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## Comparison of design and production RF settings at SNS normal temperature linac

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The beam optics in the SNS normal conducting linac is analyzed for the 1.4 MW beam-on-target operation settings. The first section is a room temperature copper linac which include Medium Energy Beam Transport (MEBT) section with four re-bunching radio-frequency (RF) cavities, Drift Tube Linac (DTL), and Coupled Cavity Linac (CCL). The Radio Frequency (RF) cavities in this section accelerate H- beam to 185.5 MeV. For production runs the parameters of RF cavities in this section are chosen by using combination of models and empirical tuning providing low beam loss and low rate of discharge events inside the cavities. For some cavities the set parameters are significantly different from the design values. The paper discusses accuracy of these settings and discrepancies between design and real-life high-power production settings in the warm linac section of SNS.

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### Footnotes

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Yes

**Primary author:** SHISHLO, Andrei (Oak Ridge National Laboratory)

**Co-author:** PETERS, Charles (Oak Ridge National Laboratory)

**Presenter:** SHISHLO, Andrei (Oak Ridge National Laboratory)

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