

Cosmogenic activation study of the COSINE-100 experiment NaI(Tl) crystals

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The COSINE-100 is a direct dark matter (WIMPs) search experiment with a 106 kg array of NaI(Tl) crystals at Yangyang deep underground laboratory. Dark matter search experiments require ultra-low background conditions, thus background understanding and reduction are crucial to improve the sensitivity of the detectors. One of the dominant background contributions on the NaI(Tl) crystals is caused by activated radioisotopes that were primarily produced by previous exposures to cosmic rays. In this presentation, results of cosmogenic activation studies for the NaI(Tl) crystals will be presented based on data from the COSINE-100 experiment.

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