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Lattice-based simulations for the fast orbit feedback system of PETRA IV

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Modelling the fast orbit feedback (FOFB) system for the upcoming PETRA IV storage ring is in progress. The single-input-single-output (SISO) simulations provide an abstract insight into the FOFB system's performance and stability. Nevertheless, to investigate the orbit correctability in general and at spatial locations of interest, i.e. insertion devices, the simulations are extended to include the lattice model.
The multiple-input-multiple-output (MIMO) numerical simulations are being carried out in Python-based cpymad and Matlab-based Simulation Commissioning (SC) toolkit, and first results are presented.

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Footnotes

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Yes

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