Contribution ID : **451** Type : **Plenary/section talk**

Search for features in the cosmic-ray electron and positron spectrum measured by the Fermi Large Area Telescope

Thursday, 25 October 2018 17:30 (15)

Over its ten years of mission the Large Area Telescope onboard the Fermi Gamma-ray Space Telescope has collected the largest ever sample of high-energy cosmic-ray electron and positron events. Possible features in their energy spectrum could be a signature of the presence of nearby astrophysical sources or of more exotic sources, such as annihilation or decay of dark matter (DM) particles in the Galaxy. We will present the results of the search for possible delta-like line features in the cosmic-ray electron and positron spectrum. We will also present the results of the search for possible features originating from DM particles annihilating into electron-positron pairs. We are able to set constraints on DM masses up to 1.7 TeV/c^2 and exclude the thermal value of the relic annihilation cross section for DM candidates lighter than 150 GeV/c^2.

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Session Classification : Particle Physics: Astroparticle physics

Track Classification : Particle physics: neutrino physics