

Microsymposium

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New science capabilities at current and proposed US Neutron sources

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Neutron scattering is an essential tool for scientific discovery and innovation, providing unique information about the structure and dynamics of materials. This talk will review the status of the Oak Ridge National Laboratory (ORNL), Spallation Neutron Source (SNS) Second Target Station (STS) project, a next generation neutron source optimized to provide high-brightness, cold neutron beam to neutron scattering instruments that can simultaneously access a large range of length or time scales. Several instrument concepts that provide revolutionary new science capabilities will be described. This talk will also briefly review the status of neutron scattering sources in the U.S., identifying near-term opportunities to add new science capabilities at existing facilities. These additions will provide new science capabilities to the U.S. research community, including access to a new total scattering instrument and time-of-flight imaging at the SNS, re-optimization of the cold neutron guide hall at the ORNL High Flux Isotope Reactor, and novel instrumentation at the National Institute of Standards and Technology Center for Neutron Research including a new reflectometer concept and implementation of a vSANS instrument.

Keywords: [neutron sources](#), [neutron scattering](#), [instrumentation](#)