



# Report from Physics Coordinators

Keisuke Fujii  
on behalf of the Physics WG  
May 26, 2021

# **ILC Situation in Japan**

- **The political environment about ILC is now very good, thanks to strong US support. A new deputy-MEXT minister, Ms. Takahashi, responsible for S&T policy, very supportive. Masa is talking to MEXT. Amid the 4th wave of COVID19, however, it is not a perfect time to bring up a big scientific project like ILC.**
- **The climate change: The first stage of the ILC is 250 GeV but, now studies on energy upgrade even above 1 TeV is encouraged. Discussions on non-colliding beam experiments using the ILC facility starting.**
- **Despite the 4th wave of COVID19, KEK is operating in the new normal mode, and various ILC promotion activities are on-going. The KEK RM has been reviewed, final version very soon.**
- **JAHEP ILC Steering Panel was established on Oct.28 to lead the HEP community in Japan to advance the ILC project towards its timely realization.**
  - **Background briefing to media, explanation to other fields, on going.**
  - **An X+ILC series of informal talks on going to involve new comers.**
- **The International Development Team (IDT):**
  - **WG substructure ~complete.**
  - **Working on Snowmass process to expand the ILC community.**
  - **Preparation on-going for JFY2022 budget request to launch Pre-Lab, including documentation of Pre-Lab design and plan.**
- **Tohoku upgraded its ILC promotion organization, Tohoku ILC Project Development Center, on Aug.6.**
  - **Now actively promoting ILC, including English translation of CFS related documents, etc.**

- ***Tohoku ILC Promotion Council had a general meeting on May 20, decided to request the government to include ILC in its “basic policies” as an inter-ministerial project, asking for Eol from the government to enter the preparatory phase.***



増城

## 東北ILC推進協議会 総会 政府への要望など決議<岩手・盛岡市>

M4T 岩手めんこいテレビ

● 2021年5月21日 金曜 午後4:25

# ***IDT Phys/Det WG (WG3)***

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

***WG3 Meeting every two weeks (last one, yesterday, May. 25)***

- ***IDT's Pre-Lab proposal almost ready for public release***
- ***The fall WS preparation status***
- ***Reports from subgroups***

# News from IDT

## ~~“Interim Proposal for the ILC Pre-Lab”~~

### The Fall WS (ILCX 2021)

Oct. 26-29

Web site will open soon.

Given the uncertainties with the COVID-19 situation, three possible styles are being prepared in parallel: (1) in-person meeting in Tsukuba, Japan, (2) hybrid meeting on the KEK site, and (3) fully online meeting. Decision between (1) vs (2,3) will come by the end of June.

## ~~Interim~~ Pre-lab Proposal

- EB finished the draft
- revised with comments from WG1 members
- now being reviewed by ICFA
  - comments by May 14
  - another round of comments for final approval
- finalized by May 31?
- public release on June 2?
- first media event on June 10?

## ILCX 2021

- we decided to have a workshop in some form
- parallel planning for different formats
  - decision by the end of June
- HM will join LOC

## Software/Computing Group: Frank Gaede, Daniel Jeans, Jan Strube

### planning of seminar / tutorial series

plan for series of ~monthly seminars / tutorials

Wednesdays at [ 06:30 PDT / 15:30 CEST / 22:30 JST ]

60~90 minutes

first one penciled in for June 23:

DELPHES ILC card (Filip Zarnnecki)

"make your first ILC Higgs plot" (Jenny List)

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## Physics Potential & Opportunity Group: M. Peskin, A. Robson, J. Tian

### ***Kickoff Meeting & Mini-Symposium on Muon $g-2$ : tomorrow at 15:00 CEST***

- public meeting in a monthly basis, 2 hour each time
  - next one on June 17
  - last week met with conveners of 3 TGs: BSM, EW, Global Interpretation
  - discussed preliminary plan of talks: 1 hour (3 talks) on Global, 2 talks on BSM (1 from fixed target experiment, 1 from dark matter search at collider), 1 talk on EW (role of beam polarization in controlling systematics)
  - going to follow this pattern for future meetings, each time with 2-3 topical groups
  - summer break is under discussion



