

THE KITAKAMI TIMES

Iwate, the International Linear Collider, and You



In this issue...

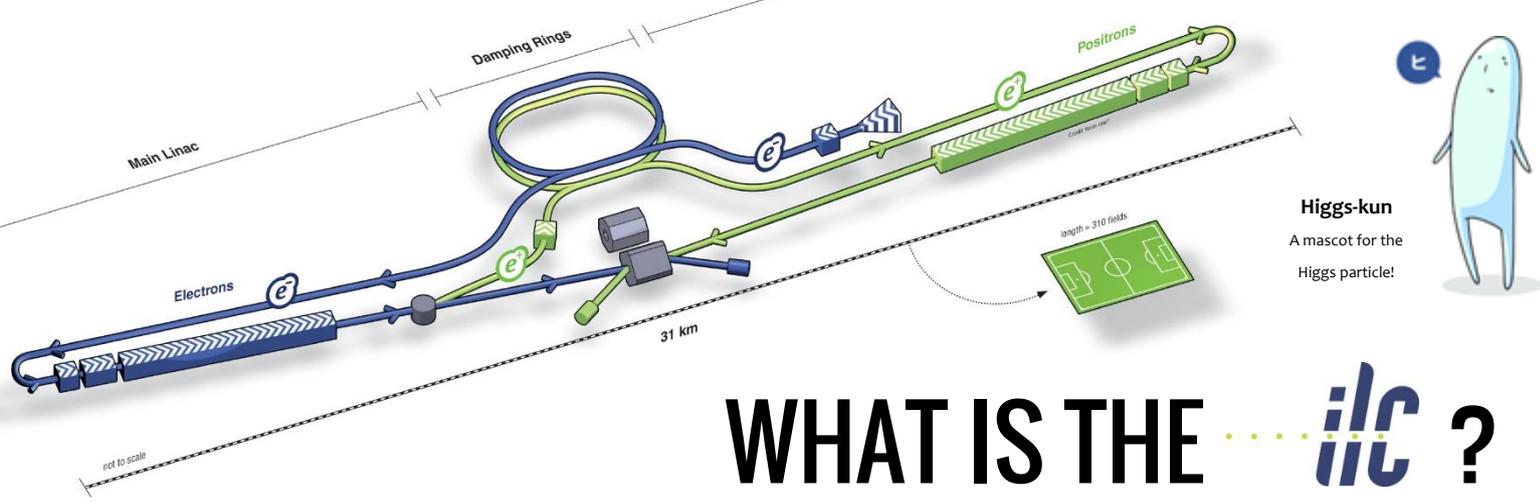
Iwate's One World Festa!

We talked about the ILC at Iwate's biggest international fair.

THE ILC - on the ground

What are people saying about the project?

All around the world in
80 steps at Iwate's One
World Festa



WHAT IS THE **ilc** ?

The International Linear Collider (ILC) will be one of the world's largest scientific endeavors.

Built in a 31 km-50km long tunnel underground, this state-of-the-art device will accelerate electron and positron particles and collide them at near the speed of light. By measuring their output, we will be able to learn more about the newly-discovered Higgs particle, and quite possibly deepen our understanding of the Standard Model, the Big Bang, and the universe. Scientists and engineers worldwide are collaborating to realize this unique project, which will contribute to fundamental science, industry, and a more international society.

THE JAPANESE CANDIDATE SITE

TOHOKU, NORTHERN JAPAN



Iwate Prefecture

A large prefecture in northern Japan, Iwate is home to the Kitakami candidate site for the ILC.



Oshu City

The ILC's northern end will lie in Oshu, which is also home to the Mizusawa National Astronomical Observatory.



Ichinoseki City

The ILC will pass through Ichinoseki City, one of the largest cities in Iwate. The ILC's interaction point will be in the northeast district of Daito.



Miyagi Prefecture

Directly south of Iwate, Miyagi holds both Kesennuma and Sendai cities in its borders.



Sendai City

Home to Tohoku University, Sendai is the urban center of the entire Tohoku region.



Kesennuma City

The southern tip of the ILC will lie in Kesennuma City. The city is hard at work rebuilding from the 2011 earthquake and tsunami.

