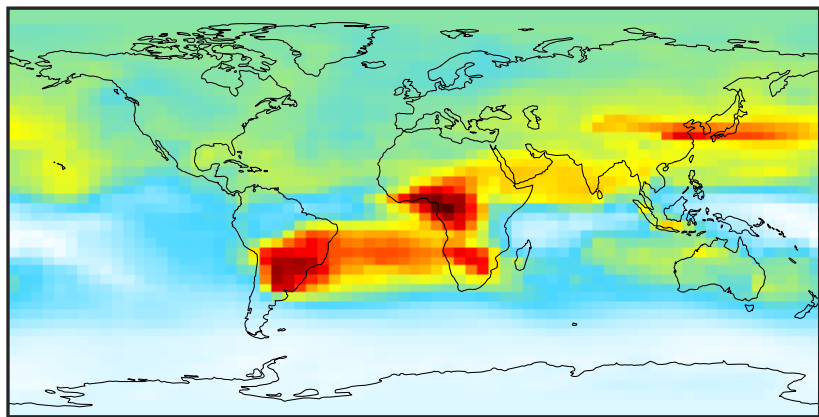


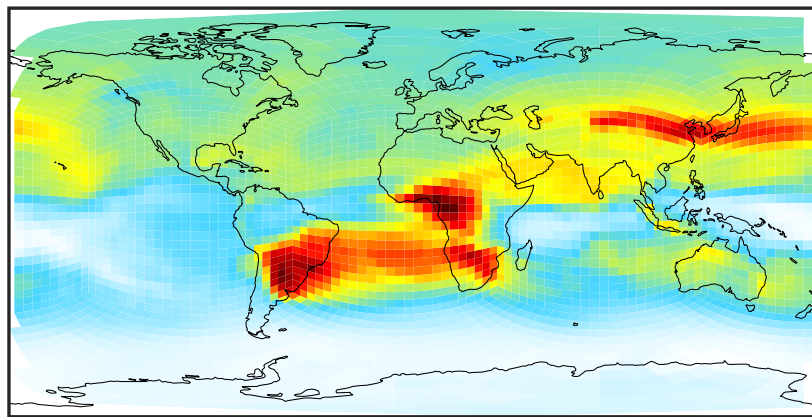
# SpeciesConcVV\_NOy (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



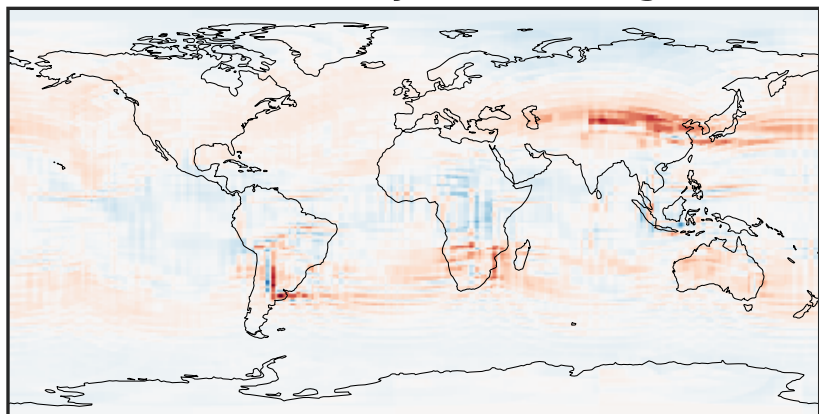
0.0342 0.1692 0.3385 0.5077 0.7112  
ppb

GCHP\_14.2.0 (Dev)  
c24



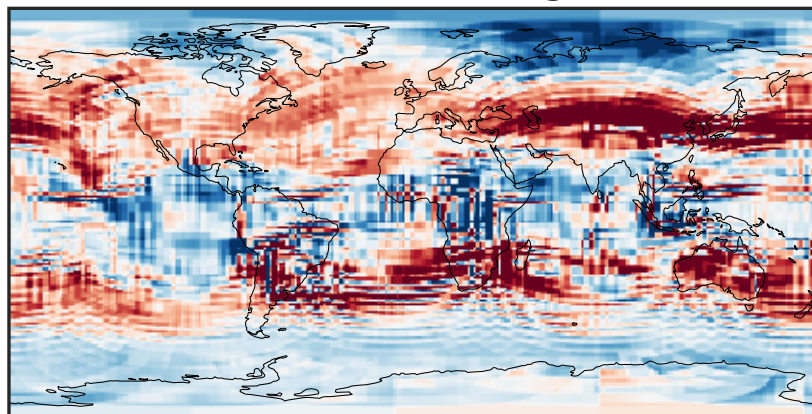
0.0342 0.1692 0.3385 0.5077 0.7112  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



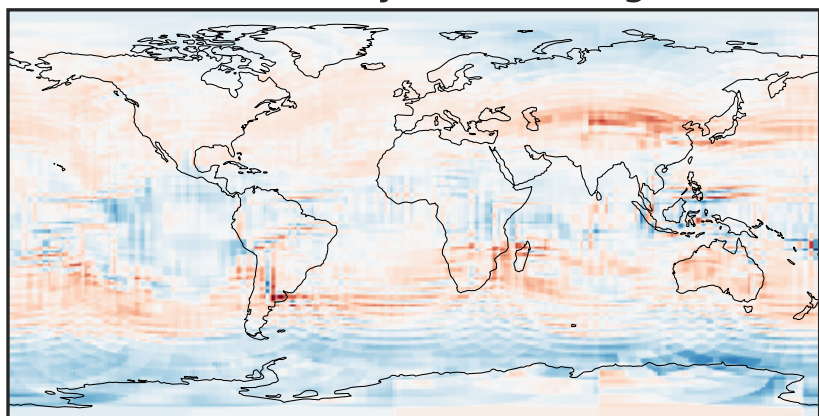
-0.2035 -0.1017 0.0000 0.1017 0.2035  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



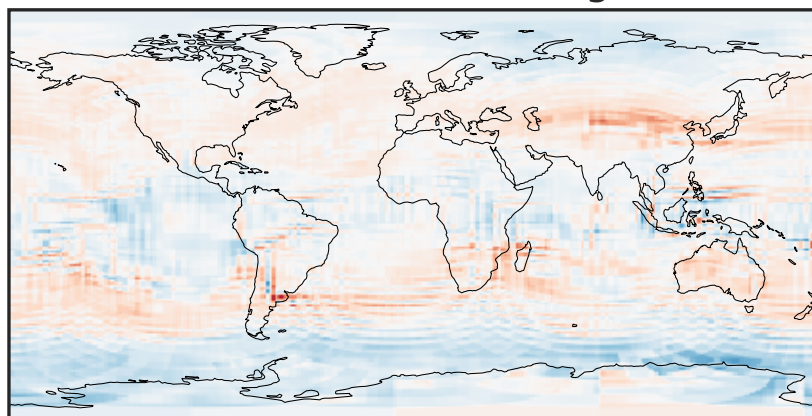
-0.02 0.00 0.02  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.575 0.787 1.000 1.370 1.739  
unitless

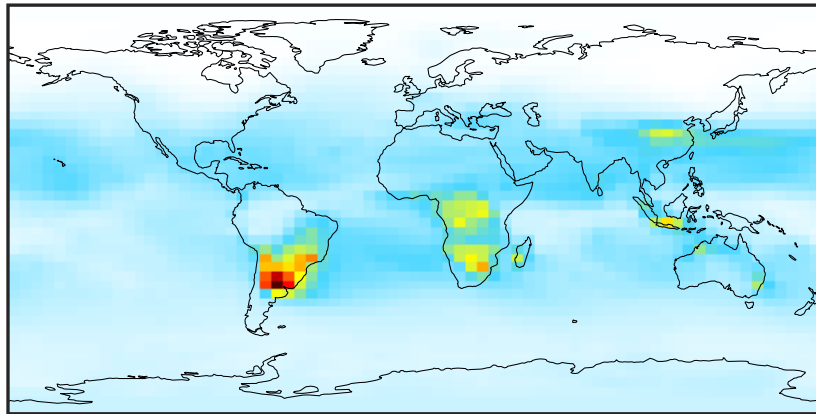
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

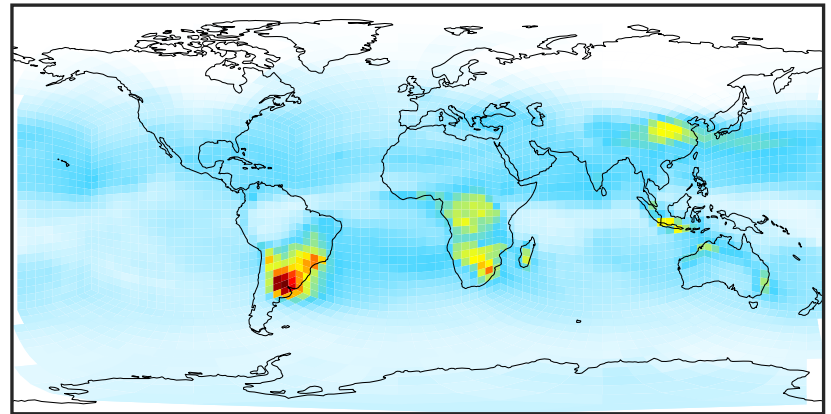
# SpeciesConcVV\_NOx (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



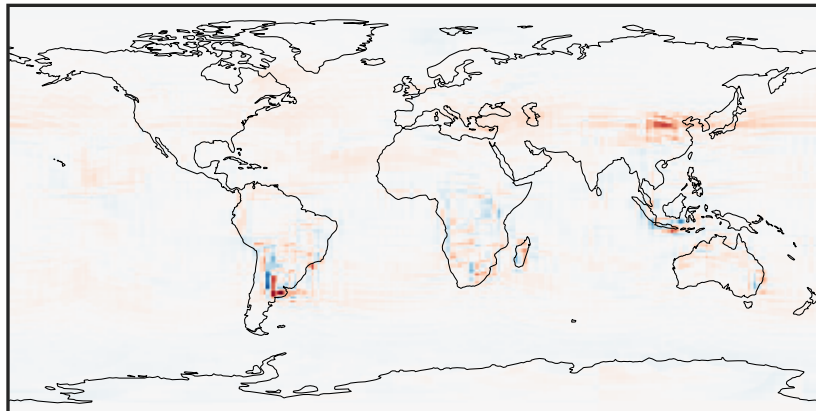
0.0008 0.0519 0.1038 0.1558 0.2085  
ppb

GCHP\_14.2.0 (Dev)  
c24



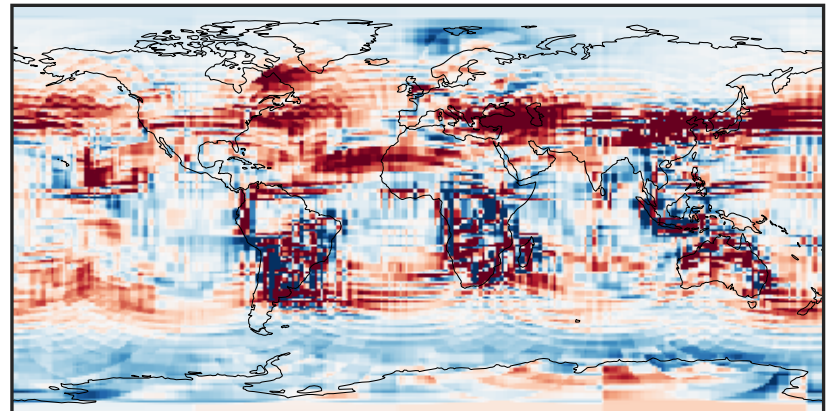
0.0008 0.0519 0.1038 0.1558 0.2085  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



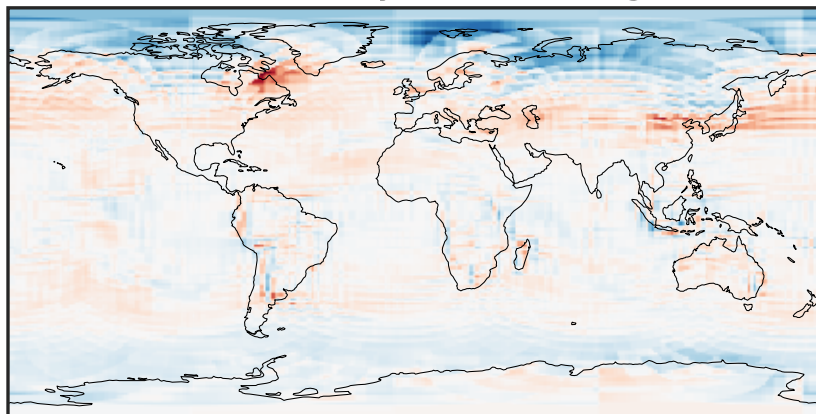
-0.0739 -0.0369 0.0000 0.0369 0.0739  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



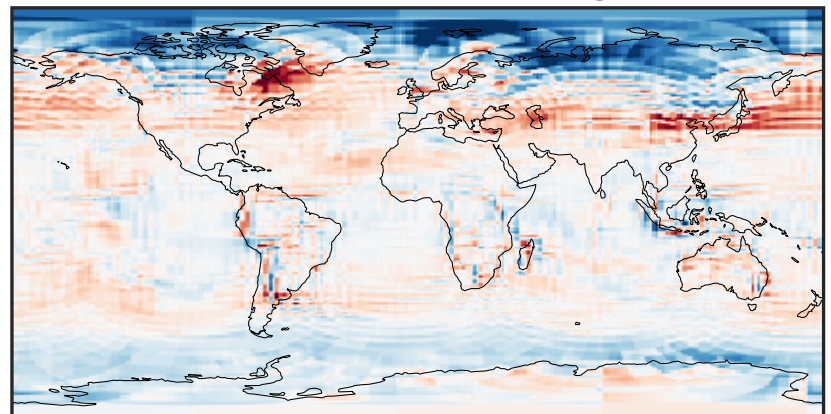
-0.0025 0.0000 0.0025  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.276 0.638 1.000 2.309 3.619  
unitless

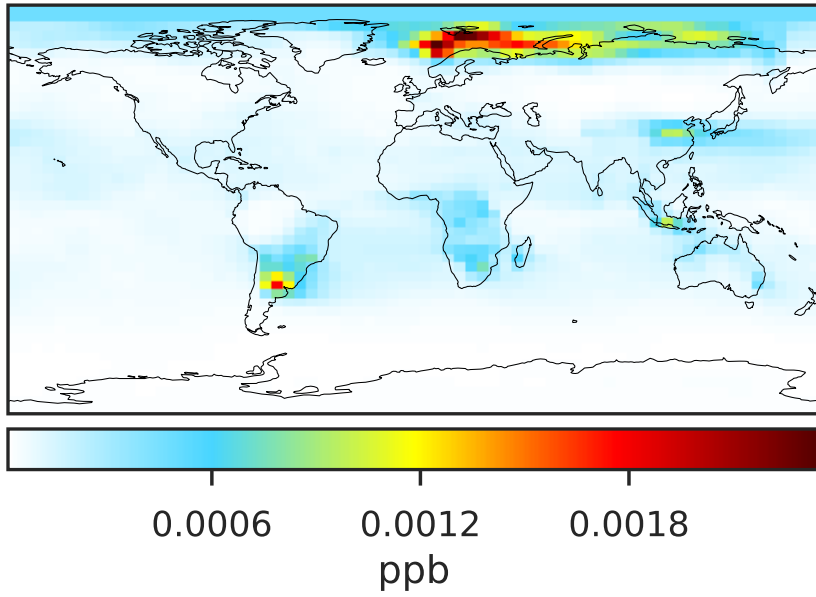
Ratio (1x1.25)  
Dev/Ref, Fixed Range



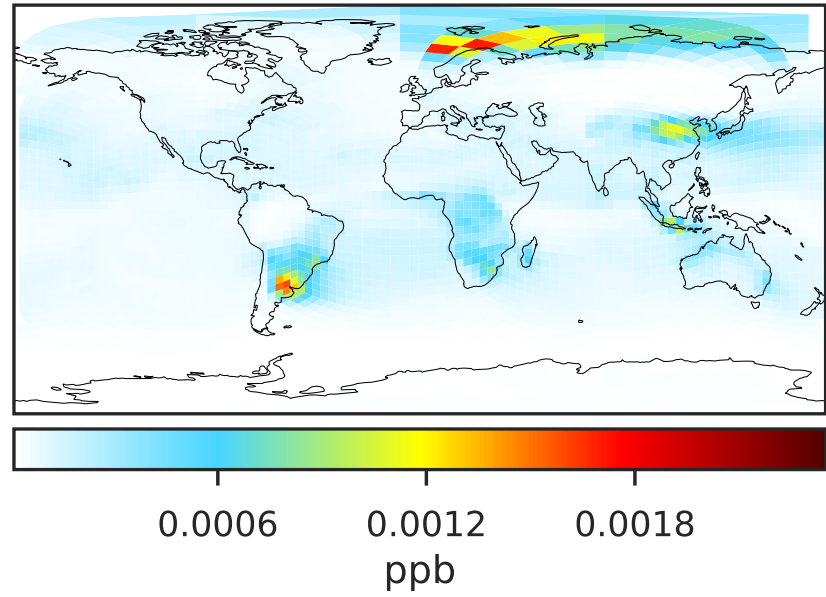
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_HNO2 (Jan2019)

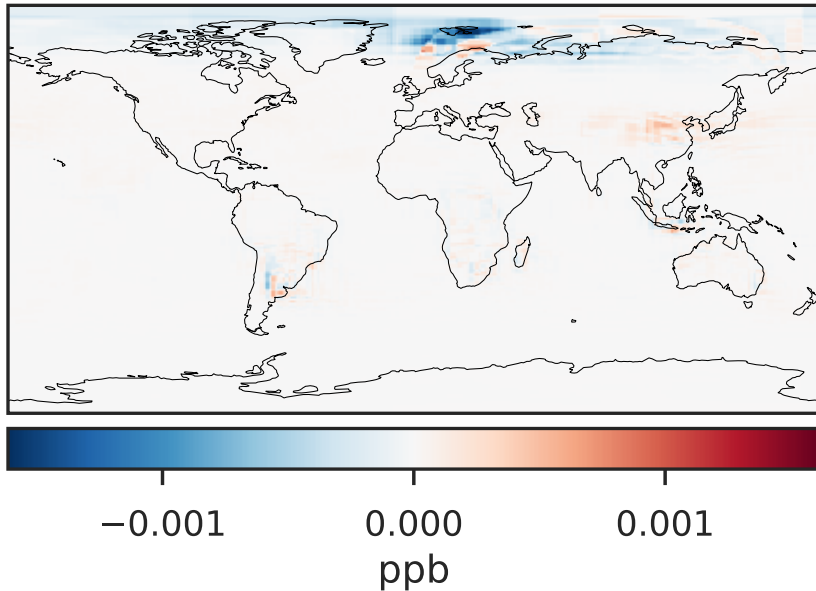
GCC\_14.2.0 (Ref)  
4.0x5.0



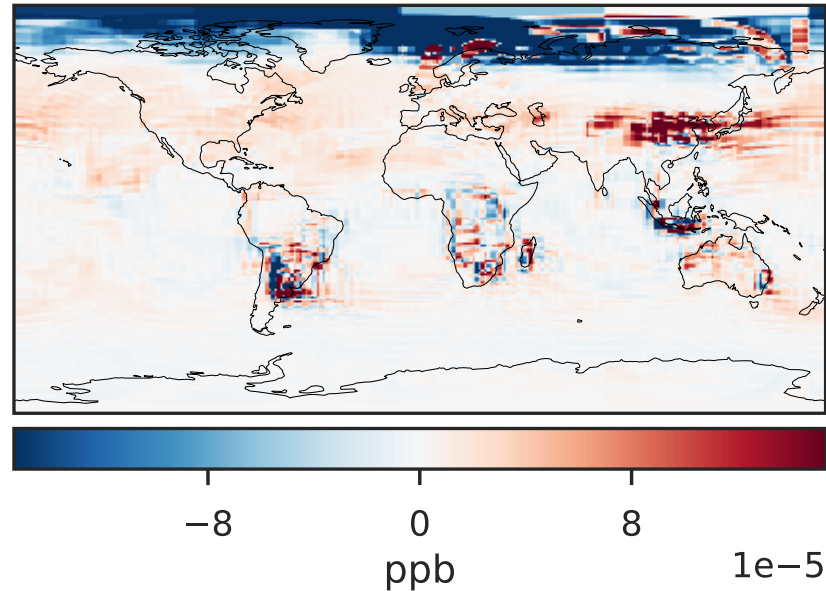
GCHP\_14.2.0 (Dev)  
c24



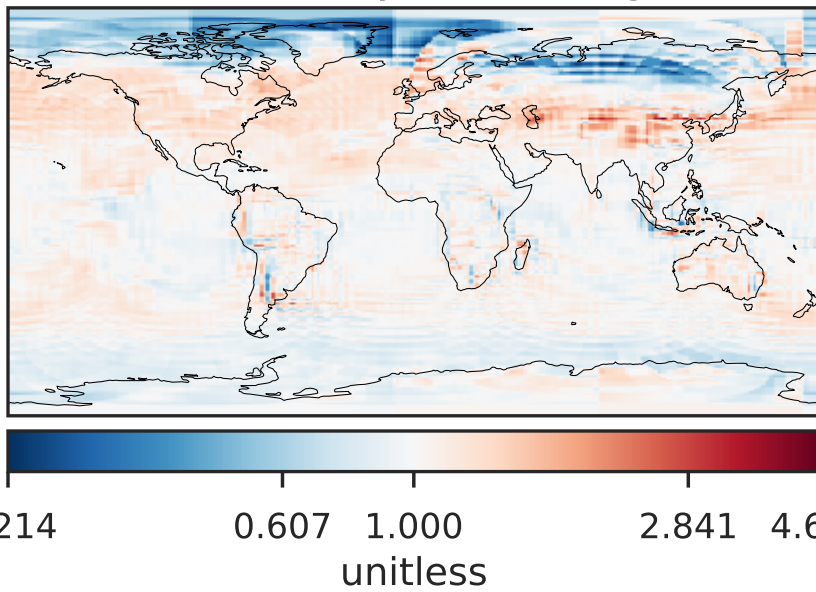
Difference (1x1.25)  
Dev - Ref, Dynamic Range



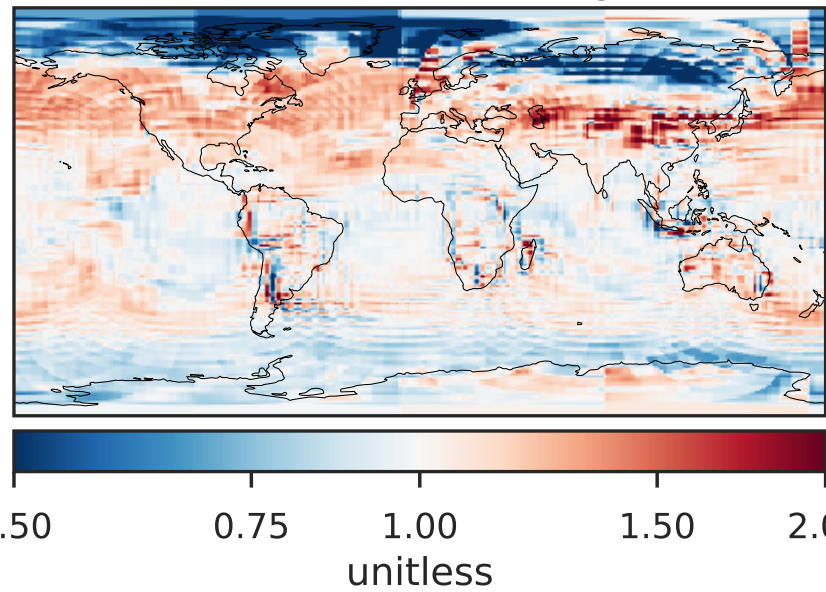
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

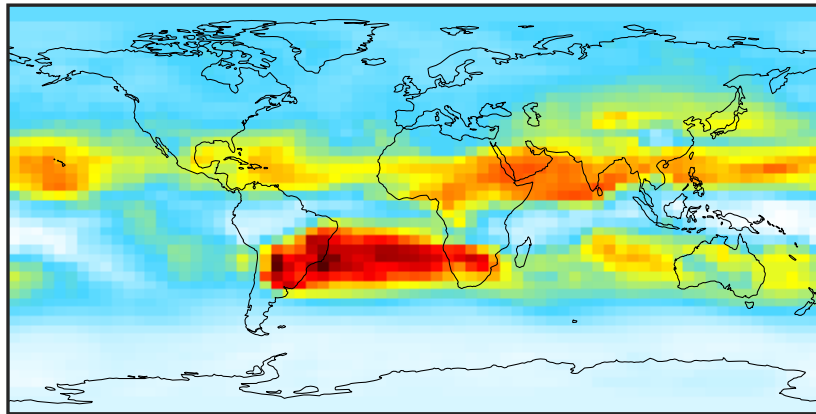


Ratio (1x1.25)  
Dev/Ref, Fixed Range



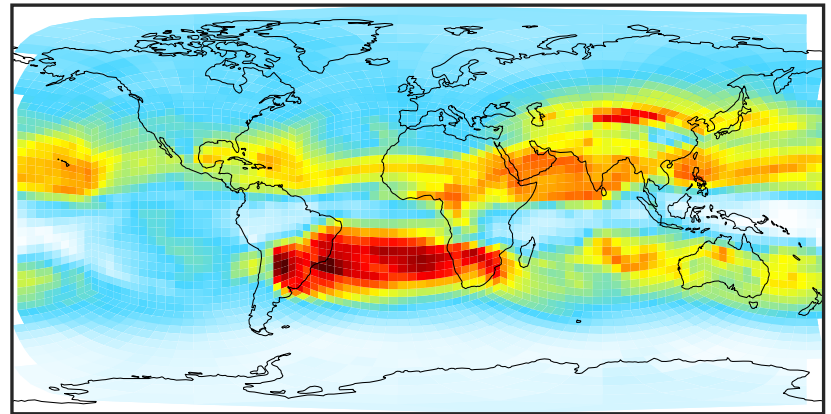
# SpeciesConcVV\_HNO3 (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



