

The EDELWEISS Dark Matter Search with Cryogenic Ge Detectors

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The EDELWEISS Dark Matter experiment is situated in the Modane underground laboratory LSM in the French-Italian Alps. It uses massive Ge mono crystals (up to 800g per crystal) with Aluminum electrodes evaporated in rings on the surfaces of the cylindrical crystals. In addition to the ionization signal, a heat (or phonon) signal is read out via a NTD Ge-thermistor glued onto the crystal. Operation at $T=20\text{mK}$ with coincident readout of both ionization and heat signals allows a highly sensitive WIMP search with excellent suppression of background.

After a short introduction into the scientific case of direct Dark Matter search we present the detector technology and the experimental setup of EDELWEISS and report on the latest results of data acquired in 2010/2011.