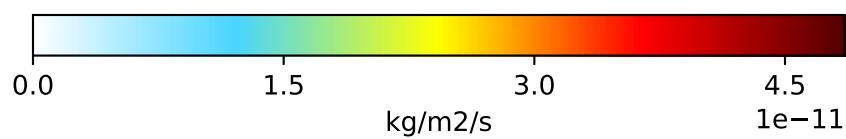
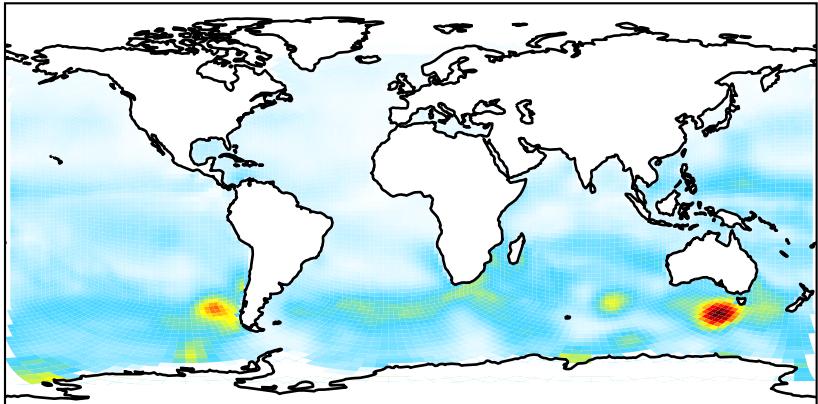
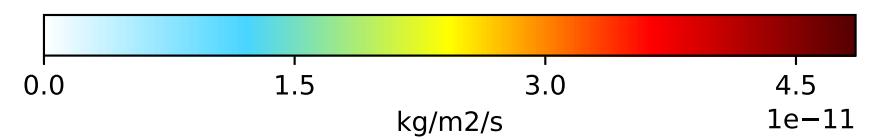
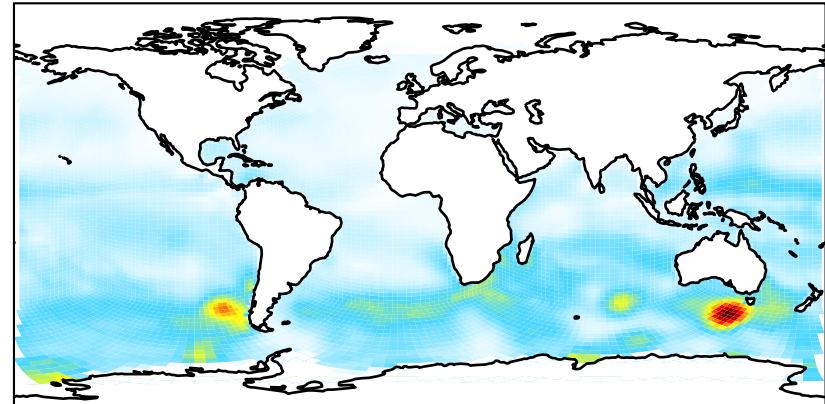


EmisDMS_Ocean (Jan2019)

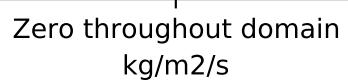
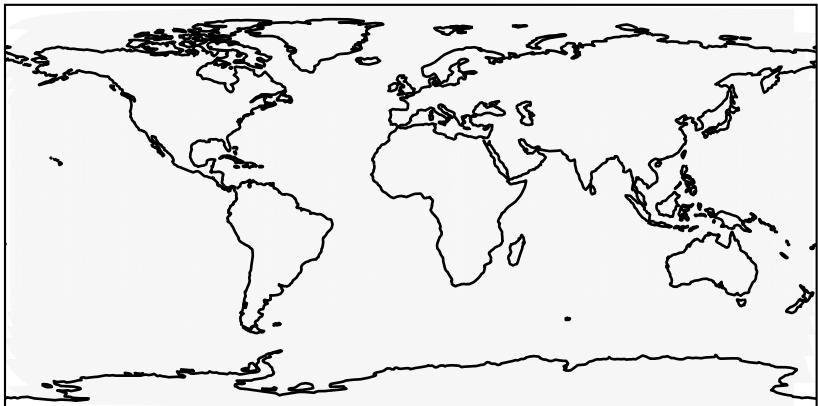
GCHP_13.0.0-beta.1 (Ref)
c48



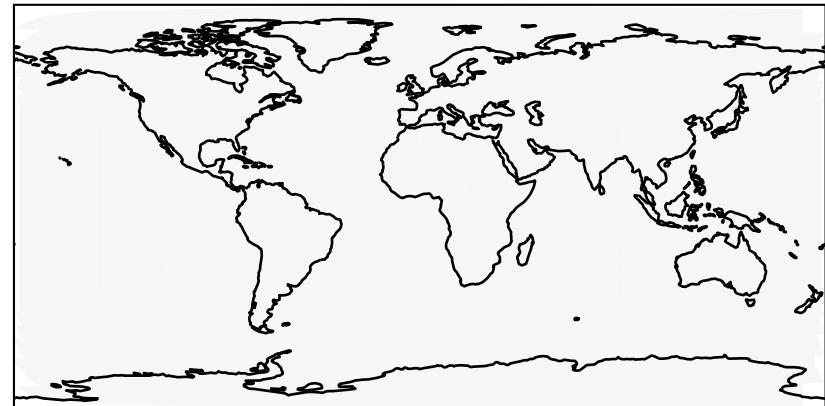
GCHP_13.0.0-rc.0 (Dev)
c48



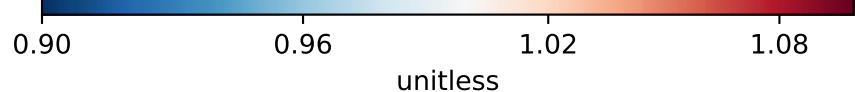
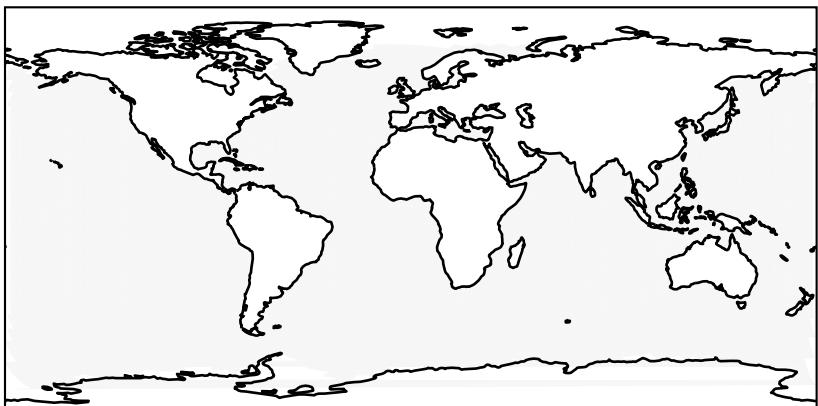
Difference
Dev - Ref, Dynamic Range



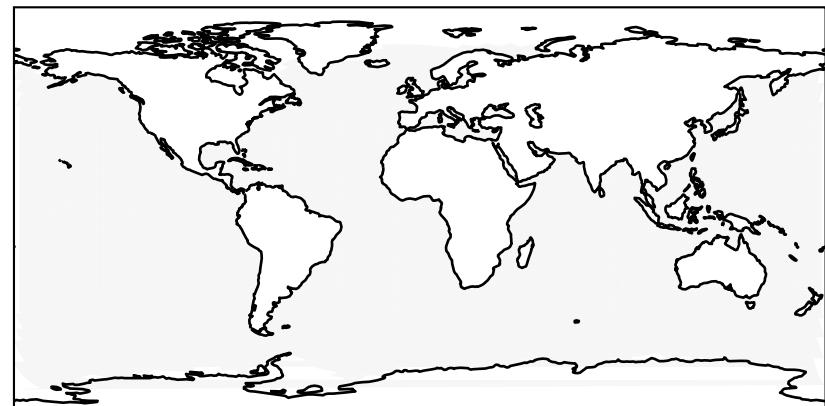
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

