

# Report on R(ECFA)

Bengt Lund-Jensen, David Milstead, Roman Pasechnik



# (R)ECFA

<https://ecfa.web.cern.ch/content/plenary-ecfa>

- European Committee for Future Accelerators
  - Bengt Lund-Jensen (KTH), Roman Pasechnik (LU)

## Plenary ECFA

Plenary ECFA decides on all ECFA activities, appoints the Chair and Secretary, approves the final reports of the working groups and terminates their activities, decides on admission of new observers, and makes recommendations to outside organizations. Plenary ECFA appoints members for a total maximum period of six years after nomination by their country. While the members so chosen should be able to represent the views of the high-energy physics community of their country, they are members of Plenary ECFA as individuals. Plenary ECFA normally holds two meetings per year. Meetings are public unless otherwise decided.

Plenary ECFA Members

- Restricted European Committee for Future Accelerators
  - David Milstead (SU)

## RECFA

Restricted ECFA is composed of one member per country, appointed for at most two three-year periods. Restricted ECFA assists and advises the Chair and the Secretary in the current running of ECFA, and acts as the communication channel to each participating country, its physics community and national institutes and authorities.



# ***European Committee for Future Accelerators (ECFA)***

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

- 1) Long-range planning of European high-energy facilities adequate for the conduct of a valid high-energy research programme by the community of physicists.
- 2) Equilibrium between the roles of international and national laboratories and university institutes, and a close relation between research and education in high-energy physics and other fields.
- 3) Adequate conditions for research and a just and equitable sharing of facilities between physicists, irrespective of nationality and origin, as conducive to a successful collaborative effort.
- 4) To achieve these aims ECFA engages in regular meetings, symposia/conferences, study groups, demographic studies, monitoring via country visits with recommendations to policy makers.
- 5) Plenary meetings with twice per year (cfr. website), followed with an ECFA Newsletter. Those with at least a CERN lightweight account have an opportunity to receive these automatically. Register under "Member" via the link: <https://e-groups.cern.ch/e-groups/Egroup.do?egroupId=10319139&AI>

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## RECFA

- Country visits to review national particle physics community.
- Working groups on specific topics, eg recognition of individuals
- Preparatory work ahead of public ECFA.

## ***ECFA Working Groups***

***ApPEC-ECFA-NuPECC Joint Seminar: next slides***

***ApPEC-ECFA-NuPECC working group on a Diversity Charter: report today***

***ECFA working group on Recognition of Individual Achievements in Large Collaborations: next slides***

***Working group on Higgs@FutureColliders: next slides***

POLICY

## Survey addresses recognition in large collaborations

The European Committee for Future Accelerators (ECFA) has created a working group to examine the recognition of individual achievements in large scientific collaborations. Based on feedback from an initial survey of the leaders of 29 CERN-based or CERN-recognised experiments in particle, nuclear, astroparticle and astrophysics, ECFA found that the community is ready to engage in dialogue on this topic and receptive to potential recommendations.

In response, ECFA has launched a community-wide survey to verify how individual researchers perceive the systems put in place to recognise their achievements. The survey will be distributed widely, and can be found on the ECFA website (<https://ecfa.web.cern.ch>) with a deadline for responses by 26 October.

The results of the survey will be disseminated and discussed at the upcoming plenary ECFA meeting at CERN on 15–16 November. An open session during the morning of 15 November, also to be webcast, will be devoted to the discussion of the outcomes of the survey, and aims to gather input to be submitted to the update of the European Strategy for Particle Physics



Physicists in CERN's Building 40. The ATLAS and CMS collaborations at the LHC each number more than 3000 members from over 200 institutes.

(CERN Courier April 2018 p7). During the remaining open sessions, comprehensive overviews of all major future collider projects in and beyond Europe, and related accelerator technologies, will be given.

“Visibility and promotion of young scientists is of utmost importance in science and in particular also for the large

collaborations in high-energy physics,” says ECFA chairperson Jorgen D’Hondt. “On the eve of the update process of the European Strategy update, it is an outstanding opportunity for ECFA to take on its responsibility for informing the community about the opportunities and challenges ahead of us. Everybody is welcome.”

