

Nuclear Science on the National Ignition Facility



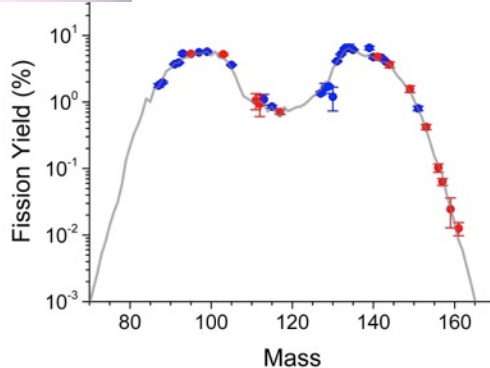
Research Overview

Development of experimental platforms for measuring nuclear reactions in high energy density plasmas.



Micro-injector adding radionuclides to NIF capsule

• Foil only
• W/chemistry



^{238}U fission product distribution measured at NIF

Potential Collaborations

- NIF capsule doping methodologies
 - Aerogel chemistry
 - Micro-chemistry and robotics
- Capsule debris collection
 - Explosive chemistry
 - Chemical fractionation
- Nuclear reaction measurements
 - Fission yield distributions
 - Neutron activation cross sections
 - Astrophysics and nucleosynthesis

Previous Dissertations

- New project with many opportunities for student involvement
- Dedicated NIF shots for nuclear science experiments are already underway

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