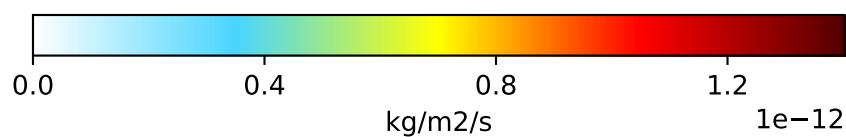
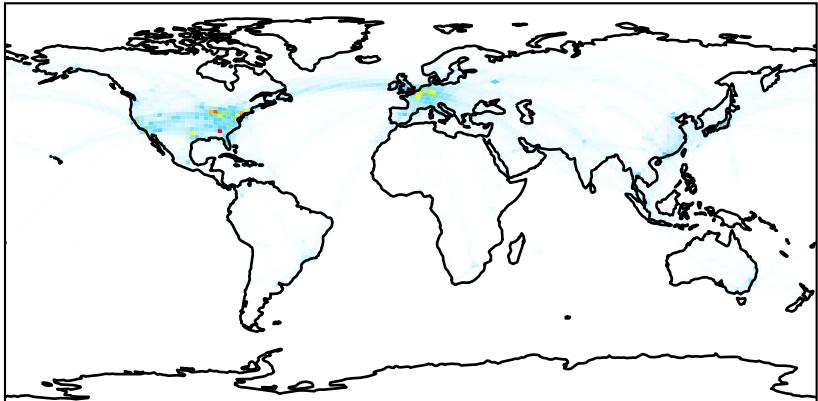


Ratio
Dev/Ref, Fixed Range

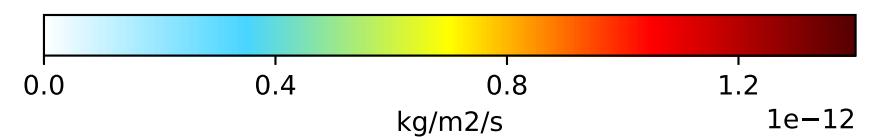
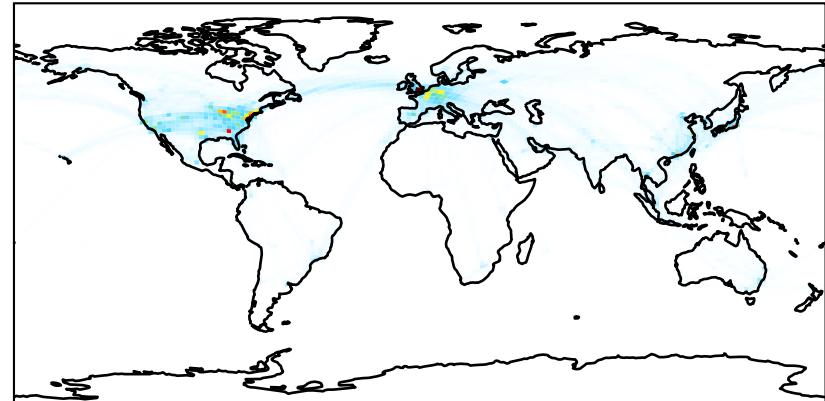


EmisSO2_Aircraft (Jan2019)

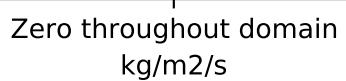
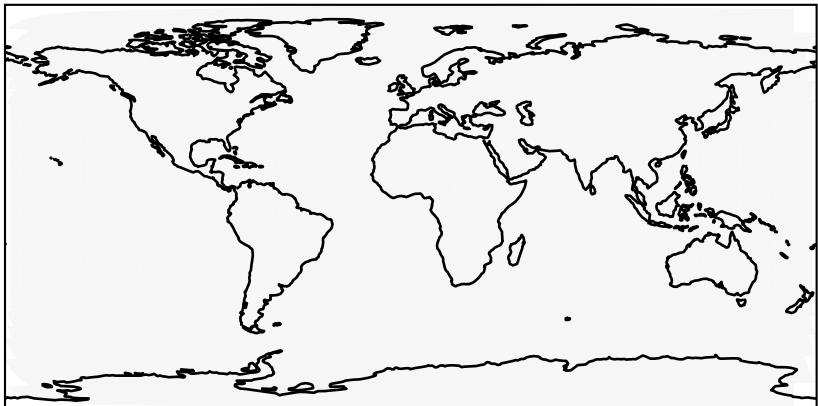
GCHP_13.0.0-beta.1 (Ref)
c48



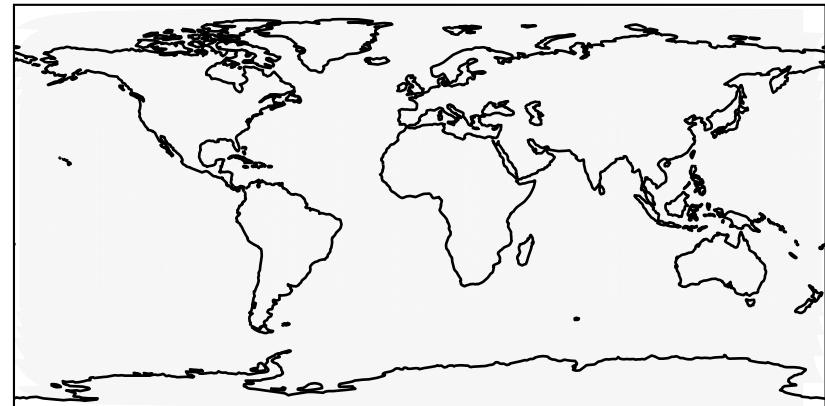
GCHP_13.0.0-rc.0 (Dev)
c48



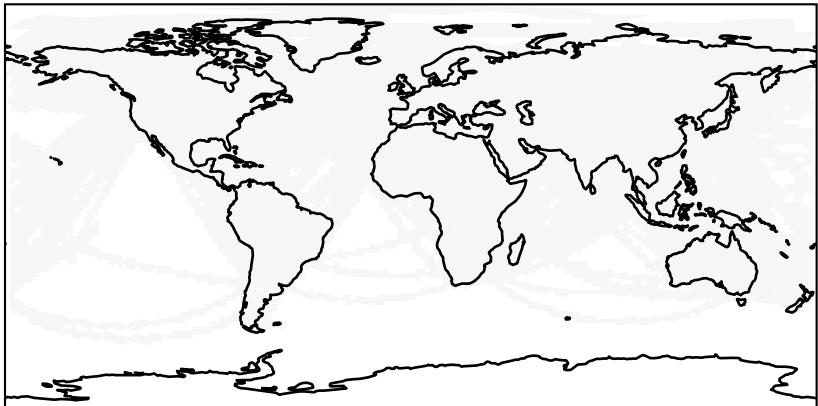
Difference
Dev - Ref, Dynamic Range



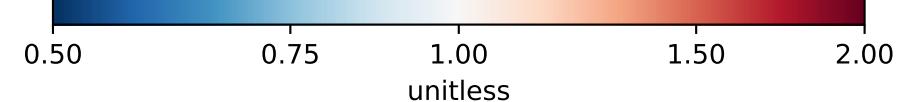
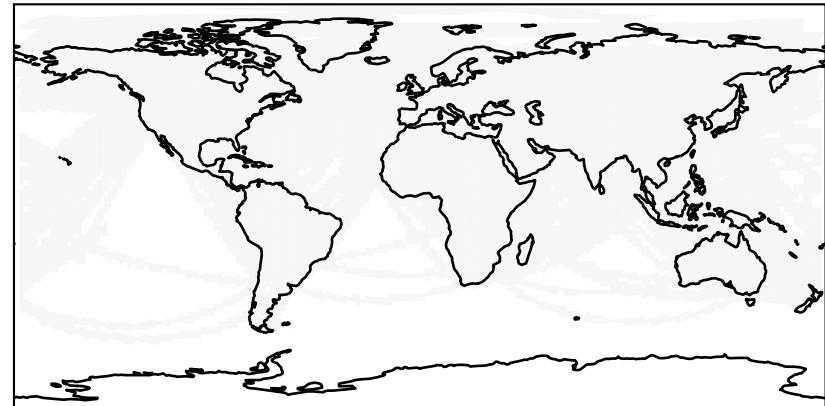
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

