

ILC @ DESY Project

Introduction

E Elsen

Why ILC @ DESY?

Welcome to ILC

Asian Regional Team for Linear Collider Accelerator Development

KEK Home | KEK Acc. Lab. | ILC-Asia Accelerator | ILC-Asia Physics Development

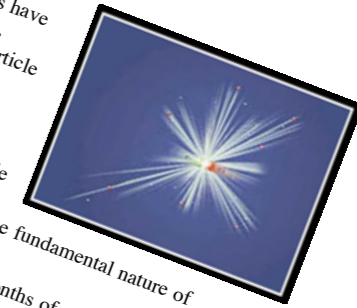


Participants at the First ILC Workshop (Nov.13, 2004)
Click on the picture to see a bigger image.

International Linear Collider

Particle physics has reached an extraordinary moment in the quest to understand the universe and its physical laws. Profound new questions have emerged to capture the human imagination. To address these questions, scientists all over the world are collaborating to design and build the particle accelerator of the future.

The International Linear Collider is a proposed future international particle accelerator. It would create high-energy particle collisions between electrons and positrons, their antimatter counterparts. The ILC would provide a tool for scientists to address many of the most compelling questions of the 21st century-questions about dark matter, dark energy, extra dimensions and the fundamental nature of matter, energy, space and time. (more...)



The International Technology Recommendation Panel (ITRP), after eight months of very hard work, recommended on August 19th that superconducting ("cold") technology be used for the linacs that will have to accelerate the electrons and positrons to record energies of 500 GeV. ICFA, the International Committee on Future Accelerators, unanimously accepted this recommendation and made it official. (more...)

Safety Comes 1st!

- SLAC ILC Planning Discussion
- ILC @ FNAL -
- ILC Status & Challenges
- KEK ILC Development
- ILC-Asia Working Groups

Upcoming Events & Calendar

- ILC Workshop, KEK - Nov 13-15, 2004 - Application Sheet
- Machine-Detector Interface Workshop, SLAC - January 6-8, 2005
- Workshop on Positron Sources, Daresbury - April 11-13, 2005

HOME

1st ILC Workshop

Overview
Introduction
Remarks
What's New

LC Office

Research Activities
ILC-Asia, WGs
ATF
SC-RF
Conv. Facilities

Calendar

Library
Lectures
Reviews
Reports
Conferences
KEK LC Proj.
Comm.

Additional Resources
World Efforts
Useful Links
Old News


Legacy Links

Site Search


Contact the web to send your comments, suggest broken links, and requests.

Fermilab
GO

International Linear Collider at Fermilab

ABOUT ILC AT FERMILAB	News & Documents
<p>Fermilab has a leadership role in working with the U.S. and international particle physics community and the Department of Energy Office of Science to design and build the proposed International Linear Collider.</p> <p>These Web pages present Fermilab's efforts in support of the ILC, in collaboration with laboratories and universities around the globe in an extraordinary scientific project. Read more...</p>	<p>KEK Workshop - Toward an International Design of a Linear Collider</p> <p>ILC Detector Design and R&D , Harry Weerts, ILC Meeting at Fermilab, October 27, 2004</p> <p>Linear Collider News Archive from Interactions.org</p> <div style="background-color: #0056b3; color: white; padding: 2px;"> What's Up with the Linear Collider? </div> <div style="background-color: #0056b3; color: white; padding: 2px;"> Fermilab Today From PowerPoint to Interaction Point, Strategic Communications Are Critical Under the unimposing title of "Working Group 6," an international band of communicators met last week during the First International ILC Workshop... Read more... Series Archive </div>
<p>COLLABORATION</p> <p>OUTREACH</p> <p>ACCELERATOR R&D</p> <p>DETECTOR R&D</p> <p>CIVIL STUDIES</p> <p>DOCUMENTS</p> <p>NEWS ARCHIVE</p> <p>For Collaborators</p> <p>Fermilab Divisions</p> <p>Fermilab Home</p>	 <p>"Cold" RF Cavities Scientist James Santucci assembles a superconducting RF structure in a clean room at Fermilab. Credit: Peter Ginter (Click image for larger view.) More linear collider images from interactions.org</p>

