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Coherent Elastic Neutrino Nucleus Scattering at CSNS

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CEvNS process plays an important role in various aspects of physics. Here, we propose a CEvNS experiment at CSvNS using Cryogenic pure CsI as the detector. After the optimization to the surface treatment and shape of CsI crystal, a high light yield of 35.3PE/keVee has been achieved at 77K. Meanwhile, the beam related neutron background at CSNS was also investigated. With proper shielding, a 5σ detection of CEvNS process is expected for one year data taking.

Collaboration (if any)

CLOVERS

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