



Report from Physics Coordinators

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on behalf of the Physics WG
April 13, 2022

IDT Phys/Det WG (WG3)

<https://linearcollider.org/team/wg3/>

Last WG3 Meeting yesterday on April 12

- ***General news: Hitoshi***

MEXT Panel Report (official English translation)

https://www.mext.go.jp/content/20220401-mxt_kiso-000020463_9.pdf

April 12: ICFA statement

- ***Subgroup reports***

From Tatsuya's slides at ICFA Meeting

The IDT recommendations:

ICFA **should continue its support** for the Japanese community effort to host the ILC in Japan in the present form, **only if:**

1. there is **a new prospect** to move towards the Pre-lab with a minimum delay,
⇒ regular interaction between MEXT and potential foreign partner governments for developing a common understanding for the path towards the ILC;
2. some of the time-critical Pre-lab **work packages can be started soon**, such that the delay in the ILC project would be minimized,
⇒ a substantial increase in the MEXT budget to KEK for ILC R&D that would allow some of the accelerator work packages to start as a collaborative effort between KEK and other interested laboratories

The recommendations by the MEXT Panel are compatible but not strong enough to give confidence that both of above will happen. **Further information from Japan would be required at the ICFA meeting** for the decision to continue.



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

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

Physics Potential & Opportunity Group

- Schedule for regular open meetings:

August 12: talks from Tim Barklow on $e\gamma \rightarrow eH$ and on the new CEPS paper

September 16: talks from Matt Basso on $H \rightarrow ss$ and from Yu Kato on $H \rightarrow 4b$

November 11/12: <https://agenda.linearcollider.org/event/9351/>

December 16/17: <https://agenda.linearcollider.org/event/9352/>

Feb. 10/11: <https://agenda.linearcollider.org/event/9354/>

Mar. 10, Snowmass, BSM mini-WS, QCD, Green ILC

<https://agenda.linearcollider.org/event/9355/>

Apr. 14: mb, BSM, ALR

<https://agenda.linearcollider.org/event/9356/>

May 12:

Feb. 28, Mar. 1, 3: Mini-WS on BSM at ILC

<https://agenda.linearcollider.org/event/9575/>

- Snowmass meetings;

EF workshop Aug. 30 - Sep.3

<https://indico.fnal.gov/event/49756/>

Snowmass Day (all frontiers) Sep. 24

<https://indico.fnal.gov/event/50538/>

EF workshop Mar. 28 - Apr.1

<https://indico.fnal.gov/event/52465/>

Snowmass Agora

Dec. 15: Linear e+e- Colliders

<https://indico.fnal.gov/event/52161/timetable/>

Jan. 19: Circular e+e- Colliders

<https://indico.fnal.gov/event/52534/timetable/>

Feb. 16: 2022: Muon Colliders

<https://indico.fnal.gov/event/53010/timetable/>

Software & Computing Group

Software tutorials <https://agenda.linearcollider.org/category/273/>

- **July 21, Introduction to iLCSoft:** <https://agenda.linearcollider.org/event/9272/>
- **August 18, LCFIPlus:** <https://agenda.linearcollider.org/event/9318/>
- **October 13, SGV fast simulation:** <https://agenda.linearcollider.org/event/9394/>
- **May 18, MarlinKinFit by Jenny**

ECFA Higgs Factory WG meetings

- **April 8, physics with light quarks:** <https://indico.cern.ch/event/1138771/>
- **April 20-22, First workshop of the Higgs/Top/EWK subgroup of WG1:**
<https://indico.cern.ch/event/1132480/>
- **May 4-5, First topical meeting on Reconstruction (WG2 activity):**
<https://indico.cern.ch/event/1124095/>
- **May 6, Higgs self-coupling (including LHC status+prospects):**
<https://indico.cern.ch/event/114376/>
- ...

All workshops and seminars of the ECFA Higgs Factory initiative (WG1+WG2) can be found at any time under the Indico category: <https://indico.cern.ch/category/14055/>

ILD Physics WG Activities

***- Joint Effort with Software WG
and IDT WG3 -***

Today (April 13)

→ ***Key4hep installation on /cvmfs/ilc.dessy.de by Thomas Madlener***

Proposed S&A meeting schedule

Apr. 13: Daniel

Apr. 27: Frank?

May 11: KF

May 25: Filip

S&A meeting usually every two weeks on Wednesday at 14:00 CERN time

Schedule also on

<https://confluence.desy.de/display/ILD/ILD+Physics+Working+group>

Physics conveners' meeting at the same time as the S&A meeting at 14:00 CERN time but one day before on Tuesday (tbc).

Conveners' ML:

ild-physics-conveners@desy.de

Use this mailing list to send your talk request.

Stay safe!