ECFA Chair Report

Plenary ECFA Meeting
21st July 2022

Karl Jakobs, ECFA Chair
University of Freiburg / Germany

Topics addressed

1. Implementation of the 2021 ECFA Detector R&D Roadmap
2. Status and plans of ECFA activity on an e^+e^- factory
3. RECFA Country visits
4. Joint ECFA-NuPECC-APPEC Activities and JENAS Seminar
5. News on ILC (recent developments from ICFA and IDT)
6. ECFA Schedule 2022 and 2023

ECFA Statement on the Russian invasion of Ukraine

The European Committee for Future Accelerators (ECFA) strongly condemns the Russian invasion of Ukraine, a terrible attack on peace, freedom and a breach of the laws of nations, leading to unimaginable suffering of the Ukrainian population and losses of life.

We believe in peaceful collaboration of scientists from all nations and reject any violence to achieve political goals. We express our solidarity with all people suffering from this war.

Ukraine is an Associate Member State of CERN and thereby one of the member countries in ECFA. Ukrainian and Russian scientists cooperate in many projects with scientists from other European countries in ECFA and from the rest of the world.

Particle physics - and CERN in particular - have set a prime example for successful international cooperation in science and for bringing nations and people together. We hold up to these values. However, given the severity of the aggression, no new cooperation agreements with Russia should be made.

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

Message from our Ukrainian RECFA delegate (Mykola Shulga)

Dear Karl,

Unfortunately, we are surviving a very dramatic period of our life here in Kharkiv. Our institute, NSC Kharkiv Institute of Physics and Technology (NSC KIPT), was closed for most of scientists starting from February 24, the very beginning of Russia's invasion of Ukraine. The institute, located on the northern outskirts of Kharkiv in a few kilometers from the front of hostilities with Russia, has been subjected to shelling and bombing. More than a hundred shells and bombs fell on the territory of the institute. As a result, most of the institute buildings have been substantially damaged. In addition, there was no power supply, water supply and communication at the institute and the area around it for more than two months (that is why I could not get in touch with you for a long time, since I was at the institute or near it). At present, communication and power supply have been restored. Huge destruction also occurred in Kharkiv. Not only military facilities were destroyed, but also residential buildings (more than two thousand residential buildings were destroyed in Kharkiv). And all this is happening and continues to happen at the present time. Who would have thought that this is possible in the 21st century in the center of Europe.

Mykola Shulga, 13 May 2022

Update on 20 July 2022 (Mykola Shulga):

A talk by M. Shulga on the history of the institute and the war is attached to the meeting page

NSC KIPT

06 March 2022

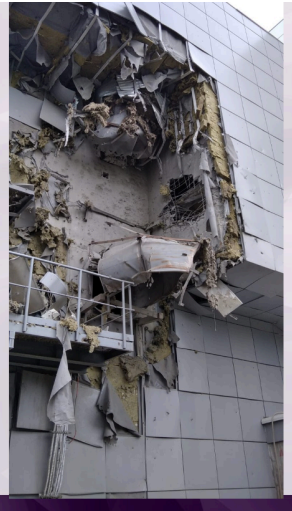
The "Neutron Source" YPU was fired upon

- the installation is switched to long-term shutdown mode
- the construction of the substation was completely destroyed
- the paneling is damaged in some places

NSC KIPT

26 March 2022

Another shelling of the territory



Since that time the building of the "Neutron Source" with the subcritical reactor was hit multiple times

Fresh result of the rocket hit of the neutron source (26 June 2022)

NSC KIPT

More than 100 shells, bombs and different rockets fell into the territory of NSC KIPT since 24 February 2022.

Significant destruction also takes place in Kharkiv. not only military facilities were destroyed, but more than 5,000 residential buildings.

And all this happened and continues to happen at the present time. Who would have thought that this is possible in the 21st century in the center of Europe.

Despite all this, the institute continues to work in many areas and heal the destruction even today.

1. Implementation of the 2021 ECFA Detector R&D Roadmap

- Approved by Plenary ECFA on 18 Nov 2021
- Released in December 2021, after presentation to CERN Council

  Documents available: https://cds.cern.ch/record/2784893

- CERN Council has mandated ECFA to work out a detailed implementation plan
  (in close collaboration with the SPC, the funding agencies and the relevant research organisations in Europe and beyond)
- Likewise, the European Lab Director Group (LDG) was mandated to work out an implementation plan for the **Accelerator R&D Roadmap**

- ECFA **Roadmap Coordination Group*** has worked out a proposal, which was discussed in RECFA and presented to SPC and Council in March and June 2022
  **(Phil Allport, Silvia Dalla Torre, Jorgen D'Hondt, Karl Jakobs, Manfred Krammer, Susanne Kuehn, Felix Sefkow, Ian Shipsey)*

