



# Integrated Research Program for Advancing Climate Models (TOUGOU Program) CMIP6 simulation data by non-hydrostatic general circulation model NICAM16-8S: HighResMIP

## 1. IDENTIFICATION INFORMATION

Name	Integrated Research Program for Advancing Climate Models (TOUGOU Program) CMIP6 simulation data by non-hydrostatic general circulation model NICAM16-8S: HighResMIP
Abbreviation	CMIP6.HighResMIP.MIROC.NICAM16-8S
DOI	doi:10.22033/ESGF/CMIP6.1034 [ <a href="http://dx.doi.org/10.22033/ESGF/CMIP6.1034">http://dx.doi.org/10.22033/ESGF/CMIP6.1034</a> ]
Metadata Identifier	CMIP6_NICAM16_8S_HighResMIP20200923153006-en

## 2. CONTACT

### 2.1 CONTACT on DATASET

Name	Chihiro KODAMA
Organization	JAMSTEC
Address	3173-25, Showa-machi, Kanazawa-ku, Yokohama-city, Kanagawa, 236-0001, Japan
E-mail	kodamac@jamstec.go.jp

Name	Masaki SATO
Organization	Atmosphere and Ocean Research Institute, the University of Tokyo
Address	5-1-5, Kashiwanoha, Kashiwa-shi, Chiba, 277-8564, Japan
E-mail	satoh@aori.u-tokyo.ac.jp

### 2.2 CONTACT on PROJECT

## 3. DOCUMENT AUTHOR

Name	Takahiro INOUE
Organization	JAMSTEC
E-mail	tkhr_i@jamstec.go.jp

## 4. DATASET CREATOR

Name	Chihiro KODAMA
Organization	JAMSTEC
Name	Tomoki OHNO
Organization	JAMSTEC
Name	Tatsuya SEIKI
Organization	JAMSTEC
Name	Hisashi YASHIRO
Organization	National Institute for Environmental Studies
Name	Akira T. NODA
Organization	JAMSTEC
Name	Masuo NAKANO
Organization	JAMSTEC
Name	Yohei YAMADA
Organization	JAMSTEC
Name	Woosub Roh
Organization	Atmosphere and Ocean Research Institute, the University of Tokyo
Name	Masaki SATOH
Organization	Atmosphere and Ocean Research Institute, the University of Tokyo
Name	Tomoko NITTA
Organization	Atmosphere and Ocean Research Institute, the University of Tokyo
Name	Daisuke GOTO
Organization	National Institute for Environmental Studies
Name	Maki A. NOGUCHI
Organization	Graduate School of Science, The University of Tokyo
Name	Tomoe NASUNO
Organization	JAMSTEC
Name	Tomoki MIYAKAWA
Organization	Atmosphere and Ocean Research Institute, the University of Tokyo
Name	Ying-Wen Chen
Organization	Atmosphere and Ocean Research Institute, the University of Tokyo
Name	Masato SUGI
Organization	Meteorological Research Institute

## 5. DATE OF THIS DOCUMENT

2020-09-23

---

## 6. DATE OF DATASET

revision : 2019-08-30

## 7. DATASET OVERVIEW

### 7.1 Abstract

"Integrated Research Program for Advancing Climate Models" ("TOUGOU Program") is a five-year project being implemented by the Ministry of Education, Culture, Sports, Science and Technology ("MEXT") from FY2017 to FY2021 with the primary objective of elucidating the mechanisms of climate change and generating information on climate change projections through the development of climate models that will form the basis for all climate change countermeasures.

The TOUGOU Program consists of four research themes. The objectives of the theme A is to actively participate in the coupled model intercomparison project phase 6 (CMIP6) by using the global climate models developed in the previous programs, and to carry out many original climate model simulations to generate the forecast information necessary for the formulation of near-future adaptation and mitigation measures. Theme B aims to, such as, more precisely estimate CO2 emissions by using the Earth System Model (ESM), a climate model that incorporates biological and chemical processes into the global climate model.

This dataset contains the results of the HighResMIP by NICAM16-8S, among the various simulations for CMIP6 that have been carried out in this TOUGOU Program using the global climate models and the Earth system models developed in Japan.

This study was supported by the Environment Research and Technology Development Fund (JPMEERF20172R01) of the Environmental Restoration and Conservation Agency of Japan (ERCA) and the Integrated Research Program for Advancing Climate Models (TOUGOU) (JPMXD0717935457), the FLAGSHIP2020 project within the priority study4, and Program for Promoting Researches on the Supercomputer Fugaku (Large Ensemble Atmospheric and Environmental Prediction for Disaster Prevention and Mitigation), of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan.

