

On industrial use of the Earth Simulator

Domestic company only.

The Earth Simulator is also open to advanced industrial research and development.

(1) Fee based usage of Earth Simulator

It is the confidential type that does not disclose the research results and the user information.

We also provide the free trial use for the program porting and the confirmation of the program execution.

Additionally, we support for the program porting and the program tuning.

Further information is available at Earth Simulator web site. (<http://www.jamstec.go.jp/es/en/>)

(2) Use of HPCI (High Performance Computing Infrastructure) System

1) Research Projects using the HPCI system

We call for proposals of Earth Simulator Projects under HPCI computational resources.

2) Industrial Trial Use projects using the HPCI system

We call for proposals of Earth Simulator Projects under Industrial Trial Use projects using the HPCI system.

3) Industrial Use projects (Proprietary Use) using the HPCI system

We call for proposals of Earth Simulator Projects under Industrial Use projects (Proprietary Use) using the HPCI system.

Further information is available at HPCI web site. (https://www.hpci-office.jp/pages/e_proposal_submission)

General Information

■ Using the Earth Simulator

We are pleased to make the Earth Simulator available also for industrial use. Please contact the following address if you are interested.

E-mail: es_apply@jamstec.go.jp

■ Use or application of HPCI system

E-mail: hpci-contact@jamstec.go.jp

■ General inquiries

Please contact us at the following address if you have any question on the Earth Simulator.

E-mail: ceist_contact@jamstec.go.jp

■ Request for Facility tours, media interview or filming

If you are interested in a tour, a media interview or filming, please click on "Contact Us" on the JAMSTEC web site.

In addition, original research results and documents from the ES development period are displayed at the Earth Science Museum of the Yokohama Institute for Earth Sciences.

JAMSTEC Web site: <http://www.jamstec.go.jp/e/>

Access Map

Center for Earth Information Science and Technology

Yokohama Institute for Earth Sciences, Japan Agency for Marine-Earth Science and Technology

3173-25 Showa-machi, Kanazawa-ku, Yokohama-city, Kanagawa, 236-0001, Japan

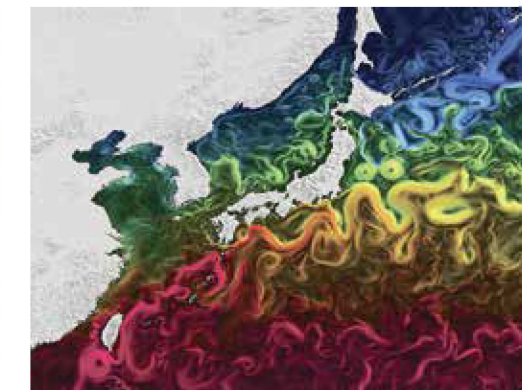
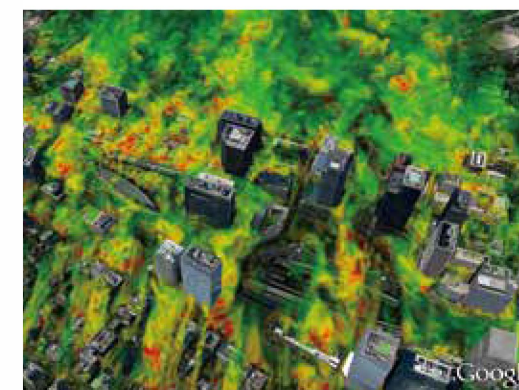
Nearest train stations:

Shin-Sugita Station on the JR Negishi Line (10 min on foot)

Sugita Station on the Keihin Kyuko Line (13 min on foot)



EARTH SIMULATOR



Japan Agency for Marine-Earth Science and Technology

JAMSTEC

Outline of the Earth Simulator

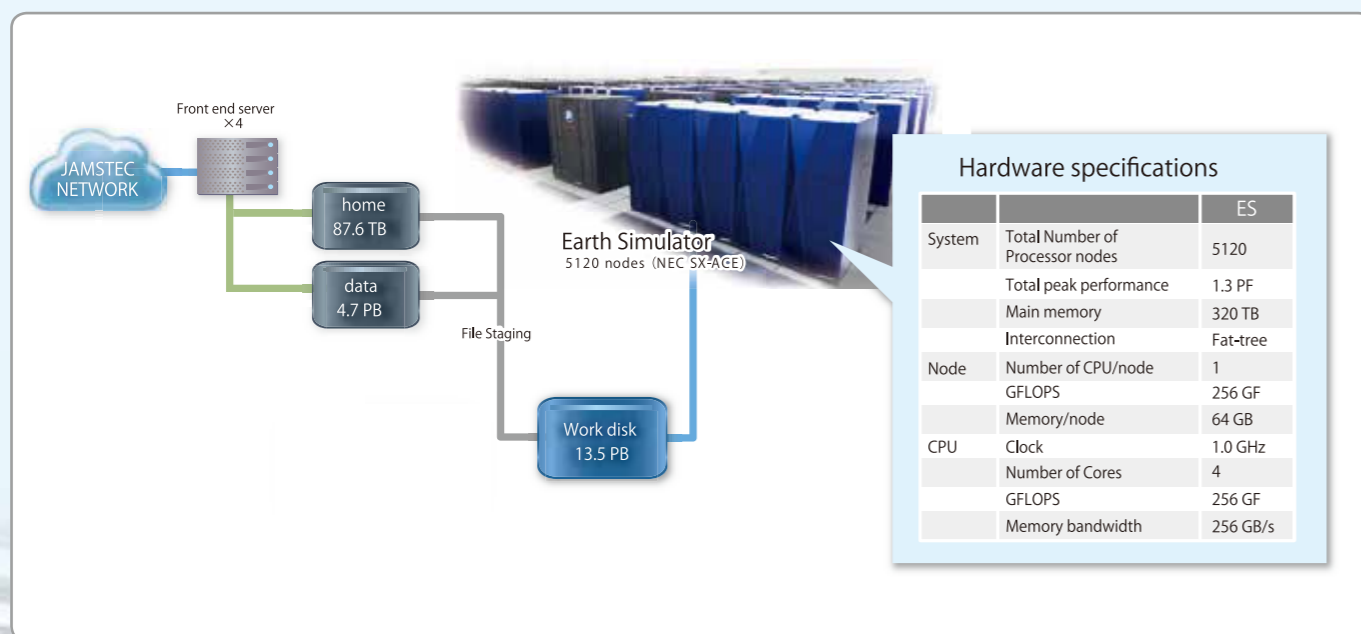
Earth Simulator started operation in March 2002 as “the world’s fastest computer capable of challenging issues for all humankind”, such as climate change including global warming, earthquakes and movement inside the earth. Especially in climate change research, Earth Simulator has been widely used for global warming projection experiments, and contributed to preparing reports for the Intergovernmental Panel on Climate Change (IPCC). Its powerful performance has also produced results that could not have been achieved by conventional simulations in various cutting-edge industrial fields such as development of materials, improvement of transportation equipment, designing devices and drugs.

