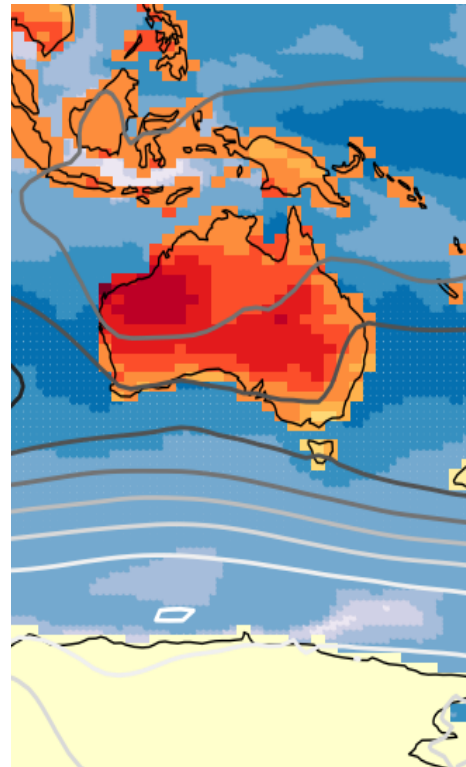


# Release Management

Scott Wales, ARCCSS CMS



# What is a release

If I say I used “ACCESS-CM2.0”, what were my

- Code
- Configuration
- Input Data

# Code

## UM

- Researchers run from specific version (e.g. UM10.1)
- Branches for configurations (e.g. GA6.0)

## CABLE

- Researchers run from Trunk

## MOM

- Researchers run from Master
- Separate repos for Bluelink/ACCESS-CM1



Global Atmosphere - Mozilla Firefox

Global Atmosphere x +

Met Office (GB) | https://code.metoffice.gov.uk/trac/GA

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Met Office Unified Model™

Global Atmosphere

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## Met Office Unified Model Global Atmosphere development

Welcome to the Global Atmosphere development TRAC system. The Global Atmosphere (GA) is a configuration of the Met Office Unified Model that is developed over a regular release cycle for use across weather and climate modelling timescales and systems. All changes to the Global Atmosphere configuration must be made via this TRAC system.

### Global Atmosphere development

<b>Development and documentation pages</b>		
<a href="#">Documentation for frozen GA/GL configurations</a>	2015-01-23	<i>UM settings, documentation papers, standard jobs etc...</i>
<a href="#">GA7 development tests</a>	2014-12-15	<i>Tickets being tested, package testing tickets etc...</i>
<a href="#">The GA development process</a>	2011-08-22	<i>How the Global Atmosphere is developed</i>
<a href="#">Running standard tests</a>	2013-12-12	<i>Tests required for all GA developments</i>
<b>Other pages</b>		
<a href="#">Expanded table of pages</a>		<i>Guidance and news, admin pages, etc...</i>

### Global Atmosphere 7.0 milestone timeline

GA6.0 standard test controls released	6th Dec 2013
Meeting to prioritise implementation work and changes to be considered for GA7.0/GL7.0	17th Jan 2014
Target (and deadline) for completing standard tests and passing into review*	28th Feb (31st May) 2014
Rough GC3.0 (incl. GA7.0) "chill" date	30th April 2015
Planned GC3.0 (incl. GA7.0) freeze date	30th June 2015

\* Note that this step also requires all new UM code to have passed Sci/Tech review.

The source data for this timeline is in the wiki page [Milestone/GA7.0](#)

Trac - Mozilla Firefox

cable - Trac

https://trac.nci.org.au/trac/cable

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## CABLE: The Community Atmosphere Biosphere Land Exchange Model

Welcome to the **CABLE trac page**. This site provides CABLE documentation and a forum to track, discuss and handle CABLE code development. For full functionality, please login.

