



Lawrence Berkeley National Laboratory National & Homeland Security Overview

**John D. Valentine
National & Homeland Security Program Manager
and LBNL POC for the CVT**



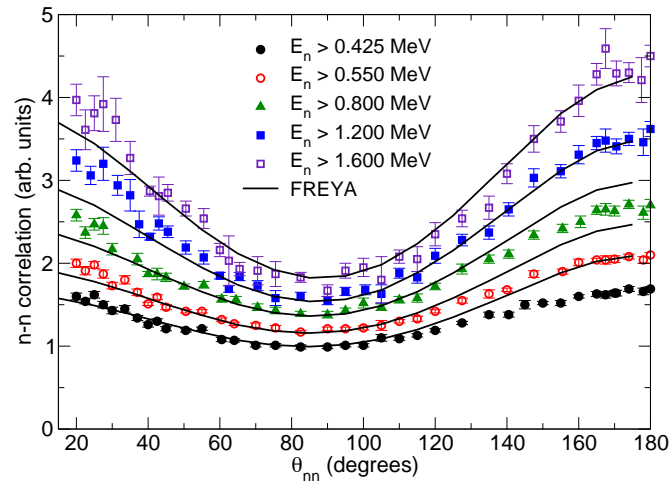
**Berkeley
Lab**

UC Berkeley

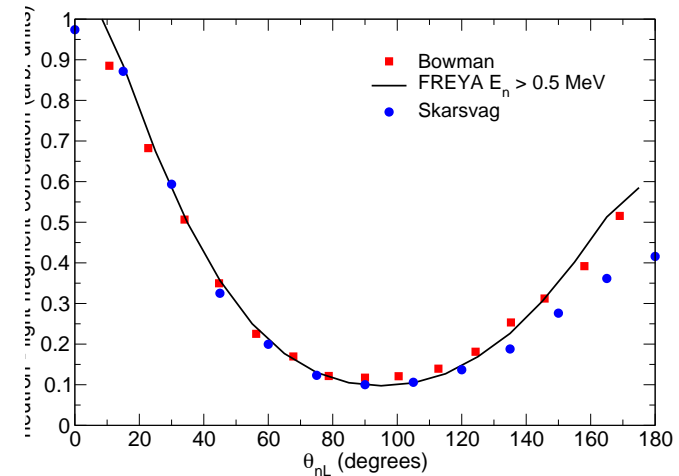
Thrust Area 2: Fundamental Data and Techniques