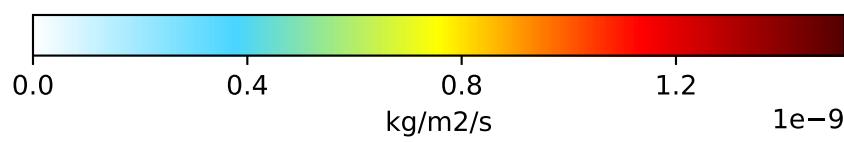
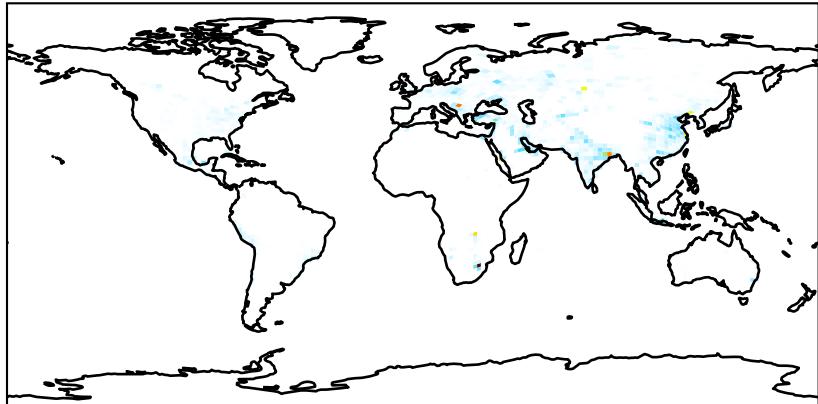


Ratio
Dev/Ref, Fixed Range

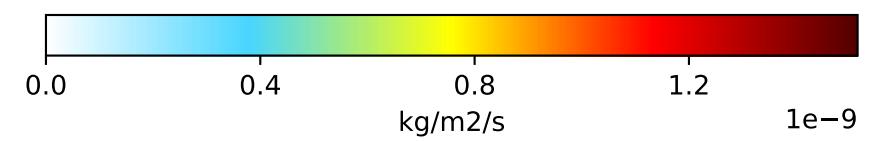
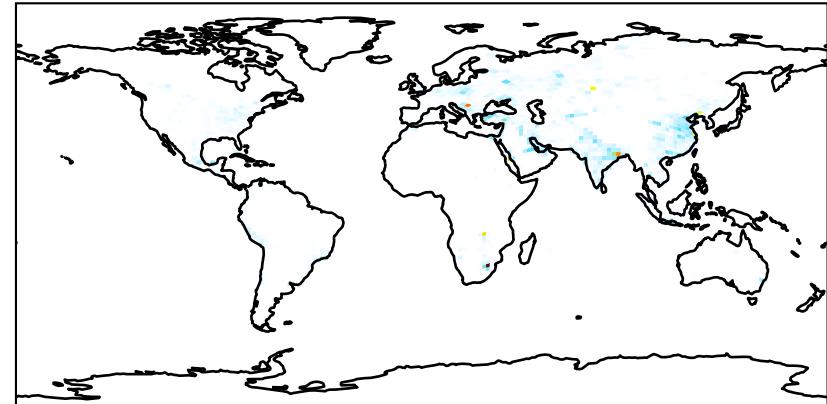


EmisSO2_Anthro (Jan2019)

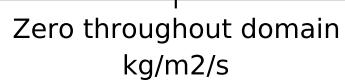
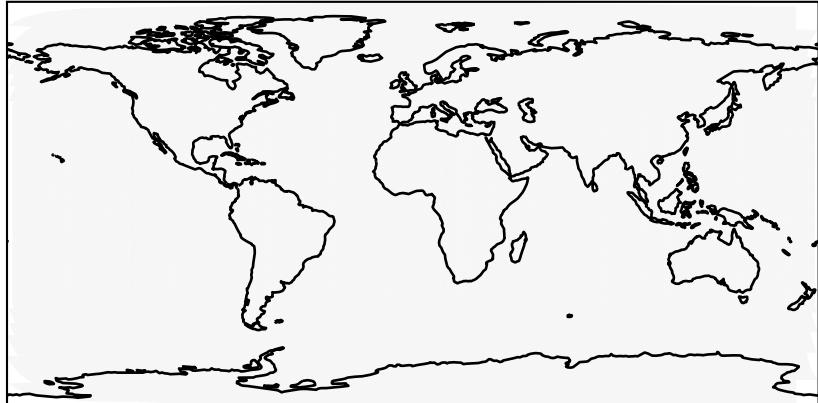
GCHP_13.0.0-beta.1 (Ref)
c48



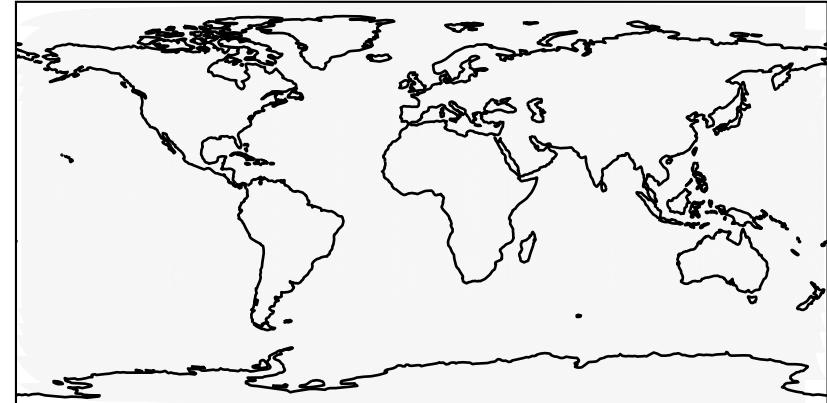
GCHP_13.0.0-rc.0 (Dev)
c48



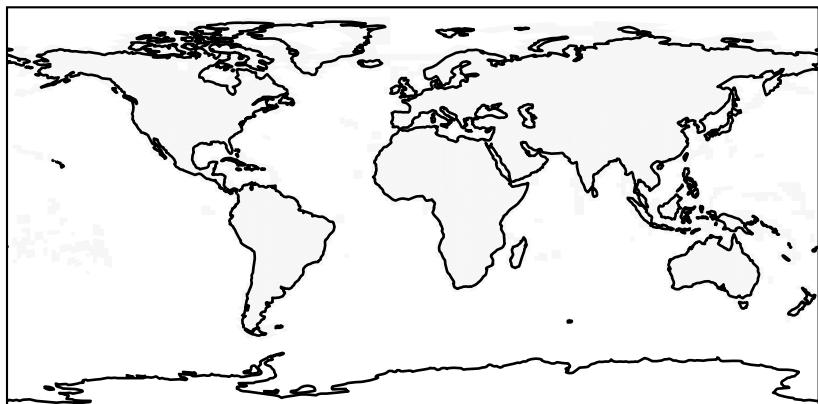
Difference
Dev - Ref, Dynamic Range



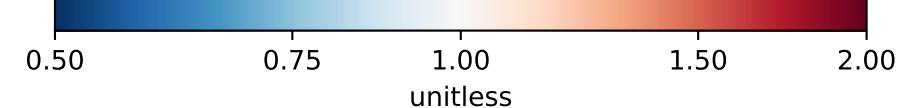
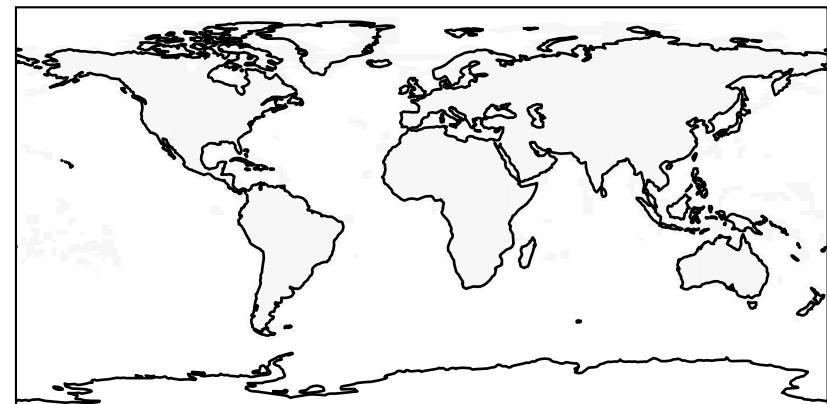
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