CERN Courier  
October 2018

<https://cerncourier.com/survey-addresses-recognition-in-large-collaborations/>

Also in CERN Bulletin

[https://home.cern/cern-people/updates/2018/10/addressing-recognition-large-collaborations?utm\\_source=Bulletin&utm\\_medium=Email&utm\\_content=2018-10-04E&utm\\_campaign=BulletinEmail](https://home.cern/cern-people/updates/2018/10/addressing-recognition-large-collaborations?utm_source=Bulletin&utm_medium=Email&utm_content=2018-10-04E&utm_campaign=BulletinEmail)

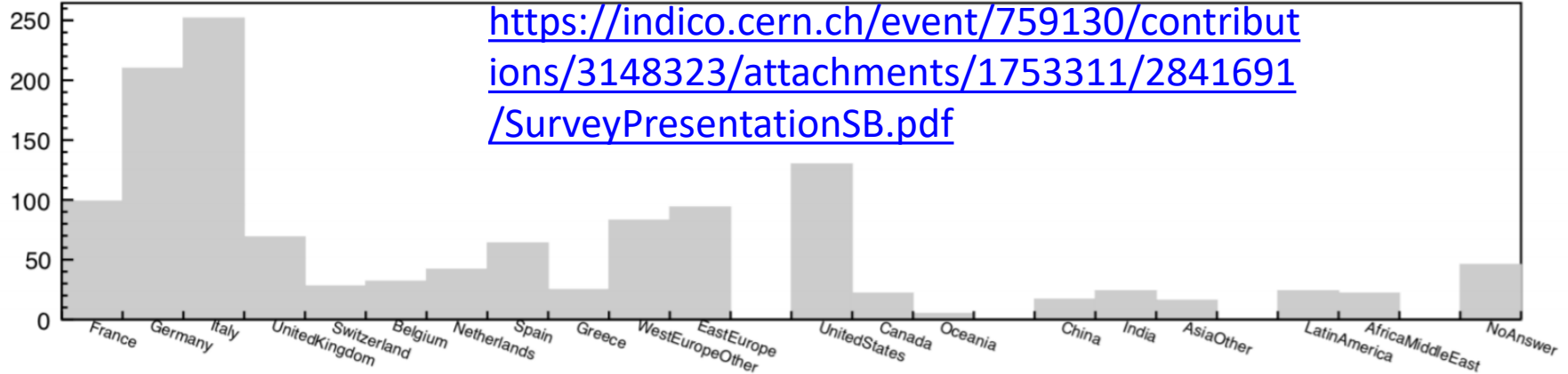
Thu 15/11

Print PDF Full screen Detailed view Filter

09:00	<b>Inspirational talk</b> 500/1-001 - Main Auditorium, CERN	Valerie Gibson	09:00 - 09:30
	<b>Results of the community-wide ECFA Survey</b> 500/1-001 - Main Auditorium, CERN	Stan Bentvelsen	09:30 - 10:00
10:00	<b>Coffee/tea break</b> 500/1-001 - Main Auditorium, CERN		10:00 - 10:15
	<b>Panel debate</b> 500/1-001 - Main Auditorium, CERN		10:15 - 11:30
11:00	<b>Q&amp;A</b> 500/1-001 - Main Auditorium, CERN		11:30 - 12:00
12:00			

Special ECFA session

<https://indico.cern.ch/event/759130/contributions/3148323/attachments/1753311/2841691/SurveyPresentationSB.pdf>

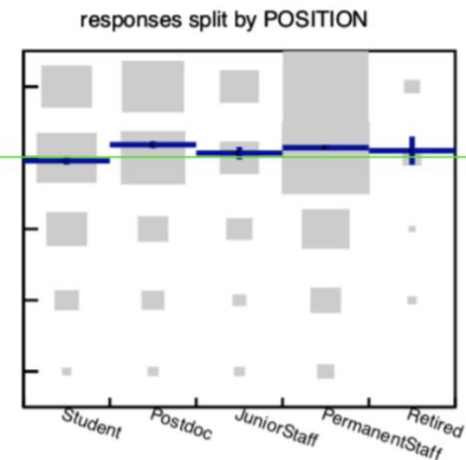
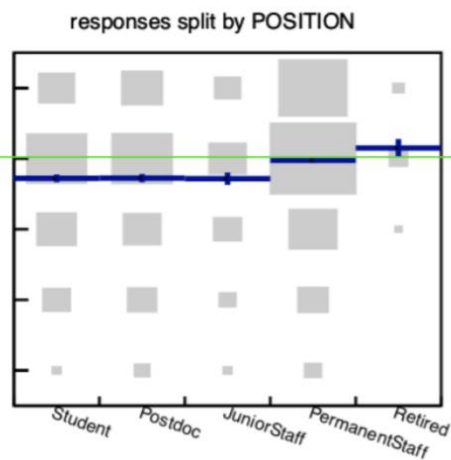
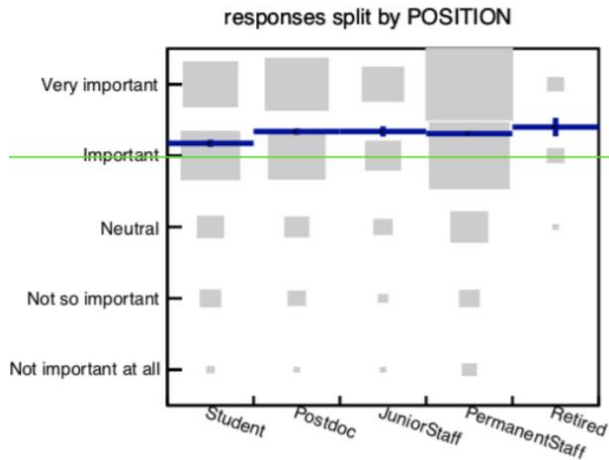


