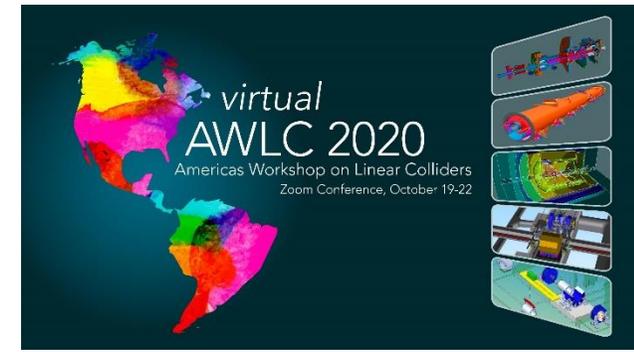




KEK, High Energy Accelerator
Research Organization



KEK perspective on the IDT

October 19, 2020

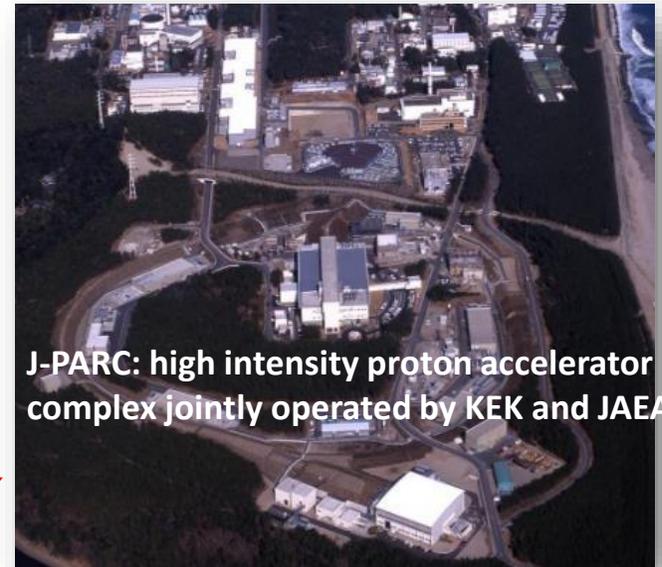
Talk given at AWLC 2020

M.Yamauchi
KEK

Outline

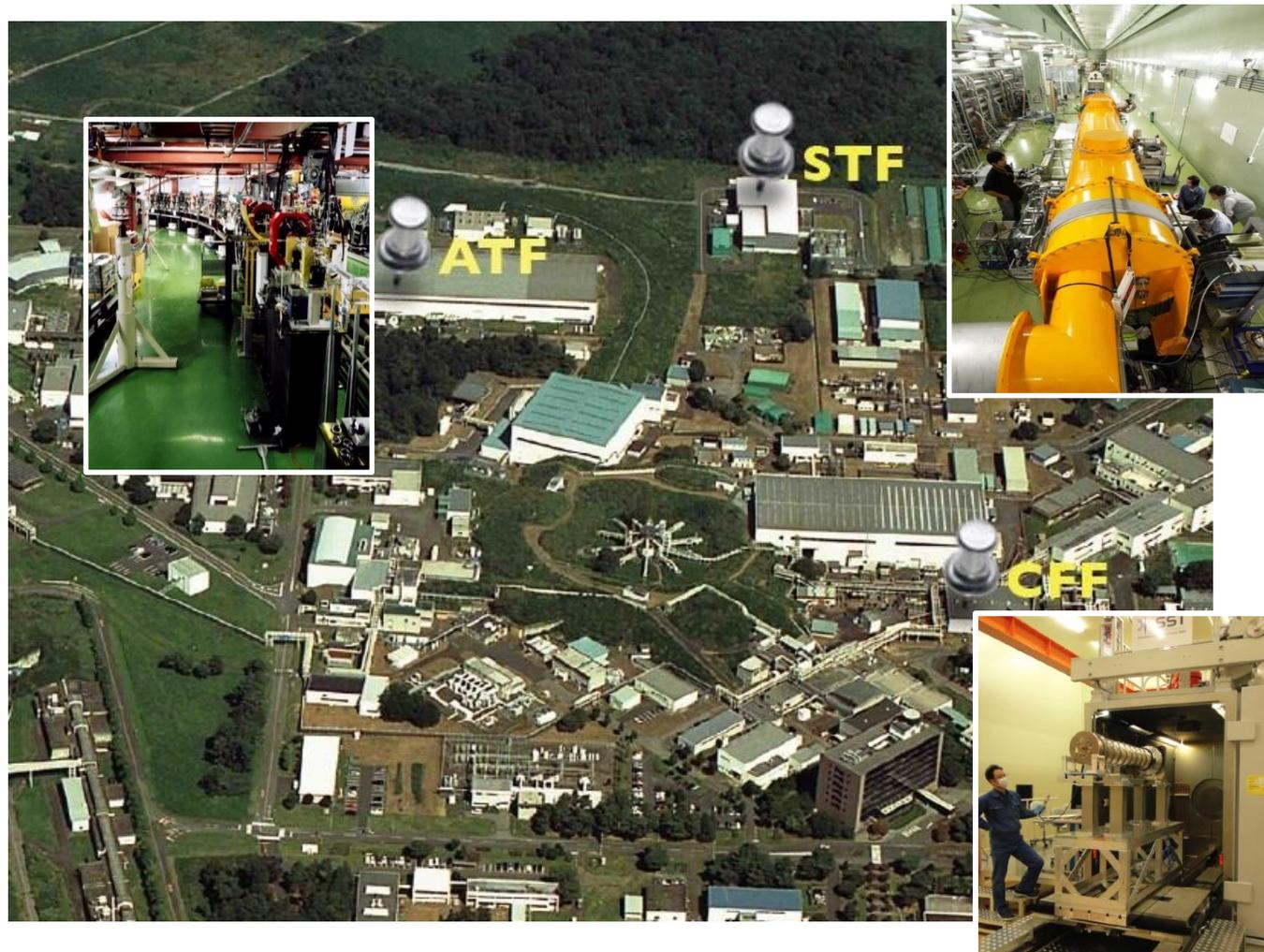
- ILC R&D at KEK
- Stepwise realization of ILC and KEK's role
- Present stance of the Japanese Government
- Supporting organizations in Japan
 - Federation of the Diet Members for ILC
 - Tohoku ILC Project Development Center
 - Advanced Accelerator Association
- Strong support by the U.S. Government
- Summary and Conclusions

KEK



KEK covers diverse field of accelerator based science making full use of the electron machines in Tsukuba and the proton machines in Tokai.