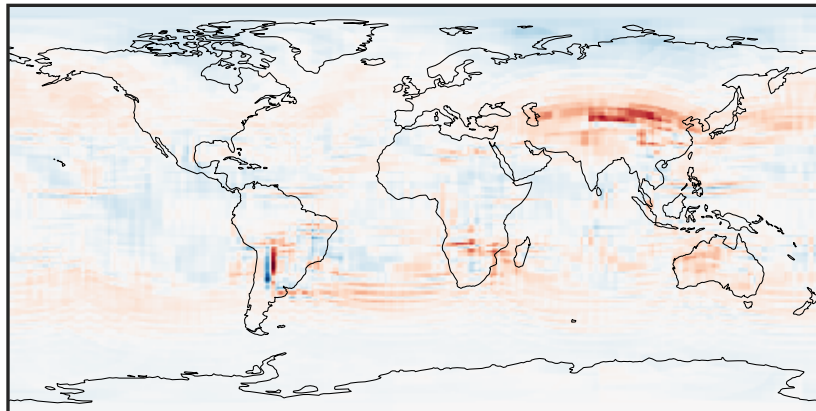
0.0069 0.0685 0.1371 0.2056 0.2811  
ppb

GCHP\_14.2.0 (Dev)  
c24



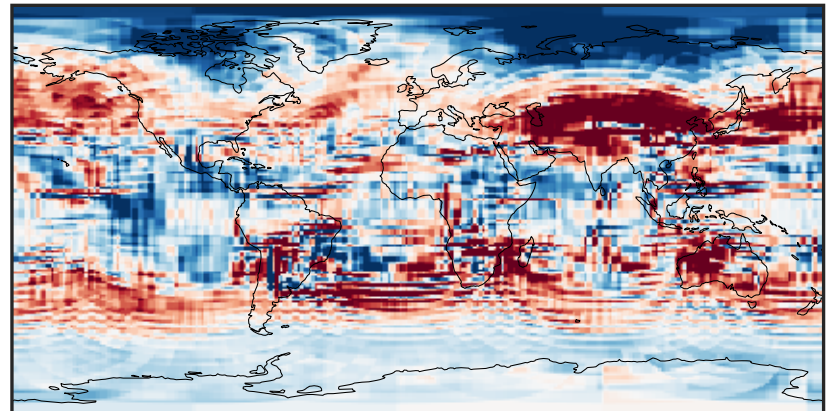
0.0069 0.0685 0.1371 0.2056 0.2811  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



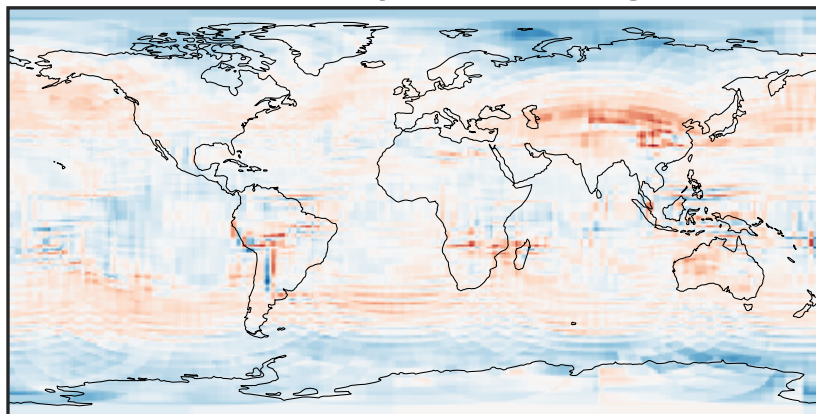
-0.1094 -0.0547 0.0000 0.0547 0.1094  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



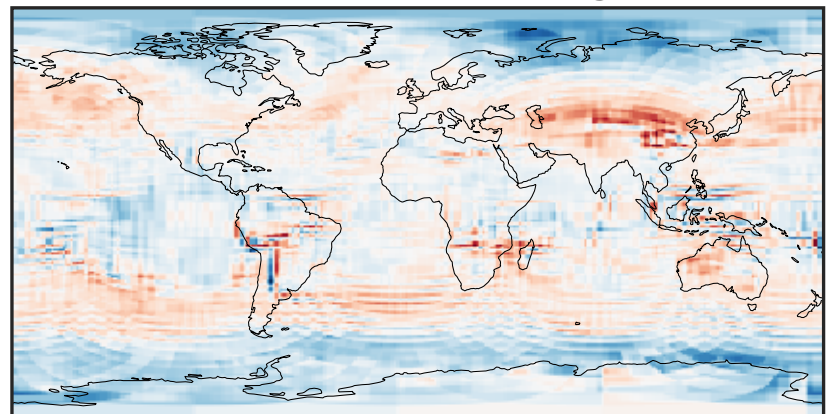
-0.01 0.00 0.01  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.406 0.703 1.000 1.732 2.464  
unitless

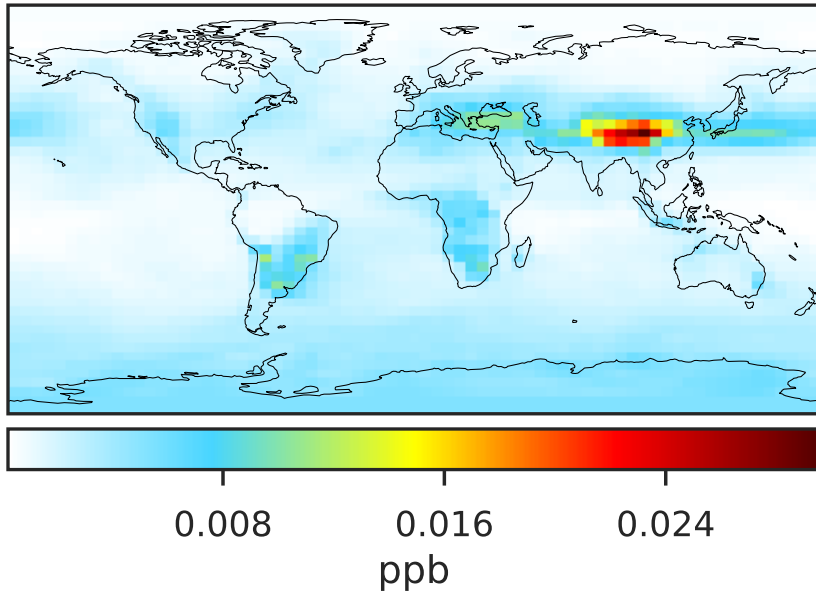
Ratio (1x1.25)  
Dev/Ref, Fixed Range



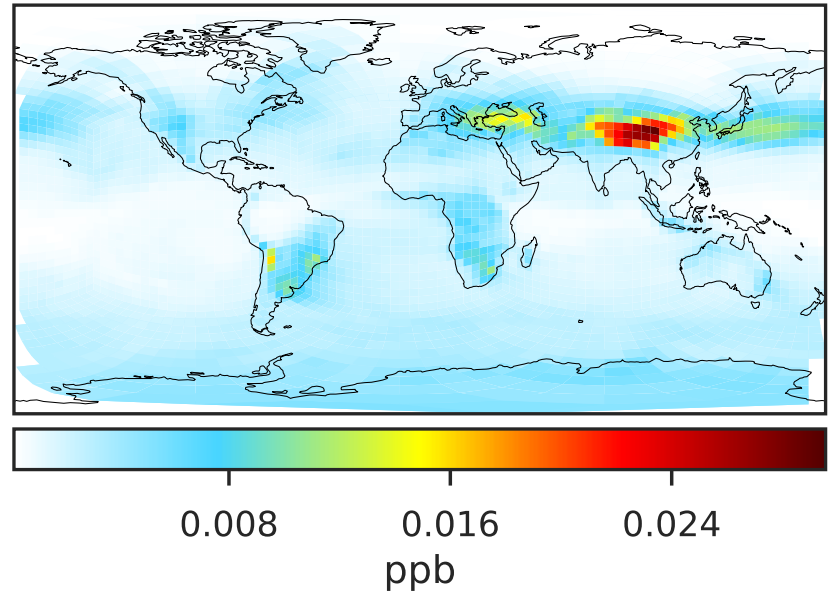
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_HNO4 (Jan2019)

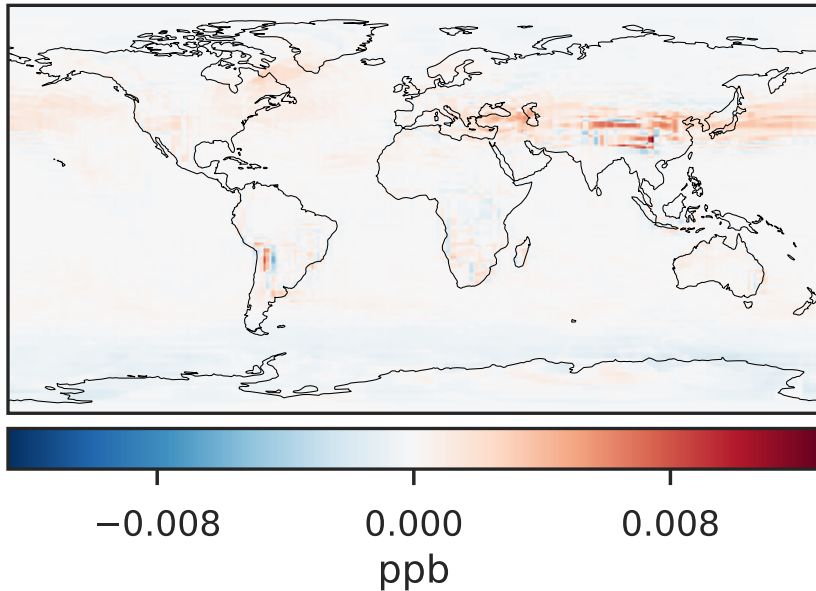
GCC\_14.2.0 (Ref)  
4.0x5.0



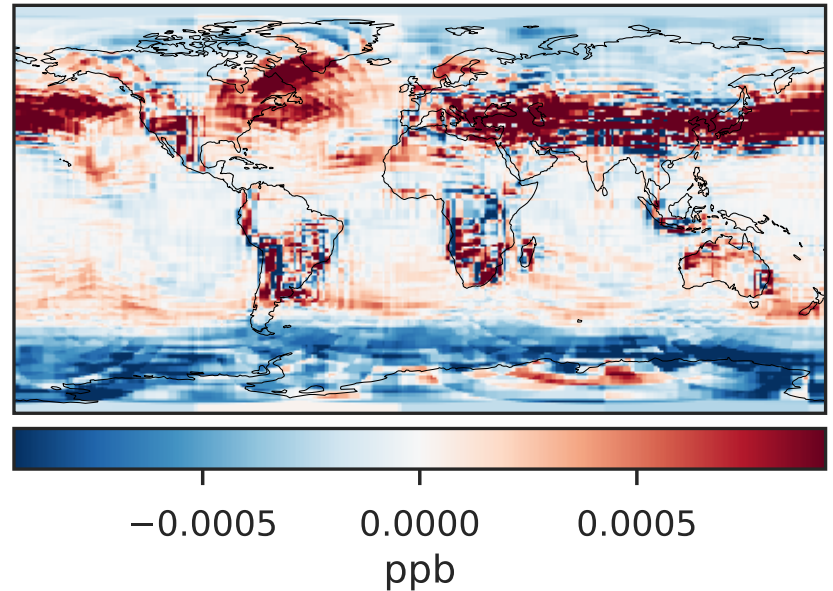
GCHP\_14.2.0 (Dev)  
c24



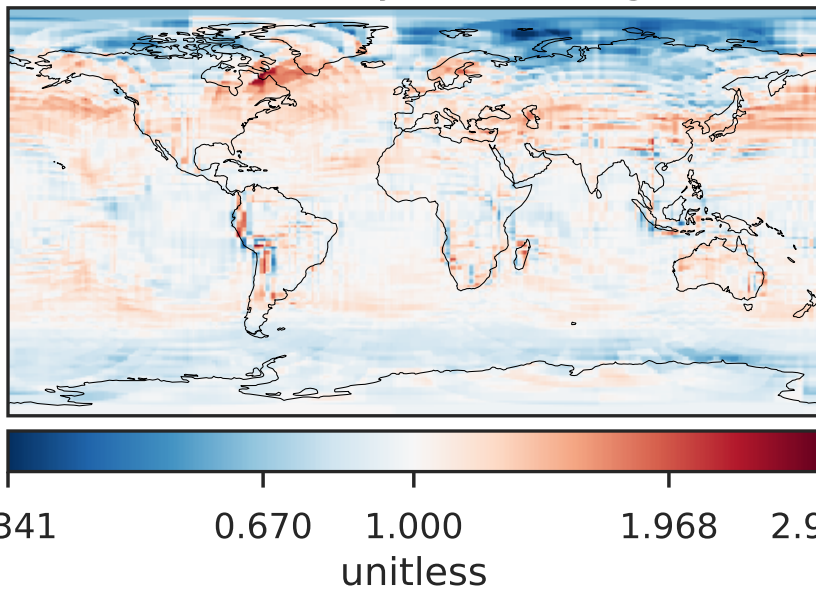
Difference (1x1.25)  
Dev - Ref, Dynamic Range



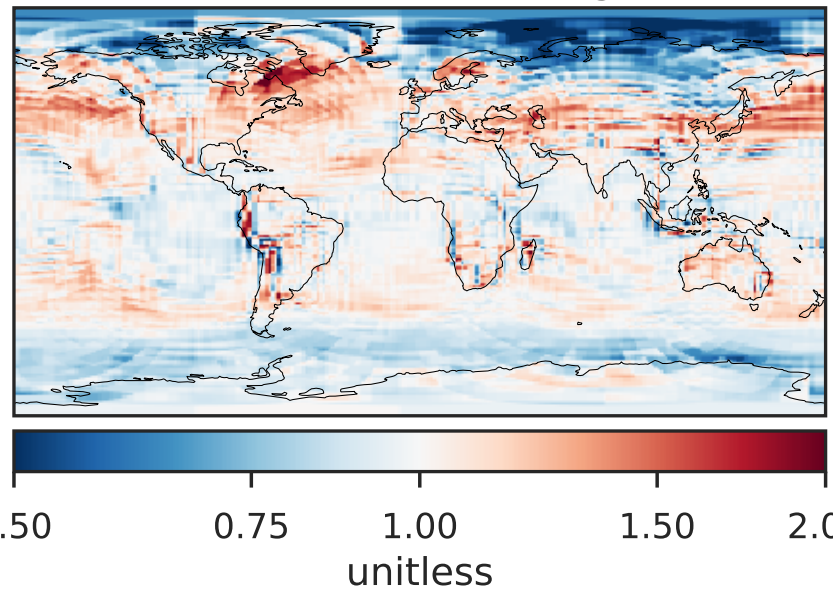
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

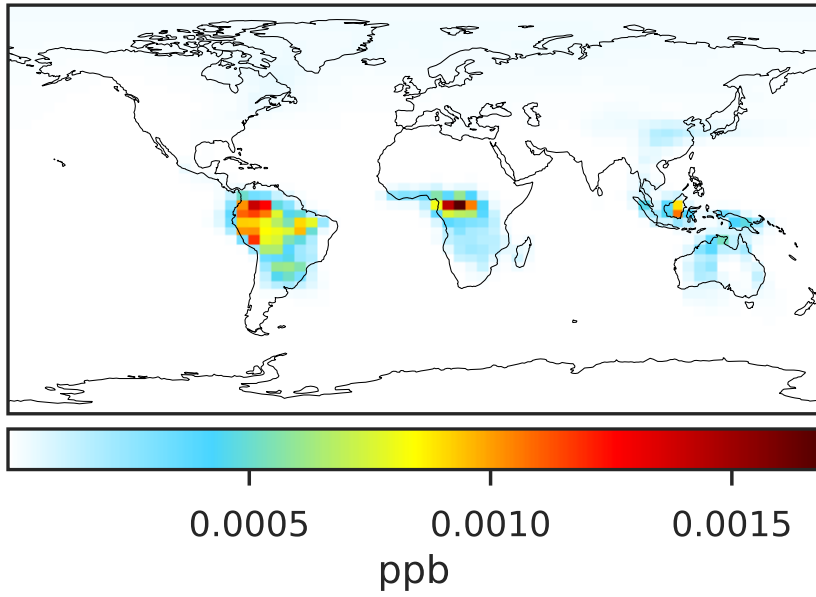


Ratio (1x1.25)  
Dev/Ref, Fixed Range

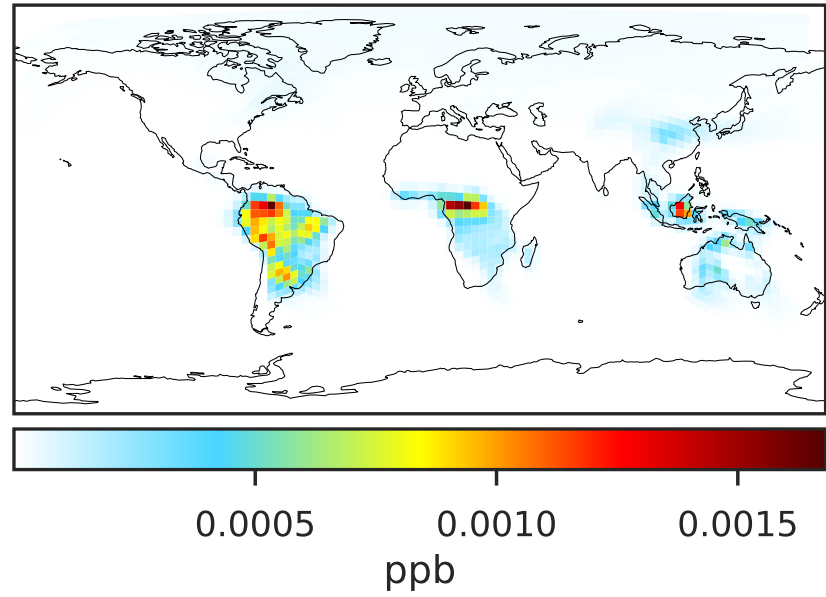


# SpeciesConcVV\_MPAN (Jan2019)

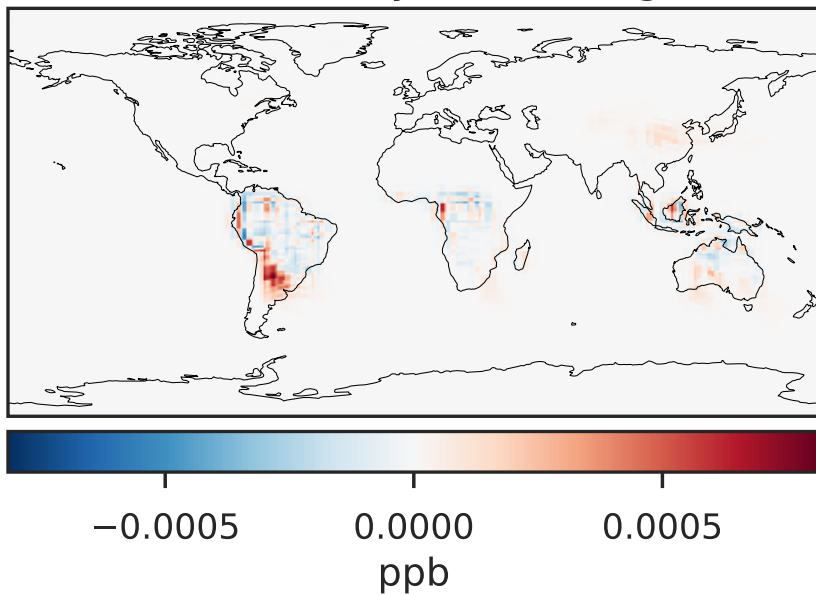
GCC\_14.2.0 (Ref)  
4.0x5.0



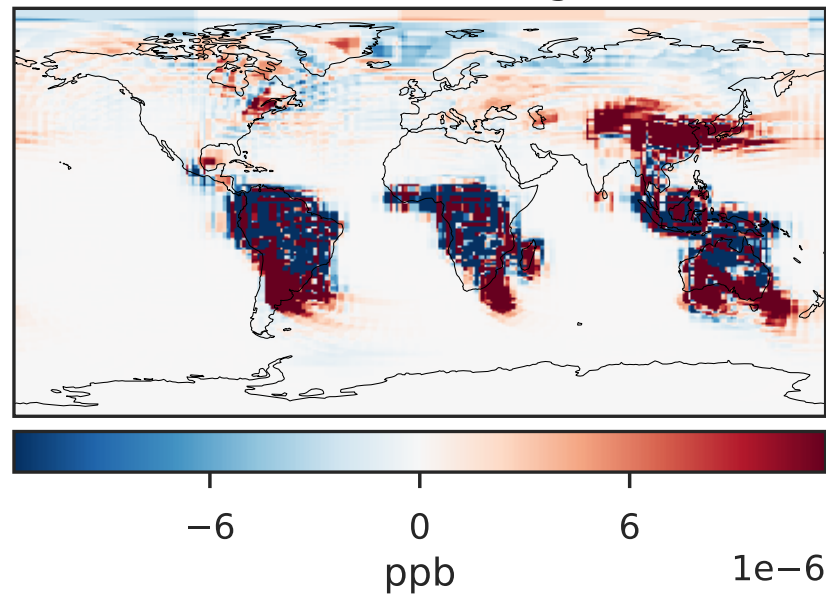
GCHP\_14.2.0 (Dev)  
c24



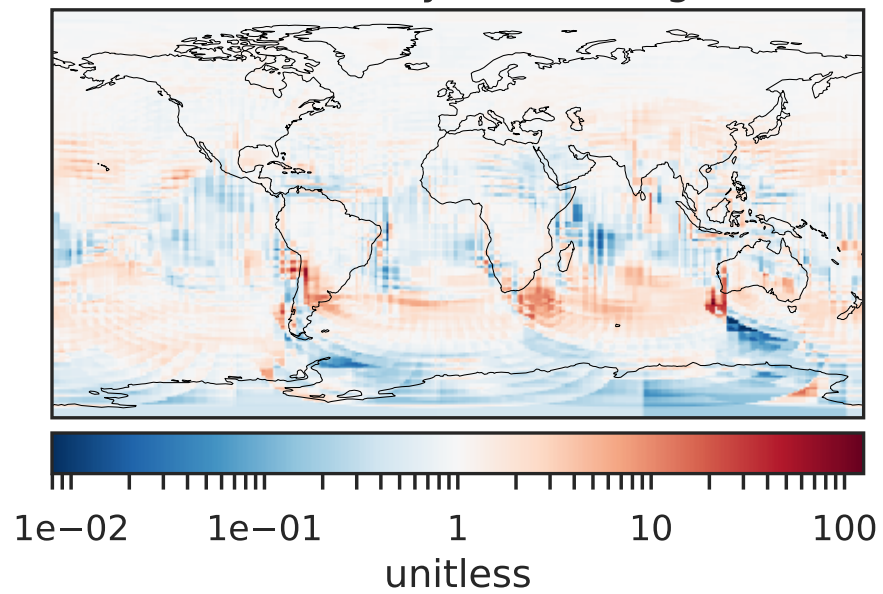
Difference (1x1.25)  
Dev - Ref, Dynamic Range



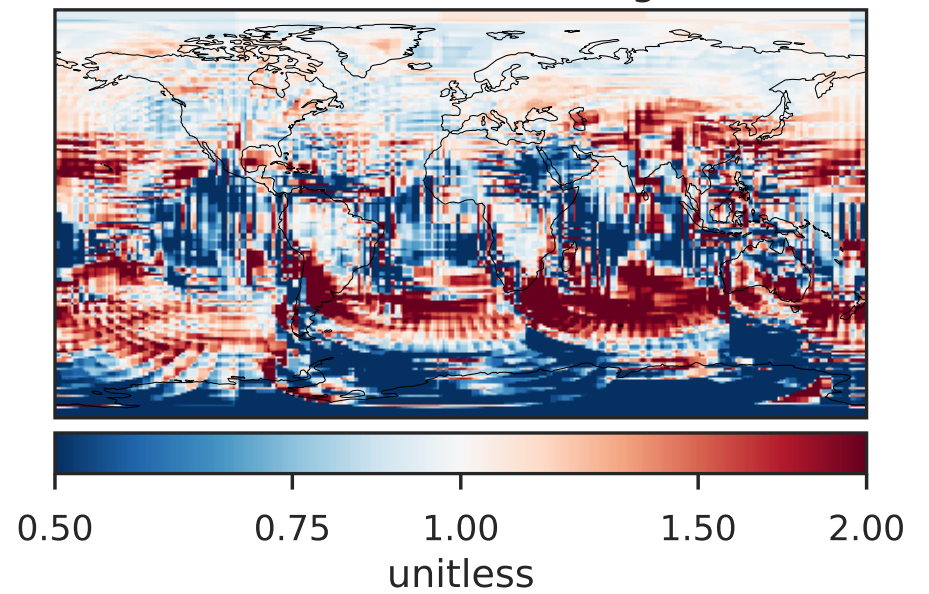
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

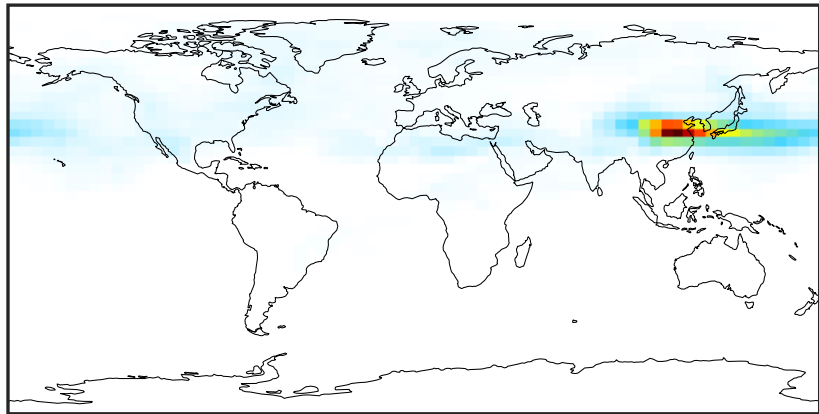


Ratio (1x1.25)  
Dev/Ref, Fixed Range



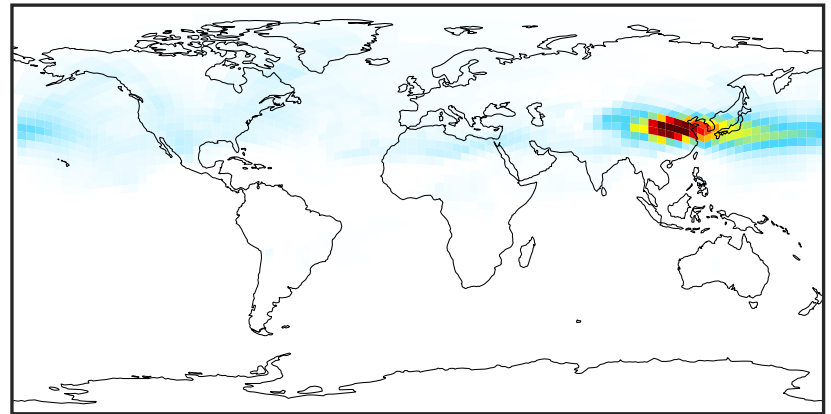
# SpeciesConcVV\_NIT (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



