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## **CODEX-b: Opening New Windows to the Long-Lived Particle Frontier at the LHC**

This document is written as a contribution to the European Strategy of Particle Physics (ESPP) update. We offer a detailed overview of current developments and future directions for the CODEX-b detector, which aims to detect long-lived particles beyond the Standard Model. We summarize the scientific motivation for this detector, advances in our suite of simulation and detector optimization frameworks, and examine expected challenges, costs, and timelines in realizing the full detector. Additionally, we describe the technical specifications for the smaller-scale demonstrator detector (CODEX- $\beta$ ) we have installed in the LHCb experimental cavern.

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