

Active shield of low background gamma spectrometer as a tool for studying muon flux properties

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In our laboratory two low background gamma spectrometers with germanium detectors are equipped with active shield. Such shield is a system of five large plastic scintillation detectors sensitive for muons surrounding the massive cubic lead shield of spectrometer from five sides. The active shield works in the anticoincidence mode with germanium detector. In our spectrometers data is collected in the event mode and the anticoincidence logical function is performed during of-line analyzes of time structure of data. The first spectrometer operates from September 2018, the second one from January 2021. The Fourier analyse for initial results from 18 months revealed, besides a day cycle two longer cycles close to one month and 70 days. Further analyses are planned.

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