THE KITAKAMI MOUNTAINS ILC CANDIDATE SITE

The Kitakami mountains are a range of gentle, rolling mountains in Iwate and Miyagi with a thick granite bedrock – perfect conditions for an underground particle accelerator. Kitakami is a name with a lot of history in the region, such as the Kitakami River, Kitakami City, and even THE KITAKAMI TIMES!

FOR THE FUTURE

If the ILC becomes a reality, about 10,000 researchers and their families around all over the world will come with their families to live in the area. An international hub of knowledge will be formed in our backyard, with leading edge research that will inspire new industries: medicine, IT, biotechnology, and many more. The ILC will be a great beacon of hope to the people of Tohoku, Japan, and the rest of the world. The entire region is joining together to make it a reality.

LEARN MORE

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International Linear Collider

IWATE PREFECTURE

Learning more about the world around us

An ILC seminar and more at Iwate's One World Festa

By Amanda Wayama



Anna Thomas and Amanda Wayama (in her country's traditional clothing) giving a talk on the ILC

Iwate, and the rest of northern Japan, have a reputation for being... well, *rural*. The winters are cold, rice fields seem more numerous than people, and you don't see many foreign faces walking around town. Or so you would think. In reality, Iwate is already home to around 5,600 residents who come from all around the world, ranging from the Philippines to Iceland, Peru to South Korea, Ecuador to the United Kingdom. Those residents got a chance to teach more about their homelands to local Japanese early in December at the 2015 One World Festa in Iwate, a day of friendship and learning held at Aiina, the largest cultural center in the prefecture.

Over 3,500 people came out to travel the world in 80 "steps." Thirsty? Drink some Vietnamese coffee at the Vietnam booth. Looking to make some decorations for the New Year? Practice paper cutting at the Chinese booth. Where's that music coming from? It's the Philippines booth showing off their *tinikling* dance.

There were also groups representing organizations like the Japan International Cooperation Agency (an entity that assists economic/social growth in developing countries). Food preparation was headed by a local Nepalese curry restaurant, as this year's theme was support for Nepal after the earthquake that shook the

country in April. There were also panels aimed at Japanese students looking to study abroad, a charity concert, and a seminar on the ILC.

In fact, the ILC was everywhere at this year's Festa. Iwate's ILC Promotion Office set up a large area with information and walked around the venue talking with residents (with Mr. Dark Matter making another appearance). The ILC Support Committee were also out in full force, and members chatted with local residents about the project.

Oshu City's Anna Thomas and I headed an hour-long presentation on the ILC aimed at Japanese residents, where we talked about what the ILC would explore as



Talking about the ILC with local residents

well as what effects we might see from the project: fundamental research, growth in industry, and an international Iwate.

The audience was packed, with young students to senior citizens. Many of the students told us they'd like to work on research at the ILC one day. However, not everyone is sold on the project, which is to be expected. Many people are aware that the ILC will be a device built underground, but the nitty-gritty of subatomic research is hard to pare down into layman's terms. While there is excitement about the economic effects and scientific advancements, concerns remain about possible radiation and the billions of yen involved in the project.

It's clear that as we continue to produce educational materials on the ILC, we have to keep the conversation going with the general population. Dr. Atsuto Suzuki (president of Iwate Pref. University and winner of the 2016 Breakthrough Prize) and his idea of an ILC Caravan, traveling through Tohoku giving talks on the ILC, seems like a good thing to get up and running.

The globalization of Iwate remains a powerful, if controversial, image of the future. One older gentleman told us he feared that the classic hometown-feel of Iwate would be irrevocably changed because of the ILC and an influx of foreign residents. I think it's natural to worry about the impact of immigration on a mostly mono-cultural society. Along with budget issues and radiation fears, I think this – integrating foreign residents into a rural Japanese society - will be the biggest challenge of the ILC project. Iwate is *satoyama*, the hilly heartland of Japan. People have been farming these lands for a millennia. Change on the scale of the ILC will need to be carefully implemented.

However, the whole vision for the ILC has the facility integrated with the culture of Tohoku. Imagine villages nestled in the mountains, with research facilities close by. Researchers living in classic Japanese homes with tiled roofs. Foreign and Japanese children going to the same school, bridging gaps between cultures. No one can deny that an influx of foreign residents will make things different, but just take a look at One World Festa. Foreign residents are part of Iwate, and Iwate is a part of us. We look forward to a time where the ILC will bring Iwate and the world together.