  Some discussions still ongoing, aim for a final plan in September (SPC, Council)

- In the following: short summary of the plan, more detailed presentation by Phil Allport tomorrow

Interactions with Funding Agencies

- Presentation to the Open LHC-RRB on 25th April 2022:
  https://indico.cern.ch/event/1133070/timetable/

  → In preparation for a more in-depth discussion that took place on Thursday, 28th April

  (LHC-RRB: reaching out to all Funding Agencies involved in any of the large LHC experiments, reaching also beyond Europe)

- Several one-to-one discussions

- In-depth discussion session on Thursday 28th April
  https://indico.cern.ch/event/1154156/

- **In general: Support for the plan to set up structured, long-term Detector R&D activities; No major objections raised**

  Issues to be clarified: Funding schemes need to be adapted, further iteration on review process, inclusion of non-European partners, industry and neighbouring fields, …

Proposed implementation plan

- We propose to organise long-term R&D efforts into **newly established Detector R&D (DRD) Collaborations**

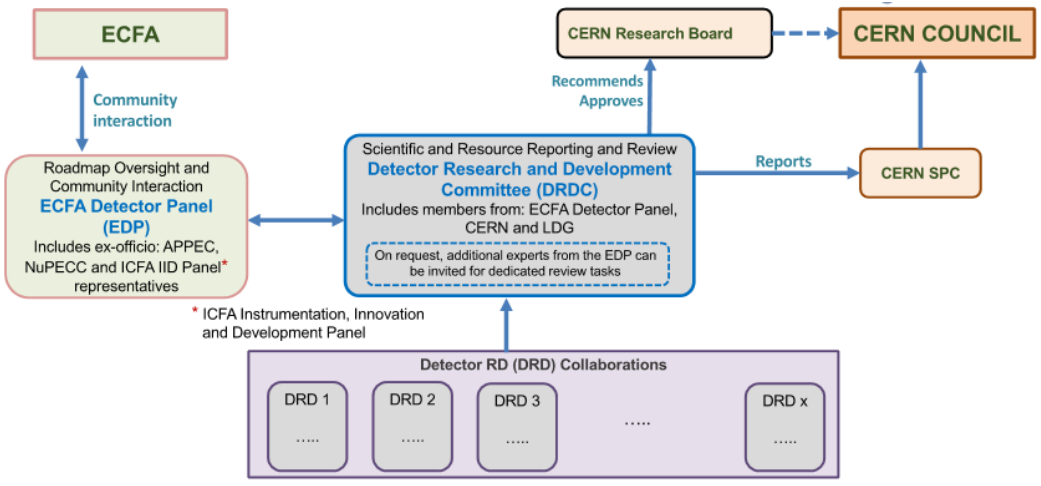
  Detector technology areas: larger DRD collaborations should be considered
  (one for each of the six areas and an additional similar structure for the transversal topics)

- **DRD Collaborations should be anchored at CERN** → CERN recognition, DRD label

- **Taking full account of existing, well-managed and successful ongoing R&D collaborations and other existing activities**
  (CERN EP R&D programme, EU-funded initiatives, collaborations exploring particular technology areas for future colliders)

- The **formation of new DRD collaborations** should adopt a **community-driven approach;**
  Supported by existing ECFA Detector R&D Roadmap Task Forces;
  Aim to have new structure in place in January 2024

Review and Approval Process



1. Scientific and Resource Reporting and Review by a Detector Research and Development Committee (DRDC)

   Assisted by the ECFA Detector Panel (EDP): the scope, R&D goals, and milestones should be vetted against the vision encapsulated in the Roadmap. (EDP: http://cds.cern.ch/record/2211641/files/, exists, hosted at DESY)

2. Funding Agency involvement via a dedicated Resources Review Board (~once every two years)

3. Yearly follow-up by DRDC → report to SPC → Council

Additional Comments

- As projects develop, **some aspects should be expected to transition into approved experiment-specific R&D** (outside the DRD programme)

- In addition, as stated in the General recommendations (GSR7) funding possibilities for “Blue-sky” R&D” should be foreseen

→ Three areas of Detector R&D:

1. Strategic R&D via DRD Collaborations (long-term strategic R&D lines)
   (address the high-priority items defined in the Roadmap via the DRDTs)

2. Experiment-specific R&D (with very well defined detector specifications)
   (funded outside of DRD programme, via experiments, usually not yet covered within the projected budgets for the final deliverables)

3. ”Blue-sky” R&D
   (competitive, short-term responsive grants, nationally organised)

Status of implementation:

