

Dark matter search using fiducial volume analysis in XMASS experiment

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An 800kg liquid xenon detector (XMASS) was constructed at Kamioka Observatory, Japan in 2010. XMASS can be made the low background region in center of detector by shield of the liquid xenon which eliminates the background in detector surface. A commissioning run was conducted from November 2010 to June 2012. We found the unexpected background in detector surface. In order to reduce these backgrounds on detector surface and increase the sensitivity for Dark Matter search, refurbishment of the detector was completed and physics data taking was resumed since Nov 2013. In this presentation, the result of dark matter search using fiducial volume analysis is reported. Also expected background events should be evaluated.

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