

## **20. DEVELOPMENT OF COLLECTION AND DATA ACQUISITION SYSTEM FROM GERMANIUM SEMICONDUCTOR DETECTOR FOR EDELWEISS EXPERIMENT**

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One of the most sensitive experiment in search for weakly interacting massive particles (WIMP) of dark matter (EDELWEISS) is carried out in the Modane underground laboratory (France). Germanium crystals cooled up to ultra low temperature are used in the experiment. Simultaneous registration of ionizing and thermal signals allows to distinguish events from recoil nucleus, which can appear as a result of interaction of WIMP particles with matter, from gamma and beta background. Data acquisition system based on 10 MHz digitizer to discriminate signals detection from acoustic noises was developed. The system allows transferring digitally processed pulse into computer, to visualize it, and create energy spectra. Tests with  $^{60}\text{Co}$  and  $^{152}\text{Eu}$  gamma sources have shown effectiveness of the applied approach.