The platform system of the Earth Simulator was replaced in March 2015 for the second time following the first replacement in March 2009.

The simulation performance of the new system in earth science is about 10 times higher than the former one.

The new system can process simulations that handle complicated parameters, which were difficult with the former one, and run larger scale simulations faster. It is expected to contribute to solving global environment issues, elucidating the mechanism of crustal movement and earthquake mechanism, and predicting tsunami damage.

System Outline



Earth Simulator Resource Allocation

There are two major project categories in the Earth Simulator resource allocation.

1. JAMSTEC research project

In this category, one set of projects will be conducted in order to carry out a necessary study for the achievement of the JAMSTEC mid-range target and plan. Another set of projects will be conducted as contracted (Fee-based) research.

(1) JAMSTEC proposed project

Projects led by JAMSTEC researchers.

(2) Strategic project with special support

Projects accelerated by proactive supports to deliver significant results. Both JAMSTEC internal and external applications to be accepted.

(3) Contract research project

The projects using the Earth Simulator focus on research commissioned by public organizations such as the government. (Global Warming, Disaster, Industry, etc)

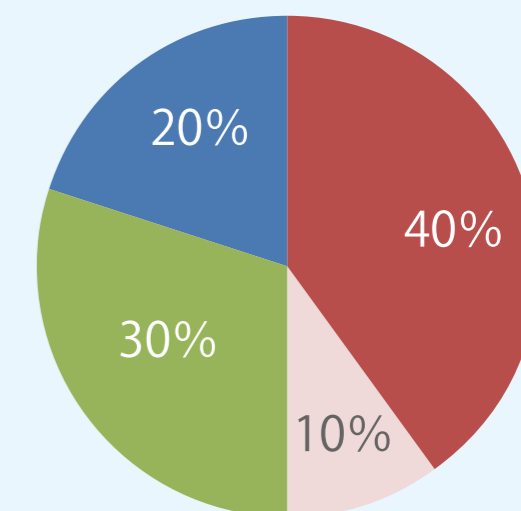
- Integrated Research Program for Advancing Climate Models
- Consignment Study (JST/CREST, KAKENHI, etc.)

(4) Fee based usage

Projects are performed under the confidential for industrial world. Users can make their information and results confidential.

2. Proposed research project

In this category, there are the public applications focus of oceanic science, earth science, and related objects for the outside of JAMSTEC.



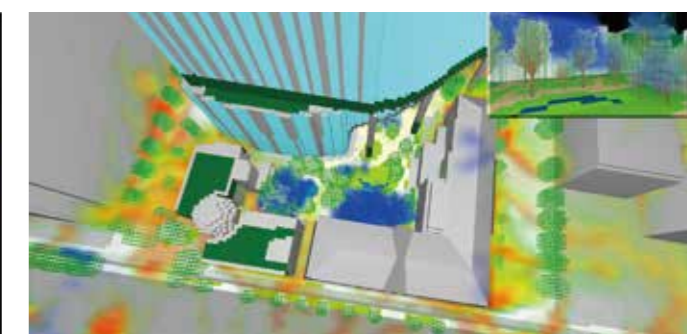
JAMSTEC Research Project
 Proposed Research Project
 ■ JAMSTEC proposed project
 ■ Proposed research project
 ■ Strategic project with special support Fee based usage
 ■ Contract research project

FY2020 Earth Simulator Resource Allocation

Research and development of cutting-edge simulation



This simulation shows the propagation of seismic waves excited by the Mw9.0 Tohoku earthquake in 2011.



Simulation of cooling phenomena due to trees around Marunouchi Park Building (Multi-Scale Simulator for the Geoenvironment (MSSG) model) JAMSTEC, Mitsubishi Jisho Sekkei Inc., Takenaka Corporation