

CSR INTERACTION FOR A 2D ENERGY-CHIRPED BUNCH ON A GENERAL ORBIT

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Abstract

When an electron bunch with initial linear energy chirp traversing a bunch compression chicane, the bunch interacts with itself via coherent synchrotron radiation (CSR) and space charge force. The effective longitudinal CSR force for a 2D energy-chirped gaussian bunch on a circular orbit has been analyzed earlier*. In this paper, we present our analytical results of the effective longitudinal CSR force for such a bunch going through a general orbit, which includes the entrance and exit of a circular orbit.

**CONTRIBUTION NOT
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