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Application of three families of sextupoles at the KARA ring of Karlsruhe Institute of Technology

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A third family of sextupole magnets was recently in-corporated at the KIT storage ring KARA (Karlsruhe Research Accelerator). Computer studies of beam dynamics were performed with an objective to estimate benefits of operation with three sextupole families and possibility of new configuration of ring lattice to control slope and curvature of momentum compaction factor as function of energy offset of particles in a bunch. Adjustment of high order terms of alpha would allow to shorten bunch further down. Simulations of KARA ring model have been bench-marked on exist-ing experiments at Metrology Light Source (MLS) in Berlin (Germany) and SOLEIL (France).

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

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