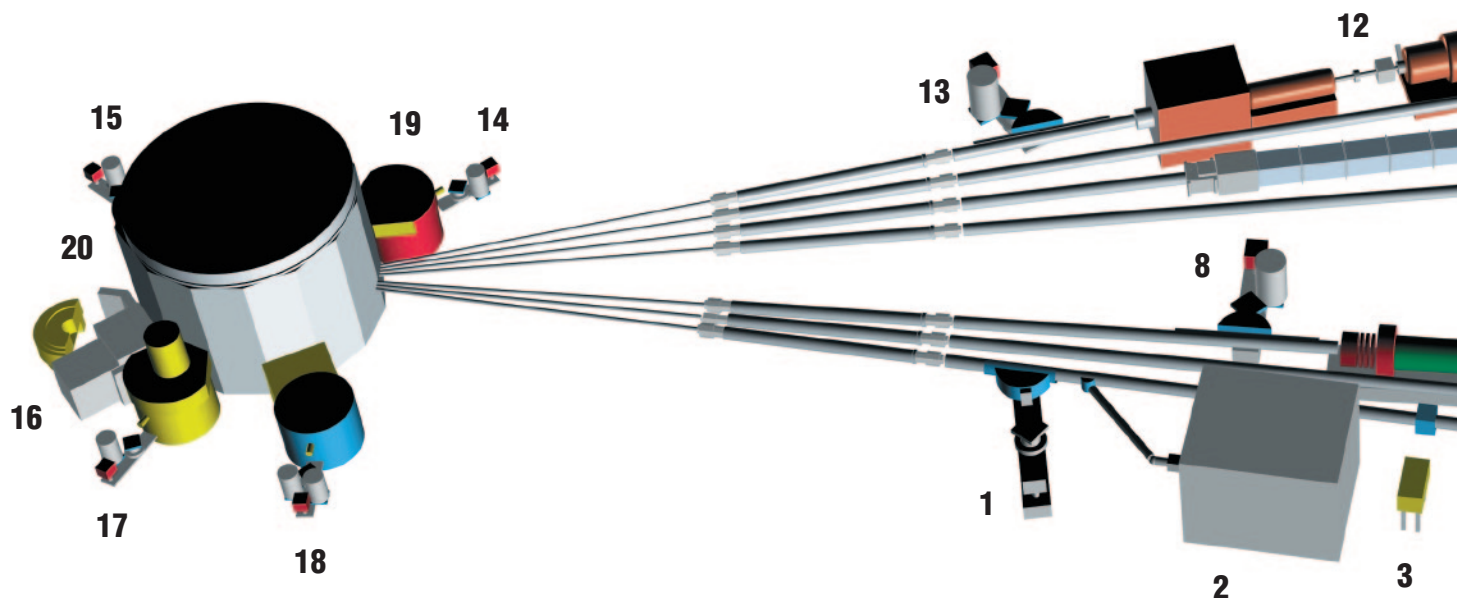


NIST CENTER FOR NEUTRON RESEARCH LAYOUT



1 Horizontal Sample Reflectometer

Horizontal surface of sample allows reflectivity measurements of free surfaces, liquid vapor interfaces, as well as polymer coatings.

2 Neutron Interferometry and Optics Station

Includes perfect silicon interferometer; vibration isolation system provides exceptional phase stability and fringe visibility.

3 Prompt Gamma Activation Analysis

Cold neutron fluxes allow detection limit for H of 1 μg to 10 μg . Focused beams are available for profiling.

4 NG-7 30 m SANS

Small Angle Neutron Scattering instrument for microstructure measurement sponsored by NIST, the ExxonMobil Research and Engineering Co., the University of Minnesota, and Texaco R&D.

5 Neutron Physics Station

A cold neutron beam 150 mm x 60 mm, available for fundamental neutron physics experiments.

6 Fermi Chopper TOF Spectrometer

A hybrid time-of-flight spectrometer for inelastic scattering, with wavelengths between 0.23 nm and 0.61 nm. The wavelength is chosen by a focusing pyrolytic graphite crystal, while the beam is pulsed by a simple Fermi chopper.

