

**Minutes of the Third Ancient Charm APMC Meeting,  
Budapest, Hungary  
19<sup>th</sup> & 20<sup>th</sup> January 2007**

AGENDA

**Friday 19<sup>th</sup> January**

8:00 Shuttle bus departs to KFKI  
9:00 Welcome and Approval of Agenda  
9.15 Administration: reporting etc (incl WP9, WP10)  
10:00 *Morning Coffee*  
10.30 WP2: imaging with thermal neutrons  
12:00 *Lunch*  
13.00 Visit to neutron facilities  
14.30 WP5: hardware simulations  
15.30 *Refreshments*  
16:00 WP6: analysis software  
17.15 End of day one  
17:30 Shuttle bus departs to hotel  
19:15 *Dinner*

**Saturday 20<sup>th</sup> January**

8:00 Shuttle bus depart to HNM  
9:00 WP3&4: imaging with epithermal neutrons  
10:30 *Coffee and Group Photograph*  
11:00 WP1&8: cultural heritage objects  
12:30 *Lunch*  
13:30 WP7: image reconstruction  
15:00 Final Administrative Matters  
Date and venue of Next Meeting  
AOB  
15:30 Coffee  
16:00 Visit to Museum  
18:00 End of Meeting

Present: G Gorini, UNIMIB  
C Andreani, UNITOV  
K Biro, HNM  
T Belgya, IKI HAS  
A Kirfel, UNIBONN  
T Materna *representing* J Jolie, UNIKOELN  
P Schillebeeckx, EC-JRC-IRMM  
H Kamermans, UNILEIDEN  
V Bom *representing* C Van Eijk, TUDELFT  
W Kockelmann *representing* P Radaelli, CCLRC

Other attendants:

R Cattaneo, E Perelli Cippo, M Tardocchi (UNIMIB)  
M P de Pascale, G Festa, A Filabozzi, (UNITOV)  
Z Hajnal, S Farkas-Szoke, E Durkovic, K Dusz (HNM)  
Z Kasztovszky, Z Kis (IKI HAS)  
P Kudejova, R Schulze (UNIKOELN)  
A Borella (EC-JRC-IRMM)  
M Clarjjs (TUDELFT)  
E Schooneveld, D Visser (CCLRC)

**Friday 19<sup>th</sup> January**

1. The meeting opened at 9:00 hrs with a welcome from Prof. L. Wojnarovits, Director of IKI HAS.
2. G Gorini dealt with the administration matters of the Ancient Charm project. Minutes from the previous meeting were approved.

A copy of the Guidelines "Project reporting on FP6" and Guidelines "Audit certificate guidance notes - 6<sup>th</sup> framework programme" was distributed. G Gorini urged all partners to contact their auditor in view of audit certificate requirements (to be prepared in English) well before the deadline of June 2007. It was agreed that preparation of reporting documents will be based on input from partners through forms to be prepared by R Cattaneo.

It was agreed to assess progress in the workplan individually for each workpackage (WP).

Administration and dissemination WPs (WP9, WP10) were reported to be according to plan. The project web page is in regular use including job advertisements.

It was agreed that no decision on a possible request of extension of the contract would be taken before the APMC meeting of January 2008. However it was noted that the late contract signature (affecting some procurements and personnel recruitment) and some technical difficulties have had an impact on progress in a few critical tasks. The project team will put their best efforts to recover the delay during 2007.

3. Progress with the second work package (WP2) was reported by T Belgia. Milestone M2 reached on time. Most of the important hardware installations were demonstrated for the workshop attendees. D2(19) will be reached well before the mid-term report (in the first half year reactor periode). Deliverable D3(22) should be ready on time, after all of the archaeological objects have been selected.

P Kudejova reported on progress at FRM-II. Equipment should be installed in October 2007. It may be possible to start experiments in January 2008.

M P de Pascale reported on construction and installation of XYZw table for NIPS.

Actions:

1. Choice of Li-plastic supplier by January 2007 (T Belgia)
2. Choice of format for imaging data ( T Belgia, W Kockelmann and T Materna )
3. Design of suitable sample supports (T Materna)
4. Time schedule of experiments at NIPS (T Belgia)
5. Videoconference on laser scanning and positioning/ repositioning system (C Andreani)

4. Progress with the fifth work package (WP5) was reported by G Gorini. PGAI/NT simulations for NIPS are completed: Milestone M8 reached; Deliverable D8 ready. NRCI detector simulations cannot be performed until NRCI conceptual design is available. Therefore Milestones M9 and M10 are delayed but should be reached before the mid-term report.

