

Milestone Report

Calibration and power supply system

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26 February 2014



The research leading to these results has received funding from the European Commission under the FP7 Research Infrastructures project AIDA, grant agreement no. 262025.

This work is part of AIDA Work Package 9: **Advanced infrastructures for detector R&D.**

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Grant Agreement No: 262025

AIDA

Advanced European Infrastructures for Detectors at Accelerators
Seventh Framework Programme, Capacities Specific Programme, Research Infrastructures,
Combination of Collaborative Project and Coordination and Support Action

MILESTONE REPORT

CALIBRATION AND POWER SUPPLY SYSTEM MILESTONE: MS45

Document identifier:	AIDA-Mil-MS45
Due date of milestone:	End of Month 36 (January 2014)
Report release date:	26/02/2014
Work package:	WP9: Advanced infrastructures for detector R&D
Lead beneficiary:	UiB
Document status:	Final

Abstract:

MS45 is an availability milestone for Deliverable 9.9:

" Adequation of GEANT4 simulation of hadronic showers in different media: Report on the comparison of GEANT4 simulations with highly granular calorimeter test beam results proposed in AIDA."

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The Advanced European Infrastructures for Detectors at Accelerators (AIDA) is a project co-funded by the European Commission under FP7 Research Infrastructures, grant agreement no 262025. AIDA began in February 2011 and will run for 4 years.

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Delivery Slip

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REGARDING THE POWER SUPPLY SYSTEM

An adaptive SiPM power supply is being developed to provide stable gains with changing temperatures. As a first step, a setup was created to characterize the temperature dependence of SiPMs. The characterization results of batches of SiPMs from different manufactures have then been used as input for a first power supply test board. Finally, experiments with the test board have shown good performance, within the 1% goal of gain stabilization, see [1].

The proof of principle, and as such milestone MS45, has thus been achieved. Based on the results a more functional PCB has now been designed and constructed. Tests are underway. A note is also underway reporting on the results.

[1] “Gain Stabilization of SiPMs”, J. Cvach, G. Eigen, J. Kvasnicka, I. Polak, E. Van der Kraaij and J. Zalieckas. LCWS2013, Tokyo, Japan.