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Charm physics prospects at the Belle II experiment

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Belle II is a major upgrade of the Belle experiment, and will operate at the B-factory SuperKEKB, located at the KEK laboratory in Tsukuba, Japan. Belle II will be an ideal laboratory to study the properties of the charm quark, collecting more than 5x10ˆ10 ccbar events with a total integrated luminosity of about 50 abˆ-1 in the next decade.

We will discuss the expected sensitivity of Belle II for CPV measurements and New Physics searches in the charm sector. Estimates for several decay channels will be presented, in particular for those with lepton-neutrino, neutral pions and other neutrals in the final state. Alternative flavour-tagging techniques has been developed, a novel flavour-tagging method of prompt D0s will be presented. Finally, we will present the impact of the improved tracking at Belle II, which will allow to significantly increase the precision of time-dependent measurements.

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