

## CMIP6 Data Citation User Guide

Version 0.2 (MS-15.11.2016)	GUI part
Version 0.5 (MS-19.02.2018)	API added
Version 1.0 (MS-26.03.2018)	API error documentation added in section 2.6
Version 1.1 (MS-16.08.2018)	GUI update
Version 1.2 (MS-17.09.2018)	GUI update (person and institute sections)
Version 1.3 (AL-29.01.2019)	API checking tool (Section 2.3)
Version 1.4 (MS-01.08.2019)	GUI update (connect lists; completed citations sections)
Version 1.5 (MS-24.05.2021)	GUI update (visibility and restriction to entries without DOIs)

This user guide gives a step-by-step introduction, how to create and maintain data references for CMIP6 data collections on **model/MIP** and **experiment** granularities. These data citations will be visible in the [ESGF CoG portals](#). Users of CMIP6 data are obliged to use these data citations in the reference lists of their publications ([CMIP6 data user guide](#) - under development). Data references can be modified prior to DOI registration to keep data references stable, which have been used in the IPCC AR6 or other publications. The CMIP6 data subset used in the AR6 will form the AR6 Reference Data Archive of the IPCC Data Distribution Centre (IPCC DDC, <http://www.ipcc-data.org>).

### Further Information:

- CMIP6 Participation Guidance for Modelers: <https://pcmdi.llnl.gov/CMIP6/Guide/modelers.html>
- Information on the CMIP6 citation service: <http://cmip6cite.wdc-climate.de>

### Citation Service Tools for Citation Managers:

- Graphical User Interface: <http://cera-www.dkrz.de/citeXA>
- Machine access (API client): [https://swiftbrowser.dkrz.de/public/dkrz\\_11279a46963f4201bae564a253d528cc/Citation\\_API\\_Client/](https://swiftbrowser.dkrz.de/public/dkrz_11279a46963f4201bae564a253d528cc/Citation_API_Client/)

## Overview

The following steps are required or recommended to create citations for your CMIP6 data:

1. **GUI - Edit Title:** Change the given default titles for the given CMIP6 model and experiment data collections.
2. **GUI - Create Lists of Persons and Institutes:** Enter lists of persons and institutes to be connected in step 3 with a special role to a data title (step 1).  
Note: Required for step 3 are a list of *Creators (authors)* and a list of *ContactPersons (corresponding author)*. The position in the list is interpreted as position in the (author) list.
3. **GUI - Build/Edit Data Citation:** Connect your *Creator (author) list* and your *ContactPerson (corresponding author) list* from step 2 to a citation title from step 1 [mandatory].  
Optionally, a citation can be linked to other lists of contributors from step 2, e.g. *Funders* or *ResearchGroups*, who contributed to the creation of the selected model/MIP or experiment data. More information on roles is provided in the DataCite Metadata Schema documentation at <http://schema.datacite.org>.
4. **GUI – Add References** to articles, input4MIPs and other data or software [recommended].
5. **API - Provide Data Citations for the experiment granularity** (chapter 2)

**Notes:** 1. Please do not use the API any more.

2. You can control the visibility of the entries in the '**Visibility**' tab and check all data citations in the '**Completed Citations**' tab of the GUI.

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# 1. GUI - Graphical User Interface

## 1.1 Login

Login is provided at: <http://cera-www.dkrz.de/citeXA>.

Use your CERA username and password to login. In case you have no CERA account or encounter login problems, please write an email to [stockhause@dkrz.de](mailto:stockhause@dkrz.de) with subject 'CMIP6 Citation...'



### CMIP6 Citation Service - GUI to collect citation information

Use this application to maintain the CMIP6 data citation information for your data. Data citations are provided on model/MIP and experiment granularities and are displayed in the ESGF CoG portals. Users of CMIP6 data are obliged to use these data citations in the reference lists of their publications.

Please contact DKRZ if you need an account or for questions around the CMIP6 Citation Service.

#### More information:

- [CMIP6 Data Citation User Guide \[PDF\]](#)
- [CMIP6 citation service](#)
- [CMIP6 project](#)

#### Login to CMIP6 Citation Application

Login to Create CMIP6 Citation

Username   
Password

#### Links

[CMIP6 Citation](#) [WDC Climate](#) [Deutsches Klimarechenzentrum GmbH](#) [Impressum](#) [Privacy Policy](#)

## 1.2 Home Area

After login you are redirected to the 'Home' area, which provides information around the CMIP6 citation service (left part). If you have entered new persons, institutes or references, these will be listed on the right. After a while these might disappear.

To start the provision of CMIP6 data citation information, please switch to the 'CMIP6 Citations' Tab.

MARTINA\_STOCKHAUSE Feedback Logout

Home
CMIP6 Citation
Completed Citations
Institute
Person
References
References (old)
Upload Area

### Information on the Application

**Home**

Use this application to maintain the CMIP6 data citation information for your data. Data citations are provided on model/MIP and experiment granularities and are displayed in the ESGF CoG portals. Users of CMIP6 data are obliged to use these data citations in the reference lists of their publications.

More information:

- CMIP6 Data Citation User Guide [PDF]
- CMIP6 citation service
- CMIP6 project

**Start the submission process on the CMIP6 Citation Tab**

**Three steps are required to create a citation for your CMIP6 data and a fourth is recommended:**

1. Edit Title: Change the given default titles for the given CMIP6 model data collections.
2. Create Lists of Persons and Institutes:  
Enter lists of persons and institutes to connect in step 3 with a special role to a data citation.  
Note: Required for step 3 are a list of Creators (authors) and a list of ContactPersons. Lists are ordered.
3. Build/Edit Data Citation: Connect your Creator (author) list and your ContactPerson (corresponding author) list from step 2 to a citation title from step 1 (mandatory).  
Optionally, a citation can be linked to other lists of contributors from step 2, e.g. Funders or ResearchGroups, who contributed to the creation of the selected model or simulation data.
4. Add/Edit references to related papers (recommended).

**Recommendations:**  
References: In the References tab the data citation can be connected to an article related to the data and to the input4MIPs forcing data used. Person: Provide ORCID author profiles for entered persons.

**Important Note:**  
Use the API to provide citation information for the experiment data (see [Best Practices](#) and [CMIP6 Data Citation User Guide \[PDF\]](#)) for more information). You can check the information entered via the API using the 'Completed Citations' Tab in this GUI.

Upload Area: Possibility to upload additional documentations and materials

**Submission Forms (Tabs)**

- CMIP6 Citation
- Completed Citations
- Institute
- Person
- References
- References (old)
- Upload Area

**Contact**

Please contact [DKRZ](#) regarding CMIP6 Citation Service or to obtain further information.

**Links**

[CMIP6 Citation](#) [WDC Climate](#) [Deutsches Klimarechenzentrum GmbH](#) [Impressum](#) [Privacy Policy](#)

### Created Persons/Institutes/References

**Institutes**

Use Tab 'Institute' to create ...

