

30th International Symposium on Lepton Photon Interactions at High Energies



Contribution ID: 48

Type: **Parallel session talk**

Charm and time-dependent CP violation in B decay at Belle II

Wednesday, January 12, 2022 12:00 PM (20 minutes)

Analyses of D and B meson yields as functions of decay time provide access to fundamental standard model parameters and probe natural non-SM scales at 10-100 TeV energies. Outstanding vertexing performances are key enablers of this program. We prove the capabilities of the Belle II detector by measuring the lifetimes of the D⁰ and D⁺ mesons. The results are the most precise to date, owing to a vertexing resolution 2x better than that of Belle and BaBar. Perspectives on the sensitivity to the main observables in charm physics and on the achievable precision in time dependent CP violation in B decays will be discussed. First results obtained on relevant channels with early data sets are shown.

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Session Classification: Quark and charged lepton flavour

Track Classification: Flavour