



ID de Contribution: 26

Type: **Non spécifié**

## Pamela and ATIC - an Astrophysicist View

*mercredi 11 mars 2009 10:45 (25 minutes)*

I review the astrophysical issues that are at the heart of the Pamela and ATIC observations. Specifically I stress the importance of diffusion and escape of Cosmic Rays from the Galaxy as well as the issue of cooling of Cosmic Ray leptons while traveling in the Galaxy. I summarize various astrophysical resolutions of these two observations. I then present a novel idea - the concentration of cosmic ray sources, SNRs, in the spiral arms (that was previously ignored) explains naturally both results in a model whose only parameters are direct observable quantities. That is - it is quite likely that both experiments don't require either new physics (WIMPS) or new Astrophysical sources.

**Auteur principal:** Prof. PIRAN, Tsvi (Racah Institute for Physics Hebrew University Jerusalem Israel)

**Co-auteurs:** Dr NAKAR, Ehud (Tel Aviv University); Prof. SHAVIV, Nir (Racah Institute for Physics Hebrew University Jerusalem Israel)

**Orateur:** Prof. PIRAN, Tsvi (Racah Institute for Physics Hebrew University Jerusalem Israel)

**Classification de Session:** Flavour Physics - Dark Matter