

LABORATORI NAZIONALI DEL GRAN SASSO

SEMINAR ANNOUNCEMENT

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***Dark Matter searches
at Canfranc with NaI:
the ANAIS experiment***

The Canfranc Underground laboratory, in the Spanish Pyrenees, has been recently enlarged and the approved experiments are in construction phase. The University of Zaragoza participates in several of these experiences and leads the ANAIS experiment, that will look for Dark Matter annual modulation with 250 kg of NaI(Tl) scintillators. I present here a brief description of the underground facilities and the current status of the ANAIS experiment. After an intense R&D program on powder selection, two ultra-low background NaI(Tl) modules (12.5 kg active mass each) have been developed and are being characterized underground. Some preliminary results, together with details of the whole experiment (shielding design, photomultipliers selection, calibration system, background simulations, acquisition and data analysis systems, etc.) are given. Finally, some R&D activities with NaI crystals at low temperature for bolometric applications are also presented.

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