Actions:

1. Meeting on NRCI detector design (M9) and other ISIS hardware R&D to be called in March (G Gorini). Design issues include choice of beamline, positioning table, NRCI detector bank, mechanics of large PSND, portable system.

5. Progress with the sixth work package (WP6) was reported by V Bom and M Clarijs and is according to schedule. However delays with NRCI system will affect progress

in the coming year. Good interaction with WP7 activities was reported and is expected to continue as more detailed simulations/reconstructions are performed.

There are no milestones or deliverables for this WP before the mid-term report.

## Saturday 20<sup>th</sup> January

6. P Schillebeeckx reported on WP3. There are delays on the tasks 1 and 2 leading to NRCI. This is mainly due to the unforeseen technical difficulties with gamma measurements on ISIS. Work is ongoing to identify remedies before proceeding with detector design and construction.

Milestone M4 is delayed but will be reached before the mid-term report.

Deliverable D5 is also delayed. It looks like only the design of the detector bank can be completed before the mid-term report. Detector construction is now scheduled for delivery before end of 2007.

Milestone M5 (low resolution measurements at GELINA) is expected to be reached in time but will be based on an upgraded version of the C6D6 detectors. Tests are underway for comparison of performance of C6D6 and new scintillator-based detectors to be used at ISIS. A dedicated positioning table is required and can be paid from the UNIMIB budget.

E Perelli Cippo reported on preliminary tests at ISIS. The background conditions on VESUVIO have been determined and possible solutions for improvement identified. Comparison between VESUVIO and INES beamlines shows that INES has better time resolution and background.

M P de Pascale reported on progress with use of SiPM as an alternative to PM tubes.

E Schooneveld showed results from PSND tests at INES. The tests have been successful and deliverable D6 (PSND) can be regarded as reached. Design of a larger detector is underway to boost PSND performance.

Actions:

1. E Schooneveld and N Rhodes to send the PSND and YAP detectors to IRMM and to agree on a test period.
2. IRMM and CCLRC to organise a technical meeting at ISIS to discuss :
  - results of detector testing at GELINA
  - design of gamma detector bank
  - moving system for low resolution tomographic measurements at GELINA
  - PSDN detector testing at GELINA

7. W Kockelmann reported on WP4.

There are no deliverables or milestones for this WP before the mid-term report. There is sufficient progress with preparations and tests for neutron diffraction tomography.

Milestone M6 (First neutron diffraction tomography experiment) may have to be delayed somewhat due to the ISIS operation schedule.

A post-doc position at ISIS has been advertised.

8. K Birò reported on WP1. Black box activities have progressed well.

Z Hajnal reported on Hungarian laws on exporting CH objects. Detailed timetables should be proposed at least 3 months before the planned experiments.

Milestone M1 will be reached as soon as suitable objects from Rome are selected.

Deliverable D1 is expected to be reached for the Budapest objects only.

Deliverable D2 (report). This was not discussed at the meeting.

Actions:

1. WP1 meeting on black boxes, public access database and Report D2 in March (K Birò). The meeting should define strategy for finalising black box analysis. Lead author(s) for D2 must be decided.

2. Construction of benchmark imitations of two artefacts from NHM (A Kirfel).

3. Selection of suitable archaeological objects from Rome (C Andreani) is needed in order to proceed with construction of imitation objects.

9. C Andreani reported about the WP8.

A protocol for transporting CH objects for analysis is being implemented jointly with Italian CH institutions.

There are no milestones or deliverables for this WP before the mid-term report.

10. T Materna reported on WP7. Work has progressed but with delays due to financing and recruitment of post-doc. So far delay is limited but recruitment of manpower in Koeln is now urgent to avoid further delays.

P Kudejova reported on tomography and imaging software. Deliverable D14 is ready since a suitable commercial software has been identified and tested. VG Studio is the candidate software for image processing (Milestone M13).

Deliverable D15 (calibration): work is in progress but delivery is not expected before the mid-term report. Alignment tools will be realised (with Cd+Au pixels) as soon as a description of the support will be available.

Milestone M12 can be reached before the mid-term only if new staff is recruited. The position has been advertised but is still vacant.

11. The date and location of the next meeting were discussed and the following were selected:

Milan, July 2007 (mid-term meeting);

Delft/Leiden, January 2008; exact date to be decided at next meeting.

12. G Gorini informed the partners of an initiative for a “horizontal I-cube” on cultural heritage following the EURICA proposal (see ESFRI road map). Preparation work is in progress and contributions are welcome. The decision on submission of a proposal will be made in March 2007.

13. The meeting closed at 16.15 hrs on 20<sup>th</sup> January 2007. The meeting was followed by a guided visit to the National Hungarian Museum.