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Development of bunch-by-bunch beam charge monitor for High Energy Photon Source

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A bunch-by-bunch beam monitor electronics for High Energy Photon Source (HEPS) was designed. The hardware of electronics consists of analog signal acquisition board and digital signal processing board. The software consists of underlying firmware and application software. The sampling frequencyis 500 MHz, and the bandwidth is 1 GHz. The electronics digitizes four analog signals from BPM probe, and ZYNQ chip was used to process the beam data and calculate the charge of each bunch. This system has been used in HEPS booster and will be used in HEPS storage ring.

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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