

Abstract Submitted  
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**Development of experiments for high-intensity laser plasma interaction in a magnetic field of the pulsed power generator**<sup>1</sup> V. V. IVANOV, K. J. SWANSON, University of Nevada, Reno, A. V. MAXIMOV, R. BETTI, University of Rochester, H. SAWADA, R. C. MANCINI, University of Nevada, Reno, Y. SENTOKU, Osaka University, Japan, P. P. WIEWIOR, A. L. ASTANOVITSKIY, V. NALAJALA, O. CHALYY, O. DMITRIEV, N. WONG, University of Nevada, Reno — Experiments were developed for investigation of the laser plasma interaction in the megagauss magnetic field of the 1MA Zebra pulsed power generator coupled with a 50TW laser. These experiments are relevant to astrophysical plasmas, particle and x-ray generation, and isochoric heating in a strong magnetic field. Magnetic fields in loads were measured with Faraday rotation in a glass sample placed near the load. 1-3MG longitudinal and transversal magnetic fields were measured in different loads. Impact of the fast rising magnetic field on metal laser targets was demonstrated. Focusing and targeting laser systems were integrated into the chamber of the Zebra generator. Shots at intensity of  $>10^{18}$  W/cm<sup>2</sup> demonstrated collimation of plasma and generation of jets on the front and rear sides of the foil target in the axial magnetic field.

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