

LC NEWSLINE

THE NEWSLETTER OF THE LINEAR COLLIDER COMMUNITY

DIRECTOR'S CORNER



A Clear and Strong Endorsement: European Strategy for Particle Physics

by Lyn Evans

On 19 June, the long-awaited report of the study group for the future European Strategy for particle physics was presented. It was a clear and strong endorsement of the need for a Higgs factory as the essential next step for particle physics and a willingness of the European particle physics community to collaborate in the ILC.

IN THE NEWS

from *Physics world*

19 June 2020

CERN approves further work on Future Circular Collider – but delays final decision

The strategy also approves European participation in the ¥800bn (\$7.5bn) International Linear Collider (ILC) if it receives support from the Japanese government. First mooted over a decade ago, the ILC would accelerate and smash together electrons with positrons at 125 GeV in a 20 km tunnel to study the Higgs boson and other particles in precise detail.

from *Sankei News*

19 June 2020

次世代加速器 I L C の日本建設 欧州研究所が支持

宇宙の成り立ちを探るため、日米欧などの物理学者が東北地方に建設を目指す巨大実験装置の次世代加速器「国際リニアコライダー（I L C）」について、欧州合同原子核研究所（C E R N）は 1 9 日、今後の素粒子物理学研究に重要な装置と位置づけ、適切な時期に実現するなら積極的に協力すると明記した次期欧州素粒子物理戦略を決定した。

from *Nature*

19 June 2020

CERN makes bold push to build €21-billion super-collider

While fully endorsing a CERN circular collider, the strategy also calls for the organization to explore participation in a separate International Linear Collider, an older idea that has been kept alive by physicists in Japan.

from *CERN Courier*

19 June 2020

European strategy update unveils ambitious future

The report also notes that the timely realisation of the ILC in Japan would be compatible with this strategy and, in that case, the European particle physics community would wish to collaborate. “The natural next step is to explore the feasibility of the high-priority recommendations, while continuing to pursue a diverse programme of high-impact projects,” explains Halina Abramowicz, chair of the European Strategy Group, which was charged with organizing the 2020 update. “Europe should keep the door open to participate in other headline projects which will serve the field as a whole.”

from *Sciences et Avenir*

19 June 2020

Le Cern dévoile la stratégie européenne en physique des particules

(...) en produisant de très grandes quantités de bosons de Higgs, cette “ Higgs factory ” augmentera la qualité et donc la précision des mesures. Ce sera donc l'occasion de consolider le modèle standard de la physique des particules et surtout repérer la moindre anomalie, qui pourrait être le signe de cette nouvelle physique au-delà du modèle standard, qui est le challenge de la discipline pour les prochaines décennies.

from *NZZ*

19 June 2020

Die zukünftige Strategie der europäischen Teilchenphysik nimmt Gestalt an

In dem Strategiepapier, dem der Cern-Rat nun zugestimmt hat, wird der ILC explizit erwähnt. Werde er rechtzeitig realisiert, sei eine Beteiligung der europäischen Teilchenphysiker mit der europäischen Strategie verträglich und auch wünschenswert, heisst es. Ähnlich hatte es allerdings schon vor sieben Jahren geklungen, als die Strategie das letzte Mal aktualisiert worden war.

from *KopalniaWiedzy.pl*

19 June 2020

CERN chce wybudować 100-kilometrowy akcelerator cząstek. Ma być 6-krotnie potężniejszy od LHC

Co ważne, mimo ambitnych planów budowy 100-kilometrowego zderzacza, nowo przyjęta strategia zobowiązuje CERN do rozważenia udziału w International Linear Collider, którego projekt jest od lat forsowany przez japońskich fizyków. Japończycy są zadowoleni z takiego stanowiska, gdyż może pozwoli to na przekonanie rządu w Tokio do ich projektu.

from *MIRAGE*

19 June 2020

Particle physicists update strategy for future of field in Europe

“Europe should keep the door open to participating in other headline projects that will serve the field as a whole, such as the proposed International Linear Collider project.”

from *Der Tagesspiegel*

19 June 2020

Das CERN will einen neuen, riesigen Teilchenbeschleuniger

Wann wird darüber entschieden?

Zuerst müssen wir sehen, ob es mit dem ILC in Japan noch etwas wird. Zusätzlich soll bis zum nächsten Update unserer Strategie, das in fünf bis sieben Jahren kommen wird, eine Machbarkeitsstudie erstellt werden. Sie soll ermitteln, ob es technologisch und

finanziell überhaupt möglich ist, einen 100-Kilometer-Beschleuniger mit den gewünschten Eigenschaften zu bauen oder ob wir es lieber lassen und beispielsweise auf CLIC zurückgreifen.

from *La Vanguardia*

19 June 2020

El CERN actualiza la estrategia para mantener “el liderazgo de Europa” en física de partículas

“Europa debe mantener la puerta abierta a participar en otros proyectos que sirvan al campo en su conjunto, como el proyecto International Linear Collider propuesto”.

from *The Guardian*

19 June 2020

Cern poised to back plan for €20bn successor to Large Hadron Collider

Competing plans included a large linear collider, which some viewed as a safer option because it could have been extended in stages, whereas the size of a circular collider must be decided at the outset.

from *Nikkei*

25 May 2020

ILC誘致へ今夏メドに新組織

ILCに関係する各国の研究者は、高エネルギー加速器研究機構（KEK）を中心に国際的な推進チームを20年中に設立すべく準備を進めている。この動きを踏まえ、誘致に取り組む自治体で受け入れ環境の整備を進めたい考えだ。

PREPRINTS

PREPRINTS

[2006.08562](#)

Recent Performance Studies of the GEM-based TPC Readout (DESY Module)

[2006.05858](#)

On a χ^2 -function with previously estimated background

[2006.05351](#)

NLO QCD corrections to J/ψ pair production in photon-photon collision

[2006.03527](#)

Higgs decay to light scalars in the semi-constrained NMSSM

[2006.02458](#)

Combining ILC and moment expansion techniques for extracting average-sky signals and CMB anisotropies

[2006.00660](#)

Tau $g-2$ at $e-e+$ colliders with momentum dependent form factor

[2005.14536](#)

HL-LHC and ILC sensitivities in the hunt for heavy Higgs bosons

[2005.10576](#)

Exploring sizable triple Higgs couplings in the 2HDM

[2005.06265](#)

ILD Benchmark: Search for Extra Scalars Produced in Association with a Z boson at $\sqrt{s}=500$ GeV

[2004.14628](#)

On the physics potential of ILC and CLIC

[2004.13791](#)

CALICE SiW ECAL — Development and test of the chip-on-board PCB solution

[2004.11017](#)

Learning for Advanced Motion Control

[2004.05948](#)

Upgrade of the ILC cryomodule

[2004.00851](#)

Versatile systems for characterization of large-area silicon pad sensors for highly-granular calorimetry