- Discussions with existing RD50 and RD51 Collaborations (semiconductor and gaseous detectors, respectively) are ongoing, on how the transition can be realised

- Consensus by all that new structure is needed and should be in place when HL-LHC detector construction is completed (HL-LHC deliverables have to be prioritised by many/all institutes);
  Since both collaborations are only approved until end of 2023, a "natural" date for start-up of the new DRD collaborations seems to be **1. January 2024**

- Aim: - **Ramp-up of the proposed resources (personnel, money) through 2025**
  - **Steady state by 2026**

- **Same start-up dates planned for the DRD collaborations in the other areas;**
  Strong support of the plan as well by other technology areas

- Setting up of new DRD collaborations should be done in a bottom-up approach involving the full community;
  To be coordinated by the ECFA Task Force leaders with strong participation of existing RD managements

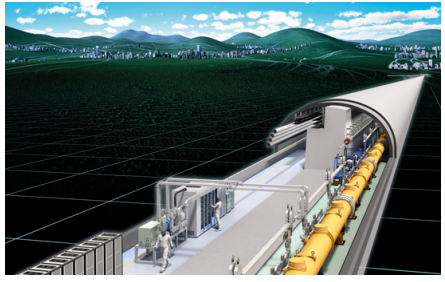
- Aim to get final endorsement of the structure in September / December Council

- CERN DRD Collaborations are open to all institutes (world-wide) to participate!

2. Physics, Experiments and Detectors at a Future e^+e^- Factory

"ECFA recognizes the need for the experimental and theoretical communities involved in physics studies, experiment designs and detector technologies at future Higgs factories to gather. ***ECFA supports a series of workshops*** *with the aim to* ***share challenges and expertise, to explore synergies in their efforts*** *and to respond coherently to this priority in the European Strategy for Particle Physics (ESPP)."*

Goal: bring the entire e^+e^- Higgs factory effort together, foster cooperation across various projects; collaborative research programmes are to emerge



Working Groups

- **Working Groups** established, important **Topical Meeting** have been held / are upcoming

WG 1: Physics Potential
Conveners: Juan Alcaraz (CIEMAT - Madrid), Jorge de Blas (Granada), Jenny List (DESY) and Fabio Maltoni (UC Louvain / Bologna)

WG 2: Physics Analysis Methods
Conveners: Patrizia Azzi (INFN-Padova / CERN), Fulvio Piccinini (INFN Pavia) and Dirk Zerwas (IJCLab)

WG 3: Detector R&D (interface group to DRD Collaborations (requirements) has been set up)
Conveners: Mary Cruz-Fouz (CIEMAT Madrid), Giovanni Marchiori (APC Paris), Felix Sefkow (DESY)

Detailed reports on status of the work tomorrow

Setting up WG3 (Detector R&D)

- There is consensus that the R&D activities for a future e+e- collider should be integrated into the Roadmap structure

  Many key issues are in line with the major roadmap detector R&D themes

- Despite this, we consider it useful to have a WG3

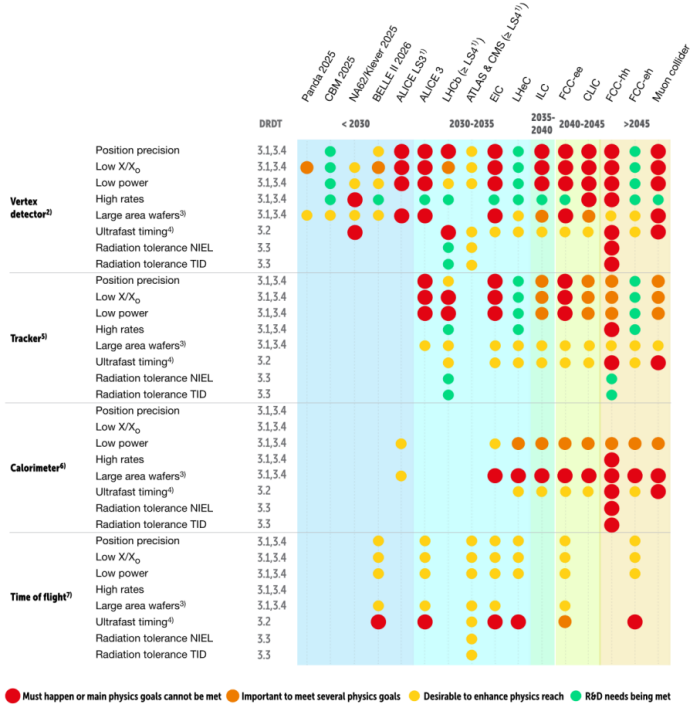
  - Interface between RD activities and various e^+e^- collider initiatives