**Persons**

Edit	First Name	Last Name
	Martina	Stockhouse

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**References**

Edit	Title ↑
	Biogeochemical protocols and diagnostics for the CMIP6 Ocean Model Intercomparison Project (OMIP)
	Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change
	Climate and carbon cycle changes from 1850 to 2100 in MPI-ESM simulations for the Coupled Model Intercomparison Project phase 5
	Detection of Melt Ponds on Arctic Sea Ice with Optical Satellite Data
	Effect of Anthropogenic Land-Use and Land-Cover Changes on Climate and Land Carbon Storage in CMIP5 Projections for the Twenty-First Century
	German Bight residual current variability on a daily basis: principal components of multi-decadal barotropic simulations
	The Cloud Feedback Model Intercomparison Project (CFMIP) contribution to CMIP6
	The Decadal Climate Prediction Project (DCPP) contribution to CMIP6
	The Radiative Forcing Model Intercomparison Project (RFMIP): experimental protocol for CMIP6
	Toward Standardized Data Sets for Climate Model Experimentation
	my new CMIP6 title

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### 1.3 CMIP6 Citation area –main tab for providing citation information

The CMIP6 Citation tab is the main entry point to maintain your data citation information. It is organized as follows:

- **top:** short information on the process steps for providing complete data citation information
- **left – step 1:** area to edit provided default titles for DRS data collection entries on **model/MIP** granularity.
- **center – step 2:** area to create/delete named author lists and other lists of persons (upper part) and to create/delete lists of institutes, e.g. Funders or research groups (lower part).  
*Notes: A copy of an existing list is possible via edit and saving under a new name. List entries are ordered.*
- **right – step 3:** area to compose citations out of the titles from step 1 and the lists of step 2, e.g. list of authors/creators, list of funders, list of contact persons and list of research groups.  
*Note: Mandatory list types to connect to a data citation entry are ‘Creator’ and ‘ContactPerson’.*
- **right – step 4:** area to add references and connect them to the data, e.g. relevant paper, used data and/or software.  
*Note: Recommended are references to papers and the used input4MIPs datasets.*

**Note:** From 2021-05-24 on, changes of title (1.) and authors (3.) are allowed again but restricted to entries prior to DOI registration in order to keep data references stable for citation in the IPCC AR6. Adding paper references (4.) is possible for all entries including those with a registered DOI. You can control, which data entries are visible in (1.) and (3.) yourself, using the application under the 'Visibility' tab.

#### General Information on steps needed to complete data citations Check completed citations (sec. 1.5)

The screenshot shows the CMIP6 Citation interface with the following annotated sections:

- 1. Titles for Data References:** A table listing data collection entries with columns for DRS Name, Title, and Change Date.
- 2. Named author lists:**
  - 2a. Lists of Persons:** A table listing individuals with columns for List Name, Change Date, and List Description.
  - 2b. Lists of Institutes:** A table listing research groups with columns for List Name, Change Date, and List Description.
- 3. Connect named author lists (2.) to the data titles (1.):** A section for building data citations, including an 'Edit Connections' button.
- 4. Connect paper and other references to the data titles (1.):** A section for connecting data or paper references to the data entry, including an 'Edit Relations' button.

The interface also features a navigation bar with tabs for Home, CMIP6 Citation, Completed Citations, Institute, Person, References, References (old), and Upload Area. A red arrow points from the 'Completed Citations' tab to the 'Check completed citations (sec. 1.5)' header.

### Step 1 – Provide a title for a data citation entry

To edit the titles for your data references click on the ‘Edit’ symbol next to the data reference in the table in the ‘1. Title’ area (left part).

MARTINA\_STOCKHAUSE Feedback Logout

Home **CMIP6 Citation** Completed Citations Institute Person References References (old) Upload Area

#### Create Citation for CMIP6 Data

Three steps are required to create a citation for your CMIP6 data and a fourth is recommended:

1. Edit Title: Change the given default titles for the given CMIP6 model data collections.
2. Create Lists of Persons and Institutes:  
Enter lists of persons and institutes to connect in step 3 with a special role to a data citation.  
Note: Required for step 3 are a list of Creators (authors) and a list of ContactPersons. Lists are ordered.
3. Build/Edit Data Citation: Connect your Creator (author) list and your ContactPerson (corresponding author) list from step 2 to a citation title from step 1 (mandatory).  
Optionally, a citation can be linked to other lists of contributors from step 2, e.g. Funders or ResearchGroups, who contributed to the creation of the selected model or simulation data.  
Mandatory roles are Creator (Author) and ContactPerson. More information on roles is provided in the DataCite Metadata Schema documentation at [schema.datacite.org](http://schema.datacite.org).
4. Add/Edit references to related papers (recommended).

**1. Title**

Edit	DRS Name	Title	Change Date
	CMIP6.CMIP.AER.LBLRTM	AER.LBLRTM model output prepared for CMIP6 CMIP	2018-07-26
	CMIP6.HighResMIP.NCAR.CESM2	NCAR model CESM2 output prepared for CMIP6 HighResMIP	2018-07-26
	CMIP6.CMIP.PCMDI.PCMDI-test-1-0	PCMDI test for CMIP/DECK data	2018-07-25
	CMIP6.VIACSAB.PCMDI.PCMDI-test-1-0	PCMDI test1.0 model output prepared for my new CMIP6 VIACSAB	2018-07-25
	CMIP6.HighResMIP.AWI.LAWI-CM-1-0-HR	AWI AWI-CM1.0HR model output prepared for CMIP6 HighResMIP	2018-04-12
	CMIP6.HighResMIP.AWI.LAWI-CM-1-0-LR	AWI AWI-CM1.0LR model output prepared for CMIP6 HighResMIP	2018-04-12

**2a. List of Persons**

Edit	List Name	Change Date	List Description
	New CMIP6.LUMIP.PCMDI.PCMDI-test-1-0.Creator_08_05_2018_15_01_28	2018-07-26	
	CMIP6.LUMIP.PCMDI.PCMDI-test-1-0.Creator_08_05_2018_15_01_28	2018-05-08	
	CMIP6.DynVarMIP.PCMDI.PCMDI-test-1-0.contactPerson_20180417_140002	2018-04-17	
	DWD_contact	2018-03-13	
	CNRM_test_author	2018-02-01	
	IPSL_test_author	2018-02-01	
	GFDL_test_author	2018-02-01	
	VIACS_test_creators	2017-10-11	
	CMIP6.VIACSAB.PCMDI.PCMDI-test-1-0.Creator_24_08_2017_14_27_05	2017-08-24	
	creator_stwebde	2017-05-03	

**3. Build Data Citation**

Edit to connect Lists of Persons/Institutes with specific roles (Creator/Author, ContactPerson, ResearchGroup, Funder, etc.) with the Titles (step 1) to finalize your data citation information.

**4. Connect Data/Paper References**

Edit to connect a data or paper reference to your data entry. It is recommended to add references to the used input4MIPs data as well as to papers related to your data.

1. Edit / Update Title

For CMIP6 a CMOR-like default title is provided for each entry. Save your changed title by pressing the ‘Apply Changes’ button.

MARTINA\_STOCKHAUSE Feedback Logout

Home **CMIP6 Citation** Completed Citations Institute Person References References (old) Upload Area

#### Note

Select the DRS Name of an Experiment or a Model and provide a title for the data citation. In case your DRS Name is missing, please contact DKRZ.

#### Create Citation Title

Cancel **Apply Changes**

DRS Name CMIP6.CMIP.AER.LBLRTM

Title AER.LBLRTM model output prepared for CMIP6 CMIP

Publisher Earth System Grid Federation

## Step 2 – Provide named author/creator and other lists

In the second step, author/creator lists and list of other contributing persons and contributing institutes are prepared.

