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Beam diagnostics for CSNS-II linac commission and operation

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The China Spallation Neutron Source (CSNS) has launched a power upgrade project this year. The beam power delivering to the target will improve from 100kW to 500kW by five times the beam current while keeping the output energy 1.6GeV unchanged. As the beam current increases, the space charge effect will be enhanced during the RCS injection and initial acceleration process. To suppress this effect, the linac of lattices will be upgraded by adjusting the current lattice and adding a superconducting linac behind the DTL. An extensive suite of diagnostics has been developed for the CSNS-II linac, which we will present in this paper.

Footnotes

Funding Agency

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Yes

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