Contribution ID: **16** Type: **not specified**

A hadronic explanation of the lepton anomaly

Friday, 27 September 2013 17:10 (25 minutes)

The anomaly in the cosmic ray positron fraction, first observed by the PAMELA experiment and later confirmed by Fermi-LAT and AMS-02, has generated a lot of interest and theoretical efforts, mostly due to the suggested interpretation as an indirect signature of dark matter annihilation in the Galaxy. I will argue that this interpretation is now strongly disfavoured by searches for gamma-rays from the galactic halo and turn to possible astrophysical explanations. A hadronic model of production and acceleration of secondaries in mature supernova remnants provides a compelling explanation of hard secondary positrons and links to signatures in other hadronic channels, like neutrinos.

Primary author: MERTSCH, Philipp (KIPAC, Stanford)

Co-authors: AHLERS, Markus (o=uwmad,ou=Institutions,dc=icecube,dc=wisc,dc=edu); Prof. SARKAR, Subir Sarkar (University of Oxford)

Presenter: MERTSCH, Philipp (KIPAC, Stanford)

Session Classification: A hadronic explanation of the lepton anomaly - Philipp Mertsch, KIPAC, Stanford

Track Classification: Philipp Mertsch