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The automated testing platform for the Front-End Electronics of the LACT camera

The SiPM camera for the LACT project divides 1616 pixels into 101 sub-modules to facilitate the development, testing, assembly, and maintenance of detector modules. Each module consists of a 4×4 pixel array and a 16-channel Front-End Electronics (FEE) board. The FEE board integrates two main functionalities: 1) it shapes and amplifies the analog pulses from the SiPMs into narrow pulses and performs high and low gain amplification, followed by digital sampling using the ASIC chip developed by IHEP; 2) it provides voltage temperature compensation for the 16-channel SiPMs under varying temperature conditions. 3232 FEE boards will be required for LACT. We will develop an automated testing platform for the efficient calibration of the analog pulse sampling and temperature compensation parts of the FEE board.

Collaboration(s)

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