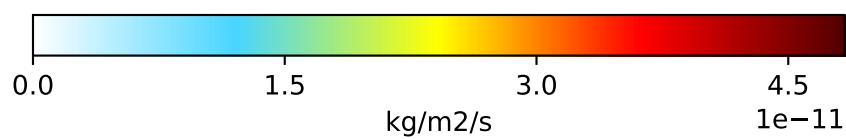
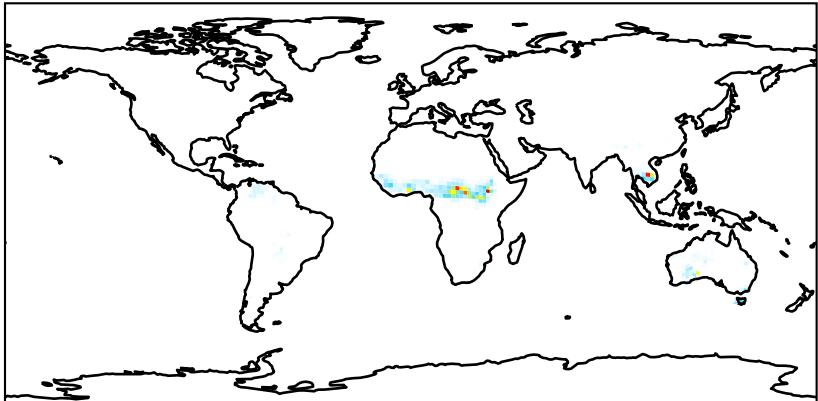


Ratio
Dev/Ref, Fixed Range

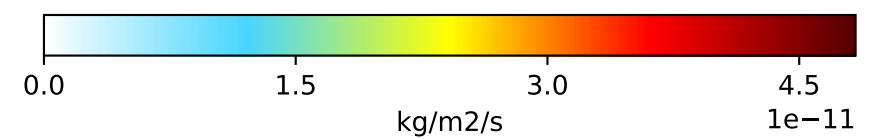
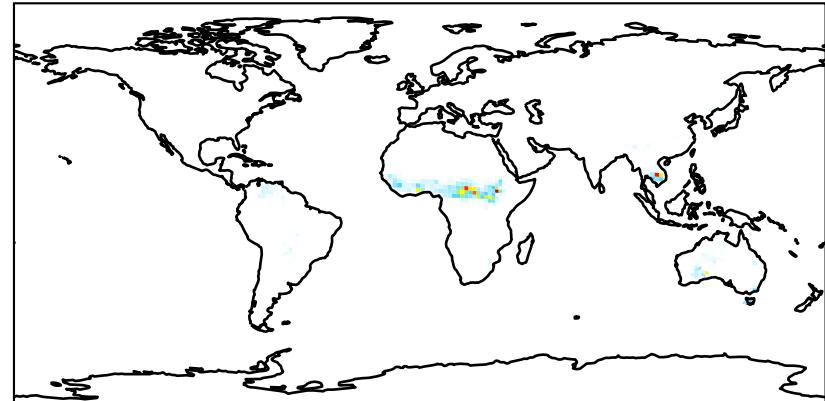


EmisSO2_BioBurn (Jan2019)

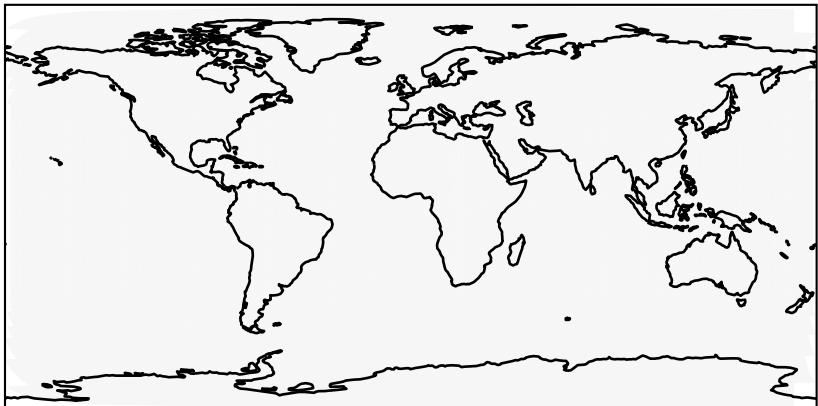
GCHP_13.0.0-beta.1 (Ref)
c48



GCHP_13.0.0-rc.0 (Dev)
c48

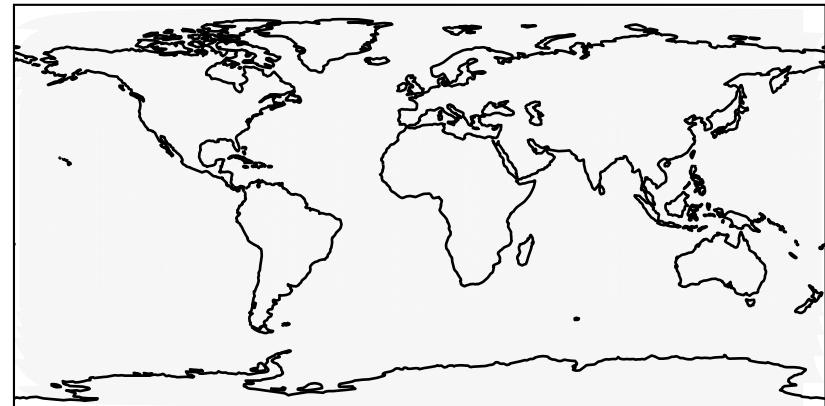


Difference
Dev - Ref, Dynamic Range



Zero throughout domain
kg/m²/s

Difference
Dev - Ref, Restricted Range [5%,95%]



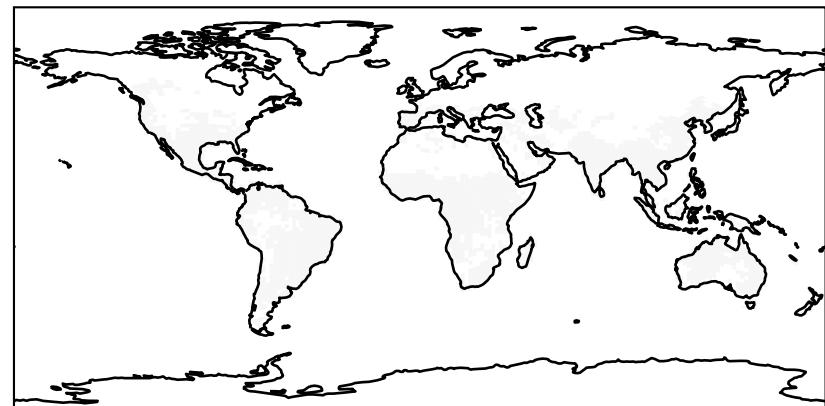
Zero throughout domain
kg/m²/s

Ratio
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08
unitless

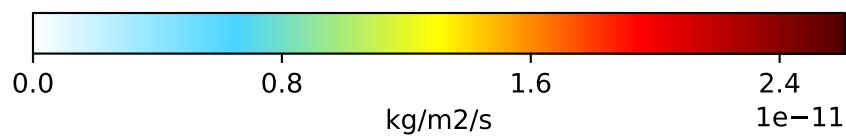
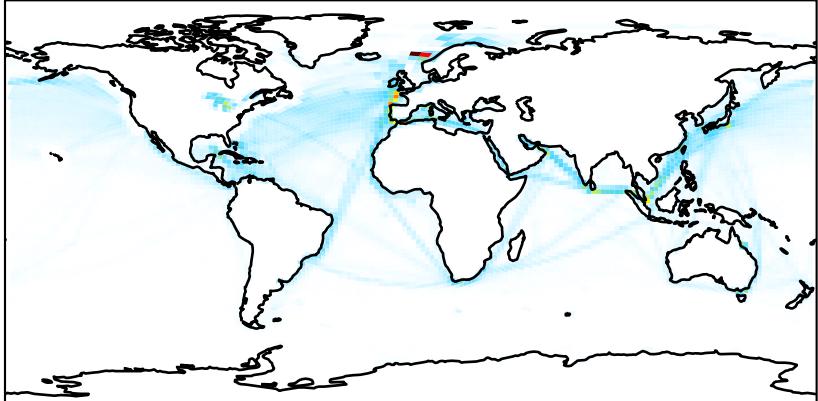
Ratio
Dev/Ref, Fixed Range