0.0000 0.1631 0.3262 0.4893 0.6524  
ppb

GCHP\_14.2.0 (Dev)  
c24



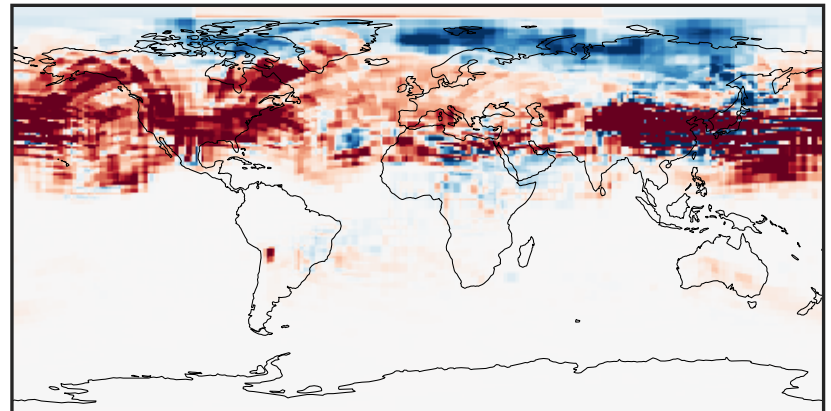
0.0000 0.1631 0.3262 0.4893 0.6524  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



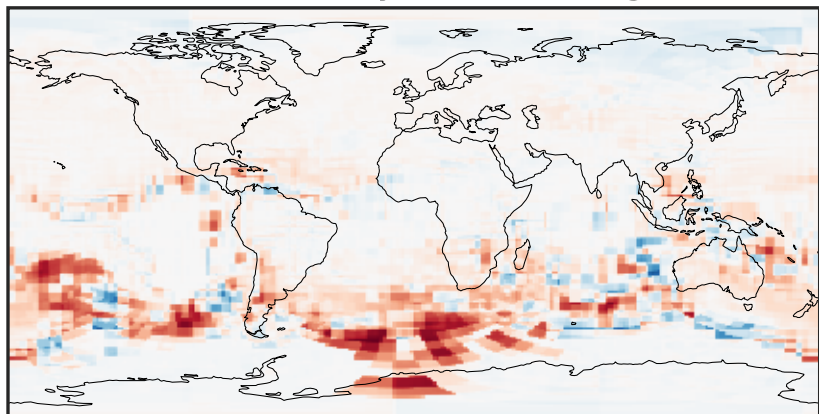
-0.308 -0.154 0.000 0.154 0.308  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



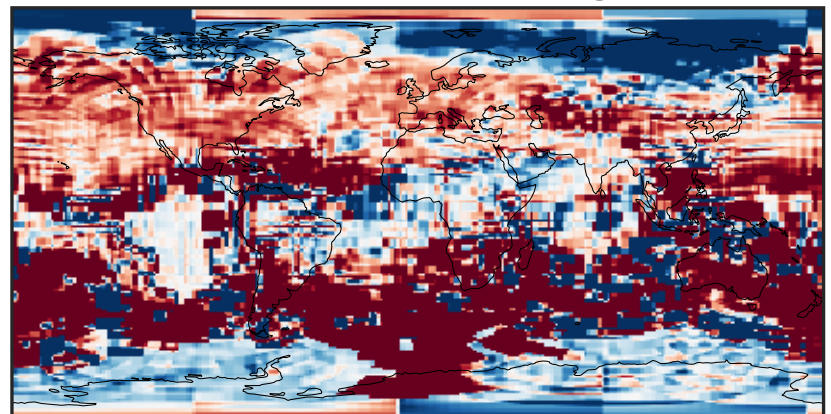
-0.006 0.000 0.006  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



1e-05 1e-03 1e-01 10 1000 1e+05  
unitless

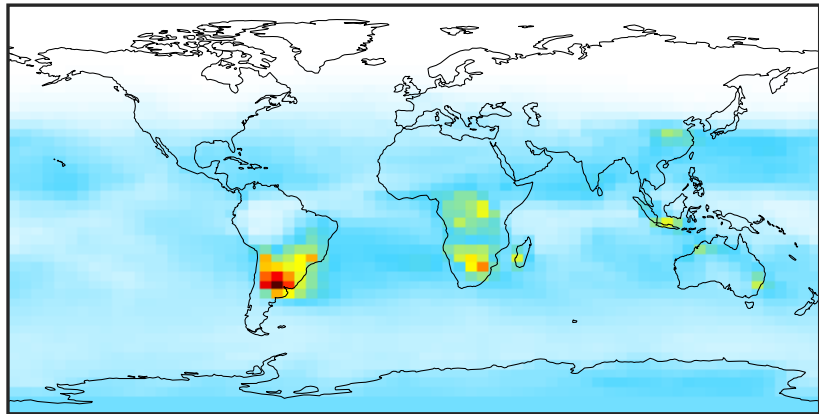
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

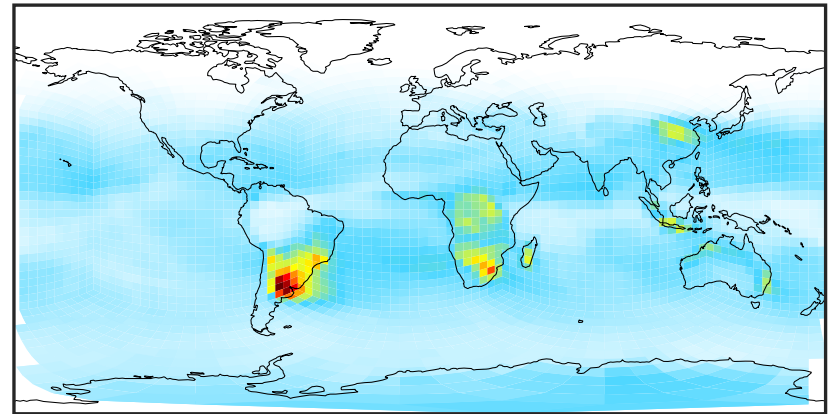
# SpeciesConcVV\_NO (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



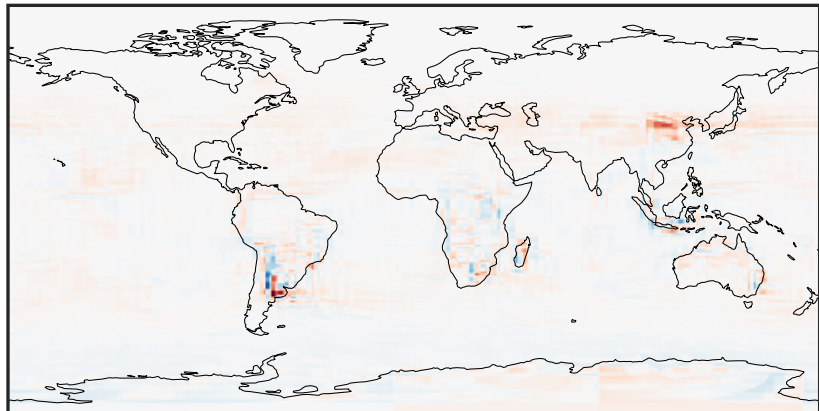
0.015 0.030 0.045  
ppb

GCHP\_14.2.0 (Dev)  
c24



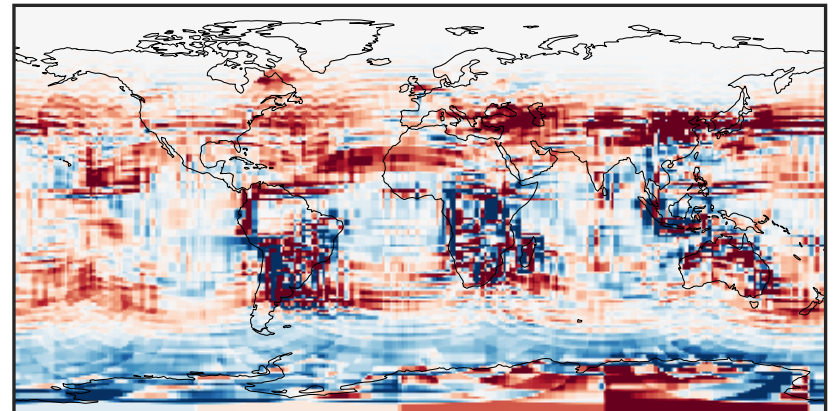
0.015 0.030 0.045  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



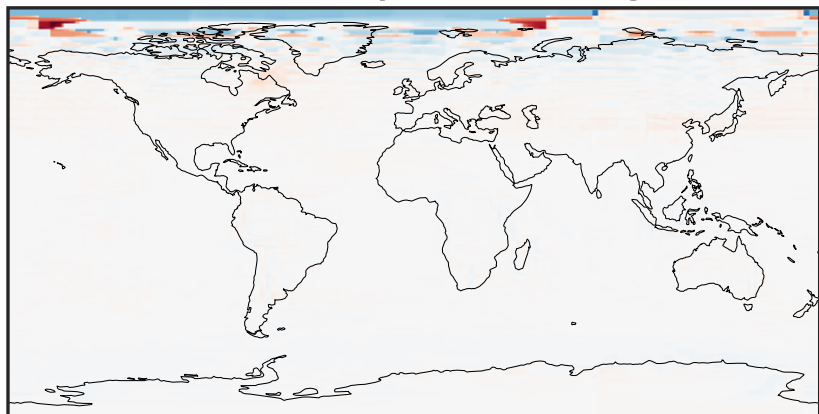
-0.01 0.00 0.01  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



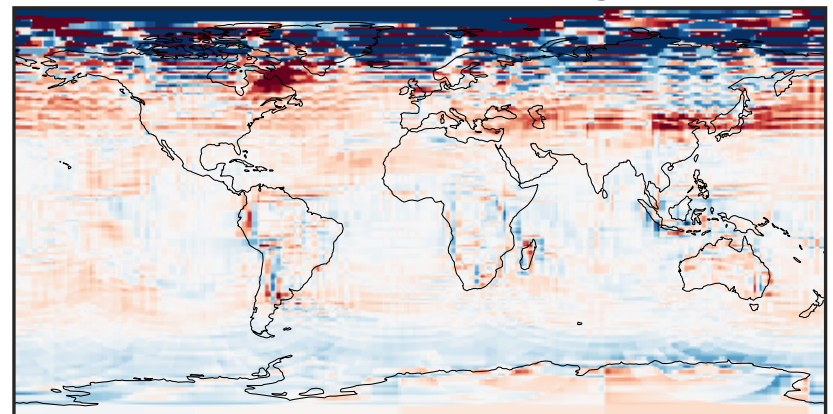
-0.0006 0.0000 0.0006  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



unitless

Ratio (1x1.25)  
Dev/Ref, Fixed Range

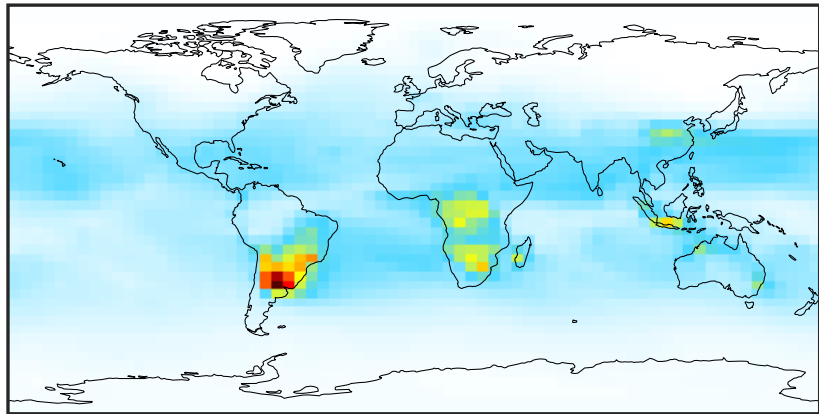


0.50 0.75 1.00 1.50 2.00  
unitless



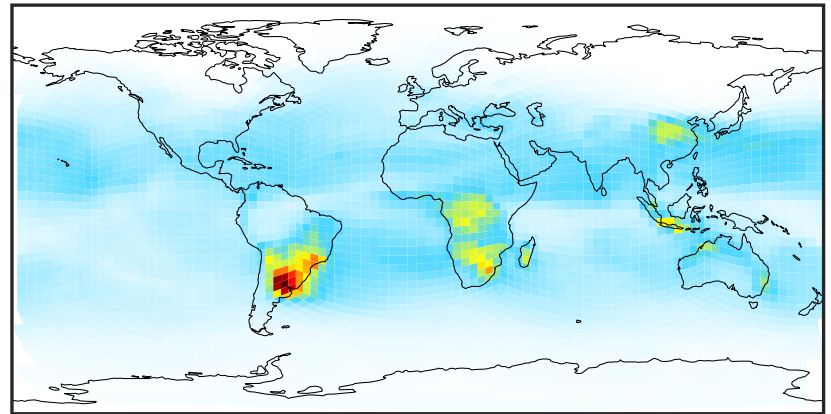
# SpeciesConcVV\_NO2 (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



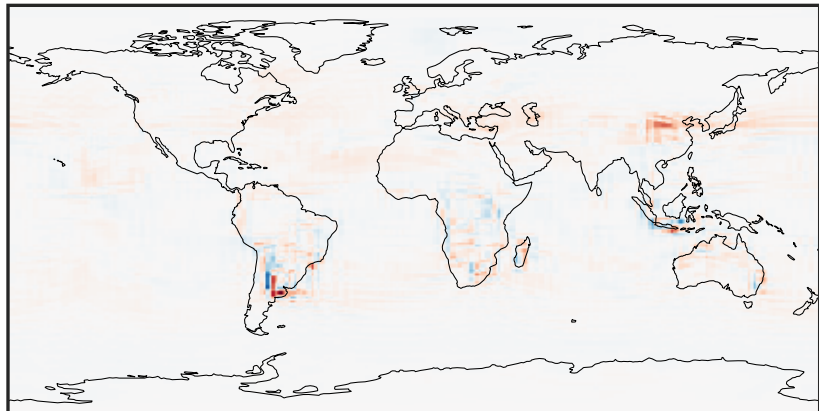
0.0002 0.0374 0.0748 0.1122 0.1498  
ppb

GCHP\_14.2.0 (Dev)  
c24



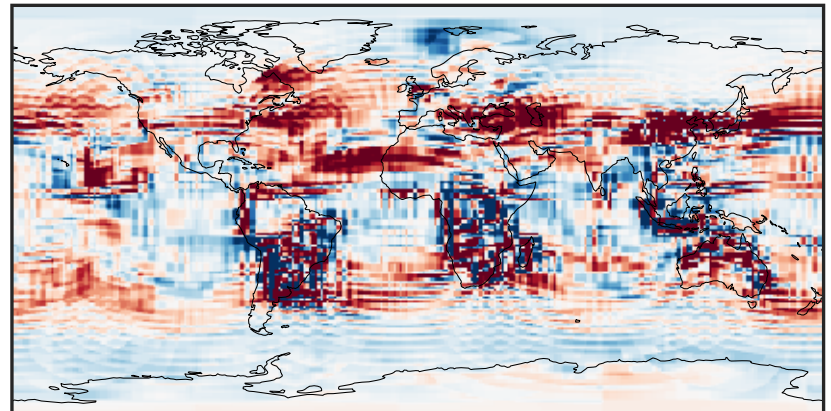
0.0002 0.0374 0.0748 0.1122 0.1498  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



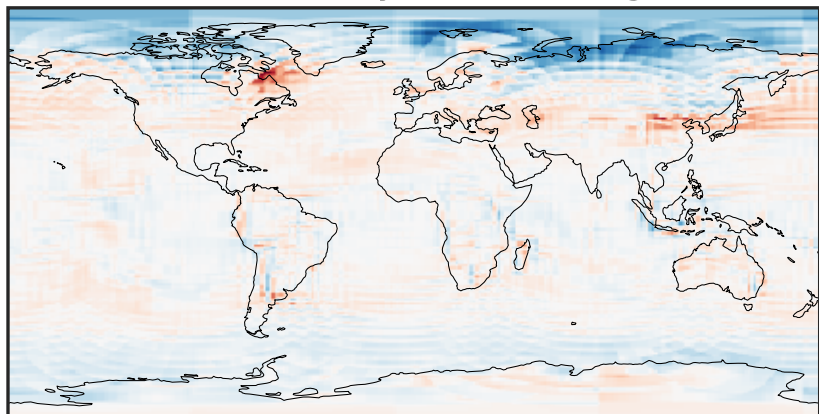
-0.0557 -0.0278 0.0000 0.0278 0.0557  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



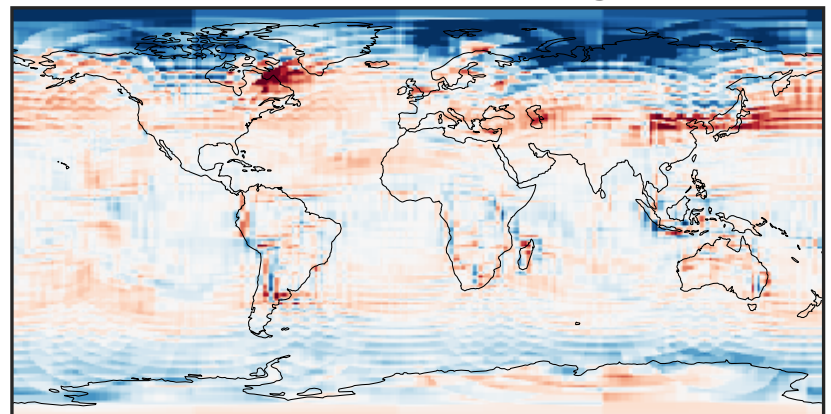
-0.002 0.000 0.002  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.222 0.611 1.000 2.756 4.511  
unitless

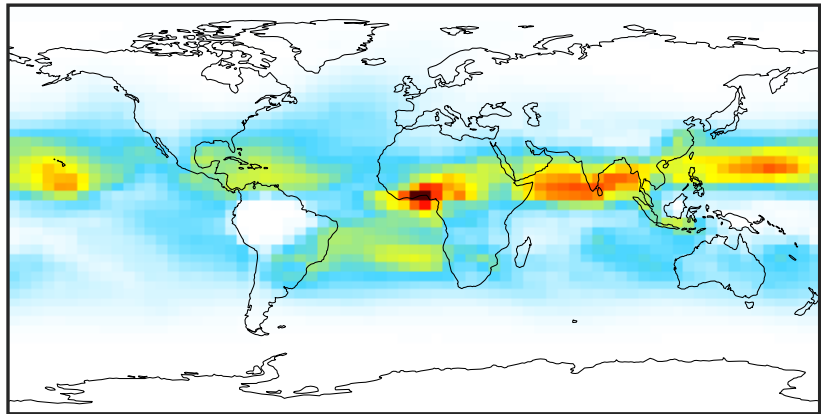
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

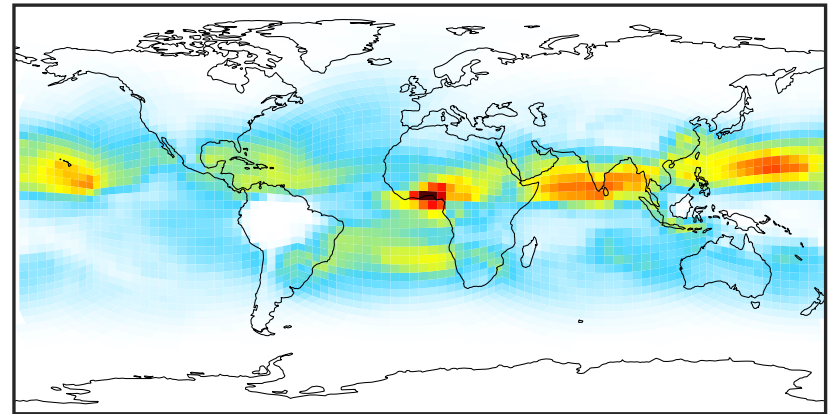
# SpeciesConcVV\_NO3 (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



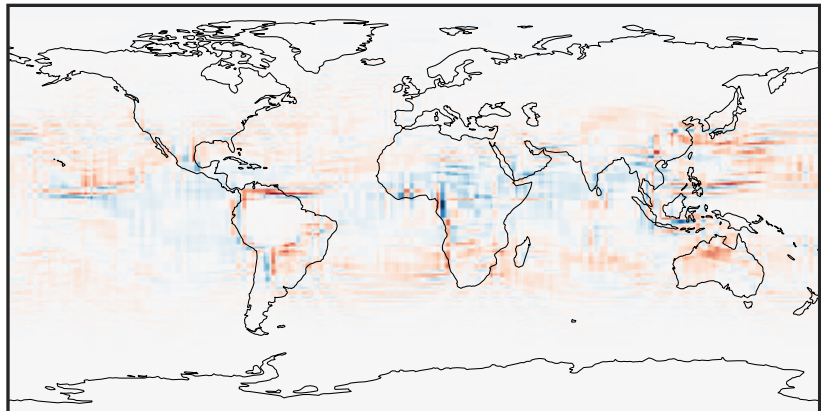
0.0015 0.0030 0.0045  
ppb

GCHP\_14.2.0 (Dev)  
c24



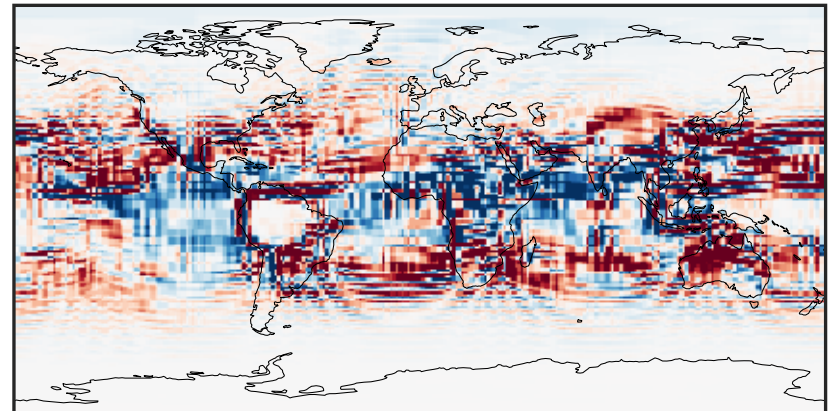
0.0015 0.0030 0.0045  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



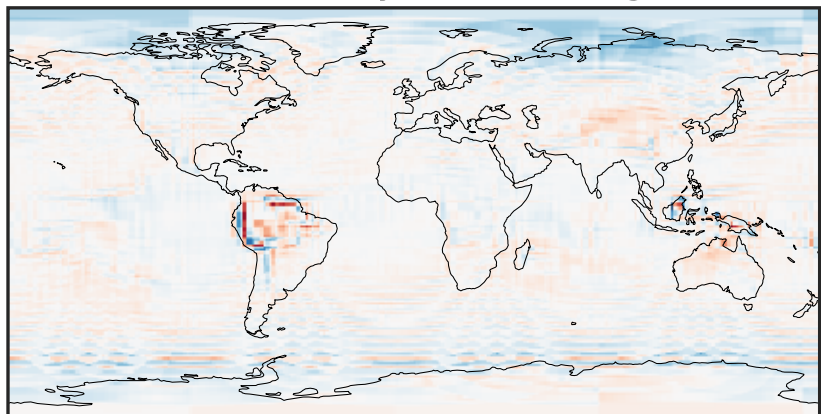
-0.0006 0.0000 0.0006  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



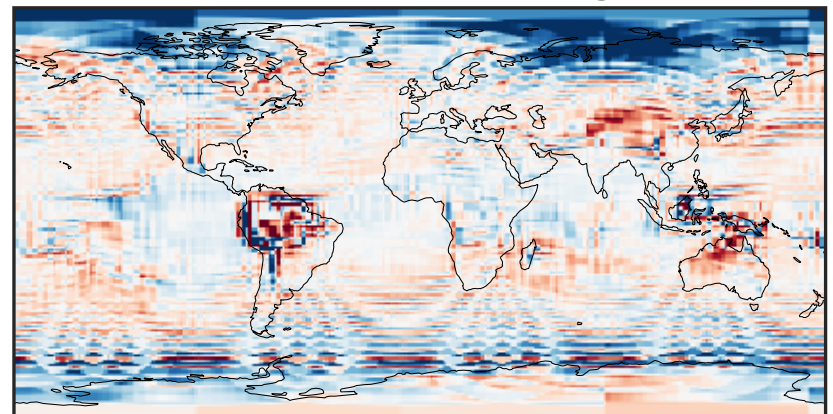
-8 0 8  
ppb 1e-5

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



1e-01 1 10  
unitless

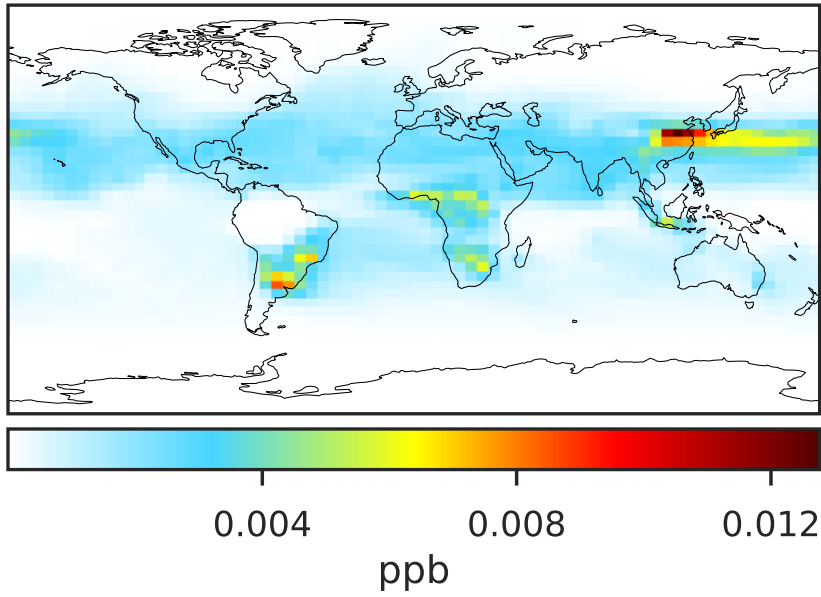
Ratio (1x1.25)  
Dev/Ref, Fixed Range



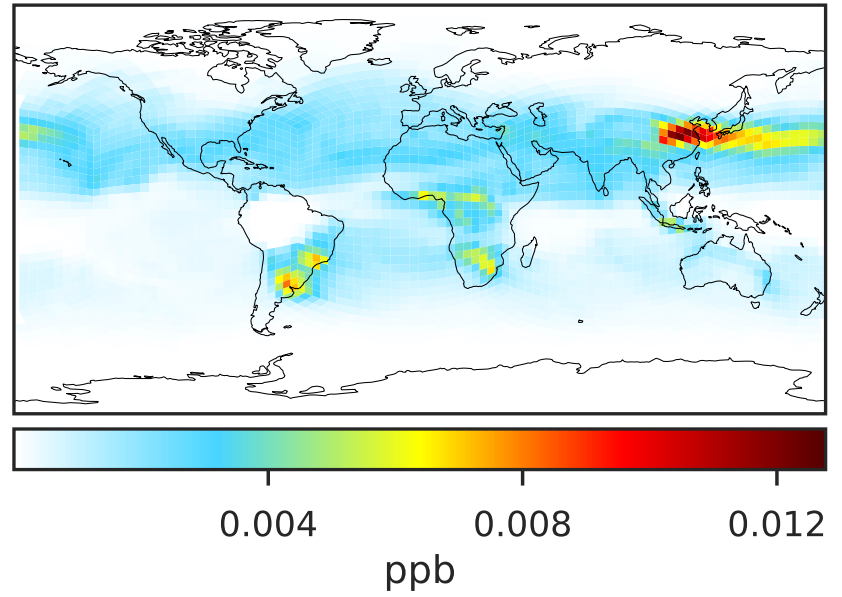
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_N2O5 (Jan2019)

