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Earth System Documentation

http://es-doc.org

Mission

Nurture a standards based eco-system in support of earth system modelling documentation creation, analysis & dissemination.

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Strategic Relevance

EXA-Scale search enhancement

IPCC reports generation

Model inter-comparison

Realtime simulation documentation

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Earth System Documentation

Funders

IPSL (EU)
NOAA (US)
EX-ARCH (G8)
ISENES-2 (EU)

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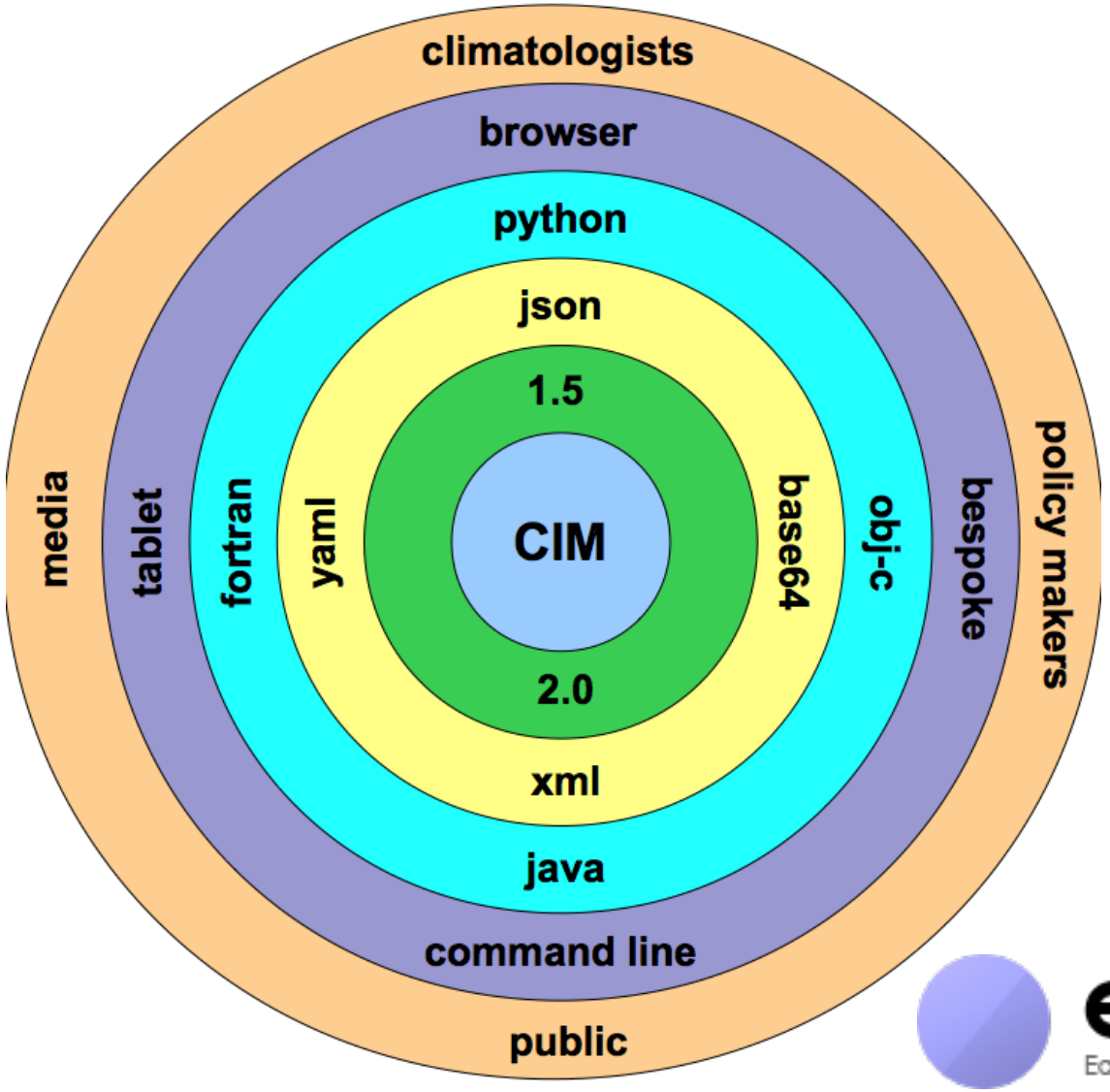
Eco-System



