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**Beam Tests of an ILC Tail Catcher/Muon Tracker Prototype Based on Scintillator/SiPMs** KURT FRANCIS, Northern Illinois University, CALICE COLLABORATION[1] — The International Linear Collider (ILC), an electron-positron colliding beam accelerator for high energy physics, has been proposed as a new particle accelerator to complement the Large Hadron Collider (LHC). The high precision of the ILC will enable physicists to study in greater detail new physics discovered at the LHC. To help define the optimum design for a detector for the ILC, the Northern Illinois Center for Accelerator and Detector Development (NICADD) is a participant in the Calorimeter for the Linear Collider Experiment (CALICE) Collaboration's detector prototype. The CALICE detector includes a tail catcher/muon tracker (TCMT), designed and built at NIU, that is designed to test the use of a tail-catching subsystem to improve the resolution of the complete detector and to test new technologies such as extruded plastic scintillators and Silicon Photomultipliers(SiPM). This presentation demonstrates that the new technology represented by the SiPMs and the addition of a TCMT subsystem successfully captures energy lost due to practical limitations to the hadron calorimeters.

[1]Calorimeter for the Linear Collider Experiment

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