MARTINA\_STOCKHAUSE Feedback Logout

Home **CMIP6 Citation** Completed Citations Institute Person References References (old) Upload Area

**Create Citation for CMIP6 Data**

Three steps are required to create a citation for your CMIP6 data and a fourth is recommended:

1. Edit Title: Change the given default titles for the given CMIP6 model data collection.
2. Create Lists of Persons and Institutes: Enter lists of persons and institutes to connect in step 3 with a special role to a data entry. Note: Required for step 3 are a list of Creators (authors) and a list of ContactPersons. Optionally, a citation can be linked to other lists of contributors from step 2, e.g. Funder. Mandatory roles are Creator (Author) and ContactPerson. More information on roles is available in the user manual.
3. Build/Edit Data Citation: Connect your Creator (author) list and your ContactPersons to your data entry. More information on roles is available in the user manual.
4. Add/Edit references to related papers (recommended).

**1. Title**

Edit	DRS Name	Change Date
	CMIP6.CMIP.AER.RTM	2018-07-26
	CMIP6.HighResMIP.AW.CESM2	2018-04-12
	CMIP6.CMIP.PCM.CMIDI-test-1-0	2018-07-26
	CMIP6.VIACSAB1.CMIDI-test-1-0	2018-07-25
	CMIP6.HighResMIP.AW.IAWI-CM-1-0-HR	2018-04-12
	CMIP6.HighResMIP.AW.IAWI-CM-1-0-LR	2018-04-12
	CMIP6.HighResMIP.BCC.CSM2-HR	2018-04-12
	CMIP6.HighResMIP.INPE.BESM2-7	2018-04-12
	CMIP6.HighResMIP.CAS.CAS-ESM1-0	2018-04-12

**2a. Edit / Update list of persons**

**2a. List of Persons**

Edit List	List Name	Change Date	List Description
	New CMIP6.LUMIP.PCMIDI-test-1-0.Creator_08_05_2018_15_01_28	2018-07-26	
	CMIP6.LUMIP.PCMIDI-test-1-0.Creator_08_05_2018_15_01_28	2018-05-08	
	CMIP6.DynVarMIP.PCMIDI-test-1-0.ContactPerson_20180417_140002	2018-04-17	
	DWD_contact	2018-03-13	
	CNRM_test_author	2018-02-01	
	IPSL_test_author	2018-02-01	
	GFDL_test_author	2018-02-01	
	VIACS_test_creators	2017-10-11	
	CMIP6.VIACSAB.PCMIDI-test-1-0.Creator_24_08_2017_14_27_05	2017-08-24	
	creator_stwebde	2017-05-03	
	PCMDItest_authors	2017-03-03	
	PCMDItest_contact	2017-03-03	
	MPI-ESM-P_authors	2015-04-02	
	MPI-ESM-P_contact	2015-04-02	

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**2b. List of Institutes**

Edit List	List Name	Change Date	List Description
	MPI-ESM-P_researchGroup2	2018-07-27	-
	testdescr	2018-07-27	-
	MPI-ESM-P_researchGroup_new	2018-07-26	-
	DWD_authorinstitutes	2018-03-13	-
	viacs_researchgroups	2017-10-11	-

**2b. Create a new author list or other list of institutes**

**3. Build Data Citation**

Edit to connect Lists of Persons/Institutes with specific roles (Creator/Author, ContactPerson, ResearchGroup, Funder, etc.) with the Titles (step 1) to finalize your data citation information.

**4. Connect Data/Paper References**

Edit to connect a data or paper reference to your data entry. It is recommended to add references to the used input CMIP6 data as well as to papers related to your data.

**To create a list of persons click on the 'Create' button in the middle part.**

You are redirected to a page where you can select persons from a list provided by the database (left side) and add them to the author/Creator, ContactPerson or researcher list (right side) you are creating. A reordering of selected persons in the created list (right side) is possible using the arrow buttons.

Enter a 'List Name', which indicates the use of this list and finalize the list by clicking on the 'Create' button. When you return to the main page using the 'Cancel' button, the name of your entered person list will appear in the table in the 'List of persons' area (upper middle part).

The list of persons can be edited by clicking on the 'Edit' symbol next to it. Lists can be created and deleted but not updated. In case you want to change/update a list, please:

1. Edit the existing list of persons and save it under a new 'List Name';
2. Replace the old list, e.g. author list, connected to the data by the newly created one (see Step 3 – Connect author list and other lists to the data reference for details).

MARTINA\_STOCKHAUSE Feedback Logout

Home CMIP6 Citation Completed Citations Institute **Person** References References (old) Upload Area

**Note**  
Select and order persons for a list, e.g. creator / author list, and assign a meaningful name to the list. In case a person is missing, please use the 'Create Person' button for insert. An existing list can be used to create a new list by saving it under a new list name.

**Create List of Persons**

List Name:   
 List Description:

Select Persons

- Laurent,Terray,Laurent.Terray@cerfacs.fr
- Lautenschlager,Björn,bjoern.lautenschlager@zmaw.de
- Lautenschlager,Michael,lautenschlager@dkrz.de
- Lavie,Franck,franck.lavie@meteo.fr
- Lawrence,Bryan,bryan.lawrence@stfc.ac.uk**
- Lawrence,David,dlawren@ucar.edu
- Le Quere,Corinne,C.Lequere@uea.ac.uk
- Lee,Hyo-Shin,climate@korea.kr
- Lefebvre,Marie-Pierre,marie-pierre.lefebvre@lmc
- Legain,Dominique,dominique.legain@meteo.fr
- Legler,David M.,
- Legutke,Stephanie,legutke@dkrz.de
- Lenz,C.-J.,
- Lenzen,Peter,data@dkrz.de
- Lenzen,Peter,lenzen@dkrz.de
- Leroch,Sabine,Sabine.Leroch@zamg.ac.at
- Levin,Ingeborg,ingeborg.levin@iup.uni-heidelberg.de
- Levitus,Sydney,slevitus@nodc.noaa.gov
- Levy,Claire,claire.levy@locean-ipsl.upmc.fr
- Levy,Hiram,Hiram.Levy@noaa.gov

Elkington,Mark,mark.elkington@metoffice.gov.uk

add highlighted person to list

order selected persons

Cancel Create Create Person

Add new persons to selection list (left side)

Create new list

Lists of institutes for Funders, research groups etc. can be created, analogously, in the 'List of Institutes' section located in the lower middle part of the page.

In case a required person (institute) is not available in the selection list on the left side of the person (institute) list dialog, please create the person (institute) first at the 'Person' ('Institute') tab. The button 'Create Person' ('Create Institute') leads you to that tab (see section 0).



### Step 3 – Connect author list and other lists to the data reference

After providing titles for your data entities in step 1 and lists of authors and other contributors, such as Funder lists, in step 2, these lists are connected to the data entities in step 3. Please note that at least an author list and a ContactPerson list are required for a completed data citation.

MARTINA\_STOCKHAUSE [Feedback](#) [Logout](#)

Home CMIP6 Citation Completed Citations Institute Person References References (old) Upload Area

**Create Citation for CMIP6 Data**

Three steps are required to create a citation for your CMIP6 data and a fourth is recommended:

1. Edit Title: Change the given default titles for the given CMIP6 model data collections.
2. Create Lists of Persons and Institutes:  
Enter lists of persons and institutes to connect in step 3 with a special role to a data citation.  
Note: Required for step 3 are a list of Creators (authors) and a list of ContactPersons. Lists are ordered.
3. Build/Edit Data Citation: Connect your Creator (author) list and your ContactPerson (corresponding author) list from step 2 to a citation title from step 1 (mandatory). Optionally, a citation can be linked to other lists of contributors from step 2, e.g. Funders or ResearchGroups, who contributed to the creation of the selected model. Mandatory roles are Creator (Author) and ContactPerson. More information on roles is provided in the DataCite Metadata Schema documentation at [schema.datacite.org](#).
4. Add/Edit references to related papers (recommended).

