

TRANSCRIPT (English translation)

Speaker: **Mr. Takeo KAWAMURA**

Date: November 11, 2013

Venue: International Workshop on Future Linear Colliders (LCWS13) at The University of Tokyo

---

Thank you for the introduction. My name is Takeo Kawamura. I have come here today as the Chair of the Federation of Diet members to promote the construction of an international laboratory for the linear collider. My role is to convey a message to you, the participants of this workshop from all over the world.

It is certain that the ILC will bring about a dramatic advance in science. In addition, I hope that the realization of the ILC will serve as a model for international collaboration and cooperation between industry and academics. The scientific innovation of this large international collaborative project is an important opportunity for the improvement of culture, education, economy and social life throughout the world.

As you know, the world is facing many fairly tough problems regarding energy, finance, security, global warming, water shortages and food-supply. It has become clear throughout this century that these problems cannot be solved by any one country alone, and must therefore be addressed on a global scale.

We should not forget that it is important to live a happy life. We should start to pay more attention to the improvement of cultural values and the so-called happiness index, rather than purely economical indices such as GDP. It is of great importance that the world grows culturally as well as economically.

We tend to say that science and technology are the most important aspects for coherent and sustainable global development. However, there are certain matters we have to think about. The most important part of science and technology is "people". Human beings use their motivation to take on challenges and cooperate throughout the world to conquer difficulties. They repeat success and failure, find their own purpose in life, and pass this legacy on to their offspring. This "human power" is the motor for development and the growth of the world.

I believe this is the most important point that science and technology addresses. It is not something only for improving our lives, although more convenience does increase economical activity and aid human development. This is only one side of the story. We will never experience true progress if we emphasize only the convenient and practical purposes served by technology.

Science brings about new knowledge and culture which gives rise to a new form of education and fosters new talents within it. The challenge of acquiring new knowledge in fundamental science has extended the horizons of human wisdom. It has realized new technology, in both software and hardware, new concepts and designs, systems in human society, and even methods of governance. It is this thirst for knowledge, the spirit of creating new things, new systems, and the challenger's spirit itself that gives the largest momentum to human development. We believe that these are the most important factors in tackling global issues.

The ILC project contains many important elements: international collaboration; promotion of global talents; the frontier of knowledge led by advanced science; and a significant potential for change in social life using new technology. It also motivates challenges for academics and industry. Above all, the international process for the realization of ILC is a new challenge. ILC is a project that can serve as a model for worldwide collaboration, not only in science and technology, but also in many other fields.

My personal involvement in activities regarding large accelerators dates back to the period of Mr. Tatsuo Tanaka, the previous Diet representative of my district. While he served as Minister of Education, he was dedicated to the promotion of the TRISTAN accelerator, the first energy frontier accelerator built in Japan. "Super conducting accelerator technology" was developed for the first time in the world, and I am very glad to hear that this technology is now at the core of ILC.

A long time ago, when I was a member of the Science and Technology Committee of the House of Representatives, I had a chance to visit CERN near Geneva. I clearly remember my astonishment at the huge and precise devices in front of me. Japan has provided resources for the construction and operation of the LHC, and also sends many researchers to CERN. Japanese companies have also played an important role in building the accelerator and detectors by developing sensor and superconducting technologies.

In October of last year, the director general of CERN, Dr. Heuer, visited Japan and met with the president of the Liberal Democratic Party Mr. Shinzo Abe, currently the Prime Minister. Dr. Heuer talked to us about the importance of both the Japanese contribution to CERN, and the further cooperation between CERN and the ILC, in order to further investigate the mysteries of the universe. Prime Minister Abe appreciated and agreed with this view.

It was the then Minister of Education, Mr. Kaoru Yosano, who in 1995 decided that Japan should contribute to the LHC. In 2006, under his chairmanship, we established the "The Committee for Promoting Construction of the International Linear Collider Laboratory" consisting of LDP Diet members. We were at first bewildered by the unfamiliar world of frontier science, but gradually came to perceive the subject and its significance. In 2008 the group was expanded to become a nonpartisan group, with interest from all political parties. We have worked together to support researchers' international activity in the design and development of ILC, and the path to its realization.

