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Test Bench for the PETRA IV FOFB System Identification

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A fast orbit feedback system is currently being developed for the upcoming fourth generation of the PETRA IV light source at DESY Hamburg. The performance of the FOFB system depends mainly on the frequency response of the subsystems, i.e. the corrector magnets, power supplies, cables, and vacuum chamber. A test bench is being developed for measuring the field quality of FOFB corrector magnets and system identification of all subsystems in the kHz range. The requirements for the test bench and the initial ideas for the different types of measurement techniques are presented.

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