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The Data Acquisition System of the SuperB-SVT Beam Test

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A prototype hybrid pixel detector and a high resistivity silicon detector with short strips, developed by the VIPIX collaboration and aimed at equipping the layer 0 of the SuperB vertex detector, have been tested in September 2011 with a 120 GeV pion beam at the SPS H6 beam line at CERN. The detectors under test were placed at the center of a reference telescope consisting of six planes with double-sided readout.

The main elements of the data acquisition and trigger systems were two programmable VME 9U custom boards organized in a master-slave configuration and responsible for programming the front-end chips of both the reference telescope and the detectors under test. The master board was also devoted to the distribution of the synchronization clock and the triggers. Both boards acted as event builders, packing information from the telescope and the DUTs in events that were then sent out via optical links to a receiving card on a remote PC. The details of the data acquisition and trigger systems are presented in this poster together with their final performance at the beam test.

for the collaboration

on behalf of the SVT-SuperB Group

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