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HPSim Simulation of the Highly Bunched WNR Beam at LANSCE

Thursday, 23 May 2024 16:00 (2 hours)

The linac at the Los Alamos Neutron Science Center (LANSCE) provides beam to five user facilities with various beam energy and timing patterns. While the other four facilities have the same 201.25-MHz micro-bunch structure created by a pre-buncher and main-buncher pair, the Weapon Neutron Research (WNR) requires significantly higher charge per micro-bunch. This is achieved via adding a low frequency buncher at 16.77 MHz to the Low Energy Beam Transport. Such highly bunched micro-bunches create several challenges in operation and remain a critical capability to maintain for the LANSCE Modernization Project. We will demonstrate the HPSim simulation of the WNR beam through the LANSCE linac as a tool to address these issues in the future.

Footnotes

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Region represented

North America

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