### On this site

- [CableHelp](#): where to get your questions answered
- [CableDocuments](#) for CABLE documentation, including User guide, coding conventions, Guidelines for developers, forms and other resources.
- [CableNews](#): monthly messages sent out to the CABLE email list.
- [CableForum](#) for general discussion of CABLE issues.
- [CableBenchmarking](#) showing how CABLE-2.0 performs.
- [CableSimulations](#) provides information about CABLE runs that are available for people to analyse.
- [CableHistory](#): lists CABLE version numbers and release dates
- [CablePlans](#): ideas for future releases of CABLE.
- [CablePublications](#): publications and presentations that use CABLE, including those submitted or in preparation.
- [CableCommunity](#): a list of research areas CABLE users are working on, where known.
- [CableCommittee](#) for details on the membership and operation of the CABLE committee
- [CableScripts](#): scripts to evaluate offline and online CABLE.
- [CableKnownProblems](#): a place to post the CABLE problems that are found by the users and have not been resolved
- [CableData](#): information on accessing datasets for offline forcing and benchmarking
- [CableWorkshop2014](#): information about last years CABLE annual workshop

### Other useful information

- [Information about the CABLE email list](#)
- [CABLE web page on CAWCR site](#)
- [ACCESS trac](#)
- [Protocol for the Analysis of Land Surface models \(PALS\)](#)
- [The ARC Centre of Excellence for Climate System Science's land surface science pages](#)
- [Global Energy and Water Cycle Experiment \(GEWEX\) Global Land/Atmosphere System Study \(GLASS\)](#)
- [OzeWEX, the Australian Energy and Water Exchange initiative of GEWEX](#)
- CABLE users formally affiliated to the [The ARC Centre of Excellence for Climate System Science](#) can run CABLE within NASA's [Land Information System \(LIS\)](#) and [NU-WRF](#). For more information, contact Andy Pitman (a.pitman@unsw.edu.au)

Information about trac is at [TracBegin](#).

### Attachments

BreakawayLabs/mom - Mozilla Firefox

BreakawayLabs/mom x +

GitHub, Inc. (US) | https://github.com/BreakawayLabs/mom

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BreakawayLabs / mom

Watch 14 Star 13 Fork 21

The Modular Ocean Model <http://www.mom-ocean.org>

586 commits 2 branches 6 releases 10 contributors

branch: master mom / +

Merge pull request #99 from marshallward/alltoall

nicjhan authored 16 days ago latest commit 7511f4b964

bin	Alltoallv implementation; xgrid alltoallv for coupler data; nci profil...	25 days ago
data	#88 syntax error.	3 months ago
doc	#89 update the quickstart to remove references to git annex.	3 months ago
exp	#88 runscripts for quarter degree test. Also collate outputs.	3 months ago
src	Merge pull request #99 from marshallward/alltoall	16 days ago
test	#88 runscripts for quarter degree test. Also collate outputs.	3 months ago
.gitignore	Makefile build changes; OASIS is now defined externally	a year ago
LICENSE	mom-10 Add the GPLv2 as the LICENSE	3 years ago
README	Update the README.	4 months ago
README.md	mom-8 Update the top level README with links to documentation	3 years ago

README.md

# The Modular Ocean Model

# Code Management

- All models are version controlled & have good practices for getting code into trunk
- Using branches make it more difficult to cite which model version is being used
- UM (and CABLE?) moving to Met Office central shared repository

# Configuration

## UM

- Database of all experiments
- UMI: file based, Rose: version controlled

## CABLE

- Configurations set in CABLE-AUX
- User changes not version controlled

## MOM

- Only standard experiments version controlled





u-aa092 - rose config-edit

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  - suite conf
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      - env
    - um
      - command
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      - namelist
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          - Model Domain and Timestep
          - Run Control and Time Settings
          - LAM Configuration
          - LBC Related Options
          - Parallel Communication Options
          - Model Identifier Code
        - Reconfiguration and Ancillary Control
          - General reconfiguration options
          - Horizontal interpolation
          - Vertical interpolation
          - Output dump fixed header overrides
          - Output dump grid sizes and levels
          - Ancil options
        - Configure ancils and initialise dump fi
        - Transplant Data
      - IO System Settings
      - Model Input and Output

um Model Domain and Timestep

The grid and level specification are configured by the reconfiguration and then read directly by the UM from the start dump. Please see "Output dump grid sizes and levels" page in "Reconfiguration and Ancillary Control".

.....

model\_type  
Select model domain type

☒ Global Model

☐ LAM (Classic style)

☐ LAM (Cyclic boundary conditions - EW only)

☐ LAM (Cyclic boundary conditions - EW and NS)

☐ Single Column Model (see help)

☐ Site Specific Forecast Model (SSFM)

l\_regular  
Is this model using a regular grid?

☒ true

secs\_per\_periodim  
Number of seconds per period, typically 1 day (86400 sec).

