



**Barcelona  
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*Centro Nacional de Supercomputación*



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# s2dverification

Update meeting – 04/05/2016

Mailing list:

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Wiki:

<https://earth.bsc.es/wiki/doku.php?id=tools:s2dverification>



- Current state
- Features in testing phase
- Paper to JSS
- Vignettes
- Compatibility break
- Issues and comments
- Useful links

- Latest release: s2dverification 2.5.0
  - Also available on CRAN.
  - Can now specify paths to NetCDF masks in Load():

```
mask_exp <- list(path = '/path/to/mask_exp.nc')
mask_obs <- list(path = '/path/to/mask_obs.nc')
data <- Load(exp = c('expA', 'expB'), obs = c('obsX'),
             maskmod = list(mask_exp, mask_exp),
             maskobs = list(mask_obs), .....
```

- Can now Load() data without a configuration file:

```
expA <- list(name = 'expA',
             path = '/path/to/experiments/$EXP_NAME$/
             $STORE_FREQ$_mean/$VAR_NAME$/
             $VAR_NAME$_$START_DATE$.nc')
data <- Load(exp = list(expA), obs = NULL, sdates = ...)
```

Branch name	Pending testers	Deadline
develop-Clusters		2016-03-18
develop-plots		2016-05-01
develop-RMSE_boot	Chloé, Omar	2016-06-01
develop-SealceModes	François, ???	2016-10-01
develop-AreaWeights	Chloé, ???	2016-10-01
BoxesStereomap	Neven, Chloé	2016-10-01
develop-PlotClim	Nico, Valentina	2016-10-01

Javi: isn't Clusters() too specific and complex? Should we keep such functions in the package? It would be nice to keep only the basic fundamental functions.

Nico: we could split the package in two, one with the basic functions and another one with complex functions that build on them.

■ Stuck at the developer's side

Martin: we could keep everything in one single package but only provide documentation for basic functions. Then each doc page of each function could be split in two different parts, one that explains basic functionality and another one that explains the functionalities of complex functions that use the basic functions.

Nicola: we could also add a Misc() function that contains all the additional functions (Nicola to provide example).

Omar: develop-RMSE\_boot will remain with the same deadline, I'm going to work on it soon.

All: we should consider merging the develop-AreaWeights with AA() from eigentechniques and Chloe's code provided in GitLab. Discussion now open in MR #98.

LP, Vir: Jean-Philippe to test SealceModes. Leave it for Autumn.

- All new functions explained in the paper will be included in the release v2.6.0 to CRAN.
  - EOF, NAO, PlotBox, MCA, UltimateBrier, AnimVsLTime, Toymodel, Composite, Clusters, plot arrows on PlotEquiMap, downscaleR format.
- Sections pending to write:
  - All written.
- Some references missing, LP will point out.
- To be submitted around 2016-05-15.

Dani: PlotBox() should be renamed to PlotBoxWhisker().

- Nico to re-write some parts.
- List of responsables:
  - Overview: LP
  - Data retrieval: LP
  - Statistics: Javi, Neven
  - Visualisation: François
  - Example: Valentina
  - Tutorial: Chloé

- Towards s2dverification v3.0.0 – s2dv v3.0.0
  - A compatibility break will happen between July and October 2016.
  - The name of the new version will change to 's2dv'.
  - Both packages will be available simultaneously in the machines.
- Júlia will start working on the compatibility break as soon as the paper is submitted.
- Nico will keep working on Vignettes and Load() enhancements to load CMORized data.

Chloé: Load() enhancements should happen before MMA and MMO files are deleted.



- Can now switch versions with:

```
#!/bin/bash

# Old version
module load s2dverification/2.4.6-foss-2015a-R-3.2.0

# New version
module load s2dverification/2.5.0-foss-2015a-R-3.2.0
```

- No need, by now, to specify version in your scripts.

- Detected bugs:
  - Bug when loading datasets with less forecast time steps than the requested (issue #126).
  - Bug in some cases when loading two datasets on the same grid but with shifted longitudes (issue #135).
  - Some symbolic links were removed in /esnas and some dataset IDs failed to load: '20thCv2', 'ERAint'. Configfile will be updated in release of v2.6.0.
- If documentation is not clear for any function, discuss with developer and improve:  
create a GIT branch > improve > push > merge request

- Ongoing developments?
  - Verónica's PlotMostLikeTercile.
  - Other?
- Other issues?

Chloé: Developing a function to compute correlation difference, based on package psych.

Jean-Philippe: Developing function to compute and plot storm density and to plot hurricane tracks on map.

Nicola: Enhancements to PlotEquiMap to plot weather regimes: coloured contour lines and dashed black lines for observations.

Llorenç: Load() should return named array dimensions.

- How to develop in s2dverification

<https://earth.bsc.es/wiki/doku.php?id=tools:s2dverification#development>

- GitLab

<https://earth.bsc.es/gitlab/s2dverification>

- Script to test or try features in development

</shared/earth/software/scripts/test-s2dverification> feature

- Script to upgrade configuration files (v2.4.6 → ≥ v2.4.7)

</shared/earth/software/scripts/convertConfig.R> file.conf



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Thanks for your attention

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