

ALIBAVA : A PORTABLE READOUT SYSTEM FOR SILICON MICROSTRIP SENSORS

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A portable readout system for micro-strip silicon sensors has been developed. The system uses an analogue pipelined readout chip, which was developed for the LHC experiments. The system will be used to characterise the properties of both non-irradiated and irradiated micro-strip sensors. Heavily irradiated sensors will be operated at the Super LHC.

The system hardware has two main parts: a daughter board and a mother board. The daughter board contains two readout chips, analogue data buffering, power supply regulation and chip-to-sensor fan-in structures.. The mother board is intended to process the analogue data that comes from the readout chips and from external trigger signals, to control the whole system and to communicate with a PC via USB. There is provision for an external trigger input (e.g. scintillator trigger) and a synchronised trigger output for pulsing an external excitation source (e.g. laser system).

A prototype of the system will be presented as well as early measurements operating a silicon micro-strip sensor in a laser setup.

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