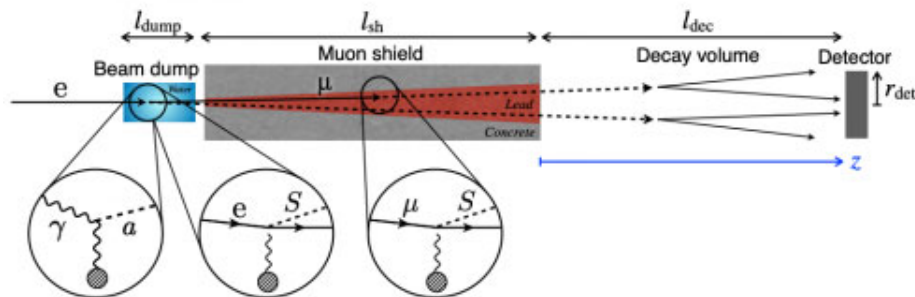




## DIRECTOR'S CORNER

## ILC++: an opportunity for all kinds of experiments

by Hitoshi Murayama



The ILC as it is planned today will offer a host of possible physics studies, writes Hitoshi Murayama, Director for Physics and Detectors in the International Development Team for the ILC. He asks: But why stop there? What else, however fancy it may seem now, can you see the ILC doing – fixed-target experiments, experiments at the beam dump or near the interaction point? Now is the time to propose them!

## ANNOUNCEMENTS

## Two workshops 2021 – Please mark your calendars

by Tatsuya Nakada, Steinar Stapnes and Hitoshi Murayama

**The 2021 International Workshop on Linear Colliders (LCWS 2021)** will be arranged by Europe/CERN as a remote meeting from 15 to 19 March next year. Similar to the past meetings, it will cover the physics, detector, and accelerator studies of ILC and CLIC. The meeting will be at a timely moment since the European Strategy for Particle Physics Update has been published and its implementation started. Also, the ILC International Development Team and its working groups have been set up and detailed plans for the ILC Pre-lab are being made. In parallel, the Snowmass process is on-going. This workshop will be followed by individual more specialized ones for ILC and CLIC in the autumn 2021. We are looking forward to “seeing” you all in March.



The ILC International Development Team (IDT) will hold a workshop, **Towards ILC Expressions of Interest**, in October 2021 in Tsukuba, Japan, with focus on the experimental programme of the ILC. The main meeting will take place from 26 to 29 October with an optional tour to the ILC candidate site in the Tohoku region of Japan, as well as satellite meetings before and after the main meeting. The discussion will be centred around the steps toward the Expressions of Interest for the experiments at the ILC. It will also include discussions of recent developments in detector technology and provide updated information about the Pre-lab planning and the general status of the ILC project. Further details will follow soon.

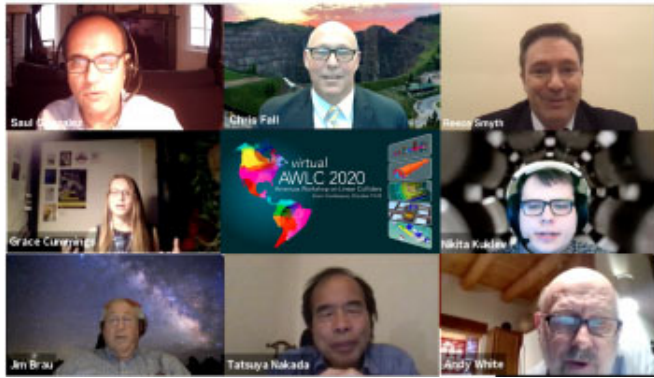
## AROUND THE WORLD

**Global community meets virtually for AWLC2020**

## AROUND THE WORLD

**Perspective: Early-career scientists weigh in on the ILC**

by Jim Brau and Andy White



The global community gathered virtually for the Americas Workshop on Linear Colliders (AWLC2020). More than 500 attendees registered for the programme of talks and discussions on the status of the project. Here's a summary of the highlights.

## project



For the early-career physicists, the ILC may be the only new energy frontier accelerator in which they take a leadership role. See their enthusiasm and concern about the project.

