

Search for neutrinos from WIMP annihilations with the AMANDA detector

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Abstract. A search for nearly vertical up-going muon neutrinos from WIMP annihilations in the center of the Earth has been performed with the AMANDA-B10 detector. AMANDA-B10 consists of 302 optical modules arranged in 10 strings deployed between 1520 m and 2000 m depth in the South Pole glacier ice. The whole data sample collected in 135 days in 1997, 10^9 events, has been re-analyzed for this search. A final sample of 15 up-going events is found in a restricted

zenith angular region where a signal from WIMP annihilations is expected. An upper limit at 90% confidence level on the ux of muons from WIMP annihilations in the center of the Earth is presented. Systematic uncertainties are included in a novel way in the limit calculations.

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