



**ECFA**

European Committee for Future Accelerators

**CERN 60<sup>th</sup> Anniversary Session**



# Report from ECFA

**ICNFP 2014**  
Kolymbari, Crete  
5 August 2014

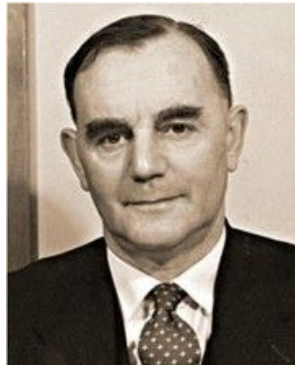


**Claudia-Elisabeth Wulz**  
Member of Restricted ECFA  
Institute of High Energy Physics, Vienna



- History and purpose
- Mission and activities
- Organization
- Recent activities of ECFA

ECFA (European Committee for Future Accelerators): founded in Jan. 1963



Initiative of Victor Weisskopf,  
Director General of CERN,  
and Cecil Frank Powell,  
Chair of Scientific Policy  
Committee



ECFA is advisory to CERN Management, CERN Council and its Committees, and to other organizations, national or international.

Guidelines on the work of ECFA have been worked out in 1976, and amended in 1981, 1997 and 2008.

Note:

ICFA, the International Committee for Future Accelerators, was founded in 1976. It is not exactly the equivalent to ECFA on international scale.



## **Long-range planning of high energy facilities**

- accelerators, large-scale facilities
- matched to resources and size of community
- encouragement of international collaboration

## **Equilibrium**

- between roles of national and international laboratories and institutes
- close relation between research and education

## **Adequate conditions**

- including equitable sharing of facilities between physicists irrespective of nationality or origin



Chairperson and secretary

Plenary ECFA (P-ECFA)

Restricted ECFA (R-ECFA)

Permanent or ad-hoc working groups

Regular meetings of P-ECFA and R-ECFA

Ad-hoc symposia and conferences sponsored or organized by ECFA

Study groups, set up by ECFA, or jointly with other organizations

Regular demographic studies of the high-energy physics community and resources in the ECFA countries

Monitoring of the ongoing implementation of the European Strategy for Particle Physics in the CERN member states (last update 2013, next one about 2018) and presentation of corresponding status reports to the European Strategy Session of Council

## Chairperson

Duration of mandate: 3 years (non-renewable)

Elected by R-ECFA, appointed by P-ECFA

Current chairperson: **Manfred Krammer** (Austria)

Call for nominations of new chairperson 2015-2017 -> suggestions to R-ECFA representatives, election in Nov. 2014



## Secretary

Nominated by Chairperson, endorsed by P-ECFA

Current secretary: **Calin Alexa** (Romania)



## Activities

- decides on all ECFA activities
- appoints Chairperson and Secretary, and members (2 x 3 years max., appointed as individuals though should be able to represent views of their communities)
- approves final reports of working groups and terminates activities
- decides on admission of new countries and observers
- Makes recommendations

## Meetings

- normally two per year
- meetings are public unless otherwise decided



Physicists from member countries of CERN, including CERN itself

On request: physicists from other countries

Ex-officio members and observers:

- Representatives of national or international laboratories or organizations of importance to ECFA's activities
- Representatives of countries that wish to follow work of ECFA or contribute views
- Former ECFA Chairpersons



## Country, ex-officio and other members

Austria:	4	Poland:	3
Belgium:	3	Portugal:	2
Bulgaria:	3	Romania:	3
Czech Republic:	3	Serbia:	2
Denmark:	3	Slovakia:	2
Finland:	3	Spain:	3
France:	12	Sweden:	3
Germany:	10	Switzerland:	4
Greece:	1	United Kingdom:	4
Hungary:	2		
Israel:	1	CERN:	8
Italy:	8		
Netherlands:	6	DESY:	1
Norway:	2	INFN:	1
		<b>Total:</b>	<b>97</b>

President of Council:	Agnieszka Zalewska
SPC Chairperson:	Tatsuya Nakada
Finance Committee Chairperson:	Charlotte Jamieson
NuPECC Chairperson:	Angela Bracco
EPS-HEPP Board Chairperson:	Thomas Lohse
ApPEC Chairperson:	Stavros Katsanevas

