

Organizational Issues

- Coordinators: [Ralph Assmann](#) (CERN/EuCARD)
[Jens Osterhoff](#) (U. Hamburg/DESY)
[Henri Videau](#) (ecole Polytechnique)
- Scientific secretary: [Steffen Hillenbrand](#)
Will help with talk upload, minutes, other scientific issues
- Merethe Morer-Olafsen, Nadine Andrey, Delphine Rivoiron gave crucial help. Many thanks. Also very busy with other work...
- Lunch: Walk over to CERN Restaurant 2.
- Welcome drink (today 18h00) and dinner (Wed): see program.
- Access cards: Conference badge serves as access card.
 - External visitor: Collect at reception.
 - CERN registered: Collect at workshop.

Please see us for any requests, proposals, ...

European Network on Novel Accelerators

1st CERN EuroNNAc Workshop

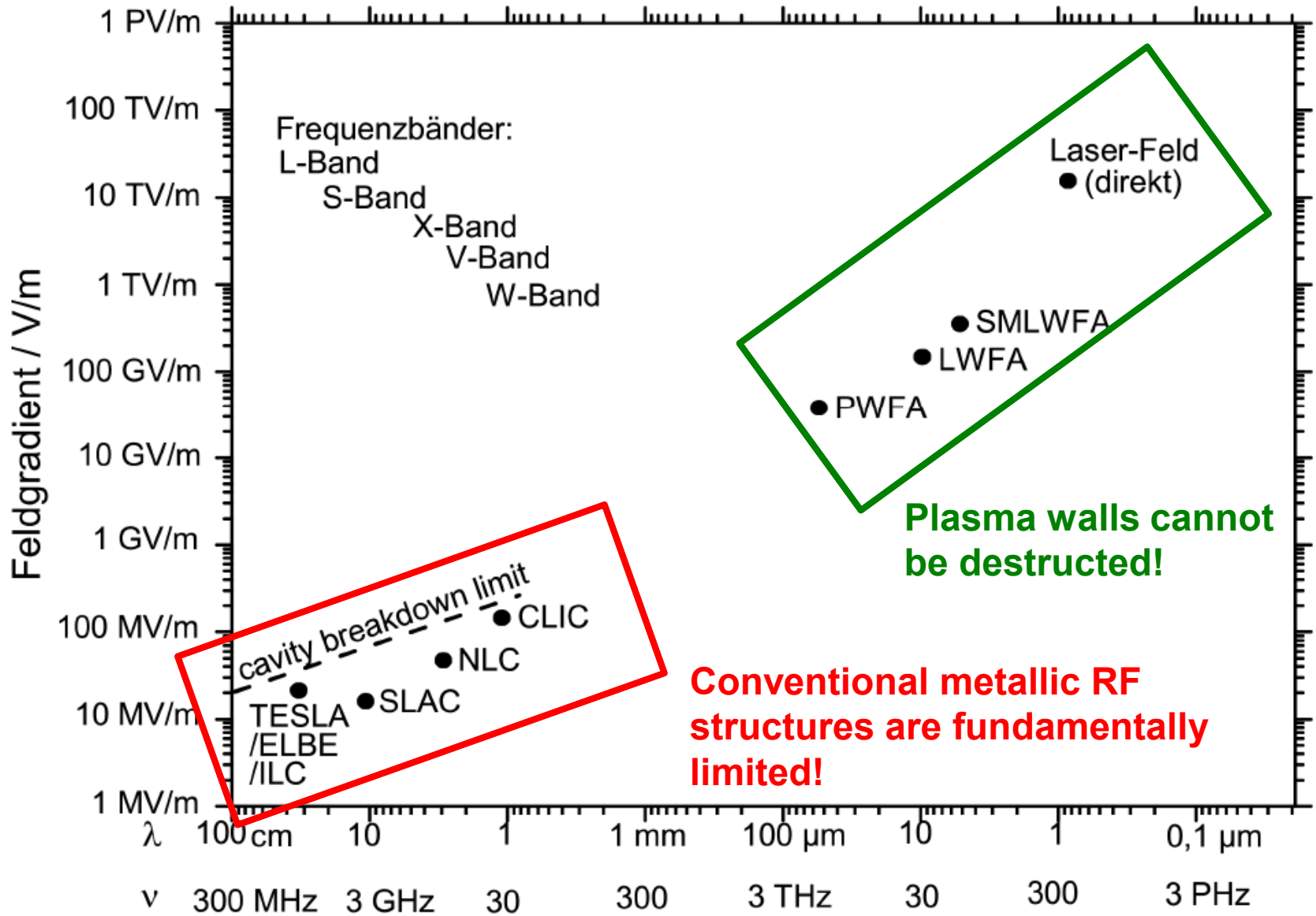
