A Cold Neutron Depth Profiling instrument (not shown) for quantitative profiling of subsurface impurities currently at this site will be moved to another position. Shown is MACS, a cold neutron Triple Axis Crystal Spectrometer under construction with double focusing monochromator and multiple crystal analyzer/detectors that can be flexibly configured for several energies simultaneously or for high throughput at one energy.

2 BT-6 (temporary location) Neutron Imaging Facility for imaging hydrogenous matter in large components such as water in fuel cells or lubricants in engines.

3 BT-7 Triple Axis Crystal Spectrometer with fixed incident energy for measurements of excitations and structure.

4 BT-8 Residual Stress Diffractometer optimized for depth profiling of residual stress in large components.

5 BT-9 Triple Axis Crystal Spectrometer for measurements of excitations and structure.

6 Thermal Column a very well-thermalized beam of neutrons used for radiography, tomography, dosimetry and other experiments.

7 BT-1 Powder Diffractometer with 32 detectors; incident wavelengths of 0.208 nm, 0.154 nm, and 0.159 nm, with highest resolution of δθ/θ = 8 x 10⁻⁴.

8 BT-2 Triple Axis Crystal Spectrometer with polarized beam capability for measurement of magnetic dynamics and structure.

9 BT-4 Filter Analyzer Neutron Spectrometer with cooled Be/Graphite filter analyzer for chemical spectroscopy.

10 BT-5 Perfect Crystal Diffractometer SANS small angle neutron scattering instrument for microstructure on the 10⁴ nm length scale, sponsored by the National Science Foundation and NIST, part of the Center for High Resolution Neutron Scattering (CHRNS).

11 NG-7 Horizontal Sample Reflectometer allows reflectivity measurements of free surfaces, liquid vapor interfaces, as well as polymer coatings.

12 Neutron Interferometry and Optics Station with perfect silicon interferometer; vibration isolation system provides exceptional phase stability and fringe visibility.

13 Spin Polarized Triple Axis Spectrometer (SPINS) using cold neutrons with position sensitive detector capability for high-resolution studies — part of CHRNS.
14 Spin Echo Spectrometer
offering neV energy resolution,
based upon Jülich design,
sponsored by NIST, Jülich and
ExxonMobil — part of CHRNS.

15 Prompt Gamma Activation
Analysis cold neutron fluxes
allow detection limit for H of 1 µg
to 10 µg. Focused beams are
available for profiling.

16 NG-7 30 m SANS for microstruc-
ture measurements sponsored by
NIST, ExxonMobil, and the
University of Minnesota.

17 Neutron Physics Station
offering three cold neutron beams
having wavelengths of 0.5 nm,
0.9 nm, and “white” that are
available for fundamental neutron
physics experiments.

18 Fermi Chopper hybrid time-of-
flight (TOF) Spectrometer for
inelastic scattering with selected
incident wavelengths between
0.23 nm and 0.61 nm.

19 Disk Chopper TOF Spectrom-
eter a 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 — part of CHRNS.

20 NG-3 30 m SANS for microstruc-
ture measurements sponsored by
the National Science Foundation
and NIST — part of CHRNS.

21 Backscattering Spectrometer
high intensity inelastic scattering
instrument with energy resolution
< 1 µeV, for studies of motion in
molecular and biological systems
— part of CHRNS.

22 NG-1 10 m SANS (under
construction.) It replaces the
current 8 m SANS and will be
made available for CHRNS use
along with use by the NIST
Polymers Division.

23 Vertical Sample Reflectometer
instrument with polarization
analysis capability for measuring
reflectivities down to 10⁻⁸.

24 Advanced Neutron
Diffractometer / Reflectometer
(AND/R), a vertical sample
reflectometer with polarization
analysis and off-specular reflection
capabilities for measuring
reflectivities down to 10⁻⁸. It is part
of the Cold Neutrons for Biology
and Technology program
committed to studies of biological
membrane systems.