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Dynamics of off-axis injection near the coupling resonance at PETRA IV

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The PETRA IV project will have a storage ring with an ultra-low natural emittance of 20 pm rad [1]. For an off-axis injection scheme with working points at the difference resonance it is important to assure the vertical excursion arising due to transversal coupling such, that injection efficiency is not compromised. In this contribution we present simulations results of an off-axis injection near the coupling resonance, which provides equal equilibrium emittances. Advantages and disadvantages of such a scheme are discussed.

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Footnotes

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