

## Collision debris

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The FCC-hh experimental insertion design poses as a major challenge the impact of the proton-proton collision debris on the final focus quadrupoles. Both instantaneous power load and accumulated dose have to be reliably quantified and brought down to an acceptable level through suitable mitigation strategies, in order to allow accelerator operation according to the desired luminosity goals.

Based on the LHC and HL-LHC design experience, dedicated energy deposition studies have been carried forward in an iterative process exploring various optics solutions. In particular, a promising crossing angle gymnastics has been evaluated and the effect of the detector spectrometer has been investigated.

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