

Yoshimura Laboratory

[Climate System and Water Cycle]



Institute of Industrial Science

Department of Human and Social Systems / Large-scale experiment and advanced-analysis platform

Eng/Department of Civil Engineering

Isotope Meteorology

Front/Department of Natural Environmental Studies

<http://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.



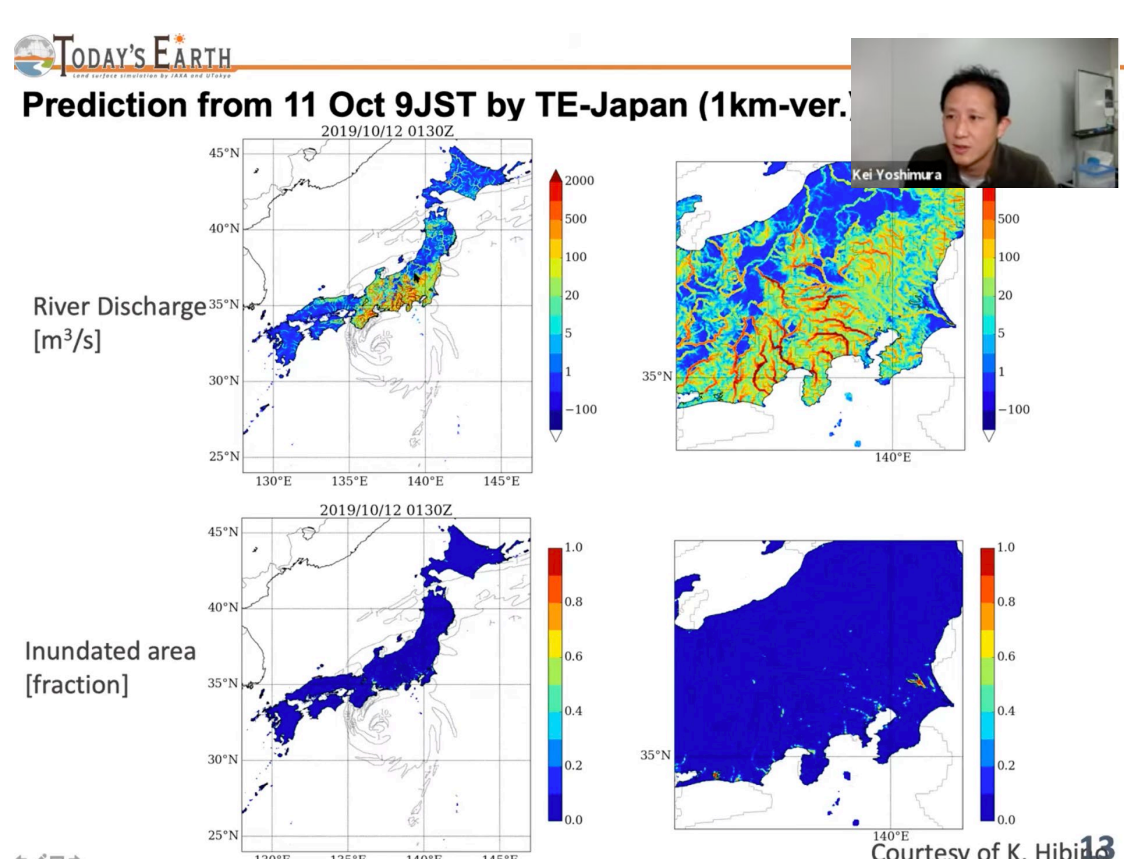
Open Campus

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.

