

A Silicon Charge Detector for the CREAM ULDB mission

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A Silicon Charge Detector (SCD) is designed and constructed for the CREAM experiment to provide a precision measurement of the charge of incident high energy cosmic ray particles. The goal of the CREAM is to understand the source and acceleration mechanism of the high energy cosmic ray particles. The payload is planned with an Ultra Long Duration Balloon mission. The silicon sensors are DC coupled PIN diode with 380 micron thickness. Each sensor is pixellated with 16 cells, 2.25 cm² in area and the total coverage of SCD is 79 cm by 79 cm. We present the status of the SCD construction, including readout electronics and mechanical support structure, and the results of the radioactive source test as well as beam tests at CERN in Oct. 2002