

Benno List, Christophe Grojean, Christian Schwanenberger, <u>Jenny List</u> 5th Future Colliders @ DESY meeting 21 April 2022





CLUSTER OF EXCELLENCE
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## **ICFA**

met March 30/31, https://icfa.hep.net/

#### 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.

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 10, 2022

### **rECFA**

### restricted ECFA visit to Germany

- Berlin, April 1 2022
- presentations of the whole particle physics landscape in Germany to rECFA and funding agency representatives
- in person!
  - => very important to enable small circle coffee break / lunch / dinner discussions
- agenda with all slides now public, cf <a href="https://indico.desy.de/event/32771/">https://indico.desy.de/event/32771/</a>
- including those by Mr Dietz (reasponsible for "Large Facilities and Basic Research" in BMBF)
- rECFA response overall very positive
- remarkable for the future collider audience:
  - future collider activities played a visible role (was not the case at last rECFA visit to Germany on 2014!)
  - further strengthening of future collider activities will be encouraged the recommendations

# Some excerpts from Mr Dietz slides

#### with Future Collider relevance



### Fundamental Research in Germany

- Gaining knowledge as a cultural value in itself. How does the universe develop? Where do we come from?
- Key innovations always start in fundamental science! We don't want to run out of ideas for innovations in the medium term.
- Germany wants to be a key player in the top league of fundamental research worldwide!
- Fundamental science as a unique opportunity for training and education of young people.

## 20th Legislation Period

The coalition agreement comprises a clear commitment to support:

- · Strong research policy
- Free, curiosity-driven fundamental research
- Future-oriented large infrastructures
- Bold research project ideas
- Emphasis placed on innovation and transfer



# Some excerpts from Mr Dietz slides

#### with Future Collider relevance





#### Brief look into the future of the next RIs

- The BMBF will use a wide variety of strategic documents, national and international, as basis for future decisions.
- · Possible future RIs need to be on the national Roadmap to get funded
  - competition to other research fields (health, environment etc.)
  - Including German contribution to future CERN machine?
- The decision will be guided by science-case:
  - What fundamental questions do we want to answer?
  - What RIs do we need to be able to answer these questions?

### Personal Outlook

- Let us shape the future of CERN as the world-wide leading facility in particle physics. Is there a "plan B" to the fcc?
- Integrate science more into society, enhance the communication and interaction.
- Enhance the ability for technology transfer and sustainability
- Focus on the most urgent science-cases, not on replacing machines by new ones!

## **News & Announcements**

### **Upcoming meetings & events**

- next FutureColliders@DESY meetings
  - poll on new slot please fill **until April 27**: <a href="https://terminplaner4.dfn.de/hHaUY3Z87JKW4S5t">https://terminplaner4.dfn.de/hHaUY3Z87JKW4S5t</a>
  - aim for meetings end of May & end of June
  - break for summer July/August, restart in September
- European ILC Community meeting April 27, 10:00
- ECFA Higgs Factory Study
  - Higgs-Top-EW workshop ongoing: <a href="https://indico.cern.ch/event/1132480/">https://indico.cern.ch/event/1132480/</a>
  - Reconstruction workshop May 4/5 at DESY: <a href="https://indico.cern.ch/event/1124095/">https://indico.cern.ch/event/1124095/</a>
  - next Higgs Factory seminar May 6, on Higgs self-coupling: <a href="https://indico.cern.ch/event/1143763/">https://indico.cern.ch/event/1143763/</a>
  - joint workshop with CERN theory <u>Precision calculations for future e+e- colliders: targets and tools</u>, June 7-17
- IDT-WG3 Open Physics Meetings: summer time -> 15:00 DESY time
  - next meeting May 12: <a href="https://agenda.linearcollider.org/event/9357/">https://agenda.linearcollider.org/event/9357/</a>
  - Jun 9, [break for ICHEP, Snowmass, summer], Sep 15, Oct 13, ...
- FCC week, May 30 Jun 3 2022, <a href="https://indico.cern.ch/event/1064327/">https://indico.cern.ch/event/1064327/</a>
- Snowmass Summer Meeting, Seattle, July 17-26, https://indico.fnal.gov/event/22303/