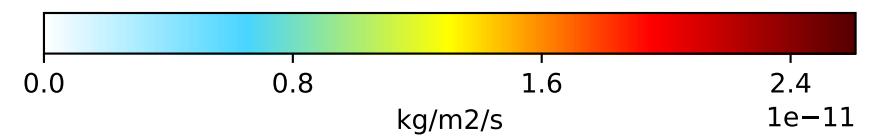
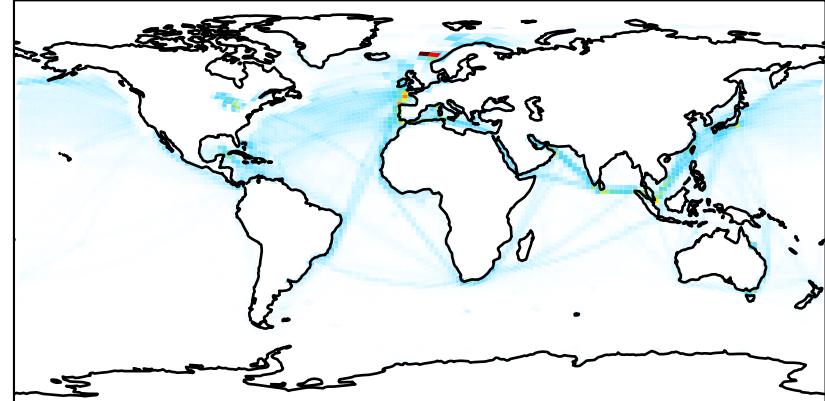
0.50 0.75 1.00 1.50 2.00
unitless

EmisSO2_Ship (Jan2019)

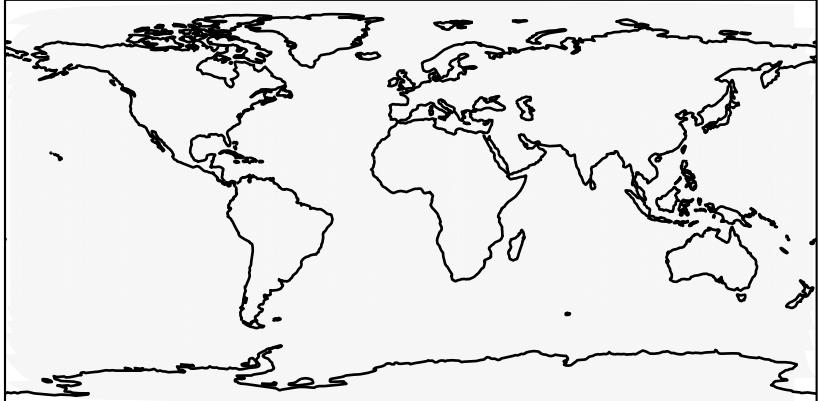
GCHP_13.0.0-beta.1 (Ref)
c48



GCHP_13.0.0-rc.0 (Dev)
c48

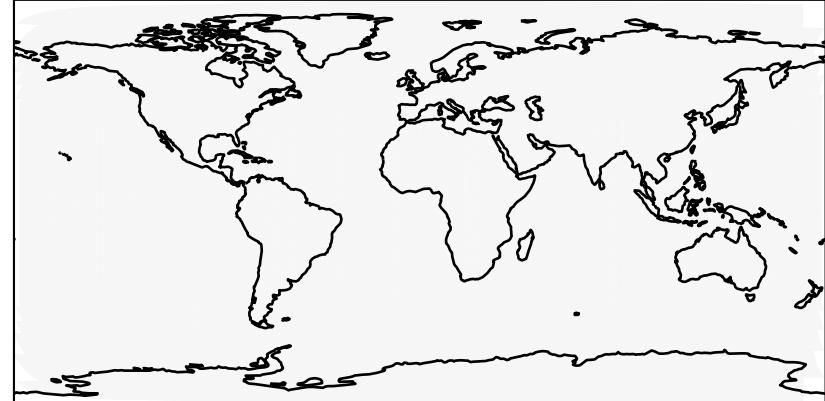


Difference
Dev - Ref, Dynamic Range



Zero throughout domain
kg/m²/s

Difference
Dev - Ref, Restricted Range [5%,95%]



Zero throughout domain
kg/m²/s

Ratio
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08
unitless

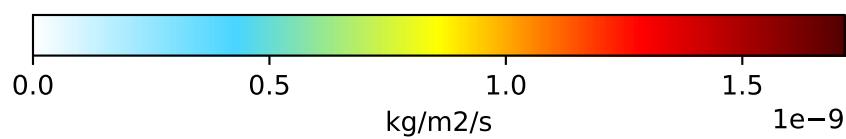
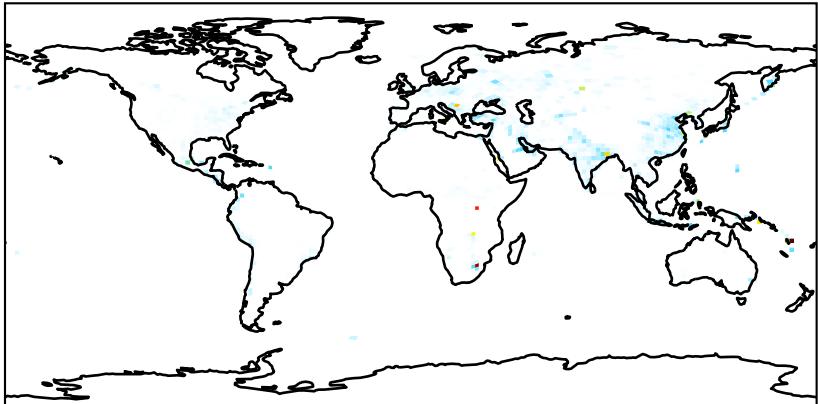
Ratio
Dev/Ref, Fixed Range



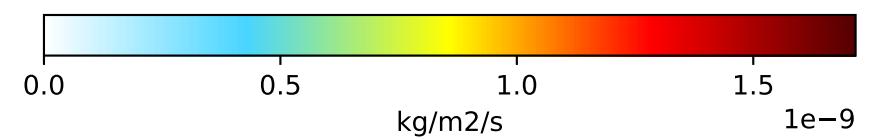
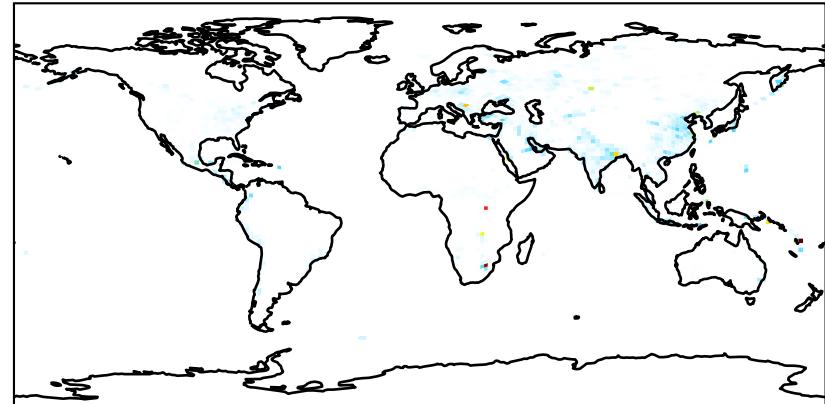
0.50 0.75 1.00 1.50 2.00
unitless

EmisSO2_Total (Jan2019)

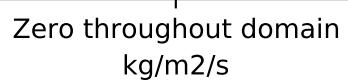
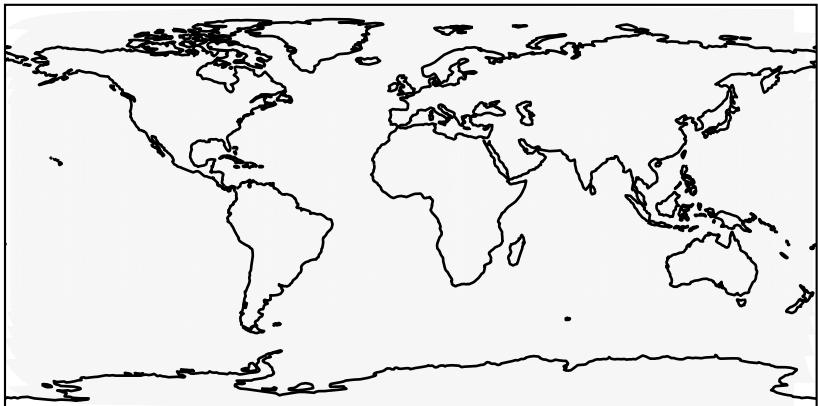
GCHP_13.0.0-beta.1 (Ref)
c48



