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Study on Readout Electronics of CEPC Scintillator Analog Hadronic Calorimeter Prototype

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Circular electron positron collider (CEPC) is proposed to research Higgs and particle flow algorithm (PFA) is expected to be adopted to get a high energy resolution. As a PFA calorimeter, CEPC hadronic calorimeter (HCAL) has the feature of fine granularity, which raise demands of high integration, low noise and low power consumption to the readout electronics. The scintillator analog hadronic calorimeter (Sc-AHCAL), which is one of PFA HCAL technical routes, has been studied. In this paper, a readout system of CEPC scintillator AHCAL prototype is designed and implemented. The system can not only readout the signals of high-density SiPMs, but also has functions such as electronic self-check, gain monitoring, and temperature compensation. And the beamtest proves the system performs well.

Minioral

Yes

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No

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