  - Follow-up and update of developing detector requirements

  (Mandate defined)

- Conveners: Mary-Cruz Fouz (Madrid), Giovanni Marchiori (APC Paris), Felix Sefkow (DESY)

Example: Solid State Detectors (TF3)



2022 ECFA e^+e^- Workshop in Hamburg 5 – 7 October 2022

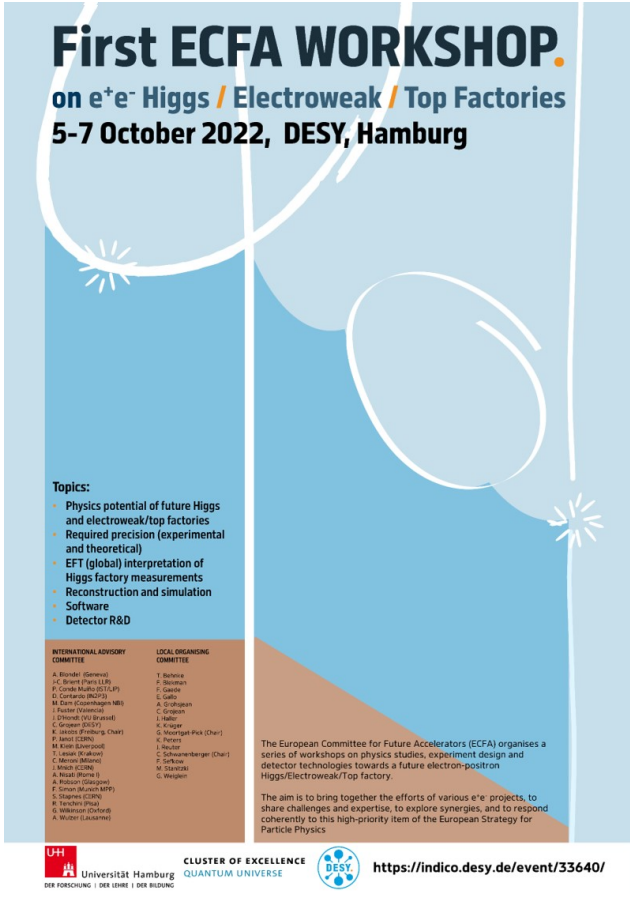
- Status of Working Group activities
- Discussion of future plans
- Interaction between theory and experiments
- "Public Talk" on importance of future e^+e^- collider / new era
  Speaker: Hitoshi Murayama
  + panel discussion
  (involving Fabiola Gianotti, ..)

Registration is open!

https://indico.desy.de/event/33640/

Broad participation is highly welcome!

Poster and Web page



Poster and web page: www.desy.de/ecfa2022

The 2022 meeting of the ECFA study on physics and experiments at e+e- Higgs/EW/Top Factories will take place in Hamburg at the **campus of the DESY laboratory** from **October 5 to 7, 2022**.

This meeting is intended to be an **in-person meeting**.

The registration fee is 165 € until **September 15 2022**, and 200 € thereafter.

The central entry point of the ECFA study is accessible through this link.

Abstract submission is possible; talks (and posters) will be selected, in addition to those assigned by the conveners

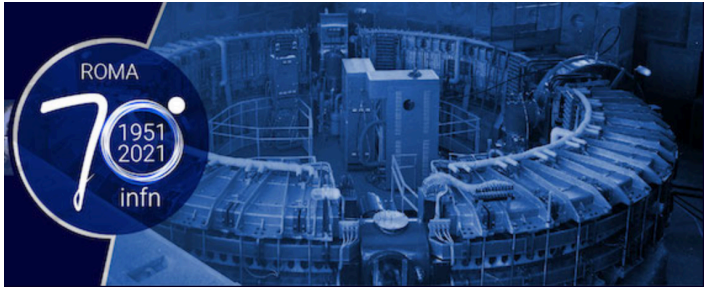
https://indico.desy.de/event/33640/timetable/#all.detailed

Opening Session, Wed. 5 Oct. 2022

Opening & Introduction *Auditorium, DESY Hamburg*		09:15 - 09:25
Physics case of an e+e- Higgs factory *Auditorium, DESY Hamburg*	*Matthew Mccullough*	09:25 - 09:45
News and input to ECFA study from circular Higgs Factories *Auditorium, DESY Hamburg*	*Frank Simon*	09:45 - 10:05
News and input to ECFA study from linear Higgs Factories *Auditorium, DESY Hamburg*	*Junping TIAN*	10:05 - 10:25
Coffee break *Auditorium, DESY Hamburg*		10:30 - 11:00
Physics landscape at the start of a Higgs factory *Auditorium, DESY Hamburg*		11:00 - 11:25
Precision theory requirements, developments & prospects for e+e- *Auditorium, DESY Hamburg*		11:25 - 11:50
Interplay of indirect and direct searches at a Higgs factory *Auditorium, DESY Hamburg*		11:50 - 12:15
Open study questions *Auditorium, DESY Hamburg*	*Jenny List*	12:15 - 12:30
From Snowmass to the ECFA Higgs Factory Study *Auditorium, DESY Hamburg*	*Laura Reina*	12:30 - 12:50

