

Development of Cryogenic Particle Detectors

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Cryogenic particle detectors have demonstrated the great performance in the energy resolution and the threshold in the last decade. These detectors significantly benefited from the noble characteristics of superconductive devices such as SQUIDs contributed to the modern detectors in various applications. During the presentation the recent progress on the cryogenic particle detection will reviewed together with the detection principal and sensor developments. The recent development based on transition edge sensors and metallic magnetic calorimeters at KRISS are also discussed with the resolution and the possible applications.

keywords : transition edge sensor, magnetic calorimeter, dc SQUID, cryogenic particle detector