

Report from the European Committee for Future Accelerators

M. Krammer – ECFA chair
HEPHY, Vienna, Austria

- Mandate
- Plenary ECFA and Restricted ECFA meetings
- RECFA Country Visits
- ECFA Panels
- ECFA Agenda 2013
- ICFA Matters

ECFA Mandate

- Hold regular meetings of Plenary and Restricted ECFA;
- Sponsor or organize ad hoc symposia and conferences;
- Set up study groups and review groups;
- Visit to CERN members states and review organization and resources, repeated at regular intervals;
- Monitoring of the ongoing implementation of the European Strategy for Particle Physics;
- Represents PP community in other organizations.

Serbia new ECFA Country

Serbia has become associated CERN member (in the pre-stage to full membership).

Plenary ECFA (July 19/20 2012) endorsed the admission of Serbia as a new ECFA country, and endorsed and welcomed new Serbian PECFA and RECFA members:

Prof. P. ADŽIĆ as the representative in RECFA

Prof. D. ŠIJAKI as new PECFA member

ECFA Meetings 2012

Plenary ECFA

- July 19/20, 2012, Paul Scherrer Institute, CH
- November 22/23, 2012, CERN

Restricted ECFA

- February 17/18, 2012, NIKHEF, NL ← Country visit
- May 11/12, 2012, Cracow, PL ← Country visit
- July 19, 2012, Paul Scherrer Institute, CH
- October 5/6, 2012, Frascati, I ← Country visit
- October 19, 2012, Belgrade, Serbia ← Country visit
- November 22, 2012, CERN

Standing Items

- Report from the chairman, including reports from other meetings/organisations (ICFA, ILCSC, EPS-HEPP, ApPEC, etc.)
- Reports from the laboratories: CERN, DESY, Frascati
- Reports from the ECFA Panels
- In 2012: Progress on European Strategy Update
- Midterm reports
 - In 2012 Czech Republic (PECFA July 19/20),
 - Russia (PECFA Nov. 22/23)

Plenary ECFA Nov. 22/23

Recent Plenary ECFA was mainly devoted to issues related to the Update of the European Strategy for Particle Physics

Talks on:

- International Linear Collider (ILC) TDR,
- Compact Linear Collider (CLIC) CDR,
- Physics at a Linear Collider,
- Physics at HL-LHC (ATLAS and CMS),
- Neutrino Experiments

<http://indico.cern.ch/conferenceDisplay.py?confId=215945>

Discussion Session on the European Update:

Minutes will be made available to the European Strategy Group.

RECFA Country Visits

RECFA visit to the Netherlands



- The Netherlands play a very significant role in a series of important experiments in particle physics, e.g. at CERN in ATLAS, LHCb, and ALICE.
- The field of astroparticle physics has remarkably fast developed into very important contributions and visibility in several experiments (ANTARES, KM3NeT, VIRGO, Pierre Auger, XENON).
- Strong Detector R&D, however, no more accelerator R&D at Nikhef.
- Excellent theory groups, computing TIER-1, very successful outreach program!
- Issues discussed: government's new policy on economic priority, length of time to obtain a PhD

RECFA visit to Poland



- Poland is a large country with a large particle physics community.
- Poland plays a very significant role in many important experiments at CERN (all four large LHC experiments) and in several other laboratories in Europe, Japan and the US.
- In the fields of neutrino and astroparticle physics many contributions in a number of leading experimental programs.
- Traditionally large theory community with many high quality contributions.
- Impressive work in detector R&D and GRID computing and especially in accelerator science.
- The use of the membership of CERN by Poland is exceptional (industrial return)
- Issues discussed: suitability of funding system for long time projects, mobility of scientists.

RECFA visit to Italy



- Very strong contributor to particle and astroparticle physics in Europe.
 - Farsighted, strategy planning through INFN.
 - Large research infrastructure in the country: Laboratories in Catania, Frascati, Gran Sasso, and Legnaro, Tier 1 in Bologna
 - Large contributions to all four large LHC experiments during design and construction, operation and exploitation.
 - Excellent: theory, computing, outreach, etc.
- At Frascati, DAPHNE machine and KLOE operating at luminosity frontier, high power injector for the free electron laser
 - Issues discussed: freeze on research appointments, difficult early career progression, bureaucratic procedure for personnel hiring