## VIDEO OF THE WEEK

### US government views of the ILC at Americas Workshop on Linear Colliders

An important element of the AWLC2020 programme was the three talks by three US government representatives

## FEATURE

### A tribute to Nobel laureate Masatoshi Koshiba, 1926-2020

by Sakue Yamada

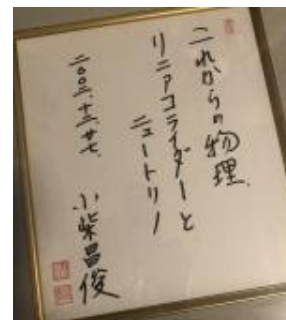


Sakue Yamada, former Research Director at Global Design Effort, looks back on his days with the late Masatoshi Koshiba, who started the  $e^+e^-$  collider physics effort in Japan.

## FEATURE

### A tribute to Koshiba-sensei

by Sachio Komamiya



Sachio Komamiya, former chair of Linear Collider Board and professor at Waseda University in Japan, pays tribute to his teacher and mentor Masatoshi Koshiba, Nobel laureate and strong advocate of the ILC, who died in November at the age of 94.

## IN THE NEWS

### from *IBC*

10 December 2020

[菅首相が県内の被災地を訪問 就任後初／岩手](#)

「やはり財源の確保が必要で、支援人員もまだ応援が必要な状況です。東北全体の復興の象徴、国際リニアコライダー誘致実現もお願いしたい」

### from *CERN Courier*

10 November 2020

[Preparatory 'pre-lab' proposed for ILC](#)

On 10 September the International Committee for Future Accelerators (ICFA) announced the structure and members of a new organisational team to prepare a “pre-laboratory” for an International Linear Collider (ILC) in Japan. The ILC International Development Team (ILC-IDT), which consists of an executive board and three working groups governing the pre-lab setup, accelerator, and physics and detectors, aims to complete the preparatory phase for the pre-lab on a timescale of around 1.5 years.

### from *CERN Courier*

10 November 2020

[TESLA's high-gradient march](#)

It is remarkable to note that the total number of such TESLA-style cavities installed or to be installed in presently approved accelerators is more than 1800. Were a 250 GeV ILC to go ahead in Japan, approximately 8000 such units would be required.

### from *Iwate Nippo*

24 October 2020

[米政府、ILC参加「強い関心」 国際会議、課題解決へ協力強調](#)

国際リニアコライダー（ILC）の実現を目指す国際会議は23日（日本時間）、米SLAC国立加速器研究所を拠点にオンライン形式で開かれ、4日間の日程を終えた。閉幕に当たって米国務省やエネルギー省の担当者が見解を述べ、日本での建設に強い関心を示すとともに課題解決に向けて協力姿勢を強調した。

### from *Spa!*

17 October 2020

[先端技術への投資に異を唱えていた日本学術会議／国防ジャーナリスト・小笠原理恵](#)

確かに、日本では研究開発予算を潤沢に使えず、ノーベル賞の山中伸弥教授が率いるiPS細胞研究所ですら寄付を集めながら研究を続けています。だからこそ、「国際リニアコライダー計画」のような世界から投資を呼び込めるチャンスへ果敢な挑戦をしてほしいものです。

### from *Iwate Nippo*

09 October 2020

[誘致実現へ「前進を実感」 東北ILC推進協が講演会](#)

国際リニアコライダー（ILC）の誘致を目指す東北ILC推進協議会は8日、講演会を開いた。国内外で今年夏以降、建設に向けた動きが本格化する中、各国の研究者による国際推進チームや建設候補地で受け入れ準備を図る東北ILC事業推進センターの主力メンバーが、最新の動向や国内誘致の意義を説いた。

### from *Kahoku Shinpo*

30 September 2020

[放射光整備に66億円、文科省概算要求 ILC関連は4億円超](#)

岩手、宮城両県にまたがる北上山地を候補地とする超大型加速器「国際リニアコライダー（ILC）」計画の関連では、前年度予算と同額の4億8000万円を計上した。

### from *Science*

2 October 2020

[With to-do list checked off, U.S. physicists ask, 'What's next?'](#)

Physicists in Japan are discussing such a Higgs factory in the form of a 30-kilometer-long linear electron-positron collider.

## PREPRINTS

### ARXIV PREPRINTS

[2011.12451](#)

Study of  $WW \rightarrow qq \bar{\ell} \nu$  at ILC500 with ILD

[2011.04725](#) [Help](#) | [Advanced Search](#)

The see-saw portal at future Higgs Factories

[2011.03551](#)

Shining light through the Higgs portal with  $\gamma\gamma$  colliders

[2010.05915](#)

The Present and Future of Four Tops

[2009.13790](#)

Search for new light particles at ILC main beam dump

[2010.15057](#)

Probing extended Higgs sectors by the synergy between direct searches at the LHC and precision tests at future lepton colliders