

Recent ILC status in Japan

LCWS2015, November 2, 2015

M.Yamauchi

KEK

Outline

- “Summary of the ILC Advisory Panel’s Discussions to Date” released by the ILC Advisory Panel of MEXT
- Reasons for not being very positive
- Reactions to be taken
- Your actions required

“Summary of the ILC Advisory Panel’s Discussions to Date”

http://www.mext.go.jp/b_menu/shingi/chousa/shinkou/038/gaiyou/1360593.htm

2. Overview of Discussions

(1) Scientific merit of the ILC project

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The ILC is considered to be important because of its capability to investigate new physics beyond the Standard Model by exploring new particles and precisely measuring the Higgs boson and top quark. It should be also noted that the ILC might be able to discover a new particle which are difficult to be detected in LHC experiments.

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Recommendation 1 (1)

- The ILC project requires huge investment that is so huge that a single country cannot cover, thus **it is indispensable to share the cost internationally**. From the viewpoint that the huge investments in new science projects must be weighed based upon the scientific merit of the project, **a clear vision on the discovery potential of new particles as well as that of precision measurements of the Higgs boson and the top quark** has to be shown so as to bring about novel development that goes beyond the Standard Model of the particle physics.

Recommendation 1 (2)

- **It is appropriate to proceed discussion on a possible international cost sharing scheme of the ILC project** by not only taking into account the scheme used by CERN but also taking into account the schemes of existing large scale international projects such as the International Thermonuclear Experimental Reactor (ITER) and International Space Station (ISS).

Recommendation 2

- Since the specifications of the performance and the scientific achievements of the ILC are considered to be designed based on the results of LHC experiments, which are planned to be executed through the end of 2017, **it is necessary to closely monitor, analyze and examine the development of LHC experiments.** Furthermore, it is necessary to clarify how to **solve technical issues and how to mitigate cost risk associated with the project.**

Recommendation 3

- While presenting the total project plan, including not only the plan for the accelerator and related facilities but also the plan for other infrastructure as well as efforts pointed out in Recommendations 1 & 2, it is important to have **general understanding on the project by the public and science communities.**

Other points to be noted (1)

2. Overview of Discussions

(3) International collaboration

The ILC project is an international project requiring enormous investment. It is necessary to conduct the project with support not only by a single country but also by international collaboration. The cost should be shared in such kind of international collaboration. **It is important to confirm the willingness of each participating country to cover a reasonable part of the project cost.**

The project should consider how to secure human resources, salaries for employees, and so on and how to organize the international collaboration.

Other points to be noted (2)

The European and American particle physics community expects Japan to proceed with the ILC project in line with their strategies. **However, current plans and budget of their countries do not explicitly define the ILC project. It is necessary to proceed based on worldwide attitudes to the ILC project.**

It should be noted that the ILC project will lose international momentum if decisions on the ILC project implementation are not made in a timely manner.

Actions to be taken

- LCB and ICFA agreed to send explanations on the following three points to the ILC Panel. Draft has been submitted from the Japanese community to LCB.
 - ... a clear vision on the discovery potential of new particles ...
 - ... It is appropriate to proceed discussion on a possible international cost sharing scheme of the ILC project ...
 - ... solve technical issues and how to mitigate cost risk associated with the project. ...
- ... it is necessary to closely monitor, analyze and examine the development of LHC experiments.
 - Surely will do.
- ... general understanding on the project by the public and science communities.
 - Public relation will be reinforced by KEK and AAA.
 - Discussions with scientists of the other fields have been undertaken.

Your actions required (1)

- The following three are the most essential points to have MEXT be more active in promotion of the ILC and move the project forward as an INTERNATIONAL Linear Collider.
 - ... it is indispensable to share the cost internationally ...
 - ... It is important to confirm the willingness of each participating country to cover a reasonable part of the project cost. ...
 - ... current plans and budget of their countries do not explicitly define the ILC project. It is necessary to proceed based on worldwide attitudes to the ILC project ...
- MEXT will do survey in some countries to confirm the governmental willingness to participate in ILC with substantial financial contribution. Having positive responses from most of the countries will lead to real progress.

Your actions required (2)

- Physics communities are requested to talk with their governments to express their strong wishes for ILC, and submit official proposals to the governments requesting review processes.