



Contribution ID: 40 Contribution code: MOYD02

Type: **Invited Oral Presentation**

## Recent experience with high-luminosity operation of SuperKEKB

*Monday 11 August 2025 11:30 (30 minutes)*

SuperKEKB is a positron-electron collider with a nano-beam scheme. The nano-beam scheme allows the extremely low beta function at the interaction point (IP) compared to the bunch length, namely ordinary colliders. The beta function at the IP is less than 1 mm which is the smallest value among the previous colliders. Recent results on beam-beam interactions, beam injection under the influence of beam-beam interactions, and a performance of the crab-waist scheme that improves the luminosity performance are discussed. Sudden beam loss (SBL), which cannot be explained by usual beam dynamics, and the nonlinear collimator as a key device to reduce both beam background and impedance are also crucial issues. We present the recent machine operation and performance of SuperKEKB which predicts the future high energy and luminosity colliders.

### Please consider my poster for contributed oral presentation

Yes

### Would you like to submit this poster in student poster session on Sunday (August 10th)

No

### Footnotes

### Funding Agency

### I have read and accept the Privacy Policy Statement

Yes

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**Session Classification:** Colliders and other Particle and Nuclear Physics Accelerators (Invited)

**Track Classification:** MC1 - Colliders and other Particle and Nuclear Physics Accelerators