



Status of EuCARD

Jean-Pierre Koutchouk, CERN

Outline

- 1. Follow-up of last GB meeting**
- 2. Election of the chairperson**
- 3. Contractual results**
- 4. Non contractual results**
- 5. Proposals to Governing Board**

1a- Follow-up of last GB meeting

1. Platform for education and training in accelerator sciences.

TIARA WP5 Objectives: The main objective of this work package is the development of structures and mechanisms that allow efficient education and training of human resources and facilitate their exchange among the partner facilities. The main tasks are to survey the human resources, training resources, and the market for Accelerator Scientists in Europe, and establish a plan of action for promoting Accelerator Science via enhanced coordination of training and exchange of knowledge and staff between institutions.

Eventhough EuCARD has many more partners in Universities, this initiative is now to be left to TIARA.

1b- Follow-up of last GB meeting

2. Support to the implementation of the SESAME project

As CERN member, the PC is the CERN contact to SESAME. A CERN-EC initiative has been under study.

If EC would agree for a financial support and would find EuCARD appropriate as an instrument, EuCARD could volunteer to open a new work package dedicated to the upgrade of the present SESAME machine.

2- Election of the chairperson

Candidate: Tord Ekelof

| Beneficiary Number | Beneficiary name | Beneficiary short name | Apotogies | Vote |
|--------------------|---------------------------|------------------------|------------------------------|-----------------------------|
| 1 | J.P. Koutchouk | CERN | | |
| 2 | E. Neubauer | ARC | | |
| 3 | T. Kamps | HZB | | |
| 4 | E. Levichev | BINP | | |
| 5 | O. Napoly | CEA | | |
| 6 | F. Toral | CIEMAT | Replaced by Laura Sanchez | |
| 7 | A. Jeremie | CNRS | | |
| 8 | B. Simone | COLUMBUS | | |
| 9 | A. Faus | CSIC | | |
| 10 | M. Grecki | DESY | | |
| 11 | A. Aubele | BHTS | yes | T. Ekelof |
| 12 | L. Weber | EPFL | | |
| 13 | J. Teichert | FZD | | |
| 14 | R. Rossmanith | FZK/KIT | | |
| 15 | D. Kraemer | GSI | | |
| 16 | W. Wierba | IFJ PAN | | |
| 17 | S. Guiducci | INFN | | |
| 18 | R. Nietubyc | IPJ | | |
| 19 | G. Belingardi | POLITO | | |
| 20 | T. Garvey | PSI | | |
| 21 | M. Chorowski | PWR | yes | |
| 22 | G. Blair | RHUL | | |
| 23 | A. Ryazanov | RRC KI | | |
| 24 | Y. Yang | SOTON | | |
| 25 | R. Jones , T Wells | STFC | | |
| 26 | A. Napieralski | TUL | | |
| 27 | R. Mikkonen | TUT | | |
| 28 | K. Osterberg, K. Nordlund | UH | | |
| 29 | J.-M. De Conto | UJF | | |
| 30 | A. Dexter | ULANC | | |
| 31 | N. Sammut | UM | | |
| 32 | A. Blondel | UNIGE | | |
| 33 | R. Jones | UNIMAN | | |
| 34 | P. Burrows | UOXF-DL | | |
| 35 | U. van Rienen | UROS | yes | Carried over to R. Jones |
| 36 | T. Ekelof | UU | | |
| 37 | R. Romaniuk | WUT | | |

3a - Deliverables Year One

| <i>WP</i> | <i>#</i> | <i>title</i> | <i>delivery</i> | <i>comment</i> |
|-----------|--|---|-----------------|---|
| 2 | D2.2.1 | EuCARD web site implementation | M1 | operational at M-4 |
| 4 | D4.1.1, D4.2.1, D4.3.1 | AccNet, EuroLumi & RFTech websites | M2→M3 | Minor delay due to solving access policies at partner site. |
| 3 | D3.1.1 | NEU2012 web site | M6 | |
| 5 | | MICE | M12 | 1100 access units granted out of 3383 |
| 10 | D10.4.1 | QE data for Pb/Nb deposited photo cathode samples | M12→ M14 | iterations on report |

3b - Milestones Year One – (1)

| <i>WP</i> | <i>Result #</i> | <i>Title</i> | <i>Delivery</i> | <i>Comment</i> |
|-----------|-----------------|---|-----------------|----------------------------|
| 1 | M1.1 | EuCARD Annual Meeting 2010 | M12→M13 | |
| 2 | M2.1.1 | Annual status of DCO 2010 | M12→M13 | at EuCARD2010 |
| 3 | M3.1.1.1 | Calendar of workshops & conferences | M6 | |
| | M3.1.3.1 | NEU2012 first annual workshop | M12→M13 | at EuCARD 2010 |
| 4 | M4.1.1 | Annual Accnet steering meeting | M12→M13 | at EuCARD 2010 |
| | M4.2.1 | Annual EuroLumi workshop | M12→M13 | changed to 4 miniworkshops |
| | M4.3.1 | Annual RFTech workshop | M12→M13 | |
| 7 | M7.1.1 | Annual HFM review meeting | M12 | at Wroclaw |
| | M7.2.2 | Preliminary heat deposition model for a dipole Nb3Sn model magnet | M12 | |
| | M7.4.1 | HTS conductor specifications for insert coil | M12 | ? |
| 8 | M8.1.1 | ColMat Review meeting 2010 | M12 | at CERN |
| | M8.2.1 | Functional specification of beam loss and collimator for LHC | M12→M6 | |
| | M8.2.3 | Functional specification of beam loss and collimator for FAIR | M12→M10 | |

