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Considerations of a round beam operation at PETRA IV

Sunday 1 June 2025 14:00 (2 hours)

Round beam operation is considered for the planned ultra-low emittance storage ring PETRA IV at DESY, Hamburg. With a natural emittance of 20 pm rad, we evaluate and discuss the advantages and challenges of sharing the emittance between transversal planes. The effect on single and coupled bunch instability thresholds, intra-beam scattering rates and Touschek lifetime of this operation mode are presented.

Footnotes

Paper preparation format

LaTeX

Region represented

Europe

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