



Contribution ID: 46

Type: not specified

## COSINUS: dark matter search with cryogenic sodium iodide detectors

Today we observe overwhelming evidence for the existence of dark matter from its gravitational effect on baryonic matter. Its nature, especially the verification of its particle character, is the objective of many experiments. Among them, direct detection experiments aim to measure the scattering of relic dark matter particles off electrons and nuclei within a certain detector material. This has led to the exclusion of large areas of the parameter space of various dark matter models. However, in tension with mentioned exclusions is an observation of a potential positive dark matter signal from the DAMA/LIBRA experiment. The fact that the signal features an annual modulation with a high statistical significance of 12.9 sigma, as expected due to the earth's trajectory within the milky way, turns this mystery especially relevant to uncover.

One possibility is that this apparent contradiction comes from different detector materials and model assumptions. The COSINUS experiment, which is currently in construction at the Gran Sasso underground laboratory (LNGS), brings a set of unique features to help with shedding light on the puzzling situation. Cryogenic scintillating calorimeters enable an especially good energy resolution and threshold for nuclear recoils, as well as particle discrimination on an event-by-event basis from the amount of produced scintillation light. Sodium iodide, the same target material as used in DAMA/LIBRA, provides reliable and model-independent comparability between the two experiments. In this contribution, we will present the recent status and an outlook on the timeline until the first data-taking of COSINUS.

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**Session Classification:** Keynotes/Contributed Talks