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Parameter space for the magnetic design of combined function magnets in the FCC-ee arc cell

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The Future Circular Collider (FCC-ee) is designed to explore the Z0 and $W\pm$ bosons, along with the Higgs boson and top quark, achieving exceptionally high luminosity and energy efficiency. In order to minimize the energy lost per turn due to Synchrotron Radiation (SR) we explore the use of Combined Function Magnets into the arcs cell. For this, it is necessary to explore the possible combinations of the different magnet types in the cell, namely: dipoles, quadrupoles and sextupoles. Specifications in terms of strength and alignment tolerances are reviewed in this paper.

Footnotes

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