

Abstract for presentation at MC-PAD Mid term review

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Abstract:

The work presented here is done under the MC-PAD project 11 “**Frontend Electronics**”. It is organized in three topics.

First, '**ADC Measurements**' in which detailed test and analysis was carried out on the 1<sup>st</sup> prototype, which was developed at WFiIS, AGH. Various static & dynamic parameters were measured and analyzed, now ADC measurement are complete and ready to be implemented.

Second, '**Command decoder module for ADC ASIC**'. A command decoder module for SPI like interface has been designed, synthesized and verified. Post-synthesis gate level simulations were successfully performed to ensure the functionality of the module. A detailed predictive analysis was carried out using code coverage tools from Cadence. This circuit will be used in slow interface unit in ADC ASIC.

Third '**I<sup>2</sup>C interface for readout ASIC**', this circuit is being designed and developed to control the readout electronics. We also intend to implement the design model by FPGA prototyping, this would ensure the functional correctness before fabrication.