

## External AmBe Calibrations in SNO+

*Monday, August 19, 2024 11:00 AM (10 minutes)*

Inverse beta decay plays an integral role in detecting reactor antineutrinos and in the early detection of supernovae with SNO+ detector. In this process antineutrinos and protons interact weakly, resulting in the production of positrons and free neutrons. The neutrons subsequently capture on hydrogen, forming deuterium and emitting a 2.2 MeV gamma photon. To calibrate the detector's response to these events, an Americium-Beryllium neutron source was deployed in the surrounding cavity water. In my presentation, I will discuss how these signals are used to calibrate the reconstruction of gamma energies following the scintillator loading process, and will compare the results from the calibration runs with simulation data.

### What area of study best describes your talk?

Physics

### If you answered 'Other', please provide the study area.

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**Session Classification:** Presentations