Radioactive Source Calibration of the Borexino Solar Neutrino Detector

STEVEN HARDY, Virginia Polytechnic Institute and State University, BOREXINO COLLABORATION — The Borexino solar neutrino detector is currently performing the first real-time measurement of the sub-MeV solar neutrino spectrum. Recently, several calibration campaigns were performed with alpha, beta, gamma and neutron sources to characterize the detector and reduce the errors as much as possible. This talk will concentrate on the hardware, sources, and performance of the system designed for the precise insertion and location of calibration sources into an environment of extreme radiopurity (∼75 counts per day inside the 100 ton fiducial volume).

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