**1. Title**

Edit	DRS Name	Title	Change Date
<input type="checkbox"/>	CMIP6.CMIP.AER.LBL.RTM	AER LBLRTM model output prepared for CMIP6 CMIP	2018-07-26
<input type="checkbox"/>	CMIP6.HighResMIP.NCAR.CESM2	NCAR model CESM2 output prepared for CMIP6 HighResMIP	2018-07-26
<input type="checkbox"/>	CMIP6.CMIP.PCMDI.PCMDI-test-1-0	PCMDI test for CMIP/DECK data	2018-07-25
<input type="checkbox"/>	CMIP6.VIACSAB.PCMDI.PCMDI-test-1-0	PCMDI test1.0 model output prepared for my new CMIP6 VIACSAB	2018-07-25
<input type="checkbox"/>	CMIP6.HighResMIP.AWI.AWI-CM1.0HR	AWI AWI-CM1.0HR model output prepared for CMIP6 HighResMIP	2018-04-12
<input type="checkbox"/>	CMIP6.HighResMIP.AWI.AWI-CM1.0LR	AWI AWI-CM1.0LR model output prepared for CMIP6 HighResMIP	2018-04-12
<input type="checkbox"/>	CMIP6.HighResMIP.BCC.BCC-CSM2HR	BCC BCC-CSM2HR model output prepared for CMIP6 HighResMIP	2018-04-12
<input type="checkbox"/>	CMIP6.HighResMIP.INPE.BESM2-7	INPE BESM2.7 model output prepared for CMIP6 HighResMIP	2018-04-12
<input type="checkbox"/>	CMIP6.HighResMIP.CAS.CAS-ESM1-0	CAS CAS-ESM1.0 model output prepared for CMIP6 HighResMIP	2018-04-12
<input type="checkbox"/>	CMIP6.HighResMIP.THU.THU-CESM	THU CESM model output prepared for CMIP6 HighResMIP	2018-04-12
<input type="checkbox"/>	CMIP6.HighResMIP.CMCC.CMCC-CM2-HR4	CMCC CMCC-CM2-HR4 model output prepared for CMIP6 HighResMIP	2018-04-12

**2a. List of Persons** Create

Edit List	List Name	Change Date	List Description
<input type="checkbox"/>	New CMIP6.LUMIP.PCMDI.PCMDI-test-1-0_Creator_08_05_2018_15_01_28	2018-07-26	
<input type="checkbox"/>	CMIP6.LUMIP.PCMDI.PCMDI-test-1-0_Creator_08_05_2018_15_01_28	2018-05-08	
<input type="checkbox"/>	CMIP6.DynVarMIP.PCMDI.PCMDI-test-1-0_contactPerson_20180417_140002	2018-04-17	
<input type="checkbox"/>	DWD_contact	2018-03-13	
<input type="checkbox"/>	CHRM_test_author	2018-02-01	
<input type="checkbox"/>	IPSL_test_author	2018-02-01	
<input type="checkbox"/>	GFDL_test_author	2018-02-01	
<input type="checkbox"/>	VIACS_test_creators	2017-10-11	
<input type="checkbox"/>	CMIP6.VIACSAB.PCMDI.PCMDI-test-1-0_Creator_24_08_2017_14_27_05	2017-08-24	
<input type="checkbox"/>	creator_stwebde	2017-05-03	
<input type="checkbox"/>	PCMDItest_authors	2017-03-03	
<input type="checkbox"/>	PCMDItest_contact	2017-03-03	
<input type="checkbox"/>	MPI-ESM-P_authors	2015-04-02	
<input type="checkbox"/>	MPI-ESM-P_contact	2015-04-02	

**2b. List of Institutes** Create

Edit List	List Name	Change Date	List Description
<input type="checkbox"/>	MPI-ESM-P_researchGroup2	2018-07-27	-
<input type="checkbox"/>	testdesc	2018-07-27	-
<input type="checkbox"/>	MPI-ESM-P_researchGroup_new	2018-07-26	-
<input type="checkbox"/>	DWD_authorinstitutes	2018-03-13	-
<input type="checkbox"/>	viacs_researchgroups	2017-10-11	-

**3. Build Data Citation** Edit Connections

Edit to connect Lists of Persons/Institutes with specific roles (Creator/Author, ContactPerson, ResearchGroup, Funder, etc.) with the Titles (step 1) to finalize your data citation information.

**4. Connect Data/Paper References** Edit Relations

Edit to connect a data or paper reference to your data entry. It is recommended to add references to the used input4MIPs data as well as to papers related to your data.

3. Connect lists of authors, ContactPersons, funders, etc. (step 2) to a citation title (step 1)

For establishing these connections of lists of persons and institutes to prepared data citation entities please:

1. add a row;
2. select the data by its title, the list of persons or institutes by its list name and the list's type, e.g. 'Creator'=Author, 'ContactPerson', 'Funder' etc. from the provided drop down menus.

Home CMIP6 Citation Completed Citations Institute Person References Upload Area

**Connect Author lists and other lists to the Data**

Connect the prepared person and/or institute lists of step 2 to the data for which the citation title of step 1 is displayed. Multiple lists can be connected to the same data with different contact types. Mandatory contact types for a data citation are "Creator" and "ContactPerson" lists. 'Contact Type' definitions from DataCite are used (see DataCite Metadata Documentation for more information).

Press 'Add Row' button to insert a row for editing. Single rows can be deleted by clicking on the 'X' icon in the first column of the grid to get the drop-down list of available values.

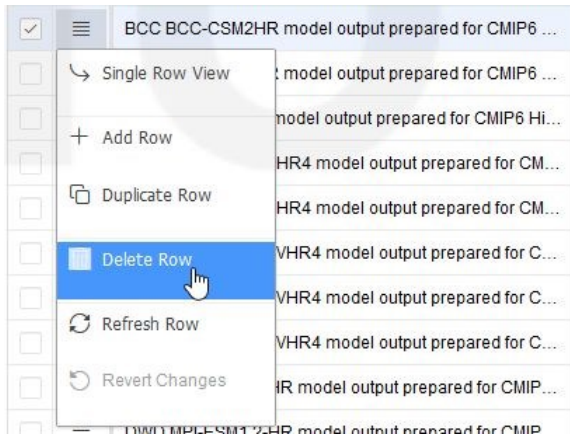
**2. Save the added lines**

**1. Add a row each to connect different ; to a citation**

Search: All Text Columns
Go
Actions
Edit
Save
Add Row
Reset

	Citation Title	Person / Institute List	Contact Type
<input checked="" type="checkbox"/>	AER LBLRTM model output prepared for CMIP6 CMIP	CMIP6.C4MIP.PCMDI.PCMDI-test-1-0.hist-bgc_Funder...	Creator
<input type="checkbox"/>	AER LBLRTM model output prepared for CMIP6 CMIP	MPI-ESM-P_contact	ContactPerson
<input type="checkbox"/>	BCC BCC-CSM2HR model output prepared for CMIP6 ...	CMIP6.CMIP.CNRM-CERFACS.CNRM-CM6-1.1pcCO2...	ContactPerson
<input type="checkbox"/>	BCC BCC-CSM2HR model output prepared for CMIP6 ...	CMIP6.C4MIP.PCMDI.PCMDI-test-1-0.ssp534-over-bgc...	Creator
<input type="checkbox"/>	CAS FGOALS-f3-H model output prepared for CMIP6 Hi...	CMIP6.CMIP.PCMDI.PCMDI-test-1-0_Creator_mytest	Creator

In case you need to update a list, use the drop down menu to change the connected list. For deleting a connection, please use the row menu:



**Finalize your changes by pressing the 'Save' button.**

### Step 4 – Connect paper or other reference to the data reference (recommended)

It is recommended to add references to papers or to data (e.g. input4MIPs datasets) and software.