ILC R&D at KEK

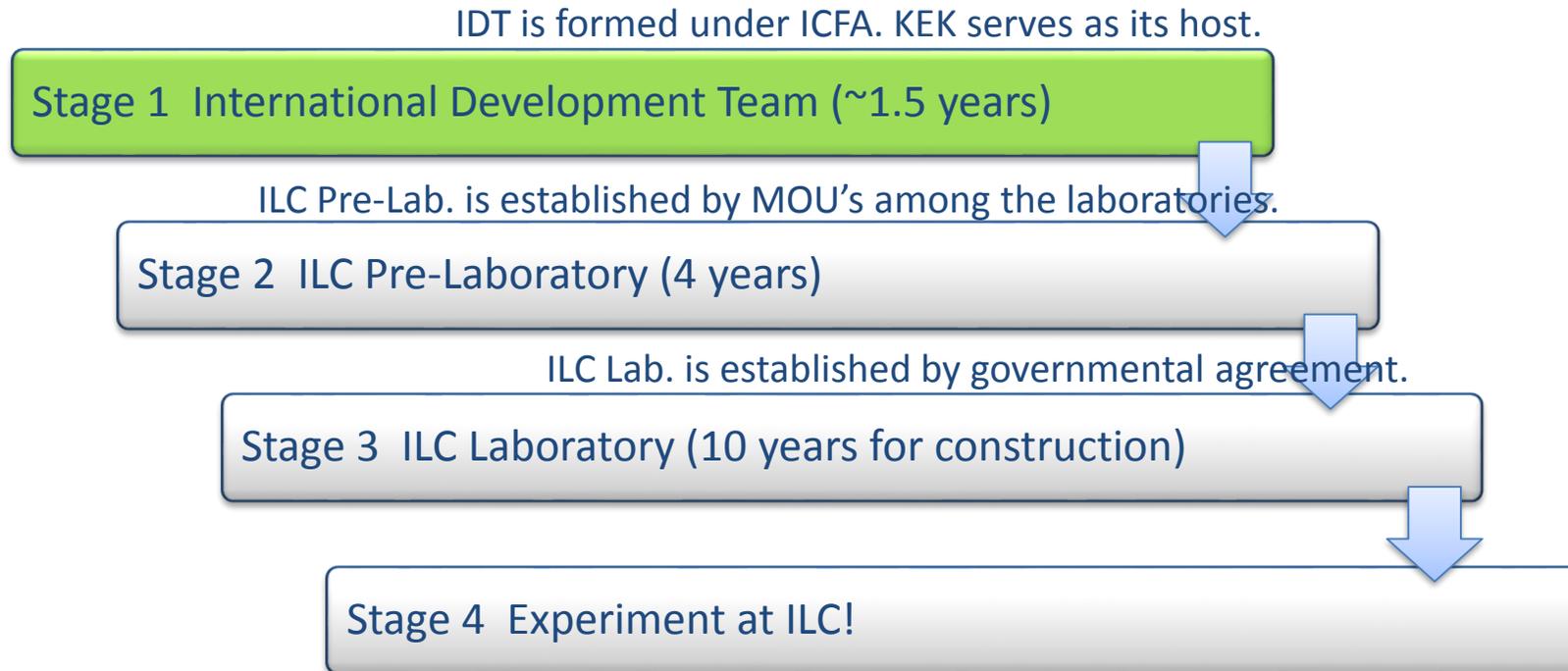


ATF: Technology to handle nano-size beam

STF: Technology to assemble and operate superconducting cavities

CFF: Technology to manufacture superconducting cavities

Stepwise realization of ILC



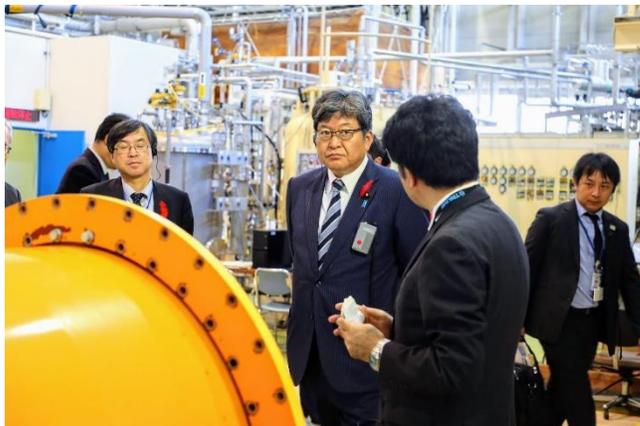
KEK's role at IDT and beyond

- The next focus will be when ILC Pre-Lab can be started following the IDT.
- The function of the ILC Pre-lab is to do the remaining works in four years.
 - Solve remaining technical issues of the accelerator.
 - Design of the organization and functions of the ILC laboratory
 - and launch the ILC laboratory!
- Since the start of the ILC Laboratory is the official start of the ILC project, it is necessary to reach an international agreement including cost sharing before its start. The ILC Pre-Lab also plays an important role in supporting such international negotiations
- KEK is making every possible effort to start the ILC Pre-Lab soon after the IDT completes its mandate, and to realize the ILC together with the Japanese physics community and supporting groups in the political sector, industrial sector and Tohoku region.

