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Laser assisted charge exchange injection into the ring at the SNS

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A realistic laser assisted charge exchange (LACE) scheme for 1.3 GeV H⁻ beam injection into the Ring for Spallation Neutron Source is under development. The design considered here is supposed to demonstrate the possibility of H⁻ charge exchange injection into the SNS ring as an alternative to carbon foil stripping. A realistic stripping magnet design is considered as an integrated part of the injection area. Beam dynamics at the injection area are optimised. Laser assisted stripping, painting and beam dynamics of protons in the ring is simulated. Several alternative stripping schemes are evaluated.

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Footnotes

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Yes

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