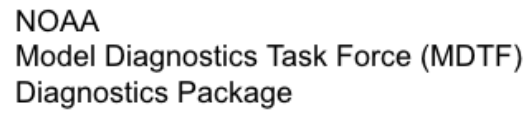


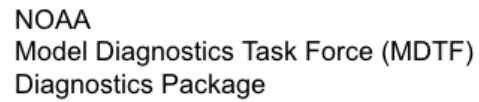
θ -S structure of the AMOC in high-resolution ocean simulations and in CMIP5 models

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3D Structures of AMOC plots



One Latitude (26.5N)

Latitudinal Variation

[illegible]

Directory and files configuration in brief

```

1  .
2  ├── mdtf.py
3  ├── README.pdf
4  ├── CCSM4 CASENAME
5  │   ├── fx FIXDIR
6  │   │   ├── CCSM4.deptho.fx.nc    bathymetry
7  │   │   ├── CCSM4.thkcello.fx.nc  layer thickness
8  │   ├── mon MONDIR
9  │   │   ├── CCSM4.so.mon.nc    monthly ocean Temperature, Salinity,
10  │   │   └── CCSM4.vo.mon.nc    (volume/mass) transport/velocity
11  ├── GFDL-CM2p1 CASENAME
12  │   ├── fx
13  │   │   └── GFDL-CM2p1.deptho.fx.nc
14  │   ├── mon
15  │   │   ├── GFDL-CM2p1.so.mon.nc
16  │   │   ├── GFDL-CM2p1.vmo.mon.nc
17  │   │   └── GFDL-CM2p1.vo.mon.nc
18  │   └── note
19  ├── obs_data
20  │   ├── transport_onto_TS REFDIR
21  │   │   ├── clim CLMREF
22  │   │   │   ├── HYCOM.AMOC_T2B.clim.nc    1/12 degree HYCOM simulation is used as reference
23  │   │   │   ├── RAPID.sf26.clim.nc
24  │   │   │   └── WOA13.so_viv.clim.nc
25  │   │   ├── fx FIXREF
26  │   │   │   ├── HYCOM.sig2_on_TS.fx.nc
27  │   │   │   └── LICOM.BASIN.fx.nc
28  │   │   └── ref_AMOCz_yz_plot.png
29  ├── var_code
30  │   ├── html HTMDIR
31  │   │   ├── mdtf1.html
32  │   │   ├── mdtf_diag_banner.png
33  │   │   └── template.html
34  │   ├── transport_onto_TS SRCDIR
35  │   │   ├── AMOC_T2B_from_climate.nc1    diagnose and plot scripts
36  │   │   └── AMOC_T2B_from_climate.py
37  │   ├── util
38  │   │   ├── rgb RGBDIR
39  │   │   │   └── xbxu.rgb    Color tables
40  │   │   └── set_variables_CMIP.py    Set variables names in CMIP5
41  ├── wkdir WKDIR
42  │   ├── MDTF_CCSM4 CASDIR
43  │   │   ├── index.html
44  │   │   ├── mdtf_diag_banner.png
45  │   │   ├── transport_onto_TS QTSDIR
46  │   │   │   ├── mdtf_diag_banner.png
47  │   │   │   ├── model PNGDIR
48  │   │   │   │   ├── AMOCz_yz_plot.png    Figures for html
49  │   │   │   │   ├── netCDF OUTDIR
50  │   │   │   │   │   ├── CCSM4.AMOC_T2B.clim.nc    results here for plot
51  │   │   │   │   │   ├── mon_yr TMPDIR
52  │   │   │   │   │   │   ├── CCSM4.AMOC_qts_2003-2003.yr.nc    temperatory files
53  │   │   │   │   │   │   └── CCSM4.AMOC_qts_2004-2004.yr.nc

```

Data is from <https://esgf-node.llnl.gov/search/cmip5/>, CMIP5 historical run.

User should cat monthly files into one, for example:

```
cdo cat so_Omon_CCSM4_historical_r1i1p1_?????-?????.nc CCSM4.so.mon.nc
```

Here results from CCSM4 and GFDL-CM2p1 are shown,

user might specify other CMIP5 models, providing corresponding netCDF files

```
54 | | | | CCSM4.AMOC_qts_2005-2005.yr.nc
55 | | | | PS FIGDIR
56 | | | | AMOCz_yz_plot.pdf temporary figures
57 | | | | obs PNGREF
58 | | | | ref_AMOCz_yz_plot.png
59 | | | | PS FIGREF
60 | | | | transport_onto_TS.html
61 | MDTF_GFDL-CM2p1
62 | | index.html
63 | | mdtf_diag_banner.png
64 | | transport_onto_TS
65 | | | mdtf_diag_banner.png
66 | | | model
67 | | | | AMOCz_yz_plot.png
68 | | | | netCDF
69 | | | | | GFDL-CM2p1.AMOC_T2B.clim.nc
70 | | | | | mon_yr
71 | | | | | | GFDL-CM2p1.AMOC_qts_2001-2001.yr.nc
72 | | | | | | GFDL-CM2p1.AMOC_qts_2002-2002.yr.nc
73 | | | | | | GFDL-CM2p1.AMOC_qts_2003-2003.yr.nc
74 | | | | | | GFDL-CM2p1.AMOC_qts_2004-2004.yr.nc
75 | | | | | | GFDL-CM2p1.AMOC_qts_2005-2005.yr.nc
76 | | | | | PS
77 | | | | | | AMOCz_yz_plot.pdf
78 | | | | | obs
79 | | | | | | ref_AMOCz_yz_plot.png
80 | | | | | | PS
81 | | | | | transport_onto_TS.html
82 | MDTF_GFDL-CM2p1.tar
```