



Contribution ID: 23

Type: **not specified**

## Development of the MTD Control and Safety Systems at CMS

The Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider (LHC) will undergo extensive upgrades during the long-shutdown 3 (LS3) scheduled for 2026-28. One of the most prominent aspects of the upgrade will be the introduction of a new detector sub-system, the MIP Timing Detector (MTD), situated between the outer tracker and the electromagnetic calorimeter. The MTD is a timing layer, which aims to provide a charge-track time resolution on the order of tens of picoseconds. As with all detector systems at CMS, the MTD will be controlled and monitored using detector control and detector safety systems (DCS and DSS). DCS and DSS are one-of-a-kind purpose-built prototype software systems, constructed using the WinCC software package.

**Primary author:** GAILE, Antra (Riga Technical University (LV))

**Presenter:** GAILE, Antra (Riga Technical University (LV))