

WDCGG DOI plan

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Introduction

- WDCGG will assign DOIs for the dataset on WDCGG this fiscal year (~Mar. 2021).
- now preparing to join as a member of JaLC (Japan Link Center: Registration Agency in Japan). Members can register DOIs to their digital objects through RAs.
- The WDCGG DOI plans (are now under consideration)
 - DOI granularity and nesting
 - One DOI for all data
 - for each gas species (all CO₂ data, all CH₄ data, ...)
 - for each data (Minamitorishima in-situ CO₂ by JMA, ...)
 - Adding of DOI for old versions data
 - WDCGG DOI ⇔ prioritize original DOI

Details are on the following pages.

DOI granularity and nesting plan

3 types of granularity are prepared.

All data

Each gas species

Each dataset

All data on the WDCGG website: doi:10.XXXXXX/YYYYYY_all

CO₂:
doi:10.XXXXXX/YYYYYY_co2

JMA RYO co2 surface insitu data1

JMA YON co2 surface insitu data1

JMA MNM co2 surface insitu data1

NOAA IZO co2 surface flask ccgg

NOAA ASK co2 surface flask ccgg

AEMET IZO co2 surface insitu data1

AIST TKY co2 tower insitu tower1

AIST TKY co2 tower insitu tower2

⋮

CH₄:
doi:10.XXXXXX/YYYYYY_ch4

JMA RYO ch4 surface insitu data1

JMA YON ch4 surface insitu data1

JMA MNM ch4 surface insitu data1

NOAA IZO ch4 surface flask ccgg

NOAA ASK ch4 surface flask ccgg

AEMET IZO ch4 surface insitu data1

AGAGE CMO ch4 surface insitu gage

AGAGE THD ch4 surface insitu gc-md

⋮

N₂O:
doi:10.XXXXXX/YYYYYY_n2o

JMA RYO n2o surface insitu data1

JMA AOA n2o surface insitu data1

JMA RYF n2o ship bottle air-sampling

NOAA IZO n2o surface flask ccgg

NOAA ASK n2o surface flask ccgg

AEMET IZO n2o surface insitu data1

AGAGE CMO n2o surface insitu ale

AGAGE THD n2o surface insitu gc-md

⋮

⋮

One data set: doi:10.XXXXXX/ZZZZZZZ

Correspondence relations of DOIs will be described on the WDCGG website.

DOI minting plan – all data –

wdcgg.txt.tar.gz

All data on the WDCGG website: one DOI

Updated Date	Version *: the latest version	GAW ID	Station/Mobile	Gas Species	Platform	Sampling Type	Buffer	Organization	Details
2020-04-24	0002-4001-1701-01-02-3006-2020-04-24-1132*	ALT	Alert	CBrClF₂	surface	flask	hats-gcms	NOAA (Earth System Research Laboratory, NOAA)	click
2020-04-24	0002-4001-3012-01-02-3006-2020-04-24-0902*	ALT	Alert	C₂Cl₄	surface	flask	hats-gcms	NOAA (Earth System Research Laboratory, NOAA)	click
2020-04-24	0002-4003-1701-01-02-3006-2020-04-24-1132*	BRW	Barrow (AK)	CBrClF₂	surface	flask	hats-gcms	NOAA (Earth System Research Laboratory, NOAA)	click

- All dataset on the WDCGG.
- (Information for inclusion relation is not available yet.)

DOI minting plan – each gas species –

CO₂ (253)

co2.txt.tar.gz (264.93MB)

One gas species tar file: one DOI

Search by a keyword:

GAW ID	Station/Mobile *: Mobile	Country/territory	Contributor	Platform	Sampling Type	Buffer	Details
ABP	Arembepe	Brazil	NOAA	surface	flask	ccgg	file
ABP	Arembepe	Brazil	INPE	surface	flask	data1	file
AIA	Aircraft (over Bass Strait and Cape Grim)*	Australia	CSIRO	aircraft	flask	data1	file
ALL	Alligator liberty, M/V*	Japan	JMA	ship	insitu	air-sampling	file
ALL	Alligator liberty, M/V*	Japan	JMA	ship	insitu	sea-sampling	file
ALT	Alert	Canada	NOAA	surface	flask	ccgg	file
ALT	Alert	Canada	CSIRO	surface	flask	data1	file

- Users can refer all data from a lot of stations by one DOI.
(In this example, all CO₂ data can be referred.)
- We will provide the version history information (which dataset is included) for proper citing.
- (Information for inclusion relation is not available yet.)

