

Introductions to LOIs for *Reactor Antineutrino Application and Organic Scintillator Developments for Neutrino Detection*

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Application of Reactor Antineutrino Physics

Mutual benefits to HEP and nuclear safety

- Remote survey and monitor nuclear reactors for nuclear safety and security
- Learn more detail about reactor isotopic structure to demonstrate theoretical models for nuclear physics
- Precise reactor flux and spectrum measurement is important research of neutrinos' nature
- Technology developments for neutrino detection benefits both the application and the fundamental research
- Offer a training ground and a career path for young HEP researchers

Continued Development of Organic Scintillators With Pulse Shape Discrimination (PSD) and ^6Li doping

- An excellent technology for inverse beta decay measurements and particle identifications for neutrino and neutron detection
- Valid for sterile neutrino oscillation measurements and other reactor neutrino experiments
- Also key technology for applications of neutrino in reactor monitoring, and other nuclear and cosmic ray measurements
- Continued developments aim to improve resolution, particle identification, stability, and flexibility of applications