

# Upgrade of the CSC Muon Port Card at the CMS Experiment

*Thursday, September 23, 2010 4:00 PM (2 hours)*

The present Muon Port Card (MPC) provides sorting of incoming Level 1 Trigger primitives and optical transmission of three best ones to the Track Finder within the Cathode Strip Chamber (CSC) sub-detector at the CMS experiment at CERN.

The transmission system comprises 180 1.6Gbps links; it has been in operation since 2008. The proposed Super-LHC upgrade implies higher data volume to be transmitted through the trigger chain and more sophisticated trigger algorithms. We plan to upgrade the MPC boards within the next few years to accommodate these requirements. The paper presents the first results of simulation and prototyping with the focus on enhancing the sorting algorithms and using of parallel 12-channel optical links and more powerful Virtex-5 FPGA.

**Primary authors:** Mr MATVEEV, Mikhail (Rice University); Mr PADLEY, Paul (Rice University)

**Presenter:** Mr MATVEEV, Mikhail (Rice University)

**Session Classification:** POSTERS Session

**Track Classification:** Optoelectronics and Links