

Long-Lived Particles - Searching for New Physics at the Energy Frontier

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For the last few decades, High Energy Physics has been a victim of its own early success. Despite numerous theoretical arguments why it cannot be the final explanation for the interactions of fundamental particles, the Standard Model of particle physics continues to withstand intense scrutiny of the most determined experimental physicists. One promising way to search for signs of new physics is at the energy frontier at the LHC, probing energies comparable to those present very shortly after the Big Bang.

In this talk, I will review some recent experimental results for searches for signs of long-lived new particle signatures using data from the ATLAS experiment. Searching for these particles is highly challenging as they have the tendency to avoid interactions, making them elusive to detection. I will discuss details about the detector performance, which are crucial for such searches.

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Please select: Experiment or Theory

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