86400

steps\_per\_periodim  
Number of time steps per period

72

1

# Configuration Management

We don't want to be passing around files

- Hard to find what settings used in an old run
- Hard to back up
- No audit trail



# Data

Small files stored in repositories

Large files mostly stored on the filesystem

- No good version control tools

Files generated by scripts (CAP) or hand edited (xancil)

# Also...

## Communication

- How do users know when there's a new release?

## Documentation

- What changes have been made since the last release?

## Configuration Testing

- Is the model still producing the same results as the official release
- What are the impacts of changes

Roadmap - Unified Model - Mozilla Firefox

um Roadmap - Unified ... x +

Met Office (GB) | https://code.metoffice.gov.uk/trac/um/roadmap

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## Roadmap

☐ Show completed milestones  
☐ Hide milestones with no due date

**Milestone: UM10.2 code release**

Due in **6 weeks** (12/06/15 16:00:00)

32%

Total number of tickets: 244 - closed: 76 - approved: 8 - under review: 30 - in progress: 54 - inactive: 76

An open release for all types of code changes.

**Code review submission deadline is 5th June 2015** and a week earlier still if including JULES changes.

**Milestone: UM10.3 code release**

Due in **6 months** (30/10/15 17:00:00)

0%

Total number of tickets: 6 - closed: 0 - approved: 0 - under review: 0 - in progress: 0 - inactive: 6

An open release for all types of code changes.

**Code review submission deadline is 16th October 2015**

**Milestone: UM10.4 code release**

Due in **10 months** (26/02/16 17:00:00)

An open release for all types of code changes.

Code review submission deadline is 12th February 2016

**Milestone: Hopefully**

No date set

3%

Total number of tickets: 62 - closed: 2 - approved: 0 - under review: 0 - in progress: 11 - inactive: 49

Dashboard [mom-ocean.org] [Jenkins] - Mozilla Firefox

Dashboard [mom-ocean.org] x +

https://climate-cms.nci.org.au/jenkins/job/mom-ocean.org/

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ENABLE AUTO REFRESH

Up

Status

People

Build History

Build Queue (2)

Unknown Task

Unknown Task

Build Executor Status

acesstester (offline)

nah599

1 Idle

2 Idle

3 Idle

4 Idle

saw562 (offline)

mom-ocean.org

Continuous integration for mom-ocean.org

All

S	W	Name ↓	Last Success	Last Failure	Last Duration
		<a href="#">MOM_bit_reproducibility</a>	N/A	7 hr 32 min - <a href="#">#122</a>	9 sec
		<a href="#">MOM_compile</a>	19 days - <a href="#">#110</a>	19 hr - <a href="#">#129</a>	17 min
		<a href="#">MOM_run</a>	3 mo 7 days - <a href="#">#45</a>	19 hr - <a href="#">#150</a>	44 min
		<a href="#">MOM_run_valgrind</a>	N/A	26 days - <a href="#">#13</a>	2 days 0 hr

Icon: [S](#) [M](#) [L](#)

[Legend](#) [RSS for all](#) [RSS for failures](#) [RSS for just latest builds](#)

Page generated: 28/04/2015 4:06:12 PM

[REST API](#)

Jenkins ver. 1.610

ARC CENTRE OF EXCELLENCE FOR  
SYSTEM SCIENCE

saw562: Rose Bush - Mozilla Firefox

saw562: Rose Bush

https://accessdev.nci.org.au/rose-bush/suites/saw562

Search

Rose Bush @ accessdev

saw562

User saw562 has 3 suite(s) installed. a few seconds ago

um	<div><div>cycles list</div><div>jobs list</div></div>	<div><div>20 hours ago</div></div>	<div><div></div></div>	<div><div></div></div>
gcom	<div><div>cycles list</div><div>jobs list</div></div>	<div><div>5 days ago</div></div>	<div><div></div></div>	<div><div></div></div>
static	<div><div>cycles list</div><div>jobs list</div></div>	<div><div>21 days ago</div></div>	<div><div></div></div>	<div><div></div></div>

Rose 2014-05+

# Thanks

Claire Carouge

Paola Petrelli

Marshall Ward

Nic Hannah

**ARCCSS CMS**

[climate-cms.unsw.wikispaces.net](http://climate-cms.unsw.wikispaces.net)

[climate\\_help@nf.nci.org.au](mailto:climate_help@nf.nci.org.au)

[scott.wales@unimelb.edu.au](mailto:scott.wales@unimelb.edu.au)