



**Barcelona  
Supercomputing  
Center**

*Centro Nacional de Supercomputación*



EXCELENCIA  
SEVERO  
OCHOA

# s2dverification

Update meeting – 13/09/2016

Mailing list:

[s2dverification@bsc.es](mailto:s2dverification@bsc.es)

Wiki:

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



- Current state
- Features in testing phase
- s2dverification paper
- Vignettes
- Compatibility break
- Issues and comments
- Useful links

- Current version: s2dverification v2.7.1
  - Will be uploaded on CRAN after 3 months.
  - Updated configuration file (since v2.6.0):

## BEFORE:

```
data <- Load('tos', exp = 'i00k', obs = NULL, sdates = '19901101')
```

## AFTER:

```
data <- Load('tos', exp = 'i00k', obs = NULL, sdates = '19901101')
```

or

```
data <- Load('tos', exp = 'eearth/i00k', obs = NULL, sdates = '19901101')
```

## BEFORE:

```
data <- Load('tos', exp = NULL, obs = 'HadISST', sdates = '19901101')
```

## AFTER:

```
data <- Load('tos', exp = NULL, obs = 'ukmo/hadisst_v1.1', sdates = '19901101')
```

or

```
data <- Load('tos', exp = NULL, obs = 'hadisst_v1.1', sdates = '19901101')
```

- Current version: s2dverification 2.7.1
  - Updated configuration file (since v2.6.0):

## BEFORE

## AFTER

exp = 'ECMWF_S4_Sea'		exp = 'ecmwf/system4_m1'
		(or exp = 'system4_m1')
exp = 'EnsMetfrSeas'		exp = 'meteofrance/ensembles-seasonal_2002s001'
exp = 'EnsEcmwfSeas'		exp = 'ecmwf/ensembles-seasonal_2001s001'
exp = 'EnsIfmSeas'		exp = 'ifm/ensembles-seasonal_2001s001'
exp = 'EnsCerfacDec'		exp = 'cerfac/ensembles-decadal_2002s000'
exp = 'EnsIfmDec'		exp = 'ifm/ensembles-decadal_2002s001'
exp = 'DePreSysAsimDec'		exp = 'depresys/ensembles-decadal_2502s051'
exp = 'cancm4dec1'		exp = 'cancm4/cmip5-decadal_i1p1'
		(or exp = 'cmip5-decadal_i1p1')
exp = 'cancm4dec2'		exp = 'cancm4/cmip5-decadal_i2p1'
		(or exp = 'cmip5-decadal_i2p1')
obs = '20thCv2'		obs = 'noaa/20thcr_v2'
var = 'tasmin_q90'		var = 'tasmin_q90'
var = 'sieN'		var = 'sieN'
var = 'sia_RegionName'		var = 'sia_RegionName'
var = 'moc_40N55N_1-2km'		var = 'moc_40N55N_1-2km'

- Current version: s2dverification 2.7.1
  - Changes in v2.6.1 to v2.6.5:
    - Small bug fixes and enhancements in Load(), configuration file and example scripts.
  - Changes in v2.7.0 to v2.7.1:
    - Enhancements and new features in map plot functions.
    - Added PlotLayout() function.

```
library(s2dverification)
```

```
data <- Load('tos', 'i00k', NULL, '19901101', leadtimemax = 4, output = 'lonlat')  
ens_mean <- Mean1Dim(data$mod, 2)
```

