



AG Pôle de modélisation – 29/06/2010

Reference simulations for seasonal cycle

Reference simulations for inter-annual variability

Visualization scripts (reference, and difference between two simulations)

Available for community (netcdf files, plots, scripts) dods & wiki

Reproducibility (nemo + libIGCM + idl-saxo)



Reference simulations ORCA2_LIM2 (Climatology)

year = 1

year = 2000

Initial state: Levitus

single run

Forcing files : CORE II (annual average values) (griffies et al. 2009)

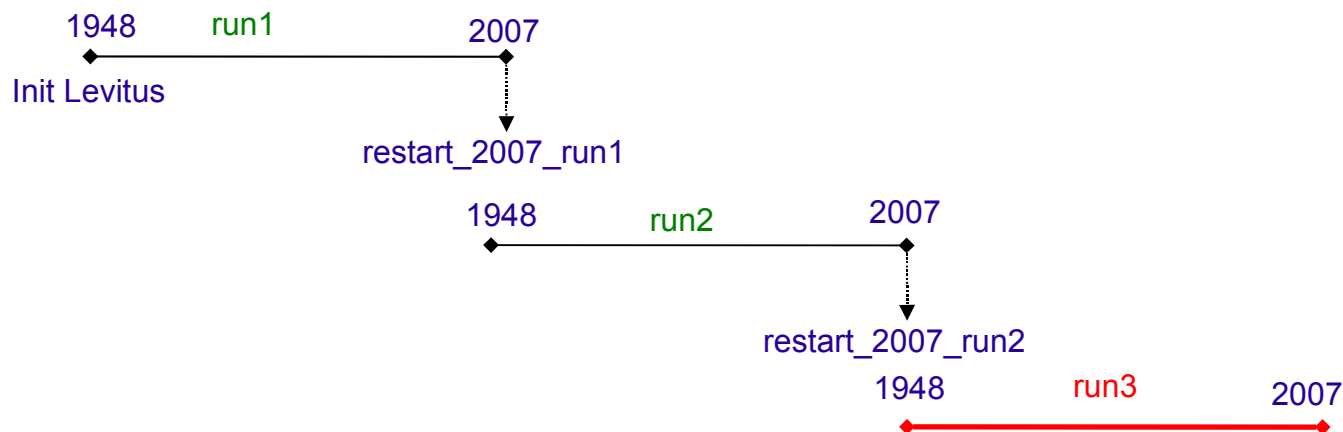
precipitation (liquid and solid)	: monthly (satellite data)
solar radiation (long & sort waves)	: daily (satellite data)
humidity	: 6 hours (NCEP)
temperature at 10 m	: 6 hours (NCEP)
wind (u & v components)	: 6 hours (NCEP)

Restarts : one instantaneous output every ten years (ocean & ice)

Outputs : ocean output : annual averages for each year (2000 years)
+ true monthly mean output for the following decades :
(1-10, 41-50, 91-100, 491-500, 991-1000, 1991-2000)
ice output : monthly averages for each year (2000 years)



Reference simulations ORCA2_LIM2 (Inter-annual)



Forcing files : CORE II (from year 1948 to year 2007) (griffies et al. 2009)

precipitation, solar radiation, humidity, temperature at 10 m, wind (u & v components)

Restarts : one instantaneous output every ten years (ocean & ice)

Outputs : ocean output : annual averages and true monthly mean output
for each year (60 years: 1948-2007)

ice output : monthly averages for each year (60 years: 1948-2007)



Versions :

- NEMO : tag v3_2 (mono processor)
- LibIGCM : tag v1_4 (changed files: opa9.driver, opa9.card, lim2.card)
- COREII
- Run at IDRIS (brodie) & CCRT (mercure SX8)

Documentation

https://forge.ipsl.jussieu.fr/nemo/wiki/core2_cmip



Creation of automatized scripts for visualization :

- for NEMO-COREII reference simulations
- available for other simulations
- for difference between two simulations

(netcdf files: annual (oce) and monthly (ice) mean with 10 records)



automatized scripts for visualization :

- Script bash (calls scripts idl-saxo)
input : experience name(s), year
output : pdf pf plots, and difference (with known climatologies or between two simulations)

To be done: possibility to have output also in html file



Plots & Time Series

Standard plots

Standard Time Series

(Griffies et al. 2009)

+ optional plots & ts

(total 37 plots and 8 time series)

One simulation:

Plots of variables and plots of difference with climatology when it is available

Two simulations:

Plots of variables and plots of difference with other simulation



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Plots & Time Series

DODS at idris :

