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TPS fast orbit feedback upgrade

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Orbit feedback system of the Taiwan Photon Source (TPS) had been delivered since 2014. As long as more and more insertion devices installed, there are various wide-band disturbance produced. To further improve orbit stability, the fast orbit feedback (FOFB) system upgrade plan had been proposed in 2019. The upgrade plan includes both power supply controller revise and feedback computation rate increase from 10 kHz to 30 kHz. After upgrade, TPS fast orbit feedback bandwidth could be expanded from 250 Hz to 400 Hz in the vertical plane and from 200 Hz to 250 Hz in the horizontal plane. The integrated orbit power spectrum density could be effectively decreased around 20%.

Funding Agency

Footnotes

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Yes

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