



Contribution ID: 55

Type: **Oral**

Belle II Experiment status and physics prospects

Thursday, 6 December 2018 17:00 (20 minutes)

The Belle II experiment is a substantial upgrade of the Belle detector and has recently successfully started operation at the SuperKEKB energy-asymmetric e^+e^- collider, with the first collisions in April 2018. The design luminosity is $8 \times 10^{35} \text{ cm}^{-2}\text{s}^{-1}$ and the Belle II experiment aims to record 50 ab^{-1} of data, a factor of 50 more than the Belle experiment. This large data set will be accumulated with low backgrounds and high trigger efficiencies in a clean e^+e^- environment; it will allow to probe New Physics scales that are well beyond the reach of direct production at the LHC and will complement the searches through indirect effects that are currently ongoing or planned.

This data set offers also the possibility to search for a large variety of dark sector particles in the GeV mass range complementary to LHC and dedicated low energy experiments. These searches will profit both from the size of the Belle II data, and from specifically designed triggers for the early running of Belle II.

This talk will review the detector upgrade, present results obtained from the first collision data analysis and prospects for the next phase of data taking that will start in early 2019; I will then focus on the planned searches, and the discovery potential of the first data.

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Session Classification: Parallel 09