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FCC-ee and alignment issues

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A hadron collider of 100 km circumference and 100 TeV in the center of mass is under study by the international physics community as next energy frontier Future Circular Collider (FCC). The same tunnel could host first a lepton collider, FCC-e+e–, with beam energy ranging between 45 and 175 GeV. For attaining luminosities between 10ˆ34 and 10ˆ36 cmˆ-2sˆ-1, the beams must be strongly focused at the Interaction Points and the vertical emittance must have unprecedentedly small values between 1 and 2.5 pm.
Resonant depolarization has been proposed for accurate energy determination of the FCC-e+e– beams. The aim of this talk is to present results of preliminary studies of the effect of magnet misalignments on machine performance and ways for compensating them.

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