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Incoherent and coherent synchrotron radiation effects in the SuperKEKB electron beam transport

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The 7-GeV low-emittance electron beam is essential to be delivered to the SuperKEKB double-ring collider. One of the issues at the complicated beam transport between the linear accelerator and the High-Energy Ring (HER) is significant transverse emittance growth. In general, both incoherent and coherent synchrotron radiation effects play crucial roles in beam behavior. In this paper, we present the measured emittance results of the nominal optics with the help of particle tracking simulations.

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Footnotes

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Primary author: YOSHIMOTO, Takashi (High Energy Accelerator Research Organization)

Co-authors: IIDA, Naoko (High Energy Accelerator Research Organization); KIKUCHI, Mitsuo (High Energy Accelerator Research Organization); SEIMIYA, Yuji (High Energy Accelerator Research Organization); ZHOU, Demin (High Energy Accelerator Research Organization)

Presenter: YOSHIMOTO, Takashi (High Energy Accelerator Research Organization)

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