

Upgrade of the first-level muon trigger for the ATLAS experiment at the HL-LHC

- Upgraded first-level ATLAS muon trigger includes novel MDT Trigger Processor (MDTTP) responsible for
 - read-out the MDT chamber hit data for transmission to DAQ upon receipt of an first-level acceptance signal;
 - configuration and monitoring of the MDT front-end electronics;
 - Improving the quality of reconstructed muon candidates and rejecting combinatorial fakes.
- MDTTP implemented on a ATCA blade divided in Service and Command Modules
 - Application-specific Command Module has a Xilinx VU13P FPGA for processing and 10 FireFlies (14 Gbps) modules for communications

