



Contribution ID: 43

Type: **not specified**

Phenomenology of $U(1)_{L_\mu - L_\tau}$ charged dark matter at PAMELA/FERMI and colliders

Wednesday 15 June 2011 15:15 (12 minutes)

Recent data on e^+/e^- and \bar{p} cosmic rays suggest that dark matter annihilate into the standard model (SM) particles through new leptophilic interaction. In this talk, I consider a standard model extension with the gauged $U(1)_{L_\mu - L_\tau}$ group, with a new Dirac fermion charged under this $U(1)$ as a dark matter. We study the muon $(g - 2)_\mu$, thermal relic density of the cold dark matter, and the collider signatures of this model. Z' productions at the Tevatron or the LHC could be easily order of $O(1) - O(10^3)$ fb.

Primary author: Prof. KO, Pyungwon (Korea Inst for Advanced Study (KIAS))

Co-author: Dr BAEK, Seungwon (Korea University)

Presenter: Prof. KO, Pyungwon (Korea Inst for Advanced Study (KIAS))