Thursday, June 13th At 1:30 pm

Nuclear Science Experiments at the University of Rochester's Omega Laser Facility

Abstract:

Exploring nuclear science and astrophysics using high-energy-density–physics (HEDP) plasmas is an emerging field leveraging a national program. The MJ-class National Ignition Facility at Lawrence Livermore National Laboratory and the Omega Laser Facility at the Laboratory for Laser Energetics have unique capabilities to create an HEDP plasma with conditions that are similar to the interior of a star to study reactions relevant to stellar nucleosynthesis (SN) and big-bang nucleosynthesis (BBN), and generate a bright monoenergetic fusion neutron source to induce the breakup of light-Z nuclei. In addition, recent experiments have demonstrated nuclear reactions initiated by laser-accelerated deuterons onto solid targets using the OMEGA EP laser. This motivated the development of a new platform to explore light-ion nuclear reactions using a tritium beam with the joint capabilities of OMEGA/OMEGA EP (T-LIANS).

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NNSA Speaker Series

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Chad Forrest

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Research Scientist

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Laboratory for Laser Energetics

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CYCLOTRON INSTITUTE
Room 228

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Refreshments will be served at 1:15 pm

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