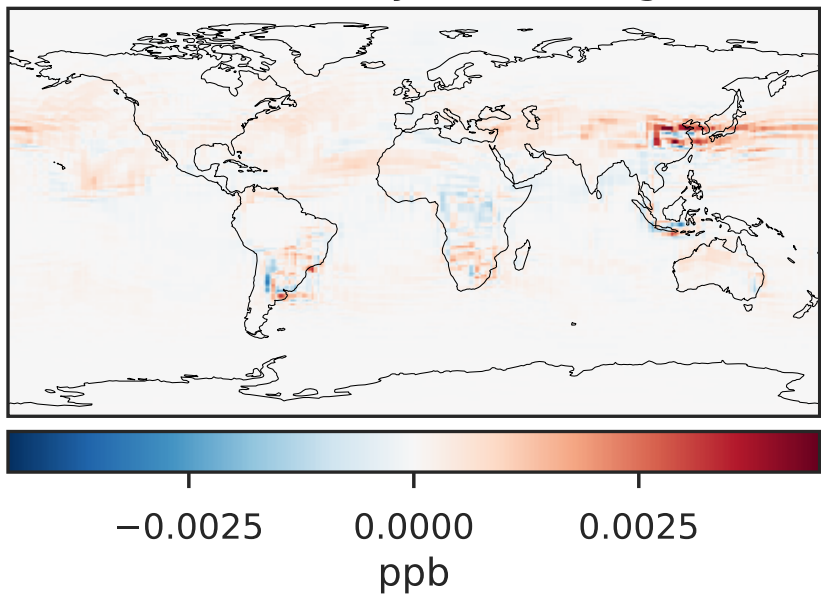
GCC\_14.2.0 (Ref)  
4.0x5.0



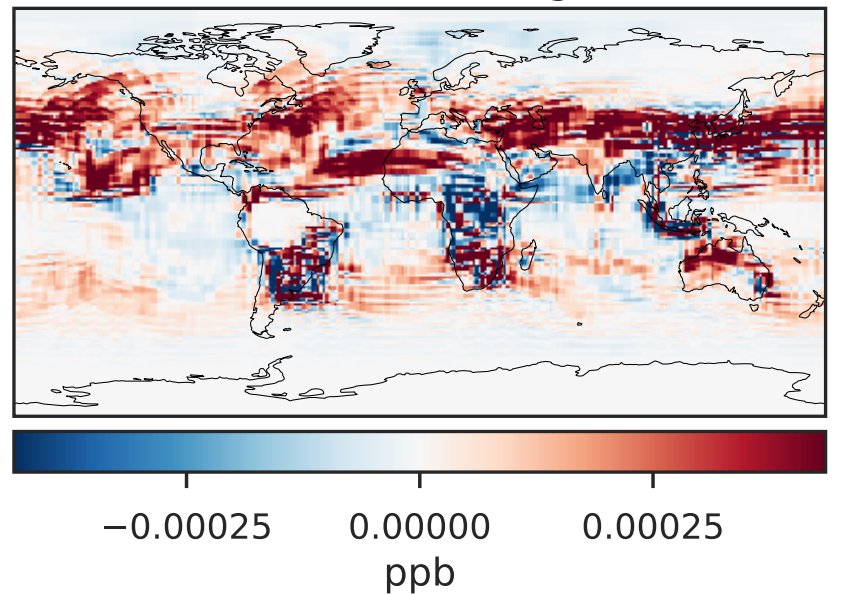
GCHP\_14.2.0 (Dev)  
c24



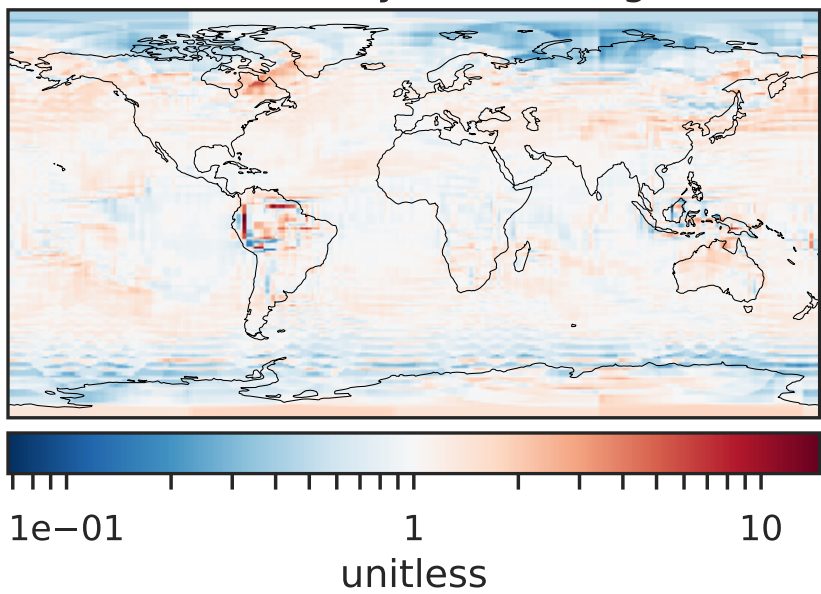
Difference (1x1.25)  
Dev - Ref, Dynamic Range



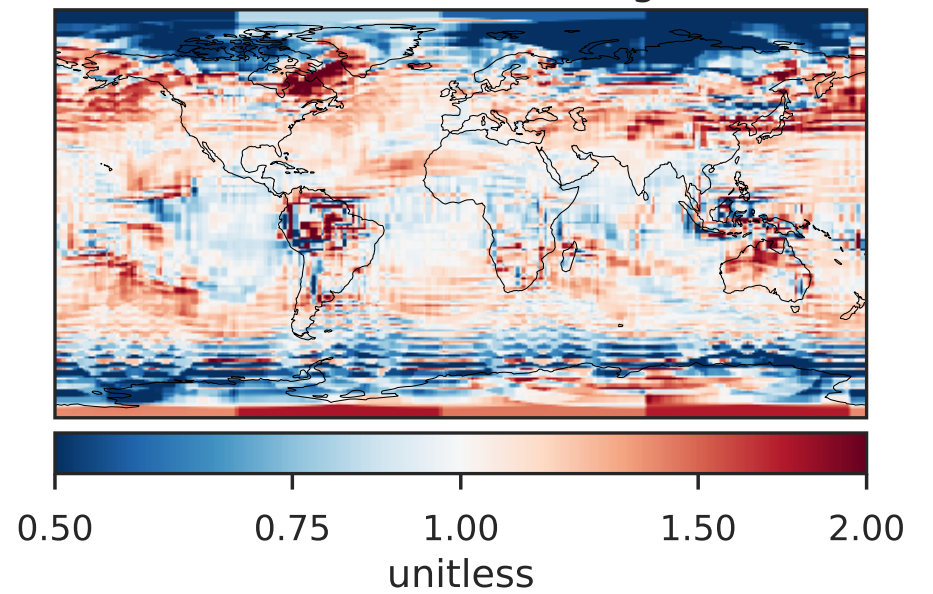
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

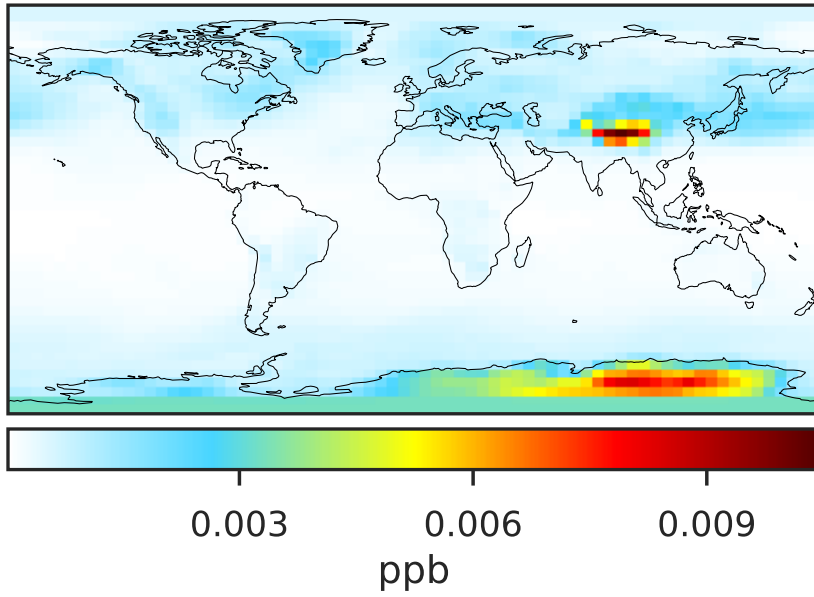


Ratio (1x1.25)  
Dev/Ref, Fixed Range

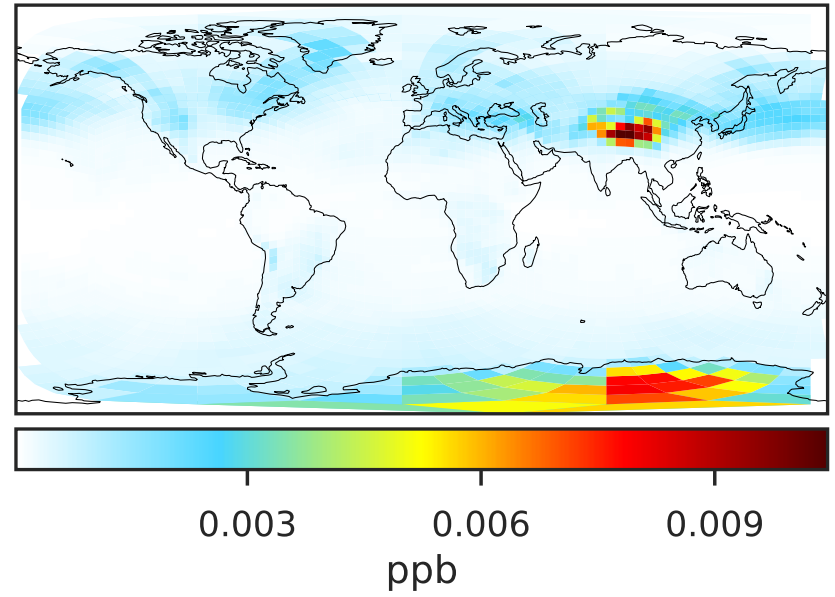


# SpeciesConcVV\_MPN (Jan2019)

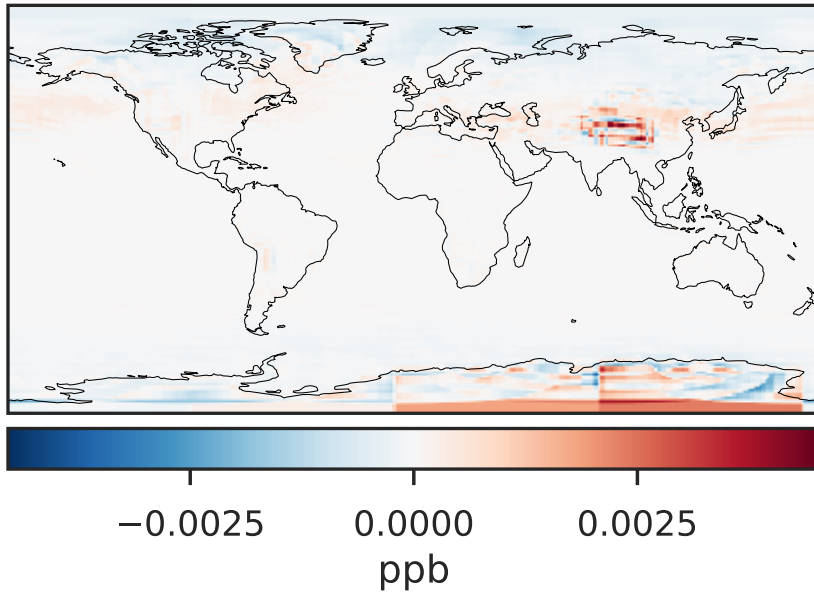
GCC\_14.2.0 (Ref)  
4.0x5.0



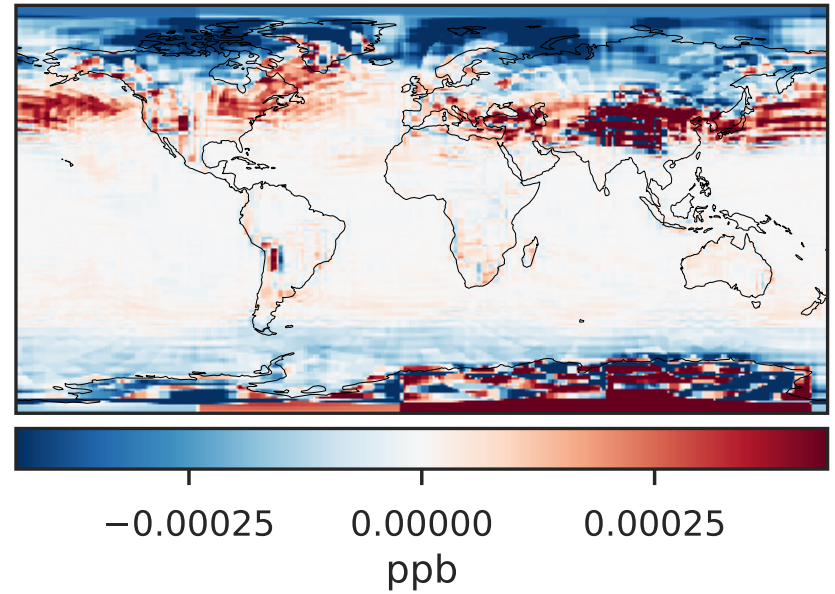
GCHP\_14.2.0 (Dev)  
c24



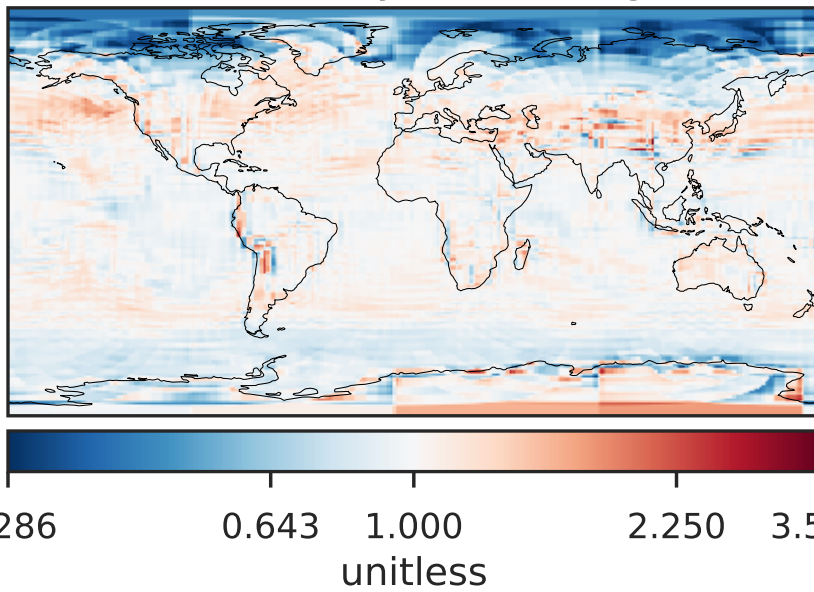
Difference (1x1.25)  
Dev - Ref, Dynamic Range



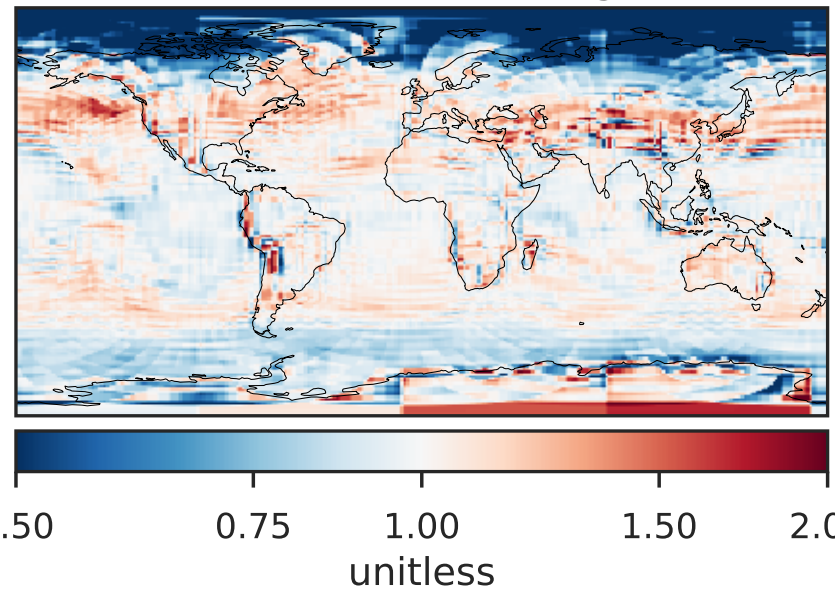
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

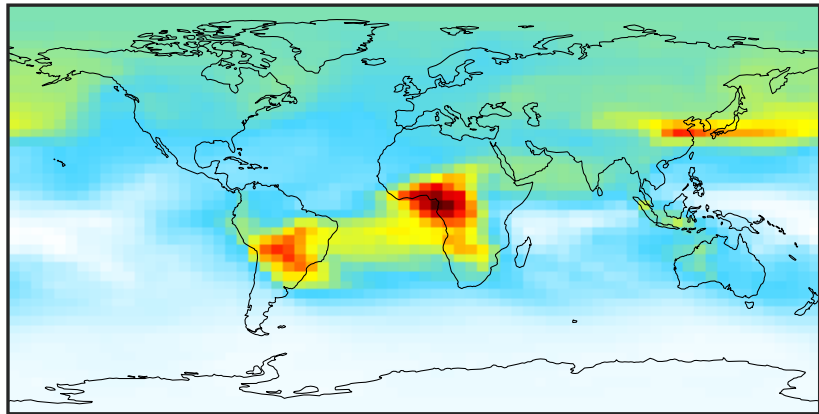


Ratio (1x1.25)  
Dev/Ref, Fixed Range



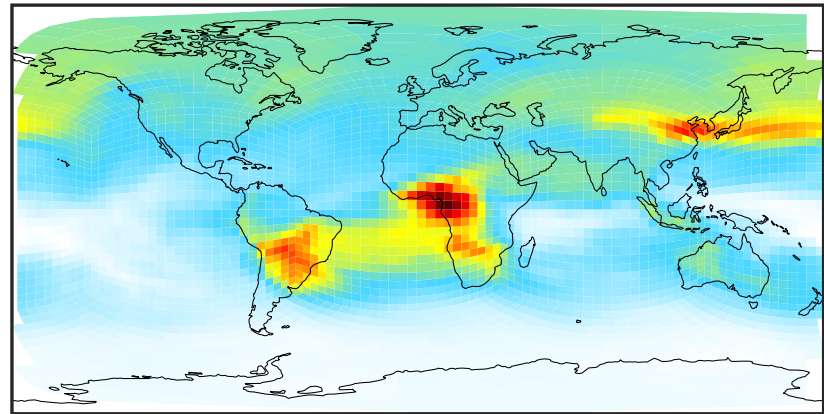
# SpeciesConcVV\_PAN (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



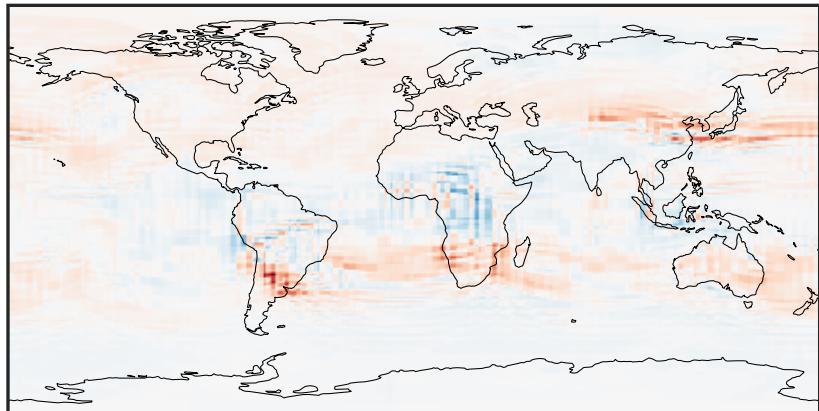
0.0095 0.0937 0.1874 0.2811 0.3843  
ppb

GCHP\_14.2.0 (Dev)  
c24



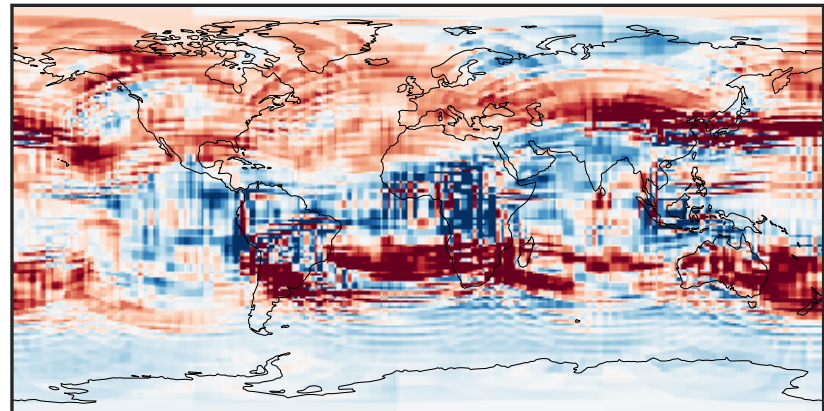
0.0095 0.0937 0.1874 0.2811 0.3843  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



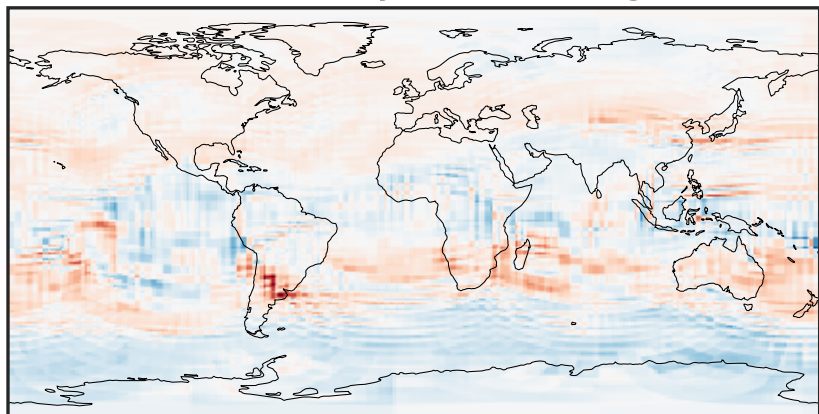
-0.10 -0.05 0.00 0.05 0.10  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



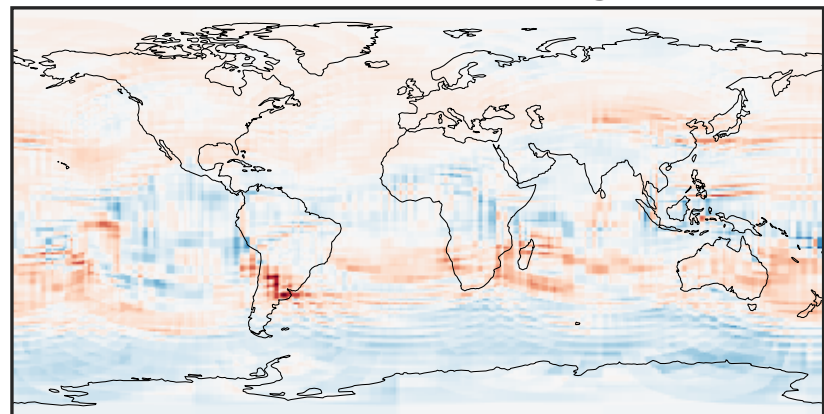
-0.008 0.000 0.008  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.491 0.745 1.000 1.519 2.037  
unitless

