



# ILC News Vol. 44

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Ichinoseki International Linear Collider Bulletin

English Translation

## Ichinoseki Science Café



Ichinoseki Science Café took place on February 3rd at the Oshu Space & Astronomy Museum, with 14 participants.

In addition to a museum tour, Assistant Professor Hirotomo Noda of the National Astronomical Observatory of Japan's RISE Lunar and Planetary Exploration Project delivered a presentation on the investigation of small celestial bodies in the solar system and Hayabusa2's research content.

Assistant Professor Noda points out that the Earth contains very little water, which is considered to have been brought in by asteroids and that he was part of a team that used lasers to observe the spacecraft's position and the shape of asteroids during the Hayabusa2 project.

## ILC Special Classes at High Schools across the city

From October 2023 to January 2024, Ichinoseki Kogyo High School, Ichinoseki Gakuin High School, Ichinoseki Daini High School, and Hanaizumi High School received special lessons on the ILC.

ILC Promotion Division staff members provided a lecture on the basics of ILC and intercultural cohabitation on November 16th at Ichinoseki Gakuin High School, which held the special class for the first time. This was followed by a group discussion. On November 21st, students showed posters that summarized the content of their group discussions.



### What is the ILC?

The International Linear Collider (ILC) is a next-generation linear accelerator whose design and development are being promoted through international cooperation. Thousands of world-class researchers and engineers from over 1,000 universities and research institutes in 100 countries will gather in Tohoku's Kitakami Mountains, establishing an international research base where they will conduct research for the next ten or twenty years.

### How the ILC works

Electrons and positrons will be accelerated to near-light speeds before colliding in a straight underground tunnel several tens of kilometers long. This creates the state that would exist one trillionth of a second after the universe's creation. For a brief moment, the state immediately following the Big Bang will be recreated, with various particles appearing, including the Higgs boson, which controls mass. By detecting these particles, we will be able to answer the long-standing question of how the cosmos and matter came to be.

Furthermore, the scope of application of accelerator technology is wide-ranging, from medical and life sciences to the creation of new materials, information and communications, metrology and measurement, and the environment and energy fields.