22. Title: Expected performance of a planar undulator designed for the terahertz source project at Tohoku University

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Source: NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT

Volume:637

Issue:S72-S75

Publication year: 2011

Document type:Journal article (JA)

Abstract: A test accelerator as coherent terahertz (THz) source project (t-ACTS) has been under development at Tohoku University, in which generation of intense coherent THz radiation from the very short electron bunch less than 100 fs will progress. Such short bunch will be utilized to generate broad-band coherent radiation from bending magnets in a ring of which isochronous optics is adapted to preserve the short bunch length. In addition, narrow-band coherent THz radiation from an undulator has been considered. We describe design of the test accelerator and expected performance of undulator radiation.