Ralph W. Assmann

CERN, 3.5.2011

<http://www.cern.ch/euroonnac>

- Number of registrants: **92**
- Europe:
 - **11 countries**
FRANCE , GERMANY, HUNGARY, ITALY, NETHERLANDS, PORTUGAL,
ROMANIA, RUSSIA, SWEDEN, SWITZERLAND, UNITED KINGDOM
 - **37 institutes**
- Outside Europe:
 - **3 countries**
CHINA, JAPAN, UNITED STATES OF AMERICA
 - **11 institutes**
- Thanks to the EuroNNAc organization committee!

Very Successful Field...

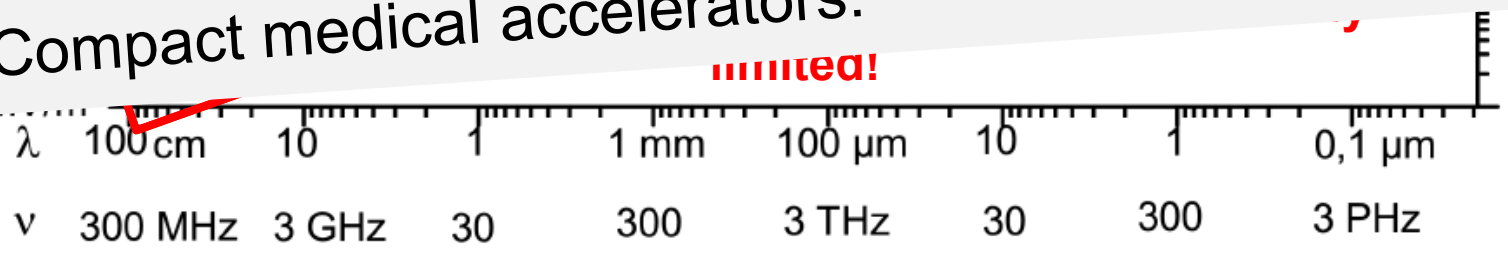


Very Successful Field...



The dream: **Build accelerators 100-1000 times more compact.**

1. A compact synchrotron light accelerator (FEL, ...) for each university lab and industry!
2. Compact (and affordable) TeV colliders for high energy physics.
3. Compact medical accelerators.



...but also very diverse.



