Contribution ID: **403** Type: **Poster**

COSINUS Dark Matter experiment

COSINUS (Cryogenic Observatory for SIgnatures seen in Next-generation Underground Searches) has the aim of detecting Dark Matter via elastic scattering off nuclei ina NaI target crystal which is the core of the detector. The NaI crystal is kept at ~10 mK and it is operated as a low-temperature calorimeter. The deposited energy is precisely reconstructed from the phonon signal. By facing to the NaI crystal another cryogenic light detector particle discrimination is achieved using the scintillation signal. With this unique combined readout not only it is possible to eliminate the beta/gamma and alpha background, but also to study the material dependency of the DM interaction. Moreover, using the identical material as DAMA/LIBRA, COSINUS will finally shade a light on the long-standing controversy in the DM direct search community.
I will present the measurements perfomed with prototype detectors, the current status and further development of COSINUS.

Mini-abstract

COSINUS: where there is light there is also heat

Experiment/Collaboration

COSINUS

Primary author: Dr PUIU, Andrei (Gran Sasso Science Institute)

Presenter: Dr PUIU, Andrei (Gran Sasso Science Institute)

Session Classification: Poster session 3