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## Preparatory Experimental Investigations in View of EEHG at the DELTA Storage Ring

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At DELTA, a 1.5-GeV electron storage ring operated by the TU Dortmund University, the seeding scheme CHG (coherent harmonic generation), the counterpart to HGHG (high-gain harmonic generation) without FEL gain, is used to provide ultrashort pulses in the femtosecond regime at harmonics of the seedlaser wavelength. To provide higher harmonics and thus shorter wavelengths, it is planned to upgrade the short-pulse facility to the EEHG (echo-enabled harmonic generation) scheme, which has yet not been implemented at any storage ring. To install the needed three undulators and two chicanes, about a quarter of the storage ring needs to be modified. The paper presents the layout of the envisaged EEHG facility and the demo project SPEED (Short-Pulse Emission via Echo at DELTA) where all components are realized in a single undulator.

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