Plasma
Science

Laser
Science

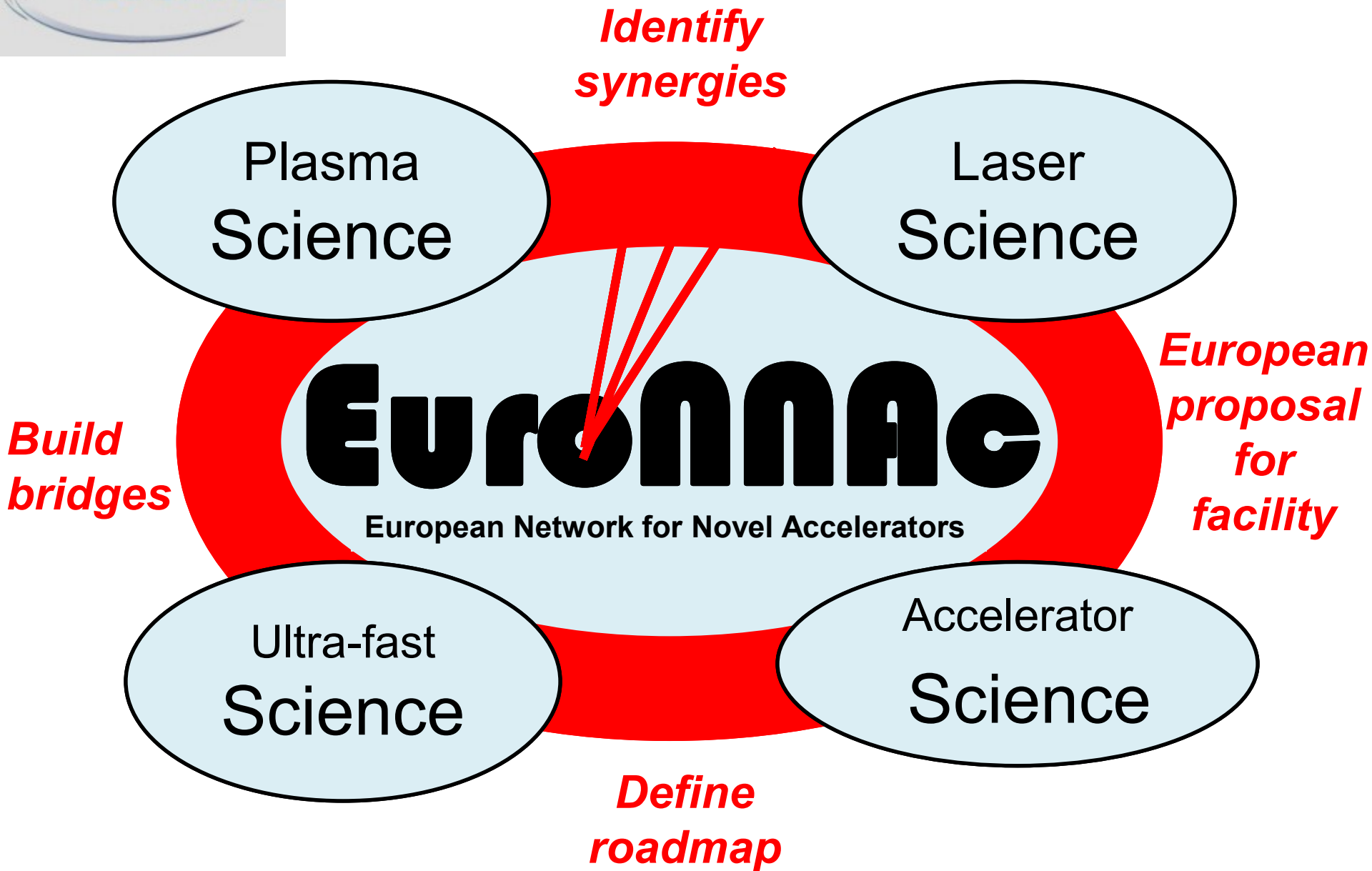
Ultra-fast
Science

Accelerator
Science

...but also very diverse.

Many challenges:

1. Different notations, language and scientific cultures.
2. Different goals (scientific achievement versus building operational accelerators).
3. More centralized “big science” versus more decentralized university-based research.
4. Complex, inter-disciplinary science problems.



Network Boundary Conditions

- Network **combines synchrotron radiation and particle physics** uses.
- Focus on **novel methods for e^- acceleration** (ion/p not included):
 - Higher chance of success if we focus on one particle type!
 - Only after it works reliably for science applications, medical applications become realistic!
- Network must be **open to all interested parties in Europe!**
No selection of members!
- Network **invites main actors in Asia/US** for discussion and decisions!
Selected international experts will be invited to organization committee.