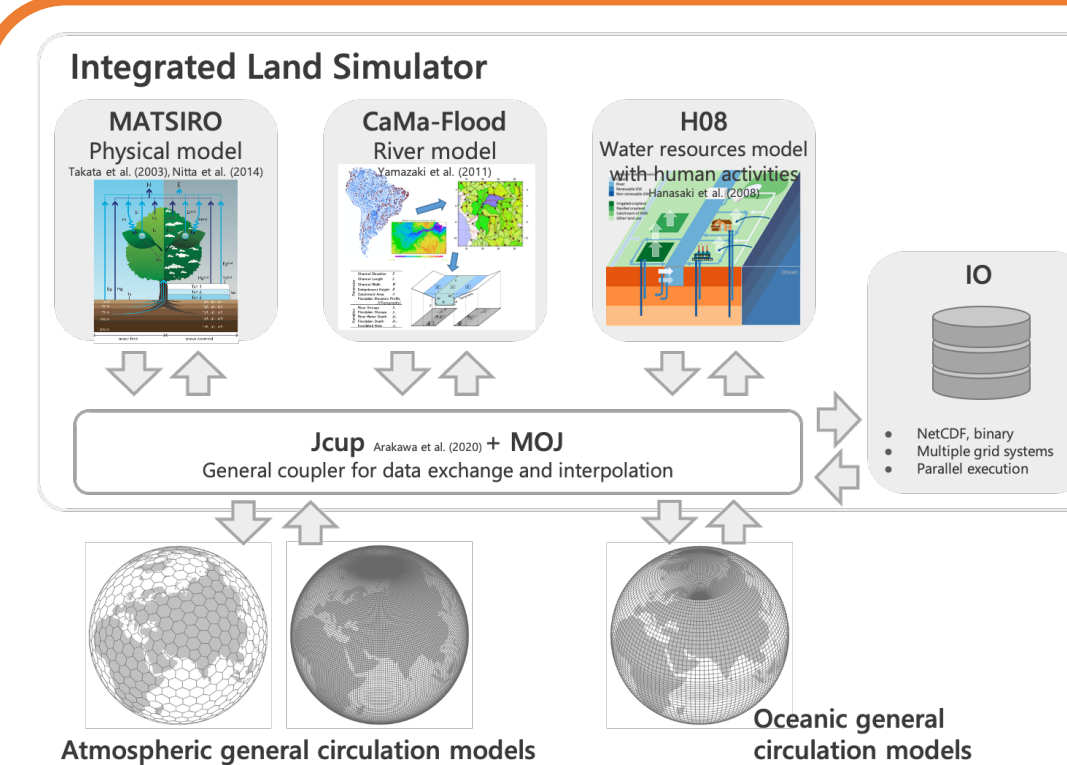


International Members

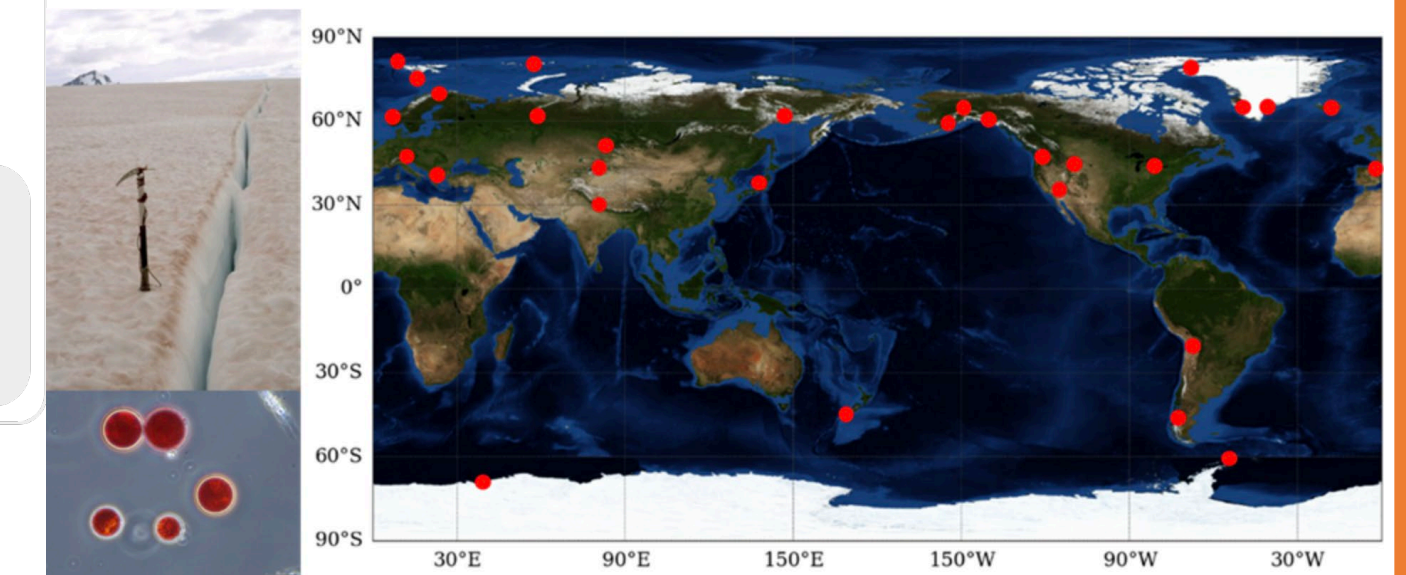
Members from various countries have lively discussions on their research topics.

