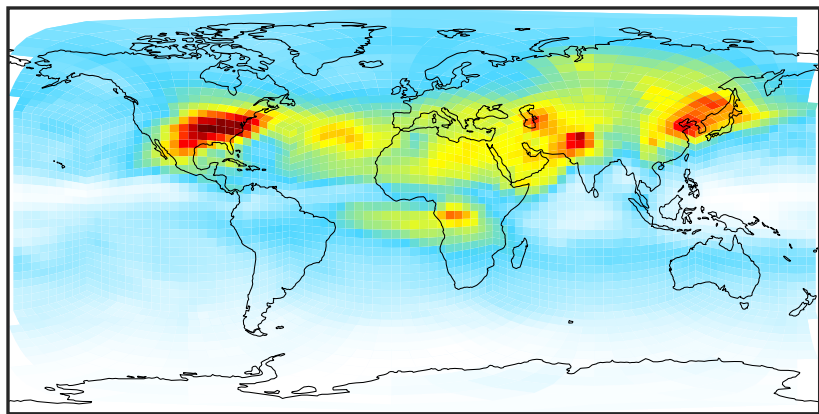


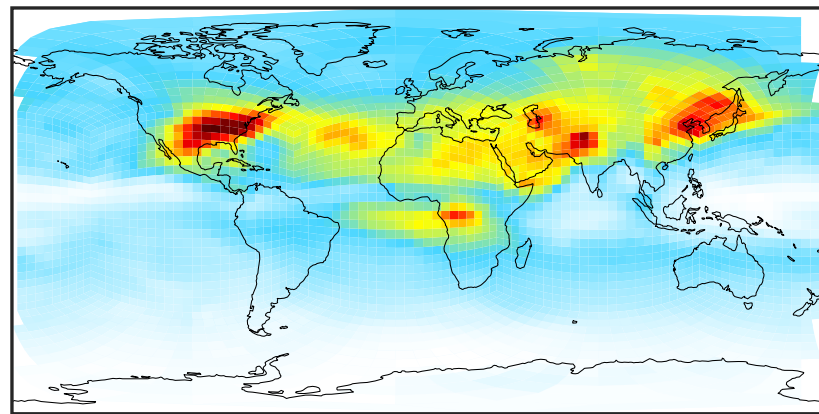
# SpeciesConcVV\_NOy (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



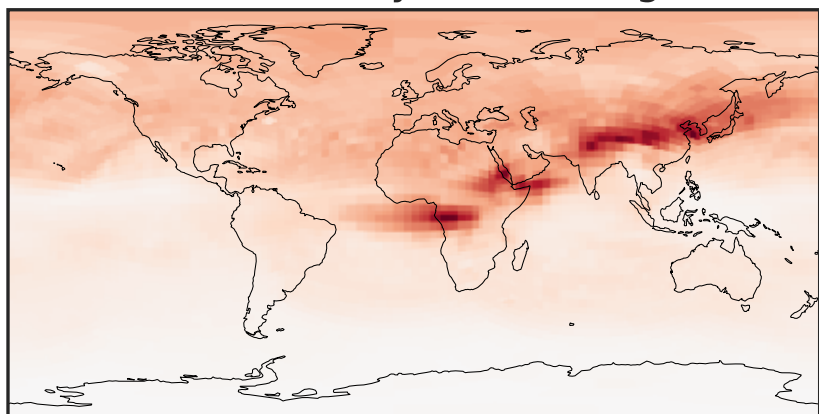
0.039 0.358 0.717 1.075 1.472  
ppb

GCHP\_14.2.0 (Dev)  
c24



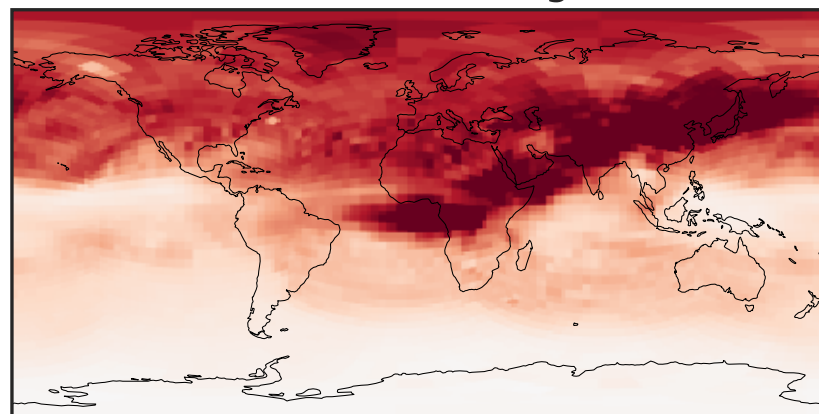
0.039 0.358 0.717 1.075 1.472  
ppb

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



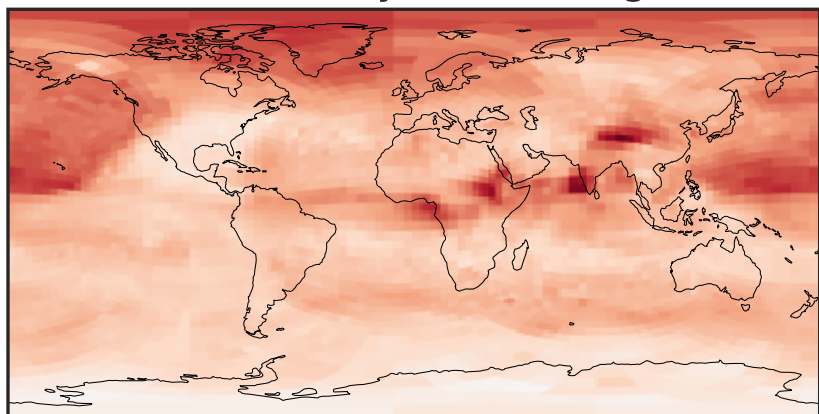
-0.1141 -0.0571 0.0000 0.0571 0.1141  
ppb

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



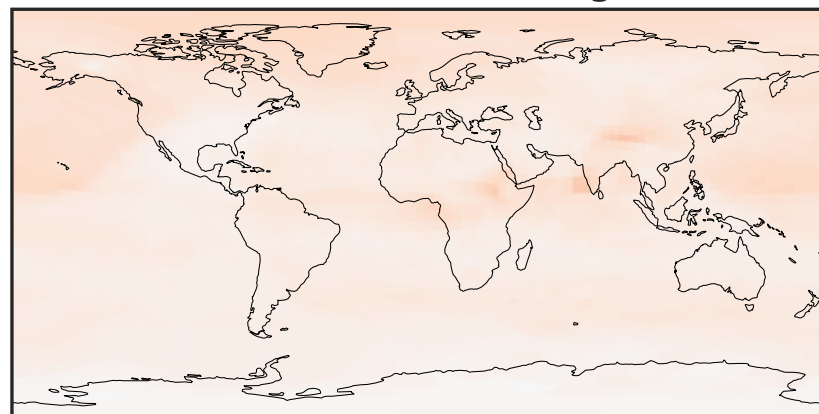
-0.025 0.000 0.025  
ppb

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



0.8244 0.9122 1.0000 1.1065 1.2130  
unitless

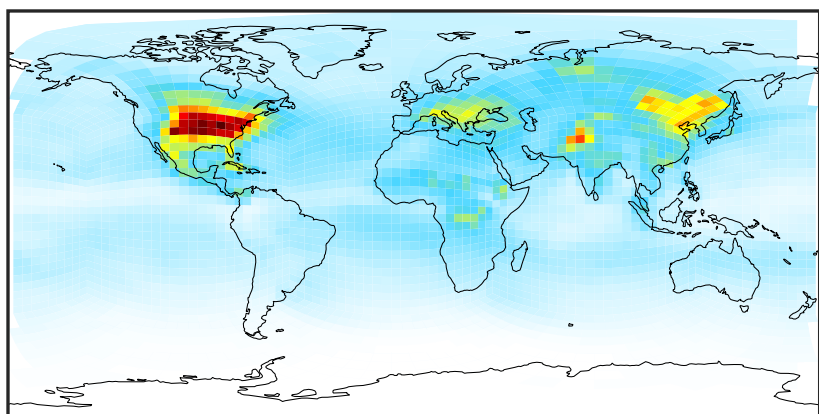
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

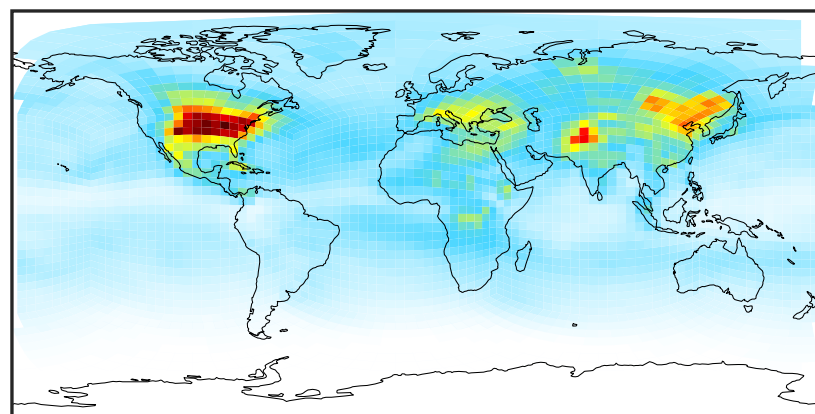
# SpeciesConcVV\_NOx (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



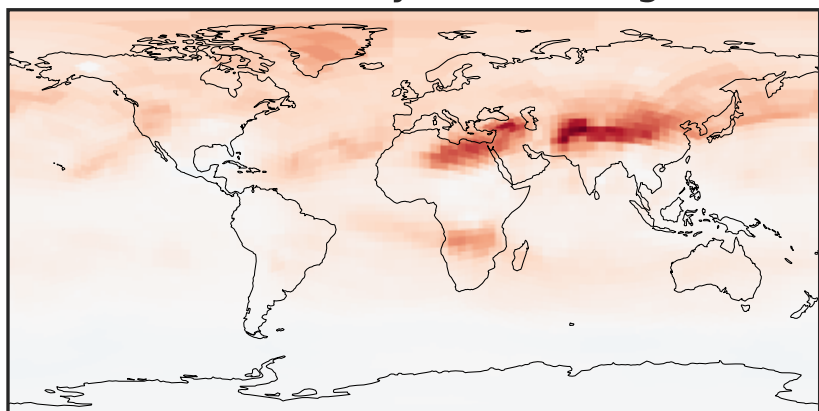
0.0002 0.0729 0.1458 0.2187 0.2917  
ppb

GCHP\_14.2.0 (Dev)  
c24



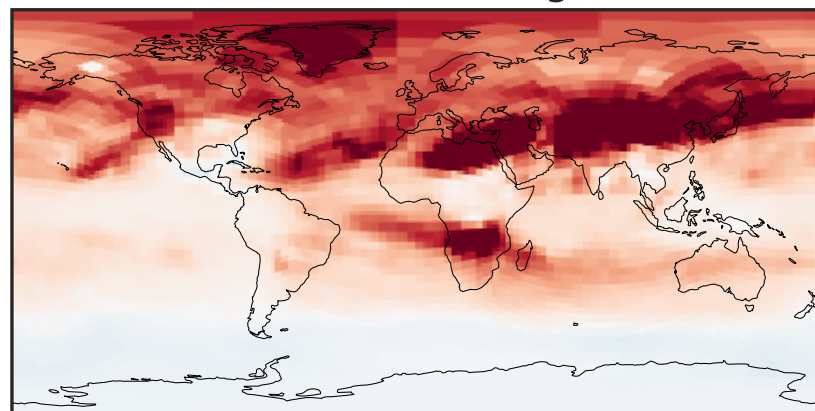
0.0002 0.0729 0.1458 0.2187 0.2917  
ppb

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



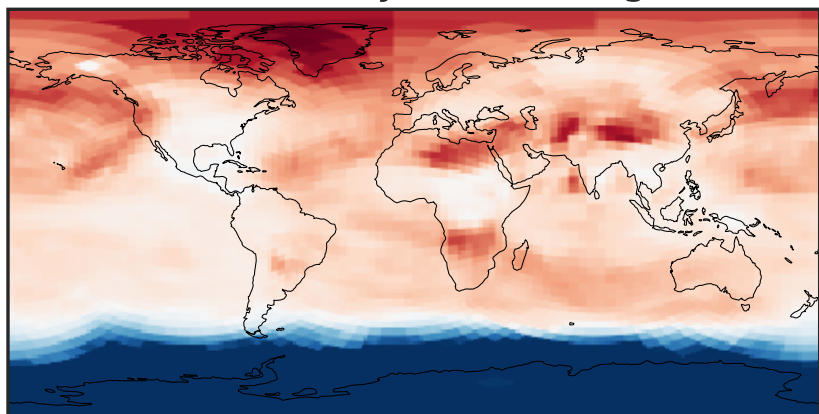
-0.025 0.000 0.025  
ppb

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



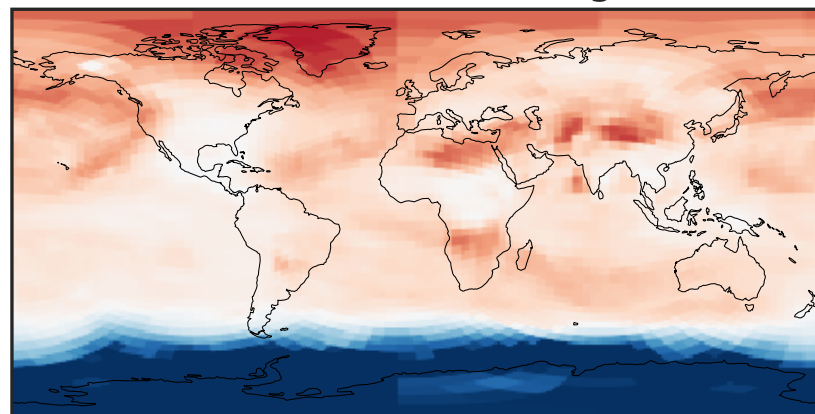
-0.008 0.000 0.008  
ppb

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



0.580 0.790 1.000 1.362 1.725  
unitless

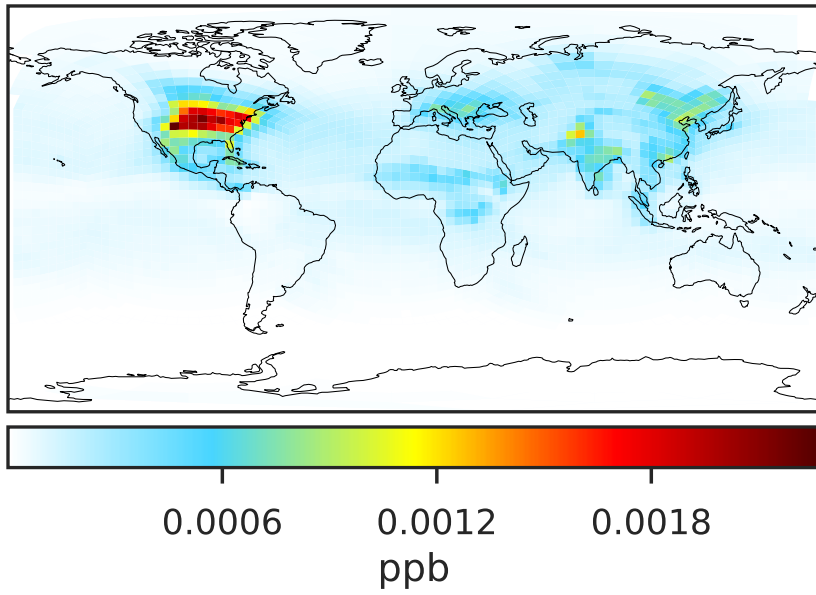
Ratio (1x1.25)  
Dev/Ref, Fixed Range



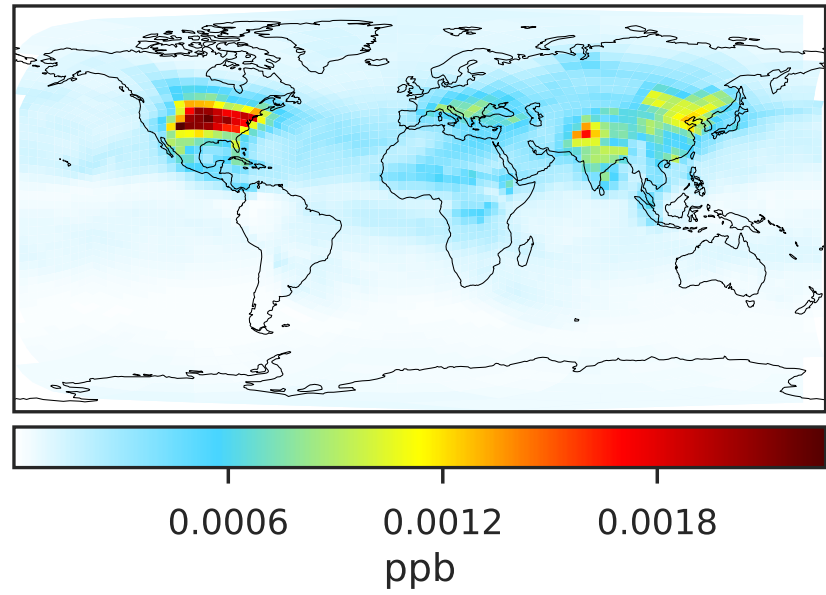
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_HNO2 (Jul2019)

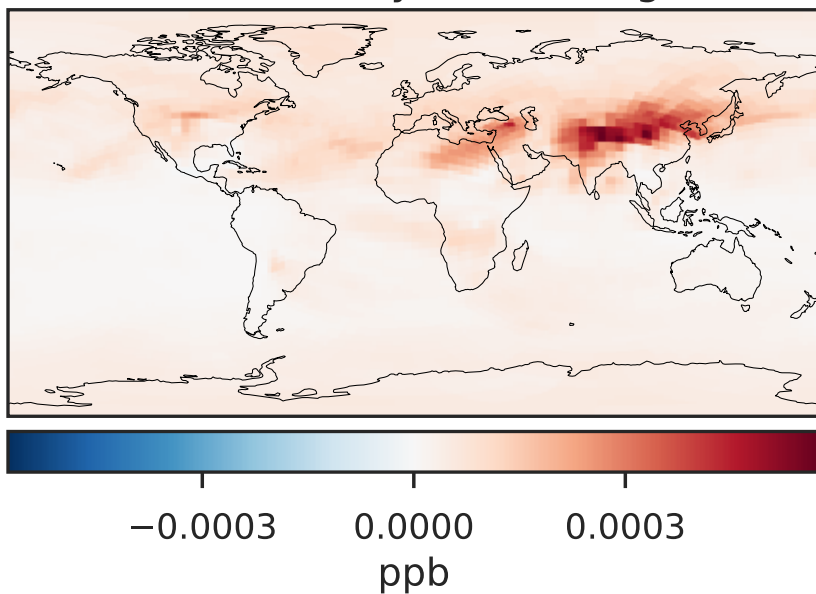
GCHP\_14.0.0 (Ref)  
c24



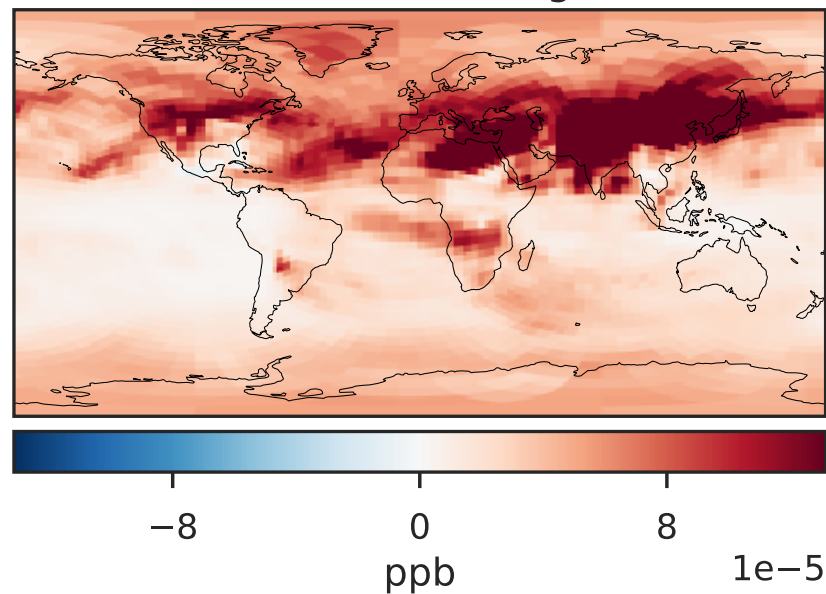
GCHP\_14.2.0 (Dev)  
c24



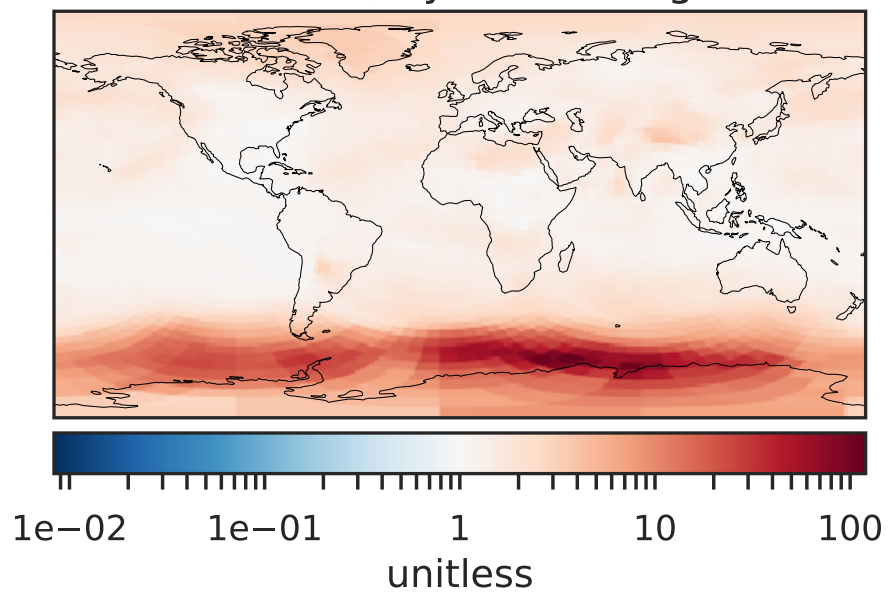
Difference (1x1.25)  
Dev - Ref, Dynamic Range



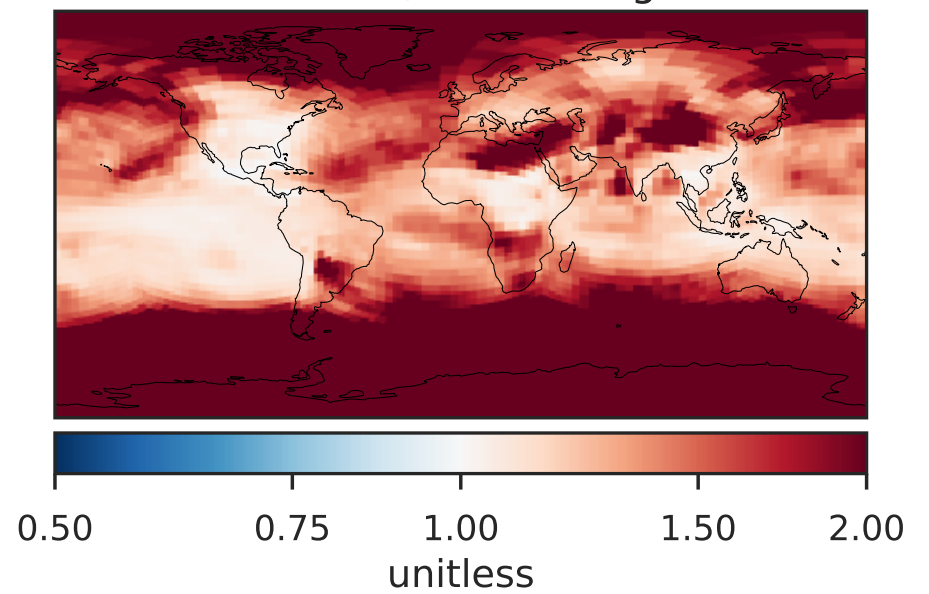
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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

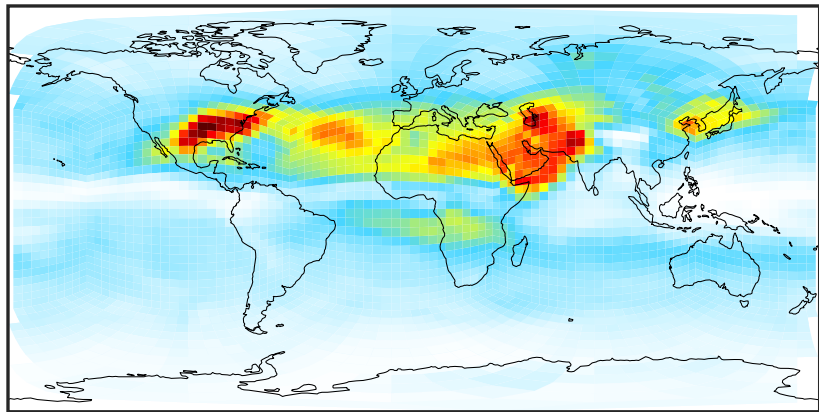


Ratio (1x1.25)  
Dev/Ref, Fixed Range



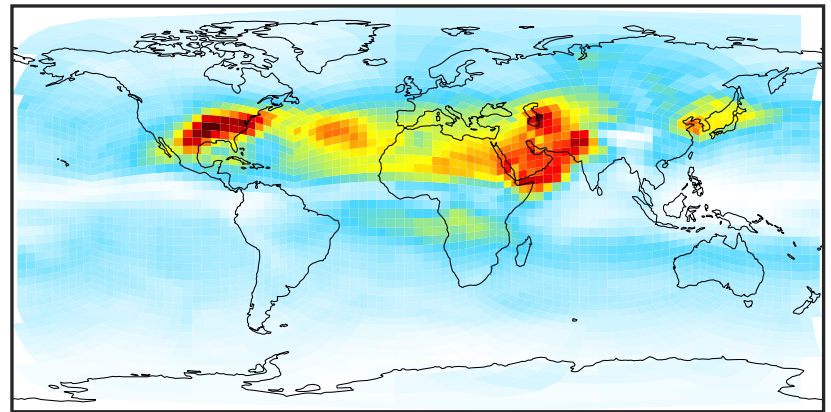
# SpeciesConcVV\_HNO3 (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



