

# The Belle II Experiment at SuperKEKB: status and prospects

*Friday, 26 October 2018 16:05 (20)*

The Belle II detector together with the SuperKEKB  $e^+e^-$  asymmetric collider are the second generation experiment at a B-Factory. The aim is to reach a luminosity of  $8 \times 10^{35} \text{ cm}^{-2} \text{ s}^{-1}$ , that is a  $Y(4S)$  production rate close to 800 Hz, by exploiting the nano beam collision scheme with large Piwinsky angle. A major upgrade of all the components of the former Belle detector had been completed in order to improve its performances and to withstand the severe background conditions foreseen during the running at nominal luminosity. SuperKEKB and an almost complete version of the Belle2 detector started the experimental run in the spring 2018 observing the first collision on April 26 and collecting a sample of almost  $0.5 \text{ fb}^{-1}$ . The key concepts of the new detectors and a first assay of their performances on real data will be presented together with a status report of the machine operations and the prospects for the new experimental run that will start with the complete Belle II detector by spring 2019.

**Primary author(s)** : PAOLONI, Eugenio (INFN & University Pisa)

**Presenter(s)** : PAOLONI, Eugenio (INFN & University Pisa)

**Session Classification** : Particle Physics

**Track Classification** : Particle physics