SEMINARIO
Departamentos de Física Teórica I y II
Universidad Complutense de Madrid

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TITULO: The search of dark matter: basics and direct search with SuperCDMS

LUGAR: FACULTAD DE CIENCIAS FÍSICAS UCM
DÍA: 19 de junio, 2015 (Viernes)
HORA: 14:30
AULA: Seminario Depto. Física Teórica I, Planta 3ª

ABSTRACT:

A wide variety of astronomical and cosmological observations strongly support the hypothesis that most of the matter content of the universe consist of a non-luminous component whose properties at the level of its fundamental particles are not yet known, called dark matter (DM). The conditions that DM particles must satisfy in order to match the experimental data suggest that such particles are beyond the Standard Model. In particular, weakly-interacting massive particles (WIMPs) are among the most popular DM candidates.

The evidences for DM and the WIMP paradigm will be explained in the first part of this seminar, along with a discussion on the three experimental approaches used in this area, and including the results obtained so far and the prospects for the near future. The second part of the seminar will focus on the direct DM detection with the SuperCDMS experiment, whose next detectors are expected to lead the WIMP search at masses below 6 GeV.