Contribution ID: **405**   Type: **Poster**

3He polarization for JCNS instrumentation

Tuesday, 18 September 2018 17:15 (15 minutes)

An in-situ polarization analyzer has been in operation for the MARIA magnetic reflectometer for each reactor cycle for over 5 years . Here it provides a continual polarization and a wide angle of ±6° for a cold neutron beam that is fully decoupled for the sample environment conditions and magnetic field. This device has been used as the basis for additional polarizer devices, using what has been learned to develop improved devices. A polarizer for thermal-energy beams, such as on the planned TOPAS spectrometer, has been completed and tested on POLI for 0.89 Å neutrons. Similarly a very compact device based on a 50% reduced scale of the MARIA polarizer is in development for KWS1. The magnetic cavity of this device, which is only 39cm long is completed and has been used for experiments with off-line polarized 3He cells in conjunction with a newly procured 3T, longitudinal or horizontal, sample magnet providing good magnetic performance in both field configurations. Finally a project is continuing to make a very high angular coverage, ±17°, device based on a compensated solenoid geometry for KWS2. The status of the various projects and device performance will be presented.

Primary author: BABCOCK, Earl

Co-authors: SALHI, zahir (JCNS); FEOKTYSTOV, Artem; MATTAUCH, Stefan (FZ-Juelich); RADULESCU, Aurel (Jülich Centre for Neutron Science - Outstation at MLZ); Mr BINGOL, Kendal (JCNS); OSSOVYI, Vladimir (JCNS); Mr STARINGER, Simon (Jülich Centre for Neutron Science); VOIGT, Jörg (Forschungszentrum Jülich); BUSS-MANN, Klauss (FZ-Juelich); HEYNEM, Achim (FZ-Juelich); KÄMMERLING, Hans (FZ-Juelich); PISTEL, Patrick (FZ-Juelich); IOFFE, Alexander (JCNS)

Presenter: BABCOCK, Earl

Session Classification: Poster session 2

Track Classification: P1 Instrumentation and methods