[Back to Top](#) | [Home](#) | [Site Map](#) | [SLAC](#) | [NLC](#) | [NLC-Tech](#) | [SLAC Web Email](#)


Office of Science
U.S. Department of Energy

[Security, Privacy, Legal](#)

and where is the home institute of the TESLA TDR?

towards ILC

- ...
- TESLA TDR March 2001
- ILC-TRC end 2002 (no rank I issues for TESLA)
- XFEL cond. approval Feb 2003
- ITRP recommendation Aug 20, 2004
- 1st ILC Workshop at KEK, Nov 13-15, 2004

Technology

Recommendation: SRF

- considered mature because of
 - TTF I
 - Industry involvement
- at XFEL test of Mass-
 - Development
 - Production
 - Installation

*owe it to the community
to maximise the
learning for the ILC*

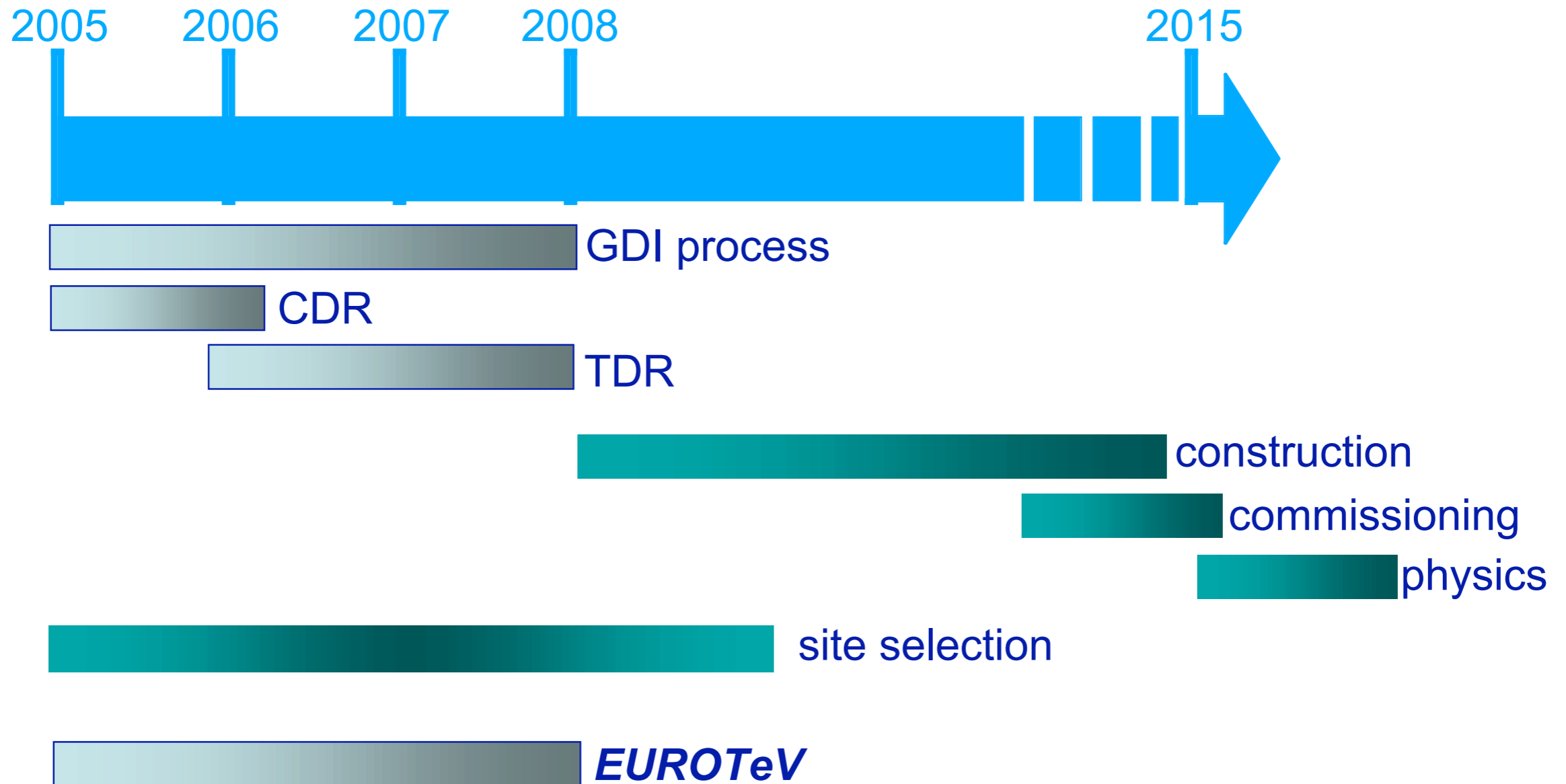
Labs unite behind the ILC



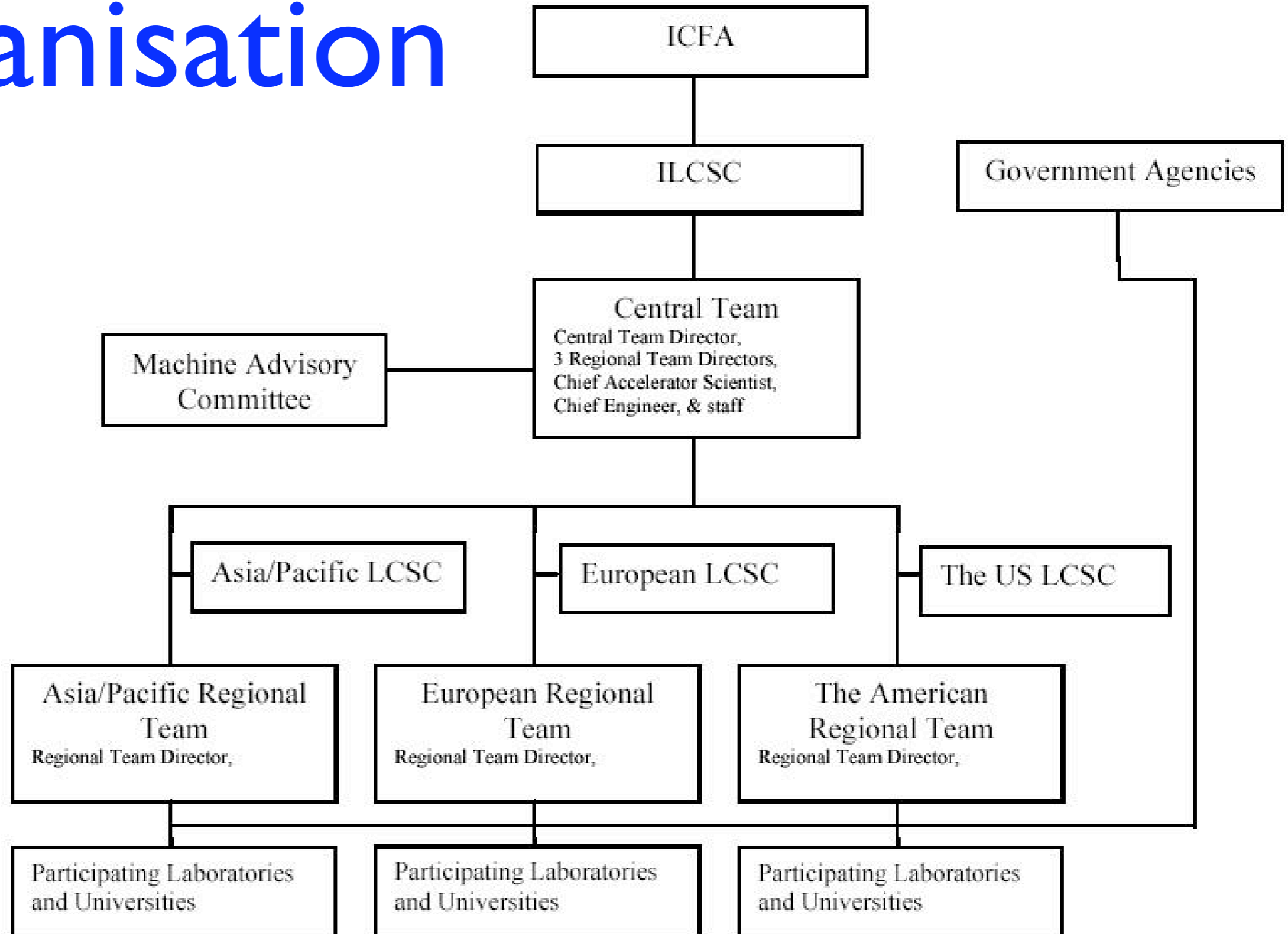
Major HEP labs talk:
- THE ILC and
- SRF