Russian Federation / JINR:	Victor Matveev
USA:	Ritchie Patterson
EPS:	David Wark
ESF (European Science Foundation):	Hans Karow

Former ECFA Chairpersons:	12
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<b>Total:</b>	<b>22</b>
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## Activities

R-ECFA assists and advises the Chairman and Secretary in the running of ECFA

R-ECFA acts as the communication channel to each participating country, its physics community and national institutes and authorities -> regular country visits, with feedback and recommendations

## Meetings

2 per year with P-ECFA, plus  
3 to 4 country visits per year

## Membership

One member per country, appointed for maximum of two 3-year periods



## One-day open session

Reports on scientific activities  
Research planning, structure and funding  
Human resources, education and outreach  
Students' point of view  
-> initial feedback to community

## Half-day closed session

Conclusions from visit  
Report from CERN, DESY, Frascati, FAIR, etc.  
Reports from working groups  
Planning future HEP activities

## Follow-up

Letter with assessment and recommendations to official bodies

## R-ECFA country visits

Denmark: May 2013   
-> recommendation on restructuring funding systems

Hungary: October 2013 

Israel: April 2014   
First visit, CERN member state since Jan. 2014

Germany: May 2014   
-> addition of LHC phase II upgrade to national roadmap

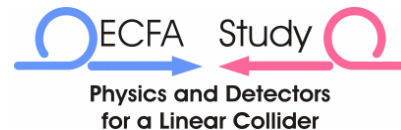
## P-ECFA + R-ECFA

CERN, November 2013

DESY, July 2014

Reports from CERN, DESY, Frascati, Belle II and Super-KEK, Fermilab, SESAME, IPPOG etc.

**Prolongation of ECFA Study for Linear Collider Physics and Detectors till 2016**



**ECFA review panel for detector R&D (Chair: Yannis Karyotakis)**

- receive R&D proposals and make recommendations
- evaluate and monitor progress of R&D programs on request
- help to create coherent global R&D effort
- overview the European effort for detector R&D
- hosted by DESY, see <http://ecfa-dp.desy.de>

**Midterm reports from countries**

- Bulgaria, Norway, Switzerland, Belgium, Finland

## ICFA discussions

Roadmaps for particle physics in Europe, Asia, Americas

Future large accelerator facilities: HL-LHC, ILC, CLIC, FCC, CEPC/CppC

## ICFA statement on global planning for particle physics

ICFA endorses the particle physics strategic plans produced in Europe, Asia and the United States and the globally aligned priorities contained therein.

Here, ICFA reaffirms its support of the ILC, which is in a mature state of technical development and offers unprecedented opportunities for precision studies of the newly discovered Higgs boson.

In addition, ICFA continues to encourage international studies of circular colliders, with an ultimate goal of proton-proton collisions at energies much higher than those of the LHC.

## New ICFA chairperson from Europe Joachim Mnich





## Organization of joint ECFA - EPS-HEPP session at EPS2015 in Vienna 25 July 2015

- “Connecting scales: bridging the infinities”

## Short document on how to evaluate achievements of physicists from our field

- Small editorial board set up

**HL-LHC Experiments Workshop, Aix-les-Bains, Oct. 2013 and Oct. 2014**  
 -> CERN Council approved inclusion of HL-LHC construction in medium-term plan!

**FCC study kick-off meeting, Geneva, Feb. 2014**



**ECFA High Luminosity LHC Experiments Workshop**  
*Physics and technology challenges*  
**1<sup>st</sup> – 3<sup>rd</sup> October**  
**Aix-les-Bains France**

<https://indico.cern.ch/conferenceDisplay.py?confId=252045>

**Programme Committee**  
 P. Allport  
 A. Ball  
 S. Bertolucci  
 P. Campana  
 D. Charlton  
 D. Contardo  
 B. Di Girolamo  
 P. Giubellino  
 J. Incandela  
 P. Jenni  
 M. Kramer  
 M. Mangano  
 S. Myers  
 B. Schmidt  
 T. Virdee  
 H. Wessels