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Modus Operandi

Soft	*Hard*
Process	***Online Tools***
Services	***API***

Process

Transparent
Documented
Iterative
Sustainable
International
Continuos

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Services

Engage scientific community
Nurture standards, e.g. CIM
Advocacy
Governance
Dissemination
Outreach

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Tools

Create
Search
View
Compare
Visualize

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Documentation Search v0.9.0.3

Support

Doc Type :	Doc Version :	Project :	Institute :	Model :	Experiment :
Model	Latest	CMIP5	*	*	*

Search returned 42 of 107 records in 0.087s

1 2 3

Institute	Short Name	Long Name	json
BCC	BCC-CSM1.1	Beijing Climate Center Climate System Model version 1.1	json
CMCC	CMCC-CESM	CMCC Carbon Earth System Model	json
CMCC	CMCC-CM	CMCC Climate Model	json
CMCC	CMCC-CMS	CMCC Climate Model with a resolved Stratosphere	json
CNRM-CERFACS	CNRM-CM5	CNRM-CM5	json
CSIRO-BOM	ACCESS1.0	ACCESS1.0	json
CSIRO-BOM	ACCESS1.3	ACCESS1.3	json
CSIRO-QCCCE	CSIRO-Mk3.6.0	CSIRO Mark 3.6.0	json
EC-EARTH	EC-EARTH	EC-EARTH	json
INM	INM-CM4	inmcm4	json
INPE	HadGEM2-ES	Hadley Global Environment Model 2 - Earth System	json
IPSL	IPSL-CM5A-LR	IPSL-CM5A-LR;atmosphere:LMDZ5A(95x96L39);ocean:NEMOv3.2 (OPA-LIM-PISCES,149x182L31)	json
IPSL	IPSL-CM5A-MR	IPSL-CM5A-LR;atmos:LMDZ5A(144x143L39);ocean:NEMOv3.2(OPA-LIM-PISCES,149x182L31)	json
MIROC	MIROC4h	MIROC4h	json
MIROC	MIROC5	MIROC5	json
MOHC	HadCM3	HadCM3 (2000) atmosphere: HadAM3 (N48L19); ocean: HadOM (lat: 1.25 lon: 1.25 L20); land-surface/vegetation: MOSES1;	json
MOHC	HadGEM2-A	Hadley Global Environment Model 2 - Atmosphere	json
MOHC	HadGEM2-CC	Hadley Global Environment Model 2 - Carbon Cycle	json
MOHC	HadGEM2-ES	Hadley Global Environment Model 2 - Earth System	json

CMIP5 Model : IPSL - IPSL-CM5A-LR (v9)

Atmosphere
- Convection Cloud Turbulence
  - Cloud Scheme
  - Cloud Simulator
- Dynamical Core
  - Advection
- Orography & Waves
- Radiation

Land Surface
- Albedo
- Carbon Cycle
  - Vegetation
- Energy Balance
- RiverRouting
- Snow
- Soil
  - Heat Treatment
  - Hydrology
- Vegetation

Ocean
- Advection
- Boundary Forcing
  - Tracers
- Lateral Physics
  - Momentum
  - Tracers
- Up & Low Boundaries
- Vertical Physics
  - Interior Mixing
  - Mixed Layer