Message from the Japanese Government



Koichi Hagiuda, Minister of MEXT



- As the Minister of Education, Culture, Sports, Science and Technology, which has jurisdiction over the nation of science and technology, I think it is important for Japan to take an active and bold challenge in this field. (Hagiuda, Feb. 2020)
- It is an international project that requires a huge resource, and we recognize that it is necessary to solve various issues, including technical feasibility and international sharing, and to obtain wide-ranging cooperation both domestically and internationally. (Hagiuda, Feb. 2020)
- The Ministry of Education, Culture, Sports, Science and Technology will keep an eye on discussions by the international research community while exchanging opinions with government authorities in the United States and Europe. (Hagiuda, Sep. 2020)

Federation of the Diet Members for ILC

- Bipartisan parliamentary league established in 2008 consisting of 150 members from the Japanese National Diet. Chair is Mr. Takeo Kawamura, former MEXT minister.
- It conducts activities in many aspects to promote ILC, including discussions with the U.S. and European Governments. Delegation the Federation have visited U.S. and Europe twice every year before the COVID pandemic.
- It advocates to realize ILC as a national project that crosses ministries.
- “I believe the ILC should be realized through politically-led efforts, cutting across different ministries and agencies. As such, we’re proceeding to realize a budgeting as a national project with a separate budget outside of the regular science and technology budget.” (Statement of the ILC Federation, March 2019)



Tohoku ILC Project Development Center

- Local governments and universities in Tohoku area established Tohoku ILC Project Development Center this summer to solve issues that should be handled by the region regarding the construction of research facilities and environmental improvement around the ILC candidate site.
- Mandate of the center
 - Examination of the impact of ILC construction on the natural environment, society, and economy
 - Utilization of local resources associated with the location of research facilities and examination for regional promotion
 - Examination of system and town development corresponding to acceptance and settlement of researchers and families