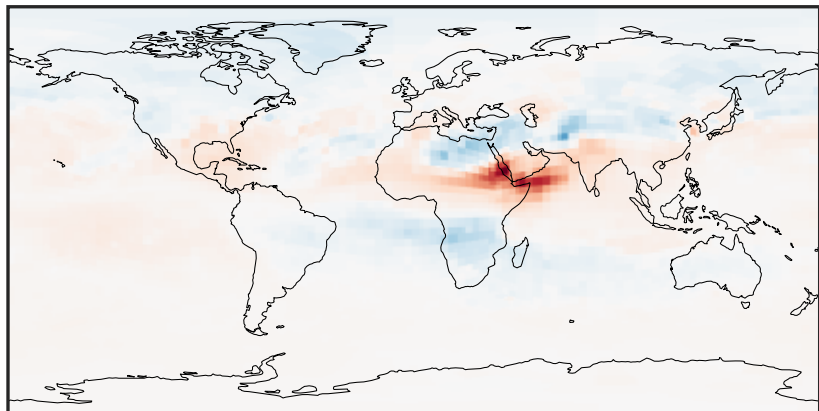
0.0058 0.1921 0.3841 0.5762 0.7740  
ppb

GCHP\_14.2.0 (Dev)  
c24



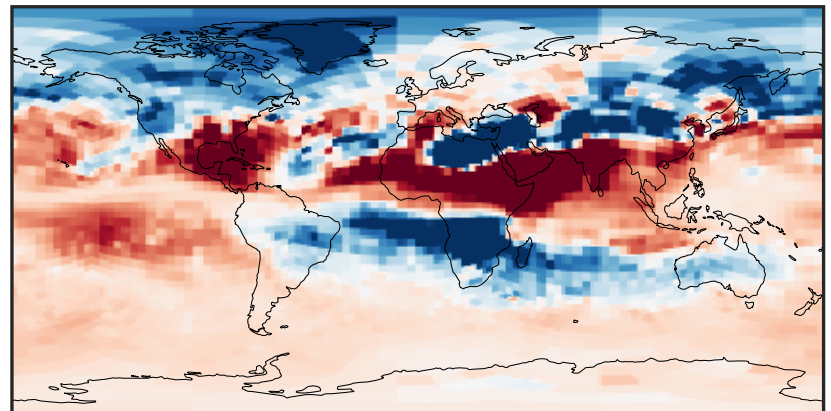
0.0058 0.1921 0.3841 0.5762 0.7740  
ppb

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



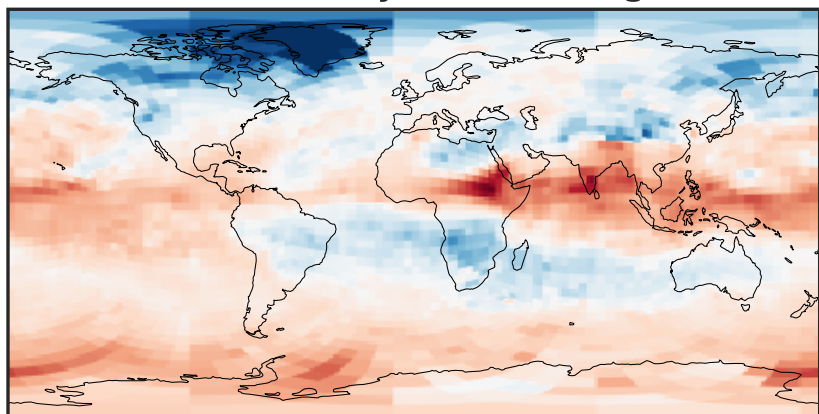
-0.0815 -0.0408 0.0000 0.0408 0.0815  
ppb

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



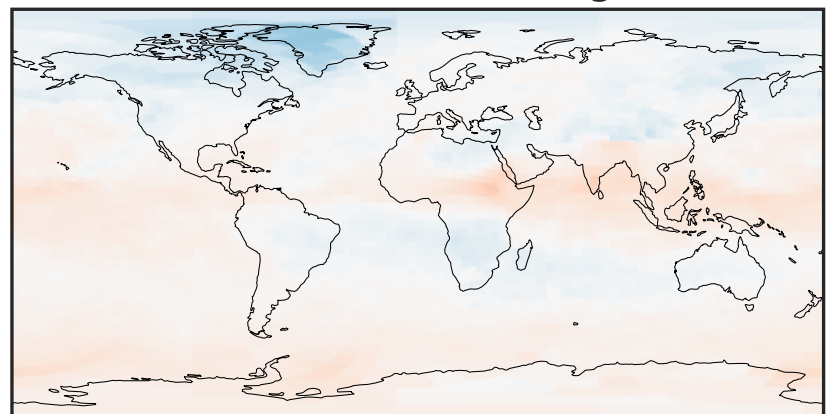
-0.005 0.000 0.005  
ppb

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



0.8374 0.9187 1.0000 1.0971 1.1942  
unitless

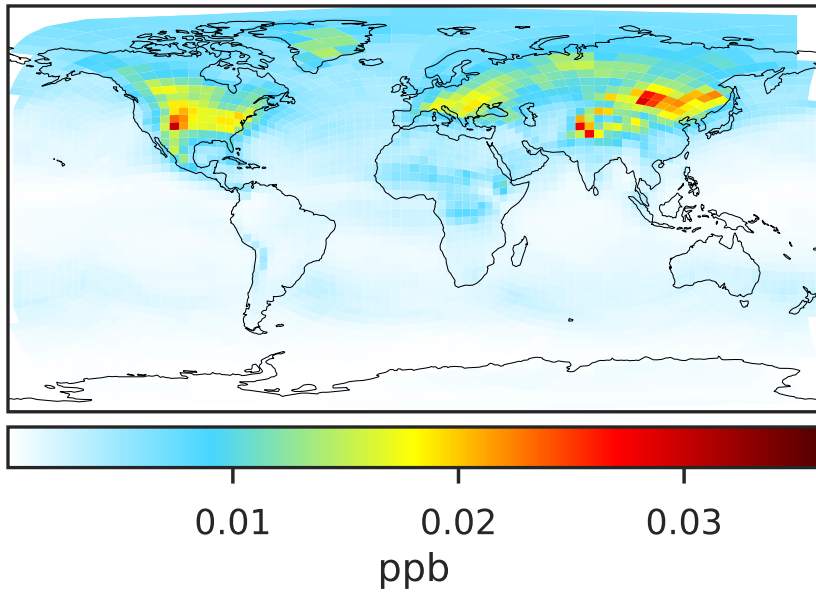
Ratio (1x1.25)  
Dev/Ref, Fixed Range



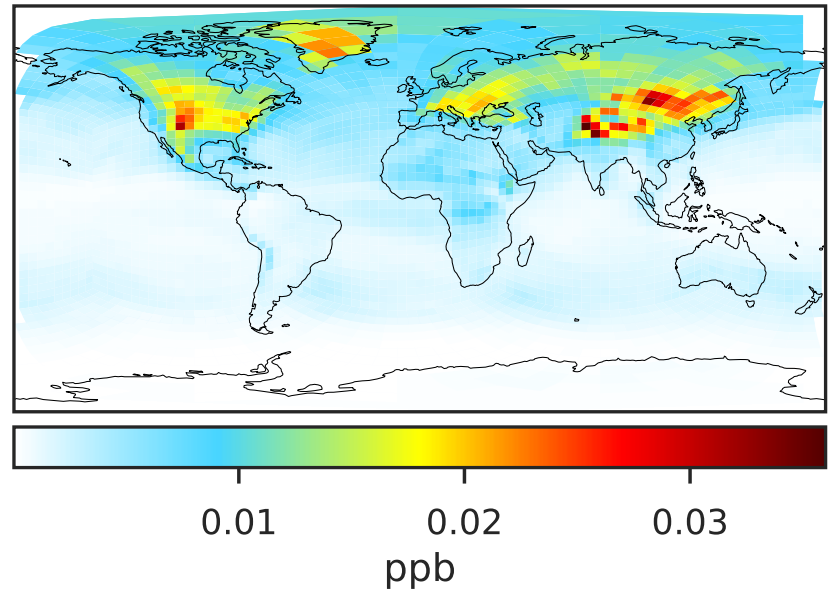
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_HNO4 (Jul2019)

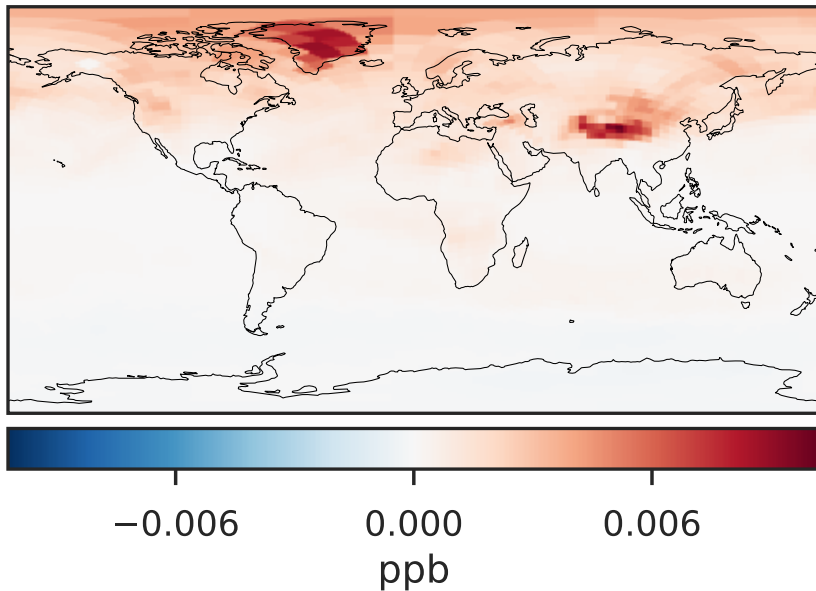
GCHP\_14.0.0 (Ref)  
c24



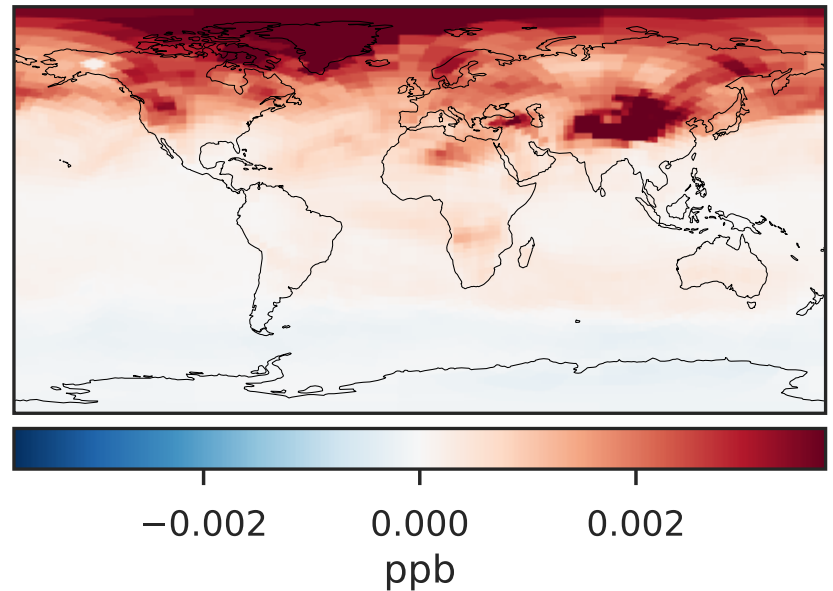
GCHP\_14.2.0 (Dev)  
c24



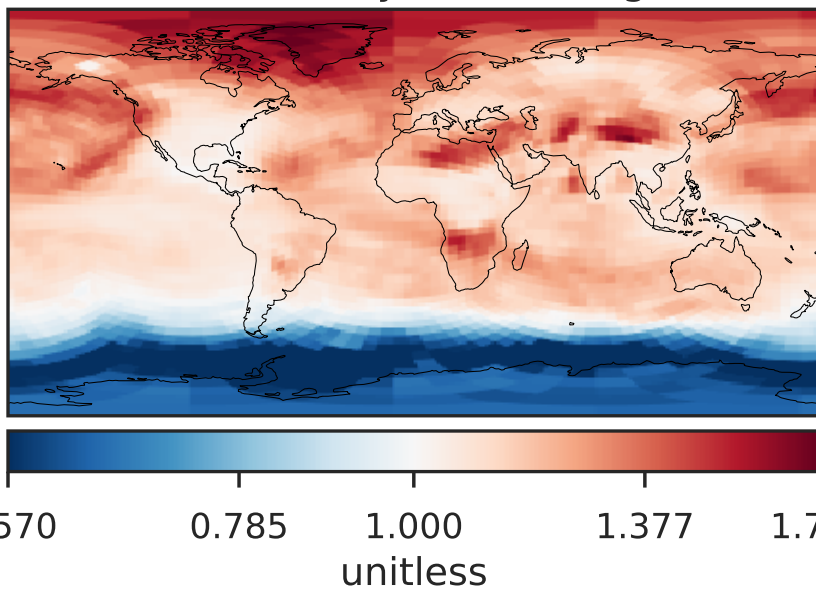
Difference (1x1.25)  
Dev - Ref, Dynamic Range



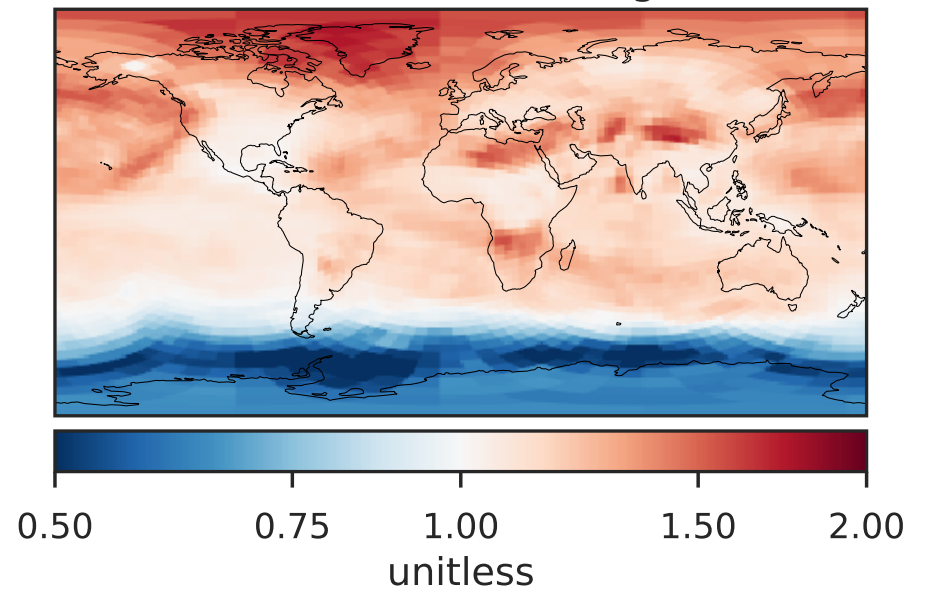
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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

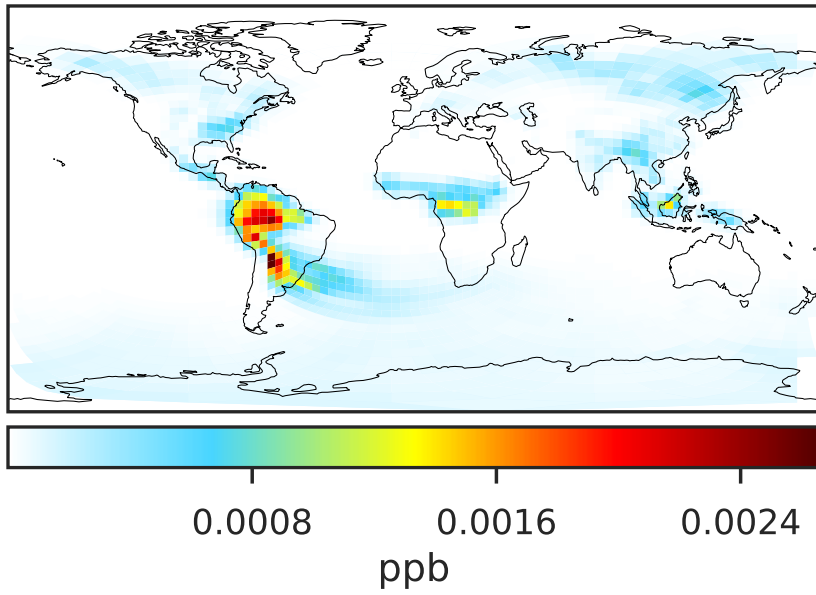


Ratio (1x1.25)  
Dev/Ref, Fixed Range

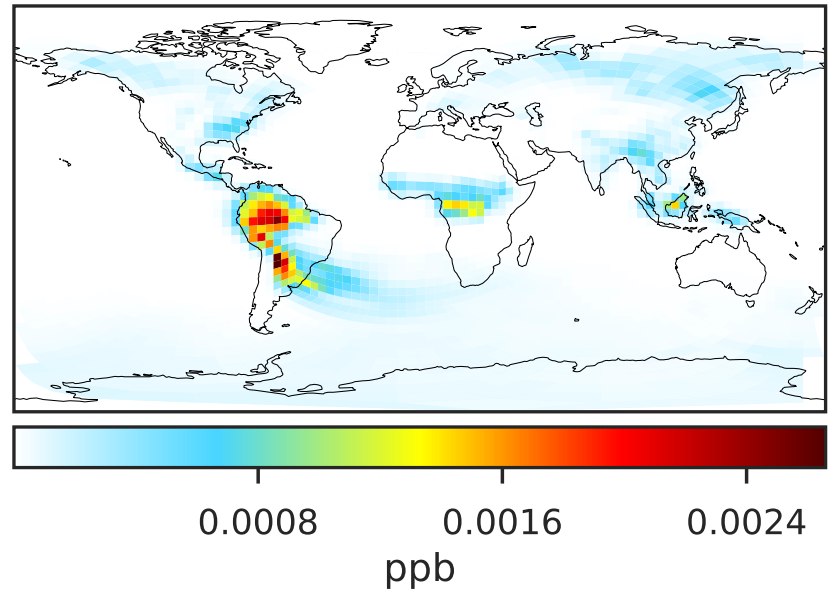


# SpeciesConcVV\_MPAN (Jul2019)

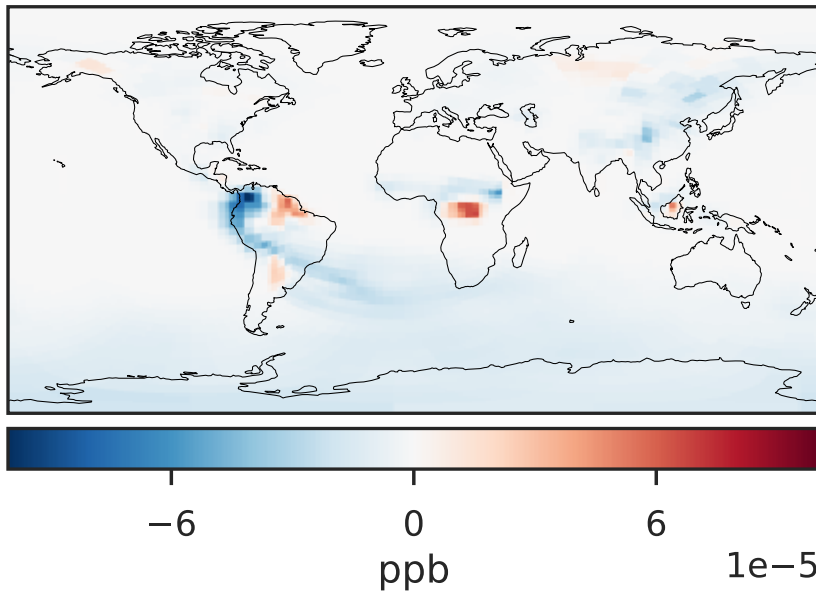
GCHP\_14.0.0 (Ref)  
c24



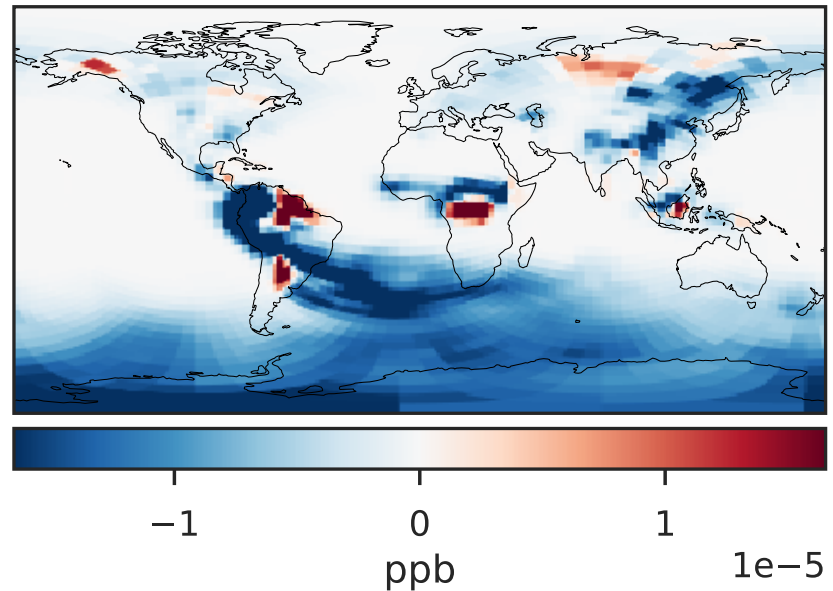
GCHP\_14.2.0 (Dev)  
c24



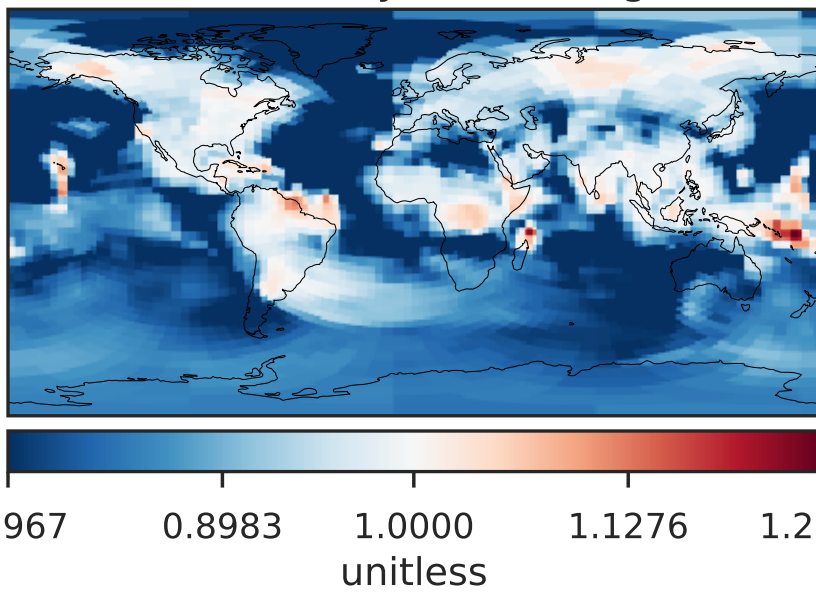
Difference (1x1.25)  
Dev - Ref, Dynamic Range



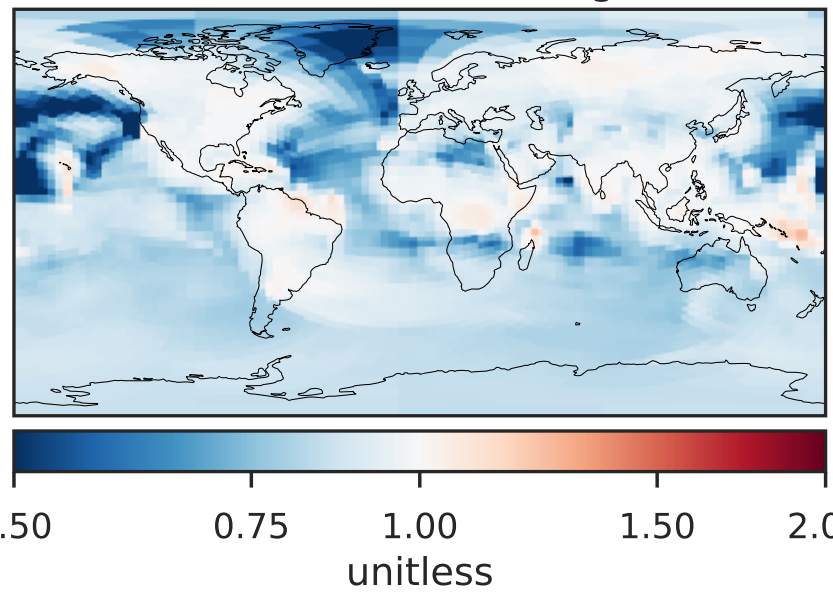
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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

