

## Channeling 2018



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# Charged Particle Bunch Radiation in Cherenkov Concentrator

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We continue investigation of radiation produced by a charged particle bunch moving through the concentrator for Cherenkov radiation. We take into account a series of issues affecting the dimensions of the focal spot and distribution of the field across this area. It is reasonable to take into account finite length of the bunch and a small shift of the bunch from the axis. Moreover, it is useful to consider target geometry without sharp “nose” to reduce parasitic multiple reflections in this area. In the second place, we consider interaction between the bunch and radiation pulse within the focal spot.

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