Ocean Bio-Geo Chemistry

Atmosphere

Overview

The atmospheric general circulation model LMDZ5A is based on a finite-difference formulation of the primitive equations of meteorology (Sadourny and Laval, 1984) on a staggered and stretchable longitude-latitude grid (the Z of LMDZ standing for Zoom). Water vapor, liquid water and atmospheric trace species are advected with a monotonic second order finite volume scheme (Van Leer, 1977; Hourdin and Armengaud, 1999). In the vertical, the model uses a classical so-called hybrid sigma–pressure coordinate. In the LMDZ5A version, (Hourdin et al, 2012) the physical parametrization are very close to that of the previous LMDZ4 version used for CMIP3. The radiation scheme is inherited from the European Center for Medium-Range Weather Forecasts. The dynamical effects of the subgrid-scale orography are parametrized according to Lott (1999). Turbulent transport in the planetary boundary layer is treated as a vertical eddy diffusion (Laval et al, 1981) with counter-gradient correction and dry convective adjustment. The surface boundary layer is treated according to Louis (1979). Cloud cover and cloud water content are computed using a statistical scheme (Bony and Emanuel, 2001). For deep convection, the LMDZ5A version uses the ”episodic mixing and buoyancy sorting” scheme originally developed by Emanuel (1991). With respect to the previous LMDZ4 version, the number of layers has been increased from 19 to 39, with 15 levels above 20km and a top at about the same altitude as the stratospheric LMDZ4-L50 version (Lott et al, 2005). The horizontal has also changed, with an increased number of point in latitude to shift the jets poleward (Guemas and Codron 2011). At Low Resolution (LR), the LMDZ5A model has 95x96 points in latitude and longitude corresponding to a resolution of 1.875° ×3.75°.

Properties

Top Of Atmos Insolation > Impact On Ozone: Yes

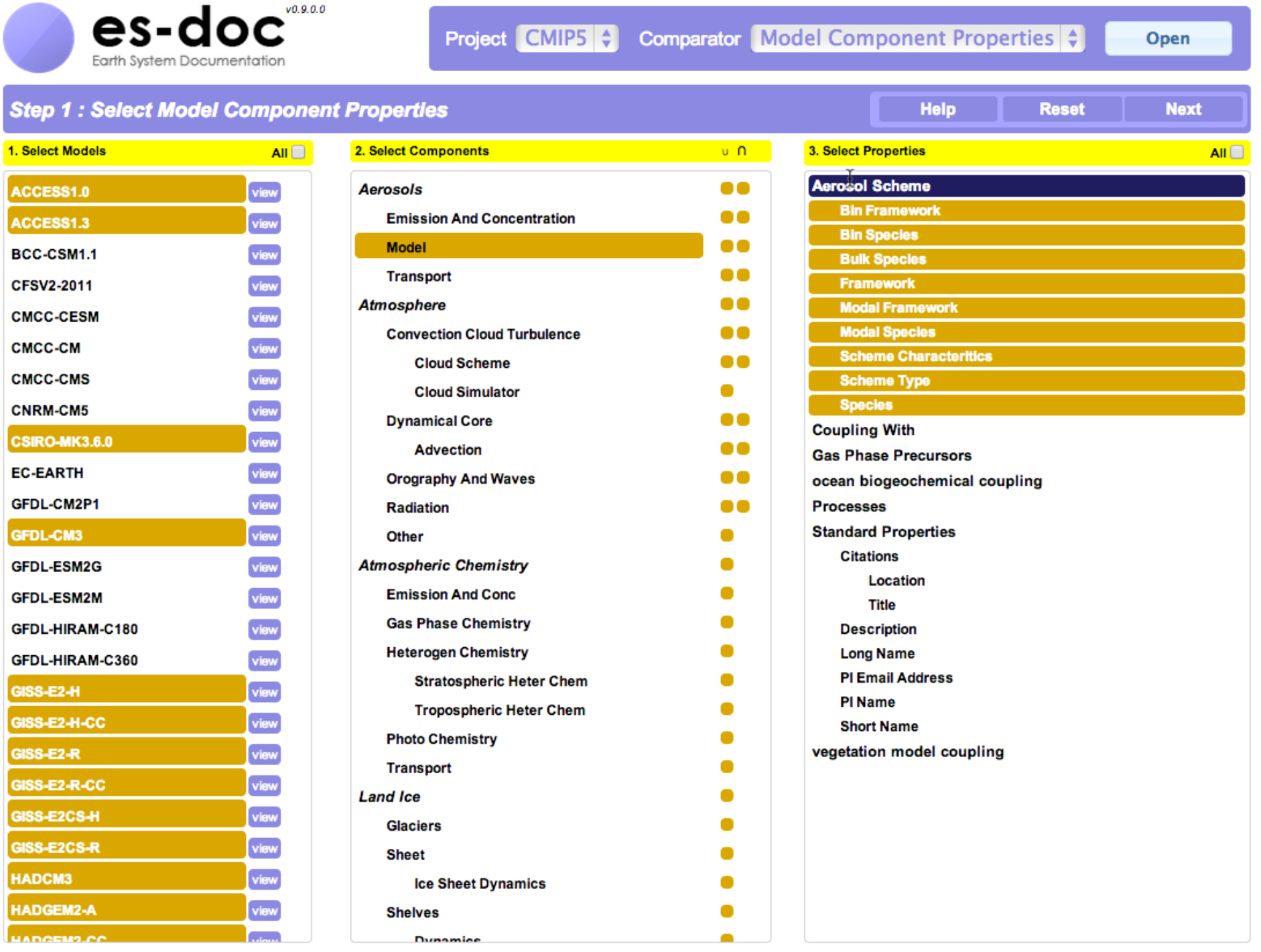
Top Of Atmos Insolation > Solar Constant > Type: Fixed

