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[316] Measuring the decay $B^+ \rightarrow \rho^0 \mu^+ \nu_\mu$ at LHCb

Tuesday 31 August 2021 18:00 (15 minutes)

A long standing tension between measurements of the CKM matrix element V_{ub} in inclusive and exclusive semileptonic decays could be due to new physics.

By using data from the LHCb experiment, we are performing a measurement of V_{ub} from the decay $B^+ \rightarrow \rho^0 \mu^+ \nu_\mu$. This talk will focus on the steps toward extracting the signal yield from data. This involves the development of a multivariate algorithm used to separate signal and background, identifying and modelling important background processes and developing a stable fit of the signal and background components. Finally the future steps and challenges of the analysis will be discussed.

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