I have heard that the Technical Design Report of ILC was issued in December 2012, and this TDR is the fruit of a long period, more than 7 years, of challenging research and development. It is the work of more than two thousand researchers from both industry and academia. I would again like to express my appreciation of this effort. I understand that it is now the turn of politicians to respond to this effort, and to construct a worldwide partnership to realize this project.

The day after the event celebrating the completion of the Technical Design Report was held on December 15th, 2012, the Lower House elections were held, and the LDP and New Komeito coalition won a stable majority. At the time I was a general director of LDP's campaign strategy. We members of the LDP had presented the ILC project in our general policies pamphlet as a means for both economic and technological development. Science and technology are essential for the development of the economy, therefore we need a process of control and selection.

From the beginning of 2013, I, Kawamura, have been working as the chairman of the Federation to promote the construction of an international laboratory for the linear collider, succeeding Mr. Yosano, who retired at the last election. It is our duty to realize this ILC project. At the very beginning of our activities in 2006 we started with a few dozen volunteers; today about 160 Diet members are registered in the Federation. There are just over 700 Diet members in total, so I think you can appreciate the significant proportion of Diet members involved.

At the end of March this year, when Dr. Lyn Evans, the new director of the Linear Collider Collaboration and former LHC project leader, visited Japan for 3 days, arrangements were made for

him to meet with Diet members, the Minister of Education Mr. Hakubun Shimomura, and the Minister of Science and Technology, Mr. Ichita Yamamoto. On the last day of his visit, despite many difficulties, we were able to grant his urgent and sudden request to meet with the Prime Minister himself.

In recent years, decreasing interest in science has become an issue. According to Dr. Evans, thanks to the promotion of science by projects such as the LHC, the number of science students in Europe has increased by 20% over the last five years. This is a great surprise to us. Dr. Evans' message is clear.

As you already know, there were two candidate locations for the construction of the ILC, in the north and south of Japan. After a series of both scientific and sociological evaluations by experts, in August of this year the northern site in the Kitakami Mountains was chosen as the site for the ILC. We politicians agree that the site for the ILC should be chosen based on scientific and technological arguments.

After a request from the Department of Education and Science, the Science Council of Japan announced its "opinions on the ILC project", from an academic point of view. We would like to clear up some misunderstandings which may have arisen from the way in which this opinion was reported in the media. The conclusion of the final report proposes to appropriate fund to both evaluate the academic motivation for the ILC, and to investigate aspects which may need more work, in order to appropriately allocate government funds.

Particular emphasis was put on the need for a more precise cost estimate, the need to discuss the required budget and international partnerships, and the necessary distribution of manpower over the next 2-3 years. To achieve these goals, the Department of Education has requested the Department of Finance to provide an ILC investigation fund of 50 million yen in next year's budget, in addition to R&D funds for research laboratories.

Although this amount is not large compared to the R&D funds, it will be the first official governmental "investigative budget" aimed at realizing the ILC. This still needs to be approved by the Department of Finance, however once it has been approved, we members of the house will have achieved one of the most important milestones of recent years. We are aware that people are usually worried that an increase of academic budget in one field may mean a decrease in other fields. ILC is not simply an academic project within science. We shall arrange a dedicated budget to accommodate its much wider implications. It is the responsibility of the government to carry this out.

I think that most Diet members' knowledge of physics is at high school students' level. If you allow me, let me take the liberty of pointing out that the understanding of political dynamics by most particle physicists is also at high school students' level. If physicists and politicians collaborate by using each other's area of expertise, it is certain that we can accelerate the realization of the ILC project.

From now on, we should move towards forming the framework for an international partnership which goes beyond simple cooperation between researchers, towards one to which governments commit. We would like to proceed in an orderly manner and with a large-scale view, by building an international network base for researchers and engineers with our partner nations, reinforcing cooperation in the fields of science, technology, and economics.

It is my sincere hope that this workshop, which starts today, will allow constructive and positive discussions towards the realization of the linear collider project.