



**Irfu**

Institut de recherche  
sur les lois fondamentales  
de l'Univers

**Séminaire  
SPP**

**Lundi 22 octobre 11h00**

CEA-Saclay Bat 141, salle André Berthelot

---

## **XENON100 - the new results**

**MARC SCHUMANN**

University of Zurich

---

There is plenty of indirect evidence that a large fraction of the energy content of the Universe is made from a yet unknown form of dark matter. The XENON100 experiment, installed underground in the Laboratory Nazionali del Gran Sasso (LNGS, Italy), is searching for WIMP dark matter particles scattering off a large liquid xenon target. XENON100 features the lowest background of all running dark matter experiments and has recently published the results of 225 live days of data taking : No indication for a dark matter signal has been found, therefore leading to the strongest limits on WIMP-nucleon scattering cross sections to-date.

In this talk, I will introduce the experiment and focus on the recent results. Finally, the status of the successor experiment XENON1T, which aims at a sensitivity increase in 2 orders of magnitude, will be presented.

---

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 Martine Oger, tél. 01 69 08 23 50, e-mail : [martine.oger@cea.fr](mailto:martine.oger@cea.fr). (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).