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Synthetic Datasets for HH->4b Background Modeling

Tuesday 14 May 2024 16:15 (15 minutes)

This talk discusses a new method to overcome common limitations in data-driven background predictions by validating the background model with synthetic data samples obtained using hemisphere mixing. These synthetic data samples allow for the validation of the extrapolation of the background model to the relevant signal region and avoid the problem of low statistical power in the most signal-like phase space. This technique also provides a way to determine the expected variance of the background prediction, resulting from the finite size of the data sample used to fit the model.

Mini Symposia (Invited Talks Only)

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