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## Selected Advances in the Accelerator Design of the Future Circular Electron-Positron Collider

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In autumn 2023, the FCC Feasibility Study underwent a crucial “mid-term review”. We describe some accelerator performance risks for the proposed future circular electron-positron collider, FCC-ee, identified for, and during, the mid-term review. For the collider rings, these are the collective effects when running on the Z resonance –especially resistive wall, beam-beam, and electron cloud –, the beam lifetime, dynamic aperture, alignment tolerances, and beam-based alignment. For the booster, the primary concern is the vacuum system, with regard to impedance and effects of the residual gas. For the injector, the layout and the linac repetition rate are primary considerations. We discuss the various issues and report the planned mitigations.

### Footnotes

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