

The Belle II SVD assembly and mechanics

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The Belle II experiment at the SuperKEKB collider in Japan will operate at an instantaneous luminosity approximately 50 times greater than its predecessor (Belle).

The central feature of the experiment is a vertex detector comprising two layers of pixelated silicon detectors (PXD) and four layers of double-sided silicon microstrip detectors (SVD).

One of the key measurements for Belle-II is CP violation asymmetry in the decays of beauty and charm hadrons, which hinges on a precise charged-track vertex determination and low-momentum track measurement.

Towards this goal, a proper assembly of the SVD components with precise alignment ought to be performed and the geometrical tolerances should be checked to fall within the design limits.

We present an overview of the assembly procedure that is being followed, which includes the precision gluing of the SVD module components, wire-bonding of the various electrical components, and precision 3D coordinate measurements of the jigs used in assembly as well as of the final SVD modules.

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