*on the way of forming a
worldwide collaboration
for machine and detector*

Timetable



Towards a Central Organisation



ILC @ DESY

- Need a home for the ILC at DESY (and in Europe)
 - Genuine e^+e^- collider & detector work
 - Points of contacts for other laboratories
- Live the ILC-XFEL synergy by
 - Attracting ILC-interested institutes to working on XFEL, TTF and ILC
 - Profit mutually ($ILC \infty XFEL$) from new developments

DESY Groups & Projects

Some examples:

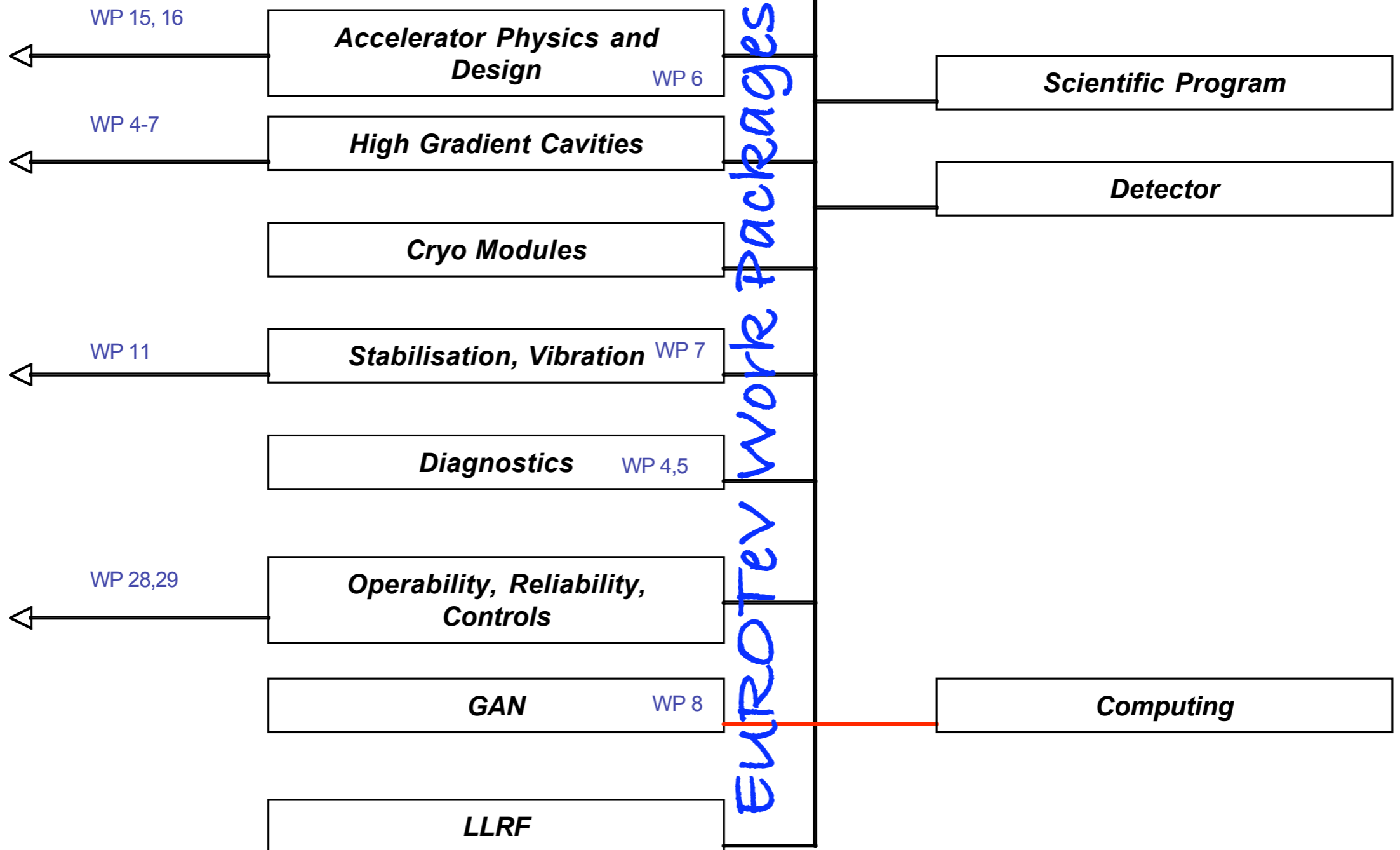
DESY Groups

DESY Projects

FHx	Mx	FSx
Expt	HERA	
XFEL		
ILC		

DESY ILC Project Group
Accelerator – EUROTeV – Experimentation
Behnke, Elsen, Walker

XFEL Work Packages



EUROTeV Work Packages

Resources

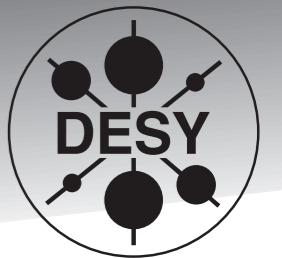
- FH contributions
 - Physicists, Engineers and Technicians - as HERA permits
 - FLC, FLA, ...
- EUROTeV
- CARE
 - Joint Research Activities: SRF
 - Networks: ELAN
- External labs

EUROTeV



- 27 Mio € effort (9 Mio € from EU) across European institutes
- 3 years
- DESY
 - 6 new positions
 - 1.4 (+ 0.3) Mio €

Deutsches Elektronen-Synchrotron
Accelerator Research



DESY is world-wide one of the leading accelerator centres exploring the structure of matter. The main research areas range from elementary particle physics over various applications of synchrotron radiation to the construction and use of X-ray lasers.

DESY is playing a major role in the world-wide development of the TeV e+e- International Linear Collider (ILC). Within the EU funded Design Study EUROTeV DESY invites applications for

6 Physicists for R&D on the International Linear Collider
BAT IIa or BAT-O IIa

de es fr it

The information on this site is subject to a [disclaimer](#) and a [copyright notice](#)

CORDIS News

Search Go [Detailed search](#)

Future EU Funding FP7

Head of Unit makes the case for increased infrastructures funding in FP7

[Date: 2004-11-30]

In its recent communication on the future of research policy in Europe, the European Commission outlined support for research infrastructures as one of the six pillars of its policy from 2007. In an interview with CORDIS News, Head of Unit for Research Infrastructures Hervé Péro explained how the Commission intends to turn the theory into practice.

