The Belle II experiment at the Japanese Super B-Factory: Gearing up for first collisions

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The Belle II experiment at the SuperKEKB e+e- B factory in Japan is expected to collect about 50 times more B-meson pairs than its predecessor Belle. The physics program of Belle II complements that of LHCb and comprises the study of rare B decays, precison measurements of CP violation and CKM parameters, searches for exotic quark states as well as physics of charm mesons and tau leptons.

The upgraded accelerator and detector are currently gearing up for first collisions.

In early 2016, the SuperKEKB accelerator saw the first turns of electrons and positrons and the initial phase of machine test operation has been successfully finished. Also most of the Belle II detector components have been installed by now. First collisions are expected in 2017 and the physics program will start in 2018.

In this talk, I will present the status of the accelerator and detector upgrades and discuss examples of key measurements to be performed with Belle II.