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Slow orbit feedback correction using extra-windings at the SAGA-LS

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The periodic orbit change caused by the temperature fluctuation of the cooling water at the SAGA-LS storage ring was suppressed by the slow orbit feedback correction system using newly equipped extra-windings on 8 steering magnets.

In recent years, the amplitude growth of temperature fluctuation of the cooling water caused maximally 40 micrometer periodic orbit change at the SAGA-LS storage ring, which affected some synchrotron radiation experiments. We equipped new extra-windings on 8 steering magnets to compensate the periodic orbit change, since the existing steering magnets for global orbit correction did not provide sufficient resolution for this small orbit change. By applying the slow orbit feedback correction system using the extra-windings, the periodic orbit change was suppressed satisfactorily.

In this conference, we will also discuss about the mechanism by which the temperature fluctuation of the cooling water causes the orbit change at the SAGA-LS storage ring.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

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