n- and γ-Beam Facilities and Experiments

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(60+ participants)

Existing neutron and gamma ray facilities play a unique role in both cutting edge science and technology and in the development of a scientific workforce. They probe observables and regimes that cannot be accessed by charged particle reactions.

In particular, they provide:

- Direct probes of fundamental properties of nuclei and reactions
- Essential measurements for nuclear technology and national security applications
- Workforce training in interdisciplinary techniques for nuclear physics and industry
- Develop and benchmark instruments, techniques, and capabilities key to the future FRIB and LENP science program

Summary of the Working Group on *n*- and γ-Beam Facilities and Experiments (1)

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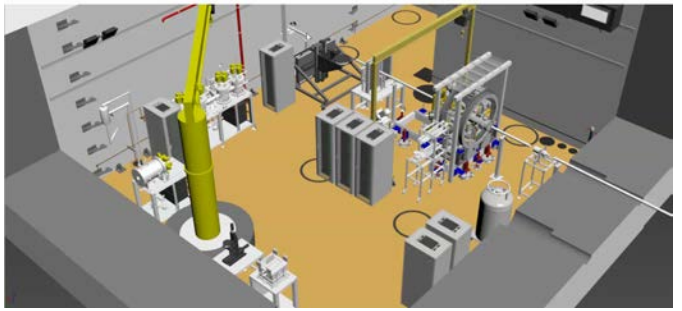
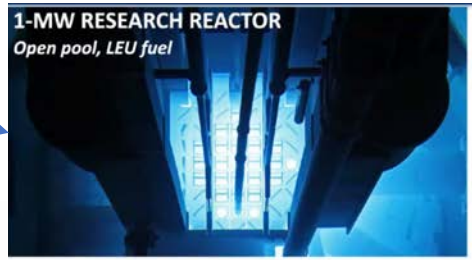
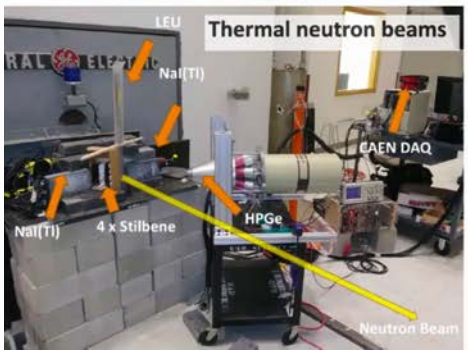
Excellent Overview of Capabilities and Advances

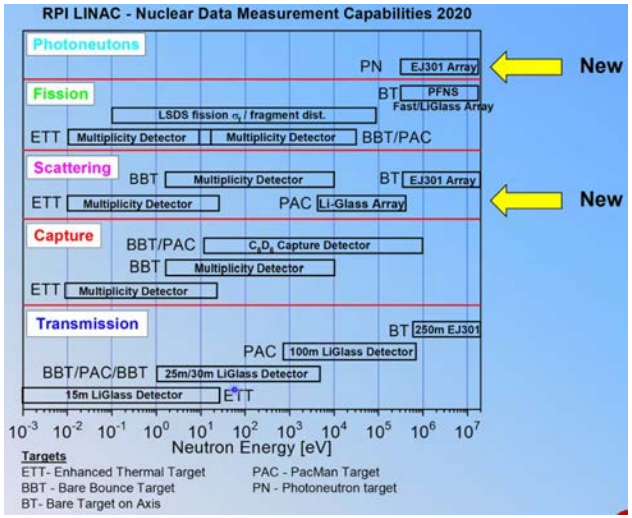
- Ohio Univ. and review of *n*-prod. reactions (C. Brune)
- Extensive ELI-NP developments (D. Balabanski)
- UMass Lowell Rad. Lab *n* Beams (A. Rogers)
- LANSCE accelerator upgrades at Los Alamos (L. Zavorka)
- RPI low-energy experimental campaign (Y. Danon)

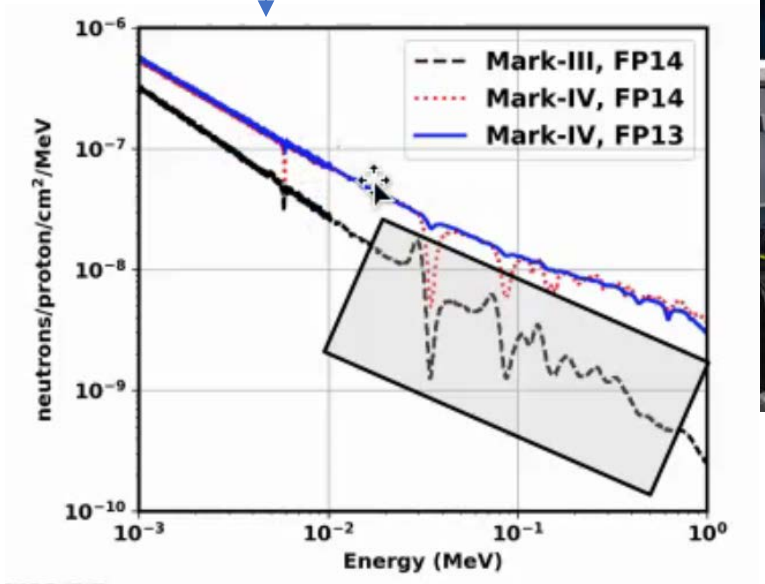
E8 experimental area: VEGA experiments











Impressive developments in these ever-important capabilities

Summary of the Working Group on *n*- and γ-Beam Facilities and Experiments (2)

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New Experimental Results and Capabilities

- ^{35}Cl(*n,p*) cross sections with the LENZ detector (S. Kuvin)
- MoNA Characterization at WNR (A. Kuchera)
- Neutron response measurements of LANA (F. Teh)
- Spatially-resolved fission event tracking, SREFT (E. L. Cidoncha)
- SARAF (*n,p*) and (*n,α*) experiments (M. Friedman)