

GEOS-Chem Newsletter, August 2018

GEOS-Chem Support Team

Bob Yantosca, Melissa Sulprizio, and Lizzie Lundgren

10 Aug 2018

GEOS-Chem 12.0.0 is now ready to use!

Previous major release	Current stable version	Version in development
GEOS-Chem v11-01-public	GEOS-Chem 12.0.0	GEOS-Chem 12.1.0
RELEASED 01 Feb 2017	RELEASED 10 Aug 2018	RELEASE TBD

We are excited to announce that **GEOS-Chem 12.0.0 is officially released as of 10 August 2018!** This version contains fixes for several issues that were reported to us during the GEOS-Chem v11-02-release-candidate evaluation period. For a complete list of new features and fixes in GEOS-Chem 12.0.0, please follow [this link](#).

We encourage all GEOS-Chem users to switch to GEOS-Chem 12.0.0 as soon as possible. The GEOS-Chem manual (<http://manual.geos-chem.org>) contains complete instructions on how to download and run GEOS-Chem 12.0.0.

If you should encounter any additional bugs, technical issues, or notice incorrect or inconsistent documentation please notify us in one of the following ways.

- Open a new issue on the [GEOS-Chem repository issue tracker](#). (This is our new recommended method of reporting bugs or issues in the GEOS-Chem source code.)
- Contact us by email at geos-chem-support@as.harvard.edu.

1-month and 1-year benchmark output for GEOS-Chem 12.0.0

We have generated both 1-month and 1-year benchmarks with GEOS-Chem 12.0.0. The customary benchmark plots are now available online:

- 1-month benchmark: **12.0.0**
 - [Click here to view a description of this 1-month benchmark](#)
 - [Click here to view the 1-month benchmark plots and emissions totals](#)

- 1-year benchmark: **12.0.0-Run0**
 - [Click here to view a description of this 1-year benchmark](#)
 - [Click here to view the 1-year benchmark plot and emissions totals](#)
 - NOTE: The emissions totals and netCDF diagnostic output are still being prepared as of the time of this writing. We hope to have these posted online by Monday (13 Aug).

DOI for GEOS-Chem 12.0.0

Each stable version of GEOS-Chem will be assigned its own digital object identifier (DOI).

GEOS-Chem 12.0.0 may be uniquely cited in publications with DOI: [10.5281/zenodo.1343547](https://doi.org/10.5281/zenodo.1343547)

New GEOS-Chem version numbering system

GEOS-Chem 12.0.0 now uses our purely numeric versioning system! We have switched to this new system in order to adhere more closely to software development best practices.

For a complete description of the new versioning system, please see [our GEOS-Chem version numbering system wiki page](#).

The GEOS-Chem Git repositories are now hosted on Github

We have now moved the GEOS-Chem Git repositories from Bitbucket to Github. Using Github lets us easily assign a Digital Object Identifier (DOI) to any GEOS-Chem version.

We have created a page on Github (<http://github.com/geoschem/>) where you will find the following repositories:

1. GEOS-Chem source code: <http://github.com/geoschem/geos-chem>
2. GCHP source code: <https://github.com/geoschem/gchp>
3. GEOS-Chem unit tester: <http://github.com/geoschem/geos-chem-unittest>
4. HEMCO data downloader: http://github.com/geoschem/hemco_data_download

IMPORTANT!

**Please clone fresh copies of these repositories from Github
and discontinue use of the repositories on Bitbucket.**

We have also migrated the Git repositories for several other supporting software packages (e.g. GEOS-FP processing codes, Python plotting codes, netCDF Fortran codes) to Github as well.

Also note: We have changed the Github organization page name from github.com/GCST to github.com/geoschem. This update aligns with software development best practice, where the name of the Github organization page should be the same as the name of the software package.

Resources

For further information we invite you to consult the following resources:

- [A list of new developments by GEOS-Chem version](#)
- [GEOS-Chem narrative description](#)
- http://wiki.geos-chem.org/GEOS-Chem_12
- http://wiki.geos-chem.org/GEOS-Chem_version_numbering_system
- http://wiki.geos-chem.org/GEOS-Chem_Unit_Tester
- http://wiki.geos-chem.org/Creating_GEOS-Chem_run_directories
- http://wiki.geos-chem.org/HEMCO_data_directories
- [GEOS-Chem standard emissions configuration \(by Christoph Keller\)](#)

Other GEOS-Chem news

GCHP update

GCHP is compatible with 12.0.0 and validation is in progress. Please see the following resources for more information about the latest version of GCHP:

- [GCHP v11-02/12.0.0 version history](#)
- [GCHP Online User Manual](#)
- [GCHP Home Wiki Page](#)

Running GEOS-Chem in the Amazon cloud

Jiawei Zhuang has created a [tutorial](#) that shows how you can run GEOS-Chem “Classic” (GCC) on the Amazon Web Services EC2 cloud computing platform. A copy of the GEOS-Chem “gcgrid” data directories has been synchronized to the Amazon S3 storage system and is available for use with your GEOS-Chem simulations.

Priorities for further model development

We have updated the [GEOS-Chem model development priorities wiki page](#) with the latest status reports from GC developers.

Please note that “ready to go in” indicates that work by the developer is considered complete. However, GCST time to implement may vary significantly depending on the structural updates or reworking required for compatibility with the latest version.

The 9th International GEOS-Chem Meeting (IGC9) will take place in May 2019!

We now have a starter website for the 9th International GEOS-Chem meeting (IGC9) at:

- <http://geos-chem.org/meetings/2019/index.html>

Which can also be accessed by this alias:

- <http://igc9.geos-chem.org>

IGC9 will be held at Harvard on May 6-9, 2019 (Monday-Thursday), with model clinics and Young Scientists’ social on May 5. Registration will open up in December. For now, mark your calendars, and see you in May!

NCAR - GEOS-Chem meeting

Several of us were at a NCAR-GEOS-Chem meeting on (July 30-31, 2018) to resolve issues in the on-line coupling of GEOS-Chem with CESM2 and WRF, and to lay the basis for integrating GEOS-Chem into the next generation of NCAR models (SingleTrack). The meeting was very productive, with a lot of interest from NCAR scientists, and laid the basis for strong collaboration in the future. You can access the meeting presentations here:

- <https://www2.acom.ucar.edu/workshop/integration-geos-chem-ncar-models-agenda>

If you are interested in contributing to development and testing of the CESM-GC and WRF-GC models we encourage you to contact the lead developers:

- CESM-GC: Seb Eastham (seastham [at] mit.edu)
- WRF-GC: Tzung-May Fu (tmfu [at] pku.edu.cn).

We would like to sincerely thank you for your patience and understanding during the 12.0.0 release process. Happy modeling!

Bob, Melissa, and Lizzie
geos-chem-support@as.harvard.edu