



Contribution ID: 427

Type: poster

## ATLAS LUCID detector upgrade for LHC Run 2

The new ATLAS luminosity monitor got several major innovations. Its photomultiplier tubes are used as detector elements by using the Cherenkov light produced by charged particles above threshold crossing the quartz windows. In order to cope with the 25 ns bunch spacing of the LHC machine the analog shaping of the readout chain has been significantly improved. The main readout card represents a quite general processing unit based on 12 bit - 500 MS/s Flash ADC and on FPGAs, delivering the processed data to 1.3 Gb/s optical links. The talk will describe all improvements and will outline future perspectives of the readout card for next generation high energy physics experiments.

**Author:** VIAZLO, Oleksandr (Lund University (SE))

**Presenter:** VIAZLO, Oleksandr (Lund University (SE))

**Track Classification:** Detector R&D and Data Handling