

Searches for long-lived particles with ANUBIS: first commissioning results from proANUBIS

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Many extensions of the Standard Model with Dark Matter candidates predict new long-lived particles (LLP). The LHC provides an unprecedented possibility to search for such LLP produced at the electroweak scale and above. The ANUBIS concept foresees instrumenting the ceiling and service shafts above the ATLAS experiment with tracking stations in order to search for LLPs with decay lengths of O(10m) and above. After a brief review of the ANUBIS physics case, this contribution will discuss the first complete prototype detector module called proANUBIS, its design, installation, and commissioning, and its upgraded trigger system. A first glimpse at data taking in the ATLAS cavern in 2024 will be given, followed by a summary of long-term plans.

Alternate track

1. Operation, Performance and Upgrade (incl. HL-LHC) of Present Detectors

I read the instructions above

Yes

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