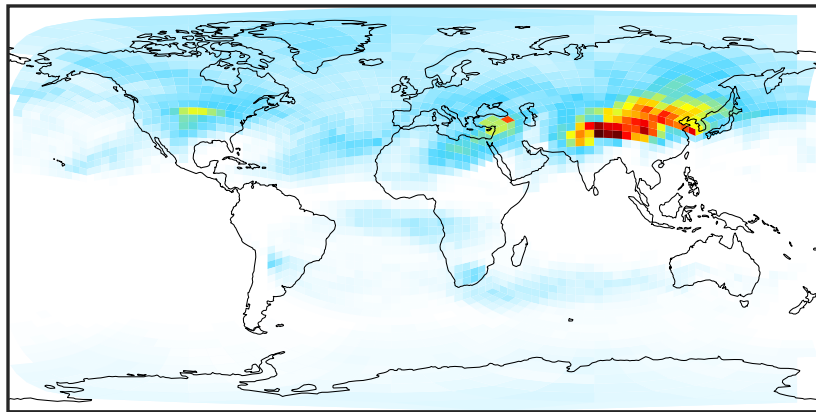


Ratio (1x1.25)  
Dev/Ref, Fixed Range



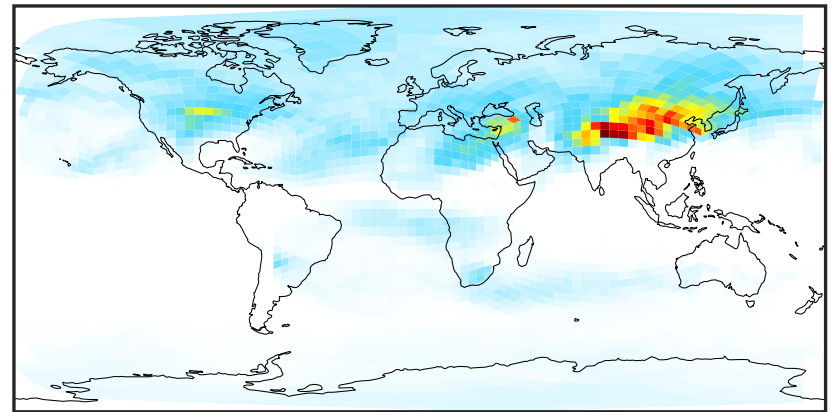
# SpeciesConcVV\_NIT (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



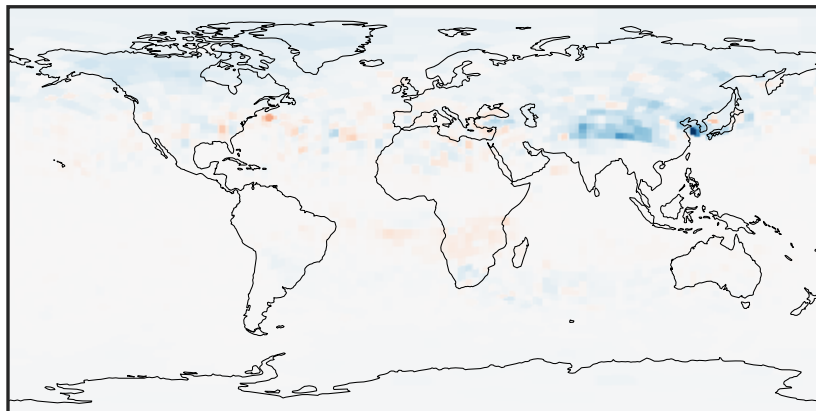
0.0000 0.0654 0.1309 0.1963 0.2617  
ppb

GCHP\_14.2.0 (Dev)  
c24



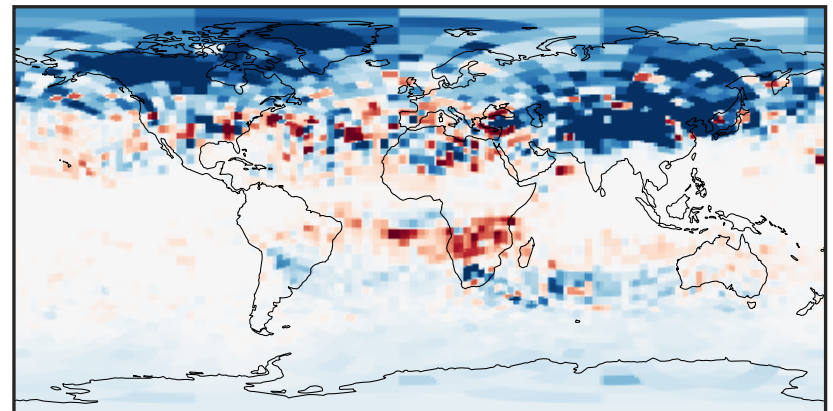
0.0000 0.0654 0.1309 0.1963 0.2617  
ppb

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



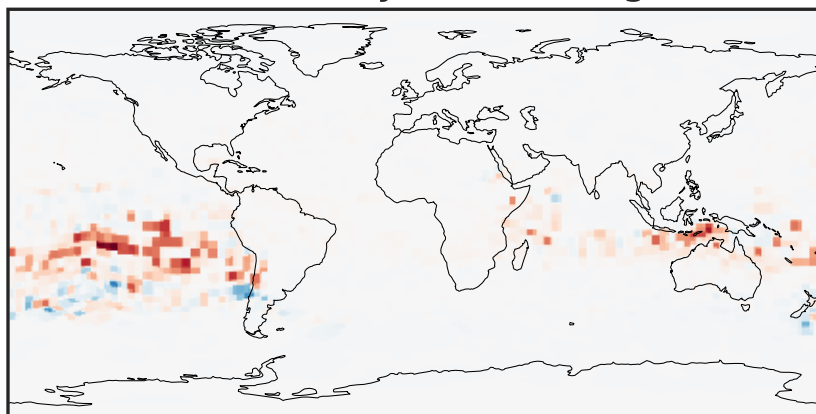
-0.02 0.00 0.02  
ppb

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



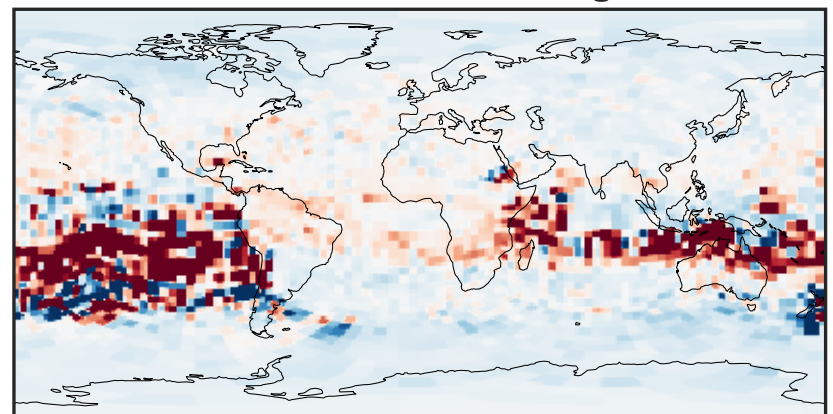
-0.002 0.000 0.002  
ppb

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



unitless

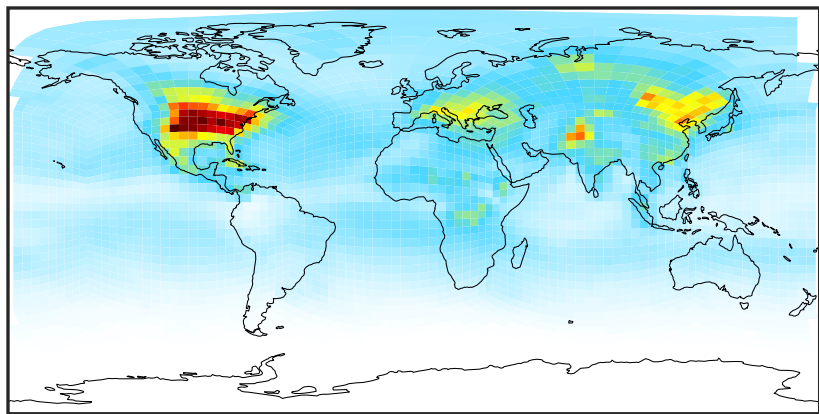
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

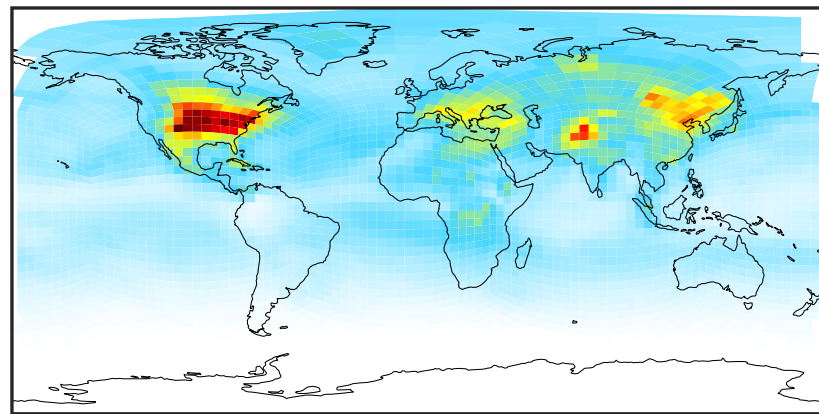
# SpeciesConcVV\_NO (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



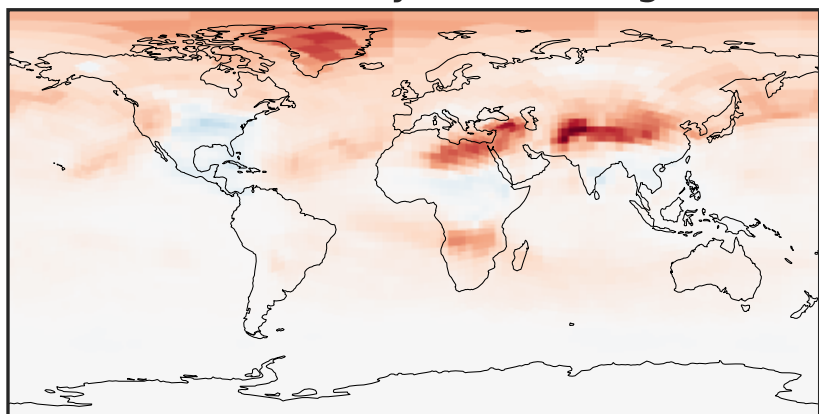
0.000 0.015 0.030 0.045  
ppb

GCHP\_14.2.0 (Dev)  
c24



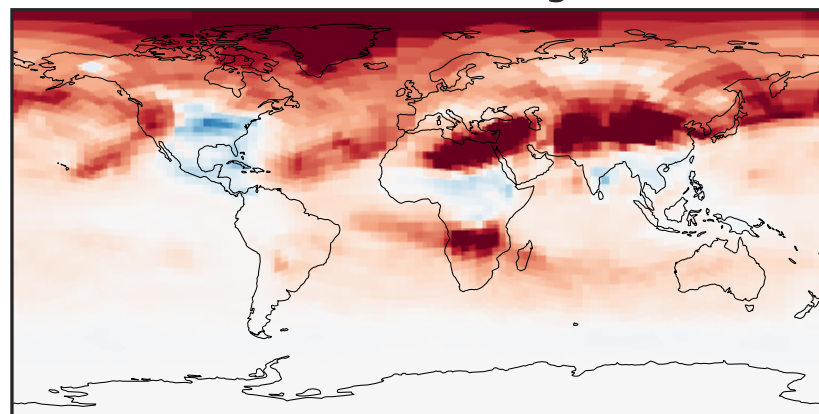
0.000 0.015 0.030 0.045  
ppb

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



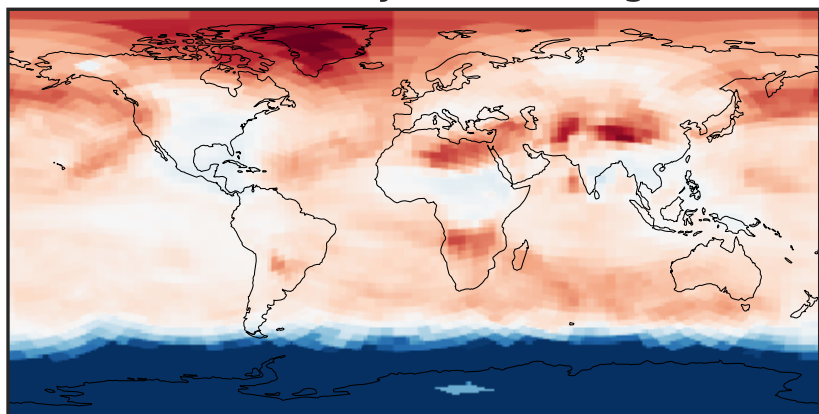
-0.005 0.000 0.005  
ppb

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



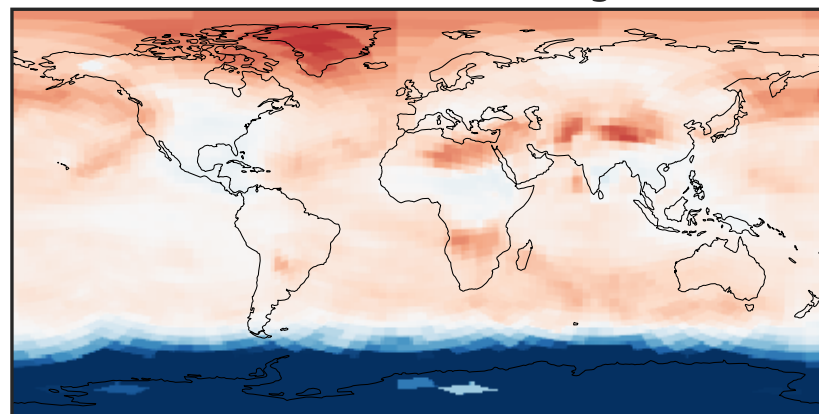
-0.002 0.000 0.002  
ppb

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



0.609 0.805 1.000 1.321 1.642  
unitless

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

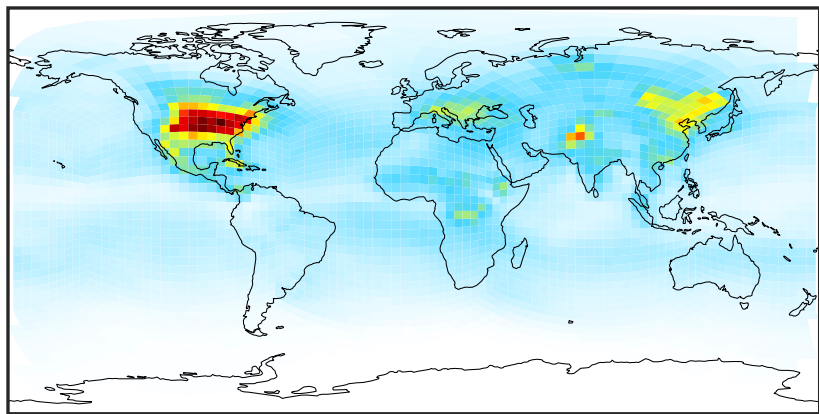


0.50 0.75 1.00 1.50 2.00  
unitless



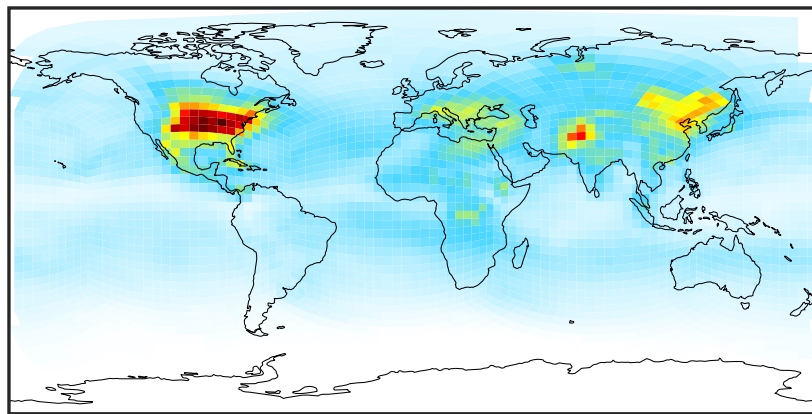
# SpeciesConcVV\_NO2 (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



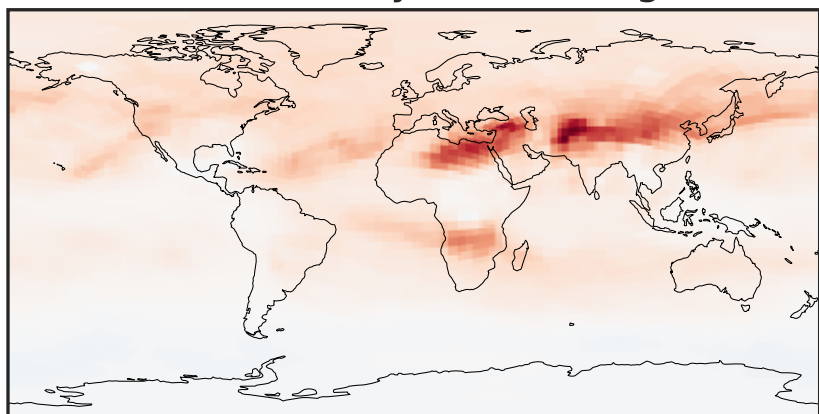
0.0000 0.0535 0.1070 0.1606 0.2141  
ppb

GCHP\_14.2.0 (Dev)  
c24



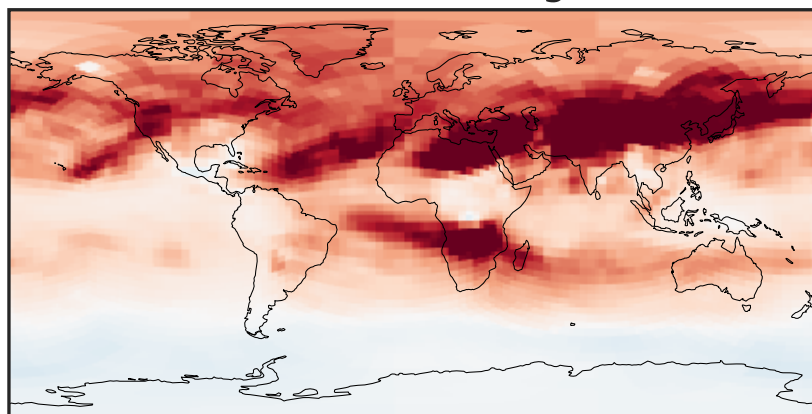
0.0000 0.0535 0.1070 0.1606 0.2141  
ppb

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



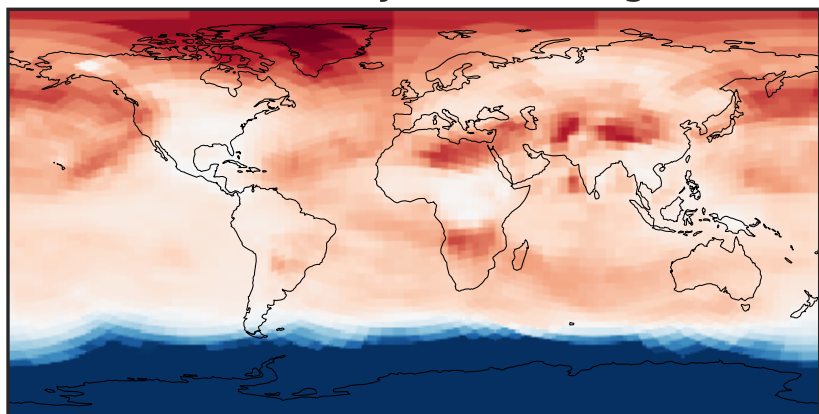
-0.02 0.00 0.02  
ppb

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



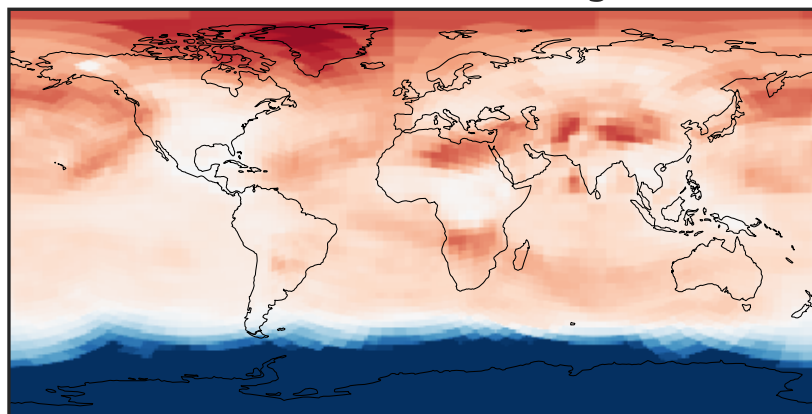
-0.005 0.000 0.005  
ppb

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



0.550 0.775 1.000 1.409 1.817  
unitless

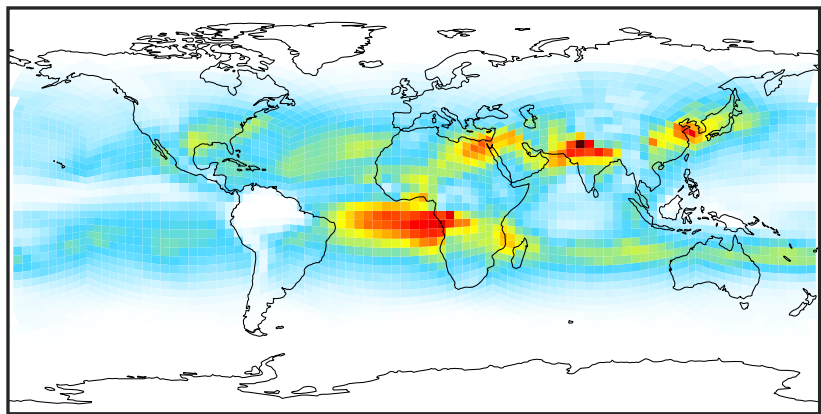
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

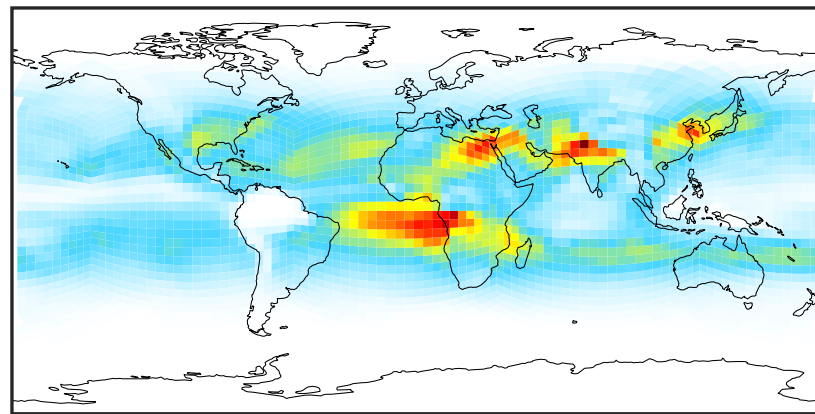
# SpeciesConcVV\_NO3 (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



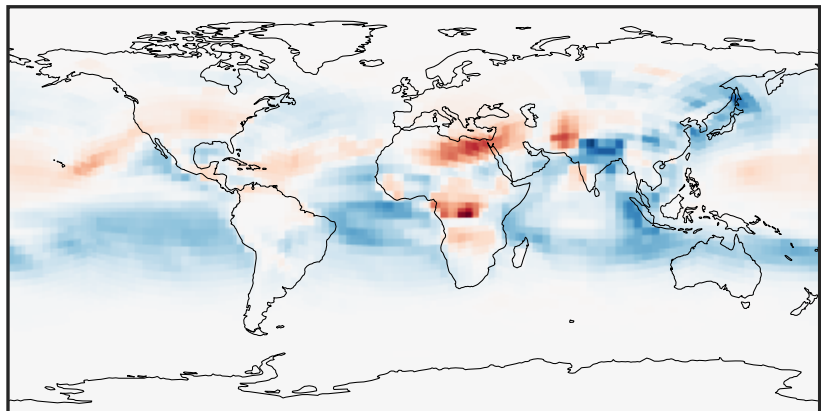
0.002 0.004 0.006  
ppb

GCHP\_14.2.0 (Dev)  
c24



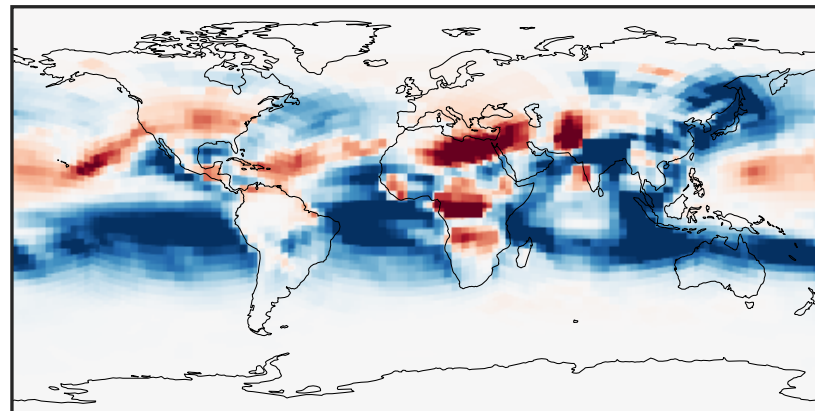
0.002 0.004 0.006  
ppb

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



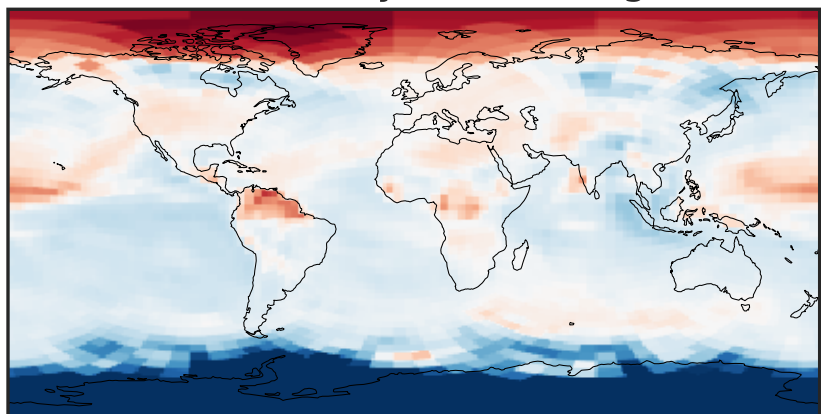
-0.0004 0.0000 0.0004  
ppb

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



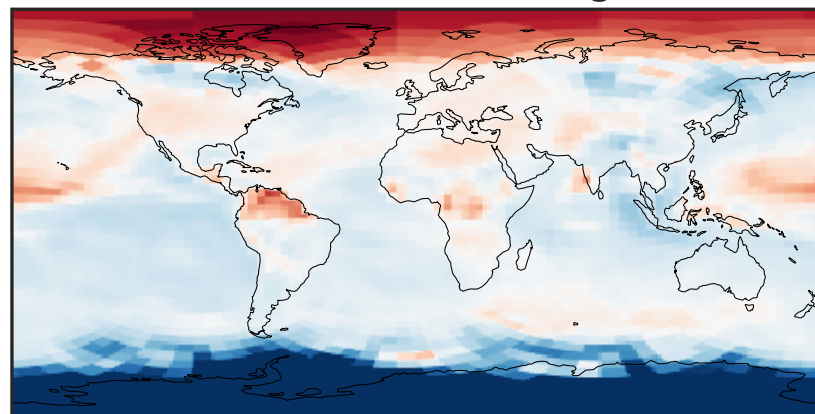
-0.00015 0.00000 0.00015  
ppb

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



0.507 0.754 1.000 1.485 1.971  
unitless

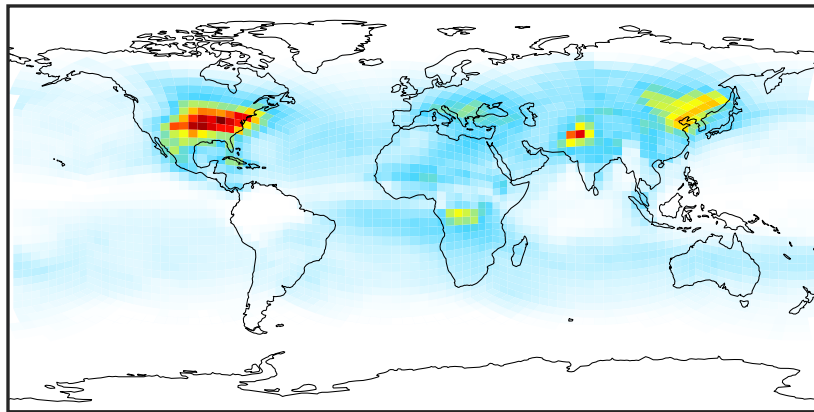
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

