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Physics Opportunites using Compton Suppressed Ge Clover Array, CAGRA

Tuesday, 16 September 2014 09:00 (30 minutes)

The construction of a Compton suppressed Germanium clover array (CAGRA) by a U.S.-Japan collaboration is on going. High-precision capabilities of existing devices at RCNP can be combined with ultra-high precision γ-decay measurements to gain access to observables at an unprecedented level of detail. Three experimental sites are foreseen: at the EN beam line, where beams of rare isotopes are available; the Grand Raiden Spectrometer, where high-precision coincidence experiments utilizing light-ion reactions can be performed; and the muon beam facility at RCNP. A wide variety of important scientific questions will be addressed, such as the detailed nature of Pygmy dipole and Gamow-Teller resonances, the shell-evolution across the chart of nuclei, searches for superdeformed states, as well as astrophysical applications. In the presentation, an overview of CAGRA project will be presented and the scientific opportunities using CAGRA will be discussed.

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