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Type: **Talk**

## CMS Upgrades

Wednesday 28 August 2024 12:00 (20 minutes)

The present and future runs of the Large Hadron Collider (LHC) will provide a unique opportunity to extend the physics reach of the CMS experiment. Therefore, an ambitious upgrade program of the experimental apparatus has been carried out.

The major experimental upgrades implemented before Run3 mainly aim to improve the trigger: additional new stations have been included in the CMS muon system. The High Luminosity LHC phase will push the experimental challenges to the technology limit because of the higher radiation level and harsh environment. The key features for successful detector operation in Run4-5 are high granularity, radiation hardness, improved time precision. Therefore, CMS will be equipped with a new inner tracking detector, new high-granularity calorimeter and timing layers and additional muon stations..

In this contribution an overview of the mentioned upgrades will be provided, together with a description of the detector technologies and first performance studies.

### Internet talk

Maybe

### Is this an abstract from experimental collaboration?

Yes

### Name of experiment and experimental site

CMS, CERN

### Is the speaker for that presentation defined?

Yes

### Details

Rosamaria Venditti, Bari University and INFN

**Primary author:** VENDITTI, Rosamaria (Universita e INFN, Bari (IT))

**Presenter:** VENDITTI, Rosamaria (Universita e INFN, Bari (IT))

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