



Contribution ID: 564

Type: **Poster contribution**

Search for dark matter with LHAASO

Saturday 1 August 2015 15:30 (1 hour)

Detection of gamma rays from the annihilation or decay of dark matter particles is a promising method for identifying dark matter, understanding its intrinsic properties, and mapping its distribution in the universe. The searches feature many different target types, including dwarf spheroidal galaxies, galaxy clusters, the Milky Way halo and inner Galaxy and unassociated Fermi-LAT sources.

The LHAASO experiment is a new generation Extensive Air Shower array devoted to detect photon-induced showers in the wide energy range from few hundreds GeV up to PeV and to study cosmic ray physics up to 10^{18} eV.

Due to its all-sky field of view and high duty-cycle (about 100%), the dwarf spheroidal galaxies are the most promising target for LHAASO, due the possibility to monitor in the same time different objects.

LHAASO will also allow to look for dark matter signatures from unknown locations of the Northern sky with unprecedented sensitivity above tens TeV.

In this contribution we present the LHAASO sensitivity to the gamma-ray signatures of high-mass (multi-TeV) dark matter annihilation.

Collaboration

LHAASO

Registration number following "ICRC2015-I/"

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