'In order to face societal and industrial challenges, scientists need to have facilities that have the capacity to generate the relevant data to increase knowledge and develop models,' said Mr Péro.

'As problems become more complex, we need to go more from the infinitely small to the infinitely big, using powerful instruments such as particle accelerators and telescopes,' he added. We need new tools to explore the unknown, more consistent databases to better understand the evolution of society and more powerful computing systems to help researchers understanding the evolution of the climate.

The renewed emphasis on research infrastructures is based on four principal assessments, according to Mr Péro: the key role of research infrastructures in the generation of knowledge; the need to give Europe the necessary means to act at a global level and to keep up with the Lisbon agenda; the need to increase cooperation to stimulate cost sharing and create an economy of scale with regard to research infrastructures; and the necessity of using public funds efficiently.

Speaking of the cost of research infrastructures, Mr Péro gave two reasons for encouraging collaboration through EU funding. The cost of building a very large facility, such as a linear collider, can amount to several billion euro, and cannot, therefore, be met by one country acting alone. For other purposes, such as oceanographic vessels or research laboratories in the Arctic, less expensive facilities can be met by national budgets, but a reduction of fragmentation in research infrastructure would lead to large economies of scale, he explained.

Politically, an EU strategy for research infrastructure would lead to Europe acting better at world level - 'able to sit at the same table as other large regions in the world'. And also able to provide solutions to problems at global level, relating to the environment, security, immigration and space, for example, added Mr Péro.

