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# Physics Department Seminar

Friday February 18th, 2000

11:00am in PhSc 105

## “Ejecta Particle Holography in Hydrodynamic Experiments”

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### Abstract:

When a shock wave interacts at the surface of a metal sample “ejected matter” (ejecta) can be emitted from the surface. The mass, size, shape, and velocity of ejecta varies depending on the initial shock conditions and the material properties of the target. To understand this phenomena, a Fraunhofer in-line holography diagnostic has been developed to make particle size distribution measurements. A high energy (200 mJ), short pulsed (80 ps) laser was developed. In addition, a high resolution optical relay system (1000 lp/mm) was designed and used so that particles sizes down to 2 microns in diameter could be recorded. The diagnostic and results from experiments will be presented.