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## Energy spread of the beam induced by betatron radiation in PWFA

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Energy spread caused by the longitudinal size of the beam is well known in PWFA. Usually this issue can be resolved with beam loading effect that allows to keep accelerating field constant, or close to constant, along all the duration of the beam. In this work however, we would like to address another source of energy spread, that arises at higher energies - betatron radiation.

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