Press the ‘Edit References’ button to get redirected. Add a row and select data references and the target (paper) reference you want to connect to the data from the given drop down menus. ‘Relation Type’s from DataCite are used to specify the type of connection (see [schema.datacite.org](http://schema.datacite.org)). Read reference entries from left to right: ‘Data Reference’ ‘Relation Type’ ‘Target Reference’, e.g. ‘PCMDI PCMDI-test 1.0 model output for CMIP6 LUMIP’ ‘isDocumentedBy’ ‘Durack et al. (2018)’. For deleting a connection, please use the row menu (see Step 3).

**Finalize your changes by pressing the ‘Save’ button.**

In case a ‘Target Reference’ (e.g. a paper) is missing in the drop down menu, please create it first by pressing the ‘Create Target Reference’ button (see section 1.7 for details).

### 1.4 Control Visibility of data citation entries

Use this form to control the visibility of your entries in this application by changing the value in the 'Change Visibility' column and 'Save' the changes.

For changing multiple rows, please use the 'Copy Down' function in 'Actions' > 'Selection' > 'Copy Down' by selecting all rows you want to change using the check boxes in the right most column. The 'Change Visibility' value of the first selected row will be copied down to the other selected rows.

MARTINA\_STOCKHAUSE Logout

Home CMIP6 Citation **Visibility** Completed Citations Institute Person References Upload Area

Maintain visibility of citation entries

**2. Apply change to selected rows**

by changing the value in the 'Change Visibility' column. The value of the first selected row will be copied down to the other selected rows.

**3. Save your changes**

The 'Save' button is highlighted in red.

**1. Change visibility value**

The 'Change Visibility' column is highlighted in blue, and the value '<blank>:invisible' is shown in the selected row.

	DRS Name ↑	Visibility	Change Visibility
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1		Y':visible
<input checked="" type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.hist-1950HC		<blank>:invisible
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.hist-piAer		Y':visible
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.hist-pINTCF		Y':visible
<input checked="" type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST		Y':visible
<input checked="" type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST-1950		Y':visible
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST-noL		Y':visible
<input checked="" type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST-piA		Y':visible
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST-piCH4	Y	Y':visible
<input checked="" type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST-piN2O	Y	Y':visible
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST-pINTCF	Y	Y':visible
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.histSST-piO3	Y	Y':visible
<input type="checkbox"/>	CMIP6.AerChemMIP.AS-RCEC.TaiESM1.piClim-2xDMS		Y':visible

## 1.5 List of Completed Citations and landing pages

After finalizing steps 1-3, your data citations will appear under the 'Completed Citations' tab together with the registered DOI and a link to the citation landing page displaying the full citation information.

**Note:** This is the only place in the GUI, where you can see the data references for data references with a registered DOI.

Check completed citations

DRS Name	Registered DOI	URL of Citation Landing Page	Landing Page
CMIP6.C4MIPPCMDI.PCMDI-test-1-0	--	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.C4MIP.PCMDI.PCMDI-test-1-0	View
CMIP6.C4MIPPCMDI.PCMDI-test-1-0.hist-bgc	--	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.C4MIP.PCMDI.PCMDI-test-1-0.hist-bgc	View
CMIP6.C4MIPPCMDI.PCMDI-test-1-0.ssp534-over-bgc	--	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.C4MIP.PCMDI.PCMDI-test-1-0.ssp534-over-bgc	View
CMIP6.CMIP.AER.LBLRTM	--	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.CMIP.AER.LBLRTM	View
CMIP6.CMIP.CNRM-CERFACS.CNRM-CM6-1.1pctCO2	https://doi.org/10.5072/ESGF/CMIP6.3842	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.CMIP.CNRM-CERFACS.CNRM-CM6-1.1pctCO2	View
CMIP6.CMIP.DWD.MPI-ESM1-2-HR	--	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.CMIP.DWD.MPI-ESM1-2-HR	View
CMIP6.CMIP.PSL.IPSL-CM6A-LR.piControl	https://doi.org/10.5072/ESGF/CMIP6.3970	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.CMIP.PSL.IPSL-CM6A-LR.piControl	View
CMIP6.CMIP.NOAA-GFDL.GFDL-CM4	https://doi.org/10.5072/ESGF/CMIP6.1402	http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP.NOAA-GFDL.GFDL-CM4	View

Access Landing Page to view full content

**WCRP** World Climate Research Programme

**PCMDI**

**British Atmospheric Data Centre** NATIONAL CENTRE FOR ATMOSPHERIC SCIENCE NATURAL ENVIRONMENT RESEARCH COUNCIL

**WDC CLIMATE**

### Metadata for 'CMIP6.LUMIP.PCMDI.PCMDI-test-1-0'

General Information | Creators | Funders | Relations

**General Information**

**Name** CMIP6.LUMIP.PCMDI.PCMDI-test-1-0

**Abstract** Coupled Model Intercomparison Project Phase 6 (CMIP6) data sets. These data includes all datasets published for 'CMIP6.LUMIP.PCMDI.PCMDI-test-1-0' according to the Data Reference Syntax defined as 'mip\_era.activity\_id.institution\_id.source\_id.experiment\_id.member\_id.table\_id.variable\_id.grid\_label.version'.  
The Earth System Model PCMDI-test 1.0 (This entry is free text for users to contribute verbose information), released in 1989, includes the components:  
atmos: Earth1.0-gettingHotter (360 x 180 longitude/latitude; 50 levels; top level 0.1 mb), land: Earth1.0, ocean: BlueMarble1.0-warming (360 x 180 longitude/latitude; 50 levels; top grid cell 0-10 m), seaIce: Declining1.0-warming (360 x 180 longitude/latitude).  
The model was run by the Program for Climate Model Diagnosis and Intercomparison, Lawrence Livermore National Laboratory, Livermore, CA 94550, USA (PCMDI) in nominal resolutions: atmos: 1x1 degree, land: 1x1 degree, ocean: 1x1 degree, seaIce: 1x1 degree.

**Subjects** • CMIP6.LUMIP.PCMDI.PCMDI-test-1-0 (DRS: [http://github.com/WCRP-CMIP/CMIP6\\_CVs](http://github.com/WCRP-CMIP/CMIP6_CVs))  
• climate  
• CMIP6

**Rights** • Creative Commons Attribution 4.0 International License (CC BY-SA 4.0)

**License** • CMIP6 model data is evolving in the sense that datasets are changed and added as new versions. The author list and the title are not final, either. Cite this data collection including the latest dataset version according to the Data Citation Guidelines (<http://bit.ly/2gBcuqM>). Individuals using the data must abide to the terms of use for CMIP6 data (<https://pcmdi.llnl.gov/CMIP6/TermsOfUse>). Details on any license restrictions are recorded as global attributes in the files.