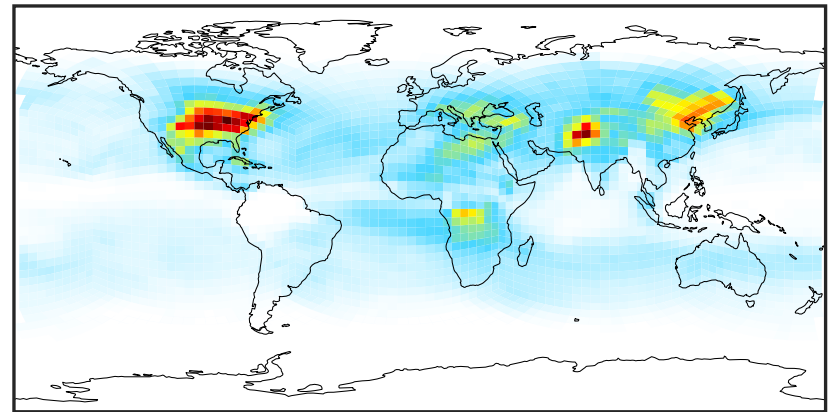
# SpeciesConcVV\_N2O5 (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



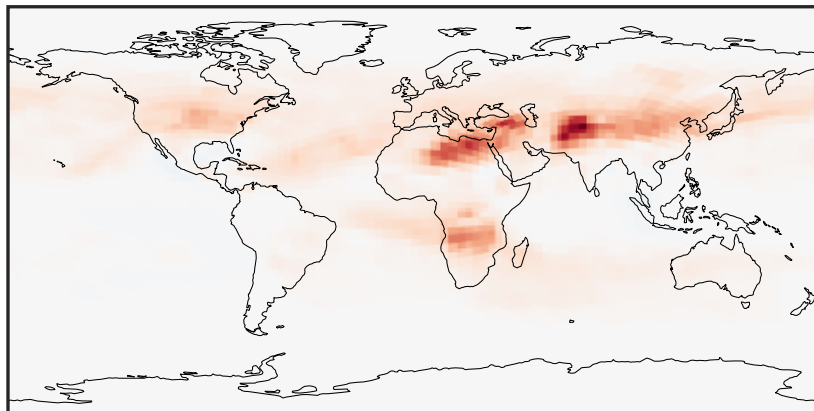
0.005 0.010 0.015  
ppb

GCHP\_14.2.0 (Dev)  
c24



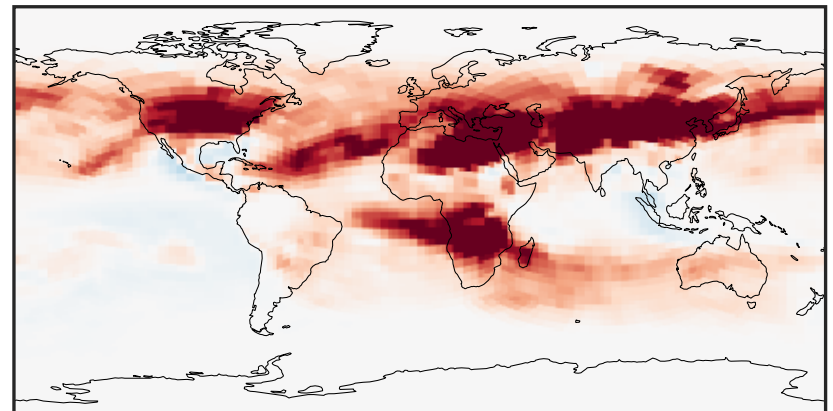
0.005 0.010 0.015  
ppb

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



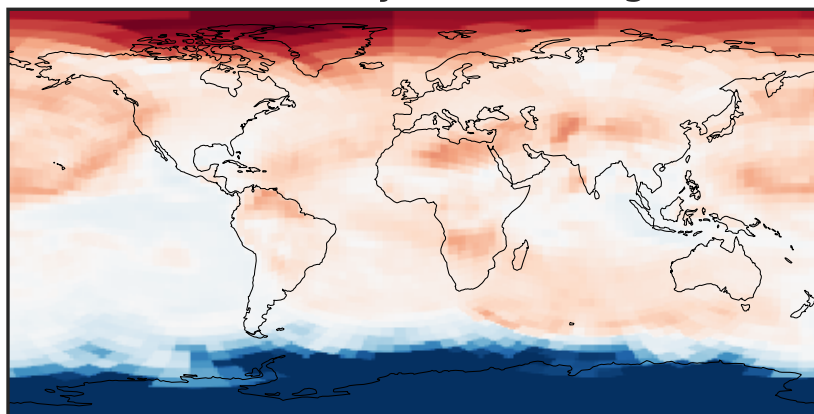
-0.0025 0.0000 0.0025  
ppb

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



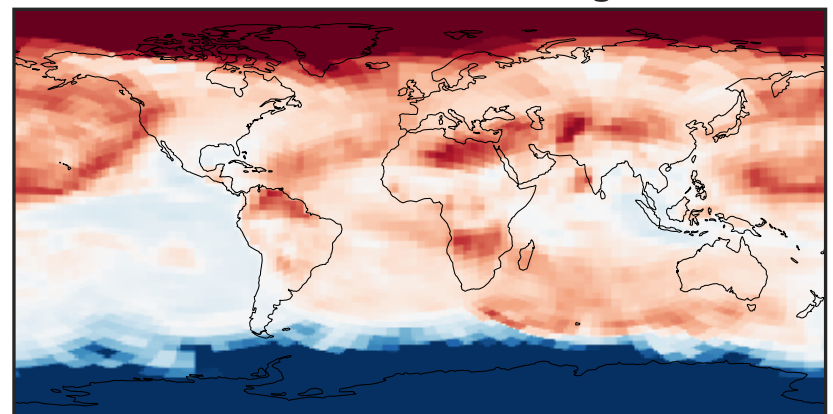
-0.0005 0.0000 0.0005  
ppb

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



0.272 0.636 1.000 2.339 3.678  
unitless

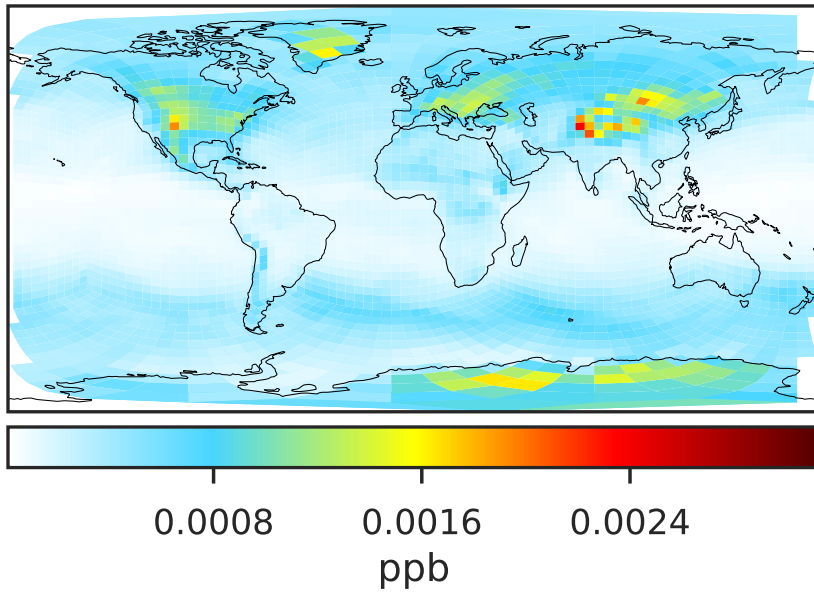
Ratio (1x1.25)  
Dev/Ref, Fixed Range



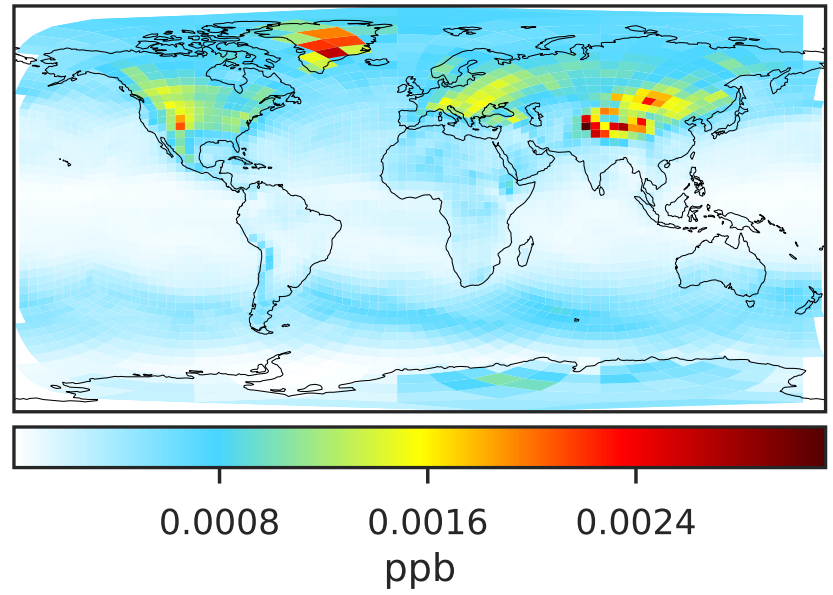
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_MPN (Jul2019)

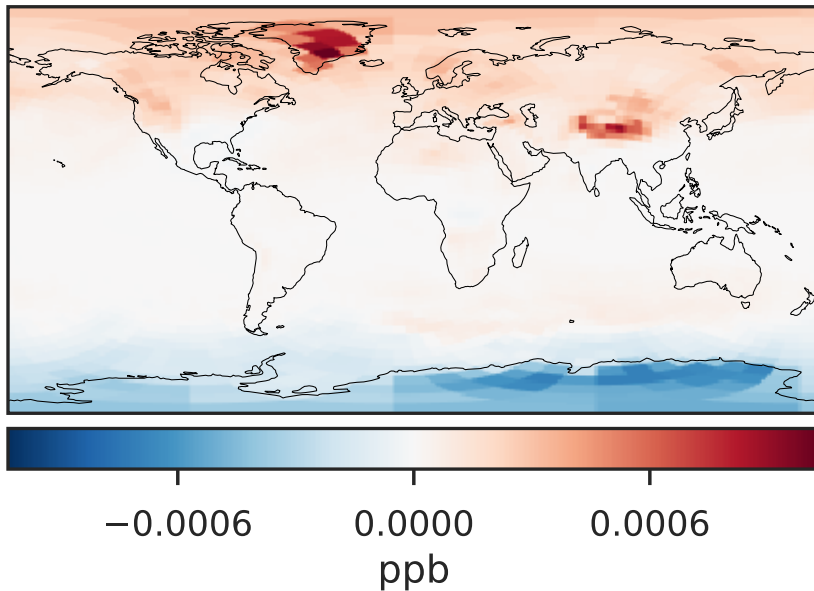
GCHP\_14.0.0 (Ref)  
c24



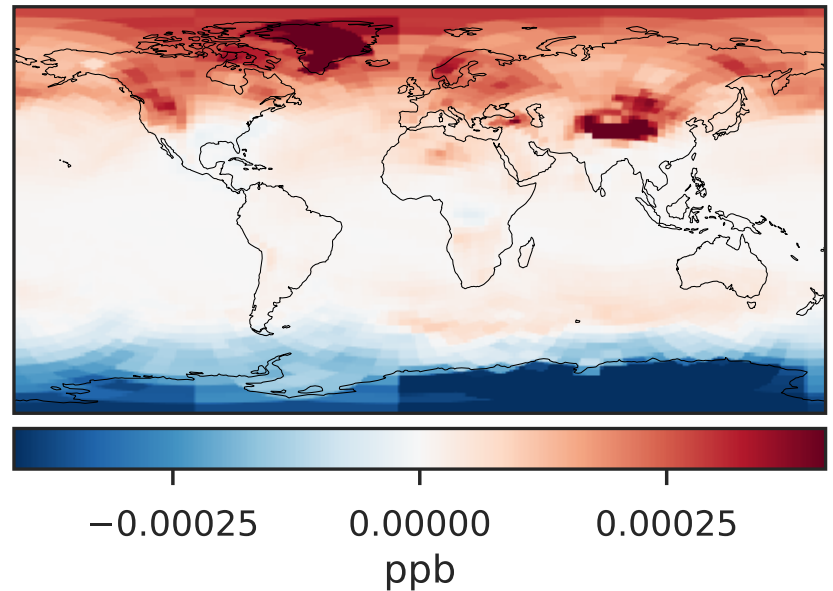
GCHP\_14.2.0 (Dev)  
c24



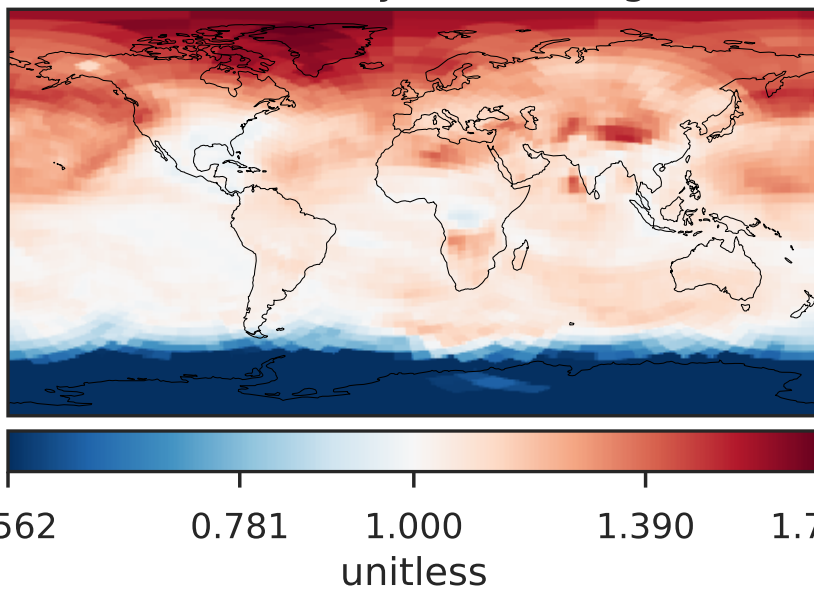
Difference (1x1.25)  
Dev - Ref, Dynamic Range



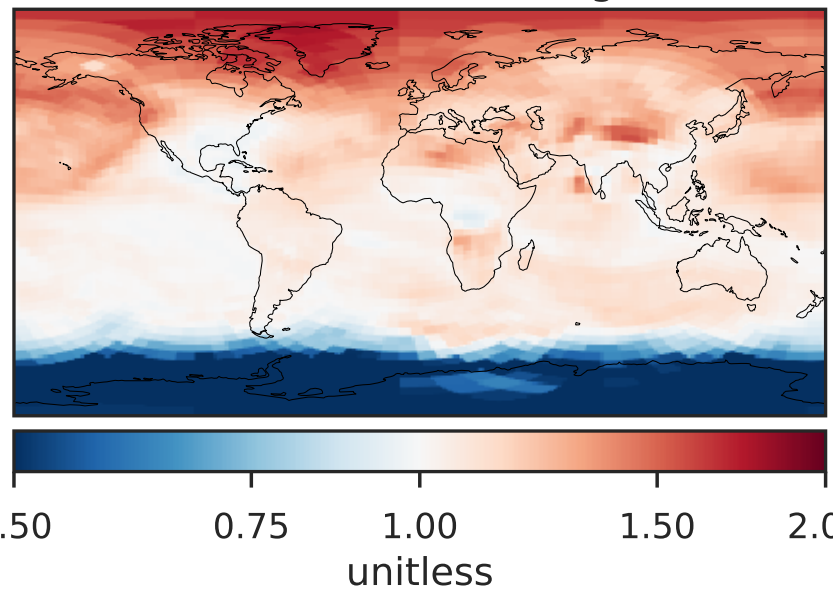
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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

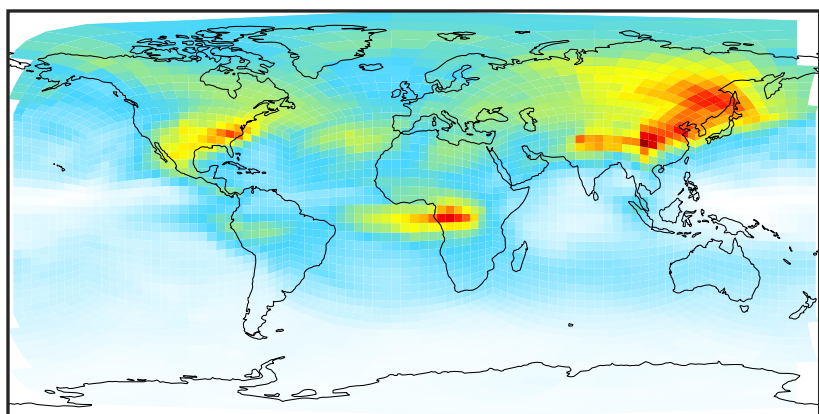


Ratio (1x1.25)  
Dev/Ref, Fixed Range



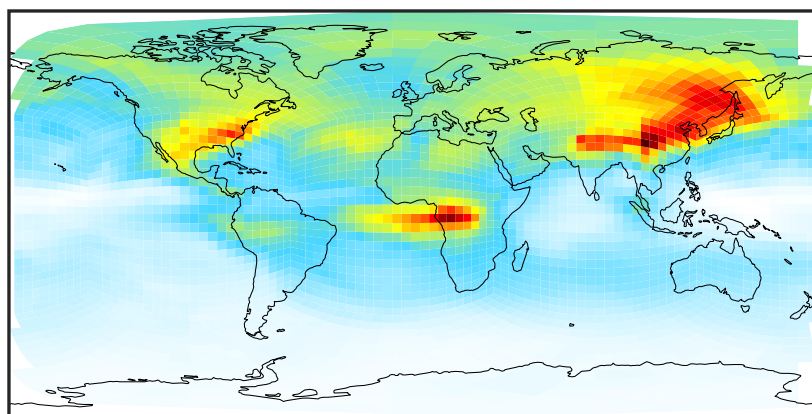
# SpeciesConcVV\_PAN (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



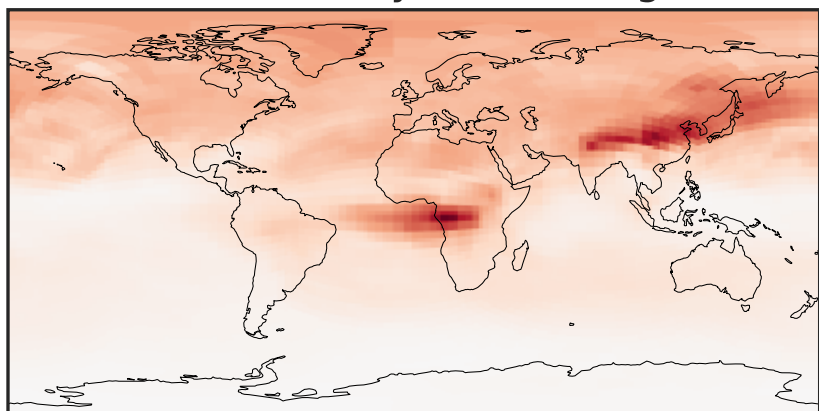
0.0100 0.1442 0.2885 0.4327 0.5870  
ppb

GCHP\_14.2.0 (Dev)  
c24



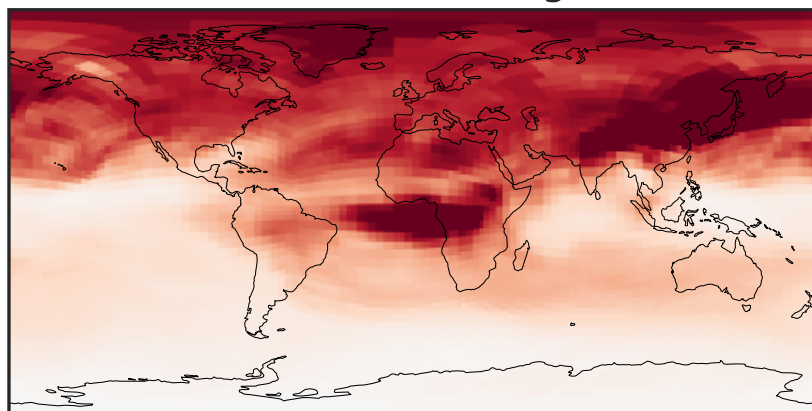
0.0100 0.1442 0.2885 0.4327 0.5870  
ppb

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



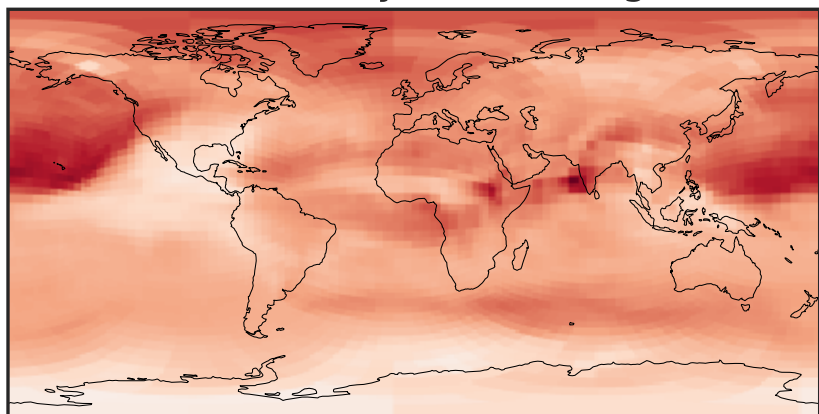
-0.0753 -0.0377 0.0000 0.0377 0.0753  
ppb

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



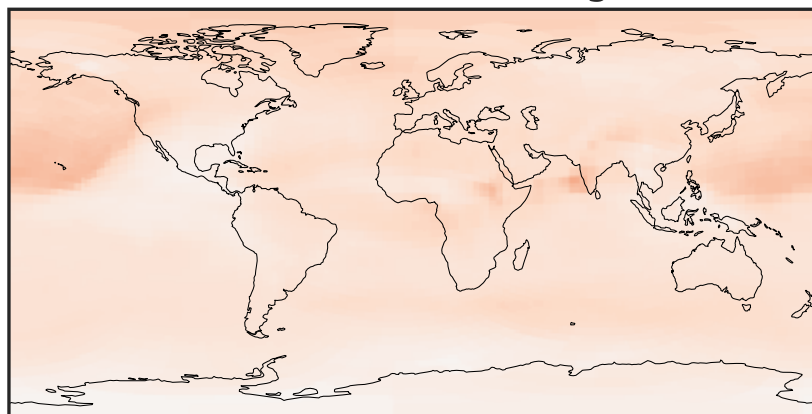
-0.02 0.00 0.02  
ppb

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



0.774 0.887 1.000 1.146 1.292  
unitless

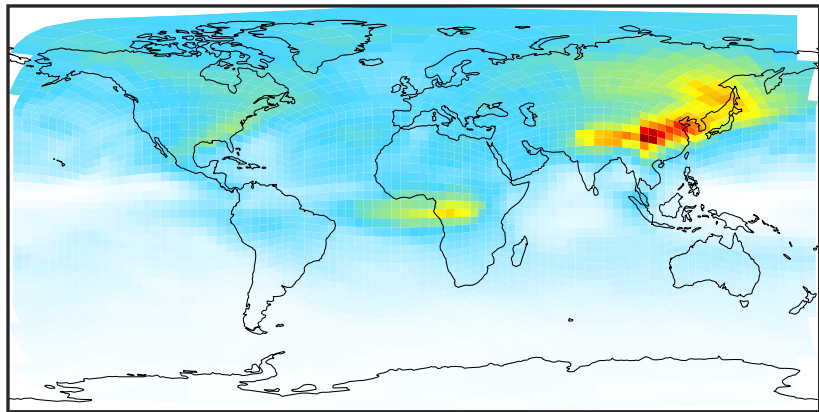
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