LEARN MORE ABOUT IWATE

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Rock on Iwate PR in English

[Iwate Prefecture ILC Promotion Council](#)

Search

Iwate ILC Promotion Council

THE ILC AND THE PEOPLE OF IWATE

We talked to people to see what they thought about the International Linear Collider. As we end 2015, knowledge of the project is growing, but more needs to be done to show how it will benefit both Iwate and the world. However, there is a lot of excitement for researchers to come to Iwate!

Quotes have been translated and edited for clarity.



TATSUMASA NAKAYA

No matter what world you're in, science does not have a lot of immediate practical applications, but work hard at [the ILC]. Work hard so that long after I'm gone, the people of Tohoku will think that the ILC was a good thing.

What do we need to make the ILC a reality?

That's hard to answer in a short amount of time, but I'd say money is necessary.

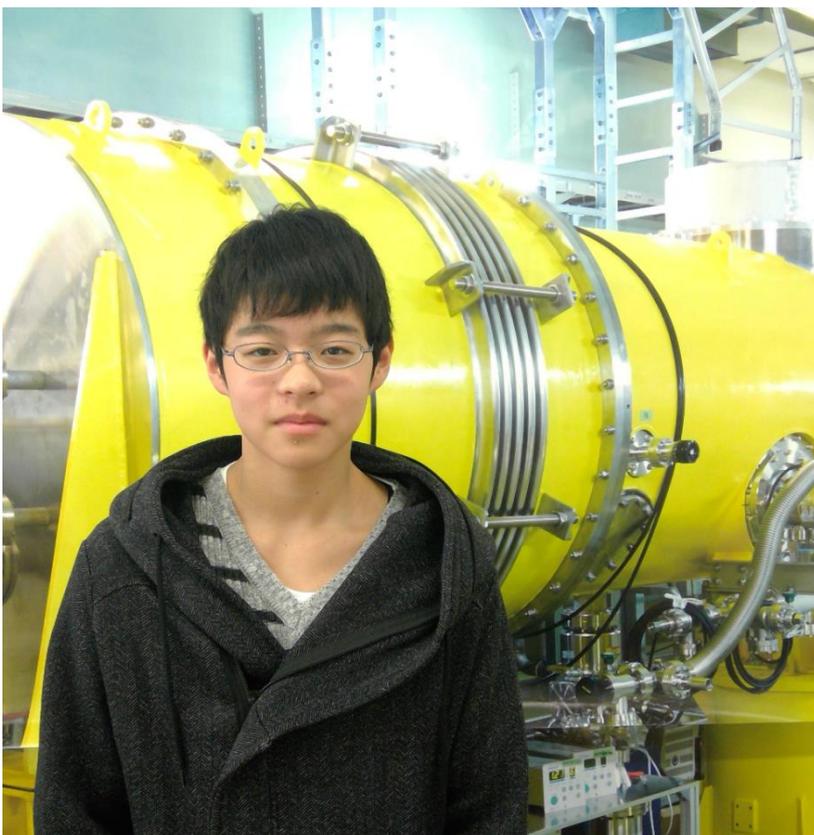


Cà REM (VIETNAM)

We were saying that the ILC might be a way to create a new form of energy to replace nuclear energy. If the ILC is built here, there will be a lot more opportunities for work in the STEM fields. The rest of the country will look to Iwate as a leader.

I think Iwate will become like your second home. I personally am leaving Iwate next year and I'm pretty sad about it. Iwate's got cool stuff and the people are so nice, it's easy to live here – it's just great.

“I'd really like to research elementary particles and do a job that helps people”



TAKATO HATAKEYAMA

There was a person who came to talk about the ILC at my school, and as I was listening to their talk I thought I'd like to do that kind of work myself. I'd really like to research elementary particles and do a job that helps people.

Iwate is still very rural, so if the ILC is built many people from around the world will come to the area, which will energize and rebuild the region. There will be a lot of money involved, so Iwate's economy will grow a lot. I don't think that Iwate will ever be a huge city or anything, but it will definitely get more developed which will be great.

Do you have a message for researchers abroad?

Uh, well, I'd really like to do research for a living so... (laughs)

There's a lot of really cool culture in Iwate as well as very beautiful nature, so please come on by.



SATOKO & UTA OKUMA

Uta: I think the ILC is very interesting. A lot of people from around the world will come, and Iwate will become prosperous like Tokyo.

