

Experience from design, prototyping and production of a DC-DC conversion powering scheme for the CMS Phase-1 Pixel Upgrade

The CMS pixel detector will be exchanged during the technical stop 2016/2017. To allow the new pixel detector to be powered with the legacy cable plant and power supplies, a novel powering scheme based on DC-DC conversion is employed. After the successful conclusion of an extensive development and prototyping phase, mass production of 1800 DC-DC converters as well as motherboards and other power PCBs has started and will be finalized by the end of 2015. This contribution will summarize the lessons learned from the development of the power system for the Phase-1 pixel detector, and summarize the experience from the production phase.

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