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Development of beam loss measurement electronics based on ZYNQ in RCS of CSNS-II

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The beam loss measurement system is an important beam measurement device in the CSNS accelerator, used to measure the beam loss signals along the entire accelerator to monitor the beam status. In CSNS, the beam loss measurement system uses NI PXIe-6358 acquisition card combined with self-developed front-end analog electronics. In the RCS of CSNS-II, a new beam loss electronics based on zynq development is planned to replace the existing electronics for beam loss signal acquisition. The CSNS-II ring beam loss measurement electronics based on zynq consists of independently developed high-voltage output modules, front-end analog boards, digital boards, as well as related driver programs, epics ioc software, etc, realizing functions such as signal acquisition, range control, data processing, epics publishing.

Footnotes

Funding Agency

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Yes

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