

見据え接客英語研修 奥州市国際交流協会

奥州市国際交流協会 佐藤剛会長 主催の「接客英語研修会」は、 月 日午後 時から水沢区東町の奥州商工会議所 階中ホールで開かれる。国際リニアコライダー 建設を見据え、外国人とのコミュニケーションや接客が増える場面を想定した研修。(Oshu International Relations Association will host a English training workshop on 1 August, in anticipation of construction of the ILC which will increase the opportunity to welcome foreign guests.)

from *Kahoku Shinpo*

19 July 2014

東北にも放射光施設を 産学官27団体が推進協

放射光施設の誘致を目指し、東北 県と国立大、経済団体は 日、「東北放射光施設推進協議会」を設立した。出席した達増知事は国際リニアコライダー と連動した誘致推進を呼び掛けた。建設費は約 億円で、候補地は未定。早ければ 年度の着工、 年度の運用開始が見込まれる。(Local governments, national universities, and economic organization in six prefectures in Japan's Tohoku area, established the association to promote the construction of the light source facility. Tasuya Tasso, the governor of Iwate prefecture called for cooperation coupled with the activities toward invitation of the ILC. The construction cost for the Tohoku light source is estimated as 3 trillion yen, and the site is undecided. Anticipating the start of the construction in 2016, and the operation in 2019.)

from *Materia*

16 July 2014

Así serán las nuevas megamáquinas de la física

El ILC ha pasado ya una fase de ocho años de diseño y se encuentra ahora a la espera de que el Gobierno de Japón declare su interés en albergar el acelerador.(...) El jefe del KEK explica que Japón se encargaría de pagar la mitad del proyecto y el resto de socios, entre ellos Europa y EEUU, la otra mitad. "Nuestra idea es que el nuevo acelerador sea un proyecto internacional parecido al G20 o al ITER", comenta el japonés. ([Read Google translation](#))

from *NewsWales*

14 July 2014

Cardiff University honours exceptional individuals

Welsh physicist, Dr Lyndon Evans, has spent his whole career in the field of high energy physics and particle accelerators. (...) [he] is currently a visiting professor at Imperial College London and Director of the Linear Collider Collaboration. Since 1993 he led the team that designed, built and commissioned the Large Hadron Collider. He was awarded a Special Fundamental Physics Prize in 2013 for his contribution to the discovery of the Higgs boson.

from *CERN*

7 July 2014

Results from CERN presented at ICHEP

"The LHC is a focal point for particle physics research at the high-energy frontier," said Heuer. "It forms part of globally coordinated strategy for the field, with plans in Europe, North America and Japan converging to ensure strength in the field in all regions."

from *The Guardian*

5 July 2014

Two years ago the discovery of the Higgs boson was announced. What's new?

We have new things to say because those high-bandwidth cables really did spew out an enormous amount of data, and although by this time two years ago (4th July 2012) we had managed to get enough of it analysed to be sure there was a new boson there, data carried on coming until the end of 2012, and squeezing the maximum amount of physics information from the raw data takes time and effort. Those efforts have been fruitful.

from *Tendencias 21*

3 July 2014

Juan Fuster: "El Colisionador Lineal Internacional depende de Japón"

"La tecnología está lista, desarrollada y madura", señala. (...) Japón se ha postulado como el lugar para albergarlo y tanto Europa como Estados Unidos se han mostrados muy interesados en conocer cuál podría ser la propuesta oficial para colaborar, añade. "Es decir, el ILC depende de lo que decida Japón. Ni Europa ni Estados Unidos tienen capacidad para liderar este proyecto pero sí para contribuir". ([Read Google translation](#))

CALENDAR

Upcoming events

[Applied Superconductivity Conference \(ASC 2014\)](#)

Charlotte, NC, USA
10- 15 August 2014

[POSIPOL 2014](#)

Ichinoseki, Iwate, Japan
27- 29 August 2014

[View complete calendar](#)

PREPRINTS

ARXIV PREPRINTS

[1407.3792](#)

The global electroweak fit at NNLO and prospects for the LHC and ILC

[1407.3650](#)

Photoproduction of the heavy quarkonium at the ILC

[1407.2133](#)

The Higgs boson and the International Linear Collider

[1407.1859](#)

Singlet Majorana fermion dark matter: a comprehensive analysis in effective field theory

ANNOUNCEMENTS

LCWS14: registration is open

The [International Linear Collider Workshop in 2014](#) will take place from 6 to 10 October in Belgrade, Serbia.

Find more information at the [workshop web site](#) and register now at lcws14.vinca.rs/form/add/.