DOI minting plan – each dataset –

Updated Date	Version *: the latest version	GAW ID	Station/Mobile	Gas Species	Platform	Sampling Type	Buffer	Organization	Details
2019-09-19	0002-3007-1001-01-02-3001-2019-09-19-1114*	USH	Ushuaia	CO₂	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	click
2019-09-19	0002-3007-1002-01-02-3001-2019-09-19-1114*	USH	Ushuaia	CH₄	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	click
2019-09-19	0002-3007-1003-01-02-3001-2019-09-19-1114*	USH	Ushuaia	N₂O	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	click
2019-09-19	0002-3007-1004-01-02-3001-2019-09-19-1114*	USH	Ushuaia	SF₆	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	click
2019-09-19	0002-3007-1102-01-02-3101-2019-09-19-1114*	USH	Ushuaia	¹³CO₂	surface	flask	sil	NOAA (Earth System Research Laboratory, NOAA)	click

One data set :
one DOI

- Users can specify the individual dataset by this type of DOI easily.
- DOI remains the same even when the data version updated.
- Only the latest version data is available on the WDCGG website.

DOI minting plan – Handling of older ver. data –

Updated Date	Version *: the latest version	GAW ID	Station/Mobile	Gas Species	Platform	Sampling Type	Buffer	Organization	Details
2019-09-19	0002-3007-1001-01-02-3001-2019-09-19-1114*	USH	Ushuaia	CO ₂	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	click
2019-09-19	0002-3007-1002-01-02-3001	USH	Ushuaia	CH ₄	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	click

One data set :
one DOI

- The version history is described on the website.
- The data of old versions are not available at WDCGG.
- The data cited at the time of writing the paper may differ from the latest version data on WDCGG.

Data Version History									
See the data version history. The data of old versions are not available at WDCGG.									
Search by a keyword: <input type="text" value="(start typing)"/>									
Updated Date	Version *: the latest version #: the number of WMO GHG Bulletin the data is used for	GAW ID	Station/Mobile	Gas Species	Platform	Sampling Type	Buffer	Organization	Details
2019-09-19	0002-3007-1001-01-02-3001-2019-09-19-1114*	USH	Ushuaia	CO ₂	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	click
2019-08-30	0002-3007-1001-01-02-3001-2019-07-22-1105	USH	Ushuaia	CO ₂	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	
2018-09-25	0002-3007-1001-01-02-3001-2018-08-06-0947 #14	USH	Ushuaia	CO ₂	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	
2018-06-25	0002-3007-1001-01-02-3001-2018-03-09-1519	USH	Ushuaia	CO ₂	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	
2017-02-13	0002-3007-1001-01-02-3001-2017-02-03-1358	USH	Ushuaia	CO ₂	surface	flask	ccgg	NOAA (Earth System Research Laboratory, NOAA)	

➤ There are some comments that **WDCGG should mint separate DOIs to each versions.**
To be, or not to be: that is the question:

- If we do not change, Citing its DOI with the data version is recommended when users cite data. If we give DOIs to older versions, we need to archive the data for all versions on WDCGG website. The number of DOIs to give will be huge. So we are looking for the best way.

DOI minting plan – if original DOI exists–

CO₂ _ USH _ surface - flask _ NOAA _ ccgg

File Contact Observation **Reference(s)** Gallery

Search by a keyword:

1	▶ Dlugokencky, E.J., J.W. Mund, A.M. Croswell, M.J. Croswell, and K.W. Thoning (2019), Atmospheric Carbon Dioxide Dry Air Mole Fractions from the NOAA ESRL Carbon Cycle Cooperative Global Air Sampling Network, 1968-2018, Version: 2019-07, https://doi.org/10.15138/wkgj-f215
2	▶ Conway, T.J., P.P. Tans, L.S. Waterman, K.W. Thoning, D.R. Kitzis, K.A. Masarie, and N. Zhang, Evidence for interannual variability of the carbon cycle from the NOAA/GMD global air sampling network, J. Geophys. Res., 99, 22831–22855, 1994.

- The original DOI by the data provider is prioritized.
(The original data DOIs are already indicated on the current WDCGG website.)
- No new DOIs will be issued by WDCGG for such datasets.
- Contributors can choose whether to get DOI by WDCGG or not.
-> If no reply, WDCGG mints DOI.

WDCGG DOI \Leftrightarrow original DOI

Once a DOI is minted for a specific dataset, it cannot be removed ever after.

	Current	-->	Updated
○	WDCGG DOI	-->	WDCGG DOI
○	Original DOI	-->	Original DOI
×	WDCGG DOI	-->	Original DOI
×	Original DOI	-->	WDCGG DOI

- The DOI is a system which provides persistent access to the contents.
- Once DOI is issued by the WDCGG, the WDCGG has the duty to maintain the data access and landing pages (to access the data).
- Even though the contributors needed to withdraw their data for special reasons, the WDCGG has to keep its landing page to show the dataset is unavailable.