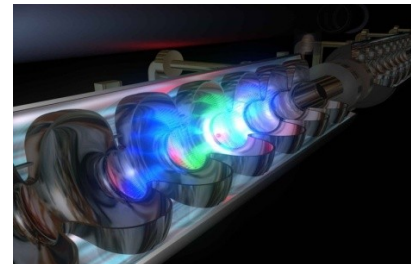
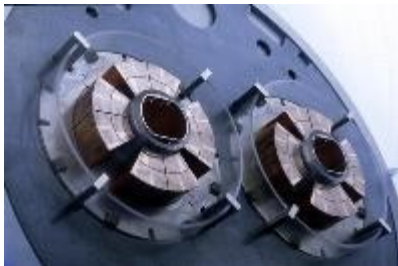


# European framework for EuroNNaC & future developments

<http://eucard.web.cern.ch/EuCARD/>



*J.P. Koutchouk, EuCARD Project Coordinator, CERN*

# Introduction

1) EuCARD has launched a new self-supported network on laser and plasma acceleration in the framework of its Accelerator Networks (AccNet, WP4)

*and*

2) ESGARD is considering the possibility of support of this initiative in the next FP7-IA on accelerator R&D (Call in Nov. 2011, project running over 2013-2017).

# What is EuCARD?

European Coordination for Accelerator R&D  
a **FP7 « Integrating Activities »**, including

- **Joint Research Activities (87%)** on advanced accelerator technologies, on topics of high priority in
  - High-energy physics,
  - Nuclear Physics,
  - Linac-based light sources,
- **Scientific networks (10%)** as exchange platforms.
- EU sponsored access to two accelerator test facilities (3%).

Duration 2009-2013, total budget 31 M €

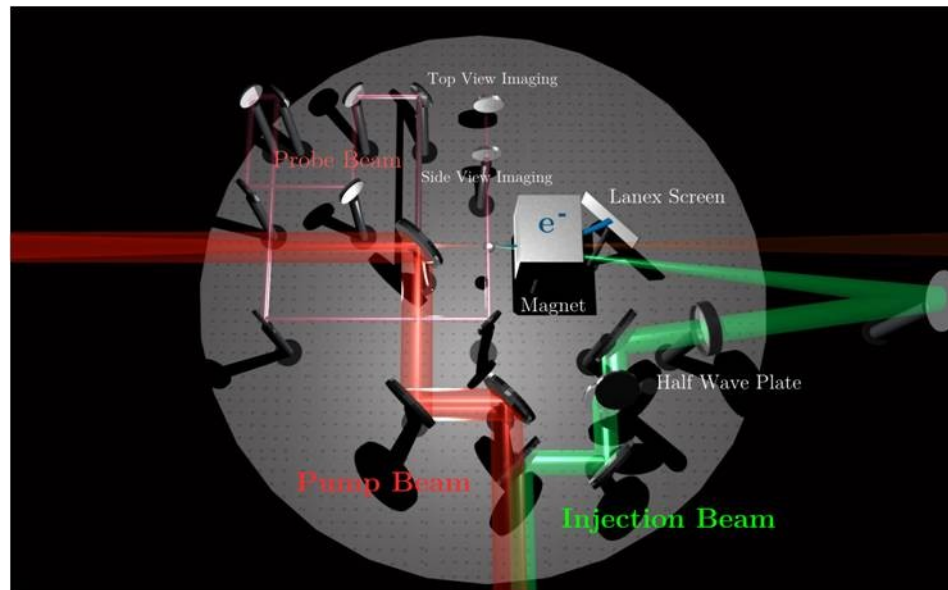
# What scientific program?

1	MGT	J.P. Koutchouk, R. Assmann, S. Stavrev/CERN	0.2%
2	Dissemination	R. Romaniuk/WUT, K. Kahle/CERN	1.5%
3	Neutrino network	V. Palladino/U. Napoli	3%
5	Access to HiRadMat@SPS	I.Efthymiopoulos/CERN	0.5%
6	Access to MICE	N. McCubbin/STFC-RAL	2%
7	High Field Magnets	G. De Rijk/CERN, F. Kircher/CEA	21%
8	Collimation & Materials	R. Assmann/CERN, J. Stadlmann/GSI	12.8%
9	NC linac technologies	G. Blair/RHUL, E. Jensen/CERN	20%
10	SC RF technologies	O. Napoly/CEA, O. Brunner/CERN	24%

# Zoom on JRA WP11: Novel concepts

Crab waist crossing, Non-scaling FFAG-s  
and...