FREYA

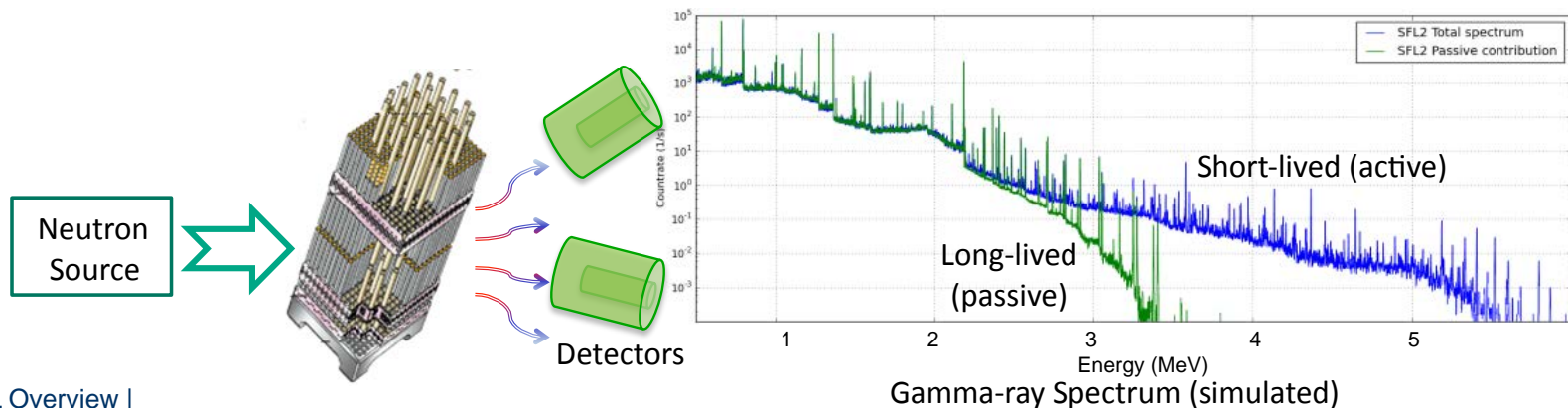


Neutron-neutron correlations



Neutron-light fragment correlations

Delayed-Gamma NDA of Spent Fuel



Thrust Area 3: Advanced Safeguards Tools for Accessible Facilities



Handheld/Portable Room Temperature Semiconductor Gamma-Ray Imaging

DNDO-funded

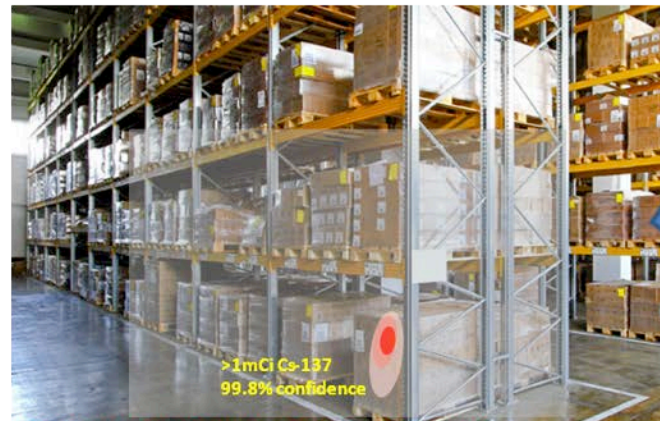
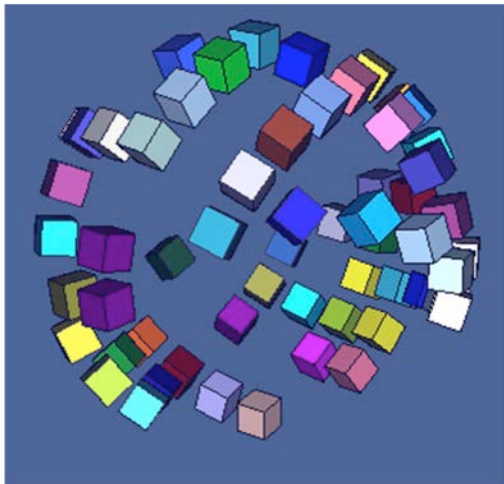
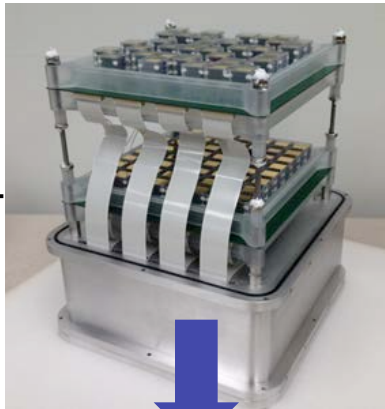
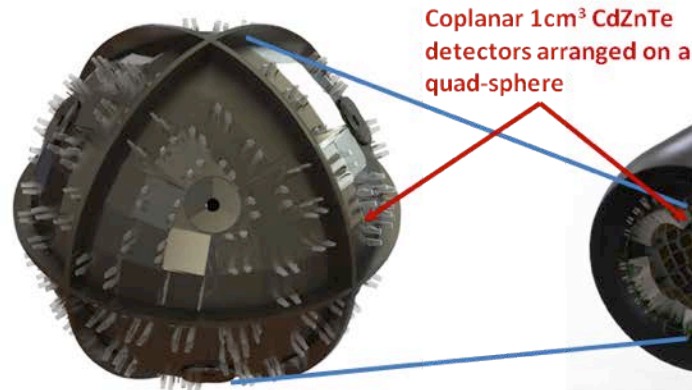


Image augmented with radiological threat

Wireless connection to Android-powered Ather One AR glasses



RGB and IR range imaging sensors



Coplanar 1cm³ CdZnTe detectors arranged on a quad-sphere

Read-out electronics, processing and wireless communication to Ather One AR glasses