- **Comparison of different methods** to drive plasma wakefields and dielectric structures: lasers, electron beams, proton beams.
 - Investigate an optimal strategy in combining different technologies for a novel accelerator facility.
- **Description of required R&D** that is still needed for verifying various technologies and establishing the required technological basis.
 - What work can and should be done at universities?
 - Is help from large research facilities required?
 - How could existing large accelerator infrastructure be used to best advance the field of novel acceleration?
- **Roadmap towards a novel beam test facility with first test applications** (medical, synchrotron, ultra-fast science).
 - Is a European test facility needed to complement the ongoing US efforts (BELLA/LBNL and FACET/SLAC projects)?
 - How to combine efforts inside Europe but also with the US and Asia to best advance the field?

- **Roadmap towards high energy physics applications** with intermediate applications for applied science.
 - How can a 1 – 10 GeV beam test facility be best used for developing ultra-high gradient technology for high energy physics?
- **Coordination of European expertise** towards one or several test facilities, including close collaboration with the US and Asian communities.
 - Define coherent goals to focus efforts.
 - Make use of synergy between institutes and labs.
 - Build bridges from the accelerator world to the ELI project.

Timeline	Milestone
May 2011 (first week)	EuroNNAc Workshop at CERN: Review activities and discuss strategy
Jun 2011	First small initiative(s) into EuCARD2, if possible
Jun 2011 – 2012	Prepare coherent European strategy, maximizing synergy and maintaining productive competition
2012 – 2013	Agree on possibilities for a substantial FP8 proposal , prepare proposal

Goals of Workshop

- Initial **network creation in coherence with existing European & international activities** (ICFA, ICUIL, ELI, ...)
- Define **draft goals**, both general and specific: First idea on possible FP8 proposal on test facility
- Prepare the creation of a **steering committee** (request expression of interest from institutes)
- Prepare writing of **white paper** on “Draft European Strategy on Novel e-Beam Acceleration”
- Define **next steps**

Format of Workshop

- Diversity requires to first **provide overview**: status and plans in Europe and the world (Tuesday & Wednesday).
- Use discussion, coffee breaks, welcome drink, dinner to digest information and **build common understanding**.
- Working day is Thursday: most of time free for **discussion and ad-hoc presentations! Prepare your input, announce to us and present Thursday!**
- **Summary** is Friday morning.

Tuesday 03 May 2011

Introductory Presentations - Kjell Johnsen Auditorium (08:30-10:30)

- Conveners: Dr. Collier, Paul

time	title	presenter
08:30	Goals of Network and Workshop (00h15')	Dr. ASSMANN, Ralph
08:45	Accelerator R & D as Driver of Innovation (00h45')	HEUER, Rolf
09:30	History and Outlook for Plasma Acceleration (00h30')	Prof. TOSHI, Tajima
10:00	Modern Lasers for Novel Acceleration Methods (00h30')	Prof. MOUROU, Gerard

Coffee Break - 30-7-012 (10:30-11:00)

Introductory Presentations - Kjell Johnsen Auditorium (11:00-12:30)

- Conveners: Dr. Collier, Paul

time	title	presenter
11:00	Accelerator R & D for Particle Physics (00h30')	MYERS, Steve
11:30	Status Report Asia (00h30')	SHENG, Zhengming
12:00	Status and Plans US (beam driven) (00h15')	HOGAN, Mark
12:15	Status and Plans US (Laser driven) (00h15')	ESAREY, Eric

R & D Status - Kjell Johnsen Auditorium (14:00-15:40)

- Conveners: Prof. Joshi, Chan

time	title	presenter
14:00	Status France (00h25')	MALKA, victor
14:25	Status Germany (00h25')	GRUENER, Florian
14:50	Status Italy (00h25')	GIULIETTI, Danilo
15:15	Status Portugal (00h20')	SILVA, Luis

Coffee Break - (15:40-16:00)

R & D Status - Kjell Johnsen Auditorium (16:00-17:00)

- Conveners: Prof. Joshi, Chan

time	title	presenter
16:10	Status Sweden (00h20')	WAHLSTROM, Claes-Goran
16:30	Status UK (00h25')	JAROSZYNSKI, Dino

