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## Angular analysis of $B^+ \rightarrow K^+ e e$ at the LHCb experiment

*Monday 8 April 2019 15:30 (15 minutes)*

Numerous recent anomalies in the  $b \rightarrow sll$  flavour sector give indication of potential lepton flavour universality (LFU) violation in (axial-)vector couplings.

To probe these anomalies and further assumptions about LFU in other couplings, now more than ever, precise measurements of the SM properties are needed.

This talk presents one arm of these investigations using  $B^+ \rightarrow K^+ e e$  decays, with proton-proton collision data at LHCb collected in run 1 and run 2, to conduct the first angular analysis of this mode.

An angular analysis provides a way to measure non-trivial parameters using kinematic information from the decay, and in this mode has access to the coefficients for scalar, pseudo-scalar and tensor couplings.

This angular analysis will provide the most stringent constraint on the NP contributions through scalar, pseudo-scalar and tensor, couplings as the decay is independent of (axial-)vector couplings, and additionally provide vital understanding on the electron reconstruction efficiency in  $b \rightarrow sll$  transitions.

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**Session Classification:** Parallel stream 4