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## Level changes in the SuperKEKB main ring tunnel

SuperKEKB is a next-generation B-factory machine, which aims to achieve a peak luminosity 40 times higher than that of KEKB. It was built utilizing the pre-existing KEKB tunnel. The SuperKEKB construction started in 2010, and beam circulation in the main rings was achieved in February 2016. The floor level change along the 3 km main ring tunnel has been surveyed using DNA03 and N3 periodically. The south arc section continues to sink with respect the interaction point at an average speed of a few millimeters per year, resulting in a net sinkage of more than 35 mm. The floor level around the interaction point has been monitored continuously with the BINP HLS system. The level is affected by the outside temperature and rainfall. We see tidal effects, and earthquakes which took place a thousand kilometers away from KEK with this system. The SuperKEKB tunnel level change is summarized in this report.

### Summary

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