

## Séminaire LAL

***Prof. Paolo Privitera***

***(The Enrico Fermi Institute/The Kavli Institute for  
Cosmological Physics, Univ. of Chicago)***

***Mardi 18 avril 2017 à 11h00***

***The DAMIC experiment: searching for WIMPs and beyond with CCDs***

The DAMIC experiment employs the bulk silicon of ~mm-thick charge-coupled devices (CCDs) for direct detection of dark matter particles. This novel technique features an unprecedentedly low threshold for nuclear and electron recoils (down to a single electron of charge), providing optimal sensitivity for low-mass dark matter particles (< 10 GeV). In addition, the spatial resolution of the CCDs, unique amongst dark matter detectors, results in powerful methods to identify and mitigate environmental and cosmogenic backgrounds.

I will show recent results from DAMIC at SNOLAB and present plans for an ambitious kg-size experiment based on the CCD technology which will explore with unprecedented sensitivity WIMPs and dark sector candidates over a broad mass range between 1 eV and 10 GeV.

***Salle 101*** - Bât. 200, Orsay

*Thé et café seront servis 15 mn avant le séminaire*

*Organisation : Reisaburo Tanaka (LAL) - [seminaires@lal.in2p3.fr](mailto:seminaires@lal.in2p3.fr)*

*LAL web : <http://www.lal.in2p3.fr>*

*Indico: <https://indico.lal.in2p3.fr/category/31/>*