



Contribution ID: 119

Type: **not specified**

The Belle II Experiment

The Belle II experiment at the asymmetric $e^+ e^-$ SuperKEKB collider is a major upgrade of the Belle experiment, which ran at the KEKB collider at the KEK laboratory in Japan. The design luminosity of SuperKEKB is $8 \times 10^{35} \text{ cm}^{-2} \text{ s}^{-1}$, 40 times higher than that of KEKB. The expected integrated luminosity of Belle II is 50 ab^{-1} , 50 times higher than that of Belle. The experiment will focus on discoveries of new physics beyond the Standard Model, via high precision measurements of heavy flavor decays and searches for rare signal events. The upgrade to the SuperKEKB collider has been completed and testing of the collider is going on. The detector, electronics, software, and computing systems are all being substantially upgraded. In this talk we present the status of SuperKEKB and Belle II detector construction. The expected sensitivity to new physics of the Belle II data set will be also discussed.

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