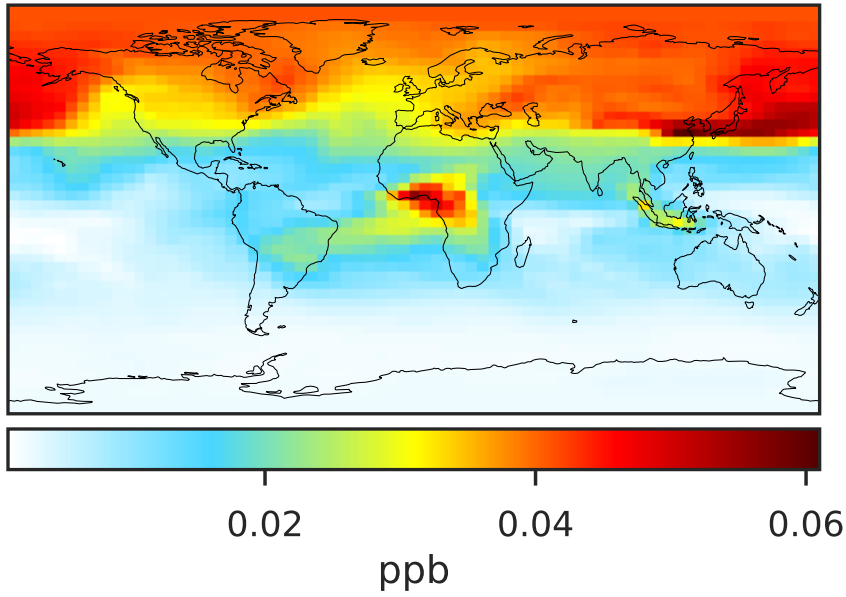
Ratio (1x1.25)  
Dev/Ref, Fixed Range



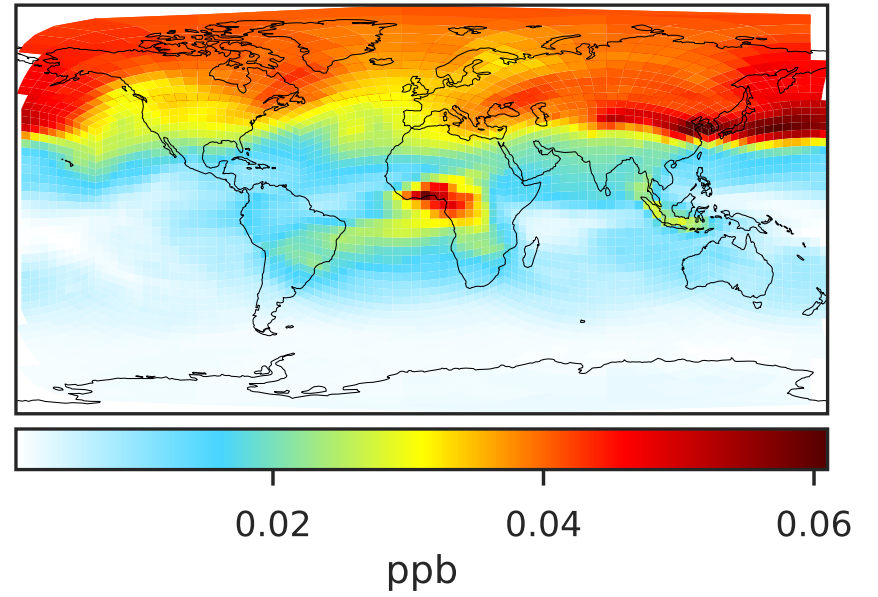
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_PPN (Jan2019)

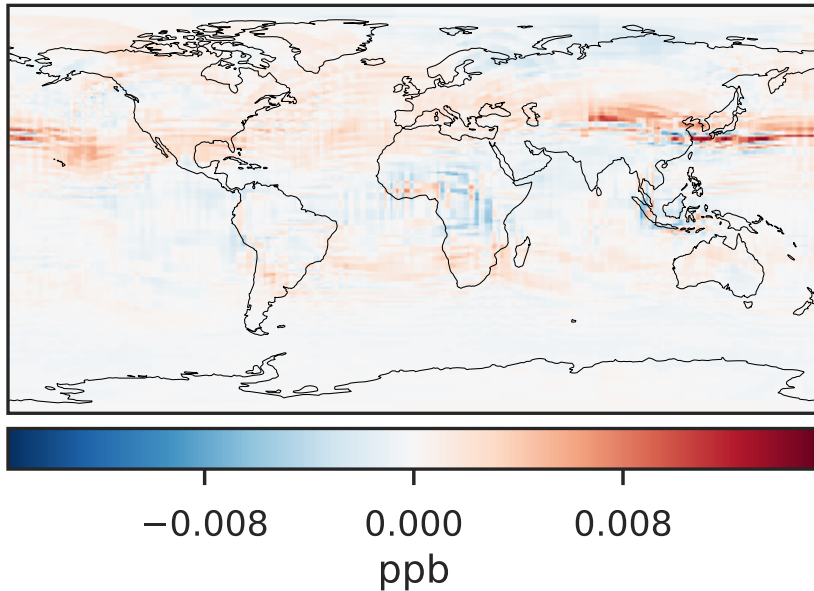
GCC\_14.2.0 (Ref)  
4.0x5.0



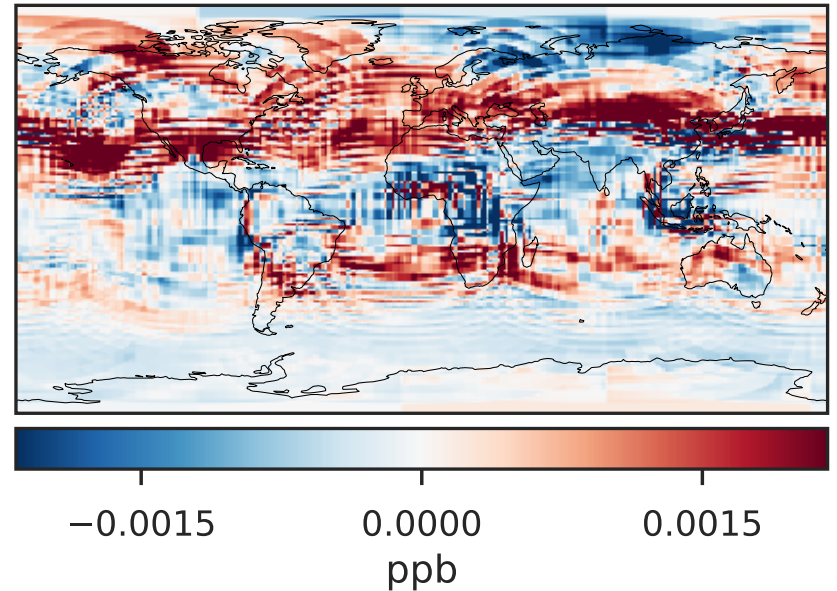
GCHP\_14.2.0 (Dev)  
c24



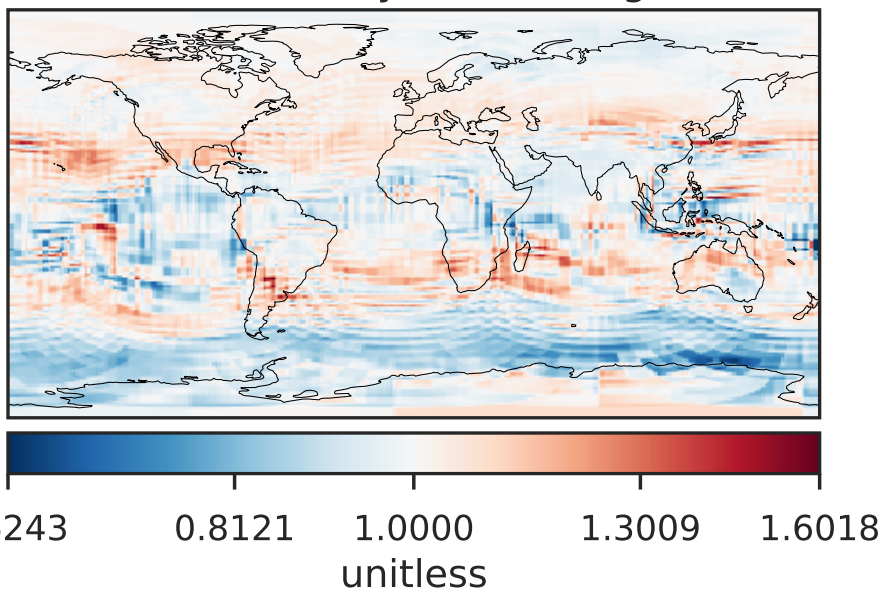
Difference (1x1.25)  
Dev - Ref, Dynamic Range



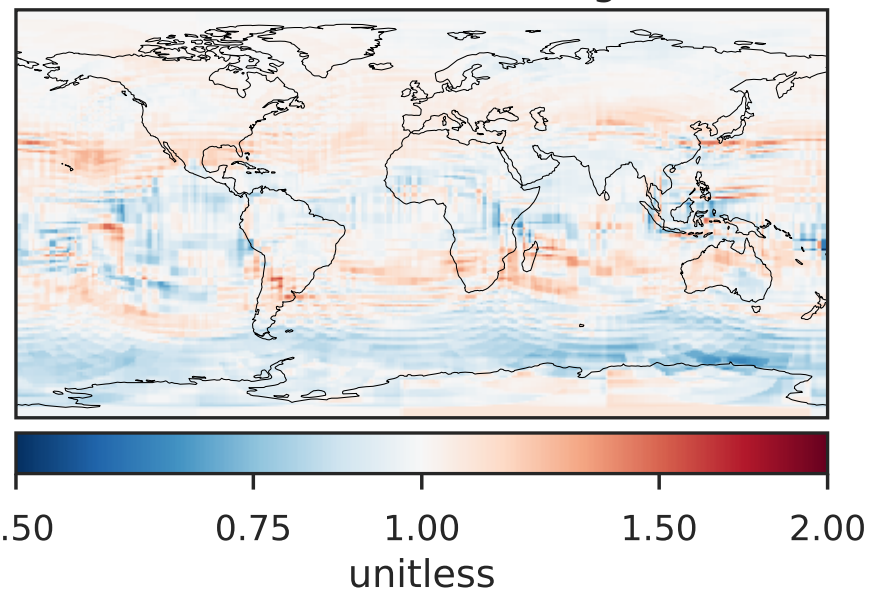
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

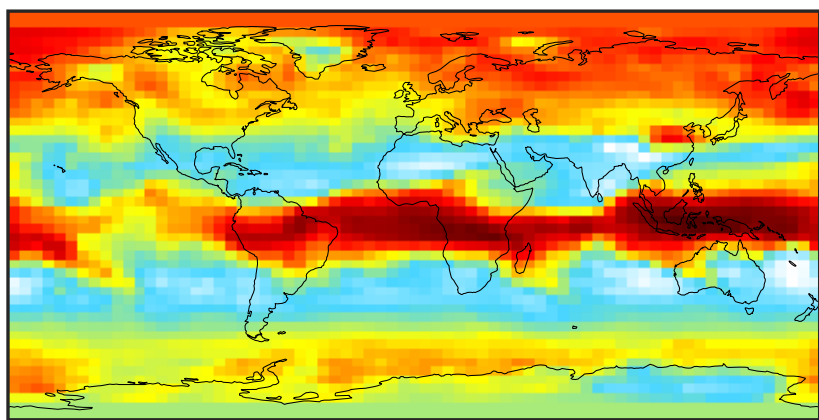


Ratio (1x1.25)  
Dev/Ref, Fixed Range



# SpeciesConcVV\_N2O (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0

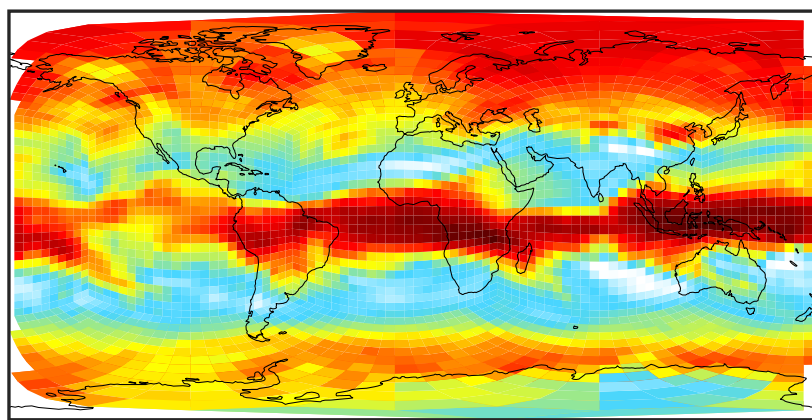


0.0

329.0

ppb

GCHP\_14.2.0 (Dev)  
c24

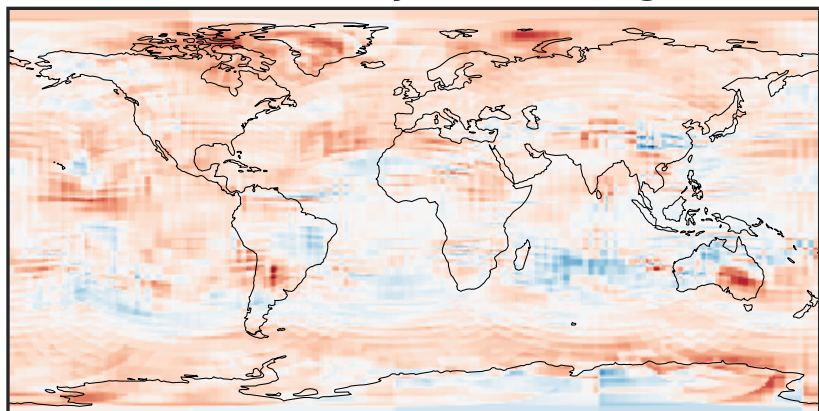


0.0

329.0

ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



-0.2787

-0.1393

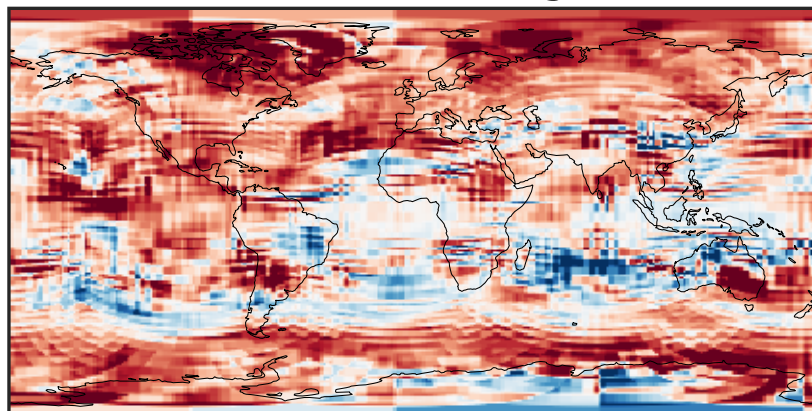
0.0000

0.1393

0.2787

ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



-0.0926

-0.0463

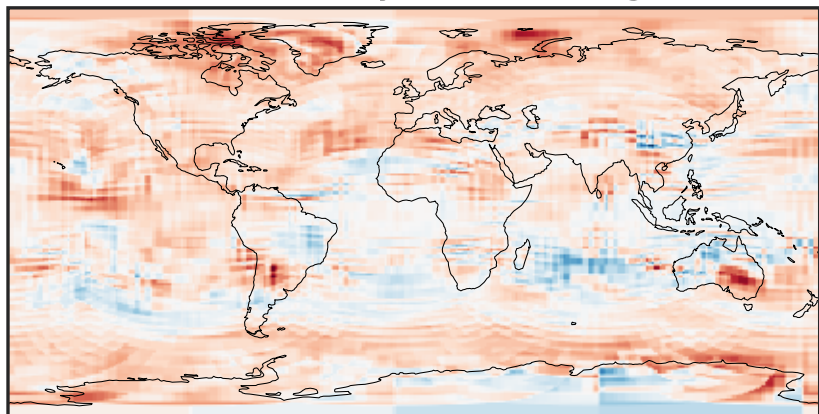
0.0000

0.0463

0.0926

ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.999253

1.000000

1.000747

unitless

Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50

0.75

1.00

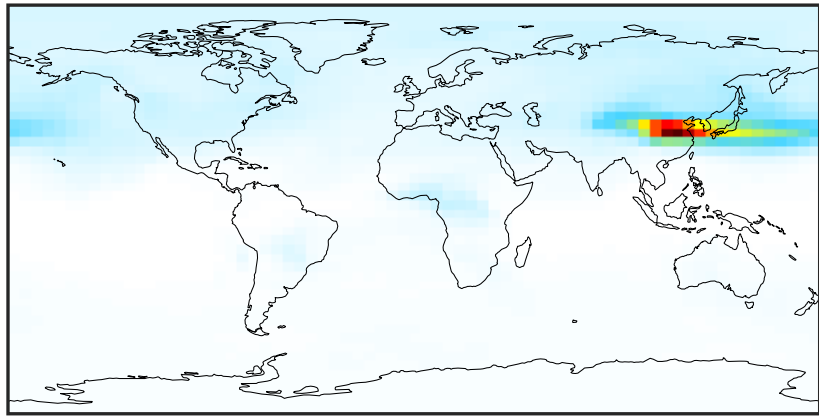
1.50

2.00

unitless

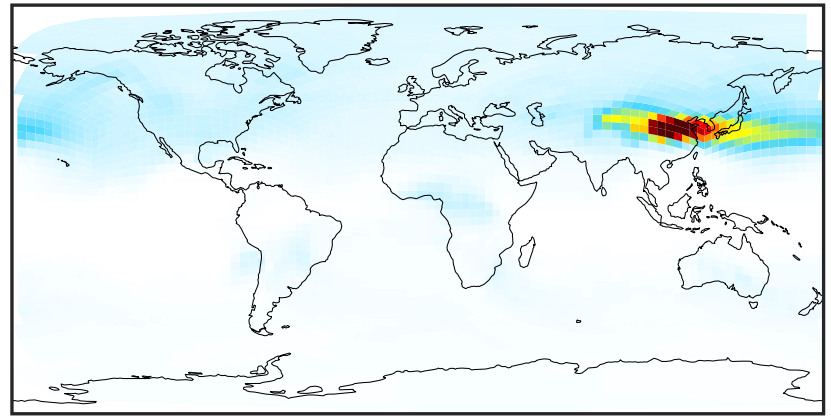
# SpeciesConcVV\_NHx (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



0.000 0.354 0.707 1.061 1.415  
ppb

GCHP\_14.2.0 (Dev)  
c24



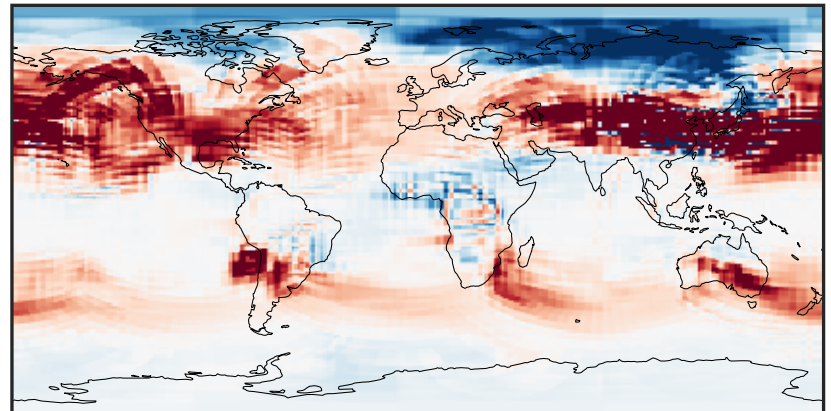
0.000 0.354 0.707 1.061 1.415  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



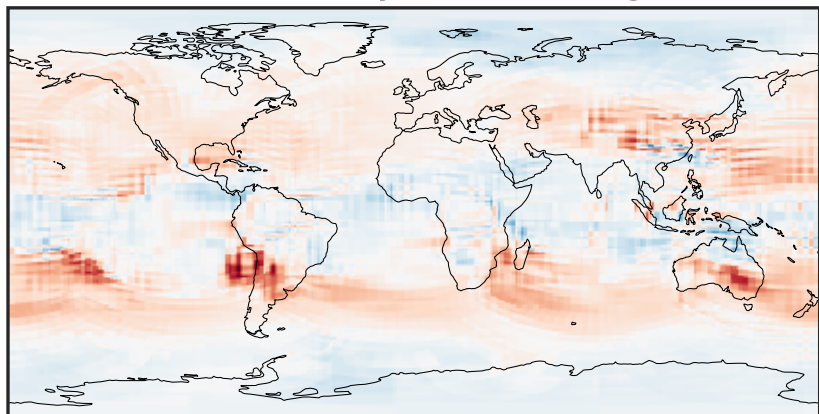
-0.745 -0.372 0.000 0.372 0.745  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



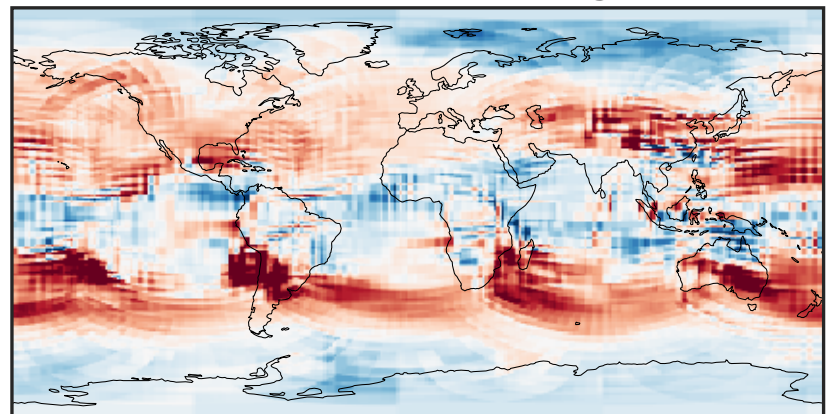
-0.015 0.000 0.015  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.168 0.584 1.000 3.480 5.960  
unitless

Ratio (1x1.25)  
Dev/Ref, Fixed Range

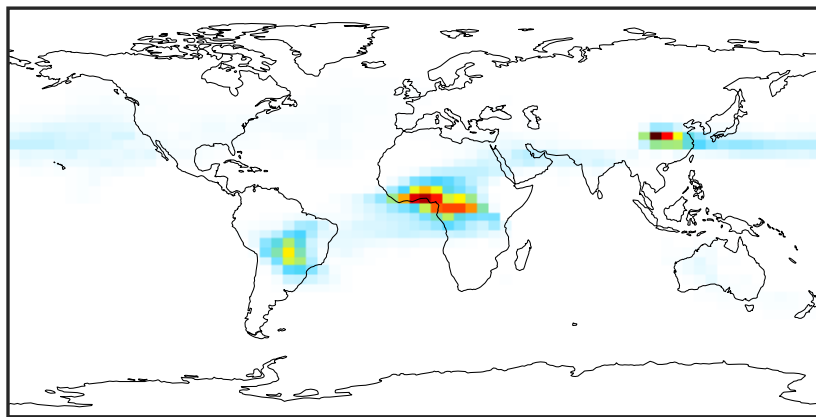


0.50 0.75 1.00 1.50 2.00  
unitless



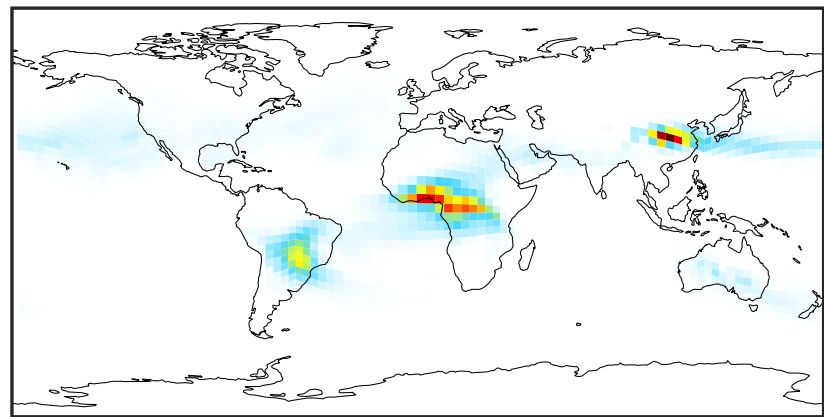
# SpeciesConcVV\_NH3 (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



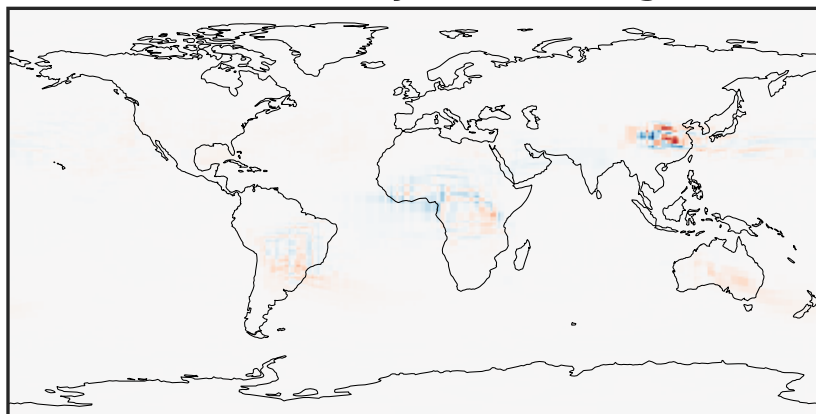
0.025 0.050 0.075  
ppb

GCHP\_14.2.0 (Dev)  
c24



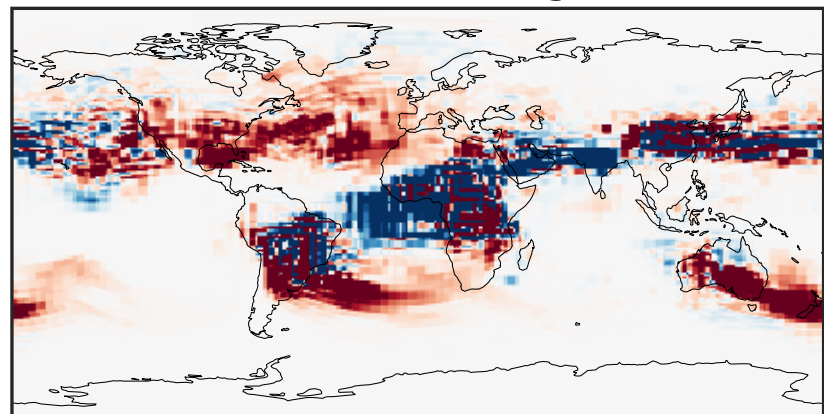
0.025 0.050 0.075  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



