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Directly Coupled Tiles for a High Granularity Scintillator-SiPM Calorimeter PATRICK SALCIDO, Northern Illinois University — Future detectors in high energy particle physics, such as those being proposed for the International Linear Collider (ILC), will require highly segmented hadron calorimetry. One goal in the design of such devices is to improve the jet energy resolution in order to separate Z and W decays into jets. One of the technologies being explored is using small scintillator cells in conjunction with silicon photo multipliers (SiPM) as photon sensors. This talk will present the status of the research being performed on this by the Northern Illinois University High-Energy Physics group in collaboration with Fermilab and the CALICE Collaboration. It will include results on the geometry used to directly couple the cells to the photo detectors, and the design and operation of the circuit board and associated electronics used to read out an array of scintillators.

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