What we do

Climate



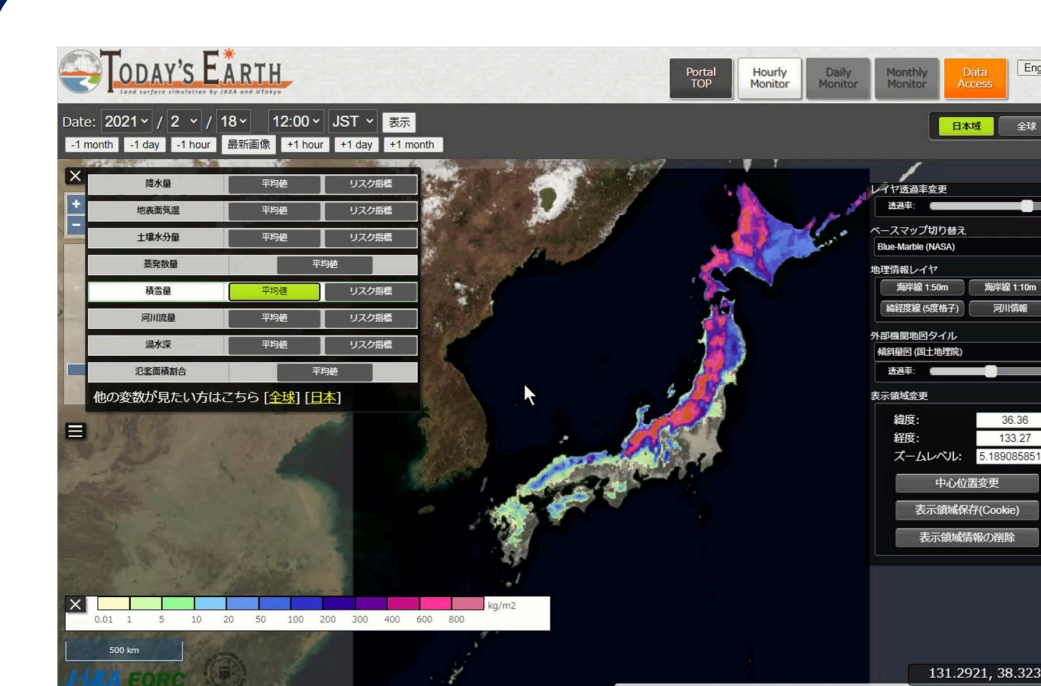
Integrated Land Simulator(ILS)



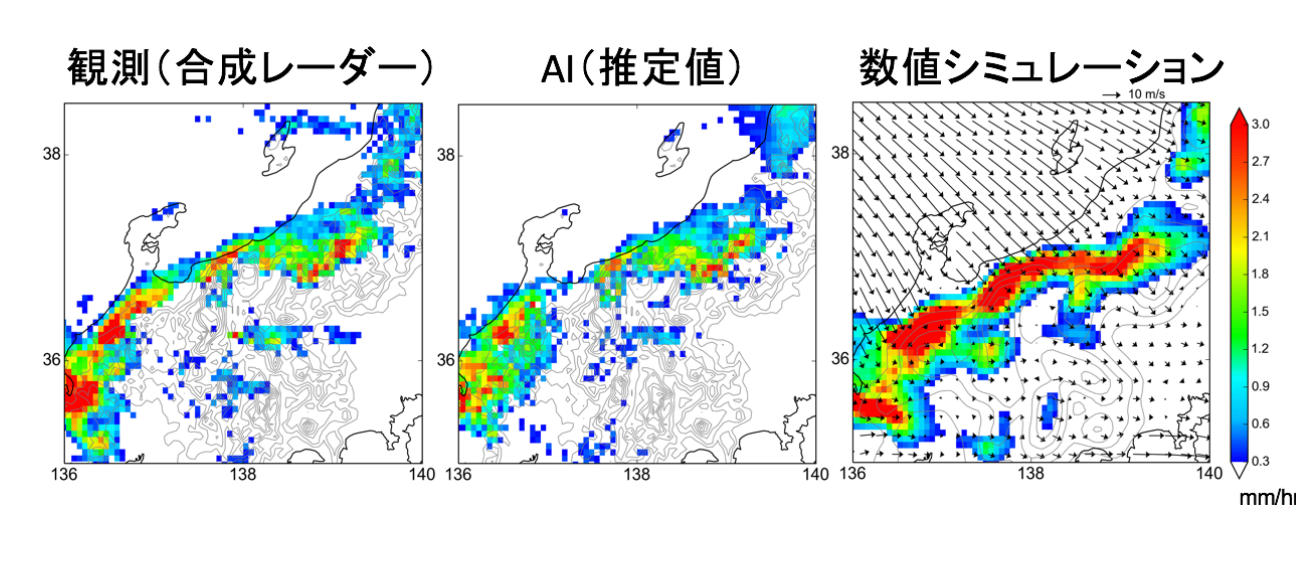
Developing a snow algae model to reconstruct blooming worldwide

