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THE LANSCE HYDROGEN MODERATOR SYSTEM

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ABSTRACT

At the Los Alamos Neutron Scattering Centre (LANSCE), we have four moderators servicing twelve flight paths. Three of the moderators are light-water; the fourth moderator is liquid Hydrogen at 20K. We flow the liquid hydrogen to and from the moderator canister. The liquid hydrogen moderator system was installed in the summer of 1985, and has operated quite satisfactorily for 2500 hours at average proton beam currents up to 35 μA. We believe liquid hydrogen has potential as a true high-power, high-intensity cold moderator for spallation neutron sources operating with average proton current greater than 100 μA.

We describe the LANSCE liquid hydrogen moderator and planned improvements in our ICANS-IX paper "THE LANSCE TARGET SYSTEM", which may be found on page 177 of these proceedings.