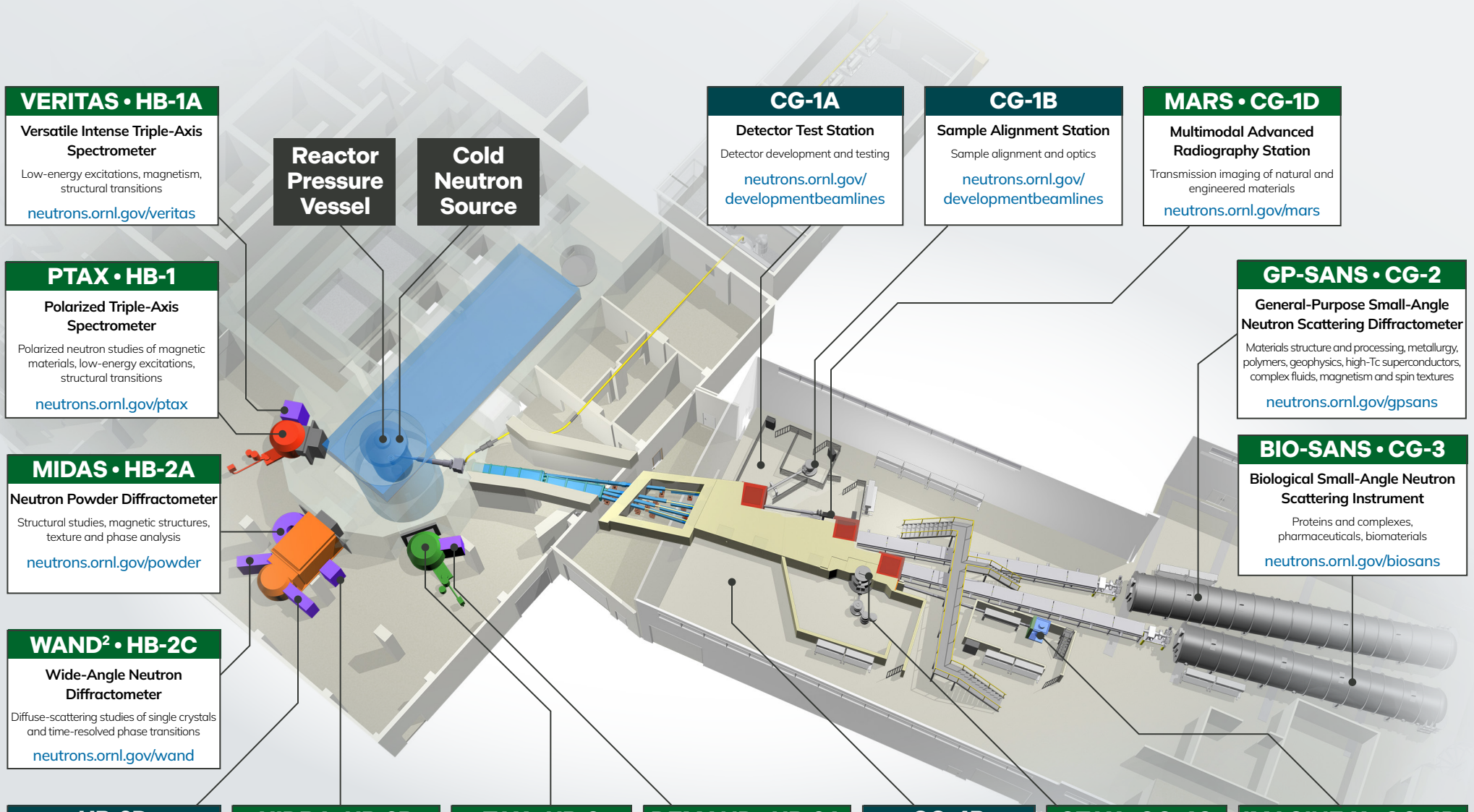
OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR

The United States' highest flux reactor-based neutron source

neutrons.ornl.gov



VERITAS • HB-1A

Versatile Intense Triple-Axis Spectrometer

Low-energy excitations, magnetism, structural transitions

neutrons.ornl.gov/veritas

PTAX • HB-1

Polarized Triple-Axis Spectrometer

Polarized neutron studies of magnetic materials, low-energy excitations, structural transitions

neutrons.ornl.gov/ptax

MIDAS • HB-2A

Neutron Powder Diffractometer

Structural studies, magnetic structures, texture and phase analysis

neutrons.ornl.gov/powder

WAND² • HB-2C

Wide-Angle Neutron Diffractometer

Diffuse-scattering studies of single crystals and time-resolved phase transitions

neutrons.ornl.gov/wand

CG-1A

Detector Test Station

Detector development and testing

neutrons.ornl.gov/developmentbeamlines

CG-1B

Sample Alignment Station

Sample alignment and optics

neutrons.ornl.gov/developmentbeamlines

MARS • CG-1D

Multimodal Advanced Radiography Station

Transmission imaging of natural and engineered materials

neutrons.ornl.gov/mars

GP-SANS • CG-2

General-Purpose Small-Angle Neutron Scattering Diffractometer

Materials structure and processing, metallurgy, polymers, geophysics, high-Tc superconductors, complex fluids, magnetism and spin textures

neutrons.ornl.gov/gpsans

BIO-SANS • CG-3

Biological Small-Angle Neutron Scattering Instrument

Proteins and complexes, pharmaceuticals, biomaterials

neutrons.ornl.gov/biosans

HB-2D

Polarized Neutron Development Station

Development of new components and techniques for utilizing polarized neutrons

neutrons.ornl.gov/developmentbeamlines

HIDRA• HB-2B

High Intensity Diffractometer for Residual stress Analysis

Strain, texture, and phase mapping in engineering materials

neutrons.ornl.gov/hidra

TAX • HB-3

Triple-Axis Spectrometer

Medium- and high-resolution inelastic scattering at thermal energies

neutrons.ornl.gov/tax

DEMAND • HB-3A

Dimensional Extreme Magnetic Neutron Diffractometer

Small unit-cell nuclear & magnetic structural studies

neutrons.ornl.gov/demand

CG-4B

Cold Neutron Polarization Development Beamline

Development of larmor precession techniques

neutrons.ornl.gov/developmentbeamlines

CTAX • CG-4C

Cold Neutron Triple-Axis Spectrometer

High-resolution inelastic scattering at cold neutron energies

neutrons.ornl.gov/ctax

IMAGINE-X • CG-4D

Laue Diffractometer

Atomic resolution structures in biology, chemistry and complex materials

neutrons.ornl.gov/imagine

Operating instrument in user program

Operating development beamline

The High Flux Isotope Reactor is a facility of Oak Ridge National Laboratory, managed by UT-Battelle LLC for the US Department of Energy.