Satoko: I'd love if Iwate became a place with tons of research facilities like Switzerland someday. But I'm still not really clear on what exactly the ILC will be doing.

I think a lot of people have fears about the ILC because they're not sure what it is. It's really important to be able to assuage those fears.

Satoko: It's something that lies beyond the imagination. We just need for there to be a clearer explanation – something that says this will definitely be safe.

Do you have a message for the researchers abroad?

Satoko: My family and I came to Iwate from Tokyo four years ago, and at first we thought Iwate was kind of like a foreign country because it had so much snow! There were a lot of things we didn't know at first, but we are really enjoying the expansive nature, the compact cities, the mountains and the rivers and the lakes. I think the researchers and their families will enjoy Iwate just like we do.

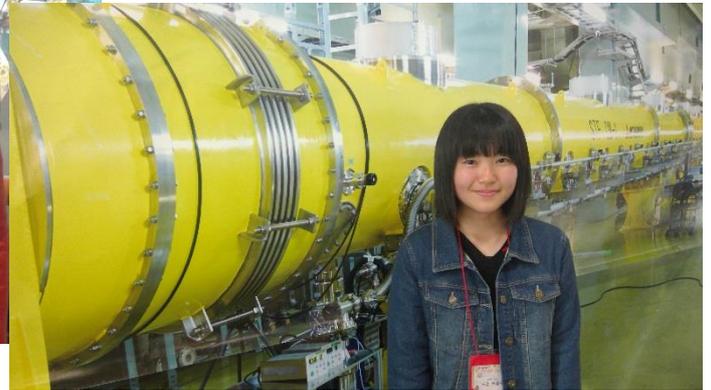
Do you want to become a researcher some day?

Uta: A little bit.

“I'd love if Iwate became a place with tons of research facilities like Switzerland.”

HINAKO MIKAMI

I've seen the ILC a lot in the newspapers, but I didn't really know what it was. [With today's talk] I was able to learn a little bit more. If the ILC is built in Iwate, we will be able to meet people from all over the world, which I'm am looking forward to. Please work hard so that the ILC can come to Iwate!



SOFIA LATIF (U.K.)

I'm very excited the ILC will come to Iwate, I think it's going to be a huge opportunity. I'll stick around here in Iwate for a bit longer and I'd like to get involved since my background is in physics. Also as a Muslim, I think I have some experiences that could help Muslim researchers that come to the area.

How does Iwate have to prepare for the researchers to come here?

Things like bureaucratic procedures need to be translated. Iwate needs to improve translation services they provide for all types of services here for foreigners. Simple things like registering at the city hall, and the emergency alerts [for earthquakes that are transmitted to cell phones].

Any messages for the people abroad?

Come to Iwate! Come and enjoy. I'm enjoying, and you'll enjoy it too. It's a beautiful part of the country. Please root for Iwate winning the bid for the ILC.



NAN LI (CHINA)

I don't know a lot about the ILC, but I've got an image in my head because I've heard the word so many times. If the ILC is built in Iwate, then Iwate will become the center of research in that area. There will be a lot of construction going on, and researchers from around the world will gather here. It will become very international. Iwate is a very easy place to live, and the people are very kind. Please come.



NOBUKO SAWADATE

I only know a little bit about the ILC, but Iwate is a wonderful place, so I want you to come here and experience many things. For example, you should visit Hachimantai [in the north of Iwate]. I like the nature there.

AKIYOSHI OSUMI

I hope that people will come to do research in Iwate as well as see all of the wonderful things Iwate has to offer. And if you're thinking of running workshops and seminars in the winter, please consider holding them at one of our many ski resorts! I'm with Appi Kogen Ski Resort.



“In 10-15 years, everyone will know what Iwate is.”

HAILEY SHOEMAKER (U.S.A.)

I think it's really cool that they're putting the ILC in Iwate, in Japan. I had the opportunity to visit the collider in CERN which was really cool. I'm kind of a science freak, and I think building a collider in Japan is going to be the best thing. This project is going to change Iwate a lot. In 10-15 years from now, everyone is going to know what Iwate is.