- Plenary and parallel sessions
  (invited talks + abstract submission)
- Poster session
- “Summary and Plans” talks on Friday

3. RECFA Country Visits



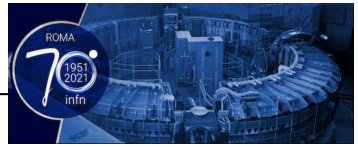
Italy, Rome, 4-5 March 2022

Germany, Berlin, 1-2 April 2022

Denmark, Copenhagen, 12-13 May 2022

https://ecfa.web.cern.ch/executive-summaries-and-letters-member-states

Italy: Main conclusions



- Italy is a stronghold of particle physics in Europe;
  A vibrant community, broad science programme and many high-quality contributions to front-line research

- INFN provides an excellent structure for fundamental research;
  Excellent interplay between INFN and the universities;

  However, improvements on stability and continuity of budget allocations desirable;
  INFN's efficiency would benefit from fewer bureaucratic hurdles

- The four national laboratories (Frascati (LNF), Gran Sasso (LNGS), Legnaro (LNL) and Sud (LNS)) provide excellent infrastructures to complement the particle, nuclear and astroparticle physics programme.

  Due to these strong laboratories (and INFN), Italy has also been very successful in exploiting EU funding opportunities and attracting high-profile, large-scale EU science programmes.
  Very substantial funding has been requested for a large national centre for high-performance computing, big data and quantum computing, as well as for large accelerator, astroparticle and technology projects.

- Strong involvement in research and development projects on particle accelerators, detectors and computing

- Emerging INFN support for the next large accelerator project (the Future Circular Collider, FCC) at CERN.

Germany: Main conclusions

- Germany is a stronghold of particle physics in Europe;
  A vibrant community, broad science programme and many high-quality contributions to front-line research

- Achievements of German institutes rely on sustained and solid funding by BMBF;
  Funding via the collaborative research structures (*Verbundforschung*) is essential to enable German universities to participate in world-leading science programmes in particle physics.

- Cooperation and funding are well complemented by strong participation by the Helmholtz Association (in particular by DESY) and the Max Planck Society as well as by support via the *Deutsche Forschungsgemeinschaft* (DFG).

- Together with CERN, more efforts should be made to increase the proportion of Germans among the CERN-employed personnel, in particular in the technical and engineering departments.

- Particular strength: large number of PhD students; efforts should be made to keep the number at the present level with adequate salaries;
  Mitigation measures should be explored and implemented to increase the rather low number of permanent scientist positions in universities.

- DESY should consider taking an even stronger role as a national support centre ("national hub") in the technology areas of detector and accelerator R&D

Denmark: Main conclusions

- Denmark has a long-standing engagement in particle physics; contributed in an important way to the establishment and development of CERN's unique research infrastructure
- Danish scientists continue to make excellent contributions to experiments at CERN. However, it is vital that they are properly supported in order to exploit the great physics opportunities, in particular in the flagship LHC experiments, and thereby to capitalise on the Danish investments and to harvest the scientific results
- This cannot be done without adapting the Danish funding structure (large degree of private funding); Increased support via the *National Instrument Centre for CERN Experiments* would be a possible way of providing sustainable funding through "rolling grants", and of catering for the needs of detector upgrades.
- Low number of PhD students and postdocs involved in the large CERN experiments
- Strategic hiring campaign needed at universities in order to safeguard the future of particle physics in Denmark (age profile of particle physics faculty members)
- Particle physics community should set up an organisation that will ensure proper community representation. The community should develop a roadmap for participation in present and future projects.
- Recommend that a working group – involving representatives from the Ministry, the universities and the community – be set up to develop a strategic plan for particle physics research in Denmark

Upcoming RECFA visits (2022) and plans for 2023

- RECFA country visit to **Hungary (Budapest)** is planned for 23 – 24 Sept. 2022

  Web page: https://indico.cern.ch/event/1148372/

- RECFA country visit to **Israel (Jerusalem)** is planned for 3 – 4 Nov. 2022

- **2023:** Planned country visits: **Czech Republic**
  Greece (t.b.c.)
  Norway
  Portugal