Ivanka Bozovic-Jelisavcic and Steinar Stapnes for the local and joint organising committees.

Summer break

The LC NewsLine production team is taking a short summer break; the next issue will be published on 21 August.

BLOGLINE

7 July 2014

CERN

[Two anomalies worth noticing](#)

7 July 2014

Ken Bloom

[ICHEP at a distance](#)

4 July 2014

CERN

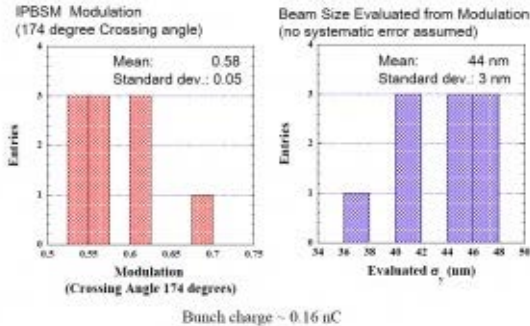
[Happy birthday, dear boson!](#)

AROUND THE WORLD

Another record for ATF2

Rika Takahashi | [24 July 2014](#)

Data of Last Week (June 12)



Last month, *LC NewsLine* reported the achievement of the [world's smallest beam size](#) of 55 nanometres at the ATF2 facility at KEK. At two international conferences held in June and July, the next record of 44 nanometres was reported by Kiyoshi Kubo and Shigeru Kuroda.

The beam line at ATF2 is designed as a prototype of the final focus system of the ILC, with basically the same optics, similar beam energy spread, natural chromaticity and tolerances of magnetic field errors.

For linear colliders, realising an extremely small and stable beam is essential. At the ILC, the design vertical beam size and required position stability at the interaction point is at the nanometer level. The target beam size at ATF is 37 nanometres. Because of the difference in the beam energy, 37 nanometres

at ATF will correspond to smaller than 5 nanometres at the ILC, the specification for the ILC design.. The result presented at ICHEP and IPAC was just one step away from the target size.

Kubo said the most important factor of the improvement was the stabilisation of the beam orbit by improving the feedback system. "We installed a new magnet for better feedback and improved the software, which worked to stabilise the beam. The beam was stable for 30 to 60 minutes without tuning in most cases."

"Also, we removed as much possible strong wakefield sources on every weekend when we stop the operation," said Kuroda. "To put it in a nutshell, the further stabilisation of the beam and reduction of wakefield," said Kuroda about the contributing factors.

The beam size is still slightly larger than the target size of 37 nanometres. ATF is now under summer shut-down, and the scientists are planning to work on the remaining issues in the autumn this year.

[ATF](#) | [ATF2](#) | [BEAM SIZE](#) | [FINAL FOCUS](#)

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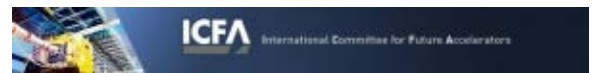
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FEATURE

From ICFA: International committee looks toward a global future of particle physics discoveries

[24 July 2014](#)

A global strategy for particle physics is taking shape, one world region at a time. Featuring colliders that smash particles at higher energies than ever before, and gigantic experiments to study the smallest components of matter, this future will lead to breakthrough discoveries at facilities around the globe.



The International Committee for Future Accelerators (ICFA), an international body that facilitates international collaboration in the construction and use of particle accelerators for high-energy physics, has issued a statement that endorses the strategic plans for the future of high-energy physics in Europe, Asia and the United States. In parallel with efforts to globally pursue the study of neutrinos, ICFA has stated its continuing support of the International Linear Collider (ILC) and its encouragement of international studies of future circular colliders.

The statement was issued at the first meeting of ICFA after the publication of the [roadmap for the future of US particle physics](#), called "P5". Previously published [Asian](#) and [European](#) strategies share common priorities. These strategies, the result of processes that involved each region's particle physics communities, provide guidelines for governments to make decisions in science policy.

"It is great to see so much congruency in all three regions and among all major particle physics players in the world," said Nigel Lockyer, Director of Fermilab and current chair of ICFA. "Particle physics has produced major discoveries that have attracted the attention of people around the globe, and the next steps will be even more global as we explore mysterious neutrinos, more powerful accelerators, and the cosmic frontier. The world's scientists are coming together to chart this exciting future."

[The full text of the ICFA statement](#) (issued 6 July 2014):

[ICFA Statement on its Support of the ILC, its endorsement of the Strategic Plans of Europe, Asia and the United States, and its Encouragement of International Studies of Future Circular Colliders](#)

ICFA endorses the particle physics strategic plans produced in Europe, Asia and the United States and the globally aligned priorities contained therein. Here, ICFA reaffirms its support of the ILC, which is in a mature state of technical development and offers unprecedented opportunities for precision studies of the newly discovered Higgs boson. In addition, ICFA continues to encourage international studies of circular colliders, with an ultimate goal of proton-proton collisions at energies much higher than those of the LHC.