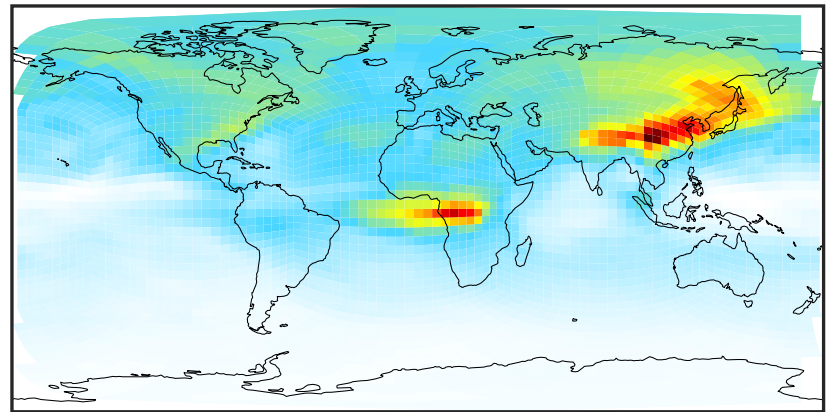
# SpeciesConcVV\_PPN (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



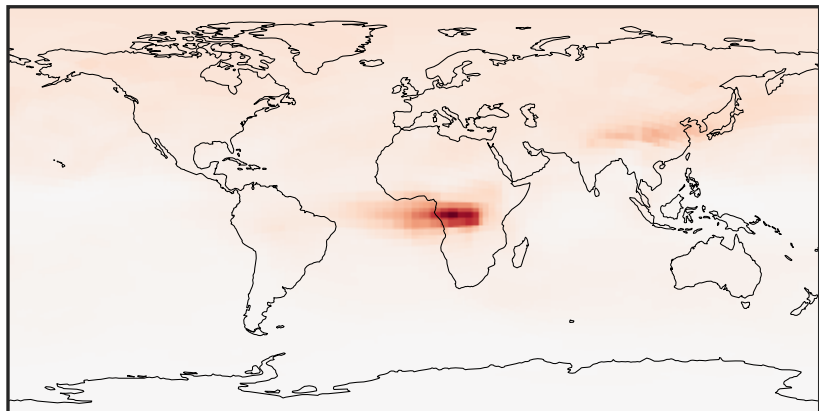
0.0014 0.0256 0.0511 0.0767 0.1036  
ppb

GCHP\_14.2.0 (Dev)  
c24



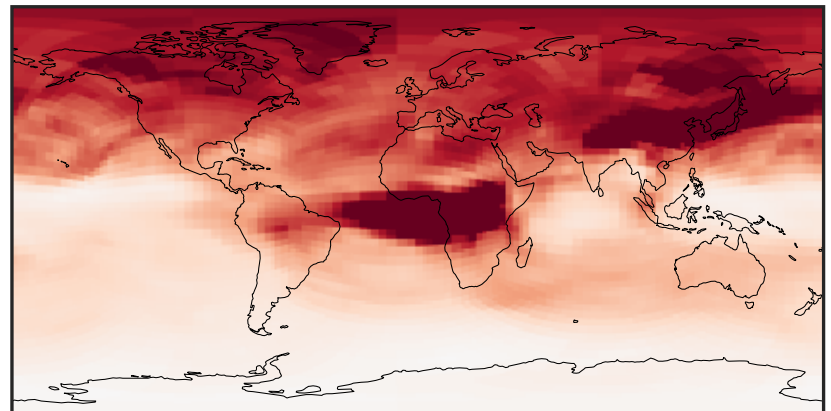
0.0014 0.0256 0.0511 0.0767 0.1036  
ppb

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



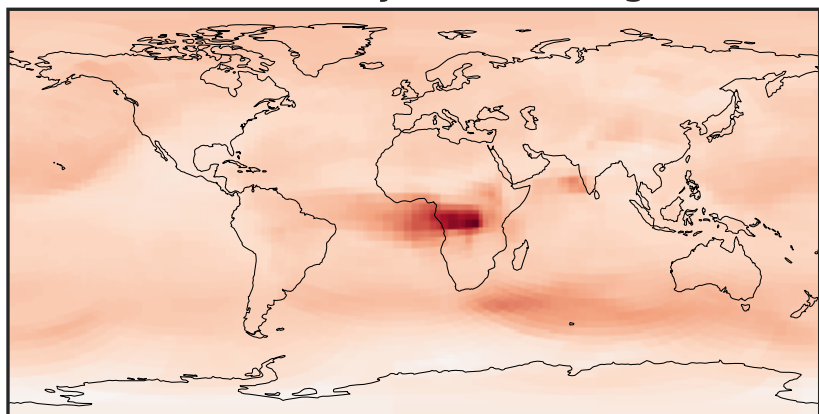
-0.02 0.00 0.02  
ppb

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



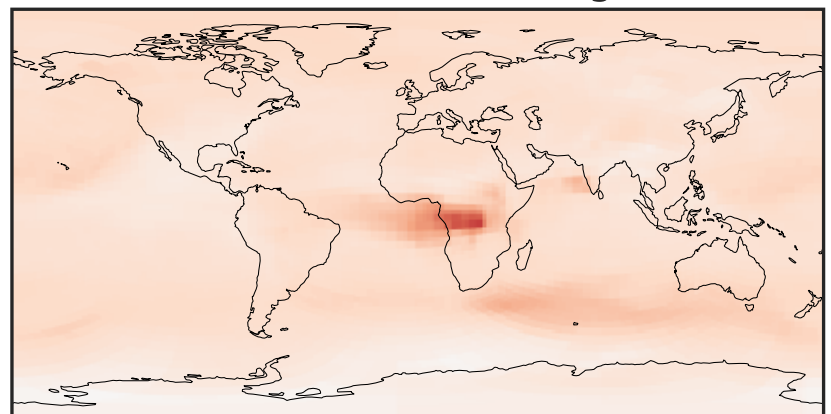
-0.0025 0.0000 0.0025  
ppb

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



0.618 0.809 1.000 1.310 1.619  
unitless

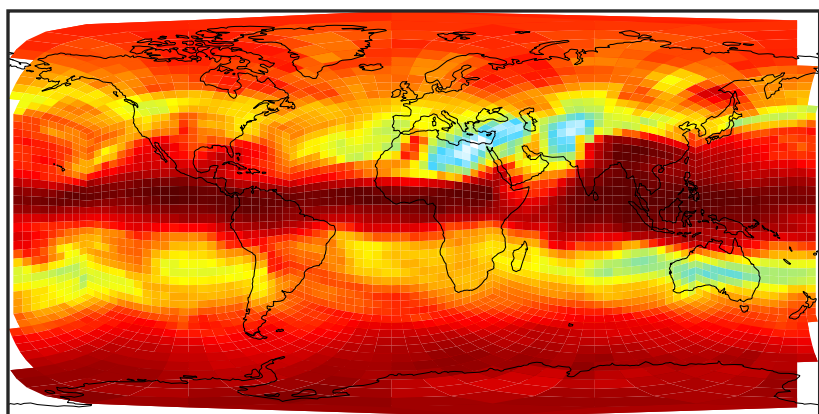
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_N2O (Jul2019)

GCHP\_14.0.0 (Ref)  
c24

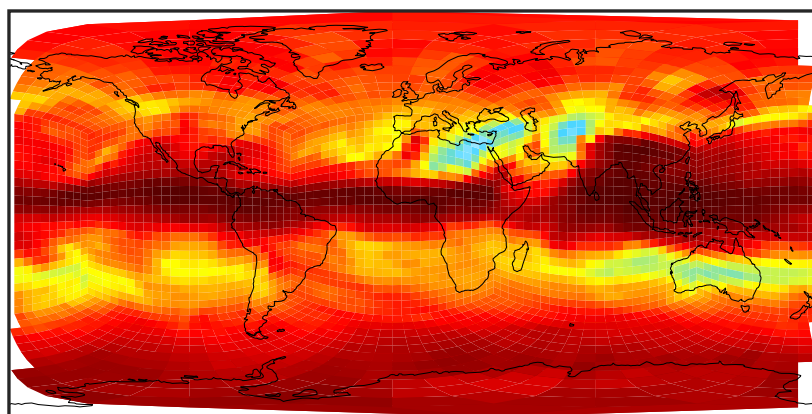


0.8

329.2

ppb

GCHP\_14.2.0 (Dev)  
c24

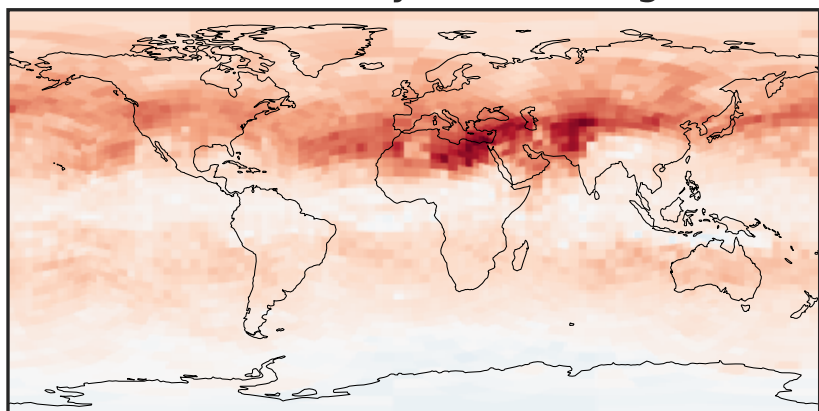


0.8

329.2

ppb

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



-0.1532

-0.0766

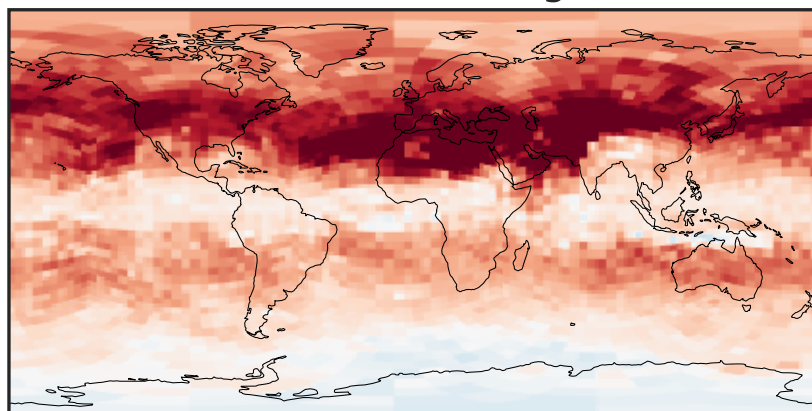
0.0000

0.0766

0.1532

ppb

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



-0.0753

-0.0377

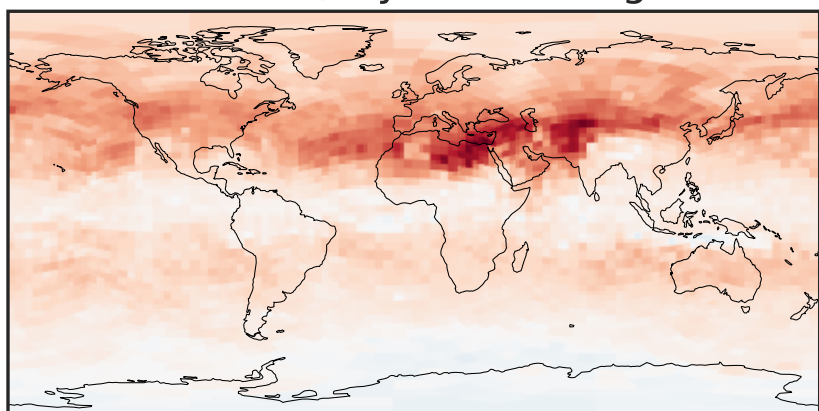
0.0000

0.0377

0.0753

ppb

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



0.9995349

1.000000

1.0004653

unitless

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



0.50

0.75

1.00

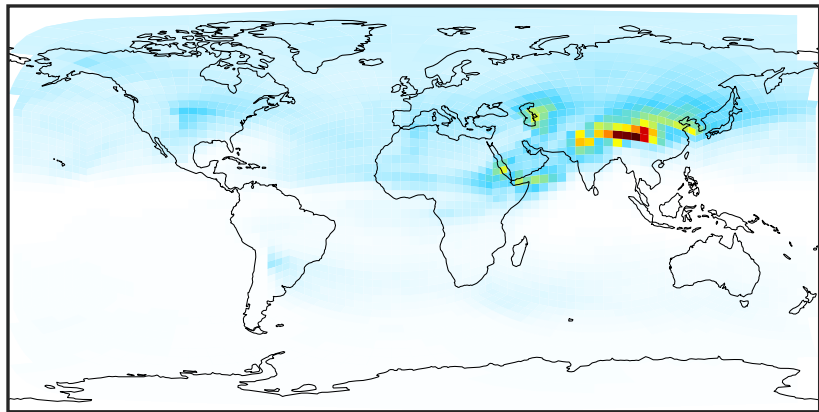
1.50

2.00

unitless

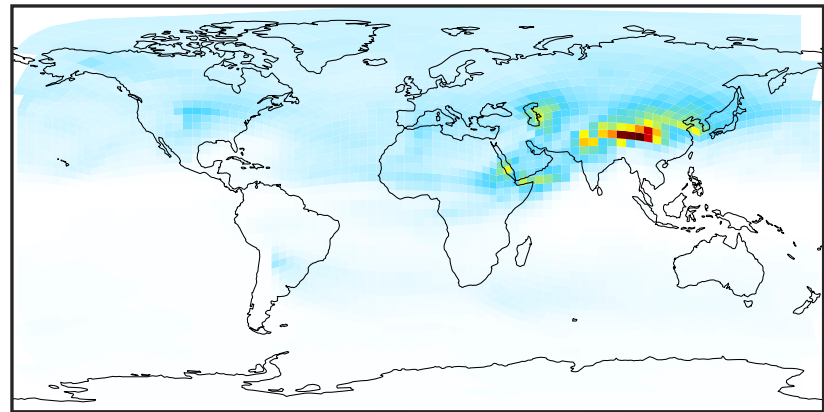
# SpeciesConcVV\_NHx (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



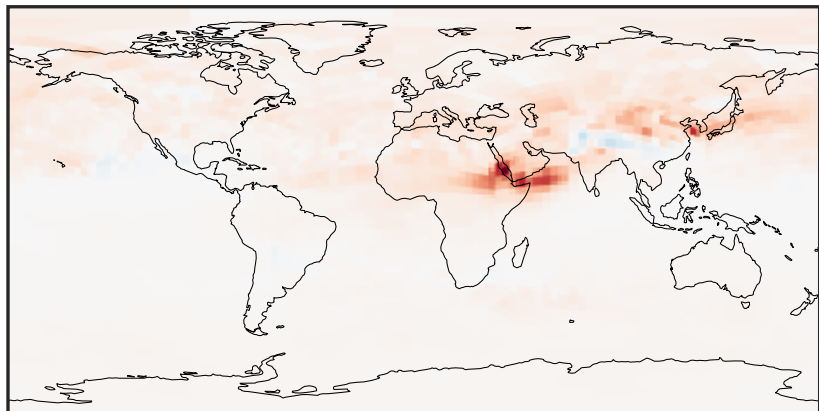
0.001 0.271 0.541 0.812 1.083  
ppb

GCHP\_14.2.0 (Dev)  
c24



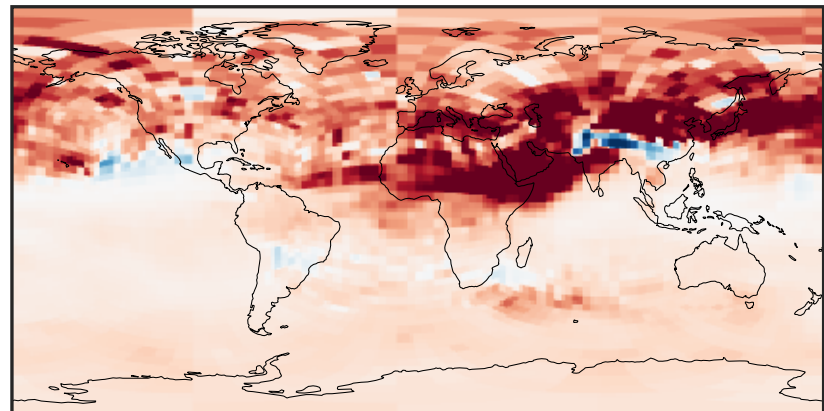
0.001 0.271 0.541 0.812 1.083  
ppb

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



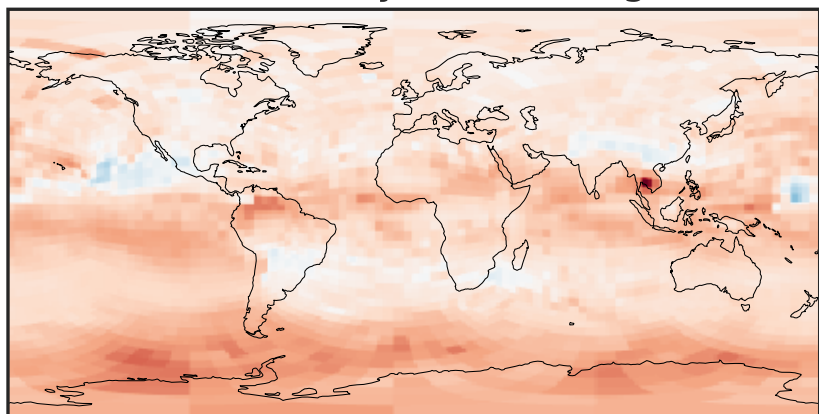
-0.008 0.000 0.008  
ppb

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



-0.001 0.000 0.001  
ppb

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



0.9226 0.9613 1.0000 1.0420 1.0839  
unitless

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

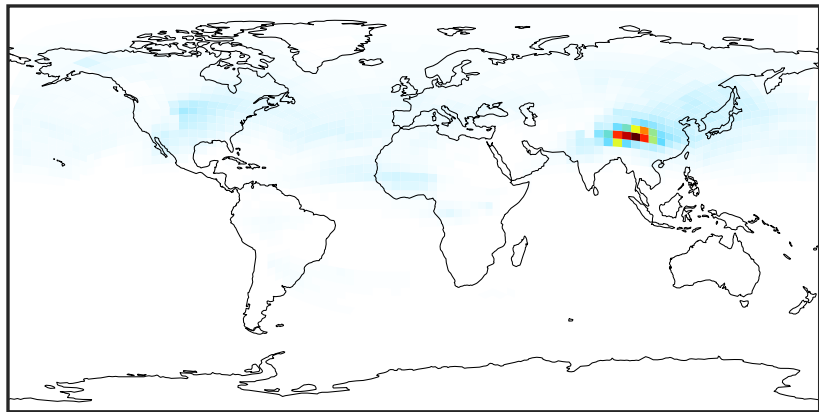


0.50 0.75 1.00 1.50 2.00  
unitless



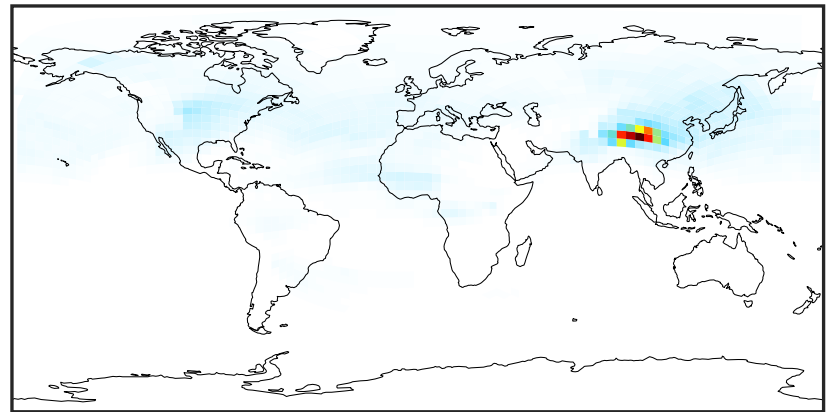
# SpeciesConcVV\_NH3 (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



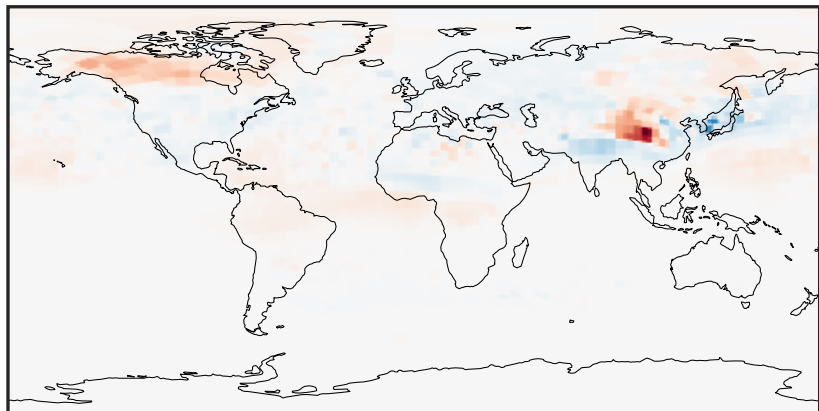
0.0000 0.2191 0.4383 0.6574 0.8765  
ppb

GCHP\_14.2.0 (Dev)  
c24



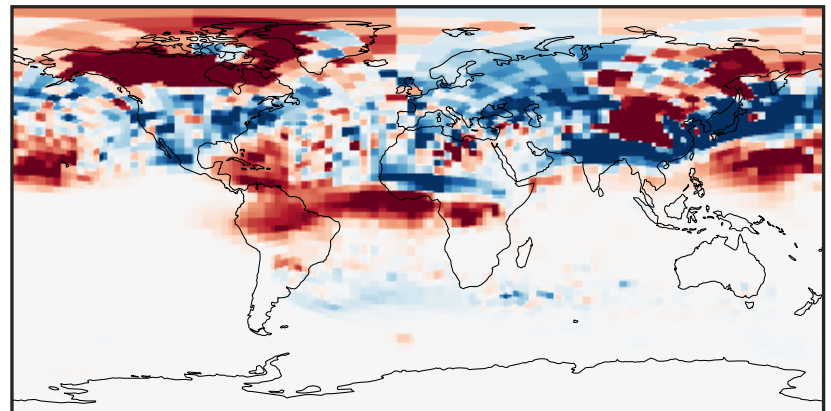
0.0000 0.2191 0.4383 0.6574 0.8765  
ppb

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



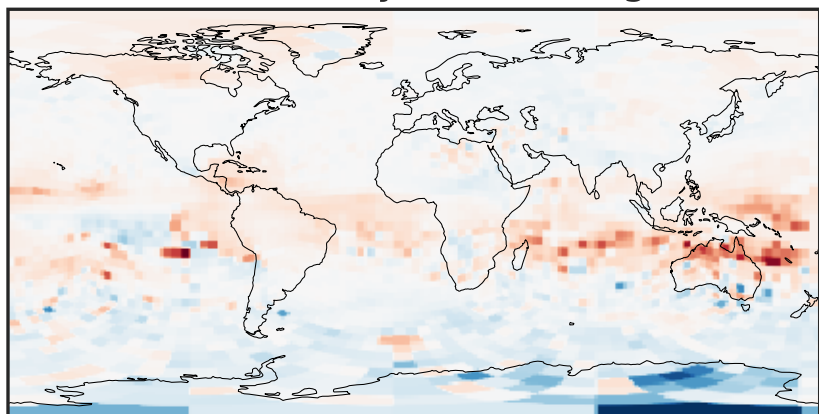
-0.008 0.000 0.008  
ppb

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



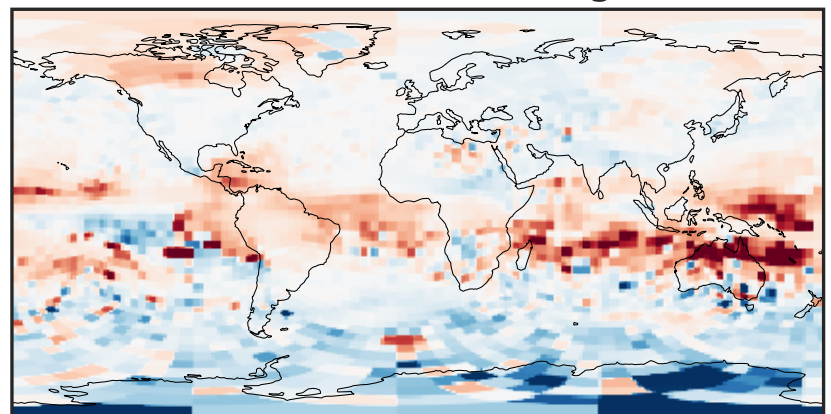
-0.0006 0.0000 0.0006  
ppb

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



0.203 0.602 1.000 2.958 4.916  
unitless

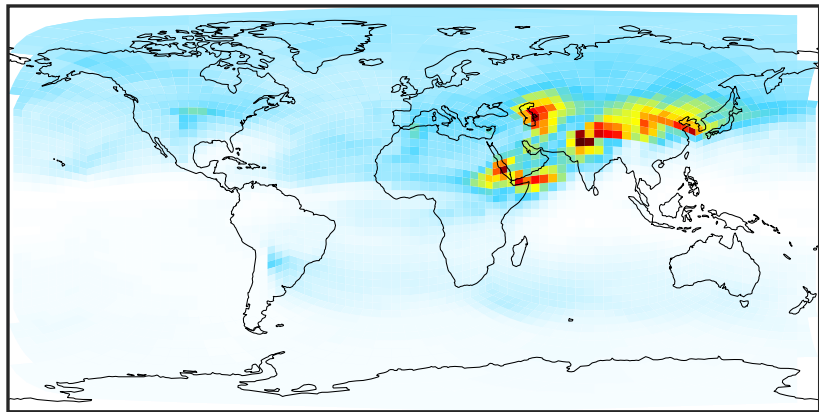
Ratio (1x1.25)  
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00  
unitless