In an October working document on research infrastructures in the Seventh Framework Programme (FP7), the Commission outlined how support for research infrastructure is likely to be divided into two lines of action, one optimising the use and performance of existing facilities, and one supporting the development of new infrastructures.

Support for existing infrastructures will be based on current activities in the Sixth Framework Programme (FP6). This mainly bottom-up approach will support the continuation of schemes to fund access to research infrastructures, integrating activities, the development of a communication network and design studies for new infrastructures.

New infrastructures will be the focus of a more strategic approach based on a global common vision, a roadmap and identified priority projects. The roadmap will be prepared with the support of the European Strategy Forum on Research Infrastructures (ESFRI), and its first version will be available in 2005. The second component of the approach, the implementation of the priority projects, will comprise an operational mechanism based on various complementary financial instruments.

The FP6 budget for research infrastructures is 730 million euro, a figure that Mr Péro says should be largely increased for FP7. This will help strengthen current activities and support the emergence of new infrastructures. For new infrastructures, not all funding will come direct from the framework programme. An alternative source of funding is the

Home
FP6
Presidency
ERA
FP5
Calls
Forthcoming Events
Interviews
Email News Alert
Republication Licence
CORDIS focus
Send News to the News team
Print latest News
Press Service
CORDIS Express
CORDIS Wire



Hervé Péro

H. Péro

'As problems become more complex, we need to go more from the infinitely small to the infinitely big, using powerful instruments such as particle accelerators and telescopes,' he added

Speaking of the cost of research infrastructures, Mr Péro gave two reasons for encouraging collaboration through EU funding. **The cost of building a very large facility, such as a linear collider, can amount to several billion euro, and cannot, therefore, be met by one country acting alone.**

Calendar of Events

Time	Meeting
07.12. - 08.12.04	Simulations Mini-WS (DESY)
06.01. - 08.01.05	MDI Workshop SLAC
13.01. - 15.01.05	Gaseous Detector Study Paris
21.02. - 22.02.05	Wiggler Workshop Frascati
18.03. - 22.03.05	LCWS
11.04. - 13.04.05	Sources Workshop Daresbury
20.06. - 24.06.05	BDIR (Oxford)
14.08. - 27.08.05	Snowmass
30.10. - 02.11.05	ECFA Vienna

+ EUROTeV
 + CARE
 + ELAN
 + TESLA
 + ILC

Conferences

Asian Regional Team for Linear Collider Accelerator Development

KEK Home | KEK Acc. Lab. | ILC-Asia Accelerator | ILC-Asia Physics

International Meetings

- **SCRF 2004** (Pushing the Limits of RF Superconductivity): Sep. 22-24, 2004, ANL, US.
- **ILCWS 2004**: the First ILC Workshop, November 12-14, 2004, KEK, Japan.
- **ILC MDI Workshop**: SLAC, Jan. 6-8, 2005
- **US Particle Accelerator School**: SF, Jan. 10-21, 2005
- **LCWS05 (Physics)**: SLAC, March 18-22, 2005
- **BDIR Workshop**: Oxford, April 11-15, 2005
- **ILC Positron Workshop**: Daresbury Lab., April 11-13, 2005
- **PAC2005**: Knoxville, May 16-20, 2005
- **SRF 2005 (Superconducting RF)**: Cornell, July 10-15, 2005

Regional Meetings

- **US SMTF Meeting**: JLab, Sep. 30, 2004.
- **ILC-America 2004**: SLAC, Oct. 14-16, 2004.
- **7th ACFA WS on Physics & Detector at LC**: Taipei, Nov. 9-12, 2005.
- **Snowmass 2005**: Snowmass, Aug. 14-27, 2005

by far not exhaustive

requires better coordination

Agenda Today

- 09:00 Introduction (E Elsen)
- 09:30 ILC (+XFEL) related areas and projects (N Walker)
- 10:00 Detector activities overview (T Behnke)
- 10:30 - coffee -
- 11:00 ILC @ KEK workshop review
- 11:00 WG1 Parameters (N Walker)
- 11:10 WG2&5 RF systems (S Choroba)
- Cavities (L Lilje)
- 11:20 WG3 Sources (K Flöttmann)
- 11:40 WG4 BDS (K Büßer)
- 11:50 Discussion on future plans