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Polarization as a Tool in High Energy Calorimetry

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The signals from a high-Z scintillating crystal (BSO) are studied to characterize Cherenkov light polarization and to measure the longitudinal polarization profile of Cherenkov light in electromagnetic showers. The scintillation and Cherenkov lights can be separated by making use of the fact that the latter is polarized in the context of dual-readout calorimetry. In addition, this unique characteristic of Cherenkov light opens up a new set of possibilities that range from high-energy calorimetry to atmospheric air showers where significant improvements seem possible.

quote your primary experiment

CMS, DREAM

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