Welcome Cocktail - Globe 1st Floor (18:00-20:00)

Wednesday 04 May 2011

Photon Science, R & D Plans I - Kjell Johnsen Auditorium (09:00-10:30)

- Conveners: Dr. Muggli, Patric

time	title	presenter
09:00	Accelerator R & D for Photon Science (00h40')	Dr. BRINKMANN, Reinhard
09:40	Plans France 1 (00h25')	AMIRANOFF, François
10:05	Plans France 2 (00h25')	SPECKA, Arnd

Coffee Break - 30-7-012 (10:30-11:00)

R & D Plans I - Kjell Johnsen Auditorium (11:00-12:35)

- Conveners: Dr. Muggli, Patric

time	title	presenter
11:00	LPA/external injection project (00h15')	Dr. SERAFINI, Luca
11:15	SITE (00h15')	Dr. GIZZI, Leo
11:30	COMB (00h20')	FERRARIO, Massimo
11:50	Proton-Driven Acceleration (00h15')	CALDWELL, Allen
12:05	CALA (00h15')	KARSCH, Stefan
12:20	Plans at Duesseldorf (00h15')	WILLI, Oswald

R & D Plans II - Kjell Johnsen Auditorium (14:00-15:30)

- **Conveners: Prof. Seryi, Andrei**

time	title	presenter
14:00	Helmholtz Activities (00h20')	COWAN, Thomas
14:20	UK Plans 1 + overview (00h20')	JAROSZYNSKI, Dino
14:40	UK Plans 2 (00h15')	Prof. HOOKER, Simon
14:55	UK Plans 3 (00h15')	NAJMUDIN, Zulfikar
15:10	Plans Sweden (00h15')	WAHLSTRÖM, Claes-Göran

Coffee Break - (15:30-15:55)

R & D Plans II - Kjell Johnsen Auditorium (15:55-18:00)

- **Conveners: Prof. Seryi, Andrei**

time	title	presenter
15:55	Plans Portugal (00h15')	SILVA, Luis
16:10	Plans Russia (00h15')	Dr. KOSTYUKOV, Igor
16:25	Plans Netherlands (00h15')	Dr. BRUSSAARD, Seth
16:40	ELI-PP science & technology: beamlines (00h15')	KORN, Georg

16:55	Discussion (01h05')	
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Transport to Auberge de Satigny (requested through registration form) - bld. 500/Main Building
(Steps-outside the bank) (19:15-19:30)

Social Dinner - Auberge de Satigny (19:30-22:15)

Thursday 05 May 2011

Brainstorming: European and World Plans - Kjell Johnsen Auditorium (09:00-10:30)

- **Conveners: Dr. Osterhoff, Jens; Dr. Videau, Henri**

time	title	presenter
09:00	ICFA/ICUIL Task Force Status (00h30')	LEEMANS, Wim
09:30	The ELI Project (00h30')	SANDNER, Wolfgang
10:00	Discussion European & World Strategy (00h30')	

Coffee Break - 30-7-012 (10:30-11:00)

Brainstorming: European and World Plans - Kjell Johnsen Auditorium (11:00-12:30)

- **Conveners: Videau, Henri; Dr. Osterhoff, Jens**

time	title	presenter
11:00	Discussion European & World Strategy (01h30')	

➔ 2 h free for discussions and additional short presentations (~5 min)

Network Organization - Kjell Johnsen Auditorium (14:00-15:30)

- **Conveners: Dr. Assmann, Ralph**

time	title	presenter
14:00	European Framework (00h20')	KOUTCHOUK, Jean-Pierre
14:20	Proposed Network Organization and Ahead (00h15')	Dr. ASSMANN, Ralph
14:35	Any other input and proposals (00h55')	

Coffee Break - 30-7-012 (15:30-16:00)

Network Organization - Kjell Johnsen Auditorium (16:00-18:00)

- **Conveners: Dr. Assmann, Ralph**

time	title	presenter
16:00	Any other input and proposals (02h00')	

