
Contribution ID: **154** Type: **not specified**

# Construction of a Hadron Calorimeter Prototype Section with Resistive Plate Chambers

*Friday, 21 July 2006 08:50 (20 minutes)*

We report on the progress made toward building a prototype section of a highly segmented hadron calorimeter for the ILC. The section includes 40 layers, each with the an area of 1 mˆ2, of Resistive Plate Chambers, interleaved with 20 mm steel plates as absorber. The section will undergo a detailed test program at the MTBF test beam at Fermilab, planned for 2008. This effort is considered an important part of the overall program of the CALICE collaboration.

The main purpose of this project is a) to validate our technological approach to finely granulated hadron calorimetry using Resistive Plate Chambers, b) to validate our concept of the electronic readout system with a highly multiplexed front-end, c) to perform precision measurements of hadronic showers with unprecedented spatial resolution, d) to validate the Monte Carlo simulation of hadronic showers and e) to compare its performance with the performance of the scintillator-based tile calorimeter section currently being built by the CALICE collaboration.

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**Session Classification:** Detector/ Calorimetry