

Energy Dispersion Measurement and Optimization of CSNS Linear Accelerator

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The beam energy dispersion in the injector of CSNS RCS is critical to the optimization of the RCS beam parameters. This paper introduces two different methods based on the wall current monitor (WCM) and wire scanner installed in the CSNS linear accelerator to measure the beam energy dispersion. The measurement errors are analyzed. The debuncher is used to adjust the energy dispersion of the beam and the center energy offset. The measurement results are in good agreement with the theoretical simulation values.

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