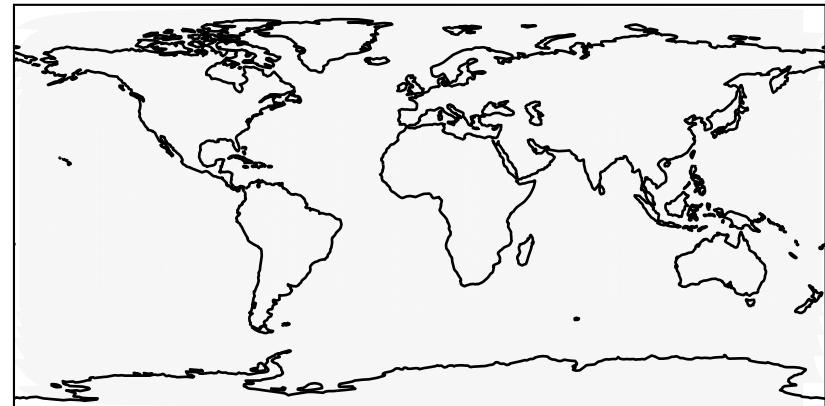
GCHP_13.0.0-rc.0 (Dev)
c48



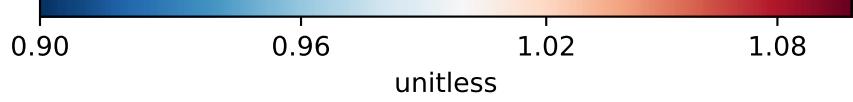
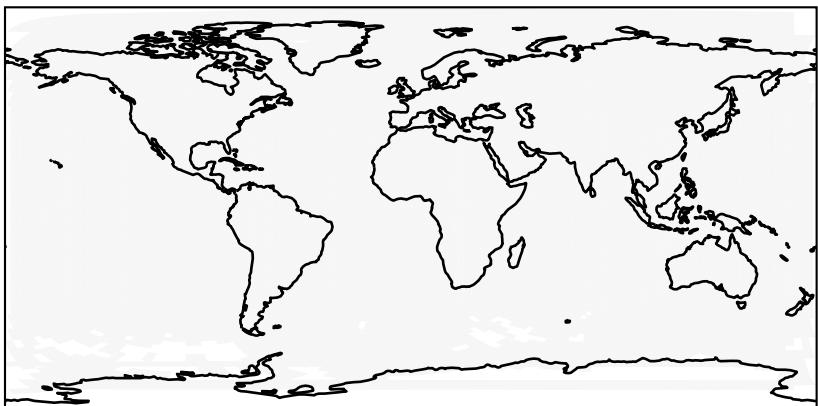
Difference
Dev - Ref, Dynamic Range



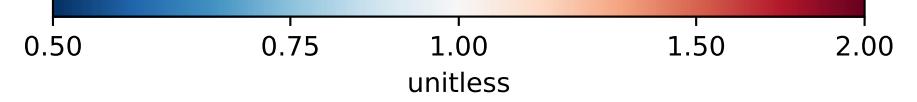
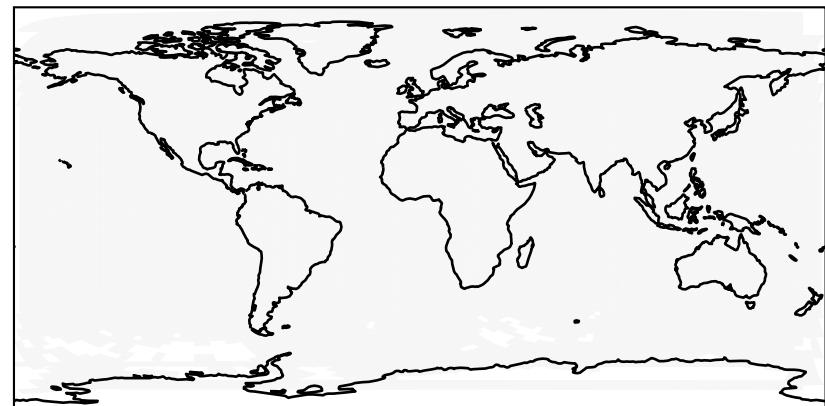
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

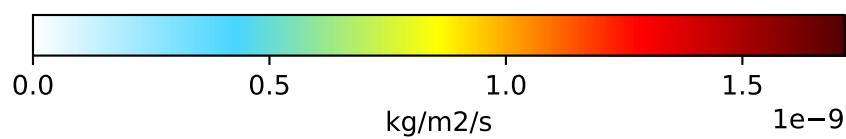
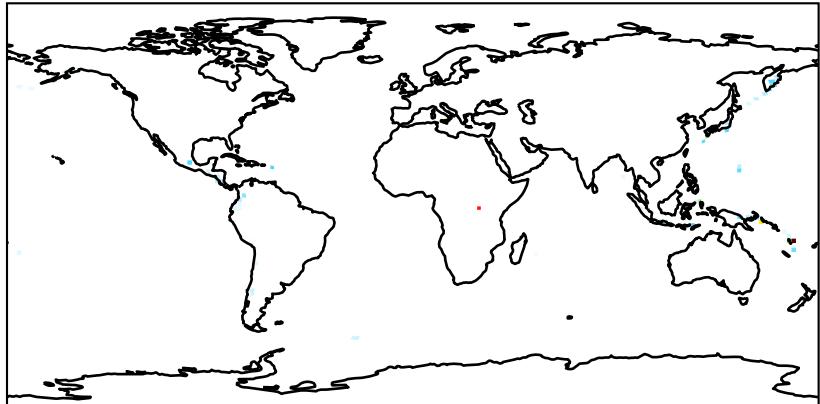


Ratio
Dev/Ref, Fixed Range

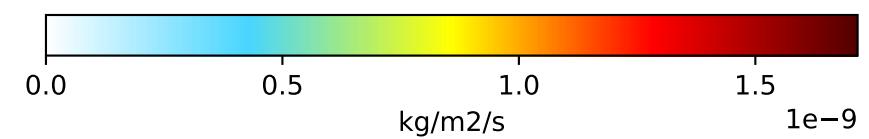
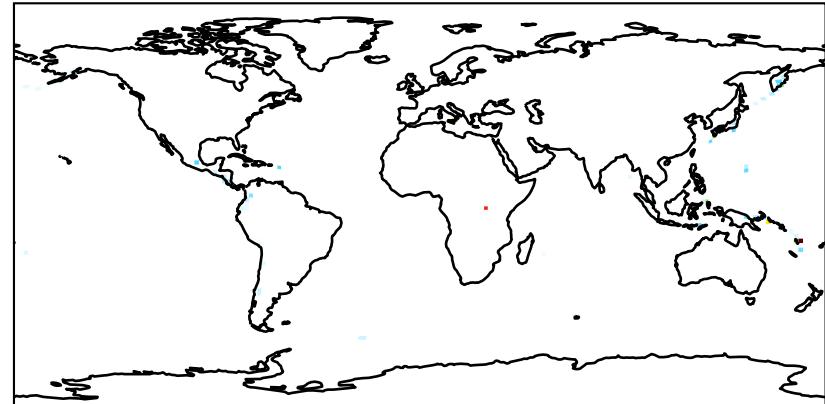


EmisSO2_VolcDegas (Jan2019)

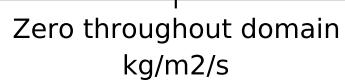
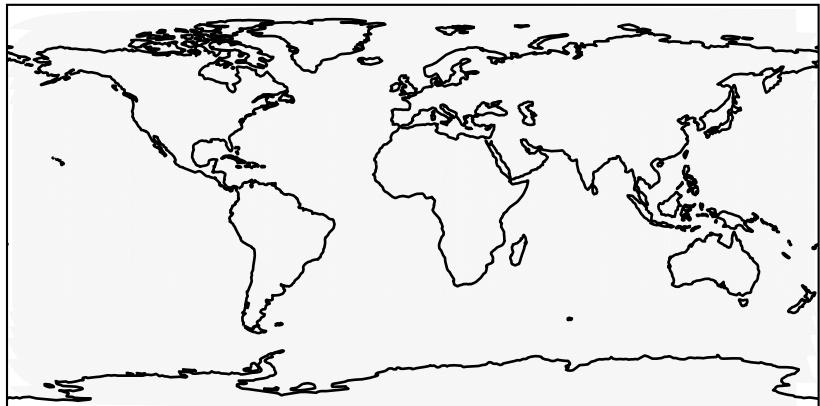
GCHP_13.0.0-beta.1 (Ref)
c48



