Contribution ID: **19** Type: **not specified**

Upgrade of the LHCb Calorimeter system

Tuesday, 3 October 2017 10:20 (20 minutes)

In 2019-2020, the LHCb collaboration will enter into the Phase I upgrade. The goal is to increase the working luminosity up to 2·1033 cm-2s-1. To achieve this, the hardware based Level 0 trigger will be replaced by a full software trigger. All the events will be read out; the event reconstruction and selection will be done in real time at a large CPU farm.

In the first part of the talk, the LHCb Calorimeter system Phase I upgrade will be described. The main modifications will consist in removal of the Preshower subdetector assembly and full replacement of the frontend electronics of ECAL and HCAL.

The second part of the talk will be devoted to the future Phase II upgrade, which is now being developed by the LHCb Collaboration. The Phase II Upgrade is supposed to make LHCb able to work at even higher luminosity, 2·1034 cm-2s-1. This implies essential revision of the Calorimeter system. The options for the Phase II LHCb Calorimeter upgrade will be discussed.

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Session Classification: Prototypes, upgrades and concepts