

INSTRUMENT

CG-4C

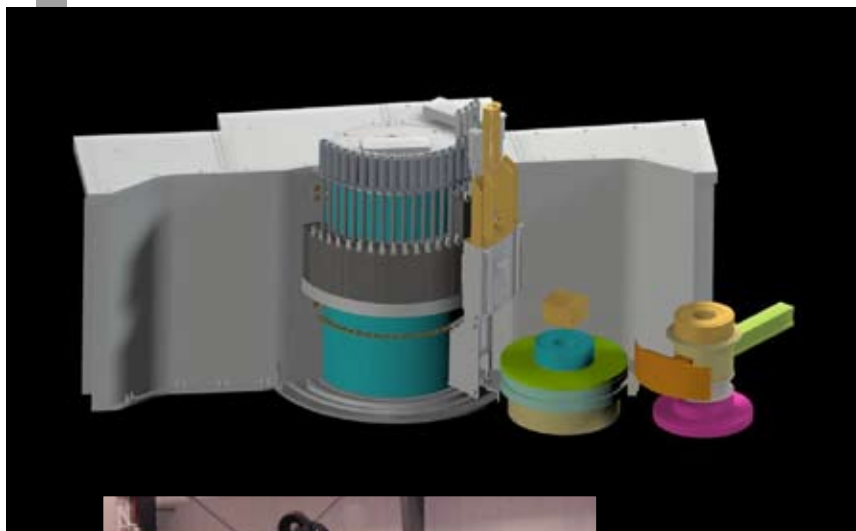
BEAM LINE HIGH FLUX ISOTOPE REACTOR



US/JAPAN COLD NEUTRON TRIPLE-AXIS SPECTROMETER

The US/Japan Cold Neutron Triple-Axis Spectrometer is a conventional triple-axis spectrometer with variable incident energy and variable monochromator-sample and sample-analyzer distances. The cold guide 4 bender and guide hall shielding reduce background levels at CG-4C, and the 15-cm-tall guide profile is well exploited by CG-4C's vertically focusing monochromator (PG 002). To enhance accommodation

of strong magnetic fields at the sample position and to simplify future polarization analysis, the amount of ferromagnetic material has been minimized in the construction of this instrument.



CG-4C is a collaboration of the Neutron Scattering Science Division at Oak Ridge National Laboratory, the Neutron Scattering Group at Brookhaven National Laboratory, and the Neutron Science Laboratory, Institute for Solid State Physics, at the University of Tokyo.

SPECIFICATIONS

Incident energy range (PG 002)	2–20 meV
Final energy range (PG 002)	>2.8 meV
Sample scatter angular range	Geometry dependent (<160°)
Collimation before monochromator	Guide dependent (40' at 2 meV, 20' at 20 meV)
Collimation after monochromator	10', 20', 40', 80'

Status:
To be commissioned in 2010

APPLICATIONS

- High-resolution measurement of low-energy excitations with high signal-to-noise ratios due to the low background
- Studies of magnetic phenomena, exploiting the energy range that matches achievable applied field at sample

FOR MORE INFORMATION, CONTACT

Principal Investigator: Steve Shapiro, shapiro@bnl.gov, 631.344.3822

Principal Investigator: Hideki Yoshizawa, yoshi@issp.u-tokyo.ac.jp

Instrument Scientist: Barry Winn, bwinn@bnl.gov, 865.241.0092

http://neutrons.ornl.gov/hfir_instrument_systems/CG-4C.shtml

