Title (WP#)	Imaging (WP18)
Responsible	Nikolay Kardjilov (HZB)
Period	2013.08.01 - 2014.01.31.
Activity type	**Coord / RTD**
Tasks	**18.1.** Nano- and micro structures resolved dark-field imaging with grating interferometers; *State of the task:* ***ongoing*** **18.2.** Direct high-resolution neutron imaging; *State of the task:* ***ongoing*** **18.3.** Energy-selective neutron imaging; *State of the task:* ***ongoing*** **18.4**. SANS 3D: vectorial magnetic imaging of nano-particles with a resolution of 1nm to 100 nm; *State of the task:* ***ongoing*** **18.5.** Precession techniques for imaging magnetic structures in thin film systems; *State of the task:* ***ongoing*** **18.6.** Tomographic imaging of magnetic structures at the µm scale; *State of the task:* ***ongoing***
Deviations from Description of work (Annex 1) & corrective action	Due to the extended shuttdown of the neutron sources BER2 (Berlin) and FRM2 (Munich) some delays in deliverables D18.5, D18.8, D18.17 are possible. Expected deliverable dates are given below.

Deliverable	Due date	Expected/ Achieved Date
D18.1	36	36
D18.2	36	36
D18.3	48	48
D18.4	18	18 (achieved)
D18.5	36	42 (postponed)
D18.6	48	48
D18.7	18	18 (achieved)
D18.8	36	42 (postponed)
D18.9	48	48
D18.10	18	18 (achieved)
D18.11	36	36
D18.12	48	48
D18.13	18	18 (achieved)
D18.14	36	36
D18.15	48	48
D18.16	18	18 (achieved)
D18.17	36	42 (postponed)
D18.18	48	48
D18.19	48	48

	Beneficiary	**A**	**B**	**C**
A) Total Person Months (PM) allocated to project (including facility contribution) per	**MTA EK (former II HAS)**	**11**	**5**	**1.25** **(for months 19 – 25)**

contributing partner (Annex 1, Part A, p.96) **B) Total staff effort charged to project per contributing partner** (Annex 1, Part B p.32) **C) Staff effort charged to project in period (Month n – n+6)**	**CEA P7** **NPI** **TUD** **TUM** **HZB** **PSI** **FZJ** **STFC**	**16** **4** **10** **35** **38** **34** **28** **2**	**8** **1** **3.4** **18**	**2** **1** **0.5**
Meetings/Conferences/Workshops attended (financed by NMI3)	Internal meetings (...participants,organising beneficiary etc) no Any external conferences attended? NINMACH 2013 1st International Conference on Neutron Imaging and Neutron Methods in Archaeology and Cultural Heritage Research, Sept. 9-12, 2013, Garching International Workshop on Neutron Optics and Detectors (NOP&D 2013) (conference partially supported by NMI3) Advances in Polarized Neutron Reflectivity Bochum July 2013 Business Meeting of the Neutron Imaging JRA (11 July Edinburg)			

Papers:

1. P. Mikula, M. Vrána, J. Šaroun, V. Em, B.S. Seong, *Investigation of multiple Bragg reflections at a constant neutron wavelength and their possible separation*, July, Journal of Physics: Conference Series **340** (2012) 012015 doi:10.1088/1742-6596/340/1/012015

2. P. Mikula, M. Vrána, J. Šaroun, V. Davydov, V. Em and B.S. Seong, *Experimental studies of dispersive double reflections excited in cylindrically bent perfect-crystal slabs at a constant neutron wavelength, J. Appl. Cryst.* **45**, (2012) 98-105.

3. P. Mikula, M. Furusaka, K. Ohkubo and J. Saroun, *TOF studies of multiple Bragg reflections in cylindrically bent prefect crystals*, J. Appl. Cryst. **45** (2012) 1248-1253.

4. P. Mikula, M. Vrána, J. Šaroun, B.S. Seong, C. Woo a V. Em, *Neutron diffraction studies of dispersive double-crystal setting containing a fully asymmetric diffraction (FAD) geometry of a bent perfect crystal (BPC) with the output beam expansion (OBE),* In Proc. of the International Workshop on Neutron Optics and Detectors (NOP&D 2013), 2-5 July 2013, Munich (Ismaning), Germany; IOP: Conference series, accepted for publication.

5. P. Mikula, M. Vrána, J. Šaroun, J. Pilch, B.S. Seong, W. Woo and V. Em, *Neutron diffraction studies of double crystal (+n,-m) setting containing a fully asymmetric diffraction geometry (FAD) of a bent perfect crystal (BPC) with the output beam expansion (OBE),* J. Appl. Cryst. **47** (2014) Part 2, 599-605.

6. P. Mikula, M. Vrána, *Observation of Edge Refraction on a Coventional Neutron Diffractometer Employing Dispersive Double-Crystal Monochromator* , In Proc. of the Int. Conf. WCNR-10, Grindelwald, Switzerland, 5-10 October 2014; Physical Procedia, 2015, submitted.

7. P. Mikula and M. Furusaka, *TOF studies of multiple Bragg reflections in cylindrically bent prefect crystals at small pulsed neutron source*, In proc. of Int Conf. ICANS XXI, 29th Sept. - 3rd Oct. 2014, Ibaraki, Japan, submitted.