UCLA

Plasma Physics Seminar

Physics & Astronomy Building (PAB) Room 4-330
Via Zoom: https://ucla.zoom.us/j/92785449357?pwd=SVBTSko3bTdEUW03dzQwNks1Q2lKZz09
Friday, March 3, 2023
11:30AM Luncheon will be served

Magnetized Transport in High Energy Density Plasmas at the Laboratory for Laser Energetics

Peter Heuer

University of Rochester

Magnetization affects the transport of particles and fields in plasmas, and accurate modelling of these magnetized transport processes is essential for accurate simulation of a wide range of experiments on magnetized inertial confinement fusion, laboratory astrophysics, and basic plasma physics. The combination of high energy lasers (OMEGA and OMEGA EP) and high magnetic fields (generated by the magneto-inertial fusion electrical discharge system, MIFEDS) makes the Omega Laser Facility at the University of Rochester Laboratory for Laser Energetics an ideal platform to study magnetized transport in high energy density plasmas. In this talk we summarize a series of experiments to diagnose the effects of magnetized transport coefficients in situ in magnetized collisional socks and magnetized liner fusion (MagLIF), as well as in basic physics benchmarking experiments designed to isolate the effects of individual transport terms.