. D. Witherspoon³, S. Brockington³, A. Case³, E. Cruz³, J. Cassibry⁴, K. Schillo⁴, R. Samulyak⁵, W. Shih⁵, P. Stoltz⁶, K. Beckwith⁶

¹Los Alamos National Laboratory, Los Alamos, NM, United States

²University of New Mexico, Albuquerque, NM, United States

³HyperV Technologies Corp., Chantilly, VA, United States

⁴University of Alabama in Huntsville, Huntsville, AL, United States

⁵Brookhaven National Laboratory, Upton, NY, United States

⁶Tech-X Corporation, Boulder, CO, United States

10:30 WE 1.1-2 SIMULATION OF SPHERICALLY IMPLoding PLASMA LINERS FOR THE PLX-ALPHA PROJECT

R. Samulyak¹, W. Shih¹, J. Cassibry², S. Hsu³, S. Langendorf³

¹Stony Brook University & Brookhaven National Laboratory, Stony Brook, United States

²University of Alabama in Huntsville, Huntsville, United States

³Los Alamos National Laboratory, Los Alamos, United States

10:45 WE 1.1-3 APPLICATION OF A KDVB EQUATION TO SHOCK FORMATION IN THE STAGED Z-PINCH

J. Narkis¹, J. C. Valezuela¹, F. Conti¹, M. P. Ross¹, H. U. Rahman², E. Ruskov², F. J. Wessel², F. N. Beg¹

¹Center for Energy Research, University of California, San Diego, San Diego, CA, United States

²Magneto-Inertial Fusion Technologies, Inc., Tustin, CA, United States

11:00 WE 1.1-4 THE NEW SCHEME TO PROMOTE IGNITION BY COMPRESSING COLLISION-MERGING TARGET OF FIELD REVERSED CONFIGURATION

X. -J. Yang

First Dept., Institute of Applied Physics & Computational Physics, Beijing, China

11:15 WE 1.1-5 INCREASING LOAD CURRENT IN MAGNETIZED LINER INERTIAL FUSION EXPERIMENTS

M. R. Gomez, B. T. Hutsel, C. A. Jennings, M. R. Martin, M. E. Cuneo, M. H. Hess, G. R. Laity, D. C. Lamppa, K. J. Peterson, G. A. Rochau, D. C. Rovang, D. B. Sinars, S. A. Slutz, W. A. Stygar

Sandia National Laboratories, Albuquerque, NM, United States

11:30 WE 1.1-6 MODIFYING MAGLIF STAGNATION CONDITIONS AND MORPHOLOGY BY CHANGING LINER INITIAL CONDITIONS

D. J. Ampleford, C. A. Jennings, M. R. Gomez, P. F. Knapp, E. C. Harding, K. Hahn, P. F. Schmitt, M. Weis, S. B. Hansen,

D. C. Lamppa, T. J. Awe, K. J. Peterson, G. A. Rochau

Sandia National Lab, Albuquerque, NM, United States

11:45 WE 1.1-7 STABILIZED LINER COMPRESSOR FOR LOW-COST CONTROLLED FUSION: PROGRESS AND ISSUES

P. J. Turchi¹, S. D. Frese², M. H. Frese³

¹NumerEx, Santa Fe, NM, United States

²NumerEx, Corrales, NM, United States

³NumerEx, Corrales, NM, United States

Session WE 2.2: Joint Fusion HEDP

Wednesday, May 24, 2017 from 16:00-18:00, Wildwood 10

Session Chair: David Ampleford, Sandia National Lab

16:00 WE 2.2-1 (invited) INVESTIGATION OF CORE TRANSPORT DURING THE FIRST W7-X EXPERIMENTAL CAMPAIGN

N. A. Pablant¹, S. Bozhenkov², A. Dinklage², G. Fuchert², M. Landreman³, A. Langenberg², A. Alonso⁴, C. D. Beidler², M. Beurskens², M. Bitter¹, R. Burhenn², L. F. Delgado-Aparicio¹, D. A. Gates¹, J. Geiger², K. W. Hill¹, M. Hirsch², U. Hofel², J. Knauer², A. Kramer-Flecken⁵, S. Lazerson¹, H. Maassberg², O. Marchuk⁵, N. B. Marushchenko², D. R. Mikkelsen¹, E. Pasch², T. S. Pedersen², S. Satake⁶, H. Smith², J. Svensson², P. Traverso⁷, Y. Turkin², P. Valson², J. L. Velasco⁴, G. Weir², T. Windisch², R. C. Wolf², M. Yokoyama⁶, D. Zhang²

¹Princeton Plasma Physics Laboratory, Princeton, NJ, United States

²Max-Planck-Institut für Plasmaphysik, Greifswald, Germany

³University of Maryland, College Park, MD, United States

⁴Laboratorio Nacional de Fusión, CIEMAT, Madrid, Spain

⁵Forschungszentrum Jülich, Jülich, Germany

⁶National Institute for Fusion Science, Toki, Japan

⁷Auburn University, Auburn, AL, United States

16:30 WE 2.2-2 UNDERSTANDING AND PREDICTION OF INTERNAL TRANSPORT BARRIERS IN TOKAMAKS USING INTEGRATED MODELING

A. Y. Pankin¹, I. Holod¹, A. Garofalo², J. Weiland³

¹Lawrence Livermore National Laboratory, Livermore, CA, United States

²General Atomics, San Diego, CA, United States

³Chalmers University of Technology, Chalmers, Sweden

16:45 WE 2.2-3 A HYBRID TRANSPORT-DIFFUSION SIMULATION IN LASER FUSION

J. Li

Institute of Applied Physics and Computational Mathematics, Beijing, China

17:00 WE 2.2-4 THE SIMULATION OF FORMING PROCESS OF Z-PINCH DRIVEN DYNAMIC HOHLRAUM BASED ON THE PROGRAM MULTI2D-Z

C. Ning, Z. Chen

Institute of Applied Physics and Computational Mathematics, Beijing, China

17:15 WE 2.2-5 (invited) AZIMUTHAL CURRENT DENSITY DISTRIBUTION RESULTING FROM A POWER FEED VACUUM GAP IN METALLIC LINER EXPERIMENTS AT 1 MA

S. Bott-Suzuki¹, S. W. Cordaro¹, L. S. Caballero Bendixsen¹, L. Atoyan², T. Byvank², W. Potter², B. R. Kusse², J. B. Greenly², D. A. Hammer², C. A. Jennings³

¹U. C. San Diego, La Jolla, CA, United States

²Cornell University, Ithaca, NY, United States

³Sandia National Laboratories, Albuquerque, NM, United States

17:45 WE 2.2-6 MEASURING PRESSURE IN WARM DENSE TUNGSTEN PLASMA CREATED IN PLASMA-FILLED ROD-PINCH DIODES

B. V. Weber¹, C. N. Boyer², D. Mosher³, N. R. Pereira⁴, A. S. Richardson¹, J. W. Schumer¹

¹Naval Research Laboratory, Washington, DC, United States

²Sotera Defense Solutions, Herndon, VA, United States

³Syntek Technologies Inc, Arlington, VA, United States

⁴Ecopulse Inc, Springfield, VA, United States