



Contribution ID: 78

Type: **not specified**

Operation of 1 mm HPL RPCs with low-GWP gas mixtures

Wednesday 11 September 2024 11:30 (20 minutes)

RPCs have traditionally used a gas mixture with a high Global Warming Potential (GWP). To reduce the environmental impact, promising low-GWP gases and the addition of CO₂ to the standard mixture have been explored on small 50 x 50 cm² RPC prototypes using a 1 mm single-gap HPL-based technology. Preliminary measurements of key performance metrics like efficiency, streamer probability, induced charge, cluster size, and time resolution are presented, highlighting their impact on detector performance and potential broader applications.

Authors: SHAH, Aashaq (University of Cambridge (GB)); BRANDT, Oleg (University of Cambridge (GB))

Presenters: SHAH, Aashaq (University of Cambridge (GB)); BRANDT, Oleg (University of Cambridge (GB))

Session Classification: Ecogases and longevity (II)