**Local Organising Committee**  
 P. Allport, D. Contardo, D. Hudson, E. Potter

Picture Credit: OT Aix-les-Bains / Gilles Lansard



**2<sup>nd</sup> ECFA HIGH LUMINOSITY LHC Experiments Workshop**  
*Physics and technology developments*  
**21<sup>st</sup> - 23<sup>rd</sup> OCTOBER 2014**  
 Aix-les-Bains | France

**Programme Committee:**  
 P. Allport | A. Ball | S. Bertolucci | F. Bordry | T. Campos | D. Charlton | D. Contardo | B. Di Girolamo  
 P. Giubellino | M. Kramer | M. Mangano | L. Rossi | B. Schmidt | T. Virdee | J. Wessels | G. Wilkinson

**Organising Committee:**  
 P. Allport | D. Contardo | D. Hudson | E. Potter

Registration and further information at: <https://indico.cern.ch/event/15626/>  
 or [dianahobson@cern.ch](mailto:dianahobson@cern.ch) and [emilie.potter@cern.ch](mailto:emilie.potter@cern.ch)



**Future Circular Collider Study Kick-off Meeting**

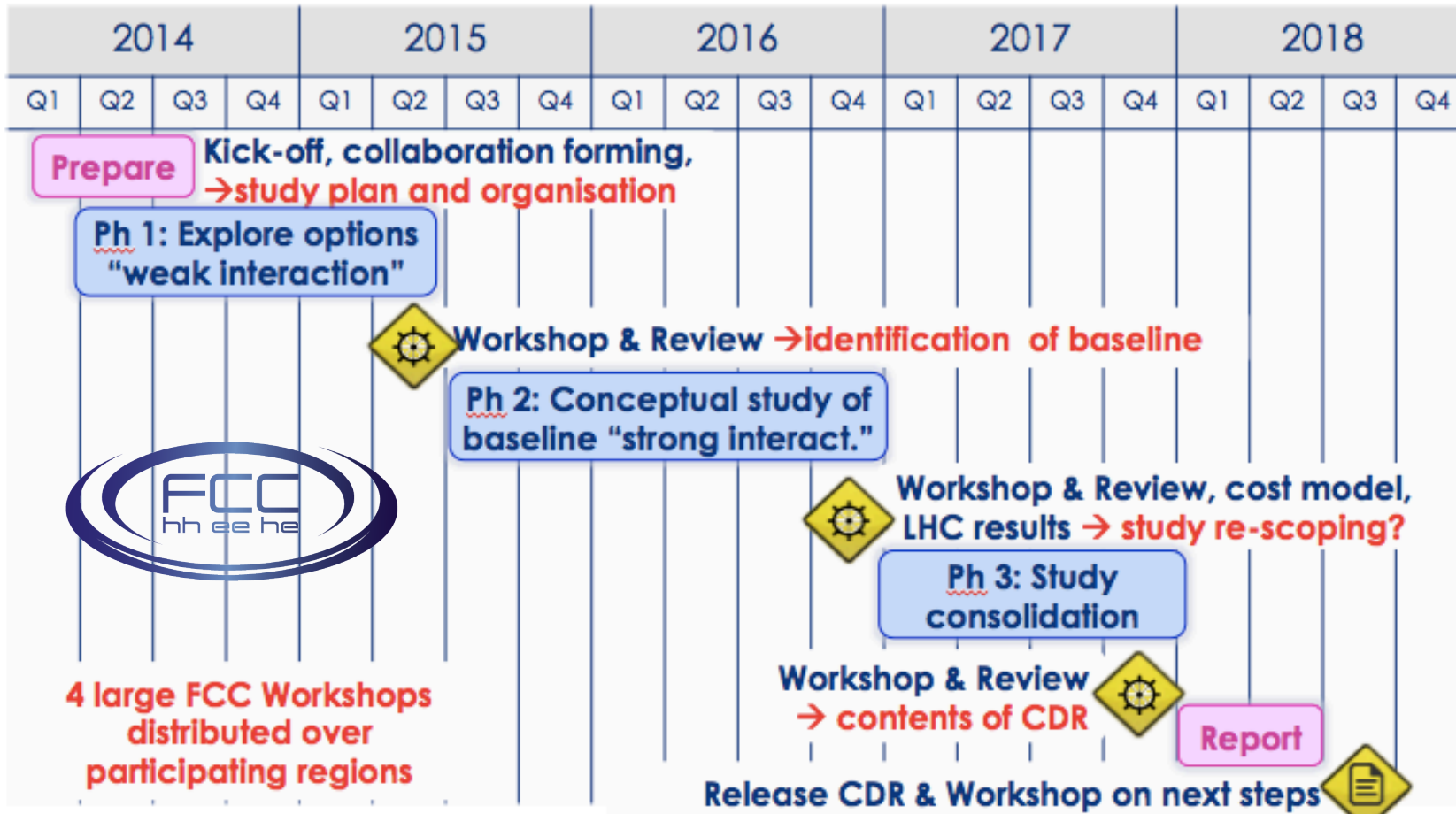
**12-15 February 2014, University of Geneva, Switzerland**

