FRONTIER DETECTORS FOR FRONTIER PHYSICS



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Segmented high-purity germanium detectors

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Segmented high-purity germanium detectors have been developed for a variety of experiments. The segmentation is used to augment the excellent energy resolution of such a device with spatial information to disentangle event topologies. Several performance aspects of true-coaxial segmented detectors are discussed, especially the effects of axes orientation and the problem of events close to the surfaces of the detector. A teststand and Monte Carlo tools developed to study such effects are introduced. The simulation tools can also be used to design novel detectors, such as segmented point-contact detectors. A selected design is presented and discussed.

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