The Belle II upgrade

The KEK B-factory is being upgraded to reach 40 times the luminosity of the original KEKB. In order to cope with the higher luminosity the Belle detector needs a substantial upgrade. Especially the silicon tracking detector is exposed to much higher backgrounds and will be completely replaced. The innermost two layers will be pixel detectors using the DEPFET technology. Driven by the requirement of precise vertexing with low momentum tracks material reduction is an important design goal. The DEPFET sensors are self supporting all-silicon modules with the sensitive area tinned to 75 μ m. The low power consumption allows air cooling. Thus the average scattering material is reduced to 0.21% of a radiation length. In this talk I will report on the KEKB and Belle II upgrade and focus mainly on the properties of the DEPFET sensors.