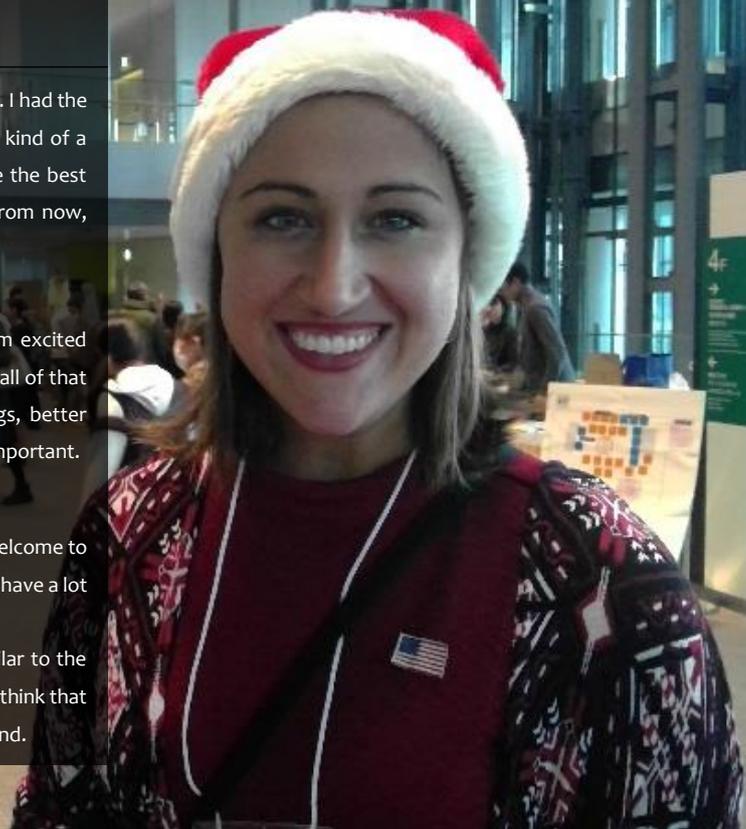
How was your experience at CERN?

I went on a tour while I was studying abroad in Switzerland. I'm excited about all the projects that they're going to be able to do there, and all of that helps us to have better medicine, better defense, better buildings, better everything. I think fundamental research coming to Japan is really important.

Do you have a message for the scientists at CERN?

Well, they probably speak French, so I would be like, *bienvenue!* Welcome to Japan, I think you're really going to like it here. I think both countries have a lot in common, like a desire to further research.

In the time I was there, the sense I got of the people is really similar to the people of Japan, and people have a lot of respect for each other, so I think that kind of environment will really feel like home for people in Switzerland.



IN THE NEWS

November
19th

[New MEXT ILC Human Resources Working Group starts deliberations](#)

Iwate Nippo: The MEXT ILC panel of experts has established a new working group for training and securing human resources, and will discuss prospects for training researchers, engineers, and technicians. They will release a draft report in spring next year at the earliest.

December
4th

[Subsidies for accelerator-related machinery and parts development](#)

Iwate Prefecture ILC Promotion Council: The Iwate Industry Promotion Center will provide a subsidy of up to 600,000 yen for approximately four projects making prototypes and/or developing accelerator-related machinery and parts.

December
7th

[Canada and Japan strengthen partnership](#)

TRIUMF: The heads of Canada's TRIUMF and Japan's High Energy Accelerator Research Organization, KEK, signed a new partnership agreement to significantly enhance research collaborations between the two centers and promote joint projects. A branch office at each other's respective institution will further strengthen collaborative research opportunities and jointly advance scientific efforts.

December
9th

[Prime Minister Meets with Nobel Laureates on Science and Technology Basic Plan](#)

NHK News: Prime Minister Abe met with 5 Nobel Prize Laureates including Dr. Ryoji Noyori and received an urgent recommendation to increase investment in science and technology for the five year Science and Technology Basic Plan from 2016. Prime Minister Abe expressed that he wanted to allocate a budget for science and technology, keeping in mind the importance of fundamental research and training researchers.

CONTRIBUTORS

Season's greetings from everyone here at THE KITAKAMI TIMES. Here's Higgs-kun in a traditional kimono for the Japanese New Year. Have a safe and warm holiday season and see you in the New Year!

Akemashite
omedeto!
(Happy New
Year!)



Kadomatsu, a
traditional bamboo
decoration

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with Oshu City, Ichinoseki City, and the ILC Support Committee

We're working on a web version of the Kitakami Times that should be up shortly. Our next issue is scheduled for January. Please let us know if you have any comments or suggestions!