plots

http://dodsp.idris.fr/reee605/plots_CORE2/CLIMATO

http://dodsp.idris.fr/reee605/plots_CORE2/INTERAN


time series

http://dodsp.idris.fr/reee605/ts_CORE2/CLIMATO

http://dodsp.idris.fr/reee605/ts_CORE2/INTERAN

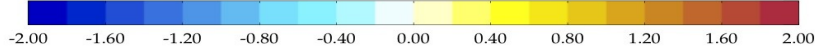
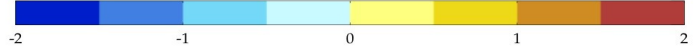
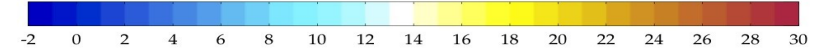
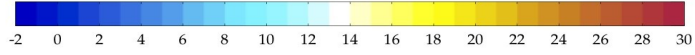
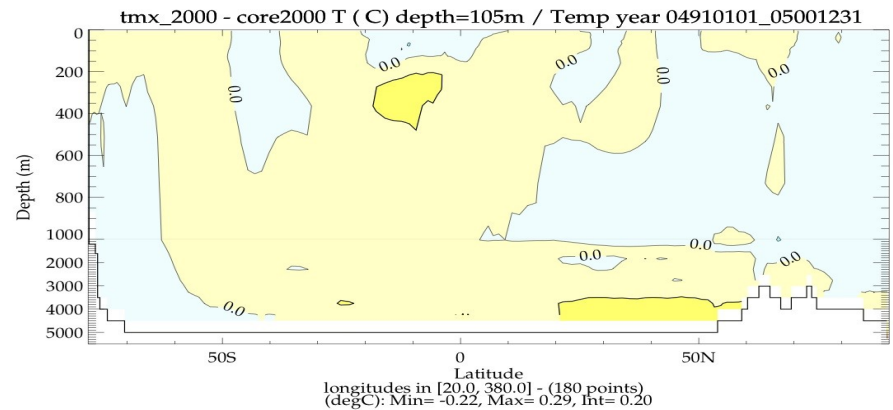
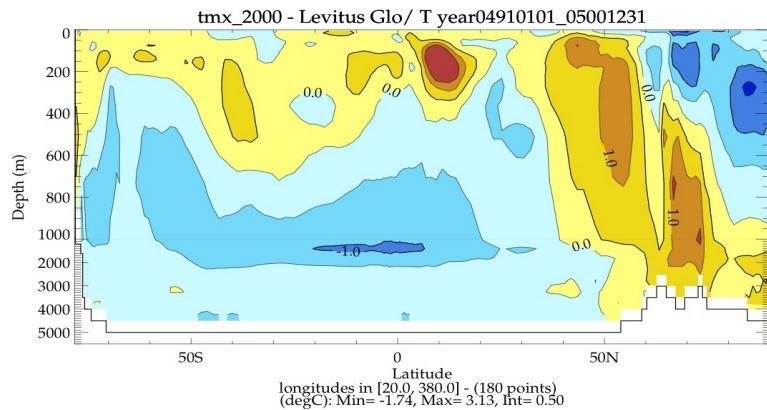
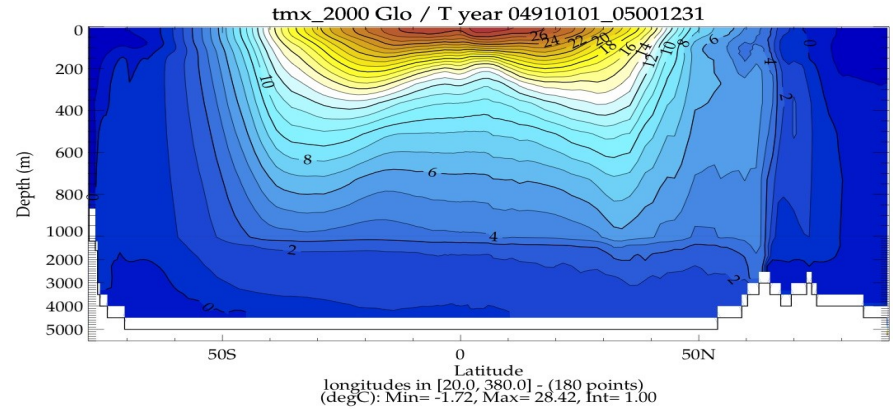
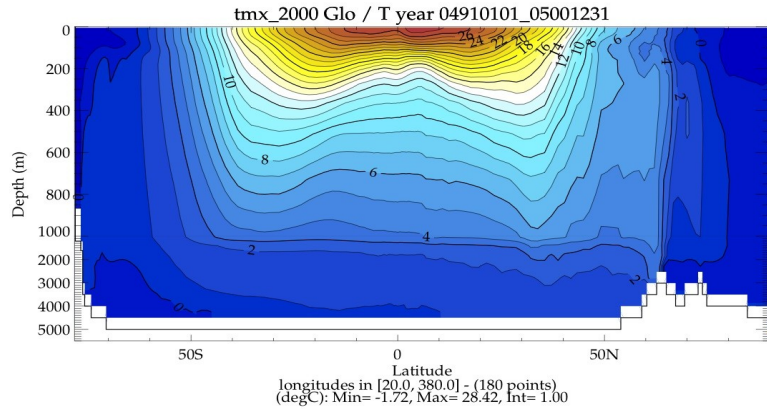


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 core2000.pdf	10-Jun-2010 12:13	5.5M	
 core2000_10y.pdf	10-Jun-2010 12:13	5.6M	
 core2000_100y.pdf	10-Jun-2010 12:14	5.4M	
 core2000_500y.pdf	10-Jun-2010 12:14	5.5M	
 core2000_1000y.pdf	10-Jun-2010 12:16	5.4M	



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Conclusion:

Run climatological of 2000 years

Run inter-annual 60 years (repeated 3 times)

Test of sensibility for clima & inter-annual (removed tidal mixing)

Wiki: documentation and scripts

Dods:

Climatological : netcdf files : monthly mean of last 10 years
annual mean of last 10 years

Inter-annul : netcdf file : monthly mean of 60 years of last **run**
annual mean of 60 years of last **run**