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## Benchmark of AT vs MADX-PTC with exact integrators

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Recently exact Hamiltonian integrators have been added for drift, multipoles and dipoles in Accelerator Toolbox. This paper reports the tracking simulations benchmarks performed to compare with the results provided by MADX-PTC for four lattices: FODO, DBA, H7BA and FCC-HFD@Z. Tracking times are also reported for completeness. The agreement in 4D is complete while small discrepancies persist for 6D tracking. Fringe fields models were not included in the comparison and are known to be different for the two codes.

### Footnotes

### Funding Agency

### Paper preparation format

### Region represented

Europe

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