- **2024**: **Serbia** (postponed a few times, should be carried out in 2024)
  United Kingdom (moved from 2023 to 2024)
  …
  …

- In addition, a first visit to **Ukraine** is on hold (was planned for May 2022)

4. JENA Seminar and Joint Activities (ECFA-NuPECC-APPEC)

- Successful in-person meeting;
  164 registered participants
- Excellent talks (all available on YouTube), lively discussions
- Excellent organisation
- Discussion with Funding Agency representatives
  (23 representatives, from 18 FAs,
  9 countries + CERN + EC represented)

JENAS Madrid: Topics

Major issues discussed: https://indico.cern.ch/event/1040535/

- Overall strategies of APPEC, ECFA and NuPECC
- Presentation of status of Joint Activities (EoIs)
- Round table discussions on Technology transfer, training, outreach
- Discussion with Funding Agency (Thursday)
  Topics: - Science Case, Big Questions
  - Detector R&D, Computing;
  Discussion on funding of these activities
  (EU involvement, …)
- Technology and Detector R&D as area of synergy
- Reports (of first study) of "Recognition" in (large) collaborations and Diversity & Inclusion

JENAS Madrid: Funding Agency discussion

- Short introduction to APPEC, ECFA and NuPECC by the three committee chairs

- Main topic: Evaluate whether appropriate (and new) funding schemes can be established to exploit better the synergies and thereby allow for a more effective use of resources.

  Focus at this meeting:
  - How we can coordinate synergies in detector R&D?
  - Organization of future computing for our research infrastructures ?
  - Are there coordinated funding possibilities to support the EoIs?

- Closed session of the FA

- Feedback (by J. Mnich) to APPEC, ECFA and NuPECC chairs

JENAS Madrid: Feedback on Funding Agency Discussion

General Feedback:

- Participation in the meeting and overview talks (Thursday) appreciated

- Suggestions for the next meeting:
  - More space for young people
  - Address competition with other disciplines
  - Address carbon footprint of the field

More dedicated Feedback:

- Coordination in the various fields, among the fields, and among the funding agencies needs to be better worked out;
  JENAS is considered as a first step in the right direction

- Improve collaboration between local and large international infrastructure (flagship experiments);
  ESFRI is a way to facilitate this coordination

- Explore mechanism for European calls dedicated / required to address more than one community
  (see no issues of cross-boundary topics, open to support topics that risk to fall in between areas, …)

- Coordinated approach for computing welcome

- Highlight socio-economic benefits of research

Joint Activities: http://www.nupecc.org/jenaa/?display=eois

1. Dark Matter - iDMEu (https://indico.cern.ch/event/869195/overview)
2. Gravitational Waves for fundamental physics (https://agenda.infn.it/event/22947/overview)
3. Machine-Learning Optimized Design of Experiments - MODE (https://userswww.pd.infn.it/~dorigo/MODE.html)
4. Nuclear Physics at the LHC (https://indico.ph.tum.de/event/4492/)
5. Storage Rings for the Search of Charged-Particle Electric Dipole Moments (EDM) (https://indico.ph.tum.de/event/4482/overview)
6. Synergies between the Electron-Ion Collider and the Large Hadron Collider experiments (https://indico.ph.tum.de/event/7004/)

Kickoff meeting for EoI 6 (EIC-LHC) took place on 21/22 June at CERN

JENAS EoI Task Force representatives

For ECFA:

- Stan Bentvelsen (2)
- Jana Bielčíková (6)
- Sascha Caron (3)
- Tuomas Lappi (6)
- Isabell Melzer-Pellmann (1)
- Nick van Remortel (2)
- Mike Seidel (5)
- Claude Vallee (1)
- Mikko Voutilainen (3)

For NuPECC:

- Navin Alahari (4)
- Dave Ireland (6)
- Eugenio Nappi (6)
- Franck Sabatié (3,6)
- Hans Stroeher (5)
- Eberhard Widmann (5)
- György Wolf (2,4)

For APPEC:

- Jo van den Brandt (2)
- Jürgen Brunner (3)
- Tomek Bulik (2)
- Francesca Calore (1)
- Fiorenza Donato (4)
- Elena Cuoco (3)
- Uwe Oberlack (1)
- Xin Wu (4)

JENAA: overview on ongoing activities

1. Common EoI Activities

Follow up and discussion of work plan and activities with EoI coordinators

(one-to-one discussions with the three Chairs will be set up; target early September)

2. Recognition

- Report finalised, presentation today to Plenary ECFA, → ECFA document
- Send report to collaborations and encourage them to implement best practises
- Follow-up with survey in ~1.5 - 2 years
  → measure improvements (w.r.t. first survey carried out in 2018/19)

