Contribution ID: **379** Type: **Poster reactor**

Response of the STEREO detector

The STEREO experiment searches for light sterile neutrinos in the eV range. The STEREO detector is divided in two subvolumes both filled with liquid scintillator: an inner neutrino target loaded with gadolinium, which is subsequently subdivided in 6 different cells, and an external unloaded gamma catcher subdivided in 4 cells.

The response of each of the cells, including charge to energy conversion and energy non linearities, have been characterized by means of a set of gamma and neutron sources covering a broad range of the energy spectrum of reactor antineutrinos. In addition, the particular response of single photomultiplier tubes and the linearity of electronics are controlled hourly by a system of LEDs performing single photoelectron calibration.

This poster will discuss this characterization as a means to obtain an accurate control energy scale and detection efficiency of STEREO, together with the monitoring of the detector's stability and light cross-talk between cells.

Authorship annotation

on behalf of STEREO collaboration

Session and Location

Monday Session, Poster Wall #195 (Ballroom)

Poster included in proceedings:

yes

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