3c - Milestones Year One – (2)

| <i>WP</i> | <i>Result #</i> | <i>Title</i> | <i>Delivery</i> | <i>Comment</i> |
|-----------|-----------------|--|-----------------|---|
| 9 | M9.3.3 | Installation of ATF2 final-focus alignment monitoring system | M6→ M16 | objectives met by other means |
| 10 | M10.2.2 | Definition of cryomodule interface | M12 | cancelled, following a change of strategy |
| | M10.3.1 | LHC crab cavities specifications | M12→M14 | change of specification (EuroLumi-LHC-CC09) |
| | M10.3.4 | CLIC crab cavities specifications | M12→M15 | difficulties in hiring |
| | M10.4.1 | Lead deposition on samples for photocathode development | M12 | |
| | M10.7.1 | Preparation system for GaAs | M12 | |
| 11 | M11.1.1 | Annual ANAC review meeting | M12→ M13 | in EuCARD 2010 |
| | M11.2.1 | Dafne beam parameters definition for KLOE | M12 | |
| | M11.3.1 | Requirements for electron beam diagnostics | M2 | |
| | M11.4.1 | Requirements for electron beam diagnostics | M2 | additional milestone provided |

3d - Deliverables Year Two

| <i>WP</i> | <i>#</i> | <i>title</i> | <i>delivery</i> | <i>comment</i> |
|-----------|----------------------|--|-----------------|--|
| 1 | D1.1 | First periodic EuCARD report | M20→M21 | some difficulties in collecting information |
| 4 | D4.3.2 | Strategy/result for SRF test infrastructures | M24→M26 | draft ready M24 but final discussions needed in Annual Meeting |
| 5 | | HiRadMat | M24→M32? | commissioning stage |
| 6 | | MICE | M24 | x access units |
| 8 | D8.1.2 | Collimator specification for LHC upgrade parameters | M24→M17 | |
| 8 | D8.1.3 | Collimator specification for FAIR | M24→M18 | |
| 10 | D10.7.1 | Results of slice measurements | M24 | |
| 10 | D10.8.1 | Test and operation of the couplers preparation procedure | M24→M34 | delay not critical (no dependencies, 3y task) |
| 11 | D11.2.1 | Dafne IR design for the upgraded KLOE detector | M24 | |

3e - Milestones Year Two (1)

| | | | | |
|---|----------|--|---------|---|
| 2 | M2.1.2 | Annual status of DCO 2nd year | M24→M26 | follows the Annual Meeting |
| 3 | M3.1.2.1 | Intermediate review of NEU2012 recommendations on neutrino experiments | M24→M26 | All milestones delayed by late Annual Meeting |
| | M3.1.3.2 | NEU2012 second annual workshop | M24→M26 | |
| | M3.2.1.1 | Intermediate review of NEU2012 recommendations on existing accelerator neutrino facilities | M24→M26 | |
| | M3.3.1.1 | Intermediate review of NEU2012 recommendations on new accelerator neutrino facilities | M24→M26 | |
| 4 | M4.1.2 | Annual Accnet steering meeting | M24→M26 | follows the Annual Meeting |
| | M4.2.2 | Annual EuroLumi workshop | M24 | replaced by 4 topical workshops |
| | M4.3.2 | Annual RFTech workshop | M24 | Dec 2010, PSI |
| 7 | M7.1.2 | Annual HFM review meeting | M24 | |
| | M7.2.1 | Methodology for the certification of radiation resistance of coil insulation | M24→M27 | 3 months delay anticipated |
| | M7.2.3 | Engineering heat deposition model for a dipole Nb3Sn model magnet | M24 | report in M25 |
| | M7.4.2 | Two HTS solenoid insert coils | M24→M30 | Coils made but problems with conductor degradation and splices to be solved |

3f - Milestones Year two (2)

| <i>WP</i> | <i>Result #</i> | <i>Title</i> | <i>Delivery</i> | <i>Comment</i> |
|-----------|-----------------|---|-----------------|---|
| 8 | M8.1.1 | Annual ColMat meeting | M24→18 | |
| | M8.2.2 | Upgrade LHC collimator specification | M24→17 | |
| | M8.3.1.1 | LHC type collimator designed | M20→M8 | |
| | M8.3.2.1 | FAIR type cryogenic collimator designed | M24→18 | |
| 9 | M9.1.2 | Annual NCLinac review | M24→M26 | |
| | M9.2.1 | Modification of NCLinac computer codes and first round of simulations | M24 | note on simulations for design, HOM damping and breakdown |
| | M9.2.2 | Design of NCLinac hardware for test module | M24 | note |
| | M9.3.1 | Characterization of noise/vibrations sources in accelerators | M24 | EuCARD-PUB-2010-011, EuCARD-CON-2010-019, EuCARD-CON-2009-021 |
| | M9.3.2 | Installation of interferometers at CTF3 module | M24→M28 | priority lowered, deliverable not delayed |
| | M9.3.4 | Installation of ILC prototype FB/FF at ATF2 | M24 | ILC intra-train FB targets met |
| | | | | |
| | | | | |
| | | | | |