3. Diversity & Inclusion

- First survey completed; limited success (low statistics, APPEC not included, conferences, …)
- Plan to cooperate with D&I Offices of the larger collaborations, involved conferences earlier, …
- Repeat after 1 – 2 years
- Update of D&I Charta (based on further input received from collaborations)
  → Working group remains in place

JENAA: possible new activities

1. Computing

In reaction to the JENAS meeting in Madrid, we should initiate activities to see to what extent more synergies can be used in the computing area between particle physics, astroparticle and nuclear physics

- Computing Model
- Common developments
- Embedding and cooperation with EU initiatives, like ESCAPE (and *Future ESCAPE*)
- Funding models (follow-up with funding agencies; to be noted that Tier-2 funding situation is at present not secured in many countries)
- …

→ Working group (volunteers from ECFA to participate are welcome)

→ 1st common APPEC-ECFA-NuPECC workshop on computing

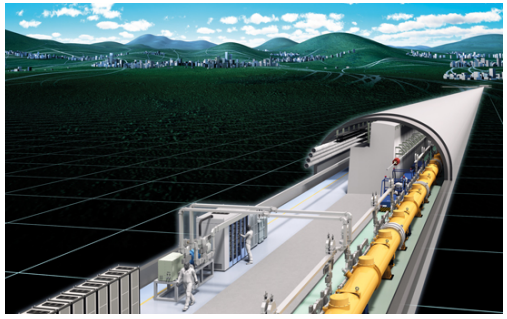
2. Detector and Accelerator R&D

These areas should be basically covered by the Detector and Accelerator R&D roadmaps and their implementation

3. Working group on other topics?

Knowledge Transfer, Training and Outreach, Sustainability, …
(cooperation between CERN and other major labs/organisations in Europe)

5. ILC News, KEK and ICFA statements



- KEK has been working on the realization of the International Linear Collider (ILC) in Japan, together with ILC Japan, a community organization under the Japan Association of High Energy Physicists (JAHEP), the **ILC International Development Team (IDT),** established by ICFA and other supporting organizations around the world.

- In June 2021, IDT published the "Proposal for the ILC Preparatory Laboratory (Pre-lab)," which proposes an outline of the organizational framework, an implementation model, work plan and required resources for the preparatory phase of the ILC.

- At the same time, KEK and JAHEP submitted a report to the Ministry of Education, Culture, Sports, Science and Technology (MEXT) that summarizes progress on ILC activities over the past three years. In response to these developments, MEXT organized an expert panel in July 2021.

- MEXT expressed its view that it could not proceed toward the Pre-lab before having a prospect for the international cost sharing. The Advisory Panel of MEXT for the ILC concluded that it was premature to proceed toward the Pre-lab and recommended re-evaluation of the roadmap of the ILC project in a global context taking into account the progress in other Higgs factory studies.

→ Clear mismatch of views: "International" vs. "Global Project"

Recommendations of the MEXT Panel*:

On 14 February, the panel issued their recommendations, pointing out following five main points:

1. The panel recognizes the academic significance of particle physics and the importance of the research activities, including that of a Higgs factory, and understands the value of international collaborative research. However, the **panel found that it is still premature to proceed into the ILC Pre-lab phase**, which is coupled with an expression of interest to host the ILC by Japan as desired by the research community proposing the project.

2. Given the increasing strain in the financial situation of the related countries, **the panel recommends the ILC proponents to reflect upon this fact and to reevaluate the plan**. **They should reexamine the approach towards a Higgs factory in a global manner taking into account the progress in the various studies such as the Future Circular Collider (FCC) and ILC.**

3. The panel recommends that the **development work in the key technological issues for the next-generation accelerator should be carried out** by further strengthening the international collaboration among institutes and laboratories, shelving the question of hosting the ILC.

4. For realizing a very large project such as the ILC, cultivating a framework where the related countries can exchange information on their situations and discuss required steps would be important.

5. The panel recommends that the research community should **continue efforts to expand the broad support from various stakeholders in Japan and abroad** by building up trust and mutual understanding through bi-directional communication with the people concerned.

**Advisory Panel report summarised and translated by KEK from* https://www.kek.jp/en/topics-en/202202251335/

KEK statement*:

In light of the panel's findings, **KEK will make an effort to reexamine the path for realizing the ILC** as a Higgs factory, taking into account the progress in various fronts including the FCC feasibility study. In this process, the interaction with the domestic and international research community as well as the opportunities in the exchange of information through ICFA will be crucial. Also, in collaboration with the IDT, **KEK will propose a framework to ICFA to address some of the pressing accelerator R&D issues** for the Pre-lab, where joint developments will be done by the participating laboratories on the selected subjects. KEK and the Japanese ILC community is committed to further advance important technological and engineering development in the accelerator area and to continue the effort for the realization of the ILC.