7 Spin Echo Spectrometer

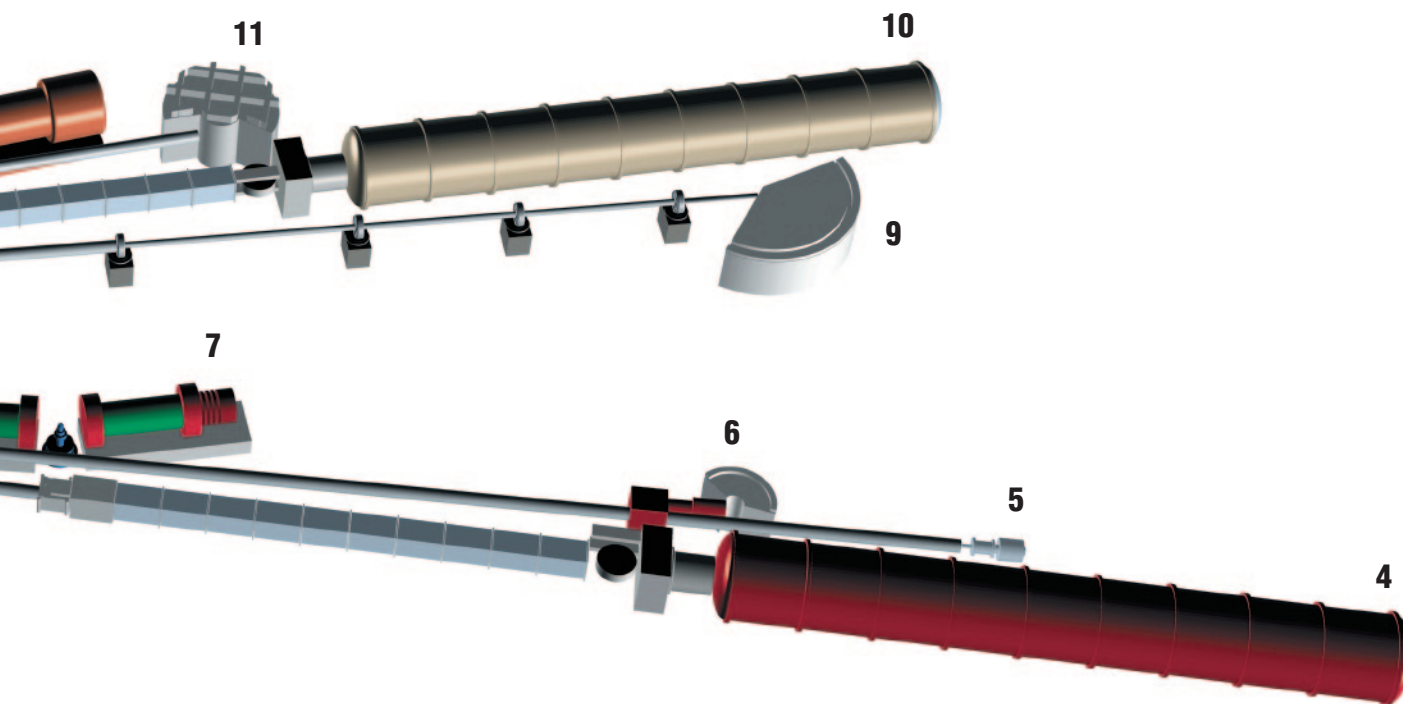
A neutron spin echo spectrometer offering neV energy resolution, based upon Jülich design, sponsored by NIST, Jülich and ExxonMobil.

8 SPINS Spectrometer

Spin Polarized Inelastic Scattering, a cold neutron triple axis spectrometer with spin polarization capabilities for high resolution studies, and position sensitive detector capability, sponsored by the National Science Foundation and NIST; part of Center for High Resolution Neutron Scattering (CHRNS).

9 Disk Chopper TOF Spectrometer

Versatile time-of-flight spectrometer, with beam pulsing and monochromatization effected by 7 disk choppers. Used for studies of dynamics in condensed matter, including macromolecular systems.



10 NG-3 30 m SANS

Instrument for microstructure measurement sponsored by the National Science Foundation and NIST; part of CHRNS.

11 Backscattering Spectrometer

High intensity, very high resolution backscattering spectrometer, with many innovative features, and energy resolution of approximately 1 μ eV.

12 8 m SANS

Instrument for polymer characterization, sponsored by Polymers Division.

13 Vertical Sample Reflectometer

Instrument for measuring subsurface structure with polarization analysis capability. Reflectivities down to 10^{-8} can be measured.

14 BT-8 Residual Stress Diffractometer

Diffractometer optimized for depth profiling of residual stress in large components.

15 BT-9 Triple Axis Spectrometer

Triple axis crystal spectrometer for measurements of excitations and structure.

16 BT-1 Powder Diffractometer

Powder diffractometer with 32 detectors; incident wavelengths of 0.208 nm, 0.154 nm, and 0.159 nm, with highest resolution of $\delta d/d = 8 \times 10^{-4}$.

17 BT-2 Triple Axis Spectrometer

Triple axis crystal spectrometer with polarized beam capability for measurement of magnetic dynamics and structure.

18 BT-4 Filter Spectrometer

A triple axis crystal spectrometer with a Be or Be/Graphite filter analyzer option for chemical spectroscopy.

19 Cold Neutron Depth Profiling

A station for quantitative profiling of subsurface impurities and coatings, based on neutron capture and emission of a charged particle.

20 Thermal Column

A very well-thermalized beam of neutrons used for radiography, tomography, dosimetry, and other experiments.