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# Compact LumiCal prototype tests for future e+e- collider

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The FCAL collaboration is preparing large-scale prototypes of special calorimeters to be used in the very forward region at a future e+e- collider for a precise and fast luminosity measurement and beam-tuning. LumiCal is designed as Si_W sandwich calorimeter with very thin sensor planes to keep the Moliere radius small, facilitating such the measurement of electron showers in the presence of background. Dedicated FE electronics has been developed to match the timing and dynamic range requirements. A partially instrumented prototype was investigated in a 1 to 5 GeV electron beam at the DESY II synchrotron. In the recent beam tests, a multi-plane compact prototype equipped with thin detector planes fully assembled with readout electronics were installed in 1 mm gaps between tungsten plates of one radiation length thickness. High statistics data were used to perform sensor alignment, and to measure the longitudinal and transversal shower development in the sandwich.

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