



Minutes of Meeting

Work package 8 / INSTRUMENTATION - E-TOOLS

Work package leader : Peter Willendrup / DTU

Venue : Department of Engineering, University of Parma

Date : June 4th 2018

Agenda :

- 1) Short status reports on incoming deliverables
 - a. **8.3 Benchmarking of PHITS / Geant4 “guide + shielding” study using McStas-MCNP (MCPL), Miguel Magan** ESS Bilbao
 - b. **8.4 Report / benchmarks from BOA experiment, Erik Knudsen** DTU + Esben Klinkby DTU + Emmanouela Rantsiou PSI
 - c. **8.6 Report on heavy concrete developments, Emmanouela Rantsiou** PSI - in place of Uwe Filges?
 - d. **8.7 Report on Delft activities: Compact Instrumentation for Larmor Labelling applications at the ESS, Jeroen Plomp** TUDelft
 - e. **8.9 Report on improved description of materials for high-energy neutron transport, Peter Willendrup** DTU in place of Emmanuel Farhi ILL
- 2) A quick look at presentation from MTR. 1)+2) should together form our WP presentation on Wednesday morning
- 3) Tour-de-table
- 4) AOB

List of participants

Name	email	Present (Y/N) & SIGNATURE
Peter Willendrup (PW)	pkwi@fysik.dtu.dk	Y – see attachment/photo
Erik Bergbäck Knudsen (EBK1)	erkn@fysik.dtu.dk	Y – see attachment/photo
Esben Bryndt Klinkby (EBK2)	esbe@dtu.dk	Y – see attachment/photo
Jeroen Plomp (JP)	j.plomp@tudelft.nl	Y – see attachment/photo
Eszter Dian (ED)	dian.eszter@energia.mta.hu	Y – see attachment/photo
Emmanouela Rantsiou (ER)	Emmanouela.Rantsiou@psi.ch	Y – see attachment/photo
Jakob Garde (JG)	jaga@fysik.dtu.dk	Y – see attachment/photo
Kristiaan Temst (KT)	kristiaan.temst@kuleuven.be	Y – see attachment
Miguel Magán (MM)	mmagan@essbilbao.org	Y – had to quickly leave, and WP manager forgot about signatures until Miguel had left



Photo of most of the WP meeting participants

After a short welcome, we progressed according to the agenda.

Short status reports on incoming deliverables

- For Deliverable 8.3 (which has been reformulated to *Benchmarking of PHITS / Geant4 "guide + shielding" study using McStas-MCNP (MCPL)*) **MM** presented slides outlining the benchmarking that will be done this summer. Focus was on the challenges in simultaneous transport of thermalised and "warmer" neutrons, and a way forward seems to be to split the problem into a "low energy" McStas transport and an MCNP-based "high energy" transport. Slides attached.

- **Action item: MM will visit PW, EBK1 and EBK2 in late summer/early fall for ~1 week to finalise the work and report.**

- For Deliverable 8.4 **EBK1** reported from an experiment performed together with EBK2 and ER at BOA, PSI to allow experimental benchmarking of the developed McStas-MCNP and MCPL solution. Work is in good progress and shows good qualitative agreement in the experimental and simulated data. Slides attached.

- **Action item: Finalize deliverable report**

- For Deliverable 8.6 **ER** reported for Uwe Filges on PSI developments of heavy concrete shielding, background measurement and development of the Bonner Sphere Spectrometer that now covers neutron energies up to 6 GeV. Slides attached.

- **Action item: Finalize deliverable report**



Minutes of Meeting

- For Deliverable 8.7 **JP** Reported on Delft activities within Compact Instrumentation for Larmor Labelling applications at the ESS, covering both the work carried out by Post Doc Andrei Kusmin for spectrometers and JP's own work for diffractometers. Slides attached.

- **Action item: Finalize deliverable report**

- For Deliverable 8.9 **PW** reported for Emmanuel Farhi on improved description of materials for high-energy neutron transport. In the already delivered report an algorithm for "expanding" 2-dimensional $S(|q|, w)$ measurements to full 4-dimensional $S(\mathbf{q}, w)$ by means of a supplemental diffraction dataset or MD/DFT calculation on the structure. Slides attached.

- Furhter **ED** reported (no slides) on the progress of material characterisation and radiation resistance carried out at MTA-EK for Task 8.2.

Afterwards the WP took a look at the slides from the Midterm Review (2017) and selected material to be presented at the GA from those slides plus what was presented during the WP meeting.

Decisions taken

Tasks / responsables

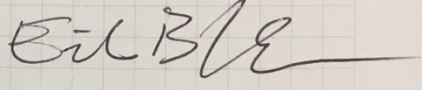
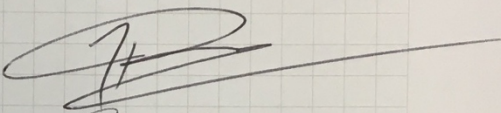
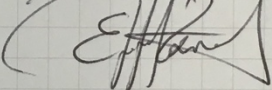
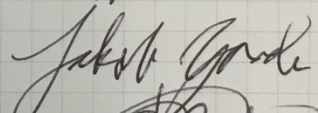
Task # / Sub task #	Responsible person / entity
Task 8.1 / D8.3	Miguel Magan (MM) and Peter Willendrup (PW) will arrange a visit to DK in the later summer / fall to finalise deliverable report.
Task 8.1 / D8.4	Erik Knudsen (EBK1) will finalise D8.4 ASAP
Task 8.2 / D8.6	Uwe Filges (UF) will finalise D8.6 ASAP
Task 8.3 / D8.7	Jeroen Plomp (JP) will finalise D8.7 ASAP

Deliverables (due in this period)

Deliverable #	Status
D8.3	Delays from staff availability, reformulated scope -> To be finalised summer/autumn 2018
D8.4	Delayed due to availability of experimental facilities. Final report will be circulated in July.
D8.6	Work done, final analysis in progress. Final report will be circulated in July.
D8.7	Draft report received, final version will be circulated in July

4/6 '18

SINE 2020 GA @ PARMA
WP 8 Meeting

<u>Name :</u>	<u>Affiliation</u>	<u>Signature</u>
Peter Willebrandt	DTU	
ERIK BERGBACK KNUDSEN	DTU	
Esben Bryndt Klinkby	DTU	
Jeroen Plomp	TUD	
Eszter Dian	MAS CER	
Emmanuela Rantsiou	PSI	
Jakob Garde	DTU	
KRISTIAAN TEMST	KULEVEN	