**LOCAL ORGANIZING COMMITTEE**  
 University of Geneva  
 C. Blanchard, A. Blondel,  
 C. Doglioni, G. Iacobucci,  
 M. Koratzinos  
 CERN  
 M. Benedikt, E. Delucinge,  
 J. Gutleber, D. Hudson,  
 C. Potter, F. Zimmermann

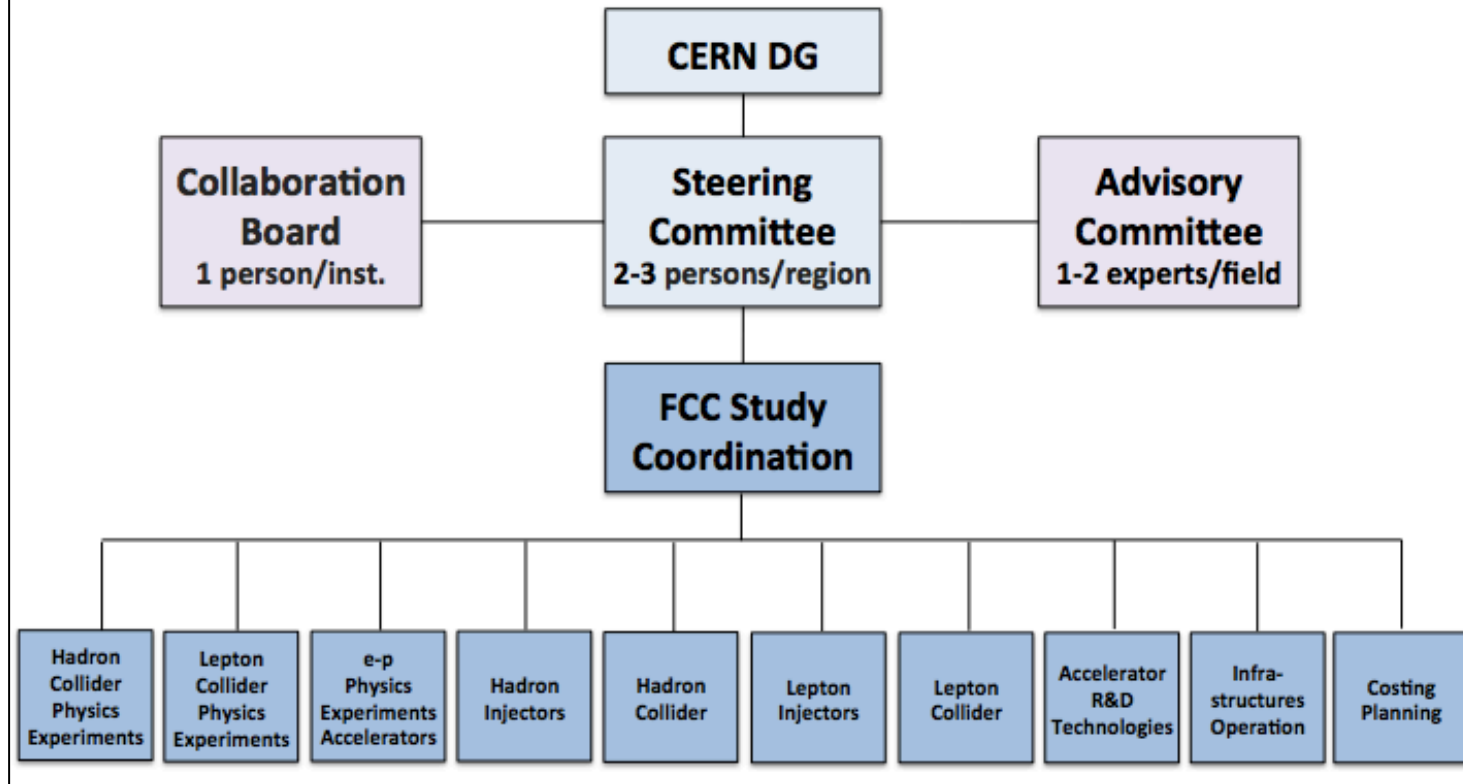
**SCIENTIFIC ORGANIZING COMMITTEE**  
**FCC Coordination Group**  
 A. Ball, M. Benedikt, A. Blondel,  
 F. Bordry, L. Bottura, O. Brüning,  
 P. Collier, J. Ellis, F. Gianotti,  
 B. Goddard, P. Janot, E. Jensen,  
 J. M. Jimenez, M. Klein, P. Lebrun,  
 M. Mangano, D. Schulte,  
 F. Sonnemann, L. Tavian,  
 J. Wenninger, F. Zimmermann