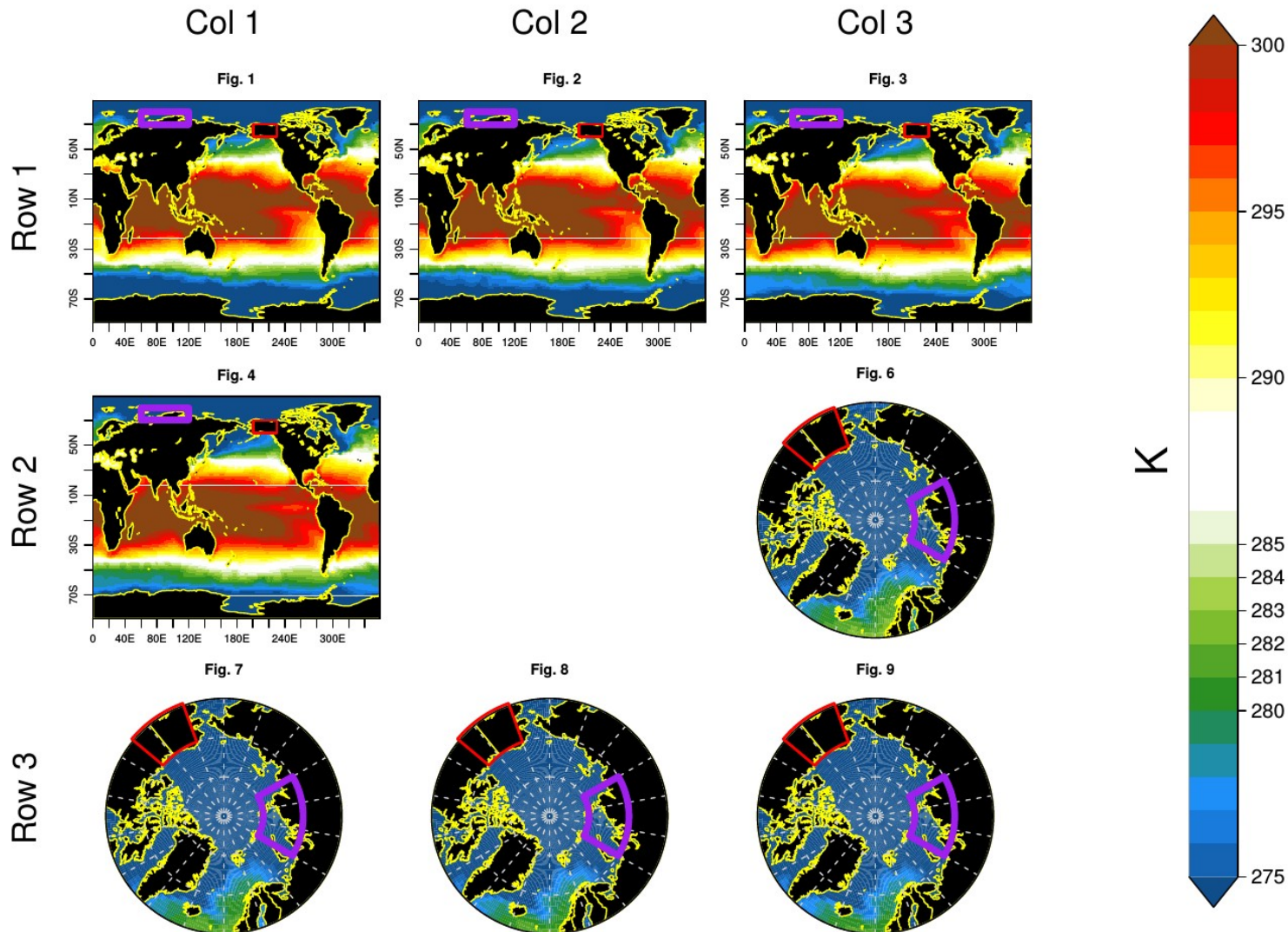
```
layout <- PlotLayout(fun = c('PlotEquiMap', 'plot', 'PlotStereoMap'),  
                    plot_dims = c('lat', 'lon'),
```

```
                    var = list(ens_mean, NA, ens_mean),
```

```
                    lon = data$lon, lat = data$lat,  
                    fill = 'black', sizetit = 0.5, axes_label_scale = 0.6,  
                    boxlim = list(c(60, 80, 120, 70), c(200, 70, 230, 60)),  
                    boxlwd = c(5, 2), boxcol = c('purple', 'red'),  
                    coast_color = 'yellow',
```

```
                    titles = paste('Fig.', 1:9), toptitle = 'Multipanel',  
                    row_titles = paste('Row', 1:3), col_titles = paste('Col', 1:3),  
                    drawleg = 'E', units = 'K', units_scale = 2,  
                    bar_limits = c(275, 300), brks = 26,  
                    bar_extra_labels = 281:284,  
                    width = 10, fileout = 'multipanel_demo.pdf')
```

## Multipanel



Branch name	Pending testers	Deadline
develop-RMSE_boot	Chloé, Omar	2016-10-01
develop-SealceModes	Jean-Philippe	2016-10-01
develop-AreaWeights	Chloé, ???	2016-10-01
develop-PlotClim	Nico, Valentina	2016-10-01

■ Stuck at the developer's side



- Sections pending to write:
  - All written.
- Some comments pending to review.
- Looking for another journal than JSS. Too focused in climate science.
- Paper now paused: working on interaction with THREDDS servers and file-per-chunk in Load().

- Paused at the moment. Current version available at <https://earth.bsc.es/gitlab/es/s2dverification/blob/develop-vignettes/README.md>
- Nico to re-write some parts.
- List of responsables:
  - Overview: LP
  - Data retrieval: LP
  - Statistics: Javi, Neven
  - Visualisation: François
  - Example: Valentina
  - Tutorial: Chloé

- Towards s2dv v3.0.0
  - A compatibility break will happen in Jan 2017 approx.
  - The name of the new version will change to 's2dv'.
  - Both packages will be available simultaneously in the machines. You will be able to adapt your scripts gradually.
  - Some releases of v2.7.X will happen with enhancements to load CMORized and THREDDS data and new time-series plot functions.
  - Plan available at:  
[https://docs.google.com/spreadsheets/d/1zj5\\_VEAJGVhc0mZ7n-5u313ljXEFjow9iqTX9fGd21g/edit#gid=0](https://docs.google.com/spreadsheets/d/1zj5_VEAJGVhc0mZ7n-5u313ljXEFjow9iqTX9fGd21g/edit#gid=0)

- Towards s2dv v3.0.0
  - Nicola: how will we be able to use s2dverification and s2dv simultaneously if the function names are the same.
  - Nicolau: by default, the functions from the last loaded package will be used. To use functions from the first loaded package, one can use `s2dverification::FunctionName()` or `s2dv::FunctionName()`.

- Can switch versions with:

```
#!/bin/bash

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

# Old version
module load s2dverification/2.6.5-foss-2015a-R-3.2.0
```

- If documentation is not clear for any function, discuss with developer and improve:

create a GIT branch > improve > push > merge request

- Ongoing developments?
  - Chloé's correlation difference.
  - Jean-Philippe's hurricane density and track plot.
  - Nicola's enhancements of `PlotEquiMap()`.
  - Martin's enhancements of `PlotStereoMap()` and `PlotSection()`.
  - François developing plot of JoCoMo matrix (for September approx.).
  - ...?
- Other issues?

- 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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OCHOA

Thanks for your attention

[nicolau.manubens@bsc.es](mailto:nicolau.manubens@bsc.es)