[EUROPEAN STRATEGY FOR PARTICLE PHYSICS | P5 REPORT](#)

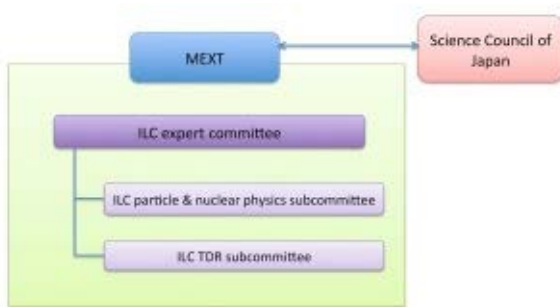
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DIRECTOR'S CORNER

Supporting political developments in Japan

Hitoshi Yamamoto | [24 July 2014](#)



The ILC expert committee established by the Ministry for Education, Culture, Sports, Science and Technology (MEXT) of Japan is divided in two subcommittees.

On 1st May 2014, Japan's Ministry for Education, Culture, Sports, Science and Technology (MEXT) established an expert committee to investigate various issues raised by the Science Council of Japan regarding the ILC. Then, two subcommittees were created: one, the ILC particle & nuclear physics subcommittee, to investigate the physics case of the ILC, and the other, the ILC TDR subcommittee, to evaluate the soundness of the cost, the human resources and the technical feasibility as described in the ILC *Technical Design Report* (TDR). The term of committee and subcommittees is set to be until 31 March 2016 even though an extension is possible. The outcome of these committees will bear critical importance when Japanese government decides whether it will officially move to host the ILC. The committees will ask for information from us and other sources as they

proceed, and we need to make sure that objective and correct information is provided. In this week's column, I will mostly focus on efforts from the physics and detector part of Linear Collider Collaboration (LCC).

First, the ILC infrastructure and planning working group was set up to investigate the time profiles of cost and human resources for the ILC detector efforts, from construction to operation. It will also look into the desirable structure where experimental groups interact with the ILC future laboratory. This working group will give input to the ILC TDR subcommittee looking into cost and human resources even though the scope is limited to detector efforts. Its membership includes quite senior scientists from both ILC detector design (ILD and SiD) groups as well as Japanese physicists familiar with local customs and ways. In order to steer this group of important people, I have recruited Sakue Yamada as chair, who had been leading the physics and detector efforts of the ILC until recently. They have already started to work on this critical task making substantial progress.

For the ILC physics subcommittee, a group of Japanese physicists preparing material and the physics working group of the LCC have been working together intensively. There is a large overlap of membership between the above Japanese groups and the physics working group so that the collaboration has been smooth and productive. The first occasion for input came when an introductory presentation was requested by the subcommittee on the physics case of the ILC. This group of people prepared a set of slides reflecting new results from LHC as well as recent studies. The effort is not finished and will continue to clarify the physics case of the linear collider in view of other proposed facilities such as circular electron-positron colliders.

In the effort above, it became clear that we urgently needed to have an official list of luminosities at different energies of the ILC to be



Organisation chart and working groups (WG) inside the Physics and Detector section of the Linear Collider Collaboration.

quoted consistently. This is not an easy task, given that there are countless possibilities for the running scenarios. However, we can rely on a group of people who are technically well equipped to deal with this challenge: the ILC parameter joint working group led by Jim Brau and Nick Walker. Here, 'joint' refers to both accelerator and physics/detector groups. The final decision should be made at a higher level such as the LCC or the Linear Collider Board (LCB) considering strategic factors. In the presentation I made to the LCB meeting held on 6 July in Valencia, this issue was raised and intensive discussions followed. In the end, such need was officially acknowledged, and the effort by the ILC parameter joint working group immediately accelerated a work which had been started earlier. We will hear soon about its outcome at Linear Collider meetings and workshops.

I have described above our efforts towards the realisation of the ILC. It involves many people, but this effort is just a small fraction of many kinds of fronts being attacked by countless people. We need to convince the Japanese government, but also the other governments. We need to convince our fellow physicists and wider scientist communities in each country, and we need to get support from the general public as well as from the industry. When all these are successful, then finally we will have a real project. We have come a long way already, but we still have a long way to go.

[ILC TDR](#) | [JAPAN](#) | [LCB](#) | [MEXT](#) | [PHYSICS AND DETECTORS](#)

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