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Studies of transverse emittance growth in CSNS Linac DTL

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The transverse emittance at the exit of the China Spallation Neutron Source (CSNS) DTL is measured regularly every year. However, recently, the measured transverse emittance growth became larger than the his-torical data. It is also bigger than the simulated emittance. The process of measurement, data analysis and matching methods used are almost the same. Several factors con-tributed to the transverse emittance growth are analysed and presented in this paper. Compared to other factors, longitudinal mismatch contributes the most growth.

Footnotes

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