Contribution ID: **15** Type: **not specified**

Use and application of the CMS RPC in future experiments

Tuesday 10 September 2024 10:30 (20 minutes)

The RPC chambers are the only detector in the muon system of the CMS experiment that covers the barrel and the endcap. During the entire time of operation in CMS, they have demonstrated their robustness, exceeding the ten-year limit for which they were originally designed. Moreover, for the high luminosity LHC period, an upgrade of the electronic boards will be performed to exploit the full potential of their time resolution (in the order of 1-2 ns), increasing even more their importance in the trigger system of the CMS experiment. RPC is a low cost and low maintenance detector (compared to other gaseous detectors) and the experience accumulated in the CMS experiment shows that it is a great alternative to be used in new physics experiments that require a large amount of detection area with high temporal resolution. During this talk we will explore some alternatives for the use of RPC chambers in new experiments, and some examples of physics analysis in which they can be used.

Author: ASILAR, Ece (Hanyang University)

Presenter: ASILAR, Ece (Hanyang University)

Session Classification: HEP & BHEP applications (part I)