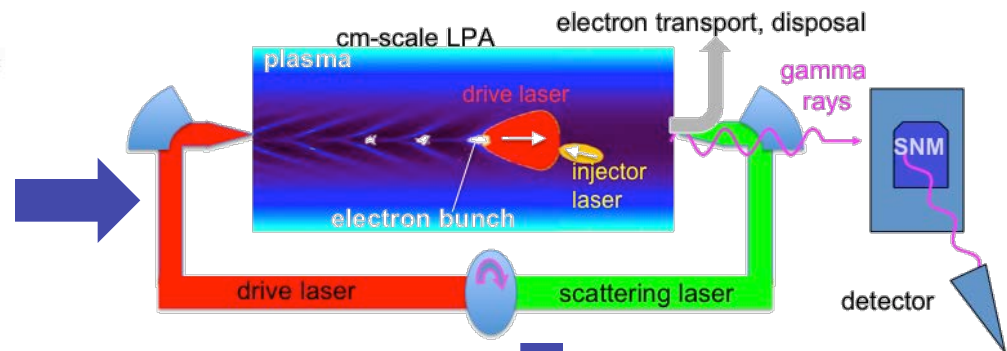
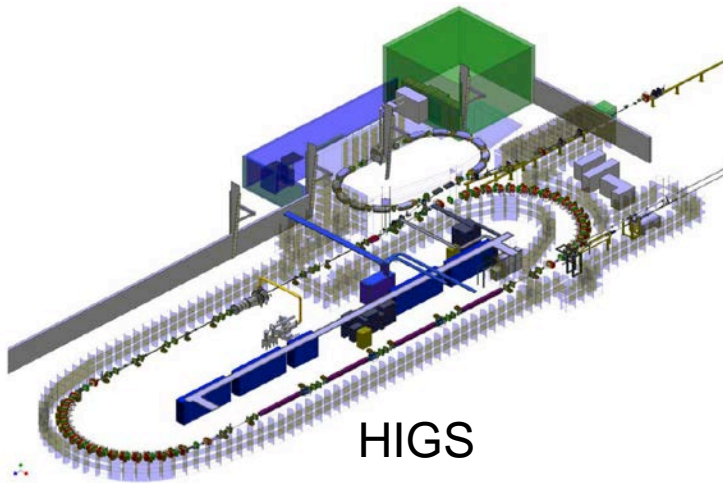
Section through the detector assembly

Portable Radiation Imaging, Spectroscopy, and Mapping (PRISM) – early NA-22 funding, FY16 DTRA funding pending

Thrust Area 5: Disarmament Verification



Limited Knowledge Transmission Nuclear Resonance Fluorescence

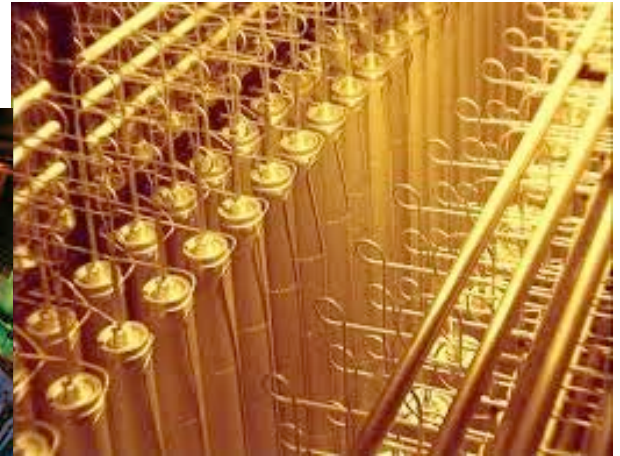


Laser plasma accelerator driven inverse
Compton quasi-monoenergetic photon source

Thrust Area 5: Disarmament Verification



Limited Knowledge Transmission Nuclear Resonance Fluorescence



Assessing Impact of Monoenergetic Photon
Sources on Nonproliferation Applications
(radiography, photofission, NRF)

SORMA WEST 2016



2016 IEEE Symposium on
Radiation Measurements
and Applications

May 22-26, University of California, Berkeley



New Exclusive Topical Focus

Radiation detection for homeland and national security: challenges, advances, and lessons learned throughout recent demonstrations

Mark Your Calendar!

Abstract submittal open late fall 2015; deadline early January

Oral and poster presentations and plenary lectures... exhibits showcasing solutions to your technology needs... and a venue at a great university in the heart of a vibrant metropolitan area make SORMA West 2016 a conference you'll remember for its technical program, networking opportunities, and more.

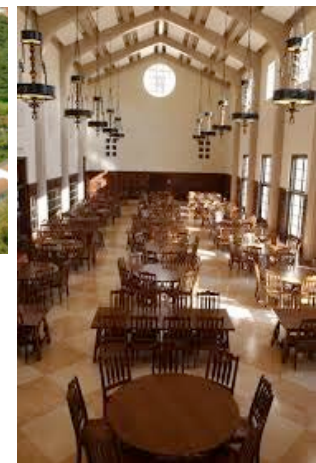


Cost-Effective Convenience

*A choice of airports
with easy transit
options; affordable
lodging onsite, plus
nearby hotels...*



Collegiate traditions blend with modern amenities on the Clark Kerr Campus of UC-Berkeley, adjacent to the main campus and Lawrence Berkeley National Laboratory



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Questions/Discussion

John D. Valentine
Program Manager
National & Homeland Security

