

Dottorato di Ricerca in Fisica dell'Università degli Studi di Messina
14 Giugno 2011, ore 12.00, Aula E. Majorana, Dip.to di Fisica,
V.le F. Stagno d'Alcontres 31, S. Agata, Messina

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Seminar title:

“High Energy proton/ion beams production by sub-ns, kJ-laser plasma interaction”

Abstract

The purpose of this seminar is to present some preliminary results recently obtained in the European & International Experiment, directed by Prof. L. Torrissi of Messina University, at the PALS Laboratory of Prague (Czech Republic), under the support given by LASERLAB Europe.

Particularly will be presented some preliminary results concerning the plasma generation in forward direction through thin laser irradiated targets, the plasma laser acceleration of protons and ions at energies above 1 MeV, the new detection technique employing Thomson parabola and semiconductor SiC detectors in time-of-flight configuration, and the first measurements of D-D nuclear fusion induced by 4 MeV deuterons accelerated by the laser-plasma.

The original results and experimental approaches will be discussed in view of a more details descriptions that will be given in the specific scientific Journals.