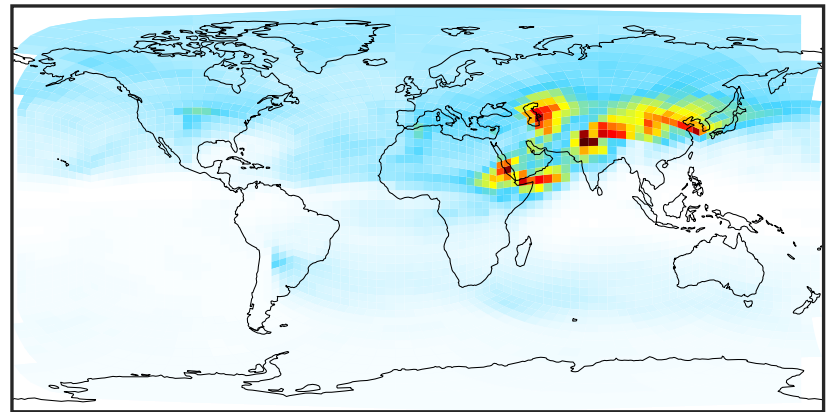
# SpeciesConcVV\_NH4 (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



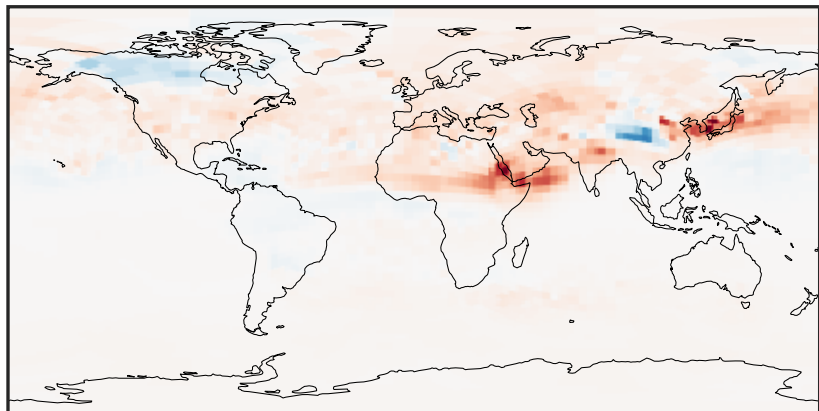
0.0006 0.1368 0.2735 0.4103 0.5476  
ppb

GCHP\_14.2.0 (Dev)  
c24



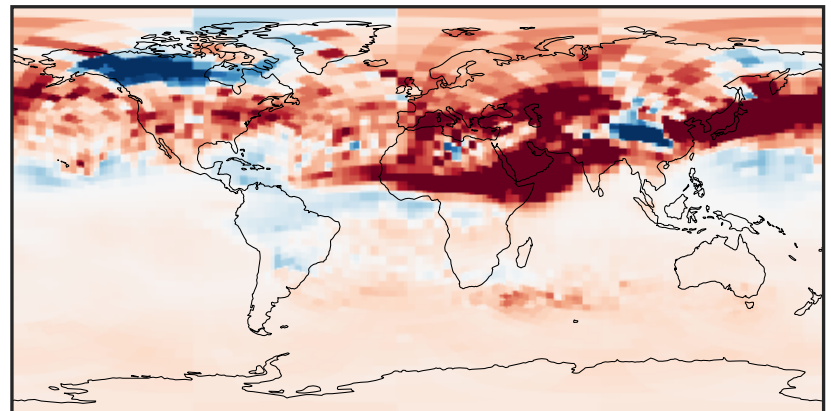
0.0006 0.1368 0.2735 0.4103 0.5476  
ppb

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



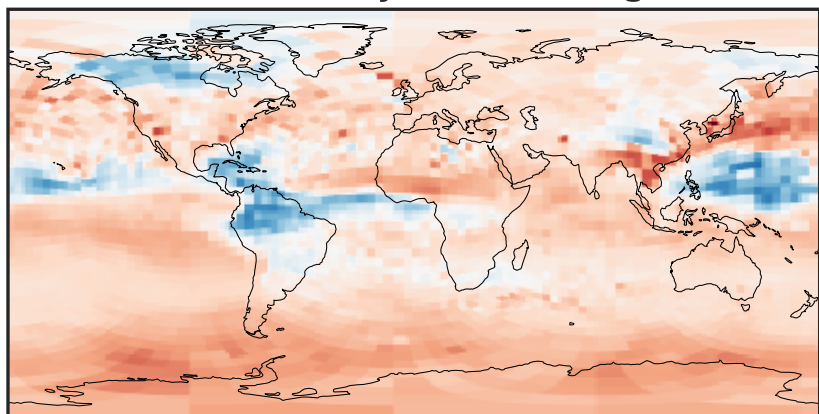
-0.008 0.000 0.008  
ppb

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



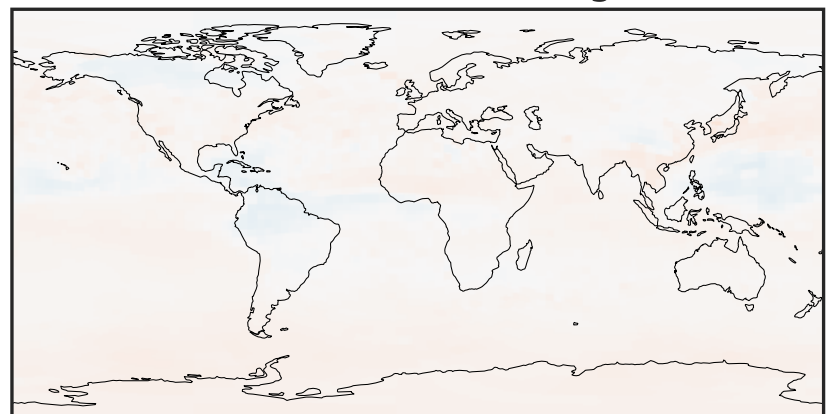
-0.0015 0.0000 0.0015  
ppb

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



0.9170 0.9585 1.0000 1.0452 1.0905  
unitless

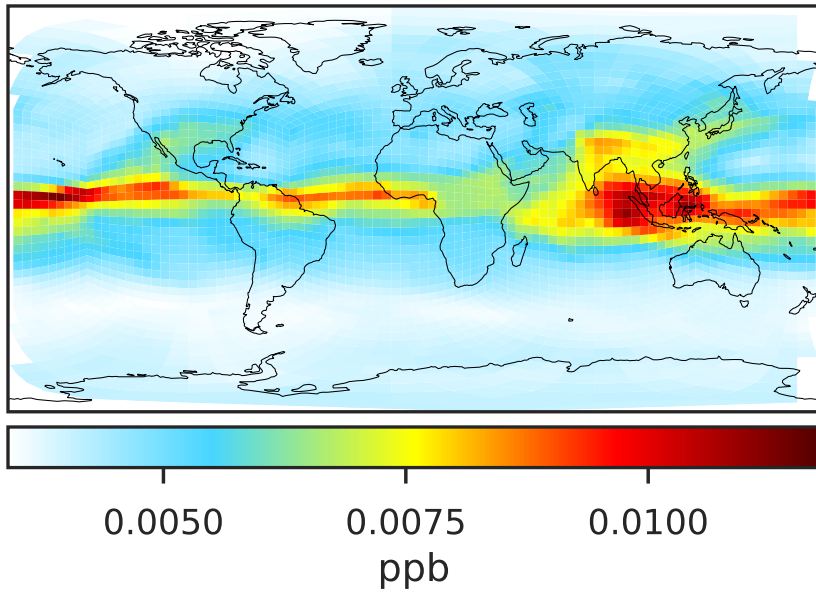
Ratio (1x1.25)  
Dev/Ref, Fixed Range



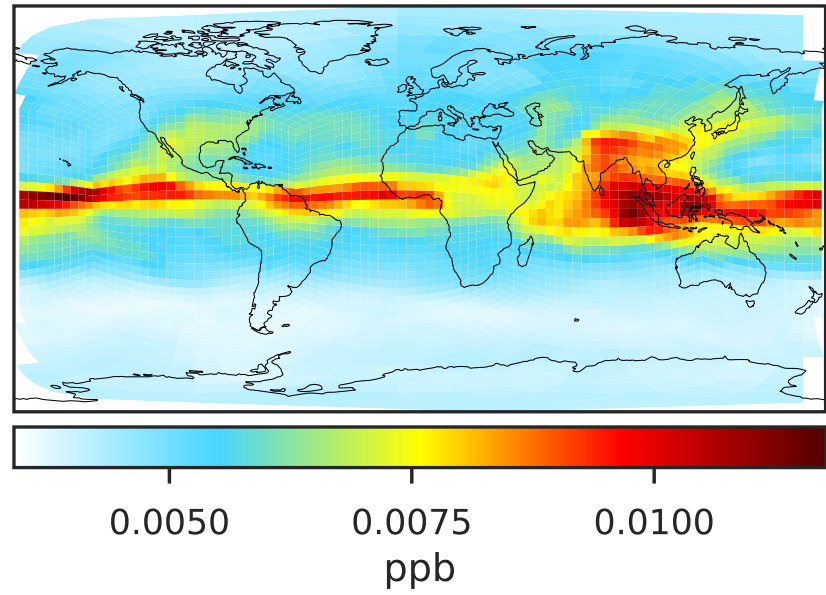
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVW\_MENO3 (Jul2019)

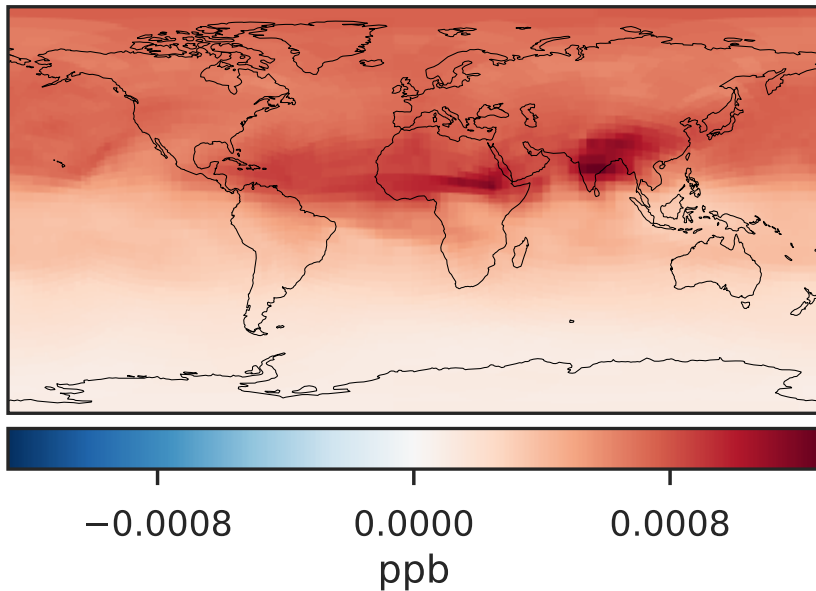
GCHP\_14.0.0 (Ref)  
c24



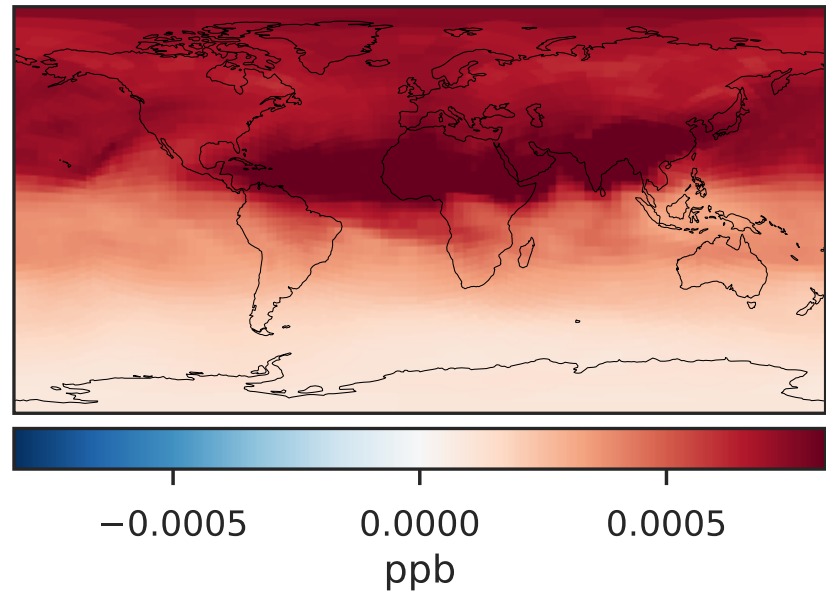
GCHP\_14.2.0 (Dev)  
c24



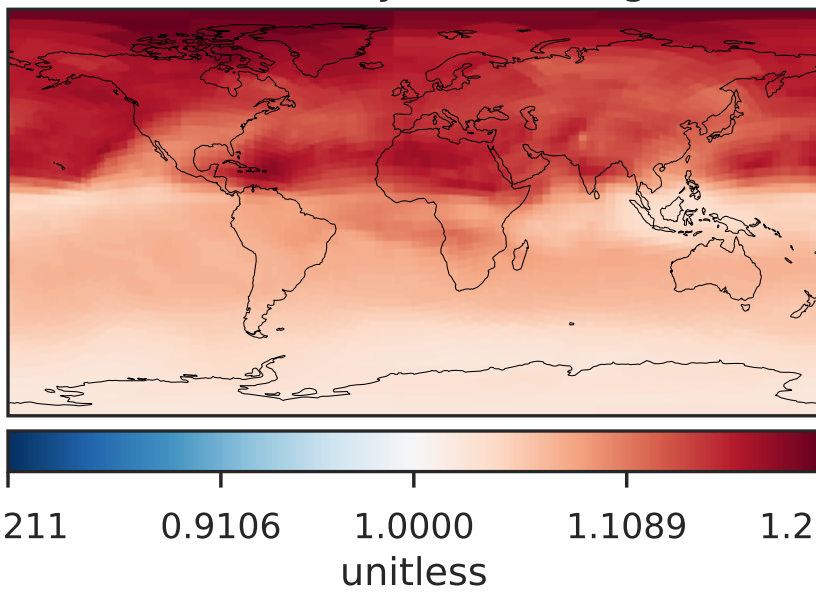
Difference (1x1.25)  
Dev - Ref, Dynamic Range



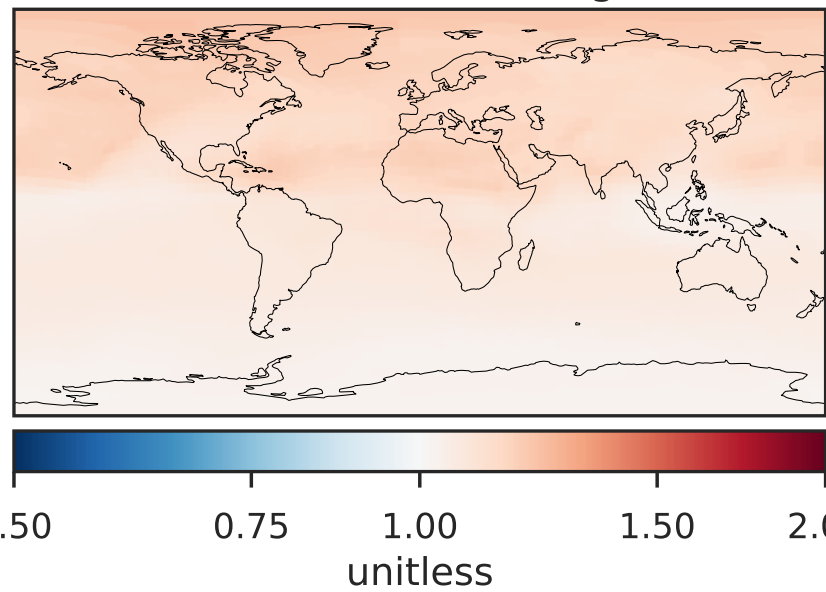
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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



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

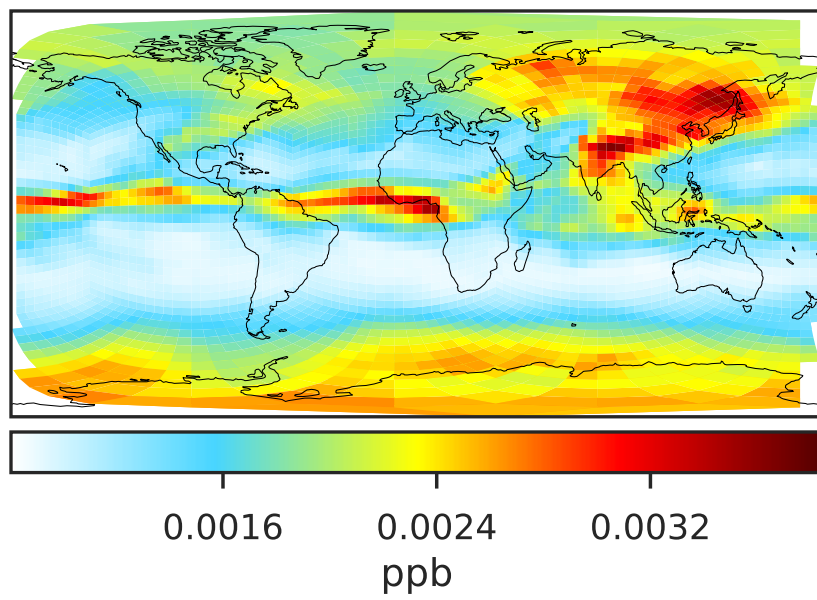


0.8211 0.9106 1.0000 1.1089 1.2179  
unitless

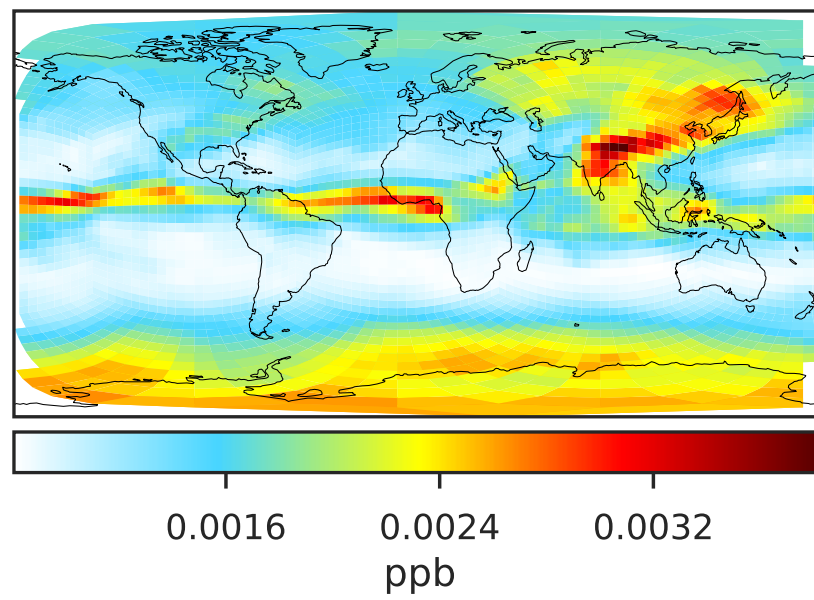
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_ETNO3 (Jul2019)

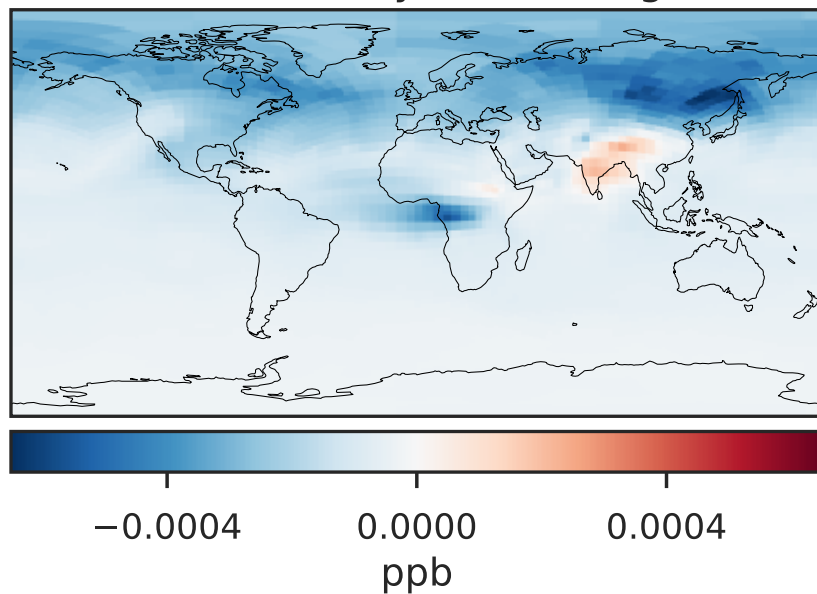
GCHP\_14.0.0 (Ref)  
c24



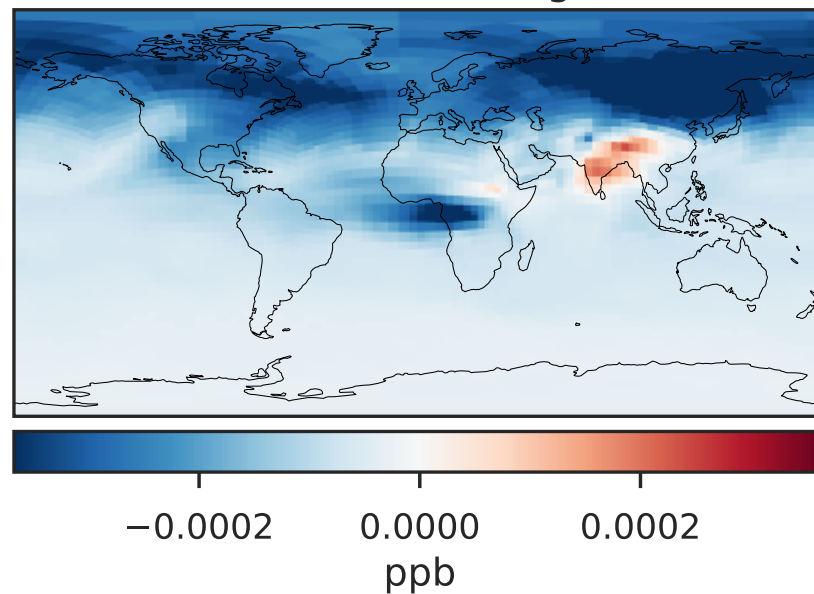
GCHP\_14.2.0 (Dev)  
c24



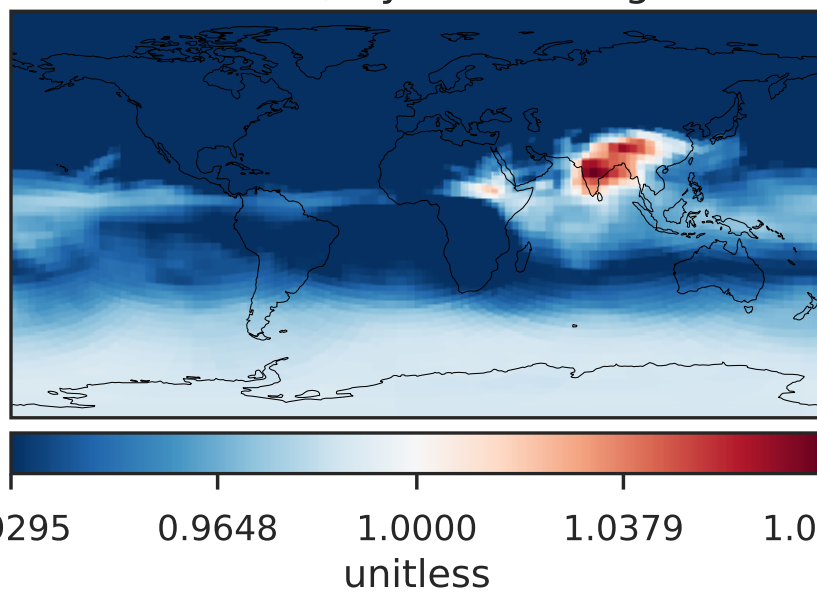
Difference (1x1.25)  
Dev - Ref, Dynamic Range



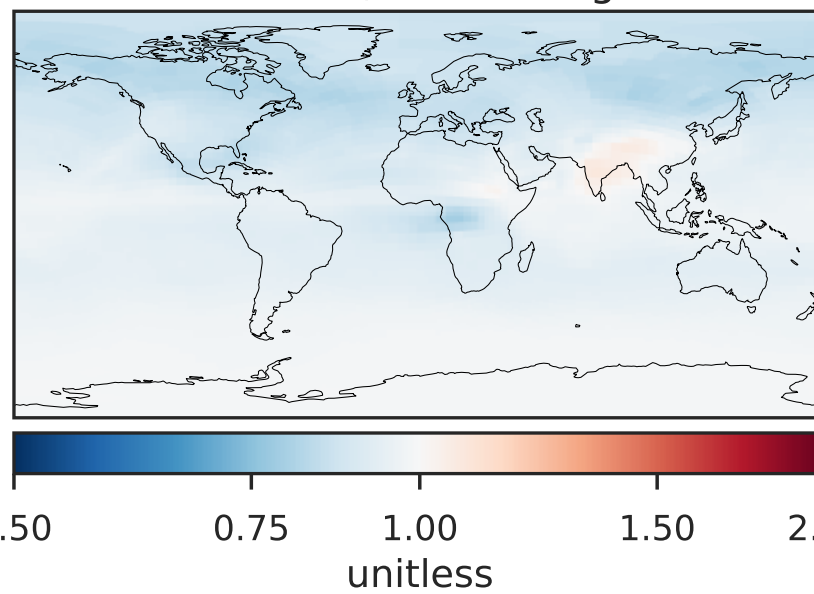
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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

