

Abstract Submitted
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The Belle II Detector LEO PIILONEN, Virginia Tech, BELLE II COLLABORATION — The Belle II detector is now under construction at the KEK laboratory in Japan. This project represents a substantial upgrade of the Belle detector (and the KEKB accelerator). The Belle II experiment will record 50 ab^{-1} of data, a factor of 50 more than that recorded by Belle. This large data set, combined with the low backgrounds and high trigger efficiencies characteristic of an e^+e^- experiment, should provide unprecedented sensitivity to new physics signatures in B and D meson decays, and in τ lepton decays. The detector comprises many forefront subsystems. The vertex detector consists of two inner layers of silicon DEPFET pixels and four outer layers of double-sided silicon strips. These layers surround a beryllium beam pipe having a radius of only 10 mm. Outside of the vertex detector is a large-radius, small-cell drift chamber, an "imaging time-of-propagation" detector based on Cerenkov radiation for particle identification, and scintillating fibers and resistive plate chambers used to identify muons. The detector will begin commissioning in 2017.

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