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

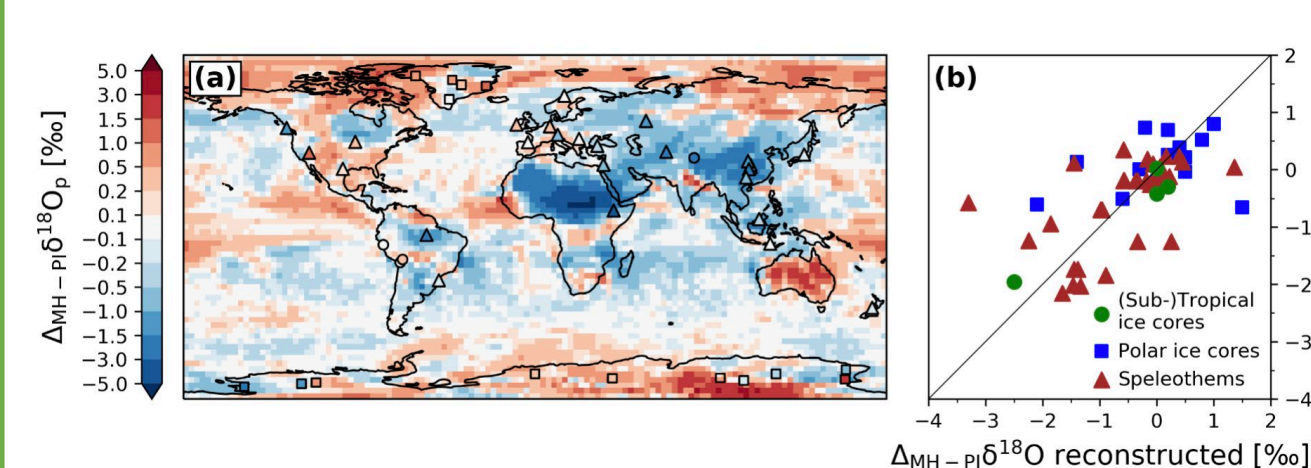


Estimation of local precipitation based on numerical simulation with AI

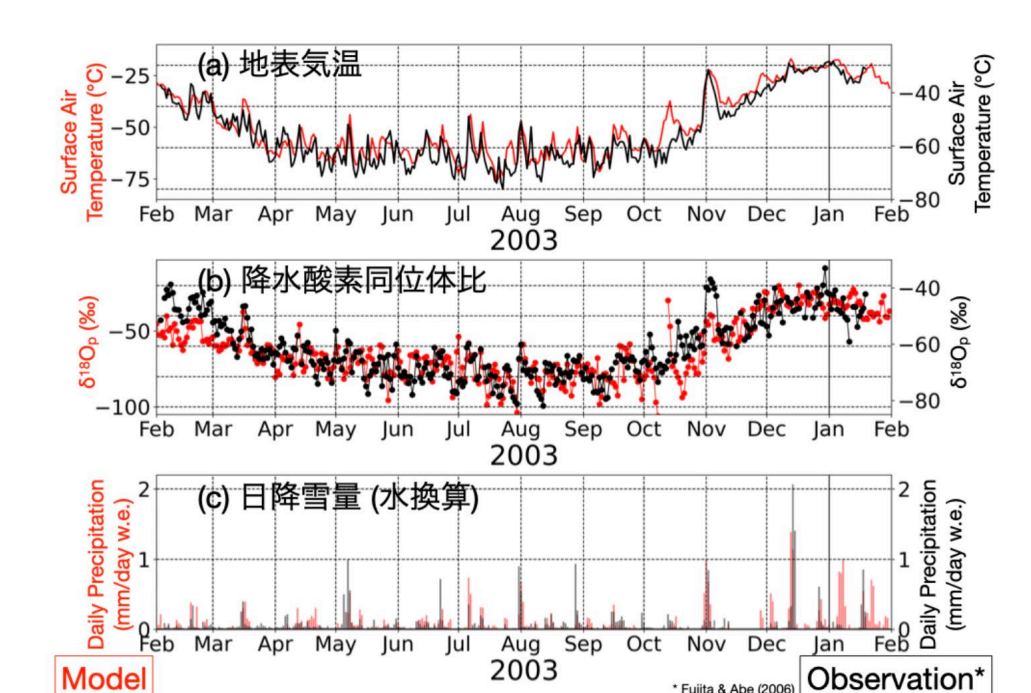
Contribution to world water resource management and disaster mitigation through representation and prediction of water cycle based on model development and its application

Isotope

Modelled $\delta^{18}\text{O}$ in precipitation and comparison with data (MIROC5-iso)



In the past climate (~6,000 years ago)



In Antarctica (2003)

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