Furthermore, KEK, in collaboration with ILC-Japan, will establish a **new organization that will centrally manage ILC communications activities.** The new organization will strengthen activities to communicate the significance of the ILC to all parties involved, such as the general public, academia, or industry, focusing on communicating the importance to build an international laboratory for basic science, which will contribute greatly to the development of a new generation of scientists and advancement of knowledge, science and technology.

KEK endeavors to promote these activities for the realization of the ILC in the future, maintaining a relationship of trust with related organizations.

**From https://www.kek.jp/en/topics-en/202202251335/*

ICFA Statement Regarding Higgs Factory Development and the ILC

The International Committee for Future Accelerators (ICFA) recently met to review global progress and plans in high-energy physics. ICFA reconfirms the international consensus on the importance of a Higgs Factory as the highest priority for realizing the scientific goals of particle physics. This view has only strengthened over time based on results from the world's particle physics facilities. Various design studies based on different technologies are in progress, including both circular colliders (FCC-ee and CEPC) and linear colliders (ILC and CLIC). ICFA follows with great attention the development of Higgs Factory proposals worldwide and recognizes the importance of advancing such concepts.

ICFA also reaffirms the importance of the regional planning activities that have recently been completed and those underway, which for decades have underpinned the global strategy for the field. Indeed, following the 2020 update to the European Strategy for Particle Physics, Europe is now undertaking a feasibility study for FCC. ICFA eagerly awaits the results of ongoing strategic planning activities in the U.S., China and elsewhere.

Concerning the International Linear Collider (ILC), ICFA reaffirms its position that the concept for the ILC is technically robust and has reached a level of maturity which supports its moving forward with the engineering design study toward its timely realization. Indeed, recent accelerator projects across the globe confirm the readiness of the foundational superconducting accelerator technology.

https://icfa.hep.net/wp-content/uploads/ICFA_Statement_April2022_Final.pdf

ICFA Statement (March 2022)

ICFA commits to continuing efforts within the International Development Team (IDT) over the next year to coordinate the global research community's activities toward further developing and realizing the ILC in Japan. In particular, the IDT will work to further strengthen international collaboration among institutes and laboratories, and to expand the broad support from various stakeholders. ICFA will monitor developments over the next year to assess availability of resources and progress in international discussions.

ICFA continues to encourage inter-governmental discussion between Japan and potential partner nations to advance international collaboration toward important research and development activities as well as coordination toward realization of an ILC.

April 8, 2022

https://icfa.hep.net/wp-content/uploads/ICFA_Statement_April2022_Final.pdf

Next steps proposed by IDT (June 2022)

IDT will organise international discussions, supported by KEK and with MEXT cognisance;

Chaired by Tatsuya Nakada (EPFL Lausanne)

- Develop a general description of the evolution and decision process of a global project, applicable to the ILC, followed by
- Discussion of the specific case of the ILC, i.e. adaptation of the process and possible implementation models

The discussions shall be carried out by an ***International Expert Panel*** consisting of scientists who are experienced in working with large international collaborations and well connected with both the particle physics community and government authorities and CERN

Panel members will make sure that government authorities and CERN are well informed about the status of the discussion and its progress.

Goal: inter-governmental discussions of the ILC should start such that the Pre-lab and international negotiations on the sharing of contributions and responsibilities can be realised

6. ECFA Schedule 2022

https://ecfa.web.cern.ch/timetable-2022

(i) Country visits

Italy	4 - 5 March 2022	✓
Germany	1 -2 April 2022	✓
~~Ukraine~~	~~13 - 14 May 2022~~	
Denmark	12 - 13 May 2022	✓
Hungary	**23 - 24 Sept. 2022**	
Israel	3 - 4 Nov. 2022	

(ii) Plenary ECFA meetings:

21 – 22 July at CERN
17 – 18 Nov at CERN

(iii) ICFA Seminar in Berlin [illegible] – 31 March 2022

(European [illegible] (incl. 10 CERN),
https:/[illegible]2022.desy.de/

Cancelled, no new date yet

ECFA Schedule 2023

(i) Country visits: Czech Republic,
Greece (t.b.c.)
Norway
Portugal

(ii) Plenary ECFA meetings:

1. During EPS Conference in Hamburg (21 - 25 August 2023)
2. At CERN: 16 – 17 Nov 2023

(iii) ICFA Seminar: ??

Stronger Involvement of Plenary ECFA members

- All ECFA members are welcome to send any ideas for initiatives, suggestions, complaints to

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