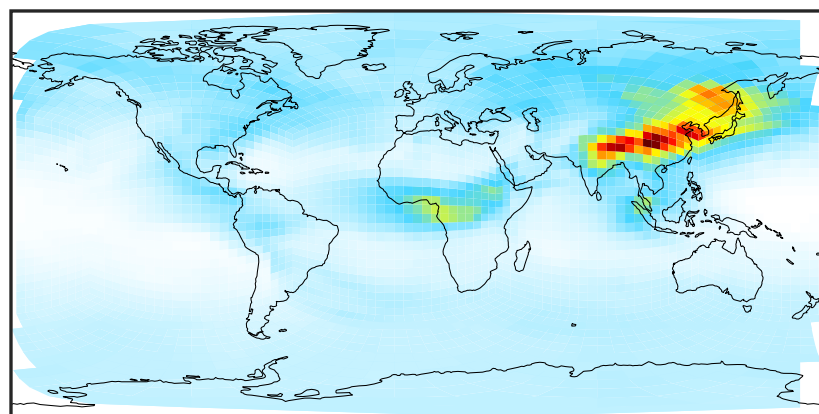


Ratio (1x1.25)  
Dev/Ref, Fixed Range



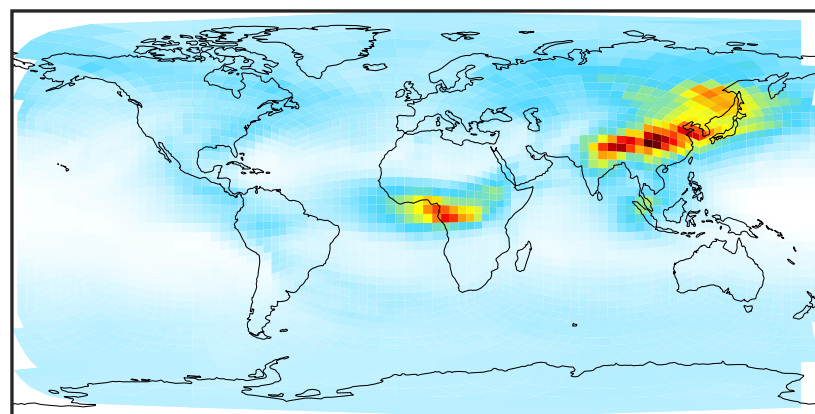
# SpeciesConcVV\_IPRNO3 (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



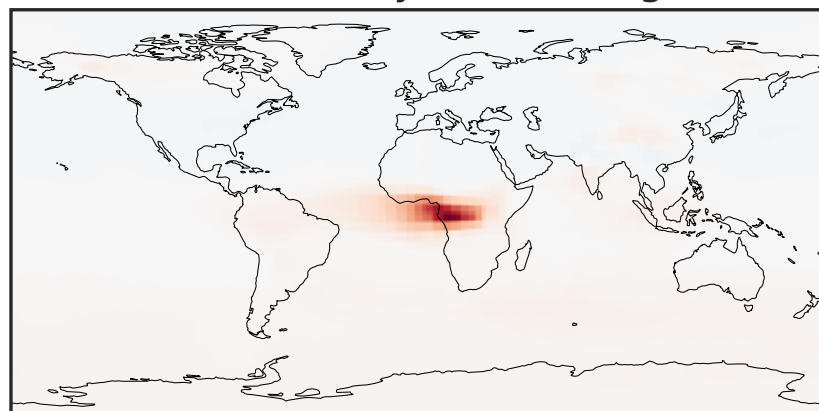
0.004 0.008 0.012  
ppb

GCHP\_14.2.0 (Dev)  
c24



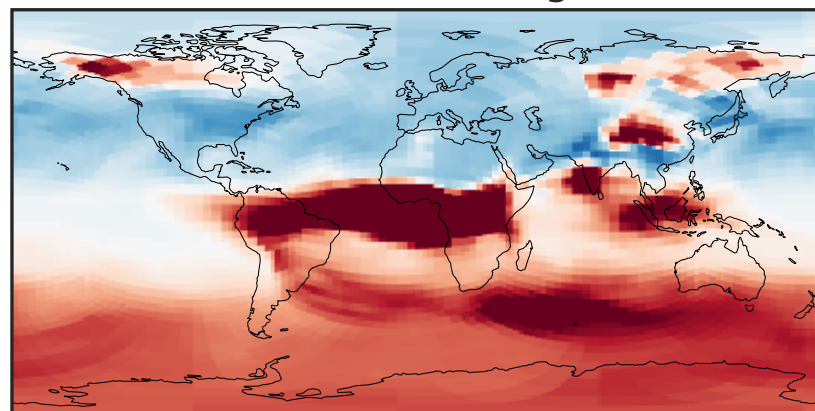
0.004 0.008 0.012  
ppb

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



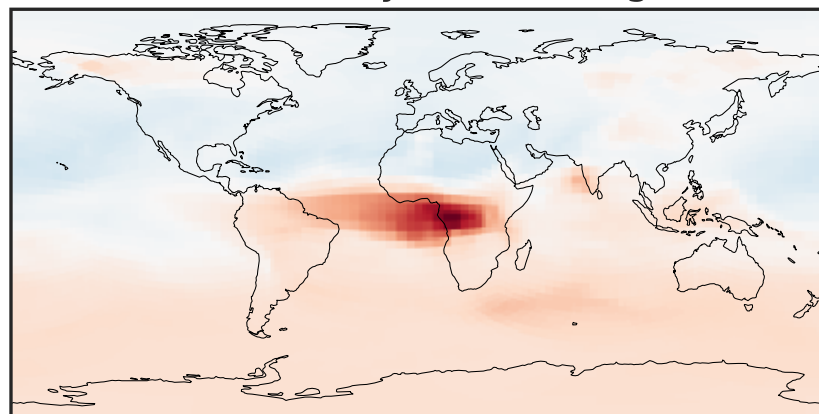
-0.0025 0.0000 0.0025  
ppb

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



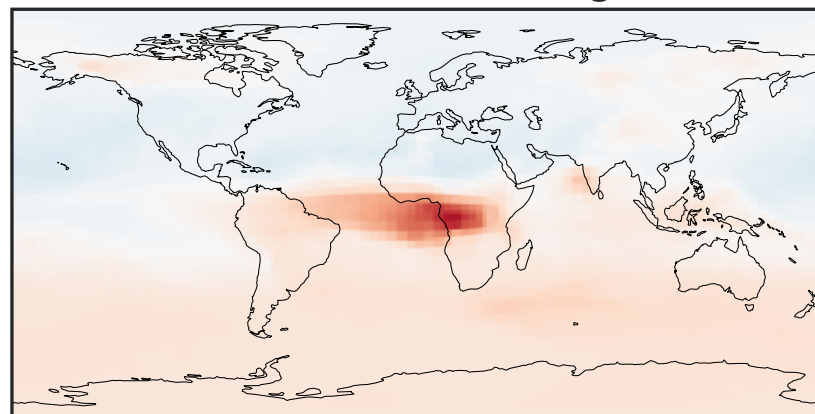
-0.0001 0.0000 0.0001  
ppb

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



0.570 0.785 1.000 1.377 1.754  
unitless

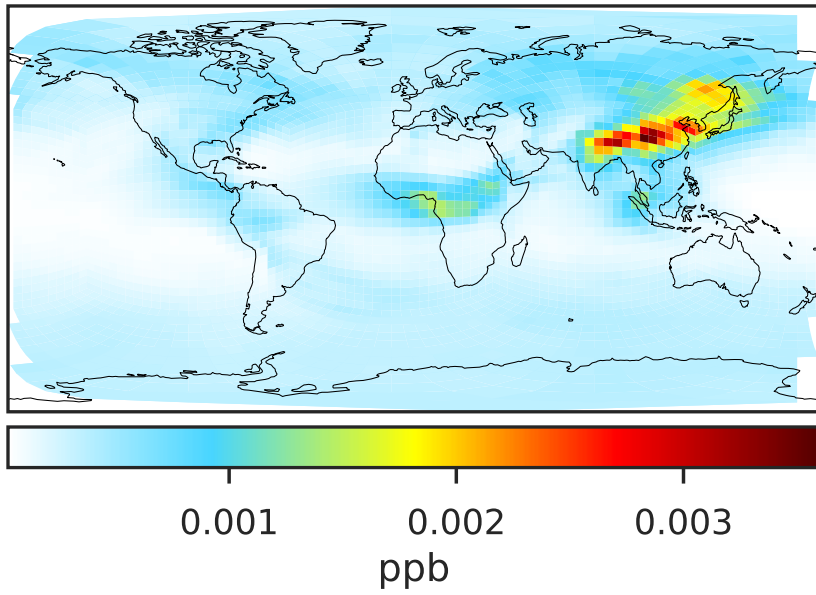
Ratio (1x1.25)  
Dev/Ref, Fixed Range



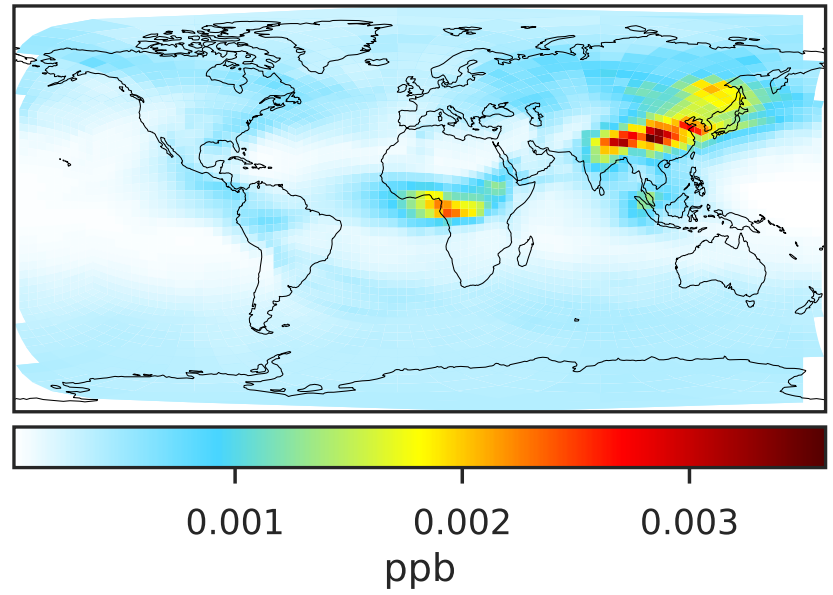
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVV\_NPRNO3 (Jul2019)

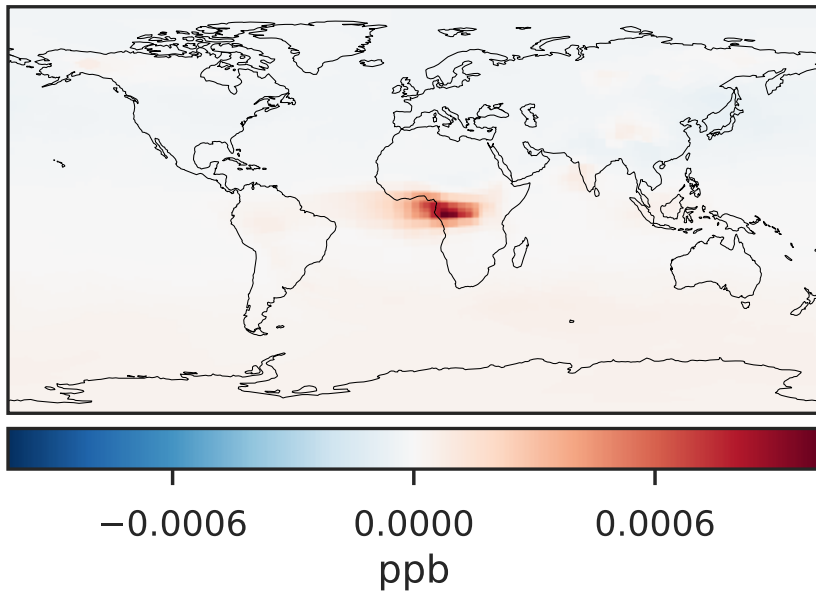
GCHP\_14.0.0 (Ref)  
c24



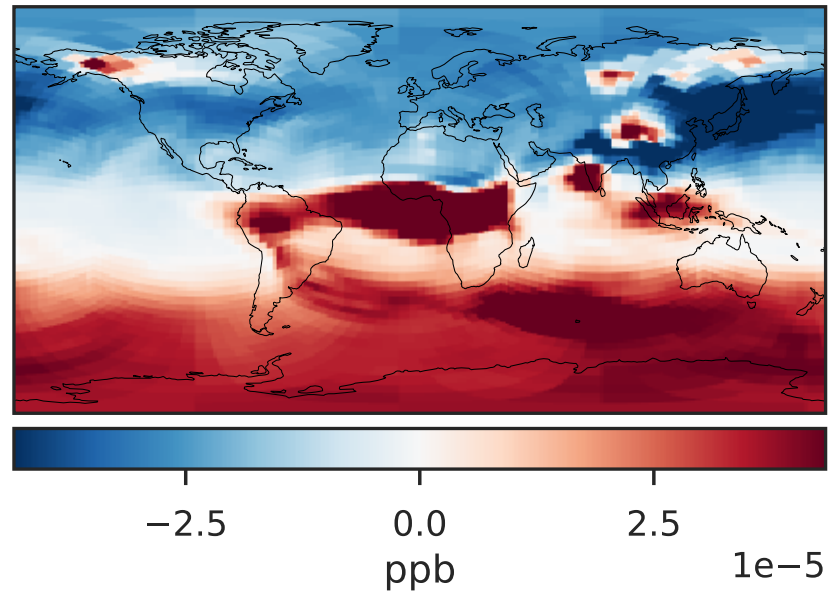
GCHP\_14.2.0 (Dev)  
c24



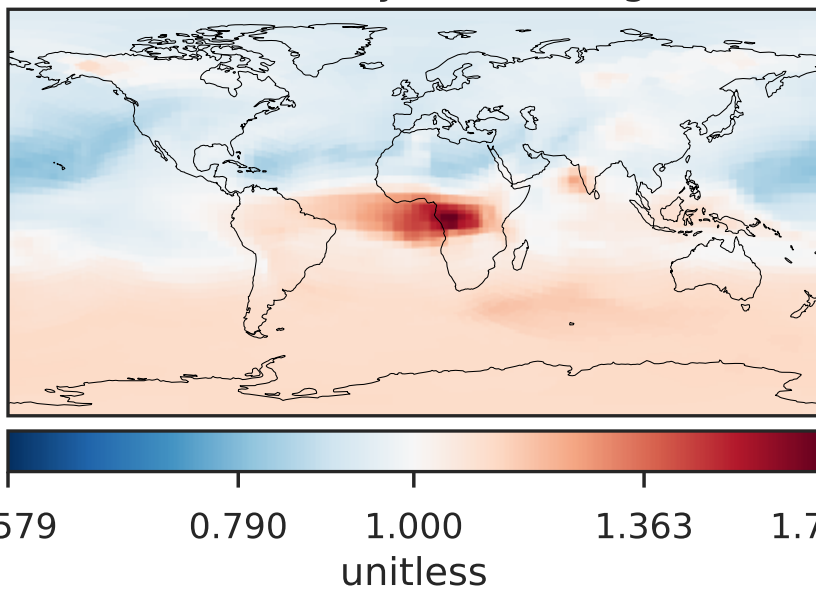
Difference (1x1.25)  
Dev - Ref, Dynamic Range



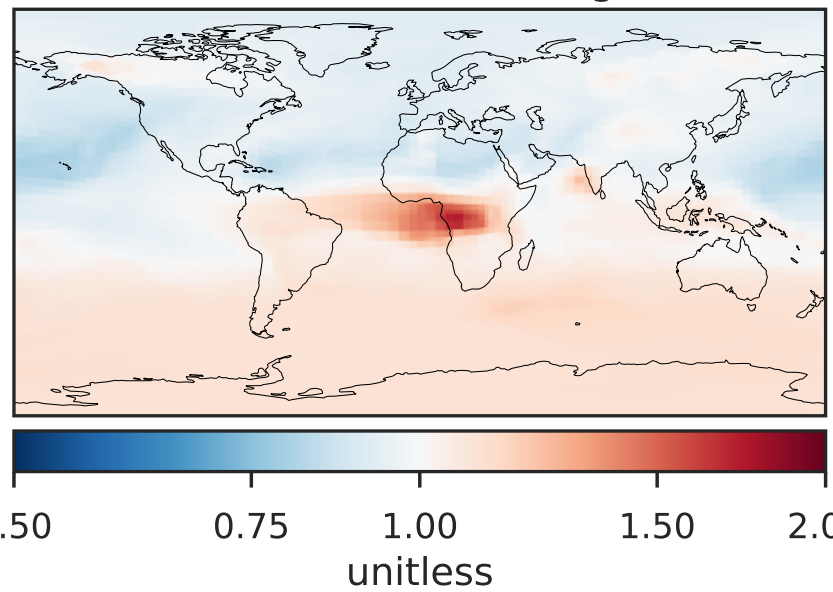
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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

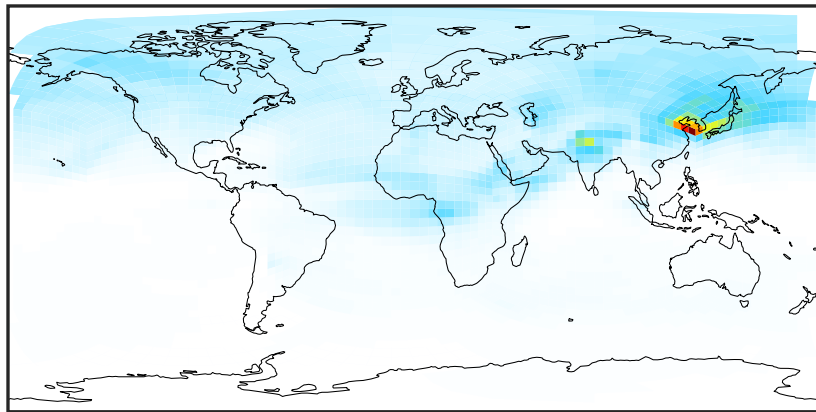


Ratio (1x1.25)  
Dev/Ref, Fixed Range



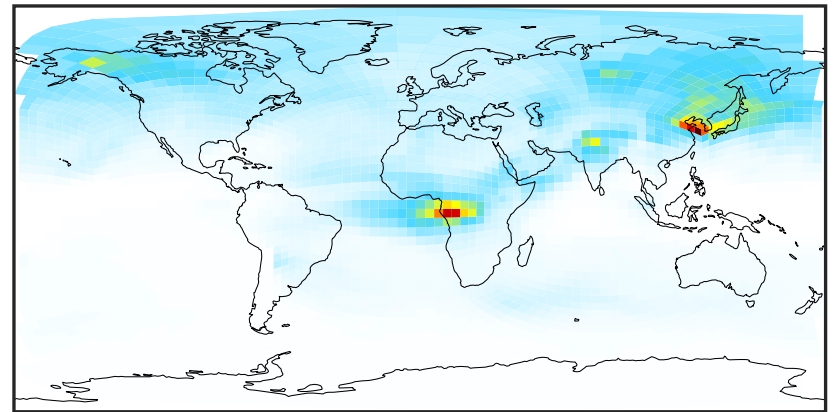
# SpeciesConcVV\_AONITA (Jul2019)