## VERIFY SUCCESS OF A SCIENTIST

**Being contact author for a publication**

**Authorship of internal notes**

**Excellent letters of reference**



Contact author for a publication is perceived to be very important as well as excellent letters of reference

Ongoing work – discussions with collaborations and community.  
Data available on request (as long as anonymity of respondents can be guaranteed).



# Intra-community activities

<https://jenas-2019.lal.in2p3.fr/>

ECFA-NuPPEC-ApPEC Seminar

Overlap between fields.

Common approach to diversity/equality - charter



## Diversity Charter ECFA-NuPECC-ApPEC

### Introduction and situation

In the past months, representatives of APPEC, ECFA and NuPECC came together for the drafting of a joint Diversity Charter (DC) to be proposed to the three consortia/committees (c/c) themselves and to collaborations, conferences and other potential signatory organizations. The first draft was presented to the General Assemblies of the three c/c in the final meeting of 2018 (APPEC GA meeting in Athens, December 2018) or in the first meetings of 2019 (ECFA and NuPECC).

Minor changes were suggested about the content of the document in this first iteration, but some concerns arose mainly about:

1. the **data-protection** level implied by the adopted tools for data collection,
2. the **workforce** needed to support the application of the DC in the upcoming years.

The aim is to confirm a final draft of the document (see doc 06.2 as proposal), solve the issues in the upcoming round of General-Assembly meetings and present the final DC at the joint meeting JENAS 2019 on October, 14-16.

# Contribution to Strategy Update

## Higgs Boson studies at future particle colliders

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### ABSTRACT

This document aims to provide an assessment of the potential of future colliding beam facilities to perform Higgs boson studies. The analysis builds on the submissions made by the proponents of future colliders to the European Strategy Update process, and takes as its point of departure the results expected at the completion of the HL-LHC program. This report presents quantitative results on many aspects of Higgs physics for future collider projects of sufficient maturity using uniform methodologies. A first version of this report was prepared for the purposes of discussion at the Open Symposium in Granada (13-16/05/2019). Comments and feedback received led to the consideration of additional run scenarios as well as a refined analysis of the impact of electroweak measurements on the Higgs coupling extraction.

**Table 8.** Sensitivity at 68% probability to deviations in the different effective EW couplings from a global fit to the projections available at each future collider project. Results obtained for the Global SMEFT fit benchmark denoted as SMEFT<sub>ND</sub> in the text. The numbers for all future colliders are shown *in combination* with the HL-LHC results. The results for ILC and CLIC are shown without a dedicated Giga-Z run. Appendix F includes the results with a Giga-Z run in Table 34.



