

Neutron and Gamma Ray Spectroscopic Detection System

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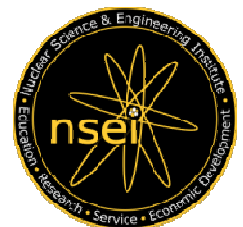
Missouri Technology Expo
October 7th, 2010.

Patent Pending



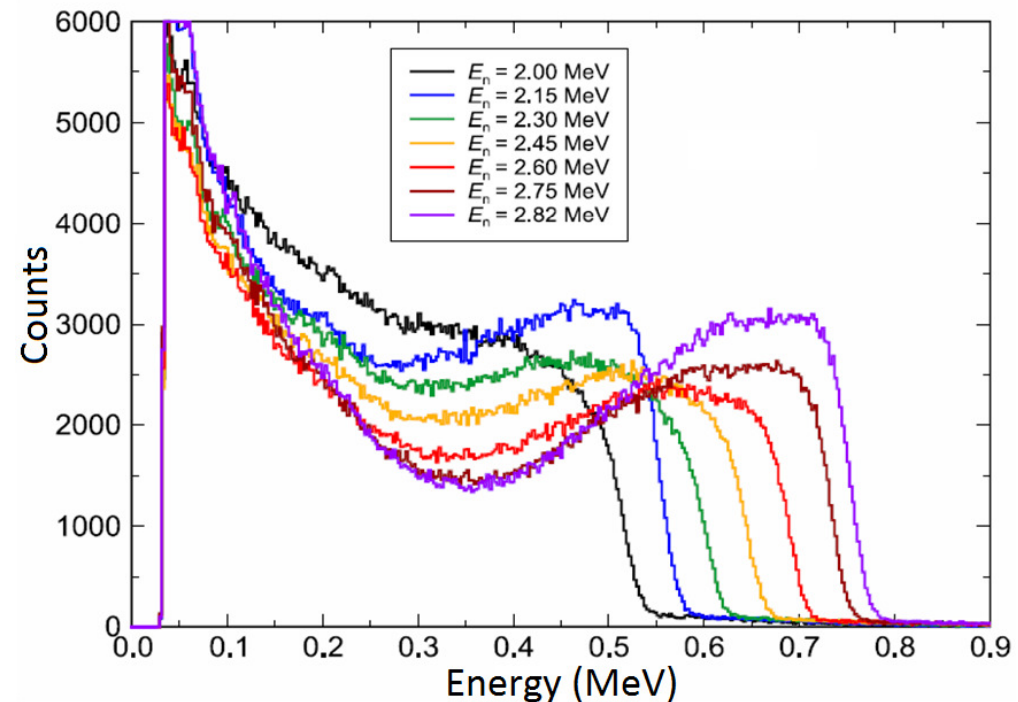
Need for Neutron Sensor Advancement

- Homeland Security: Nuclear material detection systems
- Nonproliferation: Monitoring systems
- Nuclear Industry: Fast neutron dosimetry
- Current deficiency in neutron detection systems

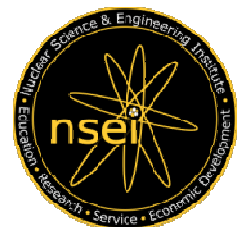


Diamond-Based Detection Systems

- Current Capabilities
 - High energy resolution
 - Fast timing
 - Good discrimination
- Technical Innovation
 - Increased intrinsic efficiency
 - Off the shelf components

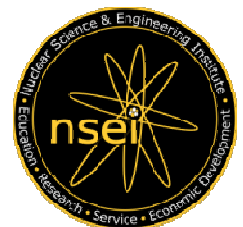
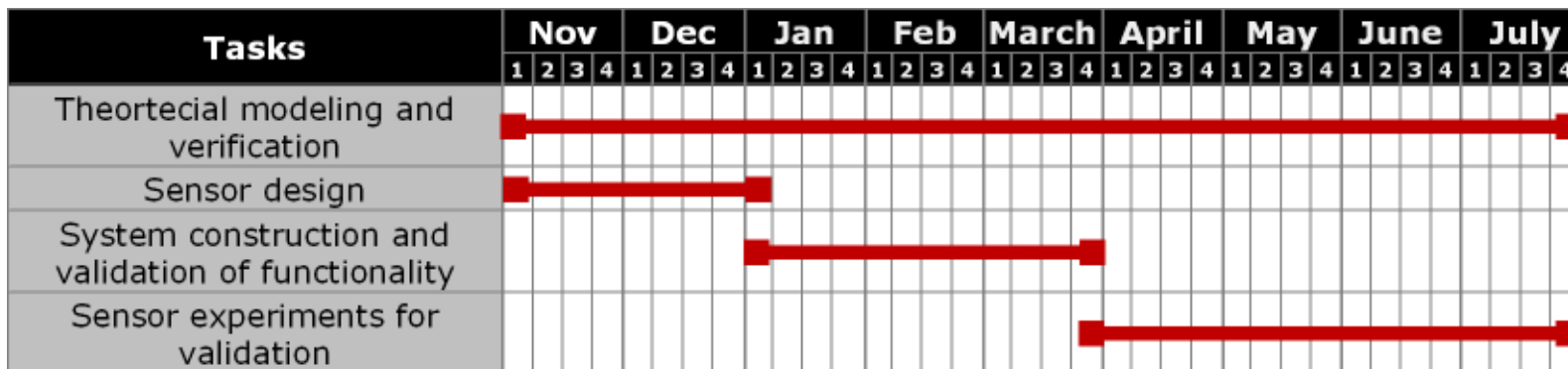


A. Zimbal *et al.* 2010



Future Directions

- Looking for collaborative effort for development phase
- Seeking to complete prototype in 9 month development time



Final Remarks

Project Team

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