

Abstract Submitted
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Search for WIMPs Dark Matter by means of segmented NaI(Tl) scintillator KEN-ICHI FUSHIMI, HIDEYUKI KAWASUSO, MASAKO TOI, ERIKO AIHARA, RENA HAYAMI, KENSUKE YASUDA, ERIKA MATSUMOTO, SHINTARO NAKAYAMA, NORIHIKO KOORI, Facul. of Integrated Arts and Sciences, The University of Tokushima, KAYOKO ICHIHARA, SAORI UMEHARA, RYUTA HAZAMA, SEI YOSHIDA, MASAHARU NOMACHI, Dept. of Physics, Osaka University — Searching for WIMPs dark matter with highly segmented NaI(Tl) scintillator array is proposed. The sensitivity was estimated by means of Monte Carlo simulation and it was found that the detector array had high sensitivity for not only spin-dependent excitation (EX) but also spin-independent (SI) interaction. The performance of the prototype thin NaI(Tl) plate scintillator with the thickness of 0.05cm and wide area of 5cmX5cm will be presented in this meeting. It has shown the excellent energy resolution of 21%(FWHM) at 60keV gamma ray and the low energy threshold of a few keV.

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