

Front-end electronics for next generation of imaging/timing calorimeters

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The next generation of calorimeters on colliders will provide unprecedented measurements of particle showers in 5 dimensions (space, energy and time). The very fine granularity leads to millions of readout channels and sets high constraints on the readout electronics, which is embedded inside the detector. In addition to the usual low noise/high dynamic range/high accuracy requirements of calorimetry come requirements of very low power and high data rate output. More recently, high timing accuracy (~ 20 -50 ps) is studied to mitigate the harsh pileup environment. The talk will present front-end architectures and recent results from CALICE, ATLAS and CMS collaborations.

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