

TCMB report

-SCJ discussion-

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ILC particle accelerator project a good fit for Japan, and vice versa



7:44 pm, November 28, 2018

The Yomiuri Shimbun

The mountainous Kitakami area in the Tohoku region is being proposed as a candidate site for building the International Linear Collider (ILC), a next-generation linear particle accelerator.

The ILC is a research facility for investigating the origin of the universe and physical substances. Given that Japan has achieved many accomplishments in the field of particle physics, positive consideration should be given to the idea of inviting the ILC to be built in the Kitakami highland.

The ILC — an accelerator that is being planned by Japanese, U.S. and European researchers — is a facility for reproducing high-energy conditions akin to those immediately resulting from the creation of the universe. The plan would construct a tunnel with a total length of 20 kilometers, along which electrons would be collided with positrons — pieces of matter with a positive electrical charge — at a speed close to that of light. Ensuing reactions would be precisely measured.

Discoveries that transcend existing physical theories, even to the extent of winning a Nobel prize, could be made possible.

Yomiuri Shimbun on Nov.28
“editorial article”

According to a science ministry estimate, the plan would require about ¥800 billion in construction costs over a 10-year period. The facility is planned to be run for about 20 years until the completion of experiments, requiring about ¥40 billion in annual operating costs.

If the ILC is built on the Kitakami highland, Japan will reportedly need to cover about half of the costs as the host nation.

In its draft reply, the SCJ said there is not yet a prospect for sharing the costs internationally. The council also called for paying attention to possible environmental destruction due to large-scale construction work. While some have also expressed concerns that the plan could end up adversely affecting research budgets in other fields of science, the government has delayed making a decision on the proposal.

To make progress in the efforts to invite the ILC, it is necessary to explain the significance of ILC construction and the project’s cost-effectiveness, thereby widening public understanding of the plans.

The ILC is a complementary facility for the world’s largest accelerator at the European Organization for Nuclear Research, known as CERN.

In 2012, CERN confirmed the existence of the Higgs boson, which gives mass to all things. One of its next tasks is to conduct a detailed analysis of the Higgs boson through the use of the ILC.

CERN has started to lay down plans for its next research project. Whether CERN can incorporate the ILC into its next plan depends on Japan’s moves. If Japan — a nation that devotes effort to the study of elementary particles — decides not to invite the facility, it will cause CERN to lose momentum for its next project at once.

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Diet members meeting and Media conference on Dec.7

Diet members meeting was held on Dec.7.

Lyn and Hitoshi MURAYAMA made some talks on that meeting.

Lyn said that LCB accepted the delay of Japanese government's EOI by Mar.7 (of ICFA/LCB).

Diet members are quite supportive to the ILC.



And after the Diet members meeting, media conference was held (at the same place).

This was reported at Japanese newspapers.

Note from Planning Office for the ILC at KEK

Dear colleagues,

This note is to communicate the recent status of the ILC in Japan to the high-energy physics community across the world.

The proposal of the ILC was reviewed in detail by the ILC Advisory Panel of MEXT, and subsequently MEXT consulted the Science Council of Japan (SCJ) in July 2018 to hear an opinion from the broader academic community in Japan. The MEXT Minister stated that MEXT would wait for the final report of the SCJ before taking any further action with regard to the preparation of the policy decision on ILC.

We had expected that the report from the SCJ would be released in a timely manner so that the Japanese government could express its policy regarding ILC by the end of this year as requested by the Linear Collider Board (LCB). A committee that was set up at the SCJ has been evaluating the case for the ILC Higgs factory, and has held more than 10 meetings in the last four months. The final report, however, has not been released yet, and therefore, the announcement by the Japanese government on the ILC will be delayed until next year. In a recent teleconference, the LCB decided to accept this delay, and concluded that it would be crucial to have a statement from the Japanese government in time for the LCB/ICFA meeting on March 7 and 8, 2019, in Tokyo.

The Japanese high-energy physics community will make all possible efforts to help the Japanese government so that it can give the statement in a timely manner. We would like to emphasize that this delay should never be interpreted as a negative sign from the Japanese government.

We understand that the deadline for providing inputs from the scientific community to the European Particle Physics Strategy Update is December this year, and that it is highly desirable for the Japanese government to make an official announcement on the ILC in the same timeframe. It is regrettable that

it has to be postponed. We have come a long way, however, and the Japanese government is getting very close to issuing an announcement. We therefore ask you to wait just a little more.

December 14, 2018
Planning Office for the ILC at KEK

SCJ executive committee will be held tomorrow (Dec.19).

SCJ reply can be sent to MEXT tomorrow (in earliest case).

However, we should not be optimistic about the reply.