

2nd Linear Collider Testbeam Workshop

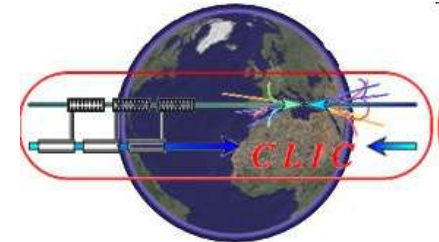


Bruno Mazoyer LAL Orsay

LAL Orsay, **3-5** November 2009



Charge to the Workshop



Roman Pöschl
LAL Orsay

LCTW 2009 LAL Orsay/France November 2009

Organisation Committees

Programme Committee: F. Sefkow (DESY), J. Yu (UTA), V. Vrba (FZU Prague),
K. Kawagoe (Kobe University)
V. Boudry (LLR Palaiseau), J. Hauptman (Iowa University)
Yulan Li (Tsinghua University), **Replaced by Takeshi Matsuda**
R. Lipton (FNAL)
M. Vos (IFIC Valencia), T. Nelson (SLAC)
F. Gaede (DESY), N. Graf (SLAC), M. Wing (UCL London)

NB.: Crossviews are “allowed” and desired

Scientific Advisory Board: Sakue Yamada (Tokyo University, KEK), H. Yamamoto (Tohoku University)
J. Brau (University of Oregon), F. Richard (LAL), M. Demarteau (FNAL)
Young-Kee Kim (FNAL), S. Bertolucci (CERN), J. Mnich (DESY),
D. MacFarlane (SLAC), K. Nishikawa (KEK)

The SAB is ready to give advice and to watch the balance of the meeting programme

Local Organisation Committee: R.P. (Chair)
P. Doublet (Scientific Secretary)
M. Faucci-Gianelli (Scientific Secretary)
P. Chemali (Workshop Secretary)
V. Brouillard (Workshop Secretary)
G. Dreneau (Webcast, technical questions)

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The workshop is dedicated to ...

- Obtain a view on how to meet the objectives in detector R&D in in test beam programs
Establish a well defines list of requests to test beam sites
- Obtain a coherent picture of the R&D and thus ...
- ... help to structure the detector R&D for the ILC and to ...
- Identify items for collaboration (even beyond subdetector systems)

How to meet Objectives in Detector R&D ?

- What are the Objectives?
- General: Testbeams are the occasions at which ideas and concepts face the truth!!
- For a serious TDR we need to demonstrate the maturity on detector technology Prototypes which shows technological feasibility of realisation and underline that physics goals can be reached
Where alternatives are proposed need enable decisions on equal footing
- => Large Scale testbeams with modular setup
- Proof of principle for ideas/proposal which are still in early phases

=> Small scale testbeams and high mobility of equipment
Re-use of existing equipment where possible
- How to integrate “non mainstream” activities?

Structure Detector R&D

- Who is addressing the topics?

Clearly the **Detector R&D Collaborations** are the place where this is mostly going to happen
What projects are lacking collaboration, how to “incorporate” isolated groups

- Identify which topic can be best addressed where

Compare detector programs and capabilities of sites

Is there risk a rush to one site while others are idle?

A plan listing activities and time scales could avoid this and help to tailor requests

- How should requests be launched and monitored?

- Detector R&D groups give (brief) summary on activities to Detector R&D Panel

Helps to assure that objectives are met

- Proposal for monitoring: Establish a **database/portal/wiki** where testbeam efforts are assembled

Would e.g. facilitate exchange of experience with given beamlines

(ILC) Beam Lines and Combined Testbeams

- Is it worth/reasonable to establish beamlines common to all ILC Testbeam projects?

What are commonalities between the testbeam programs

Beam structure and rates, Triggers, Particles

- Can smaller projects be integrated into large efforts?
- ILC Detector Concepts (i.e. Particle Flow) is based on the perfect interplay between different detector components

Are the R&D projects far enough advanced to envisage combined testbeams now (Period 2010-2013)?

Important topics which will be addressed on Thursday
Both need firm agreement and very careful planning
Pros and Cons?

Coherent Picture of Detector R&D

- May want to make our plans available to Testbeam Sites Funding Agencies, national and international Research bodies

Only possible if objectives and structures are **clearly defined** there is a reasonable chance to get a handle on scarce funding

Must make clear that the programs are endorsed by a large community and serves the interest of research policy in general

The LC R&D testbeam program may need a face

- Aim would be that a request by an ILC groups rings an alarm bell at sites
Btw.: Support received so far is extremely good, thanks at this place
- Testbeam sites needs central contact to them allow for planning
Should avoid situation in which group A wants this and group B wants another thing
Maybe spokesperson of big R&D collaborations are already fine
What about smaller efforts?

Collaboration

- How to make **Optimal use** of scarce human and financial resources ?
- Common beamlines and/or testbeam portals would allow for easy share of information

Establishment of communication/control infrastructure

E.g. monitoring, remote control and conferencing tools can be established for the benefit of many projects

- **Beam instrumentation**

E.g. Beam Telescope which can be permanently installed somewhere (+plus a highly mobile device)

- **Synchronised** DAQ systems

Allow for collaboration latest in the data/processing analysis

- Again **common beamlines** would allow to solve (sometimes tedious) problems in understanding the beamline once for all

E.g. BeamLineHandlers in common s/w scheme

- Agreement on **software tools** would facilitate analysis of data

Even if only in terms of technical problems

Outlook on Workshop ... and beyond

- Workshop will be entirely focussed on Testbeam Activities
Allows us to work out a comprehensive overview
and a coherent picture
- ... should give an answer how questions to be answered in TDR will
be addressed by testbeams
- Identify room for collaboration (among detector “boundaries”)
- The workshop should render a document which is to constitute a reference
for the LC testbeam projects
It is likely that projects mentioned/defined in the document will benefit
from priority in the coming years

Thanks for Participation and Welcome to LAL Orsay