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Beam size measurement at SBL in SuperKEKB

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Sudden beam loss (SBL) is one of the obstacles to improving the luminosity of SuperKEKB. SBL cause damage to collimators and other accelerator components, QCS quench, and large background to the Belle II detector. It also causes beam abort and prevents the accumulation of high currents. Therefore, it is an important issue to investigate and resolve the causes of SBL events. In order to investigate the causes of SBL events, we measured the beam profile at the moment abort due to SBL using three different cameras and found that the beam size was larger than at the moment of abort due to other causes. This paper summarizes the results of the beam size measurements made as part of the investigation into the cause of the SBL.

Footnotes

Funding Agency

I have read and accept the Conference Policies

Yes

Author: IKEDA, Hitomi (High Energy Accelerator Research Organization)

Co-authors: MITSUKA, Gaku (High Energy Accelerator Research Organization); FUKUMA, Hitoshi (High Energy Accelerator Research Organization); TOBIYAMA, Makoto (High Energy Accelerator Research Organization); MITSUHASHI, Toshiyuki (High Energy Accelerator Research Organization)

Presenter: IKEDA, Hitomi (High Energy Accelerator Research Organization)

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