All CMIP6 data are collected, managed and published by the Earth System Grid Federation (ESGF), and DIAS serves as one node of the ESGF. All public datasets, including this dataset, are available from ESGF. Please refer to the CMIP6 Guidance for Data Users (link below) for information on the use of these datasets, including this dataset.

### 7.2 Topic Category(ISO19139)

climatologyMeteorologyAtmosphere

### 7.3 Temporal Extent

Begin Date	1950-01-01
End Date	2015-01-01

### 7.4 Geographic Bounding Box

North latitude bound	90
----------------------	----

West longitude bound	-180
Eastbound longitude	180
South latitude bound	-90

## 7.5 Grid

## 7.6 Geographic Description

## 7.7 Keywords

### 7.7.1 Keywords on Dataset

Keyword Type	Keyword	Keyword thesaurus Name
theme	Climate	GEOSS

### 7.7.2 Keywords on Project

## 7.8 Online Resource

DOI landing page, Citation information : <https://doi.org/10.22033/ESGF/CMIP6.1034>

TOUGOU Program Web site : <http://www.jamstec.go.jp/tougou/program/index.html>

CMIP6 Project Web site : <https://pcmdi.llnl.gov/CMIP6>

CMIP6 Terms of Use : <https://pcmdi.llnl.gov/CMIP6/TermsOfUse>

CMIP6 Guidance for Data Users : <https://pcmdi.llnl.gov/CMIP6/Guide/dataUsers.html>

MIP Description : <https://search.es-doc.org/>

Model Information(Not ready) : <https://explore.es-doc.org/cmip6/models/miroc/nicaml6-8s>

ESGF, Search Variables (in DKRZ) : <http://esgf-data.dkrz.de/search/cmip6-dkrz>

ESGF, Search Variables (in LLNL) : <http://esgf-node.llnl.gov/search/cmip6>

Errata Information : <https://errata.es-doc.org/>

## 7.9 Data Environmental Information

## 7.10 Distribution Information

name	version	specification
netCDF	classic	CF Convention

---

## 8. DATA PROCESSING

## 9. DATA REMARKS

## 10. LICENSE

### 10.1 Data Policy by the Data Provider

This dataset is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0).

See "CMIP6 Guidance for Data Users" for the detailed information.

<https://pcmdi.llnl.gov/CMIP6/Guide/dataUsers.html>

### 10.2 Data Policy by the Project

## 11. DATA SOURCE ACKNOWLEDGEMENT

### 11.1 Acknowledge the Data Provider

Cite this dataset as:

Kodama, Chihiro; Ohno, Tomoki; Seiki, Tatsuya; Yashiro, Hisashi; Noda, Akira T.; Nakano, Masuo; Yamada, Yohei; Roh, Woosub; Satoh, Masaki; Nitta, Tomoko; Goto, Daisuke; Miura, Hiroaki; Nasuno, Tomoe; Miyakawa, Tomoki; Chen, Ying-Wen; Sugi, Masato (2019). MIROC NICAM16-8S model output prepared for CMIP6 HighResMIP. Version YYYYMMDD[1]. Earth System Grid Federation. <https://doi.org/10.22033/ESGF/CMIP6.1034>

[1] Please use the latest dataset version or if not available the latest data download date as version in your data citation.

For acknowledgement, see CMIP6 Terms of Use.

### 11.2 Acknowledge the Project

## 12. DISCLAIMER

### 12.1 Disclaimer of Project

## 13. REFERENCES

The Non-hydrostatic Icosahedral Atmospheric Model: description and development. Satoh, Masaki; Tomita, Hirofumi; Yashiro, Hisashi; Miura, Hiroaki; Kodama, Chihiro; Seiki, Tatsuya; Noda, Akira

---

T; Yamada, Yohei; Goto, Daisuke; Sawada, Masahiro; Miyoshi, Takemasa; Niwa, Yosuke; Hara, Masayuki; Ohno, Tomoki; Iga, Shin-ichi; Arakawa, Takashi; Inoue, Takahiro; Kubokawa, Hiroyasu. DOI:10.1186/s40645-014-0018-1

The non-hydrostatic global atmospheric model for CMIP6 HighResMIP simulations (NICAM16-S): Experimental design, model description, and sensitivity experiments. Kodama, Chihiro; Ohno, Tomoki; Seiki, Tatsuya; Yashiro, Hisashi; Noda, Akita T.; Nakano, Masuo; Yamada, Yohei; Roh, Woosub; Satoh, Masaki; Nitta, Tomoko; Goto, Daisuke; Miura, Hiroaki; Nasuno, Tomoe; Miyakawa, Tomoki; Chen, Ying-Wen; Sugi, Masato. DOI:10.5194/gmd-2019-369

Copyright(c) 2006-2020 Data Integration & Analysis System (DIAS) All Rights Reserved. This project is supported by "Data Integration & Analysis System" funded by MEXT, Japan
--