Contribution ID: **306** Type: **Poster dark matter**

Search for neutrinos from dark matter annihilation in the Earth core with the Super-Kamiokande detector

One of the strategy for dark matter detection is to search for the products of its self-annihilation, such as antimatter, photons or neutrinos. The later provide very good information about their source location and generated energy spectra. In the presented analysis, atmospheric neutrino data collected with the Super-Kamiokande in years 1996-2016 was used in order to search for the neutrinos produced in the dark matter annihilation in the Earth core. No excess of neutrinos from the Earth core with respect to atmospheric neutrino background has been observed. The upper limits for SI WIMP-nucleon cross-section have been set for dark matter particle masses ranging from 3-1000 GeV. High sensitivity of Super-Kamiokande detector to the resonant capture region allowed to set the strongest limits from neutrino experiments for WIMP masses < 100 GeV.

Authorship annotation

for the Super-Kamiokande collaboration

Session and Location

Wednesday Session, Poster Wall #134 (Hölderlin-Room)

Poster included in proceedings:

yes

Primary author: Ms FRANKIEWICZ, Katarzyna (National Centre for Nuclear Research)

Presenter: Ms FRANKIEWICZ, Katarzyna (National Centre for Nuclear Research)

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