

## DC-DC Buck Converters for the CMS Upgrade at SLHC

*Tuesday, September 21, 2010 4:45 PM (25 minutes)*

The CMS experiment foresees the deployment of DC-DC buck converters in its pixel and strip tracker upgrades, to facilitate the supply of the required currents with the installed cable plant and with a minimal amount of material.

We have developed DC-DC buck converters based on radiation-tolerant ASICs from the CERN electronics group. Their performance in terms of power efficiency and conductive and radiative noise emissions will be introduced, and system tests with silicon strip modules as well as pixel modules, using the original pixel power supply chain, will be presented. The implementation in the foreseen applications will be discussed.

**Primary author:** Dr KLEIN, Katja (I. Physikalisches Institut (B), RWTH Aachen University)

**Co-authors:** SAMMET, Jan (I. Physikalisches Institut (B), RWTH Aachen University); Prof. FELD, Lutz (I. Physikalisches Institut (B), RWTH Aachen University); WLOCHAL, Michael (I. Physikalisches Institut (B), RWTH Aachen University); JUSSEN, Rüdiger (I. Physikalisches Institut (B), RWTH Aachen University); KARPINSKI, Waclaw (I. Physikalisches Institut (B), RWTH Aachen University)

**Presenter:** Dr KLEIN, Katja (I. Physikalisches Institut (B), RWTH Aachen University)

**Session Classification:** Power, Grounding and Shielding

**Track Classification:** Power, grounding and shielding