➔ 2h55 free for discussions and additional short presentations (~5 min)

Friday 06 May 2011

Summary and Discussions - Kjell Johnsen Auditorium (09:00-10:30)

- Conveners: Aleksan, Roy

time	title	presenter
09:00	Summary "Setting the Scene" (00h20')	COLLIER, Paul
09:40	Summary "R & D Status" (00h20')	JOSHI, Chandrashekhar
10:00	Summary "R & D Plans 1" (00h30')	MUGGLI, Patric

Coffee Break - 30-7-012 (10:30-11:00)

Summary and Discussions - Kjell Johnsen Auditorium (11:00-12:30)

- Conveners: Aleksan, Roy

time	title	presenter
11:00	Summary "R & D Plans 2" (00h20')	SERYI, Andrei
11:20	Summary "Brainstorming: European and World Plans" (00h20')	VIDEAU, Henri OSTERHOFF, Jens
11:40	Summary "Network Organization and Ahead" (00h20')	Dr. ASSMANN, Ralph
12:00	Closing Address from CERN (00h20')	COLLIER, Paul

Reserve Session. Visits to CERN facilities. - Kjell Johnsen Auditorium (14:00-17:00)



Thanks...

Status 11.1.2011

Europe	Name		Affiliation
EuCARD, CERN	Dr.	Assmann* Ralph	EuCARD/CERN
	Dr.	Geschonke Gunther	CERN
	Dr.	Koutchouk Jean-Pierre	EuCARD/CERN
	Dr.	Zimmermann Frank	EuCARD/CERN
France	Dr.	Cros Brigitte	LPGP -CNRS
	Prof. Dr.	Malka Viktor	LOA
	Dr.	Martin Philippe	CEA
	Prof. Dr.	Mourou Gerard	ILE
	Dr.	Specka Arnd	Ecole polytechnique
	Dr.	Videau* Henri	Ecole polytechnique
Germany	Prof. Dr.	Caldwell Allen	MPI-P Muenchen
	Dr.	Floettmann Klaus	DESY
	Prof. Dr.	Gruener Florian	LMU Muenchen/MPQ
	Dr.	Osterhoff* Jens	University Hamburg, DESY
Italy	Prof. Dr.	Sauerbrey Roland	FZD Rossendorf
	Dr.	Ferrario Massimo	LNF
	Dr.	Ghigo Andrea	INFN Frascati
	Prof. Dr.	Guiletti Danilo	INFN Frascati
Portugal	Dr.	Serafini Luca	INFN Frascati
	Prof. Dr.	Mendonca Jose Tito	Instituto Superior Tecnico
Russia	Dr.	Kostyukov Igor	Institute of Applied Physics
Sweden	Prof. Dr.	Wahlstroem Claes-Goran	Lund University
Switzerland	Prof. Dr.	Rivkin Leonid	EPFL, PSI
United Kingdom	Prof. Dr.	Jaroszynski Dino	University of Strathclyde
	Dr.	Najmudin Zulfikar	Imperial College
	Prof. Dr.	Neely David	Rutherford Appleton Lab
	Prof. Dr.	Seryi Andrei	John Adams Institute

*Coordinators

Status 11.1.2011

Non-Europe	Name		Affiliation
China	Prof. Dr.	Sheng Zhengming	Institute of Physics, CAS
India	Dr.	Naik Prasad	RRCAT
Japan	Prof. Dr.	Yokoya Kaoru	KEK
United States	Prof. Dr.	Chou Weiren	ICFA/Fermilab
	Prof. Dr.	Joshi Chan	University of California
	Prof. Dr.	Katsouleas Thomas	Duke University
	Dr.	Leemans Wim	LBNL
	Prof. Dr.	Muggli Patric	USC
	Prof. Dr.	Raubenheimer Tor	SLAC
Prof. Dr.	Tajima Toshiki	ICUIL/LMU	

... thanks to the EuroNNAc organization committee for help in organization of this workshop!

Towards Applications: My View

(Advanced Lepton Acceleration)

