

Status of Higgs-charm coupling measurements at CMS

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The coupling of the Higgs boson to fermions is a crucial part of the standard model with still much room to explore. Since we've measured the interaction with the heavy third generation, our focus naturally shifts to the lighter generations. As the Higgs boson coupling scales with mass, this endeavor is much more difficult. The next natural candidate, the charm quark, in particular poses a challenge, as distinguishing jets which originate from charm quarks from other types of jets is a difficult problem. In this poster, we summarize the current status of Higgs-charm coupling measurements. Special focus will be put on the benefits of charm jet identification with modern machine learning methods such as transformer models.

Alternate track

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Yes

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