

Abstract Submitted
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The Goals and Status of SoLid Experiment JAEWON PARK, Virginia Tech — SoLid is a short baseline sterile neutrino oscillation search experiment using the BR2 compact core reactor in Belgium. Ruling out or confirming sterile neutrino is one of main interests in the neutrino physics field. Highly segmented scintillator cube detector with ${}^6\text{LiF:ZnS(Ag)}$ neutron screen provides high purity neutron tagging by pulse shape discrimination (PSD), and capture position identification. These capabilities from this novel detector are critical to isolate neutrino interactions in a high background environment. The prototype detector (SM1) provides important feedback for validating the performance of the detector design. Recent results from SM1 will be presented. Construction of the SoLid Phase-1 detector is underway. The three-ton detector with three years running will allow us to reach the sterile neutrino exclusion limit of $\sin^2 2\theta < 0.03$ at $\Delta m^2 \sim 2 \text{ eV}^2$ at the 99% confidence level.

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