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作者: Lee, WH (Lee, W. H.); Seo, YH (Seo, Y. H.)
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摘要: The influence of the electron energy spread in a superradiant oscillator based on coherent undulator synchrotron radiation of periodic electron bunches is investigated numerically. The permitted energy spread is found to be scaled by 1/2N(U), where N-U is the the cavity length in units of the undulator period. As a result, when the cavity length is limited within a few undulator periods, an energy spread on the order 10% can still lead to significant radiation growth.
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地址: [Lee, W. H.; Seo, Y. H.] Kwangwoon Univ, Dept Electrophys, Seoul 139701, South Korea
通讯作者地址: Lee, WH (通讯作者),Kwangwoon Univ, Dept Electrophys, Seoul 139701, South Korea
电子邮件地址: yseo@kw.ac.kr
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