RECFA visit to Serbia



- First RECFA visit to Serbia.
- Very enthusiastic community.
- Serbian colleagues contributing already since a long time to experiments at CERN.
- Grid project in Serbia is a very positive example for technology and experience transfer – suggestion to repeat the success with detector R&D (CERN detector school as jump start)
- Discussion on how Serbia can make best use of CERN membership: scientifically; through CERN programs for students, engineers, teachers, etc.; economically through the involvement of companies (industrial liaison officer being set up)
- The meeting concluded with a very positive and constructive discussion with the Serbian Minister of Education and Science

ECFA Panels

- **European Detector R&D Panel** (chair Y. Karyotakis)
Review European detector R&D efforts for accelerator based particle physics projects without host laboratory
 - 1st Meeting (kick off) May 2012
 - 1st Report to PECFA July 19/20
- **LHeC CDR Review Panel** (chair Th. Müller)
Conceptual Design Report published
J. Phys. G: Nucl. Part. Phys. 39 (2012) 075001
ECFA and NuPEC sponsored study
 - Intermediate report presented to PECFA July 19/20
 - Final report (**ECFA/12/279**) endorsed by PECFA November 22/23,

Agenda 2013

Country visit dates and RECFA meetings in 2013:

- France March 15/16
- Denmark May 3/4
- Hungary October 4/5
- 4th visit Not yet decided

Plenary ECFA meetings in 2013:

- Joint EPS-ECFA session, EPS-HEP Stockholm, Saturday July 20
Theme: "Particle Physics after the European Strategy Update"
- 2nd Plenary ECFA at CERN, November 21/22

ECFA sponsored Workshops 2013

European Linear Collider Workshop ECFA LC2013

27-31 May 2013, DESY, Hamburg

<http://lc2013.desy.de>



Workshop “HL-LHC: Physics and Technologies”

Initiated by spokespersons of ATLAS and CMS.

- 3 day workshop
- All 4 large LHC experiments eager to participate
- The venue should be not too far from CERN
- Probable date is 1st week in September

ECFA Scientific Secretary

Ken Long serving as ECFA secretary since July 2010.
He will end his term end of 2012.

Many thanks to Ken Long for his contribution!

New ECFA scientific secretary for a period of 3 years as of
Jan. 1, 2013:

Calin ALEXA (RECFA representative of Romania)

Endorsed by PECFA Nov. 22/23

Activities of the International Committee for Future Accelerators (ICFA)

Meetings in 2012:

- 2-3 February 2012, Oxford
- 8 July 2012, during ICHEP2012, Melbourne

Reports to ICFA

- ICFA Panels:
 - Instrumentation,
 - Beam Dynamics,
 - Advanced Accelerators,
 - Interregional Connectivity,
 - **International Linear Collider Steering Committee,**
 - HEP Data Preservation
- InterAction (particle physics communicators' organization)
- Reports from the regions

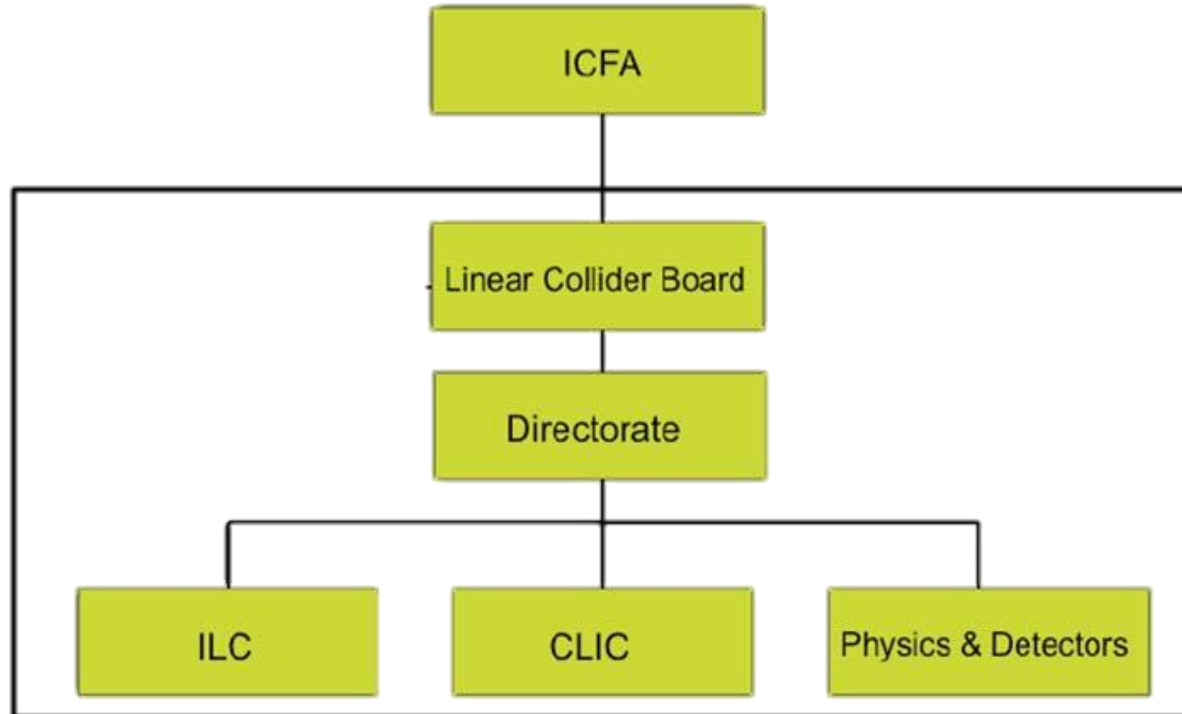
International Linear Collider Steering Committee (ILCSC)

