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Beam lifetime due to radiative Bhabha scattering

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A good understanding of radiative Bhabha scattering at high energy $e+e-$ colliders is important as it might become the limiting factor for the beam lifetimes. In this talk, the impact of beam-size effects will be presented, in particular the strong suppression of the radiative Bhabha scattering due to small lateral beam sizes at the interaction points. The resulting beam lifetime limits will be discussed for all FCC-ee collision energies and as a function of collision parameters. In addition, the effects of the coherent radiative Bhabha scattering will be briefly described.

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