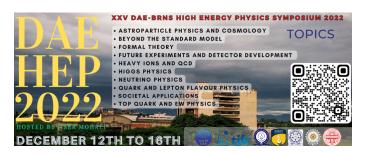
## XXV DAE-BRNS High Energy Physics Symposium 2022



Contribution ID: 560 Type: Poster

## Reconstruction and identification of Electrons or Photons by the Level 1 Trigger of CMS

Thursday 15 December 2022 14:00 (1 hour)

The LHC machine collides proton-on proton every 25 ns. In the recently started operation of Run-3, the peak instantaneous luminosity delivered is about  $2 \times 10^{\circ}[34] \text{ s-1 cm-2}$ . This results in about ~40 TB/s of data flow from the detector, all of which cannot be stored offline for detailed analysis. The most interesting events are selected quickly via a 2-tier trigger in real time. The first one, called Level -1 trigger, is a hardware based trigger and the second one uses a computer farm for detailed event analysis. For identification of interesting events with photons and electrons in their final state the Level 1 hardware trigger implements various algorithms that weed out mundane processes. In this talk we present the reconstruction of electron/photon for Level 1 trigger along with an overview of the Electron/Photon trigger setup for Run 3. We will also present the performance of the Level 1 Electron/Photon trigger in the latest Run 3 data.

## Session

Future Experiments and Detector Development

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Session Classification: Poster - 3