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Error study on Hefei Advanced Light Facility storage ring

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Hefei Advanced Light Facility (HALF) is a fourth-generation storage ring with an emittance lower than 100 pm·rad. To assess the real performance, in this paper, static error effects are studied and corrected for HALF. Simulation corrections of closed orbit, linear optics and transverse coupling are presented and the results show that the HALF lattice has reasonable robustness. The emittance growth caused by error effects is acceptable and the nonlinear dynamics performance with errors considered is also favorable.

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Footnotes

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Yes

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