GCHP\_14.0.0 (Ref)  
c24



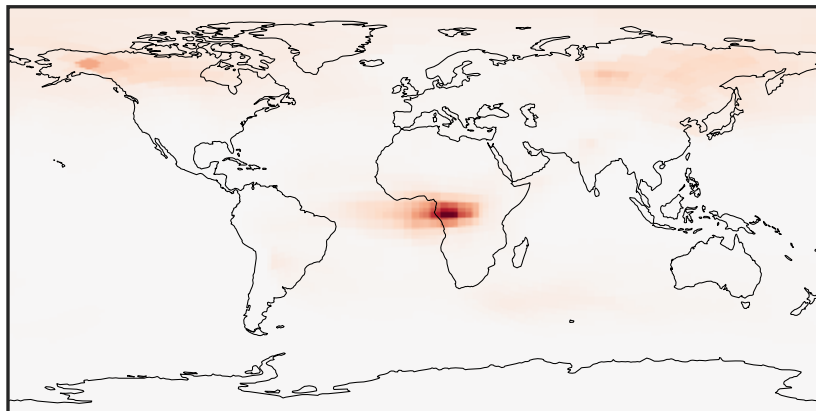
0.0025 0.0050 0.0075  
ppb

GCHP\_14.2.0 (Dev)  
c24



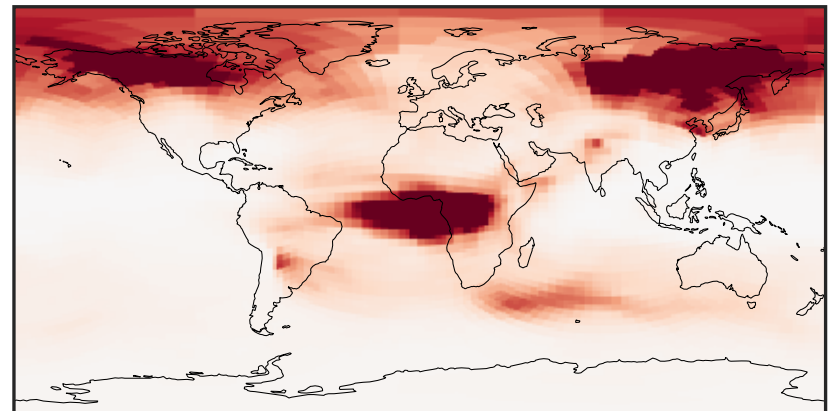
0.0025 0.0050 0.0075  
ppb

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



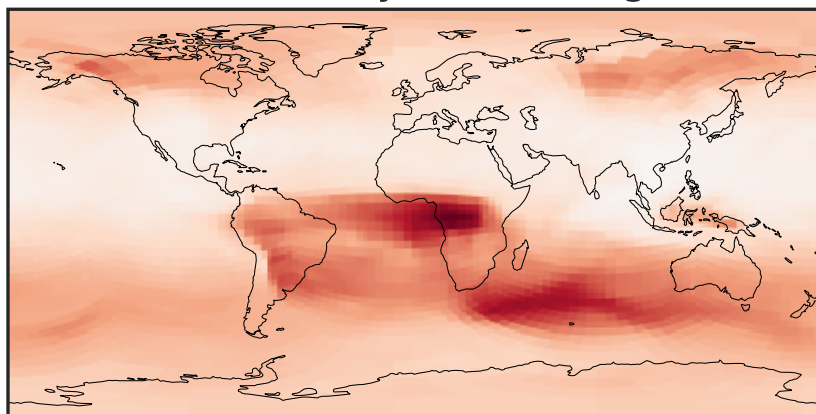
-0.003 0.000 0.003  
ppb

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



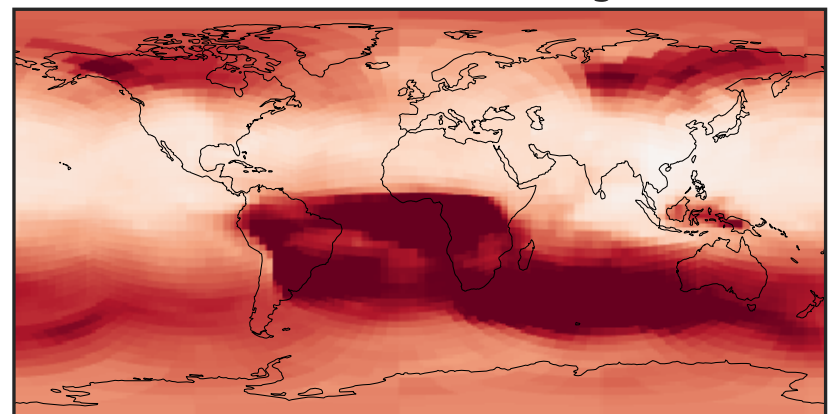
-0.0004 0.0000 0.0004  
ppb

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



0.249 0.625 1.000 2.505 4.010  
unitless

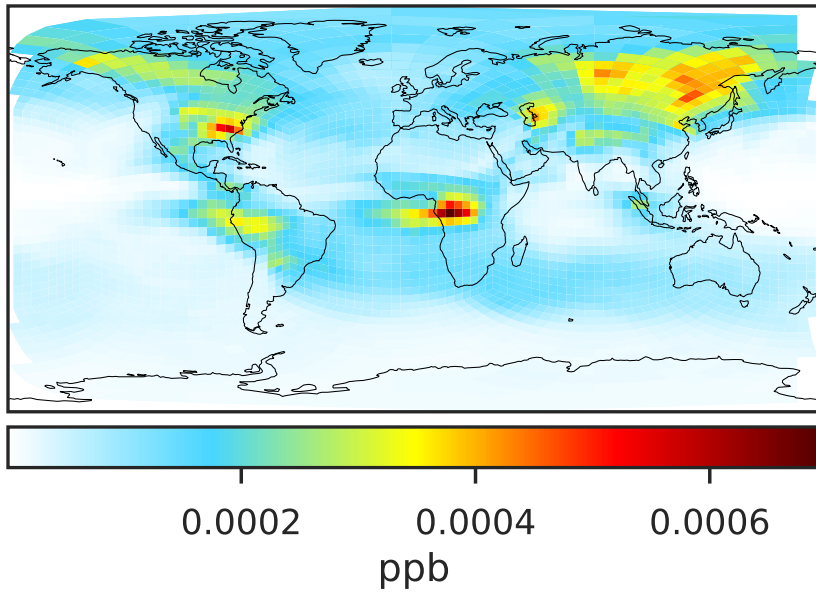
Ratio (1x1.25)  
Dev/Ref, Fixed Range



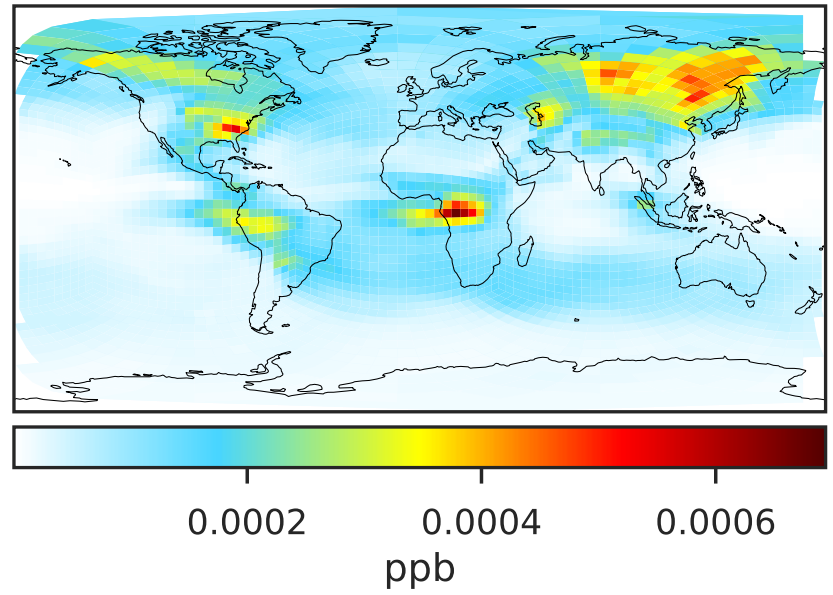
0.50 0.75 1.00 1.50 2.00  
unitless

# SpeciesConcVW\_ETHN (Jul2019)

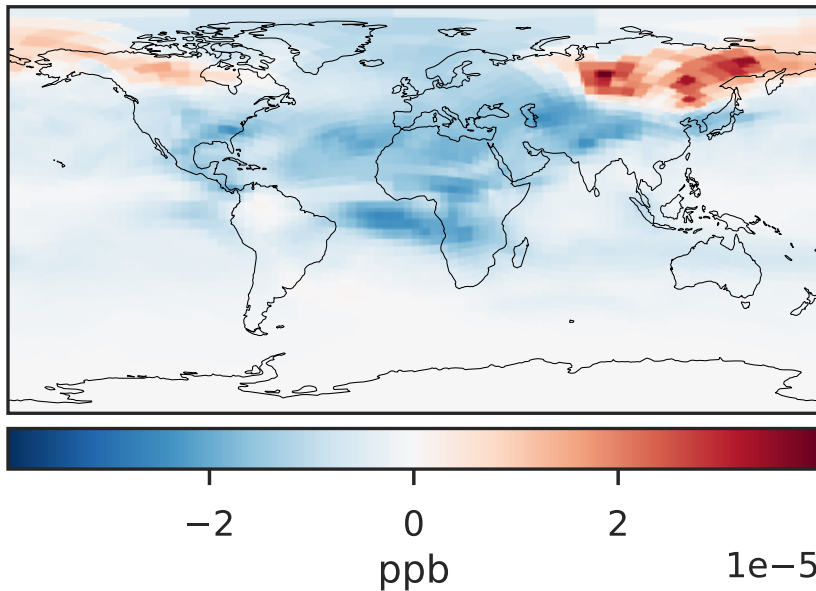
GCHP\_14.0.0 (Ref)  
c24



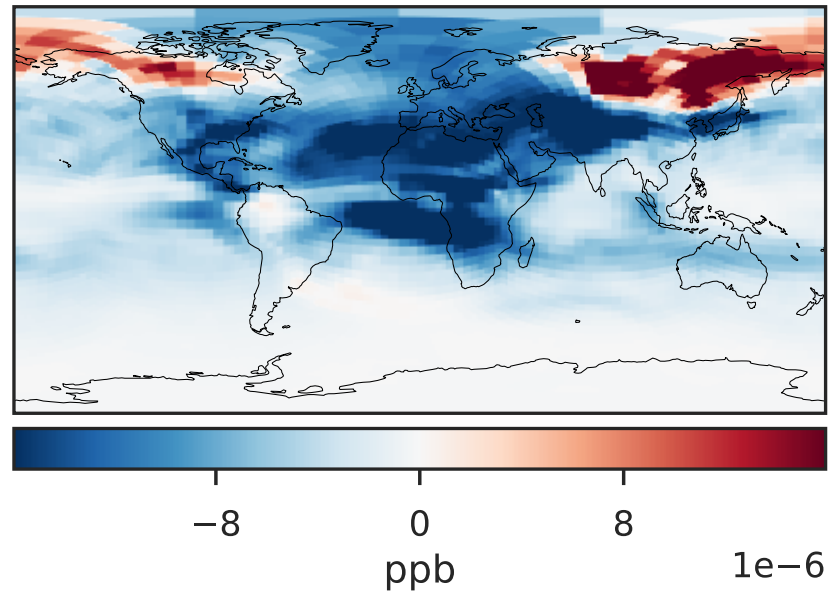
GCHP\_14.2.0 (Dev)  
c24



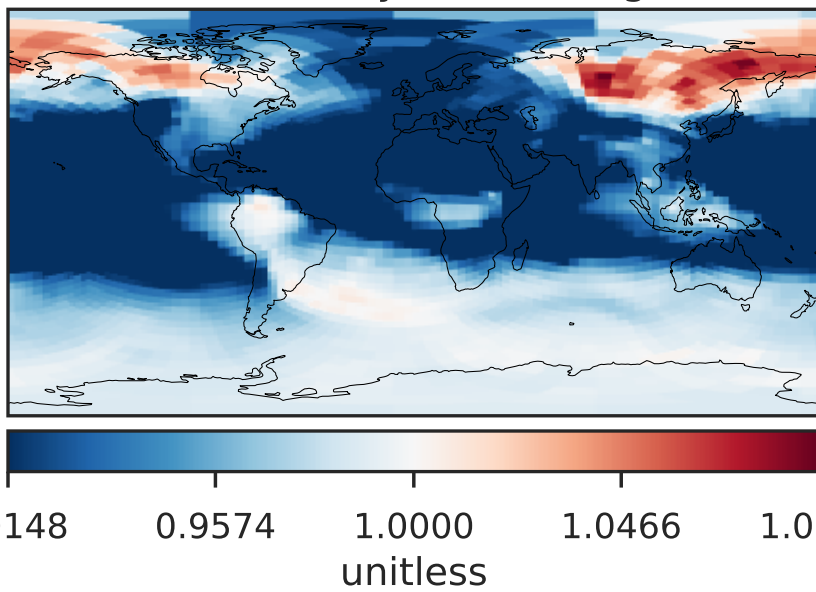
Difference (1x1.25)  
Dev - Ref, Dynamic Range



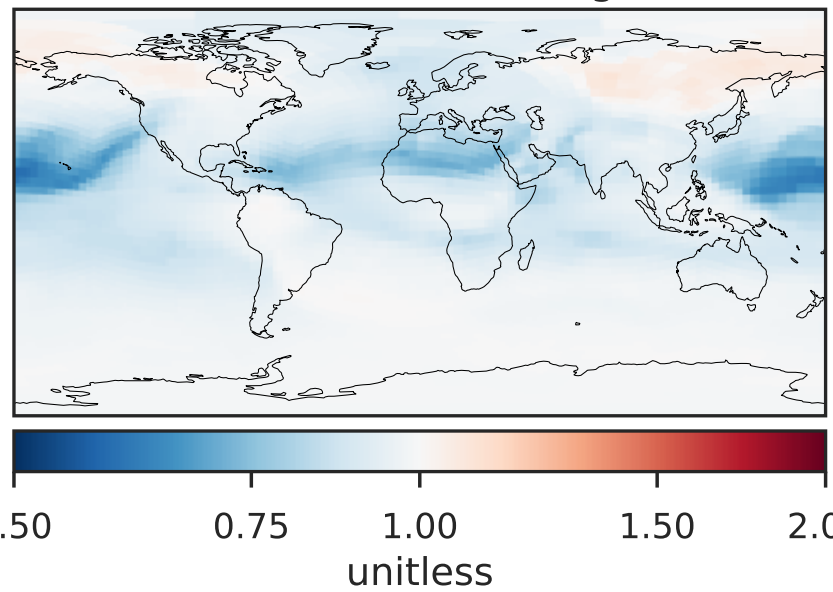
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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



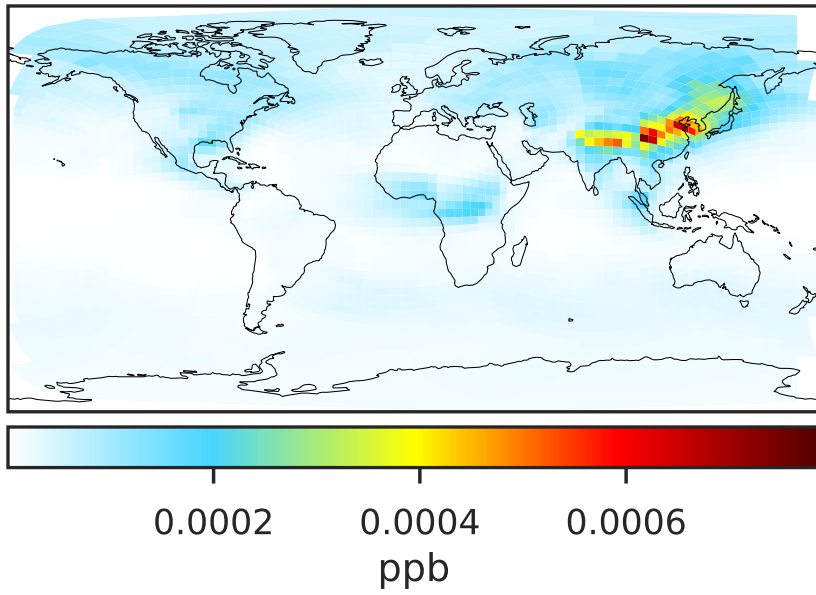
Ratio (1x1.25)  
Dev/Ref, Fixed Range



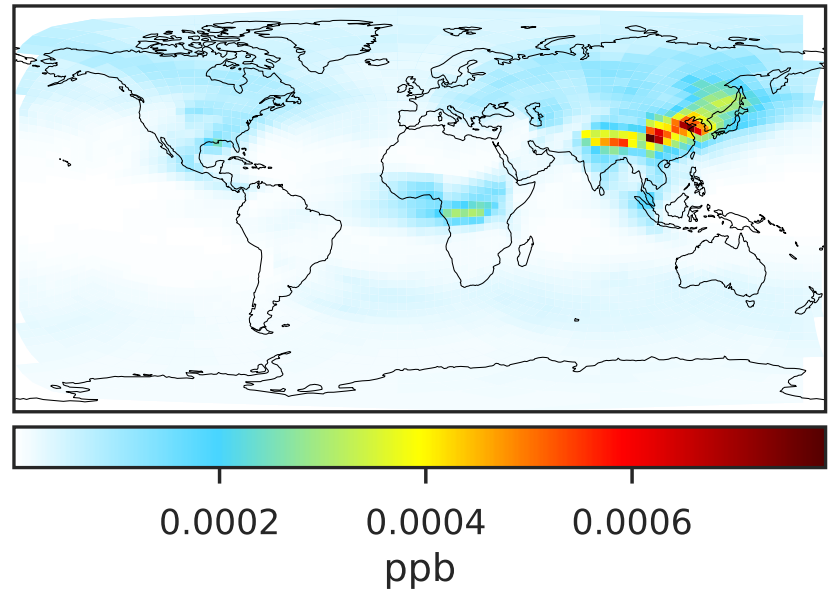


# SpeciesConcVV\_BZPAN (Jul2019)

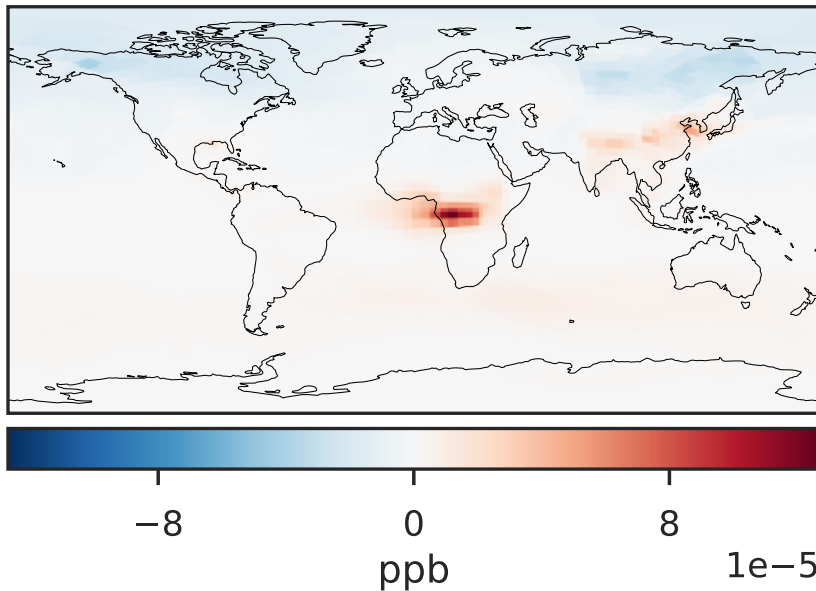
GCHP\_14.0.0 (Ref)  
c24



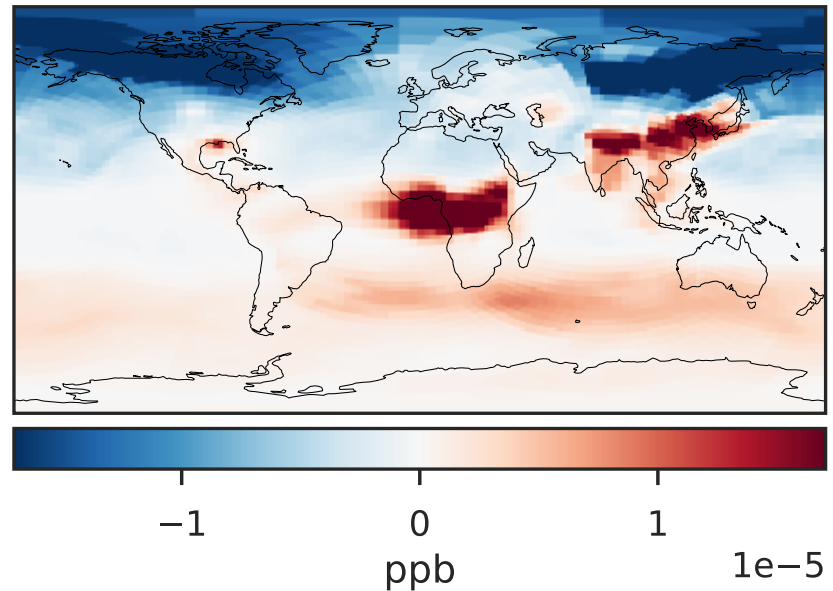
GCHP\_14.2.0 (Dev)  
c24



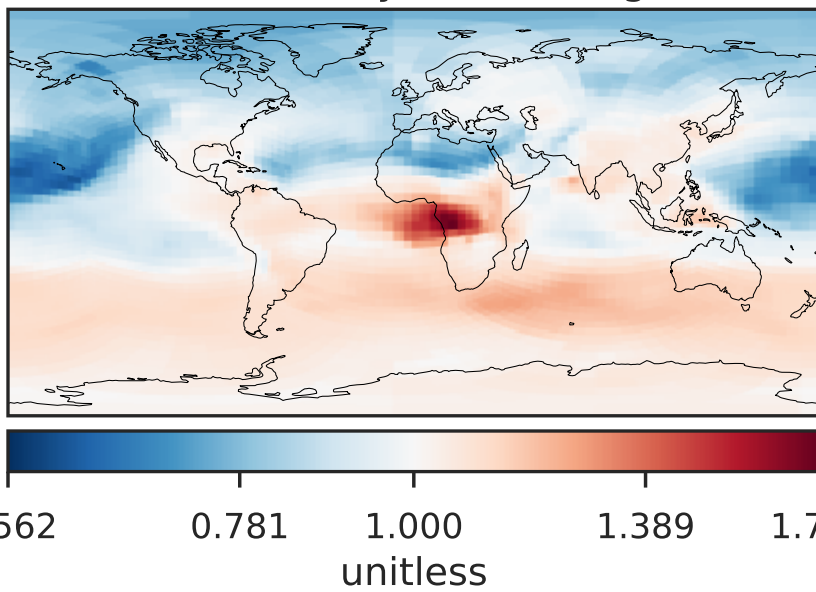
Difference (1x1.25)  
Dev - Ref, Dynamic Range



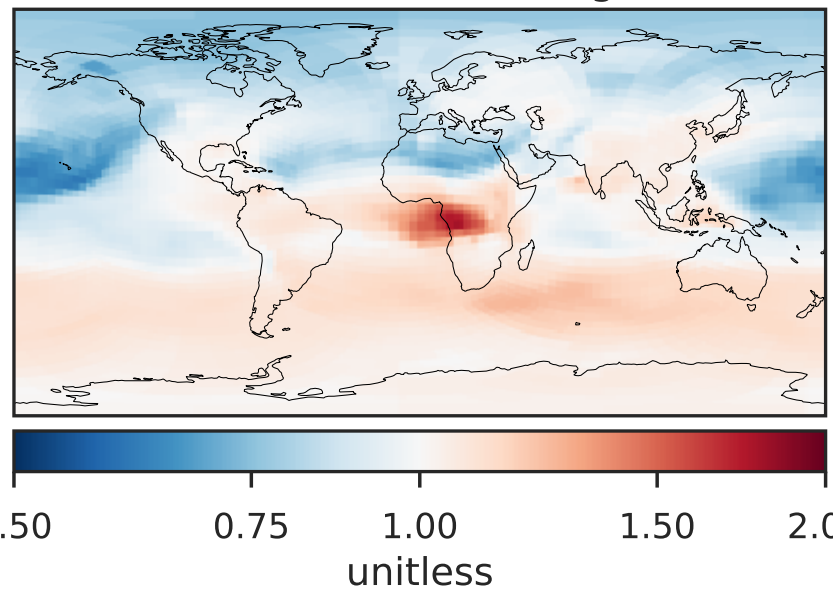
Difference (1x1.25)  
Dev - Ref, Restricted Range [5%,95%]



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

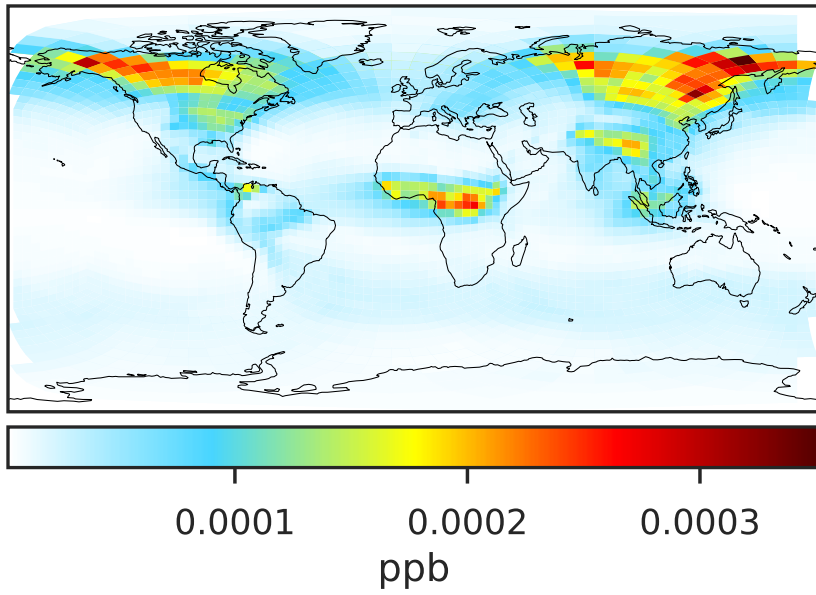


Ratio (1x1.25)  
Dev/Ref, Fixed Range

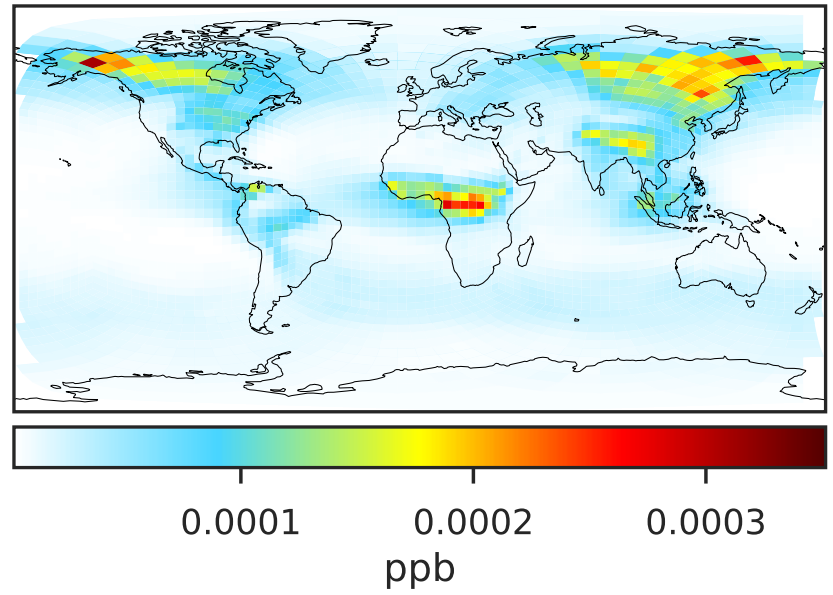


# SpeciesConcVV\_NPHEN (Jul2019)

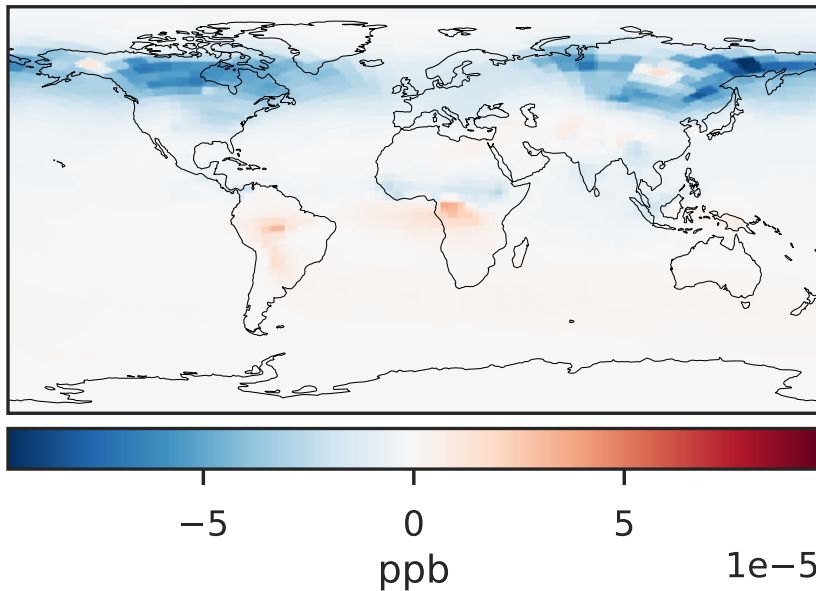
GCHP\_14.0.0 (Ref)  
c24



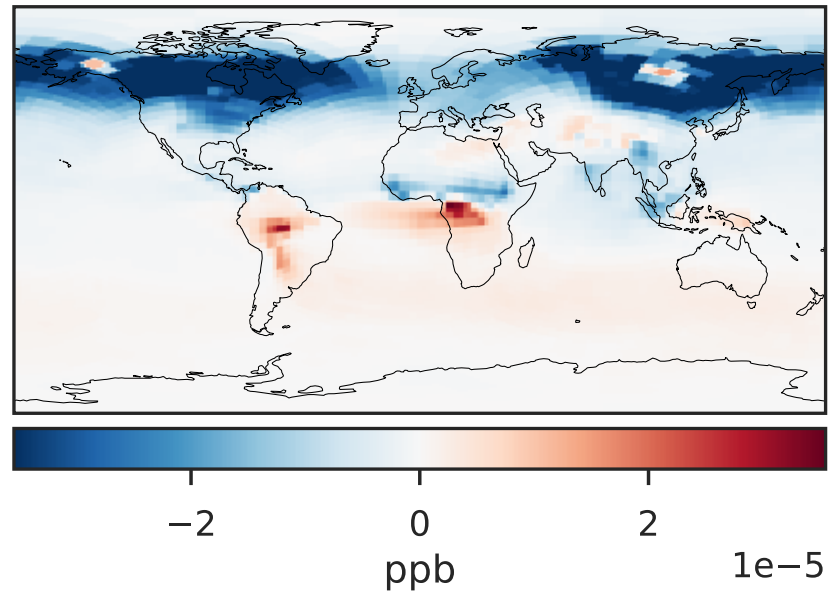
GCHP\_14.2.0 (Dev)  
c24



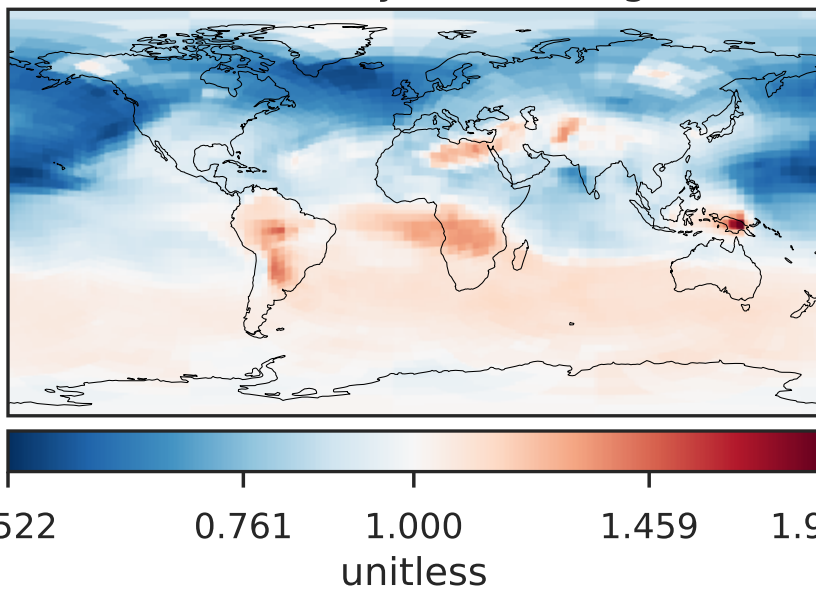
Difference (1x1.25)  
Dev - Ref, Dynamic Range



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



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



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