Top Of Atmos Insolation > Solar Constant > Value: 1366.0896

Top Of Atmos Insolation > Orbital Parameters > Type: Fixed

Top Of Atmos Insolation > Orbital Parameters > Computation Method: Berger 1978

Top Of Atmos Insolation > Orbital Parameters > Reference Date: 2000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Project CMIP5
Comparator Model Component Properties
Open
Step 1 : Select Model Component Properties
Help
Reset
Next
1. Select Models
All
ACCESS1.0 view
ACCESS1.3 view
BCC-CSM1.1 view
CFSV2-2011 view
CMCC-CESM view
CMCC-CM view
CMCC-CMS view
CNRM-CM5 view
CSIRO-MK3.6.0 view
EC-EARTH view
GFDL-CM2P1 view
GFDL-CM3 view
GFDL-ESM2G view
GFDL-ESM2M view
GFDL-HIRAM-C180 view
GFDL-HIRAM-C360 view
GISS-E2-H view
GISS-E2-H-CC view
GISS-E2-R view
GISS-E2-R-CC view
GISS-E2CS-H view
GISS-E2CS-R view
HADCM3 view
HADGEM2-A view
2. Select Components
∪ ∩
Aerosols
Emission And Concentration
Model
Transport
Atmosphere
Convection Cloud Turbulence
Cloud Scheme
Cloud Simulator
Dynamical Core
Advection
Orography And Waves
Radiation
Other
Atmospheric Chemistry
Emission And Conc
Gas Phase Chemistry
Heterogen Chemistry
Stratospheric Heter Chem
Tropospheric Heter Chem
Photo Chemistry
Transport
Land Ice
Glaciers
Sheet
Ice Sheet Dynamics
Shelves
3. Select Properties
All
Aerosol Scheme
Bin Framework
Bin Species
Bulk Species
Framework
Modal Framework
Modal Species
Scheme Characteritics
Scheme Type
Species
Coupling With
Gas Phase Precursors
ocean biogeochemical coupling
Processes
Standard Properties
Citations
Location
Title
Description
Long Name
PI Email Address
PI Name
Short Name
vegetation model coupling

API

Publish
Search
Compare
Visualize
Validate
Transform

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API Client

(pyesdoc)

I/O
Parsing
Publish
Search
Serialisation
Validate