3g - Milestones Year Two (3)

| <i>WP</i> | <i>Result #</i> | <i>Title</i> | <i>Delivery</i> | <i>Comment</i> |
|-----------|-----------------|--|-----------------|---|
| 10 | M10.1.2 | Annual review SRF | M24→M26 | |
| | M10.3.2 | LHC model crab cavity completed | M24→M28 | delay after change of strategy in LHCC09 |
| | M10.3.5 | CLIC model crab cavity completed | M24→M26 | delay at the manufacturer: issue with precision after brazing |
| | M10.3.7 | Development of LHC LLRF system | M21→M30 | interchange LHC and CLIC work |
| | M10.3.8 | Development of CLIC LLRF system | M30→M25 | |
| | M10.6.2 | Design and manufacturing of the AMC modules with fast analogue and digital IO | M24→M28 | |
| | M10.6.3 | Design and manufacturing of the AMC board with ultrafast ADC | M24→M28 | |
| | M10.6.6 | Design and manufacturing of the AMC frequency synthesizer board | M24→M28 | |
| | M10.6.8 | Integration of downconverters and upconverters in RTM | M24→M28 | |
| | M10.6.9 | Design and fabrication of AMC modules for step motors, piezo and waveguides tuners | M24→M28 | |
| | M10.7.3 | GaAsphotocathodes produced | M24→M36 | manpower problems, now solved (3y task) |
| 11 | M11.1.2 | ANAC review meeting | M24 | not needed |
| | M11.4.1 | Electron beam emittance meter finished | M24 | |

3f - Trans-national access Facilities

MICE@STFC: is smoothly running, and the complexity of its EC rules and reporting mastered by its coordinator. It is used so far by teams would had proposed it as TA. Unplanned customers would give an added value.

HiRadMat@CERN: had to be delayed to end 2011, due to the LHC “incident”; excellent progress of the HiRadMat team, with a possibly “early” availability.

| | Units planned | Units allocated | Unites delivered | # of user teams |
|----------|---------------|-----------------|------------------|-----------------|
| MICE | 3384 | 4556 | 1700 | 4 |
| HiRadMat | 50 | (8) | 0 | (≥4 + CERN) |

4 – Other results

Publications

(27/4/2011)

| | M12 | M24 |
|------------------------------|------------|------------|
| Conf. papers | 40 | 135 |
| Journal publications | 19 | 38 |
| Academic | 2 | 4 |
| Notes, reports, other | ... | 36 |
| Presentations | ... | 60 |
| TOTAL | 77 | 273 |

(in CARE, 70 publications per year on average)

[294 on 9/5/2011]

4 – Other results

Networks

Contractual results or publications do not reflect accurately the network activities (talking efficiency is hard to measure!)

From reports or from my own experience as a participant, they create a remarkable added value by allowing scientists from various institutes to discuss common issues or focus on one of them.

For accelerator performance, EuroLumi is the link to US and Japanese colleagues or network (USLARP).

A new EuCARD self-sustained laser/plasma network has held its first workshop last week.

Others could come if motivated coordinators are found.

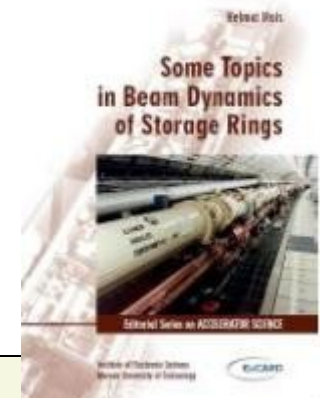
The PC Office gives maximum support to this activity.

Video-conferencing quality and efficiency??

5a- Proposals to GB: Dissemination, Communication and Outreach

- **Web site:** number of “unique” visitors/EuCARD members: baseline 600/235.
- **EuCARD Newsletters** every 3 months, sent to ~600 persons. *Project to convert it to “Accelerator Newsletter” and open it to FP7 EUROnu and HiLumi LHC, ..., → open to discussion*
- **Series of A5 monographs** on accelerator sciences; distribution to libraries to be organized soon.

Project of using this series for “short” summaries on accelerator projects , ..., → open to discussion



5b- Proposals to GB: Adjustment of Interim Reporting calendar

| Interim report | EC periodic report | Project event |
|----------------|--------------------|------------------------------------|
| M6 | | |
| M12 | | Annual Meeting |
| | M18 | |
| M24 | | Annual meeting and Mid-term Review |
| M30 | | |
| | M36 | Annual meeting |
| M42 | | |
| | M48 | Annual meeting and final report |

*Reporting will largely be done via deliverable reports,
→ open for discussion*