	HL-LHC	LHeC	HE-LHC		250	ILC	1000	HL-LHC + CLIC			CEPC	FCC-ee		FCC-ee/eh/hh
			S <sub>2</sub>	S <sub>2</sub> '		500		380	1500	3000		240	365	
g <sub>1</sub> <sup>0</sup> [%]	1.3	0.97	1.3	1.2	0.082	0.048	0.043	0.027	0.013	0.011	0.032	0.028	0.028	0.028
g <sub>1</sub> <sup>+</sup> [%]	1.2	1.2	1.2	1.2	0.11	0.088	0.085	0.16	0.14	0.14	0.036	0.03	0.03	0.03
g <sub>1</sub> <sup>-</sup> [%]	1.6	1.4	1.6	1.5	0.12	0.095	0.092	0.16	0.14	0.14	0.038	0.034	0.034	0.033
g <sub>2</sub> <sup>0</sup> [%]	0.08	0.079	0.079	0.079	0.048	0.037	0.035	0.035	0.022	0.02	0.014	0.0095	0.0073	0.0072
g <sub>2</sub> <sup>+</sup> [%]	0.098	0.098	0.098	0.098	0.055	0.041	0.037	0.047	0.035	0.031	0.016	0.0097	0.0089	0.0088
g <sub>2</sub> <sup>-</sup> [%]	0.39	0.39	0.39	0.39	0.072	0.07	0.069	0.17	0.17	0.17	0.031	0.0094	0.007	0.007
g <sub>3</sub> <sup>0</sup> [%]	0.61	0.6	0.6	0.6	0.09	0.087	0.087	0.24	0.24	0.24	0.047	0.0099	0.0092	0.0091
g <sub>3</sub> <sup>+</sup> [%]	0.2	0.2	0.2	0.2	0.076	0.073	0.073	0.17	0.17	0.17	0.016	0.0099	0.0076	0.0076
g <sub>3</sub> <sup>-</sup> [%]	0.29	0.29	0.29	0.29	0.094	0.091	0.091	0.24	0.24	0.24	0.018	0.01	0.0094	0.0094
g <sub>4</sub> <sup>0</sup> [%]	0.97	0.96	0.95	0.95	0.24	0.23	0.23	0.26	0.26	0.26	0.051	0.05	0.05	0.047
g <sub>4</sub> <sup>+</sup> [%]	3.6	3.6	3.5	3.5	0.35	0.35	0.35	0.43	0.44	0.43	0.08	0.066	0.066	0.064
g <sub>4</sub> <sup>-</sup> [%]	11.	11.	11.	11.	11.	0.84	0.78	2.4	0.65	0.52	11.	11.	1.5	1.3
g <sub>5</sub> <sup>0</sup> [%]	–	–	–	–	–	2.	1.9	6.	1.6	1.7	–	–	3.5	3.1
g <sub>6</sub> <sup>0</sup> [%]	0.88	0.81	0.77	0.75	0.23	0.21	0.21	0.25	0.24	0.24	0.056	0.051	0.051	0.047
g <sub>6</sub> <sup>+</sup> [%]	27.	25.	23.	22.	4.8	3.9	3.8	5.9	5.3	5.1	1.4	1.1	1.1	1.
g <sub>6</sub> <sup>-</sup> [%]	0.35	0.35	0.35	0.35	0.071	0.068	0.067	0.13	0.13	0.13	0.017	0.011	0.011	0.011
g <sub>7</sub> <sup>0</sup> [%]	11.	11.	11.	11.	0.51	0.51	0.51	3.	3.	3.	0.29	0.088	0.088	0.087



# RECFA meetings

## October 2019

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-  26 Oct [RECFA session - Cyprus](#)
-  25 Oct [RECFA visit to Cyprus - Open Session](#)



## July 2019

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-  13 Jul [RECFA session - Ghent, Belgium.](#)



## May 2019

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-  25 May [RECFA Session - Warsaw, Poland](#)
-  24 May [RECFA visit to Poland - Open Session](#)



## April 2019

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-  06 Apr [RECFA Session - Ljubljana, Slovenia](#)
-  05 Apr [Open Session - Ljubljana, Slovenia](#)

## March 2019

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-  02 Mar [RECFA Session - Madrid, Spain](#)
-  01 Mar [RECFA visit to Spain - Open Session](#)

## December 2018

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-  14 Dec [Special RECFA meeting](#)

## November 2018

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-  14 Nov [Restricted ECFA - CERN](#) (protected)

Day 1: Open session  
Talks on activities, funding,  
national infrastructures  
Day 2: Closed session.  
Discussion on national  
activities + RECFA/ECFA  
business

# Forthcoming PECFA

Plenary ECFA 15th November.

## Early Career Researchers debate the European Strategy for Particle Physics (15 Nov 2019)

With the input from the Physics Briefing Book due by the end of September, the next step in the European Strategy process is to define some overall long-term scenarios, keeping an eye on evolutions in the global landscape, and to discuss within the European Strategy Group (ESG) their scientific coverage, feasibility and community support. Given the long-term impact of these strategic choices, ECFA is organising a full-day event in the Main Auditorium at CERN on 15 November 2019, to enable early-career researchers to debate the Strategy. Participation in the meeting will be limited to invited early-career researchers (see ECFA Newsletter #3). Both PhD students and postdocs active in particle physics and/or adjacent fields are eligible. After the event, the early-career researchers will be mandated to deliver a brief document overviewing their thoughts on the Strategy. There will be no need to reach a consensus on all aspects, but the document must cover all the topics that were discussed during the meeting. The ECFA Chair will bring this document to the attention of the ESG.

### ***Plenary ECFA meeting in 2020***

- JINR (Dubna) as venue for the Summer PECFA meeting
- Current dates: 6-7 July 2020
  
- CERN for the Autumn PECFA meeting
- Possible dates:
  - 12-13 Nov
  - 19-20 Nov

# Summary + changes

- R(ECFA)
  - Working groups on topical areas of research and how research is done.
  - Review of national activities.
- Bengt is stepping down (tack for the work)
  - New Swedish nominee towards the end of 2020.
  - Board + discussion from community.