

KENS Instruments at J-PARC/MLF

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Neutron Science Division (KENS) of KEK owns 5 instruments at J-PARC/MLF for the inter-university research cooperation. The instruments are as follows:

- BL05: Neutron Optics and Fundamental Physics (NOP)
The incident beam line is divided into 3 branches; polarized-beam branch, unpolarized-beam branch, and low-divergence-beam branch. Through precise measurements of neutron decay, scattering, interference, and diffraction, new phenomena beyond the standard theory will be investigated.
- BL08: Super High Resolution Powder Diffractometer (S-HRPD)
S-HRPD is a neutron powder diffractometer with the world best resolution by about 100 m total flight path. Complicated and hierarchical structures of newly developed materials will be determined.
- BL12: High Resolution Chopper Spectrometer (HRC)
Inelastic neutron scattering at neutron energy range from 1 meV to 2 eV will be observed with an energy resolution of 1 %. Phonon vibration and dispersion, elemental spin and orbital excitation in magnetic systems, etc. will be investigated.
- BL16: High-Performance Neutron Reflectometer with a Horizontal Sample Geometry (ARISA-II)
Incident neutron beam comes downward from the neutron moderator, and measurements could be done with samples kept horizontally. Structure and dynamics of surface and interface of materials are investigated.
- BL21: High Intensity Total Diffractometer (NOVA)
This instrument covers very wide-Q range with much amount of neutron detectors. The main purpose of this diffractometer is to contribute the development of hydrogen storage materials.