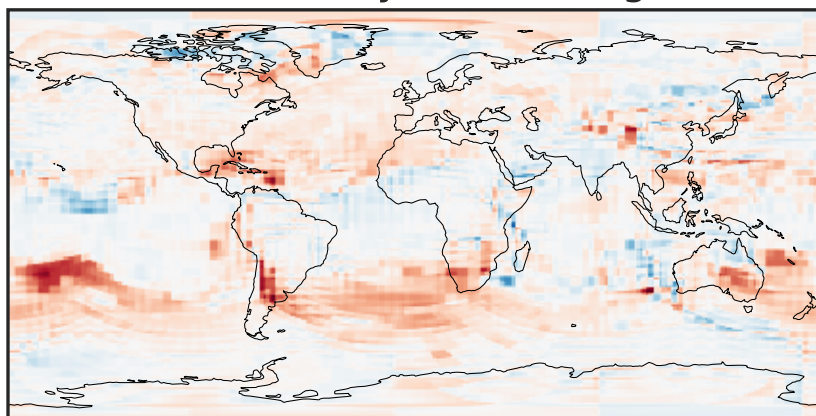
-0.0511 -0.0256 0.0000 0.0256 0.0511  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



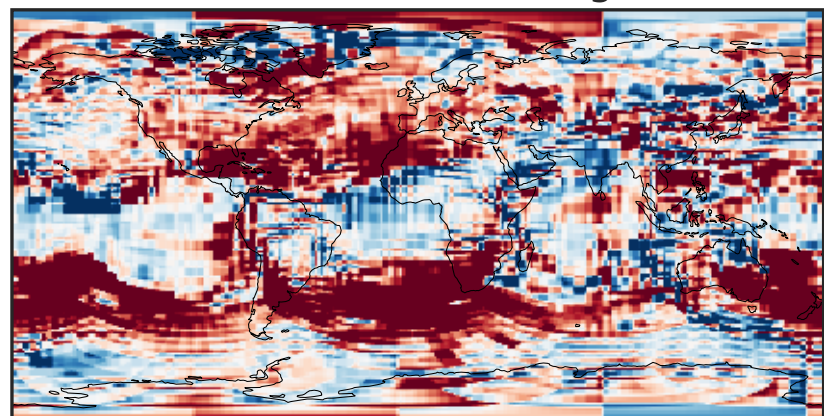
-0.0005 0.0000 0.0005  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



1e-02 1e-01 1 10 100  
unitless

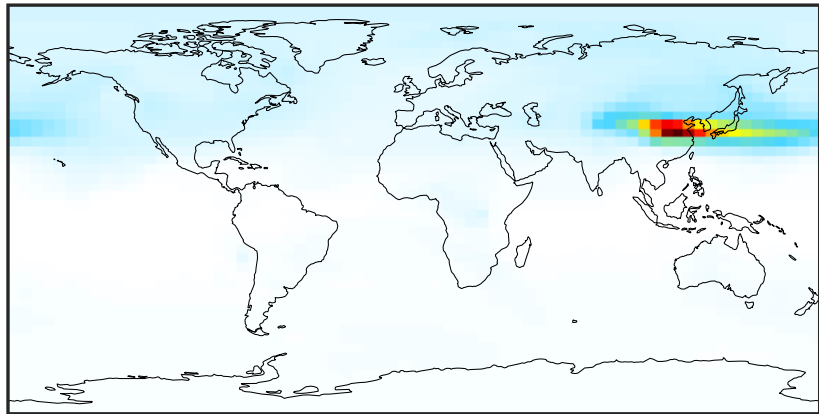
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

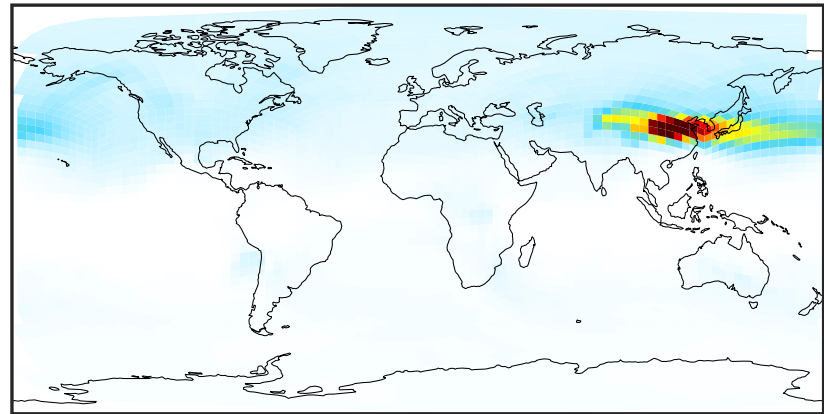
# SpeciesConcVV\_NH4 (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



0.000 0.342 0.684 1.025 1.367  
ppb

GCHP\_14.2.0 (Dev)  
c24



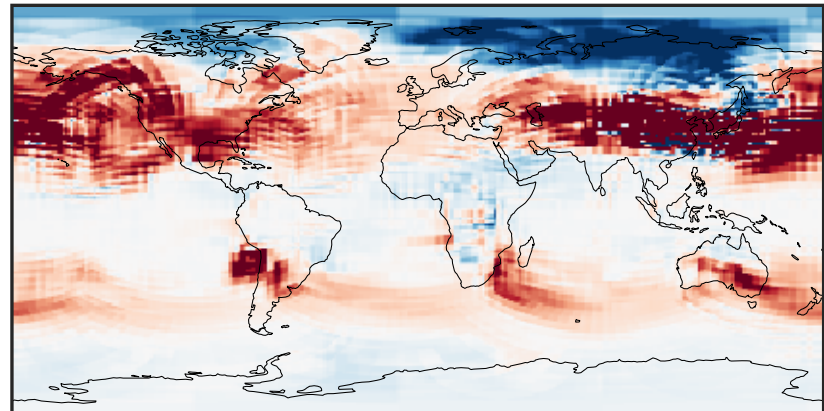
0.000 0.342 0.684 1.025 1.367  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



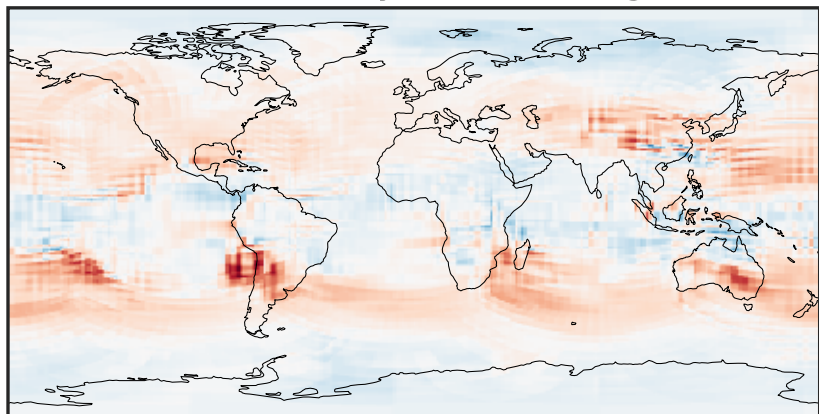
-0.715 -0.357 0.000 0.357 0.715  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



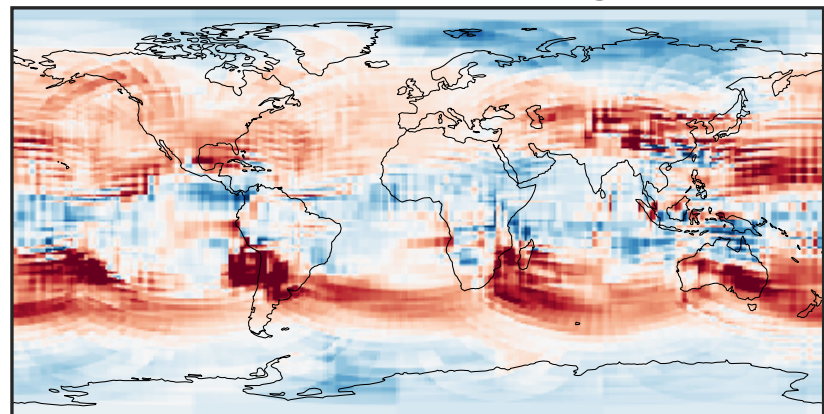
-0.015 0.000 0.015  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.168 0.584 1.000 3.483 5.965  
unitless

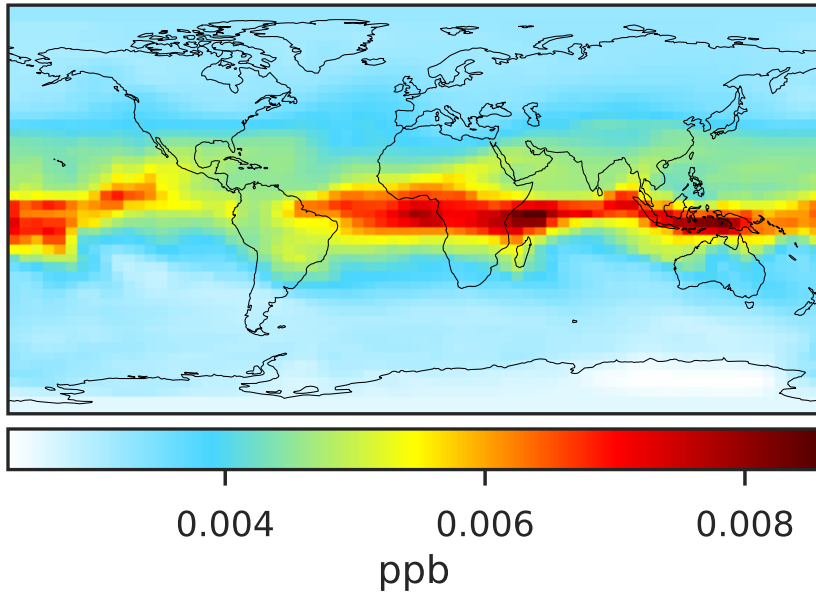
Ratio (1x1.25)  
Dev/Ref, Fixed Range



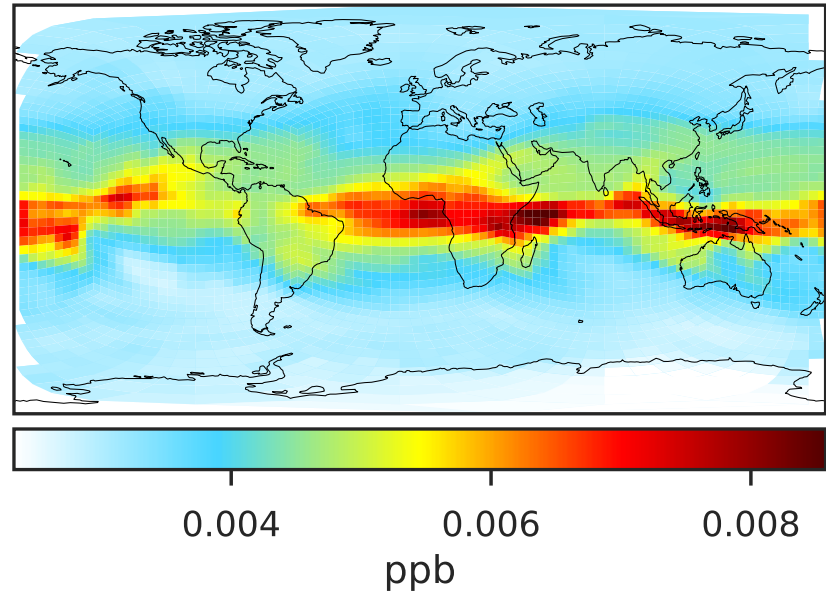
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_MENO3 (Jan2019)

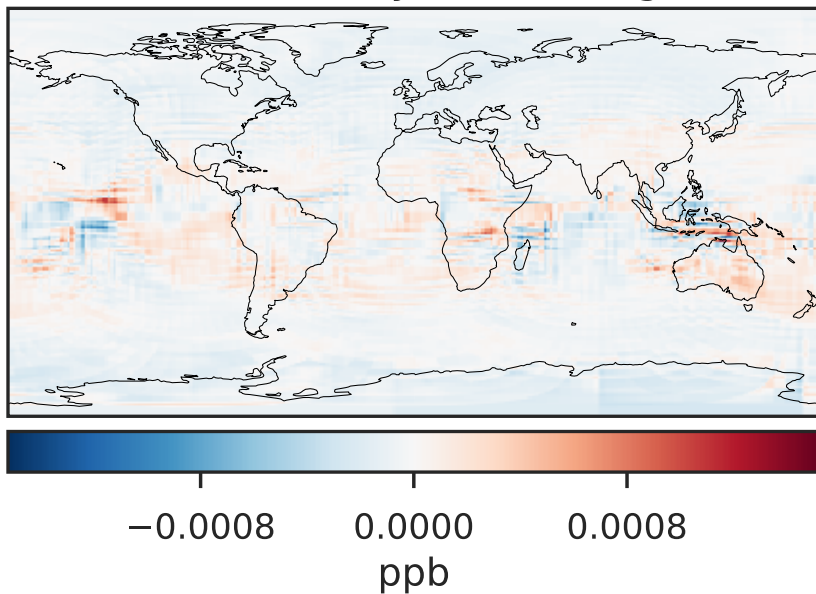
GCC\_14.2.0 (Ref)  
4.0x5.0



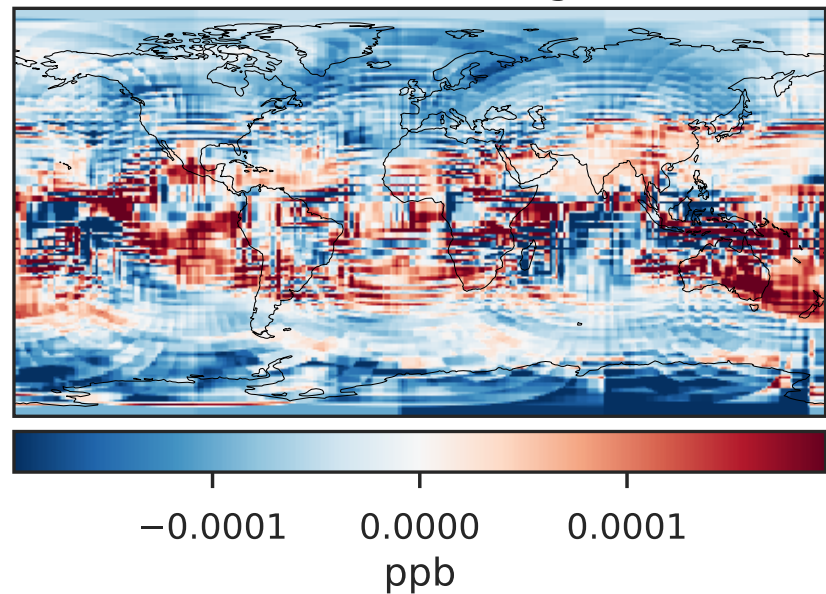
GCHP\_14.2.0 (Dev)  
c24



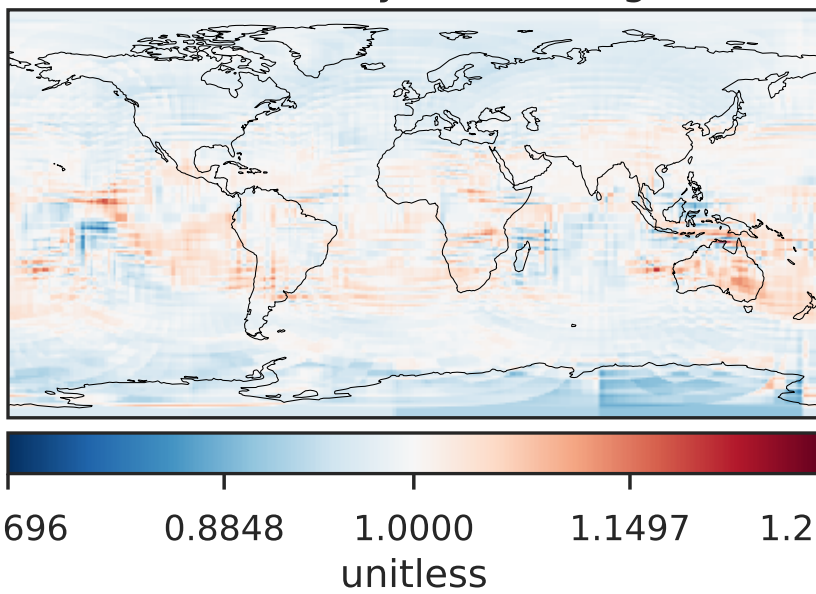
Difference (1x1.25)  
Dev - Ref, Dynamic Range



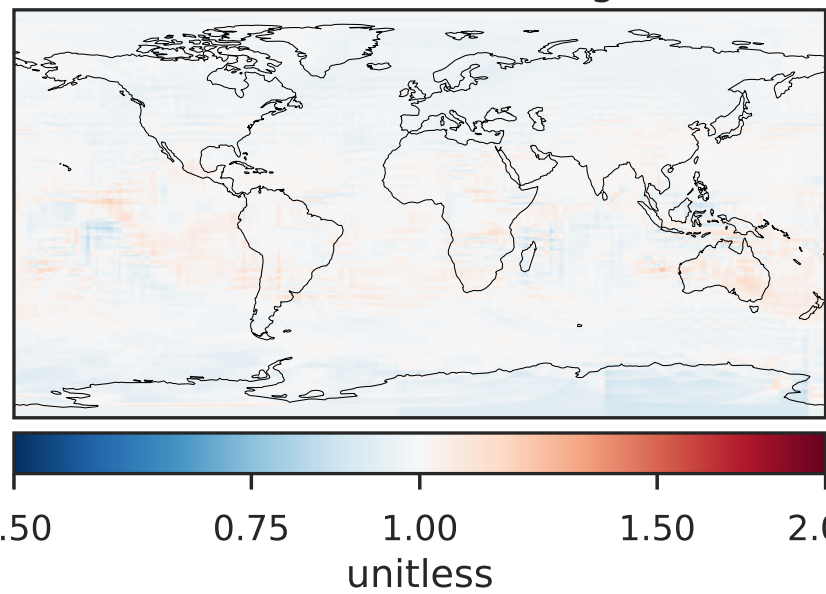
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

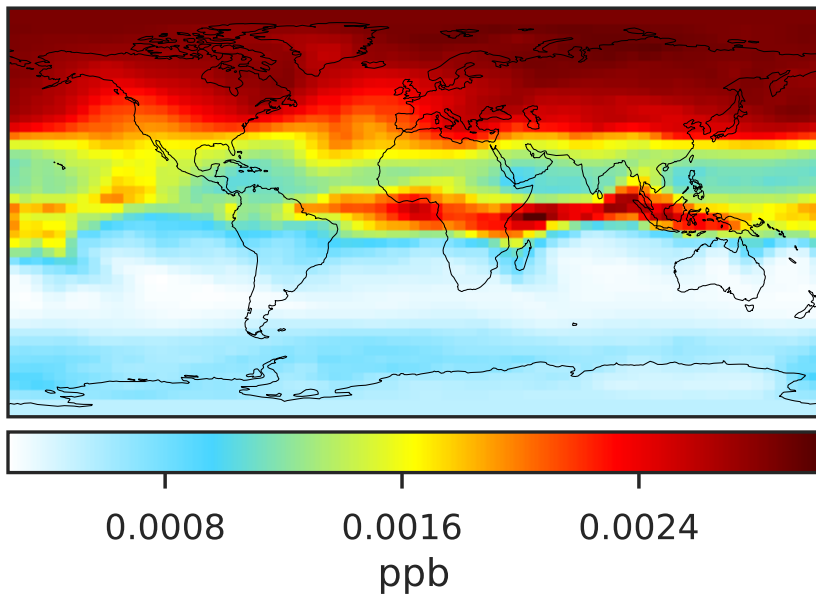


Ratio (1x1.25)  
Dev/Ref, Fixed Range

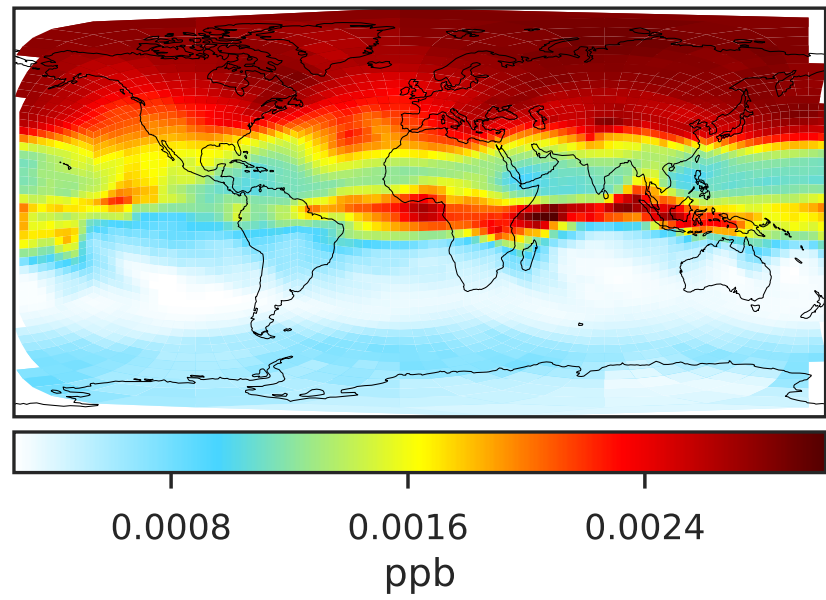


# SpeciesConcVV\_ETNO3 (Jan2019)

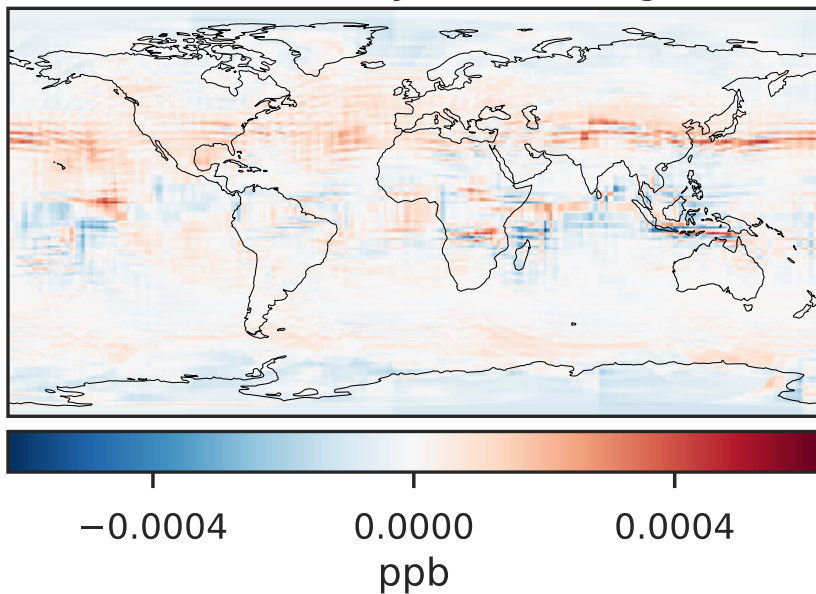
GCC\_14.2.0 (Ref)  
4.0x5.0



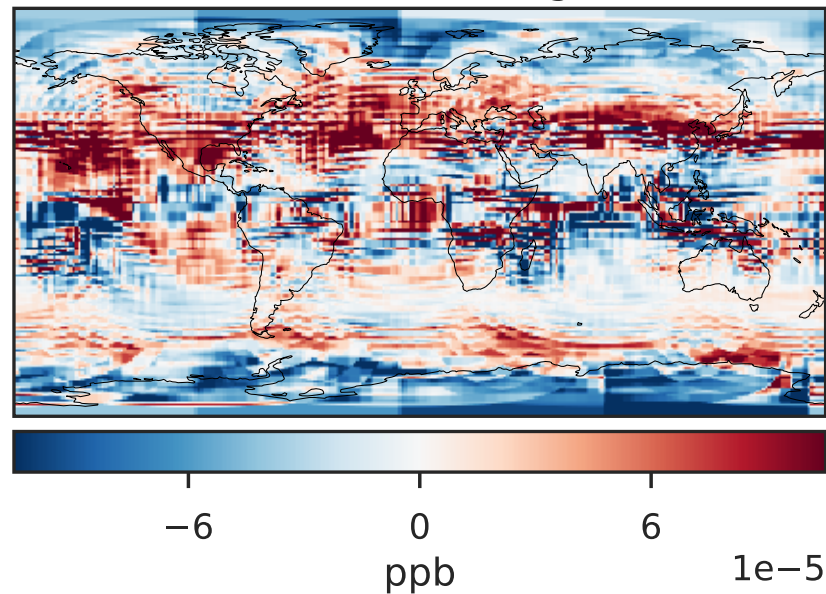
GCHP\_14.2.0 (Dev)  
c24



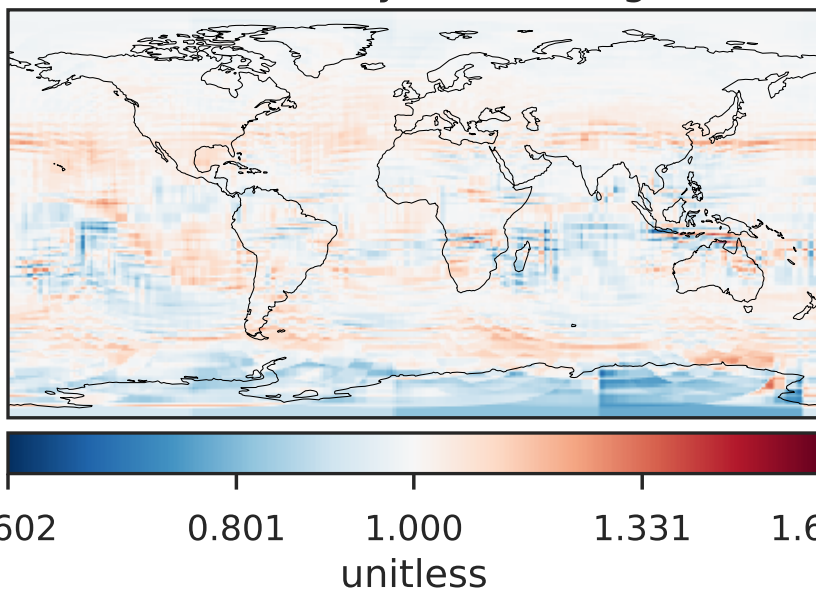
Difference (1x1.25)  
Dev - Ref, Dynamic Range