**Contacts** • Giorgetta, Marco  
**Funders** • Giorgetta, Marco

**Cite this data**

**Citation** Taylor, Karl E.; Stockhouse, Martina; Stockhouse, Martina; Lautenschlager, Michael; Lawrence, Bryan (2017), PCMDI PCMDI-test1.0 model output prepared for CMIP6 LUMIP. Earth System Grid Federation. <http://cera-www.dkrz.de/WDCC/testmeta/CMIP6/CMIP6.LUMIP.PCMDI.PCMDI-test-1-0>

**Data Access**  
Data is not yet available.

**Related Data**  
PCMDI PCMDI-test1.0 model output prepared for CMIP6 LUMIP ssp126-ssp370Lu [Show](#)

**Metadata Export**  
[XML](#) [JSON](#)

Export JSON citation file to use as template for the API (see section 2)

## 1.6 Create a person and institute entries

Creation and update of person and institutes work the same way. Here the example for the creation of a person is described. Go to the 'Person' Tab and

- a. Create a person and
- b. Add ORCID details (recommended)

### a. Create a new person entry

Press the 'Create' button.

MARTINA\_STOCKHAUSE Feedback Logout

Home CMIP6 Citation Completed Citations Institute **Person** References References (old) Upload Area

Create a new person

Create / Edit Person information

**PERSON** Create

Q Search: All Text Columns Go Filter Reset

	First Name	Last Name ↑	Email
	Jakob	Abermann	jakob.abermann@uibk.ac.at
	Yukimasa	Adachi	yadachi@mri-jma.go.jp
	Mariana	Adam	not filled
	Panagiotis	Adamidis	adamidis@dkrz.de
	Alistair	Adcroft	Alistair.Adcroft@noaa.gov
	Bodo	Ahrens	Bodo.Ahrens@iau.uni-frankfurt.de
	Lucas	Alados-Arboledas	not filled
	Nicole	Albern	nicole.albern@LIVE.DE
	Lisa	Alexander	Lisa.Alenander@arts.monash.edu.au
	Antoinette	Alias	antoinette.alias@meteo.fr
	Ramdane	Alkama	ramdane.alkama@meteo.fr

Edit person details →

Enter at least the mandatory information in the form: first name, last name, institute and email. Finalize your edits by pressing the 'Create' button.

MARTINA\_STOCKHAUSE Feedback Logout

Home CMIP6 Citation Completed Citations Institute **Person** References References (old) Upload Area

Person Details

1. PERSON: provide person details and
2. PERSON\_IDENTIFIER (visible after 'Create'): add a Researcher ID, e.g. ORCID, to the person.

WDCC recommends to provide ORCID Researcher PIDs for persons/authors.  
 An example for an ORCID is  
 External Identifier: 0000-0001-6636-4972  
 External Identifier URL: <https://orcid.org/0000-0001-6636-4972>

**PERSON** Create Cancel Back to Person List

\* First Name   
 Second Name   
 \* Last Name   
 Title   
 \* Institute   
 Telephone   
 Fax   
 Url   
 Email

Store new person

### b. Add ORCID Researcher ID to person record (recommended)

After saving the person record the person identifier section will appear at the bottom. Add the ORCID to the person record and store it again by pressing the 'Save' button.

MARTINA\_STOCKHAUSE [Feedback](#) [Logout](#)

---

[Home](#)
[CMIP6 Citation](#)
[Completed Citations](#)
[Institute](#)
[Person](#)
[References](#)
[References \(old\)](#)
[Upload Area](#)

---

**Person Details**

1. PERSON: provide person details and  
 2. PERSON\_IDENTIFIER (visible after 'Create'): add a Researcher ID, e.g. ORCID, to the person.

WDC recommends to provide ORCID Researcher PIDs for persons/authors.  
 An example for an ORCID is  
 External Identifier: 0000-0001-6636-4972  
 External Identifier URL: <https://orcid.org/0000-0001-6636-4972>

**PERSON**

\* First Name   
 Second Name   
 \* Last Name   
 Title   
 \* Institute   
 Telephone   
 Fax   
 Url   
 Email   
 392 of 1179

store changed person record

Go back to Step 2a - list of persons

**PERSON\_IDENTIFIER** provide ORCID details

	External Identifier URL	External Identifier Type	External Identifier
<input checked="" type="checkbox"/>	0000-0003-1264-0024	ORCID	<a href="https://orcid.org/0000-0003-1264-0024">https://orcid.org/0000-0003-1264-0024</a>

1 rows selected Total 1

## 1.7 Add Paper and Data References

Under the references tab you have the opportunity to add scholarly publications, which you then can connect in Step 4 to the data. This information will be published together with the data reference and therefore enable data-interlinking services to direct readers from data to articles and vice versa.

The form provides two possibilities to add a reference:

1. **'Add DOI Row'** – Insert a paper reference by its DOI from CrossRef (a 2<sup>nd</sup> try might be required);
2. **'Add Row'** – Insert a paper/data/software reference manually.

MARTINA\_STOCKHAUSE Feedback Logout

Home CMIP6 Citation Completed Citations Institute Person **References** References (old) Upload Area

**Article References**  
Provide details for articles or data you want to connect to your data here.  
You can add references manually via the 'Add Row' button or access the information from CrossRef by providing the doi.  
Use the 'Save' button to save your changes and refresh your browser.  
Use the 'Back to Connect Reference' button to get to the form, where you can connect these:

2. Create reference manually 1. Create paper reference by DOI

References Back to Connect Reference

Search: All Text Columns Go Actions Edit Save **Add Row** doi:10.5334/dsj-2017-030 **Add DOI Row** Reset

	Authors	Title	DOI/URL	Publication
<input type="checkbox"/>	Giorgetta, Marco A.; Jungclaus, Johann; Reick, Christi...	Climate and carbon cycle changes from 1850 to 2100 ...	doi:10.1002/jame.20038	Journal of Advances in Modeling Earth Systems
<input type="checkbox"/>	Frauke Feser, Monika Barcikowska, Susanne Haesele...	Hurricane Gonzalo and its Extratropical Transition to a ...	https://www2.ametsoc.org/a...	Bulletin of the American Meteorological Society
<input type="checkbox"/>	Giorgetta, Marco A.; Jungclaus, Johann; Reick, Christi...	Climate and carbon cycle changes from 1850 to 2100 ...	doi:10.1002/jame.20038	Journal of Advances in Modeling Earth Systems
<input type="checkbox"/>	Durack, Paul; Taylor, Karl; Eyring, Veronika; Ames, Sa...	Toward Standardized Data Sets for Climate Model Exp...	doi:10.1029/2018eo101751	Eos

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### Finalize your edits by pressing the 'Save' button.

To connect this reference to your data please press the 'Back to Connect Reference' button to be redirected to the right form.

MARTINA\_STOCKHAUSE Feedback Logout

Home CMIP6 Citation Completed Citations Institute Person **References** References (old) Upload Area

**Article References**  
Provide details for articles or data you want to connect to your data here.  
You can add references manually via the 'Add Row' button or accessing the information from CrossRef by providing the doi.  
Use the 'Save' button to save your changes and refresh your browser.  
Use the 'Back to Connect Reference' button to get to the form, where you can connect these:

Save all edits Go to Step 4 - Connect the references to the data

References Cancel **Back to Connect Reference**

Search: All Text Columns Go Actions Edit **Save** Add Row doi:10.xxxx **Add DOI Row** Reset

	Authors	Title	DOI/URL	Publication
<input type="checkbox"/>	Stockhauser, Martina; Lautenschlager, Michael	CMIP6 Data Citation of Evolving Data	doi:10.5334/dsj-2017-030	Data Science Journal
<input type="checkbox"/>	Stockhauser, Martina	Manually inserted paper reference	doi:10.xxx	My Journal
<input type="checkbox"/>	Giorgetta, Marco A.; Jungclaus, Johann; Reick, Christi...	Climate and carbon cycle changes from 1850 to 2100 ...	doi:10.1002/jame.20038	Journal of Advances in Modeling Earth Systems
<input type="checkbox"/>	Frauke Feser, Monika Barcikowska, Susanne Haesele...	Hurricane Gonzalo and its Extratropical Transition to a ...	https://www2.ametsoc.org/a...	Bulletin of the American Meteorological Society
<input type="checkbox"/>	Giorgetta, Marco A.; Jungclaus, Johann; Reick, Christi...	Climate and carbon cycle changes from 1850 to 2100 ...	doi:10.1002/jame.20038	Journal of Advances in Modeling Earth Systems
<input type="checkbox"/>	Durack, Paul; Taylor, Karl; Eyring, Veronika; Ames, Sa...	Toward Standardized Data Sets for Climate Model Exp...	doi:10.1029/2018eo101751	Eos

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## 1.8 Upload Area

A possible use case for the upload area is:

- Provision of materials which are relevant for the cited CMIP6 data but not formally published in a scholarly publication. These materials will be long-term archived together with the data.

