Selected Aspects of the SNS-Linac Performance*

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The Spallation Neutron Source (SNS) linac is comprised of both normal- and super-conducting RF (SRF) structures. The normal-conducting section up to 185 MeV, consists of a Low Energy Beam Transfer (LEBT) line downstream of the H^- ion source leading to a 2.5-MeV RFQ, a Medium Energy Beam Transfer (MEBT) line, a 402.5-MHz DTL, followed by a 805-MHz CCL. The SRF structure accelerates the beam from a nominal energy of 185 MeV to 1000 MeV. The SRF section consists of two, a medium beta (β_g = 0.61), and a high beta (β_g = 0.81) sections. In this paper, we discuss a few selected aspects of the expected beam performance including loss patterns under error conditions.

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