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Type: **Talk**

Eco-friendly Resistive Plate Chamber detectors for HEP applications

Friday 9 September 2022 12:00 (20 minutes)

Resistive Plate Chamber detectors are largely used in current High Energy Physics experiments given their excellent resolution in time and high resolution in space. They are typically operated in avalanche mode with large fractions of Tetrafluoroethane ($C_2H_2F_4$), a gas recently banned by the European Union due to its high Global Warming Potential (GWP).

An intense R&D activity is ongoing to improve RPC technology in view of present and future HEP applications. Since a few years a joint effort between the ALICE, ATLAS, CMS, LHCb/SHiP and CERN Communities is in place to search for potential eco-friendly gas mixtures and assess the performance of RPCs in different irradiation conditions. Test campaigns are in progress at the CERN Gamma Irradiation Facility (GIF++). In this talk, a review on the promising results of these studies and future plans will be given.

Internet talk

Yes

Details

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She/he will be defined as soon as positive feedback will be eventually received from the Conference Organizers.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

RPC EcoGas@GIF++ Collaboration, CERN

Is the speaker for that presentation defined?

Yes

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