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Recent Belle II results on decay-time-dependent CP violation

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Measurements of decay-time dependent CP violation are chief goals of the Belle II physics program. Comparison between penguin-dominated $b \rightarrow q\bar{q}s$ and tree-dominated $b \rightarrow c\bar{c}s$ results allows for stringent tests of CKM unitarity that are sensitive to non-SM physics. This talk presents first Belle II results on the mixing rate and lifetime of B^0 mesons, an essential validation of time-dependent measurements that requires detailed control of complex high-level capabilities such as flavor tagging and decay-time resolution modeling. Recent results on $B^0 \rightarrow K_S^0 \pi^0 \gamma$ and $B^0 \rightarrow K_S^0 K_S^0 K_S^0$ are also reported.

In-person participation

Yes

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