# IDT-WG3-Phys (Physics Potential & Opportunity Group)

M. Peskin, A. Robson, J. Tian + J. List

## Kickoff Meeting & Mini-Symposium on Muon $g-2$

CEST

Thursday, May 27, 2021

- 15:00** → 15:15 **Introduction to the ILC and the IDT**  
Speaker: Hitoshi Murayama (University of California Berkeley (US))
- 15:15** → 15:22 **Topical Group plans: Higgs properties**
- 15:22** → 15:29 **Topical Group plans: Electroweak physics**  
Speakers: Graham Wilson, Graham Wilson (The University of Kansas (US))
- 15:29** → 15:36 **Topical Group plans: Top / heavy flavour / QCD**
- 15:36** → 15:43 **Topical Group plans: BSM particle production**  
Speaker: Shigeki Matsumoto (IPMU, Univ. of Tokyo)
- 15:43** → 15:50 **Topical Group plans: global interpretations**  
Speaker: Tim Cohen (University of Oregon)
- 15:50** → 15:57 **Topical Group plans: Modelling and precision theory**  
Speaker: Jürgen Reuter (DESY Hamburg, Germany)
- 16:00** → 17:15 **Mini-Symposium: What does the muon  $g-2$  anomaly imply for  $e^+e^-$  colliders?**
- 16:00** **The Tiny ( $g-2$ ) Muon Wobble from Small- $\mu$  Supersymmetry**  
Speaker: Nausheen Shah (Wayne State)
- 16:15** **Muon  $g-2$  in Lepton Portal Dark Matter**  
Speaker: Yang Bai (Wisconsin)
- 16:30** **A comprehensive study of vector leptoquark on the B-meson and Muon  $g-2$  anomalies**  
Speaker: Seong Chan Park (Yonsei)
- 16:45** **The new "MUON G-2" Result and Supersymmetry**  
Speaker: Sven Heinemeyer



# ***ILD Physics WG Activities***

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

***Today (May 26)***

→ ***Heavy Neutrinos at Future Linear  $e^+e^-$  Colliders by  
Krzysztof Mekala***

# ***Reminder***

## ***Registration Page for The ILC White Paper for Snowmass 2022***

***Register on the authors/supporters list for the ILC White Paper for Snowmass through***

<https://agenda.linearcollider.org/event/9135/>

***Subscribe to various mailing lists through***

<https://agenda.linearcollider.org/event/9154/>

## ***IDT-WG3-Phys***

### ***Kickoff Meeting & Mini-Symposium on Muon $g-2$***

***Thursday, May 27, 2021, 22:00 - 24:15***

***Participate this kickoff meeting through***

<https://agenda.linearcollider.org/event/9218/>

# ***ILD Meeting 2021***

***June 3-4 (Zoom)***

***Physics Analysis Session***

***15:25-16:55 CEST (90 min)***

Introduction: 5min

Higgs/EW status and plan: 15+5min

Top/QCD/HF status and plan: 15+5min

BSM status and plan: 15+5min

Discussion: 25min

# ***Conferences***

# ***From IDT WG3 Speakers Bureau: forth coming deadline for abstract submission***

- PANIC 2021, September 5-10
  - Submission deadline: June 20 (an abstract per person)
  - SB asks WG conveners for abstracts to be submitted to the sessions:
    - Standard model physics at the TeV scale
    - Energy frontier physics beyond the standard model
    - Development of accelerators and detectors

***Consider submitting an abstract for your analysis.***

***Let PSB and Physics conveners know if you plan to do so well before the deadline, although the submission will have to be done by you eventually.***

# *Proposed S&A meeting schedule*

**May 26:**      **KF**  
**Jun. 3-4:**    **ILD Meeting 2021**  
Jun. 9:        Daniel  
Jun. 16:       Frank

***A short S&A meeting every Wednesday at 14:00 CERN time***

***Schedule also on***

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

***Physics conveners' meeting every two weeks on Wednesday at 13:00 CERN time.***

**Conveners' ML:**

[ild-physics-conveners@desy.de](mailto:ild-physics-conveners@desy.de)

***Use this mailing list to send your talk request.***

***Stay safe!***