<http://indico.cern.ch/e/fcc-kickoff>

## Proposal for FCC Study Time Line




## Proposed international organization structure



P-ECFA approved Manfred Krammer as the representative of ECFA in the FCC Steering Committee.

## Instrumentation School in Novi Sad, Serbia 8-13 Sep. 2014

- initiated during RECFA country visit in Oct. 2012
- jointly organized by ECFA, ICFA Instrumentation Panel and CERN



*Danube School*  
on Instrumentation  
in Elementary Particle  
& Nuclear Physics

UNIVERSITY OF NOVI SAD, SERBIA  
September 8-13, 2014

The school is an equal opportunity event intended for MSC, PhD and Postdoc students who want to acquire hands on experience in different detector technologies used in Particle Physics and Nuclear Physics. Researchers, who are actively involved in the field and are recognized experts in detector R&D, will give lectures and state-of-art laboratory sessions. Students are encouraged to attend, contribute and share their experience.

**Review Talks**

- Higgs Boson: from QED to LHC
- Future Challenges in Physics
- The Linear Colliders Challenges
- Neutrino Physics
- The Challenge of B-physics and rare decay events
- Astro-particle and dark matter searches
- Nuclear Physics

Accompanied by lectures and laboratory "hands-on" practice on detector techniques both in particle and nuclear physics.

**INTERNATIONAL ADVISORY COMMITTEE**

C. Alexa, IFRE-III, Bucharest, Romania  
P. Bloch, CERN  
V. Bragilevic, Rudjer Boskovic Institute, Zagreb, Croatia  
G. Casse, University of Liverpool, UK  
A. Corti, CERN  
R.D. Fisher, CERN  
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P. Krizan, University of Ljubljana and JSL, Slovenia  
L. Masetti, CERN  
E. Nappi, INFN, Italy  
M. Planinic, Faculty of Sciences, Zagreb, Croatia

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D. Ninković, University of Novi Sad  
J. Nikolic, University of Novi Sad  
D. Popović, University of Belgrade  
G. Stapanović, University of Novi Sad  
D. Špačnik, University of Belgrade  
M. Veskovik, University of Novi Sad (School Director)

More information and registration:  
<http://cern-danube-school.uns.ac.rs>

Deadline for applications:  
June 15<sup>th</sup> 2014



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More information, documents:

<https://ecfa.web.cern.ch/>

**Thank you!**