**Instrumentation (emittance measurement) for  
laser driven plasma wake field accelerators:** v.  
Malka coordinator, with CNRS-LOA and INFN-LNF



*Courtesy LOA*

# Who is EuCARD?

A joint venture of 37 **European** « legal entities »  
representing some 45 accelerator laboratories, universities,  
research centers and 3 private companies,  
  
to which about 40 laboratories and universities are  
*associated worldwide* through networks,



# Partners

- **International:** CERN
- **Austria:** ARC
- **Finland:** TUT, UH
- **France:** CEA, CNRS, UJF
- **Germany:** HZB, DESY, BHTS, FZD, FZK/KIT, GSI, UROS
- **Italy:** Columbus, INFN, POLITO
- **Malta:** UM
- **Poland:** IFJPAN, IPJ, PWR, TUL, WUT
- **Russia:** BINP, RRC KI
- **Spain:** CIEMAT, CSIC
- **Sweden:** UU
- **Switzerland:** EPFL, PSI, UNIGE
- **UK:** RHUL, SOTON, STFC, ULANC, UNIMAN, UOXF-DL

# Associates via networks

- **International: JINR**
- **Europe:**
  - **Belgium:** U. Catholique Louvain
  - **Bulgaria:** U. Sofia
  - **France:** GANIL, THALES
  - **Germany:** Max Planck Inst. Heidelberg, U. Erlangen, T. U. Berlin, U. Hamburg
  - **Italy:** U. Bologna, U. Sannio
  - **The Netherland:** Twente University
  - **Poland:** BUT, Cracow U., LUT
  - **Russia:** IHEP, INR RAS, IPCP, ITEP
  - **Spain:** U. A. Madrid, UCLM
  - **Sweden:** U. of Stockholm
  - **Switzerland:** CHIPP
  - **UK:** Imperial
- **America**
  - **Canada:** TRIUMF
  - **Mexico:** CINVESTAV
  - **USA:** ANL, BNL, FNAL, LBNL, MIT, MSU, SLAC, Texas A&M, TJNAF
- **Asia:**
  - **China:** CIAE
  - **India:** TIFR
  - **Japan:** KEK, Osaka U.,
- **Australia:** ANU



# Additional charge of EuCARD by the EC, beyond its scientific goals

« [*Contribution to the emergence of*] **sustainable collaborative structures in the field of accelerator research and development.** »

# Motivation of EuCARD

- Foster European collaborations between the community of laser, plasma and the community of accelerator scientists and engineers,
- With the goal of [better] including this promising but very challenging concept in the R&D programs of accelerator laboratories, via EU projects (ESGARD/TIARA) and beyond.
- In tight collaboration with the actors and existing bodies, e.g. ICFA/ICUIL.



## *European Steering Group for Accelerator R&D*

### Mandate

ESGARD develops proposals to optimize and enhance the outcome of the R&D in the field of accelerator physics in Europe. It promotes collaborations and a coherent and coordinated utilization and development of infrastructures. It prepares and/or follows up FP proposals/projects (CARE, EuCARD, EURONU, SLHC-PP, ILC-HiGrade, TIARA,...)



Members appointed by directors of large labs: R. Aleksan/CEA (chair), M. Cerrada/CIEMAT, R. Edgecock/STFC, E. Elsen/DESY, JP Koutchouk/CERN (sc. secretary), F. Richard/CNRS, L. Rivkin/PSI.

**ESGARD now prepares the accelerator R&D proposal to come after EuCARD (November 2011 Call):**

*4 requests received so far for plasma wakefield acceleration from 7 labs, mostly EuCARD partners.*

# Goal for EuCARD2/ESGARD

- If the EuCARD network is found valuable by the actors in laser and plasma acceleration, create a funded network to take over in 2013.
- Consider one JRA task with EU funding of up to 0.5 M€ or so.

# Longer term Goal for ESGARD/TIARA

Create a sustainable support for laser and plasma acceleration, included in the accelerator R&D scientific programme, hopefully in the form of Joint Programming.

# Conclusion

*An important goal for this workshop is to give a clear signal to the Accelerator laboratories, and to ESGARD, as to the potential and added value of these initiatives.*