Geological survey of the ILC candidate site

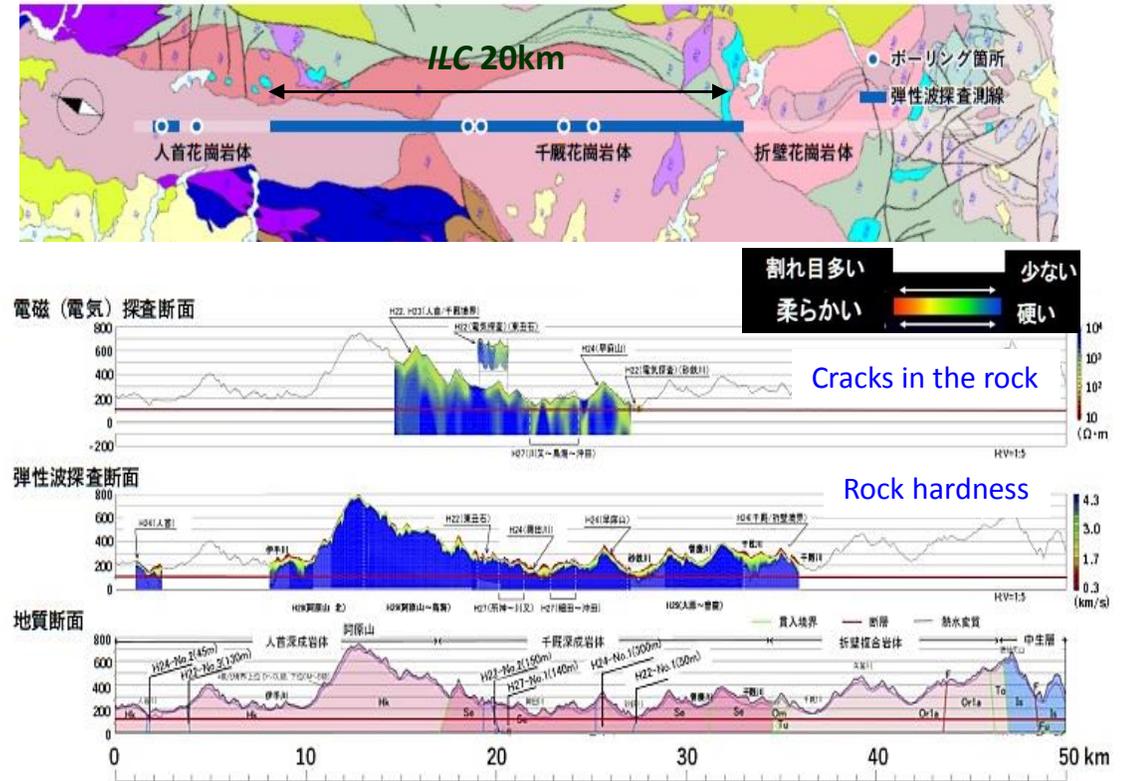


図 4.1: 地質調査結果概要

Advanced Accelerator Association (AAA)

- An organization of industrial sector to aim to make a leap in science and technology through the development of cutting-edge accelerators jointly by industry and academia.
- 102 companies and 41 universities and research laboratories
- Activities
 - Activate public relations about the ILC by organizing public symposia and awareness event targeting influencers
 - Consider the direction of technological development for the ILC, and make recommendations to related organizations.
 - Create innovative technology to support advanced accelerators.



Strong support by the U.S. Government

- U.S. Deputy Secretary of State Stephen Biegun sent a letter to Japan's Foreign Minister Motegi in February 2020.

It is necessary to take decisive action to ensure that Japan and the United States continue to be at the forefront in particle physics, and I strongly support the progress of the International Linear Collider Program. (Article in the Yomiuri newspaper on May 13, 2020, translation by MY)

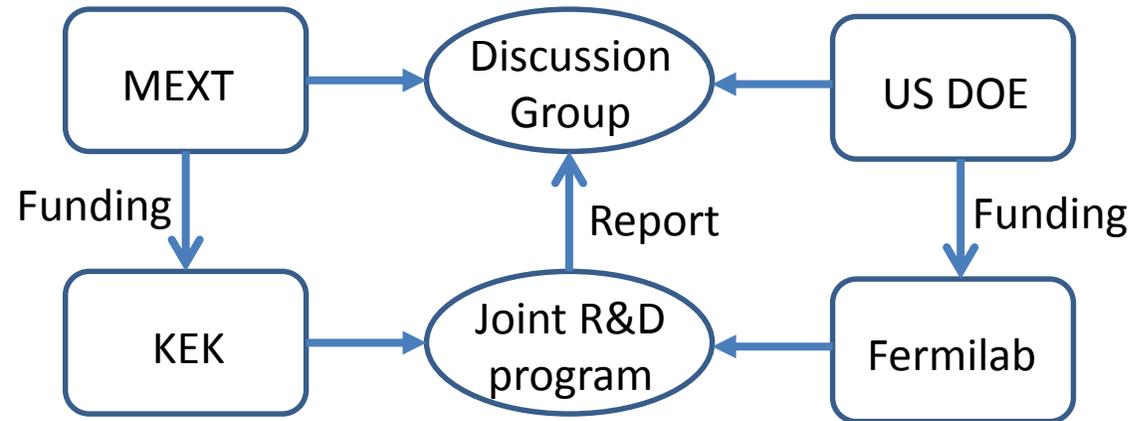
- Representatives from DOE visited KEK and Tokyo to discuss ILC with the MEXT and the Diet members.

Paul Dabber at KEK
Oct. 2018



International discussion groups

- The bilateral “discussion group”: an example of US-Japan DG



- MEXT is trying to make a similar framework with Germany, France and other European countries.

Summary and Conclusions

- ILC will be realized in the stepwise process. The first of it, the International Development Team, has been formed with KEK as a host. Lively discussion is underway under Chair Tatsuya Nakada.
- Next step is to start ILC Pre-Lab soon after the IDT finishes its mandate. The Japanese research community and KEK are making every possible effort to realize the ILC in timely way.
- There are some organizations in Japan, which provide essential support to the ILC; Federation of members of the National Diet, the ILC support group in the Tohoku region, which is candidate for the site, and support organizations established in the industrial sector.
- The strong support provided by the U.S. Government is extremely important to push the program forward.