Poster

Signal Read-out for the EDELWEISS-III Cryogenic Detectors

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The read-out electronics for the charge and heat signals of the cryogenic germanium detectors of the EDELWEISS-III experiment are presented. The design optimizes the conflicting constraints of keeping electronics component as far as possible from the detectors to minimize radioactive backgrounds and the thermal load at low temperature, while keeping the influence of the line stray capacitance to an acceptable level. The signals are fully digitized in order to take advantage of digital filtering and triggering. The charge read-out is extended to very low frequencies in order to exploit the advantages of the very-low temperature environment.