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标题: Observation of coherent transition radiation in the prewave zone
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摘要: Transition radiation generated from a relativistic electron beam is used as a tool for diagnostics of the beam. Also, it can be used as a source of femtosecond (fs) THz radiation. We are generating the THz radiation with the pulse energy of 3 mu J by means of the coherent transition radiation (CTR) from 55-MeV electron beam in the fs-THz linac at the Pohang Accelerator Laboratory. The spatial distribution of CTR could be easily observed by using a pyroelectric camera. In this paper, we report observation of the transversal distribution of CTR in the prewave zone, and compare with calculated results based on the bunch form factor.
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