***Please do not upload data files.***

MARTINA\_STOCKHAUSE Feedback Logout

Home CMIP6 Citation Completed Citations Institute Person References References (old) **Upload Area**

**Upload Additional Documentation** Cancel

Use this Page to Upload Additional Documentation, e.g. unpublished documents, readme files or any relevant material (preferred format: pdf). For relevant published articles please use the References Tab.

**Upload Files Report**

No data found.

**Upload Section**

File Browse **Browse...** No file selected.

Insert File Description

File Description

**Upload File**

1. Select and
2. Upload File

## 2. API - Application Programming Interface

**Please do not use the API any more as it is not maintained any longer. It's functionality is also restricted to adding paper references (step 4).**

The API uses the JSON representation of the DataCite 4.1 schema (<http://doi.org/10.5438/0014>) to insert and update citation information.

Please download the python API client from DKRZ's cloud at:

[https://swiftbrowser.dkrz.de/public/dkrz\\_11279a46963f4201bae564a253d528cc/Citation\\_API\\_Client/](https://swiftbrowser.dkrz.de/public/dkrz_11279a46963f4201bae564a253d528cc/Citation_API_Client/)

and check if you can reach the API server with: `ping ceracite.dkrz.de`.

The API client is provided as

- **python 3.5+ plus httplib2** (citation\_client.py),
- **python 2.7 plus httplib2** (citation\_client.py), and as
- **python 2.6+ / python 2.5 plus simplejson** (citation\_client\_httplib2.py).

### 2.1 Preconditions

To use the API client please:

- Use the GUI to provide details for all persons, institutes and paper references, which you want to use in the JSON input file for the API insert of citation information (section 1)
- Store your user credentials in the \$HOME/.netrc file:

```
machine cera
  login <user name>
  password <password>
```

### 2.2 Best Practice

1. **Download a template JSON file** from a landing page:  
You can find a landing page using the 'View' links on the 'Completed Citation' tab of the GUI (see section 1.5 for details). Use the 'JSON' button to get the JSON representation of your citation information on this example on the coarse citation. To have all optional sections present in the downloaded JSON, **it is best to use a detailed metadata example, i.e. with additional contributors such as funders and paper references as template**. Such a detailed example is given in section 0.
2. **Modify the template JSON file** as required, but at least:
  - 2.1. DRS (subject: "CMIP6.<activity\_id>.<institution\_id>.<source\_id>.<experiment\_id>"): This is the information for the citation service, to which data your citation information belongs.  
**Note that this subject has to be the first in the list.**
  - 2.2. Title  
Section 0 gives an overview of the elements and in section 0 you find a shortened JSON example with grey parts indicating ignored and red parts indicating mandatory content. Please note that many project sections are ignored, e.g. description, identifier, license, subject, publisher.
3. **Check your JSON file** (see Section 0).
4. After a successful check please **run the API** with your JSON file (Section 0).

## 2.3 Checking tool (without an entry in the database)

`python citation_client.py <json_file> check`

The checking tool goes through the json file and gives error messages back without any inserts into the database.

“subjects”:

- **Interruption** in the case of missing attribute “subjects” (citation could not be checked without the subject!)
- error messages:

ERROR type	Message/Meaning
NOT FOUND	You have to register your “subject” first at <a href="https://github.com/WCRP-CMIP/CMIP6_CVs">https://github.com/WCRP-CMIP/CMIP6_CVs</a>
AMBIGUOUS	Subject is not unique
NOT ALLOWED TO EDIT	Subject is aligned with another user

“titles”:

- error messages:

ERROR type	Message/Meaning
IN USE	The title is already in use for another citation (“subject”). The title has to be unique!
WRONG NUMBER	just one-line title allowed

“contacts” (creators, contributors, funders):

- “Creators”: one person or institute is mandatory!
- “Contributors”: “contributorType” is mandatory!
- error messages:

ERROR type	Message/Meaning
NO CREATOR	No creators provided! A Creator is mandatory
WRONG CONTRIBUTOR	wrong contributor type – a list of valid types is part of the response
INFORMATION MISSING	A person must be identified by firstName, givenName, and email
AMBIGUOUS DATA	person or institute or personIdentifier or institutIdentifier is ambiguous
UNKNOWN	Person or Institute is not available in the database. Please insert via GUI!
COMBINATION NOT ALLOWED	A combination of persons and institutes is not allowed in the same list / for the same contributorType (see next Table for allowed list member entries per contributorType)
PERSON INSTEAD OF INSTITUTE OR VICE VERSA	Wrong list member! Fill in one or more persons instead of institutes / institutes instead of persons (depending on contributorType)

- **“contributorTypes”**: Please note that it is not possible to combine persons and institutes in the same contributorType! The allowed list members for the different Types are (in the case of both, person and institute are possible, you have to select one opportunity: persons OR institutes!):

Table 1: List of possible Contributor types

Contributor Type	Person	Institute
Funder	N	Y
Researcher	Y	N
ResearchGroup	N	Y
ContactPerson	Y	N
Creator	Y	Y
RightsHolder	Y	Y
Editor	Y	N
Other	Y	Y

**“relatedIdentifiers”**:

- Paper, model documentation etc.

ERROR type	Message/Meaning
UNKNOWN	new references have to be filled in the data base via GUI before using them with the API

## 2.4 Run the API

```
python citation_client.py <json_file>
```

## 2.5 Check citation information

In case of success the response includes a link to the landing page. Please use it to check your inserted citation information, e.g.:

(200, 'SUCCESS: Your data is visible now at: <http://cera-www.dkrz.de/WDCC/meta/CMIP6/CMIP6.ScenarioMIP.PCMDI.PCMDI-test-1-0>)

It is also possible to check the citation information via the **‘Completed Citations’** tab in the GUI (see section 1.5).