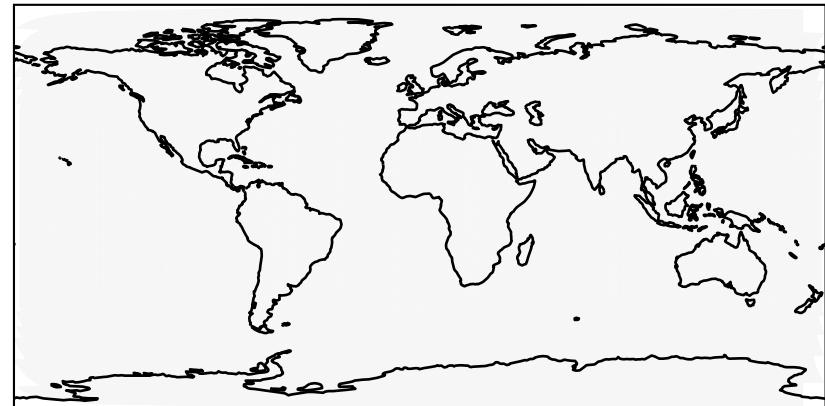
GCHP_13.0.0-rc.0 (Dev)
c48



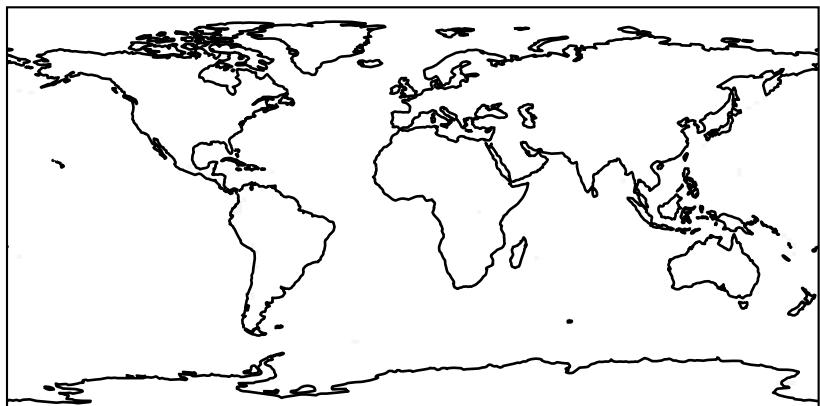
Difference
Dev - Ref, Dynamic Range



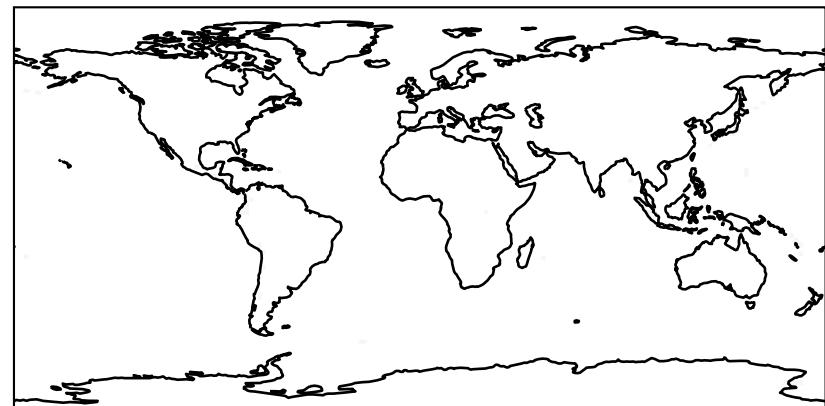
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

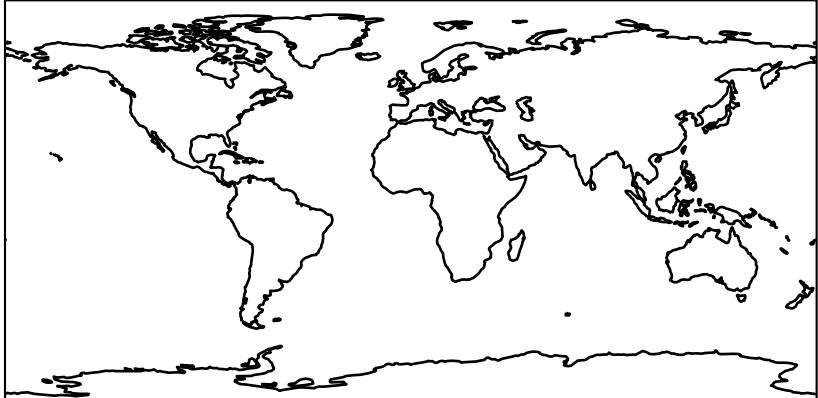


Ratio
Dev/Ref, Fixed Range



EmisSO2_VolcErupt (Jan2019)

GCHP_13.0.0-beta.1 (Ref)
c48



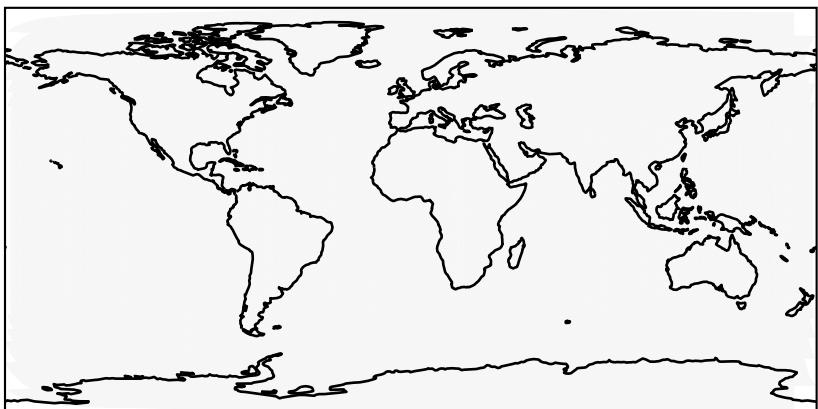
GCHP_13.0.0-rc.0 (Dev)
c48



Zero throughout domain
kg/m²/s

Zero throughout domain
kg/m²/s

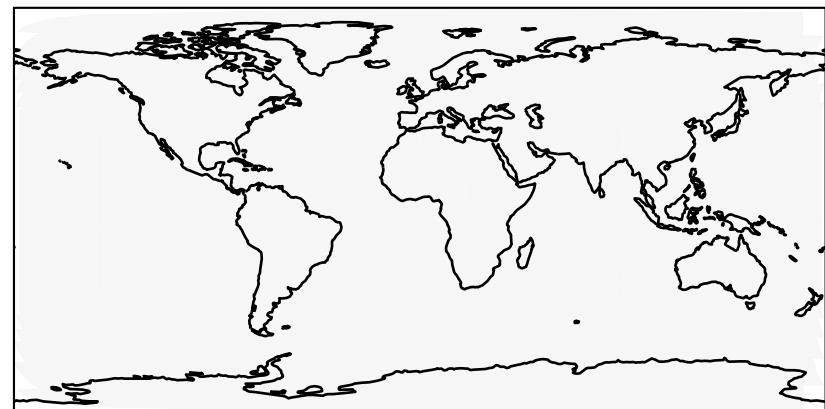
Difference
Dev - Ref, Dynamic Range



Zero throughout domain
kg/m²/s

Zero throughout domain
kg/m²/s

Difference
Dev - Ref, Restricted Range [5%,95%]



