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## Background Assessment of the COSINE-100 Experiment

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COSINE-100 is a NaI(Tl) dark matter direct detection experiment, with the goal of testing DAMA's claim of dark matter detection by looking for an annual modulation signal. It consists of eight NaI(Tl) crystals, adding to a total of 106 kg, and 2000 liters of a liquid scintillator veto. Located at the Yangyang Underground Laboratory, South Korea, COSINE-100 has been running since September 2016. The search for an annual modulation signal requires a complete understanding of the radioactive backgrounds and their time dependence. This can be achieved by conducting a full detector simulation and modeling the detector's background, in addition to studying the cosmogenic activation history of the crystals. Details of the COSINE-100 simulation, the background assessment, and the study of cosmogenic activated isotopes will be presented.

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