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Neuromorphic Readout For Homogeneous Hadron Calorimeters

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We investigate the transduction-less readout of light signals from hadronic showers in a homogeneous calorimeter by nanowires that can be arranged in a network, communicating through the time-encoding of light pulses, and offering fast, energy-efficient local computation and generation of informative high-level primitives for the precise measurement of shower energy and the identification of particle species using neuromorphic computing.

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