



Contribution ID: 54

Type: **not specified**

## **Main results from the PAMELA space experiment after 5 years in flight**

*Thursday, May 26, 2011 9:30 AM (30 minutes)*

After five years of data taking in space, the experiment PAMELA is showing very interesting features in cosmic rays, namely in the fluxes of protons, heliums, electrons, that might change our basic vision of the mechanisms of production, acceleration and propagation of cosmic rays in the galaxy. In addition, PAMELA measurements of cosmic antiproton and positron fluxes are setting strong constraints to the nature of Dark Matter.

PAMELA is also measuring the radiation environment around the Earth, and has recently discovered an antiproton radiation belt. The analysis of particles coming from the Solar activity is part of the scientific program of PAMELA too, and important improvements in the comprehension of the solar modulation mechanisms are achievable.

In this talk PAMELA main results will be reviewed.

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**Session Classification:** High Energy Cosmic Rays and Gammas