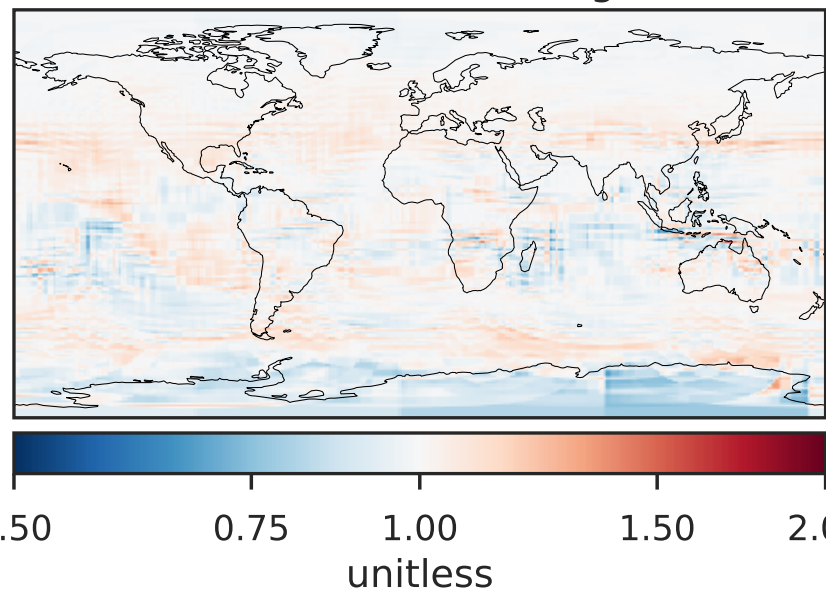
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

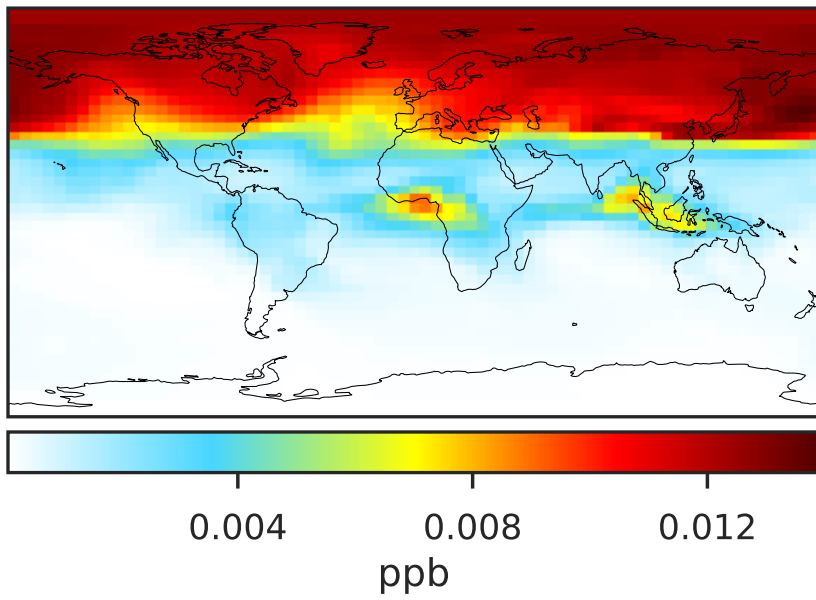


Ratio (1x1.25)  
Dev/Ref, Fixed Range

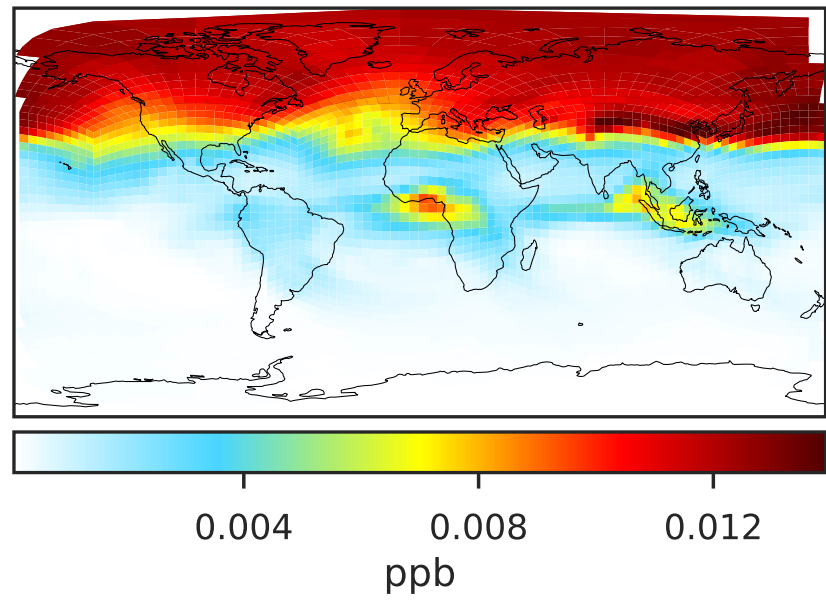


# SpeciesConcVV\_IPRNO3 (Jan2019)

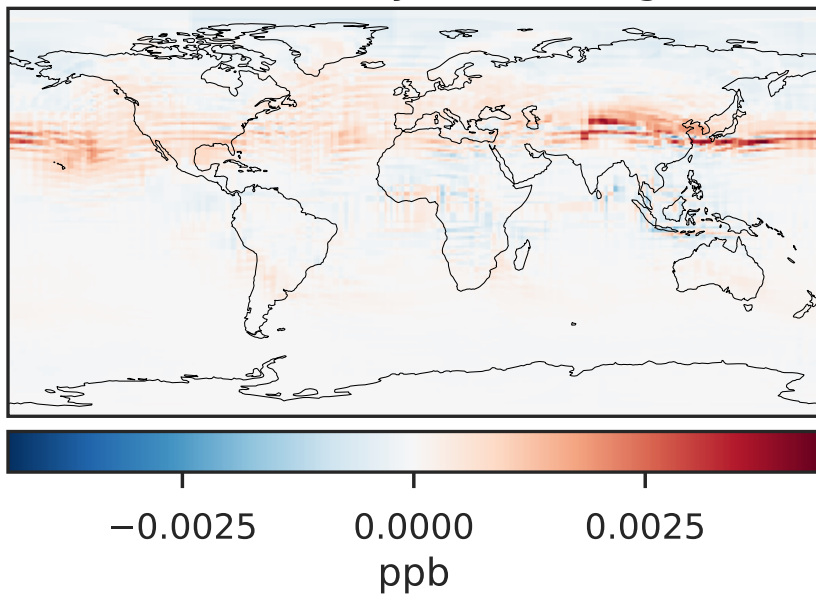
GCC\_14.2.0 (Ref)  
4.0x5.0



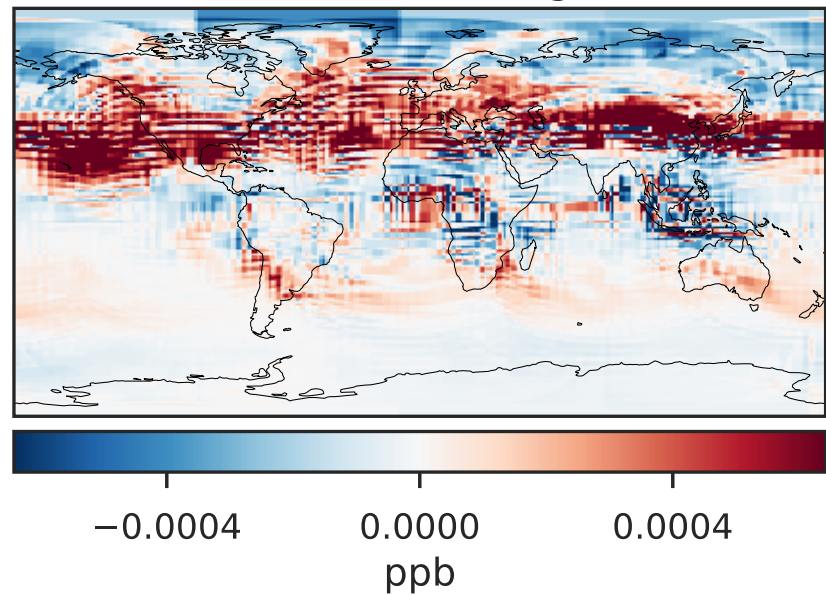
GCHP\_14.2.0 (Dev)  
c24



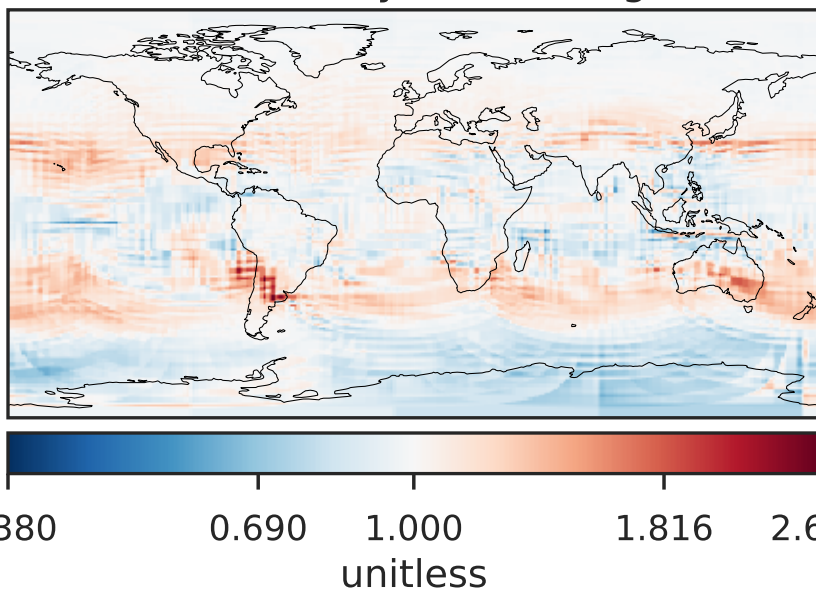
Difference (1x1.25)  
Dev - Ref, Dynamic Range



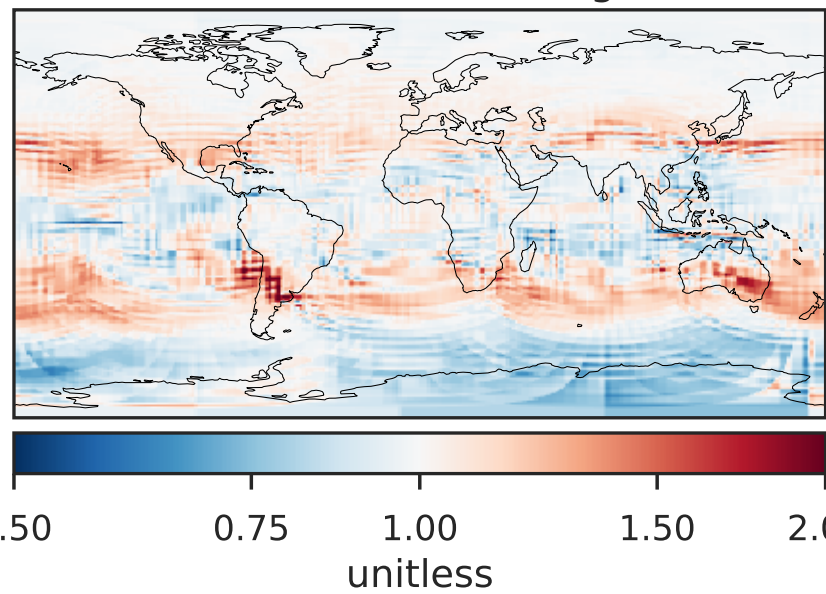
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

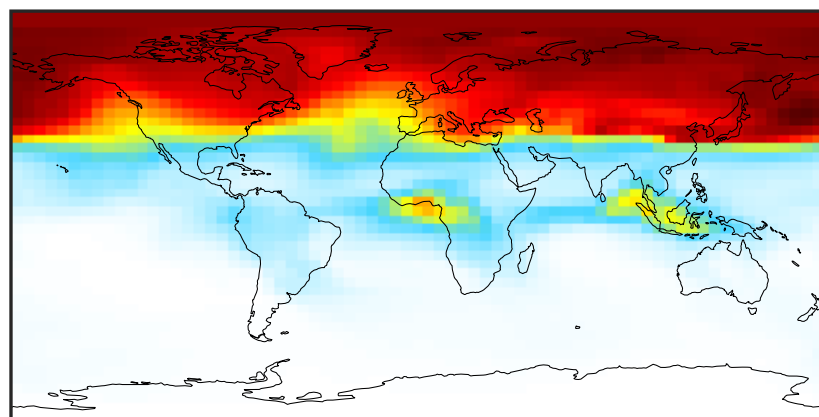


Ratio (1x1.25)  
Dev/Ref, Fixed Range



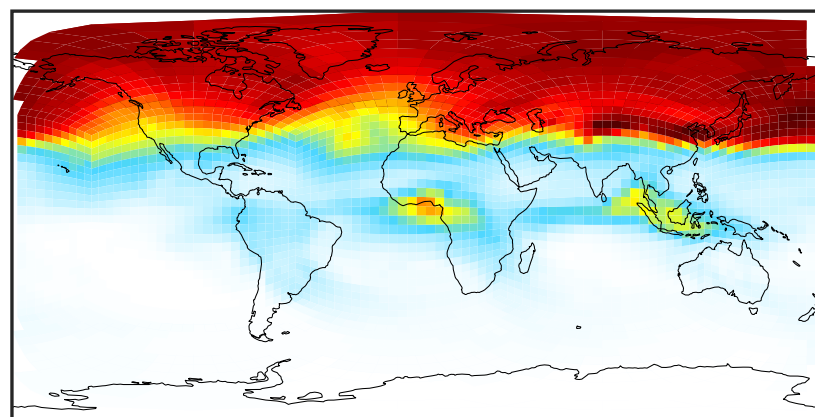
# SpeciesConcVV\_NPRNO3 (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



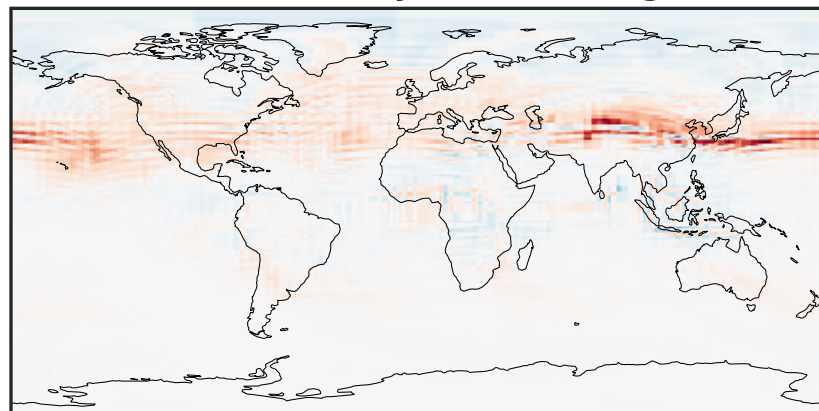
0.001 0.002 0.003  
ppb

GCHP\_14.2.0 (Dev)  
c24



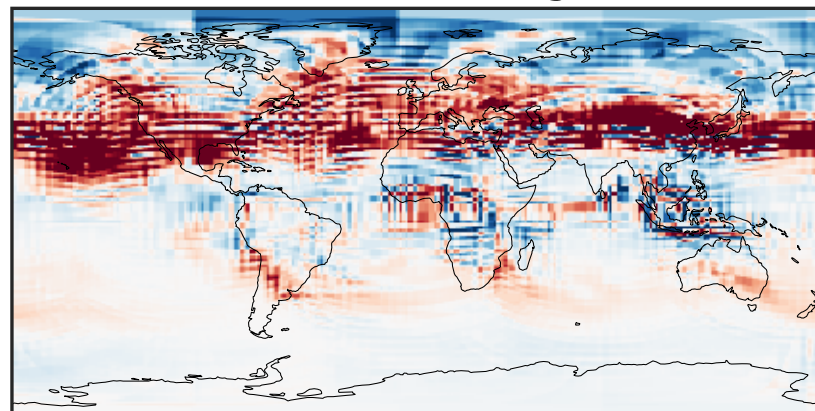
0.001 0.002 0.003  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



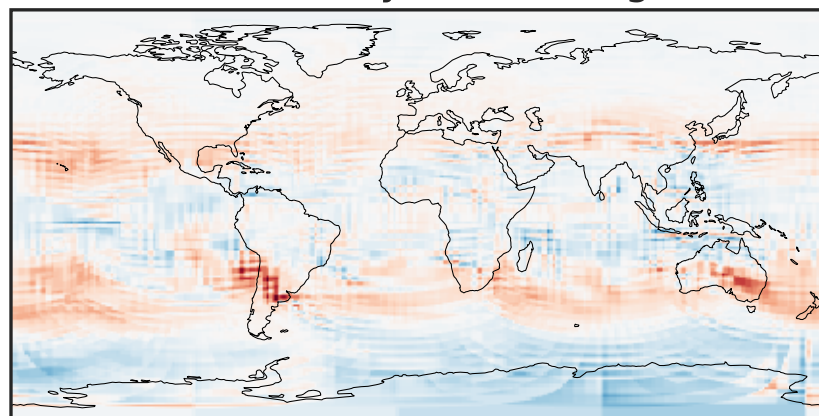
-0.0006 0.0000 0.0006  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



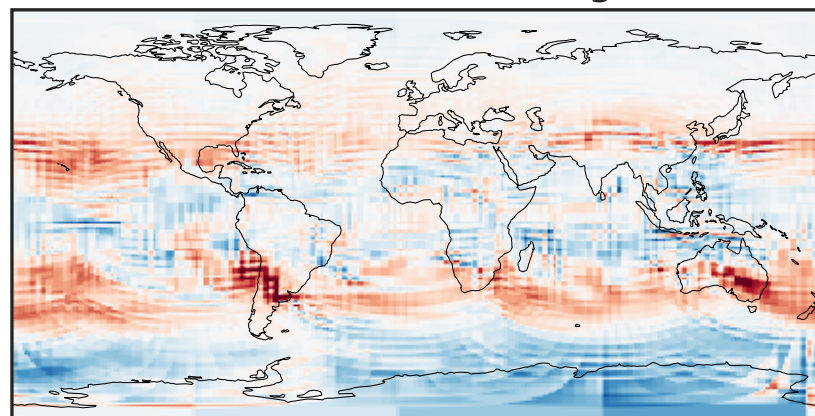
-0.0001 0.0000 0.0001  
ppb

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.330 0.665 1.000 2.013 3.026  
unitless

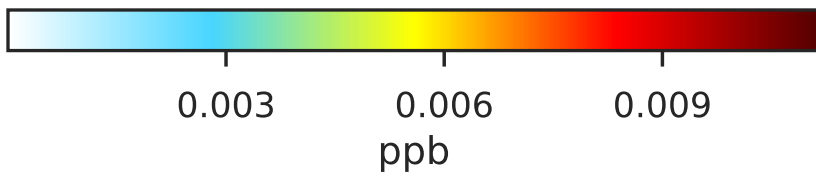
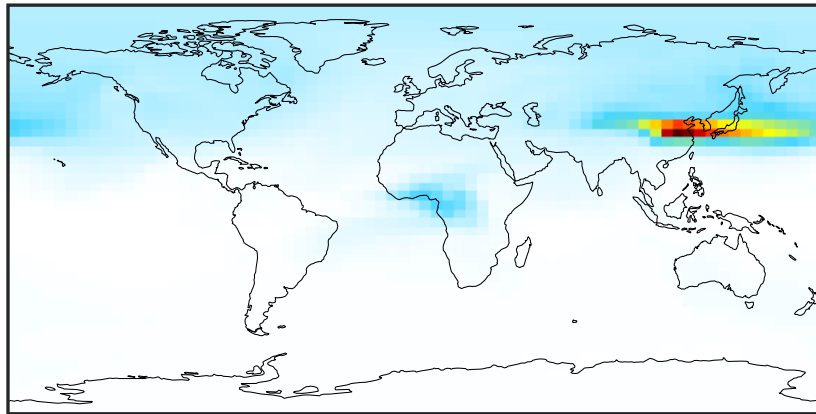
Ratio (1x1.25)  
Dev/Ref, Fixed Range



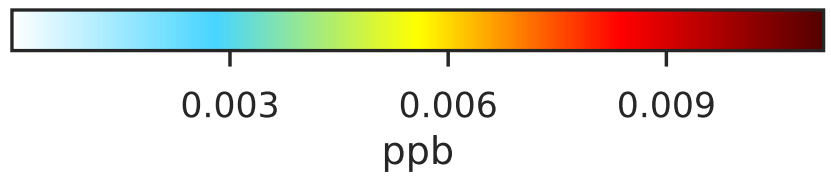
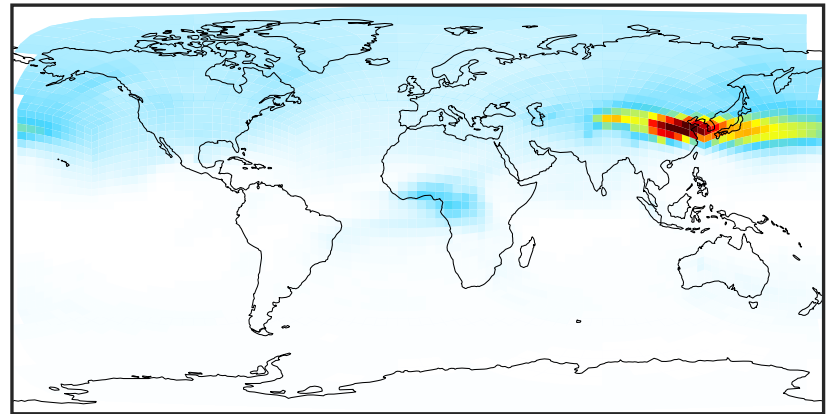
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_AONITA (Jan2019)

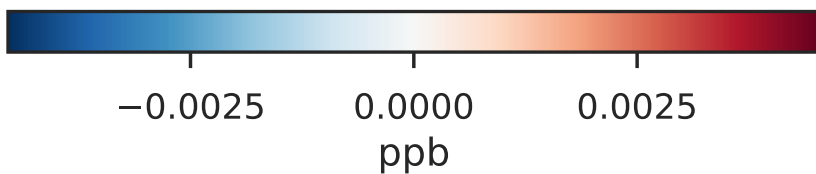
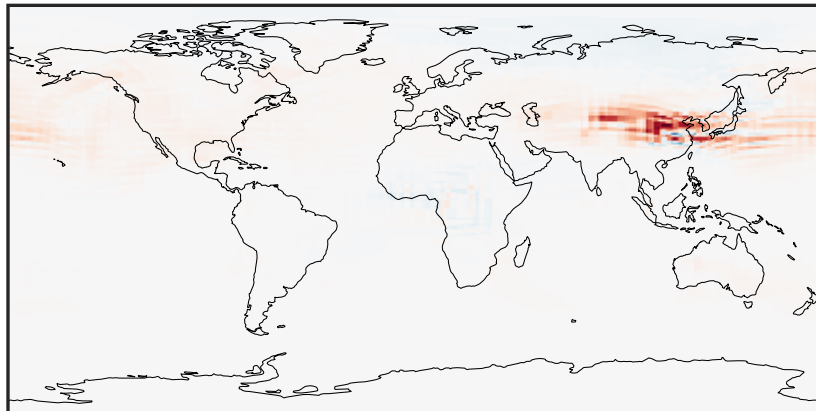
GCC\_14.2.0 (Ref)  
4.0x5.0



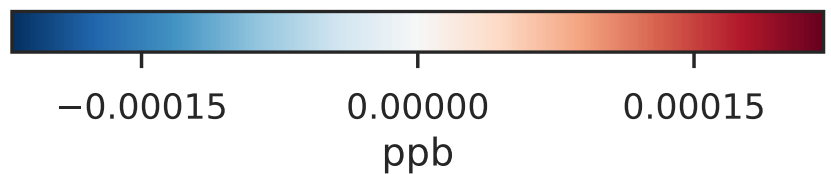
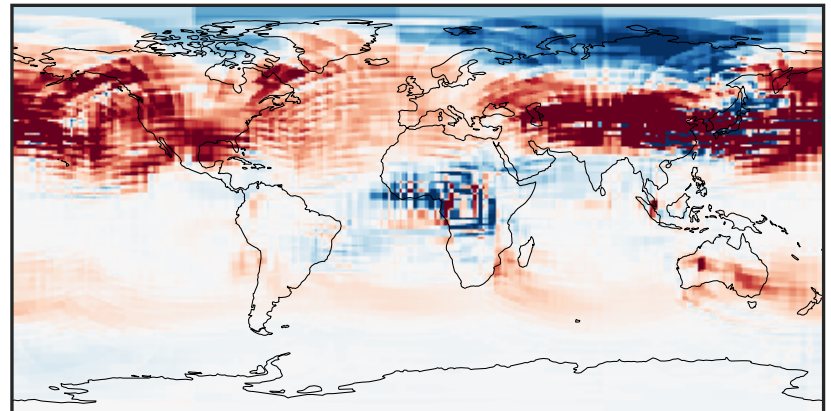
GCHP\_14.2.0 (Dev)  
c24



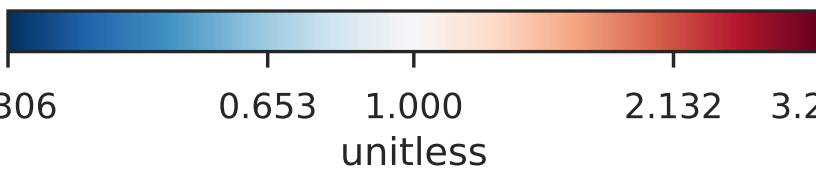
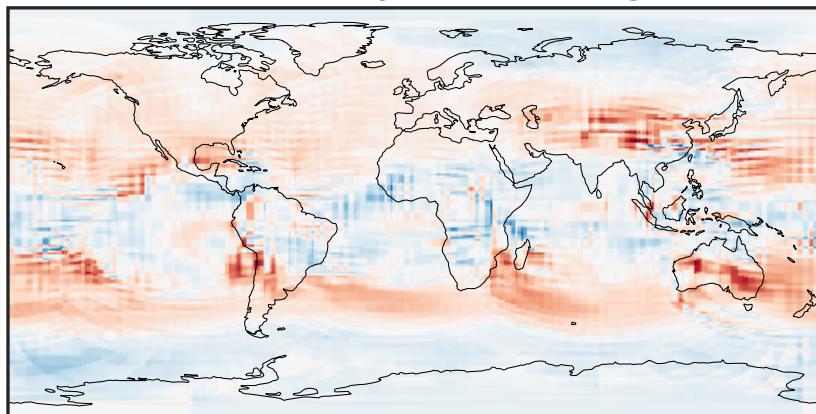
Difference (1x1.25)  
Dev - Ref, Dynamic Range



