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[332] Designing a 100 TeV Future Circular Hadron Collider: beam-beam studies.

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As a result of 2013 Update of the European Strategy for Particle Physics the Future Circular Collider hadron-hadron (FCC-hh) with 100 TeV CM collisions has emerged as one of the future options in the post-LHC era. The beam-beam interaction, being the strongest non-linearity of the machine, has implications in many aspects. A robust design should take into account the different optics and crossing schemes and evaluate the long range interactions effects as well as the impact of large head-on beam-beam interactions. Different compensations techniques are also explored as possible mitigation to the detrimental effects on beam lifetimes and emittance degradation.

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