Abstract Submitted
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Interaction of laser radiation with plasma under the MG external magnetic field[1] V.V. IVANOV, Univ of Nevada, Reno, A.V. MAXIMOV, University of Rochester, A.M. COVINGTON, P.P. WIEWIOR, A.L. ASTANOVITSKIY, V. NALAJALA, O. CHALYY, O. DMITRIEV, Univ of Nevada, Reno — A strong magnetic field can dramatically change the properties of plasmas. Studies of plasmas in the magnetic field are important for basic physics, astrophysics, and controlled fusion. A series of shots was carried out at the 1 MA pulsed power generator coupled with a 50-TW laser. A 2-2.5 MG magnetic field was generated on the surface of the Al 1 mm rod load by 1 MA current. A sub-nanosecond laser pulse with intensity of $3x10^{15}$ W/cm^2 was focused on the load surface. A collimated plasma jet 1-3 mm long was observed propagating back from the focal spot with a speed of 240 km/s. Another plasma jet was seen on the rear side of the rod load. Both jets on the front and rear sides were also seen in shots with the 0.8 mm Cu load. The front plasma jet may be linked to the **E**x**B** drift observed elsewhere at smaller B-fields. The enhanced temperature and keV x-ray radiation of laser plasma in the magnetic field were found with x-ray spectroscopy.

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