

The EDELWEISS Dark Matter search

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EDELWEISS is a phased direct Dark Matter search programme with the primary goal to search for WIMPs in the GeV-TeV mass range. For that purpose, a set of cryogenic Ge mono-crystals read out simultaneously by NTD thermal sensors and by surface electrodes is installed in the Modane underground laboratory (LSM, France). The second phase of the experiment was recently completed, setting new limits on the spin-independent WIMP-nucleon scattering cross-section for WIMP masses above 7GeV. In addition, competitive limits on axion couplings have been deduced. In 2012 and 2013, a substantial upgrade of the setup was undertaken to significantly improve the sensitivity. This upgrade includes new FID800 Ge bolometers, reduced background through improved shielding as well as better energy resolution and a highly integrated electronic readout. The scientific results of EDELWEISS will be discussed. We will describe the EDELWEISS-III setup and its prospects including latest data. Further plans for a next generation experiment are presented.

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