

Opportunities for Fundamental Physics Research at the Oak Ridge Spallation Neutron Source. FRANZ PLASIL, Oak Ridge National Laboratory*, Oak Ridge, Tennessee 37831. The Spallation Neutron Source (SNS) under construction at ORNL will provide the nuclear physics community with outstanding opportunities for fundamental research. High-flux sources of cold and ultra-cold neutrons can be used to address important issues in the elucidation of quantum phenomenology, in the determination of fundamental constants, in the study of symmetry violation, and in astrophysics and cosmology. Facility requirements and possible experiments will be discussed. The SNS is also an excellent source of neutrinos and an active collaboration, ORLaND, is proposing to build a facility to make extensive neutrino measurements. ORLaND plans call for the construction of an underground bunker adjacent to the SNS target station designed to house one large neutrino detector and several smaller detectors. Studies will range from neutrino oscillations to measurements of various neutrino interaction cross sections.

*Managed by UT-Battelle, LLC, for the U.S. Department of Energy under contract DE-AC05-00OR22725.