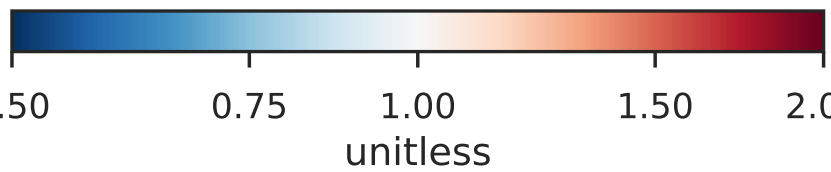
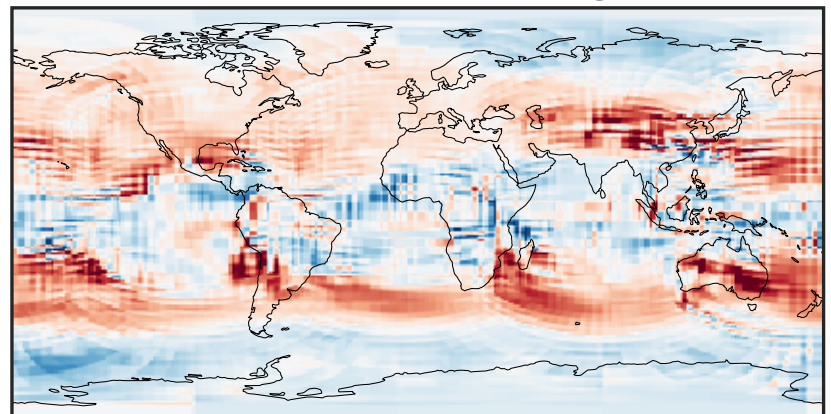
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

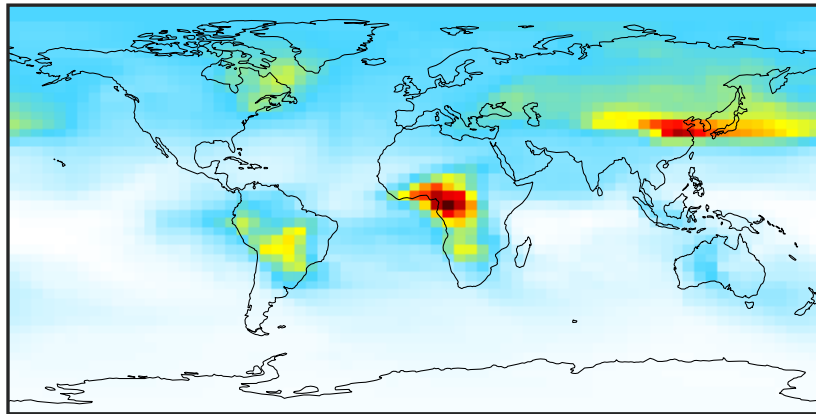


Ratio (1x1.25)  
Dev/Ref, Fixed Range



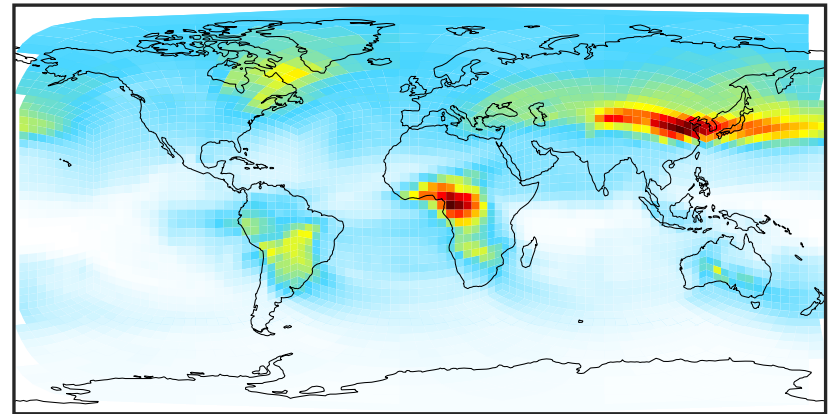
# SpeciesConcVV\_ETHN (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



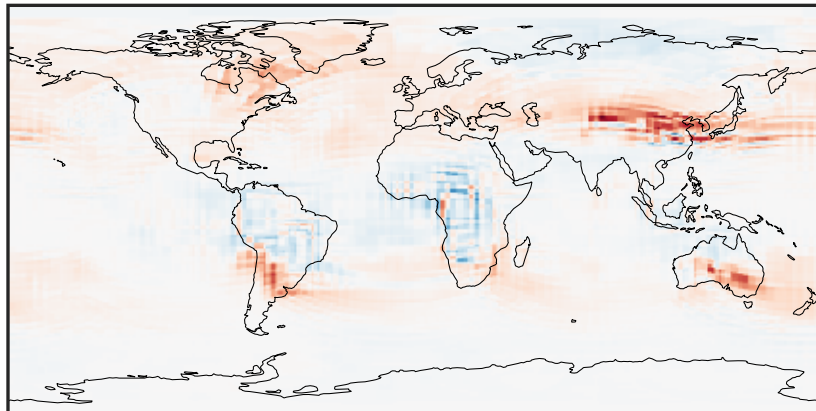
0.00015 0.00030 0.00045  
ppb

GCHP\_14.2.0 (Dev)  
c24



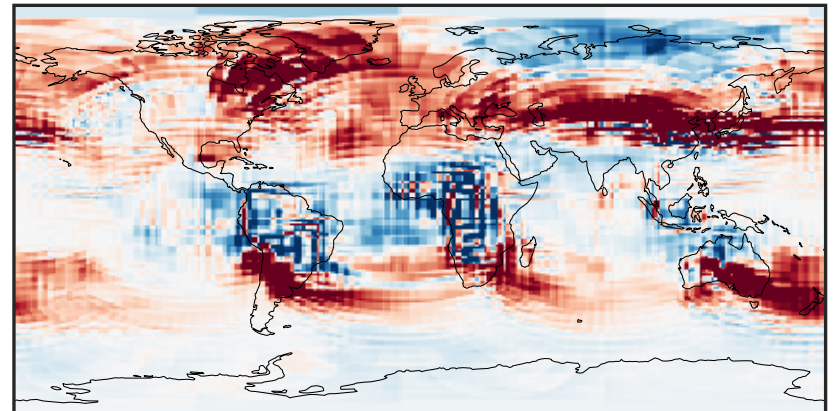
0.00015 0.00030 0.00045  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



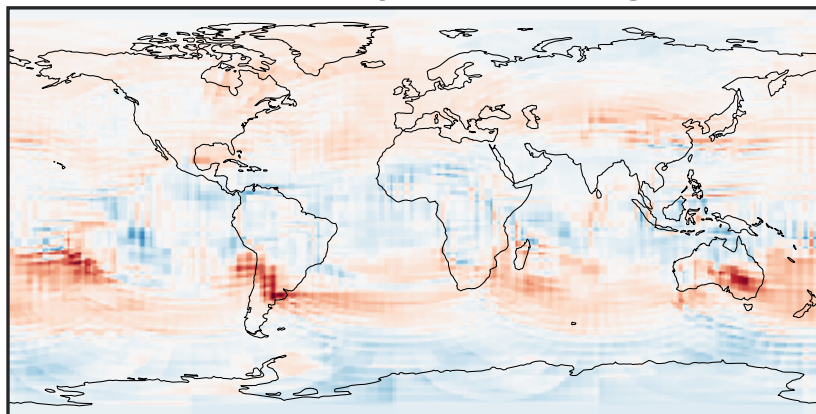
-0.0001 0.0000 0.0001  
ppb

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



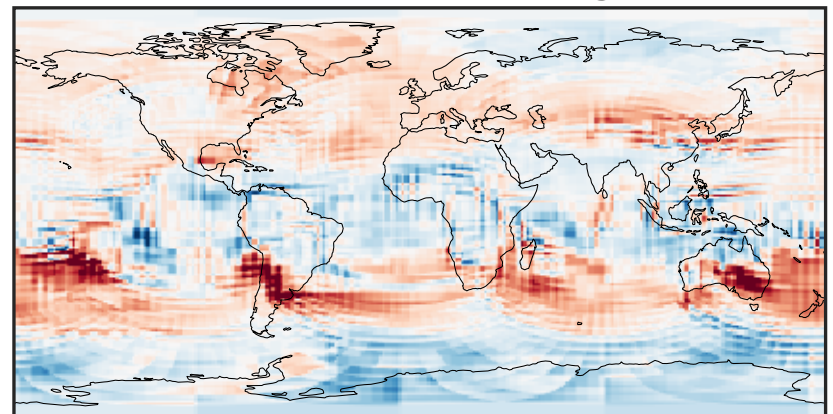
-1.5 0.0 1.5  
ppb  $1e-5$

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.285 0.642 1.000 2.255 3.509  
unitless

Ratio (1x1.25)  
Dev/Ref, Fixed Range

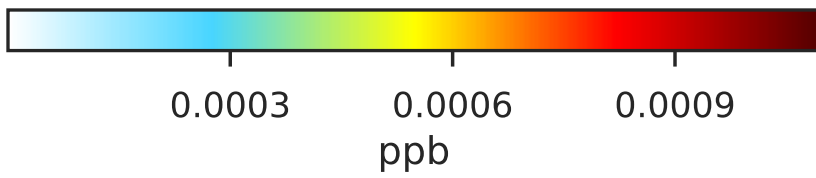
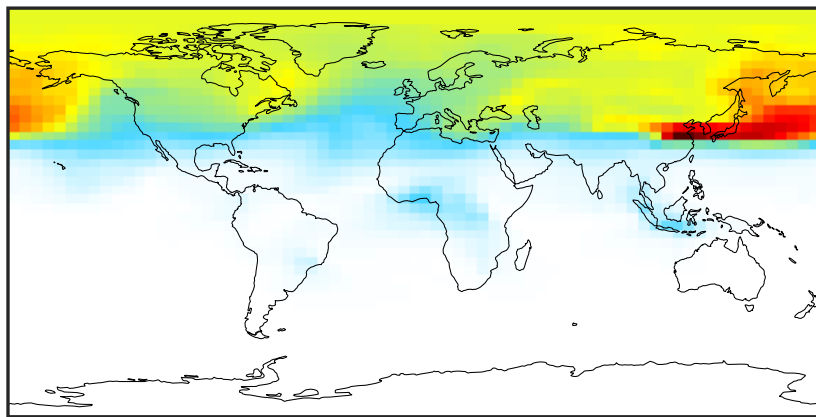


0.50 0.75 1.00 1.50 2.00  
unitless

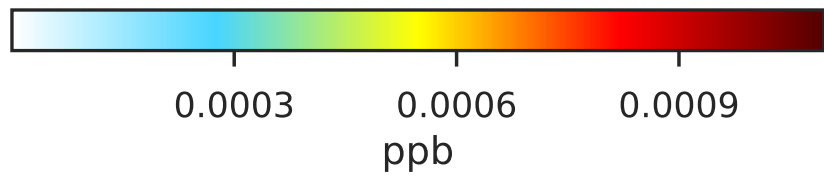
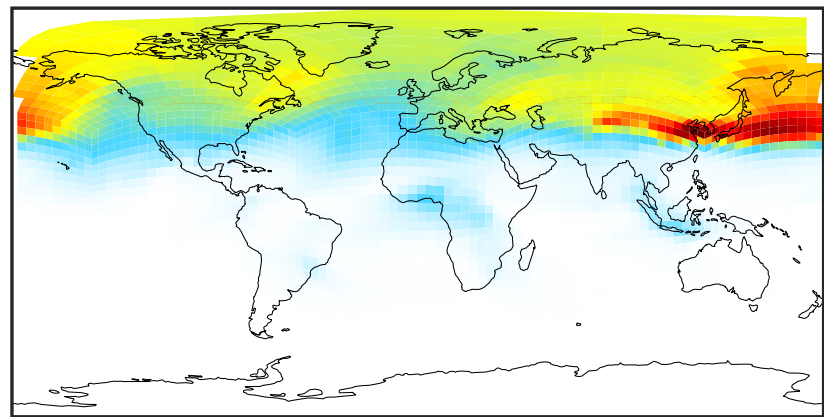


# SpeciesConcVW\_BZPAN (Jan2019)

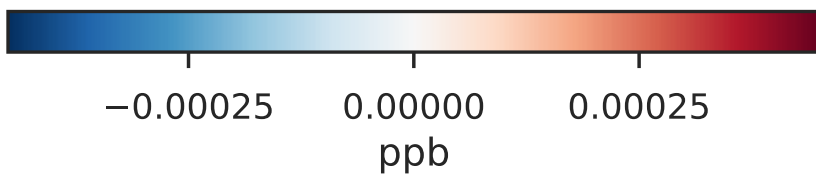
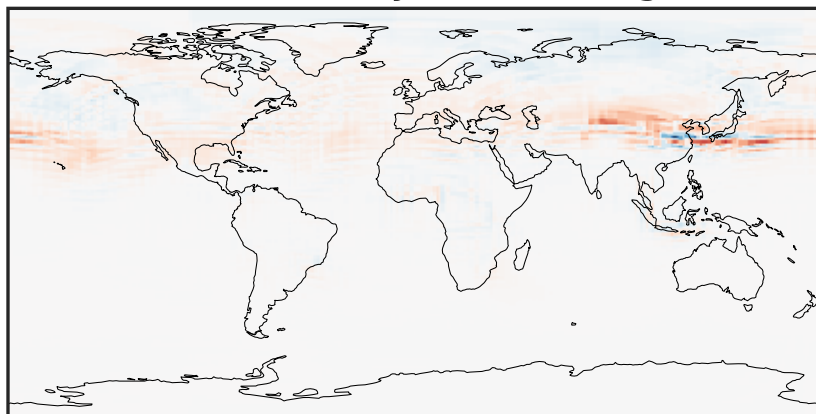
GCC\_14.2.0 (Ref)  
4.0x5.0



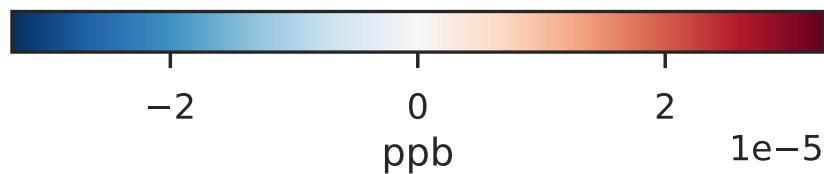
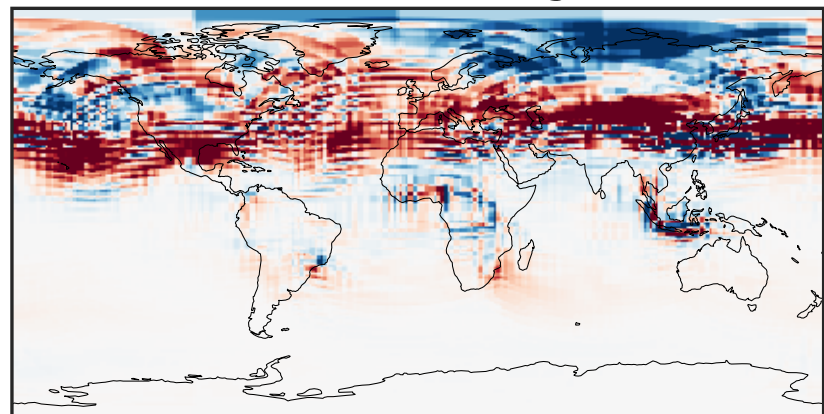
GCHP\_14.2.0 (Dev)  
c24



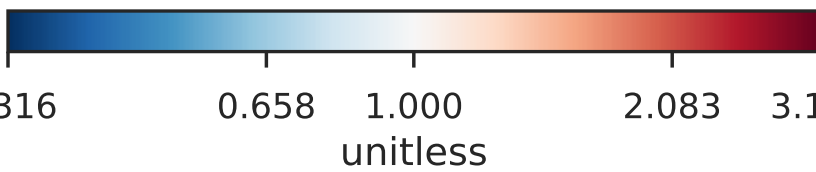
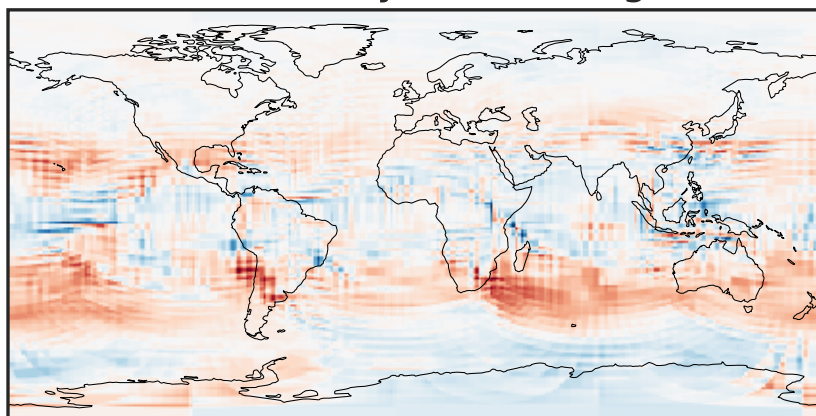
Difference (1x1.25)  
Dev - Ref, Dynamic Range



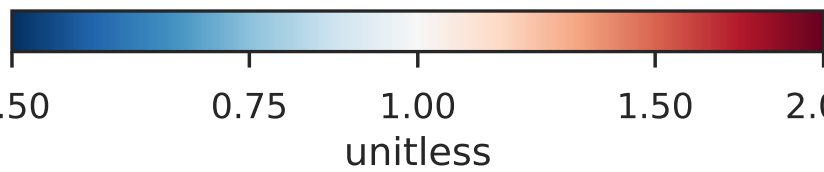
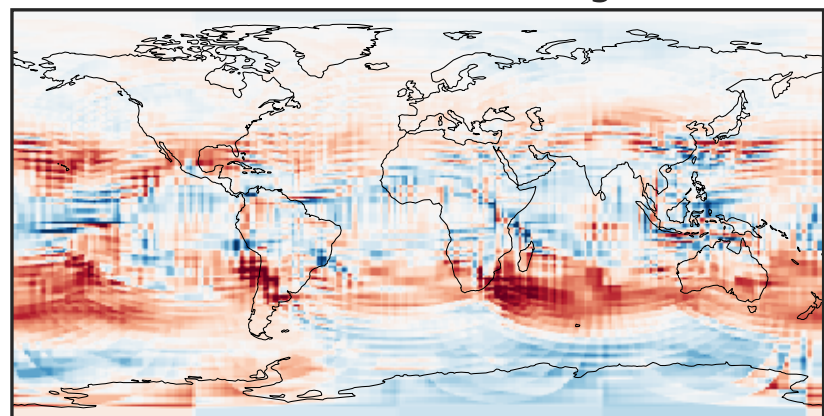
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



Ratio (1x1.25)  
Dev/Ref, Dynamic Range

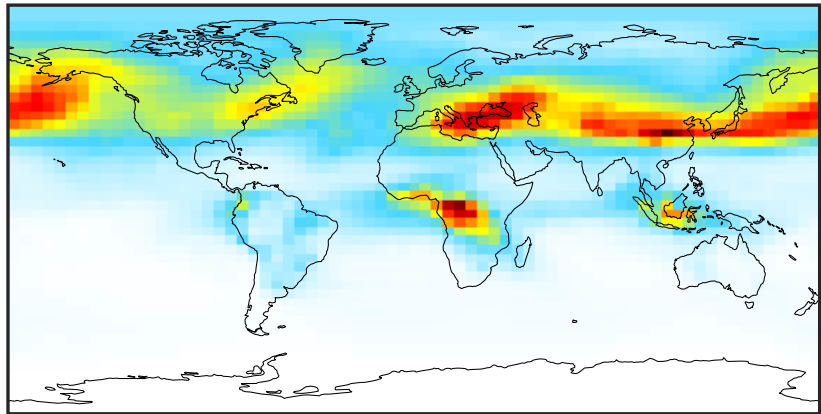


Ratio (1x1.25)  
Dev/Ref, Fixed Range



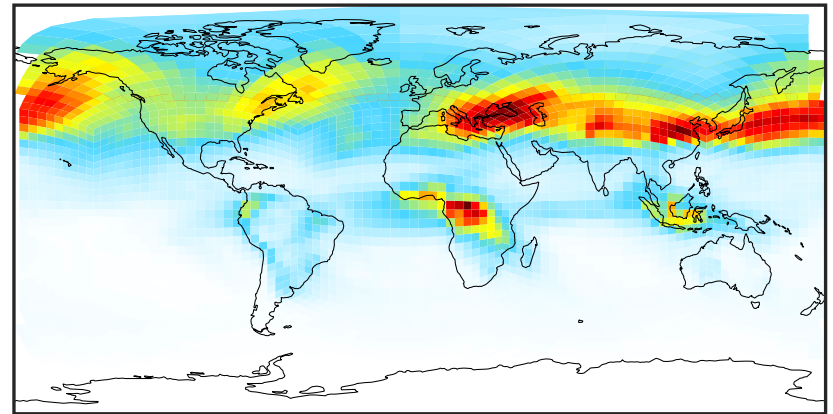
# SpeciesConcVV\_NPHEN (Jan2019)

GCC\_14.2.0 (Ref)  
4.0x5.0



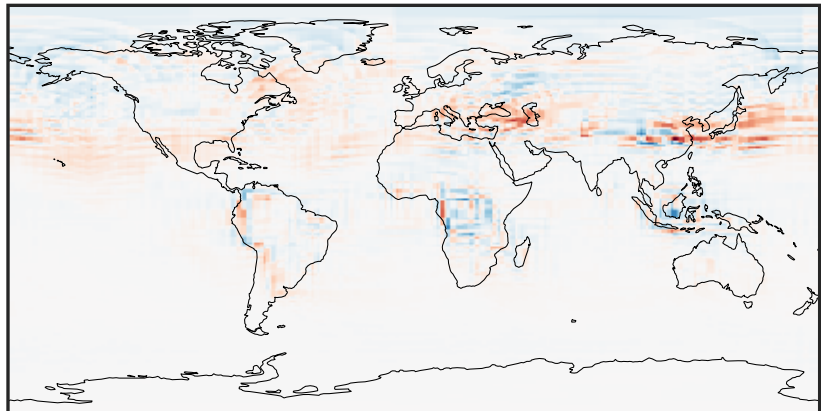
0.00008 0.00016 0.00024  
ppb

GCHP\_14.2.0 (Dev)  
c24



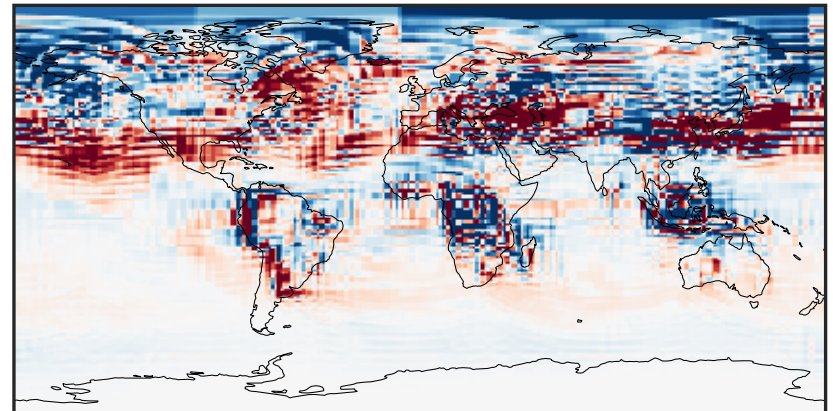
0.00008 0.00016 0.00024  
ppb

Difference (1x1.25)  
Dev - Ref, Dynamic Range



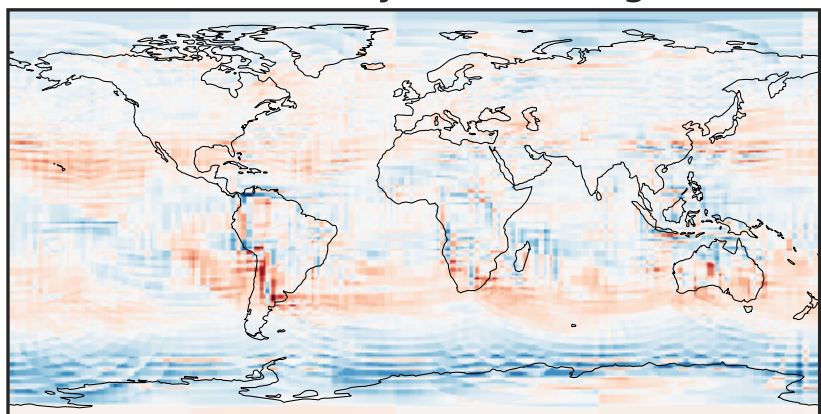
-5 0 5  
ppb  $1e-5$

Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



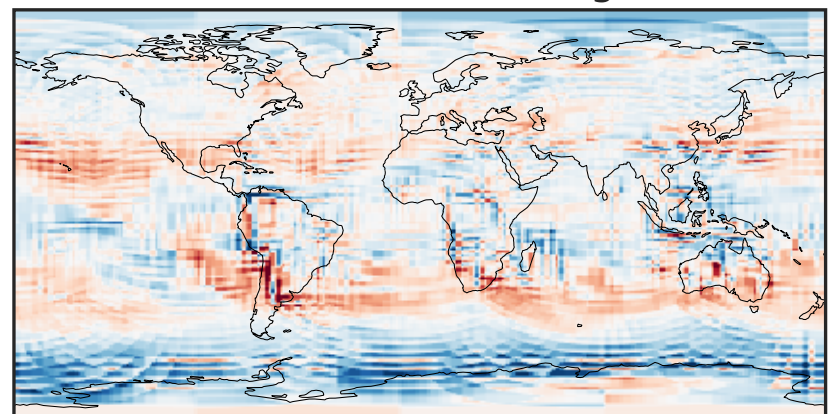
-6 0 6  
ppb  $1e-6$

Ratio (1x1.25)  
Dev/Ref, Dynamic Range



0.350 0.675 1.000 1.929 2.858  
unitless

Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless