

YOSHIMURA LAB.

Climate System and Water Cycle



Department of Human and Social Systems
Large-Scale Experiment and Advanced-Analysis Platform(LEAP)

Department of Civil Engineering, Graduate School of Engineering,
Department of Natural Environment Studies, Graduate School of Frontier Sciences

Isotope meteorology

<https://isotope.iis.u-tokyo.ac.jp>

Y-Lab contributes to the society by understanding of climate and water cycle.

We study the Earth from viewpoints of climate, water, and isotopes to make contributions to understanding of climate system and prevention of water-related disasters.

Where we are

Y-Lab is located in the LEAP of Institute of Industrial Science in Kashiwa campus.



Office

There are some opportunities which Y-lab members can gather and discuss intensively.



Reception Space

Lab members often take a rest and chat with others here.



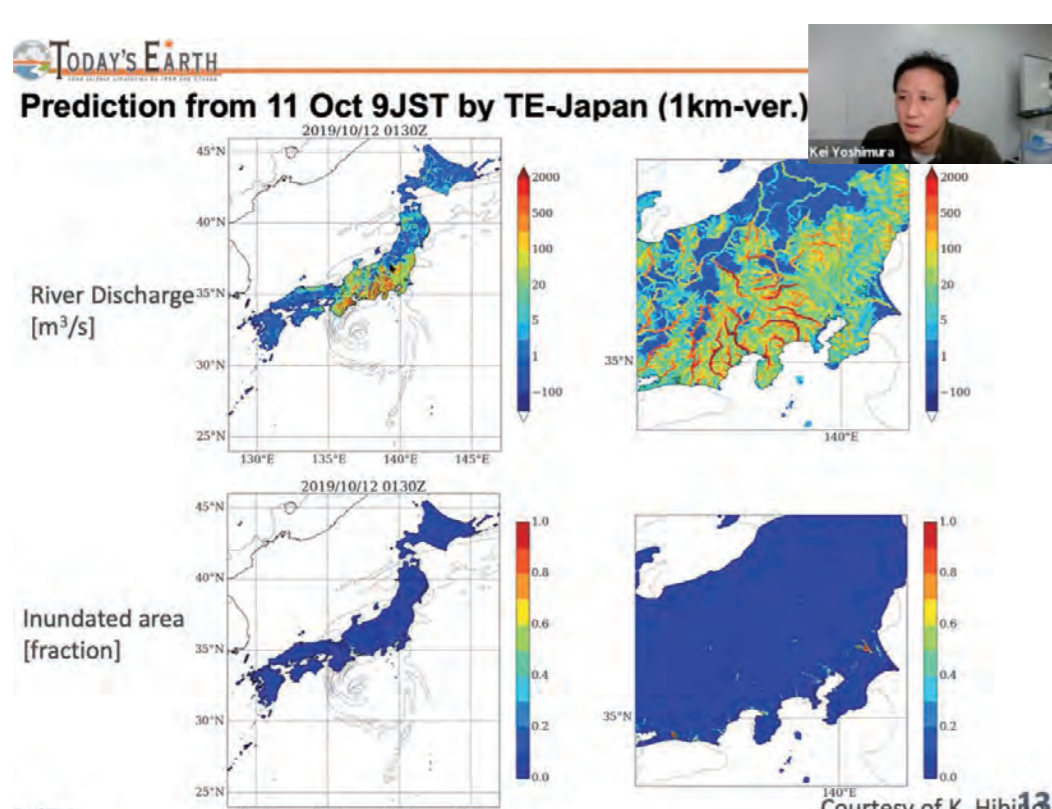
Open Campus

Visualization of water cycle with spherical display helps visitors understand research topics.



Isotope Experiment Room

Y-Lab is fully equipped with experimental instruments including mass and laser spectrometers.



Academic Conferences

Y-Lab members actively make presentations at academic conferences and share our results.



International Members

Members from various countries have lively discussions on their research topics.

What we do

Climate

MATSIRO

Emulator

Developing a faster emulator for MATSIRO, capturing its essential features

Provision of useful information for climate change through understanding climate system using model development and its application

Water Cycle

Real-time numerical flood prediction by "Today's Earth" system

Estimation of local precipitation based on numerical simulation with AI

Contribution to world water resource management and disaster mitigation through representation and prediction of water cycle based on model development and its application

Isotope

Simulated precipitation isotopes by ocean-atmosphere coupled isotope model compared with observation

Modeled tritium in precipitation

After Fukushima accident

Development of methods for climate reconstruction and improvement of model accuracy with isotope and seeking better understanding of climate system