XVI Workshop on Resistive Plate Chambers and Related Detectors



Contribution ID: 78

Type: Oral

RPC detectors to search for long-lived particles with the ANUBIS detector

Monday 26 September 2022 16:50 (20 minutes)

RPC detectors combine several crucial advantages of excellent timing precision, high detection efficiency, and good spacial resolution, all at a moderate cost. This makes RPC detectors a prime choice for instrumenting large detector volumes for tracking applications where timing plays a crucial role. This talk reviews the ANUBIS detector concept using RPC detectors to search for long-lived particles at the high-luminosity LHC in a hitherto inaccessible lifetime regime. A small-scale demonstrator called pro-ANUBIS is introduced, which will take data on-surface above the ATLAS detector in autumn 2022, and inside the ATLAS cavern in 2023. Finally, first commissioning results of pro-ANUBIS are presented.

Authors: BURR, Jon (University of Cambridge (GB)); BRANDT, Oleg (University of Cambridge (GB)); SAT-TERTHWAITE, Toby (University of Cambridge (GB))

Co-authors: AIELLI, Giulio (INFN e Universita Roma Tor Vergata (IT)); PIZZIMENTO, Luca (INFN e Universita Roma Tor Vergata (IT))

Presenter: BURR, Jon (University of Cambridge (GB))

Session Classification: New experiments