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## Measurement of the mixing parameter $\chi_d$ in semi-leptonic B meson decays at Belle II

*Monday 26 July 2021 10:15 (15 minutes)*

Inclusive semi-leptonic decays of  $B$  mesons are an excellent avenue for the study of  $B\bar{B}$  mixing, given their large branching fraction. In this talk, we present the measurement of the time integrated mixing parameter,  $\chi_d$ , using data collected by the Belle II detector. The Belle II experiment is located at the SuperKEKB laboratory in Tsukuba, Japan where electron-positron collisions at the  $\Upsilon(4S)$  energy yield a large number of  $B\bar{B}$  events. The mixing parameter  $\chi_d$  is determined by examining the charge of reconstructed lepton pairs in  $B \rightarrow X\ell\nu$  events. The result is based on  $74\text{ fb}^{-1}$  of Belle II reprocessed data.

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### Collaboration / Activity

Belle II

**Presenter:** DUELL, Stephan (BELLE (BELLE II Experiment))**Session Classification:** T08: Flavour Physics and CP Violation**Track Classification:** Flavour Physics and CP Violation