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Status of the PETRA IV electromagnets

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The proposed PETRA IV electron storage ring, that will replace DESY's flagship synchrotron light source PETRA III, will feature a horizontal emittance as low as 20 pm-rad. It is based on a hybrid six-bend achromat lattice. In addition to the storage ring PETRA IV, DESY IV booster synchrotron and the corresponding transfer lines will be renewed. About 4000 magnets will be manufactured. Some of the magnets have demanding specifications due to high magnetic field in the poles. High packing density of lattice elements implies short distances between the magnets and results in magnetic cross-talk.

This contribution presents the details of the design and prototyping of the storage ring electromagnets.

Funding Agency

Footnotes

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Yes

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