Main issue in 2012: **New Linear Collider Organization**

- Mandate for present organization (GDE) ends end of 2012 (prolonged until mid 2013 to follow TDR review process).
 - **TDR (Technical Design Report)** deadline end of 2012
 - **DBD (Detailed Baseline Design)** for physics and experiments, final draft December 2012
- Post TDR structure and mandate had to be set up without delay (a gap could put the whole project at risk!).
- **New organization includes CLIC project.**

(Involvement of ECFA through its chairman)

New Linear Collider Organisation



ILC: Post „GDE“ project for a Linear Collider (500 GeV superconducting radiofrequency cavities)

CLIC: Existing project (two beam acceleration scheme, up to 3 TeV)

Physics & Detectors: Common studies for both collider concepts

New Linear Collider Director

After extensive consultation in the three regions a list of potential candidates for the LC Director was discussed, and finally a proposal for a single candidate was made to ICFA.

ICFA approved the recommendation just prior to the Melbourne ICHEP2012 meeting.

New director of the Linear Collider

Organization: Lyn Evans !



ICFA Chair Pier Oddone congratulating the LC Director Lyn Evans in Melbourne

Linear Collider Board

- **Mandate of LCB defined in Melbourne:**

The Linear Collider Board is an ICFA Subcommittee which will oversee the world linear collider effort.

http://www.fnal.gov/directorate/icfa/recent_lc_activities_files/Linear_Collider_Board_Melbourne.pdf

- **Composition:** 5 members from each region + chair, representatives from the major stakeholders plus representatives from the community

Joint meeting of ILCSC and LCB in February 2013 (Vancouver)

Last meeting of ILCSC – first meeting of LCB !

European LCB Members

After several discussions and the consultation of many colleagues the ELCSC (European Linear Collider Steering Committee) converged to the following proposal for the 5 European members:

- DG CERN (**R. Heuer**)
- Director Particle Physics DESY (**J. Mnich**)
- Representative of Russia (Director Dubna, **V.A. Matveev**)
- Two representatives from the European community, nominated by RECFA and endorsed by PECFA (Nov. 22/23)
 - One person representing Accelerator physics (**L. Rivkin**)
 - One person representing Detector and Physics (**F. LeDiberder**)

Both ILC and CLIC activities should be represented by the two community representatives, aiming for a proper balance of the two communities in the overall representation.

+ Setting up of an “European Advisory Board”

ICFA Neutrino Panel

ICFA decided to set up a Neutrino panel

- Mandate: To promote international cooperation in the development of the accelerator-based neutrino-oscillation program and to promote international collaboration in the development of a neutrino factory as a future intense source of neutrinos for particle physics experiments.
- Panel should consist of 16 members (5 from each region plus chair).

To define European members, RECFA representatives were asked for nominations. Many nominations received.

K. Long plus a representative from RECFA (F. Linde) will prepare final nomination to be discussed in RECFA.

Acknowledgements

I would like to thank the council secretary for their assistance and the preparation of ECFA meetings at CERN and abroad,

and the CERN minute writers for their precise minutes of the Plenary ECFA meetings.



Merry
Christmas and
another
successful
year for
Science!