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Higgs columnar analysis

Saturday 14 October 2023 09:15 (1h 30m)

In the search for physics beyond the Standard Model, a detailed understanding of the Higgs boson properties is a crucial component. This exercise aims to give an overview of different analysis aspects in the context of Higgs physics at the CMS experiment. Specifically, we will discuss challenges and requirements needed for the selection of objects in signal and background events as well as the construction of a suitable final observable for selected examples. Additionally, we will show how to accomplish these tasks with modern Python-based tools for vectorized analyses, such as AwkwardArray and columnflow.

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