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Serial powering testing with the 2.0A Shunt-LDO regulator of the RD53A pixel readout chip

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The HL-LHC ATLAS and CMS pixel detectors will be powered using a serial powering scheme, where a constant current will be provided to a chain of pixel modules powered in series. This scheme is based on the design of a Shunt-LDO regulator that has been integrated on the new RD53A prototype pixel readout chip. Two Shunt-LDO regulators, one per power domain, are used to provide the required voltages while shunting any extra provided current. This poster presents results on the characterization of the 2.0A Shunt-LDO regulator and testing of the new RD53A pixel chips serially powered.

Summary

Report on serial powering measurements with the 2.0A Shunt-LDO of the new RD53A pixel chip.

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