

# Development and construction of the Belle II DEPFET pixel detector

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The construction of the new accelerator at the Japanese Flavour Factory (KEKB) has been finalized and the commissioning of its detector (Belle II) is planned by early 2017. This new e+e- machine ("SuperKEKB") will deliver an instantaneous luminosity of  $8 \cdot 10^{35} \text{ cm}^{-2}\text{s}^{-1}$ , which is 40 times higher than the world record set by KEBK.

In order to be able to fully exploit the increased number of events and provide high precision measurements of the decay vertex of the B meson systems in such a harsh environment, the Belle II detector will include a new silicon vertex detector, based on the DEPFET technology. The new pixel detector, close to the interaction point, consists of two layers of active pixel sensors. The DEPFET technology combines the detection together with the in-pixel amplification by the integration, on every pixel, of a field effect transistor into a fully depleted silicon bulk. In Belle II, DEPFET sensors thinned down to  $75 \mu\text{m}$  with low power consumption and low intrinsic noise will be used.

In the talk, a general overview of latest results and the construction status will be presented.

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