

**Jeudi 7 mai 11h00**

CEA-Saclay Bât 141, salle André Berthelot

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# Searching Antimatter and Dark Matter Signals in Space : the PAMELA Mission

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Results on the antiproton-to-proton and positron-to-all electron ratios over a wide energy range (1-100 GeV) have been obtained by the PAMELA mission. These data are mainly interpreted in terms of dark matter annihilation or pulsar contribution.

The instrument PAMELA, in orbit since June 15th, 2006 on board the Russian satellite Resurs DK1, is daily delivering to ground 16 Gigabytes of data. The apparatus is designed to study charged particles in the cosmic radiation, with a particular focus on antiparticles for searching antimatter and signals of dark matter annihilation. A combination of a magnetic spectrometer and different detectors allows antiparticles to be reliably identified from a large background of other charged particles.

This talk reviews the design of the apparatus and illustrates the most important scientific results obtained by PAMELA, together to some of the recent theoretical interpretations.

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Le café sera servi 10 minutes avant.

NB : La présentation d'une pièce d'identité est exigée à l'entrée du centre. Tous les auditeurs extérieurs sont priés de prévenir à l'avance Emilie Chancrin, tél. 01 69 08 23 50, e-mail : [emilie.chancrin@cea.fr](mailto:emilie.chancrin@cea.fr). (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).