Laser driven shocks in a large magnetized plasma$^1$ CHRISTOPH NIEMANN, CARMEN CONSTANTIN, ANDREW COLLETTE, PATRICK Pribyl, SHREEKRISHNA TRIPATHI, ERIK EVERSON, ALEXANDRE GIGLIOTTI, STEPHEN VINCENA, NATHAN KUGLAND, WALTER GEKELMAN, UCLA, RADU PRESURA, STEPHAN NEFF, CHRISTOPHER PLECHATY, UNR — We will present experiments on the interaction of an energetic laser-produced plasma with a large magnetoplasma. Laser intensities in excess of $10^{12}$ W/cm$^2$ produce an ablating plasma plume with expansion velocities of several 100 km/s. Prior to the laser pulse an ambient plasma with a length of 18 m and a diameter of 50 cm is created at $2 \times 10^{12}$ cm$^{-3}$ and 5 eV in an axial magnetic field of 600 G (the Large Plasma Device). We observe large amplitude Alfvén waves radiated from the laser-produced plasma.

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Christoph Niemann
UCLA

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