**CEPC collider ring lattice and error study for the high luminosity scheme**

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**Abstract**

This talk will concentrate on the bare lattice design, dynamic aperture optimization and the error correction for the high luminosity scheme of the CEPC collider ring.

After a brief introduction of the CEPC collider ring, the design principles of the high luminosity scheme for the interaction/arc/rf regions and ttar/Higgs/W/Z modes will be presented. Then the key-parameters and lattice design will be discussed including the optimization of compatible lattices. A comprehensive review of the dynamic aperture for the four modes will be presented.

Finally, the first result of the error correction for the Higgs mode will be shown including the closed orbit, dispersion, beta-beating, coupling correction and the corresponding emittance and dynamic aperture.