Abstract Submitted
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Study of background origin by data analysis and simulation for CANDLES III GO ITO, JPS, TADAFUMI KISHIMOTO, IZUMI OGAWA, SAORI UMEHARA, KENSUKE YASUDA, MASAKI MIYASITA, SYUICHI KAKUBATA, KENJI MATSUOKA, RYUTA HAZAMA, YOICHI TAMAGAWA, CANDLES COLLABORATION — Neutrinoless double beta decay is sensitive to not only effective neutrino mass but also to confirm Majorana nature of neutrinos. We constructed the CANDLES III detector at sea level and have been studying basic performances of the detector. Its central detector is 200kg CaF_2 crystals. The performances we studied were energy resolution, background rate, detection efficiency, and so on. In order to study background events we analyzed experimental data and compared with GEANT4 simulation. We are now constructing CANDLES III detector at the Kamioka underground laboratory. I'll report the result of background study at sea level and the current status of construction at underground laboratory.

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JPS

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