

Group Report

BL01 4SEASONS - August 2012

Beamline Update

Instrument upgrade

- A new, 500 L/min scroll pump has been installed as a backing pump for the turbo molecular pump (TMP) to augment the screw-type roughing pump that had been used for this purpose also until now. Though the pumping speed of the screw pump (630 m³/h) was sufficiently high for this role, it needed to operate constantly whenever the vacuum scattering chamber was evacuated. In the new configuration, the large screw pump can be turned off once the TMP is running. It is expected that this mode of operation will extend the lifetime of the expensive screw pump.
- A rotary encoder has been mounted on the cryostat rotation stage. With the encoder in place, the absolute rotation angle of the sample can be read easily. Until now, the angle-of-rotation had to be calculated from the number of pulses that had been sent to the stepping motor — a method that is error-prone in the case of lost pulses or a stalled motor. Though this has not been a problem in the past, the potential for error is now removed.

Research activities

- Group BL01 members, Sungdae Ji and Kazuhiko Ikeuchi, made poster presentations entitled “Strong geometrical frustration in Fe oxychalcogenide” and “Anisotropic spin excitations in spin-Peierls CuGeO₃”, respectively, at the 19th International Conference on Magnetism 2012 (ICM2012) which was held in Pusan, South Korea, between 8-13 July 2012.
- Ryoichi Kajimoto gave a talk entitled “Present status of neutron spectrometers at MLF, J-PARC” at the ISSP Workshop on triple-axis spectrometers and polarized neutron scattering which was held at the Institute for Solid State Physics, University of Tokyo, on 23-24 July 2012.