



ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE
ÚSTAV TECHNICKÉ A EXPERIMENTÁLNÍ FYZIKY
128 00 Praha 2 - Albertov, Horská 3a/22
tel.: 22435-9391, 9290; fax: 22435-9392



POZVÁNKA
na 259. seminář ÚTEF ČVUT
pod záštitou Československé sekce NPSS IEEE

The PICASSO experiment: searching for dark matter

Mgr. Robert Filgas, Ph.D.

Ústav technické a experimentální fyziky ČVUT v Praze

Abstract: The PICASSO experiment (Project In CANada to Search for Supersymmetric Objects) specializes in searches for cold dark matter through the direct detection of Weakly Interacting Massive Particles (WIMPs). It uses the superheated droplet technique, which is based on the operation principle of the classic bubble chamber. In the case of PICASSO the active detector liquid is dispersed as droplets of a metastable superheated perfluorobutane, C_4F_{10} , and the detectors are operated in a temperature range such that nuclear recoils in the keV range induced by interactions with WIMPs could trigger bubble formation. These explosive evaporations are accompanied by acoustic signals, which are recorded by piezoelectric transducers. I will present details of the PICASSO experiment and the first results obtained by the detector located at the underground laboratory of the Sudbury Neutrino Observatory.

Seminář se bude konat v úterý 5. března 2013 ve 14 hodin
v zasedací místnosti ÚTEF ČVUT, Praha 2 - Albertov, Horská 3a/22

Ing. František Krejčí
tajemník semináře

Ing. Stanislav Pospíšil, DrSc.
ředitel

Doc. Ing. Carlos Granja, Ph.D.
předseda NPSS, ČS IEEE

NUCLEAR & PLASMA SCIENCES SOCIETY CHAPTER

IEEE Czechoslovakia Section
<http://www.ieee.cz/en/nps>

