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Towards Polarization Analysis for TOPAS

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The thermal time-of-flight spectrometer TOPAS has been constructed by the Jülich Centre for Neutron scattering (JCNS) and is now awaiting neutrons in the neutron guide hall east at the Heinz Maier-Leibnitz Zentrum (MLZ). The instrument design provides wide-angle polarization analysis (PA) for the thermal energy range. While recently other thermal time-of-flight spectrometers with PA have been taken into operation, TOPAS relies on novel and unique polarization devices. To gain experience, individual components went through thorough testing on other instruments. We will present tests of the TOPAS polarizer on POLI, which features continuous spin-exchange optical pumping (SEOP). Already in this test, the performance for neutron energy up to beyond 100 meV was excellent and led to development of dedicated equipment for POLI. Tests of the wide-angle XYZ analysis have been performed during the last year of operation of the NEAT spectrometer at the HZB. Finally, we report on the progress with the installation of the instrument in the guide hall east.

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