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AMoRE Muon Veto Counter and Event Selection

The AMoRE (Advanced Mo-based Rare process Experiment) is an experiment searching for a neutrinoless double beta decay of Mo-100. A pilot experiment, AMoRE Pilot, has been running with a total of ~1.8 kg of six 40Mo100MoO4 (CMO) crystals in a cryostat at the Yangyang underground laboratory (Y2L, 700 m overburden from the surface). The AMoRE muon veto counter covers the AMoRE cryostat with 10 plastic scintillator counters (28 PMTs). We have developed several methods to select the muon events in the muon counter and checked the coincident background signals from the crystals. We will present on how to select muons, the muon rate at the AMoRE experiment, and the background level of the crystals by the muons.

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