Contribution ID: **680** Type: **Parallel session talk**

COmpact DEtector for EXotics at LHCb: CODEX-b

Thursday 18 July 2024 15:55 (17 minutes)

The COmpact DEtector for EXotics at LHCb (CODEX-b) is a particle physics detector dedicated to displaced decays of exotic long-lived particles (LLPs), compelling signatures of dark sectors Beyond the Standard Model, which arise in theories containing a hierarchy of scales and small parameters. CODEX-b is planned to be installed near the LHCb interaction point and makes use of fast RPCs, which provide both a good space and temporal sensitivity and also a zero background environment, hence complementing the new-searches program of other detectors like ATLAS or CMS. A demonstrator detector, CODEX-beta, is being assembled now to take data beginning in the second half of 2024 and 2025. It will validate the design and physics case for the future CODEX-b. CODEX-beta will be responsible for validating the background estimations for CODEX-b, demonstrating the seamless integration in the LHCb readout system, and showing the suitability of the baseline tracking and its mechanical support.

Alternate track

1. Detectors for Future Facilities, R&D, Novel Techniques

I read the instructions above

Yes

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Session Classification: Detectors for Future Facilities, R&D, Novel Techniques

Track Classification: 13. Detectors for Future Facilities, R&D, Novel Techniques