## 2.6 Overview of top-level elements (JSON file) for citation

Attribute	Sub-element	Definition	Obligation	used
<b>contributors</b>	contributorType	"ContactPerson" or "ResearchGroup",... (see Table 1)	mandatory optional	yes yes
	givenName familyName email affiliation	if contributor is a person	mandatory mandatory mandatory optional	yes yes yes no
	contributorName	"familyName, givenName(s)" or institute name	mandatory	yes
	nameIdentifier	schemeURI, nameIdentifierScheme, PID	optional	yes
	<b>creators</b>	creatorName givenName familyName email affiliation nameIdentifier	Minimum ONE creator is mandatory with <ul style="list-style-type: none"> <li>givenName, familyName and email!</li> <li>or</li> <li>institute name</li> </ul>	mandatory mandatory mandatory mandatory optional optional
<b>dates</b>	dateType	"Created"	automated	no
	date	date as YYYY-MM-DD	automated	no
<b>descriptions</b>	descriptionType	"Abstract"	automated	no
	text	"Coupled Model Intercomparison Project Phase 6 (CMIP6)..."	automated	no
<b>formats</b>	Format	"application/x-netcdf"	automated	no
<b>fundingReferences</b>	funderName	Institute	optional	yes
	nameIdentifier	with "schemeURI", "nameIdentifierScheme", and "pid"	optional	yes
<b>identifier</b>	identifierType	"URL" or "DOI"	automated	no
	id	URL of landing page or DOI	automated	no
<b>language</b>		"en"	automated	no
<b>publisher</b>		"Earth System Grid Federation"	automated	no
<b>publicationYear</b>		year	automated	no
<b>relatedIdentifiers</b>	relatedIdentifier	recommended input4MIPs and paper references with DOI number	optional	yes
	relatedIdentifierType			
	relationType			
<b>resourceType</b>	resourceTypeGeneral	"Dataset"	automated	no
	resourceType	"Digital"	automated	no
<b>rightsList</b>	rightsURI	"http://creativecommons.org/licenses/by-sa/4.0/"	automated	no
	rights	"Creative Commons Attribution 4.0 International License (CC BY-SA 4.0)"	automated	no
<b>subjects</b>	subject	predefined subject as proposed in the CV (needs to be first subject!)	mandatory	yes
	schemeURI	"http://github.com/WCRP-CMIP/CMIP6_CVs"	mandatory	no
	subjectScheme	"DRS"	mandatory	no
	subject	further subjects are not used but have to be positioned <b>after</b> the DRS subject!	optional	no
<b>titles</b>		Mandatory. Just one line! Has to be unique.	mandatory	yes

## 2.7 JSON Example (some unread sections removed)

```
{
  "identifier":
  {
    "identifierType": "URL",
    "id": "http://cera-www.dkrz.de/WDCC/meta/CMIP6/CMIP6.ScenarioMIP.PCMDI.PCMDI-test-1-0"
  },
  "creators":
  [
    {
      "creatorName": "Taylor, Karl E."
      , "givenName": "Karl E."
      , "familyName": "Taylor"
      , "email": "taylor13@llnl.gov"
      , "nameIdentifier":
      {
        "schemeURI": "http://orcid.org/",
        "nameIdentifierScheme": "ORCID",
        "pid": "0000-0002-6491-2135"
      }
      , "affiliation": "Lawrence Livermore National Laboratory"
    },
    {
      "creatorName": "Lautenschlager, Michael"
      , "givenName": "Michael"
      , "familyName": "Lautenschlager"
      , "email": "lautenschlager@dkrz.de"
      , "affiliation": "Deutsches Klimarechenzentrum (DM)"
    },
    {
      "creatorName": "Lawrence, Bryan"
      , "givenName": "Bryan"
      , "familyName": "Lawrence"
      , "email": "bryan.lawrence@stfc.ac.uk"
    }
  ],
  "titles":
  [
    "PCMDI PCMDI-test1.0 model output prepared for CMIP6 ScenarioMIP (test)"
  ],
  "publisher": "Earth System Grid Federation",
  "publicationYear": "2017",
  "subjects":
  [
    {
      "subject": "CMIP6.ScenarioMIP.PCMDI.PCMDI-test-1-0",
      "schemeURI": "http://github.com/WCRP-CMIP/CMIP6_CVs",
      "subjectScheme": "DRS"
    }
  ],
  "contributors":
  [
    {
      "contributorType": "ContactPerson"
      , "contributorName": "Lautenschlager, Michael"
      , "givenName": "Michael"
      , "familyName": "Lautenschlager"
      , "email": "lautenschlager@dkrz.de"
      , "affiliation": "Deutsches Klimarechenzentrum (DM)"
    },
    {
      "contributorType": "ResearchGroup"
      , "contributorName": "Institut Pierre Simon Laplace (IPSL)"
      , "nameIdentifier":
      {
        "schemeURI": "http://www.isni.org/isni/",
        "nameIdentifierScheme": "ISNI",
        "pid": "0000000090008794"
      }
    }
  ],
  "relatedIdentifiers":
  [
    {
      "relatedIdentifier": "10.1175/JCLI-D-12-00823.1",
      "relatedIdentifierType": "DOI",
      "relationType": "IsCitedBy"
    }
  ],
  "fundingReferences":
  [
    {
      "funderName": "Federal Ministry of Education and Research (BMBF)"
      , "funderIdentifier": "http://doi.org/10.13039/501100002347"
      , "funderIdentifierType": "Crossref Funder ID"
    },
    {
      "funderName": "Lawrence Livermore National Laboratory (LLNL)"
    }
  ]
}
```

## 2.8 Error codes and messages

Error Message	Description
Traceback (most recent call last): File "citation_client.py", line 17, in <module> info = netrc.netrc() File "/usr/lib/python2.7/netrc.py", line 34, in __init__ with open(file) as fp: IOError: [Errno 2] No such file or directory: '/home/user/.netrc'	You must provide a .netrc file in your home directory.   It must contain a line <b>`machine cera login USERNAME password PASSWORD`</b>
Traceback (most recent call last): File "citation_client.py", line 18, in <module> login, account, password = info.authenticators("cera") TypeError: 'NoneType' object is not iterable	Your <b>`.netrc`</b> file has no line for cera as mentioned above.
400 No creators provided	Your JSON-File has no <b>`creators`</b> -Object which is necessary.
400 No titles defined	Your JSON-File has no <b>`titles`</b> -array which is necessary.
400 No subjects defined	Your JSON-File has no <b>`subjects`</b> -array which is necessary.
400 Persons must have email, givenName and familyName	Each person inside the objects <b>`creators`</b> or <b>`contributors`</b> must have all of the following fields: <b>`email`</b> , <b>`givenName`</b> , and <b>`familyName`</b>
400 Unknown institute:Chocolate Factory	<b>creators, funders or contributors</b> without <b>`email`</b> , <b>`givenName`</b> and <b>`familyName`</b> are considered as institutes. There is no institute <b>`Chocolate Factory`</b> in the database
400 Unknown or ambiguous person: Alfred Neumann with email neumann@lnl.gov	The mentioned person does not exist in the CERA database, or it exists multiple times
400 Could not update title in table citation: No data found	The first subject in <b>`subjects`</b> does not exist in the database. Misspelled?
socket.error: [Errno 111] Connection refused	The client was not able to establish a connection to the citation server. Please contact <a href="mailto:data@dkrz.de">data@dkrz.de</a> if the problem persists
400 Problem with person identifier: ORCID:0000-0002-6491-2135a: Ambiguous data	This person already has an ORCID, but it does not correspond with the provided ORCID in your JSON-File
400 No contributorType provided	At least one of the items in <b>`contributors`</b> does not have a <b>contributorType</b>
400 Problem with related identifier: doi:10.175/JCLI-D-12-00823.1: No data found	Some of the following fields in <b>`relatedIdentifiers`</b> are missing in the database(misspelled?): <b>`relatedIdentifier`</b> , <b>`relatedIdentifierType`</b> , <b>`relationType`</b>
400 Could not attach list with related unit name id: 384 to citationid 1401 with contacttype ContactPerson in list_connect	One of the contact items ( <b>`creators`</b> or <b>`contributors`</b> ) in the JSON file has an issue. Probably misspelled the <b>contributorType`</b> ?