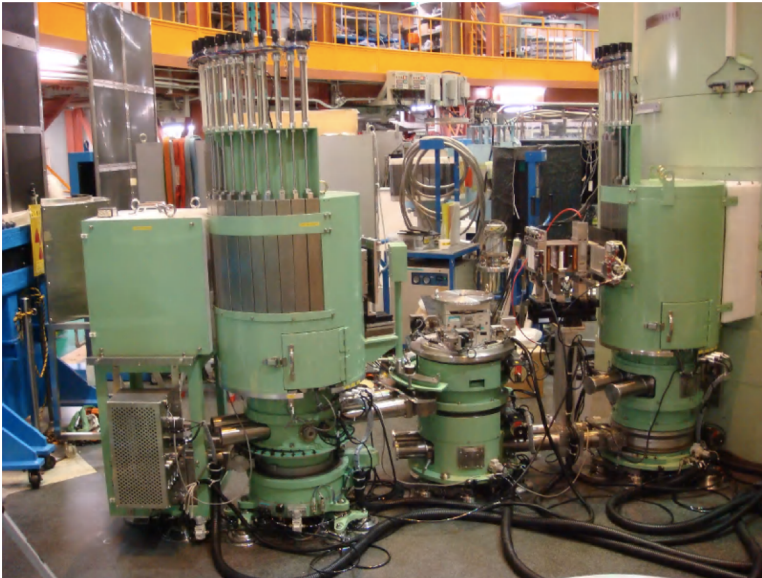


Tohoku-University Polarization Analysis Neutron Spectrometer: TOPAN

Type B: ver. 2023

TOPAN is a conventional triple-axis neutron spectrometer to promote materials research using high-intensity neutrons.



available in TOPAN

- conventional neutron-scattering experiments
e.g., phonon, magnon, electronic excitations, etc.
- Uranium compounds
- devices under planning/commissioning
 - polarized neutron Heusler/³He SEOP
 - double monochromator for high-energy resolution
 - Cu monochromator for higher-energy neutron experiments
 - special SE e.g., high pressure (< 5 GPa)

Monochromator	PG(002) ($\eta_M = 40' \sim 60'$) double-focused Cu (111)/(220) (under consideration)
Analyzer	PG(002) ($\eta_A = 40' \sim 60'$) double-focused Heusler V-focus (under consideration)
Collimations	1st: 15', 30', blank 2nd ~ 4th: 15', 30', 60', 100', blank
Filter option	PG x2 (before/after sample) sapphire (just before 2nd. col.) in-situ ³ He SEOP (under consideration)
Angle range	$27^\circ \leq 2\theta_M \leq 52^\circ$ $5^\circ(\text{beam stopper}) \leq 2\theta_S \leq 121^\circ$ $-30^\circ \leq \theta_S \leq 230^\circ$ $0^\circ \leq 2\theta_A \leq 80^\circ$
Beam size	40mm-w x 60mm-h (divergence/receiving slits)
Detector	³ He-type tube detector $\phi 2'' \times 100\text{mm}$
Sample environment	closed-cycle refrigerator (10 K ~ 300 K)
Software	FILMAN-J / LabVIEW

- **GIMRT support*** (e.g., short/long-term visit)
- trial use & measurement service
- R&D, follow-up of a long-term project

*Global Institute for Materials Research Tohoku
<https://gimrt.appli.imr.tohoku.ac.jp/login>