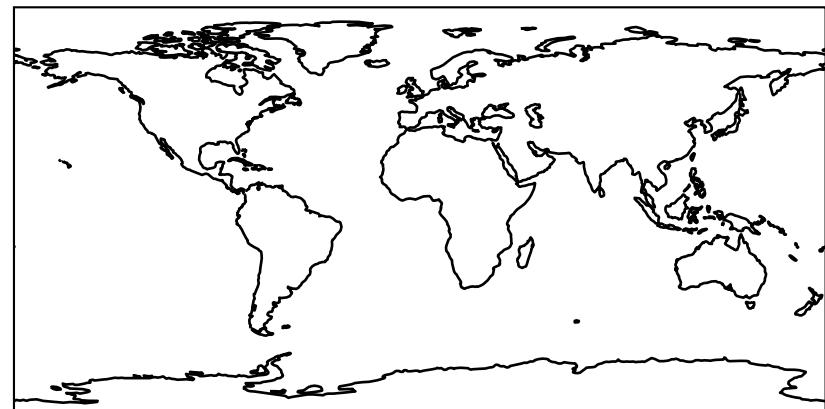
Zero throughout domain
kg/m²/s

Ratio
Dev/Ref, Dynamic Range



Undefined throughout domain
unitless

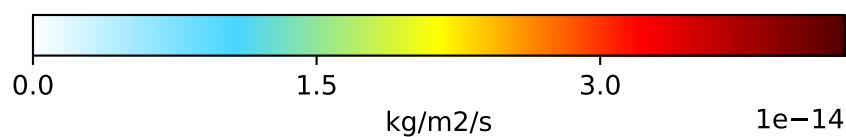
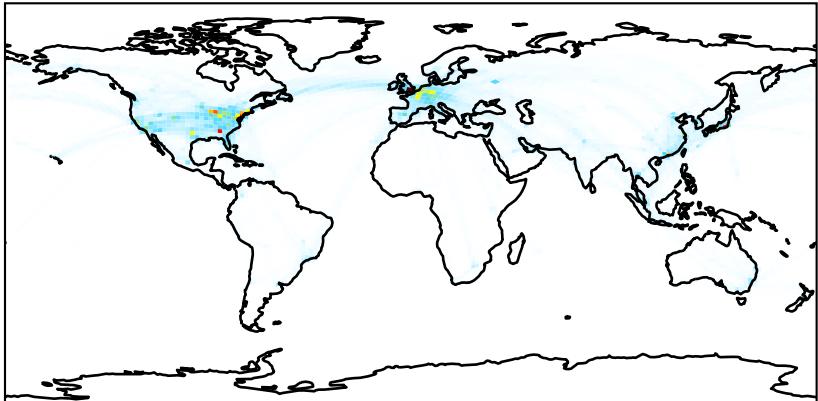
Ratio
Dev/Ref, Fixed Range



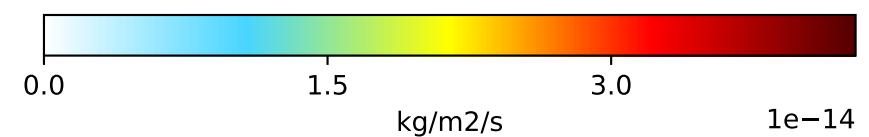
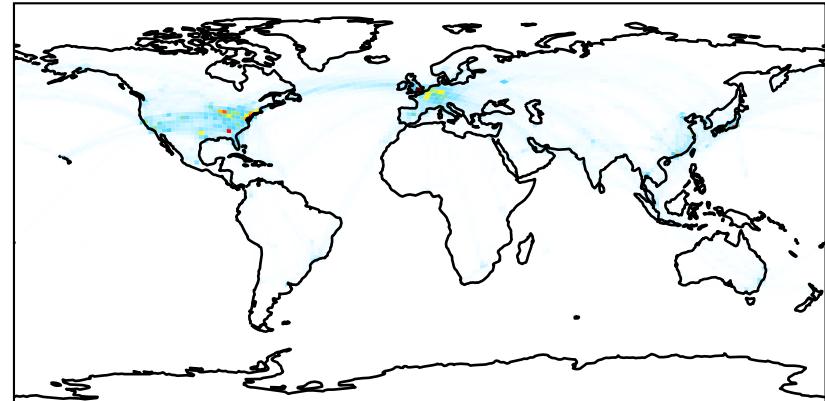
Undefined throughout domain
unitless

EmisSO4_Aircraft (Jan2019)

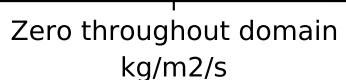
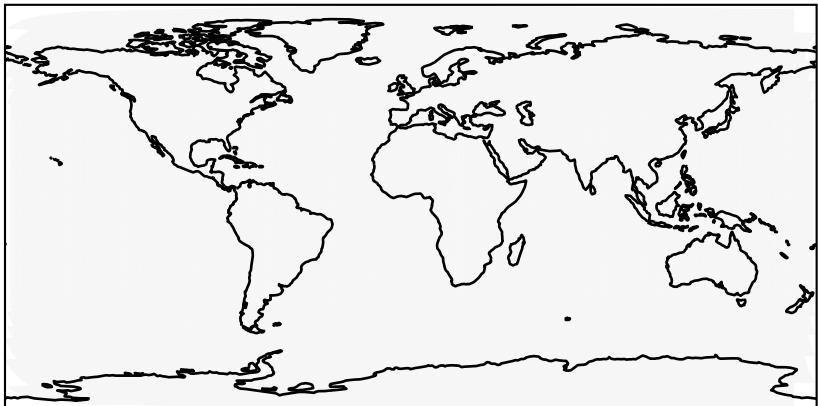
GCHP_13.0.0-beta.1 (Ref)
c48



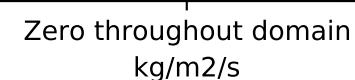
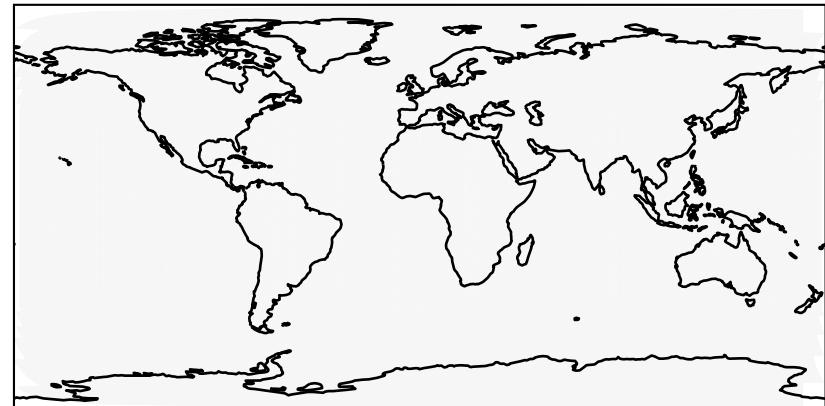
GCHP_13.0.0-rc.0 (Dev)
c48



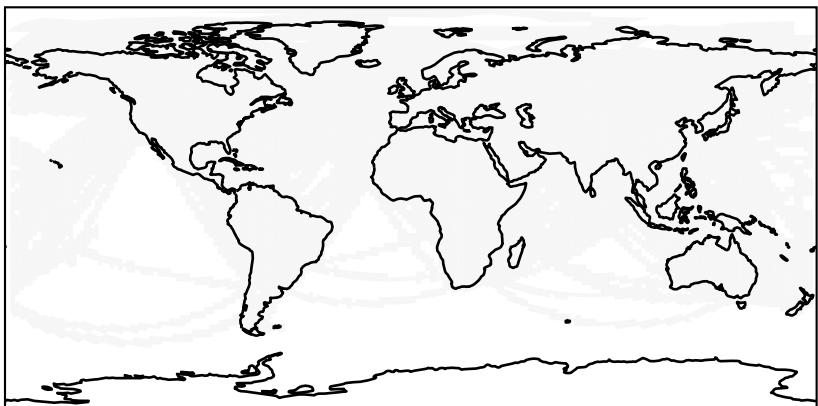
Difference
Dev - Ref, Dynamic Range



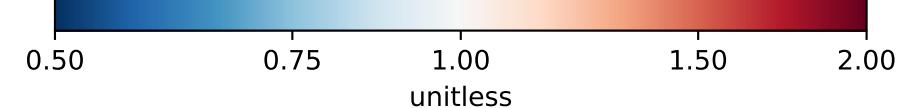
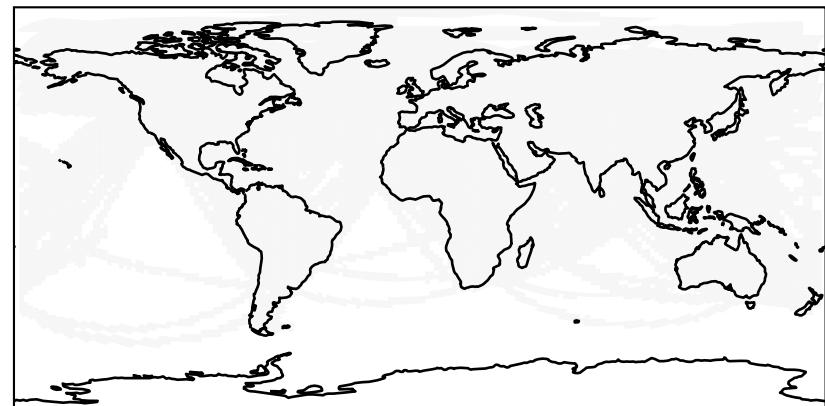
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

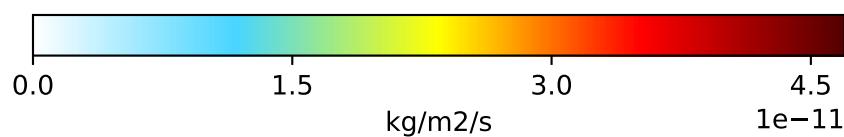
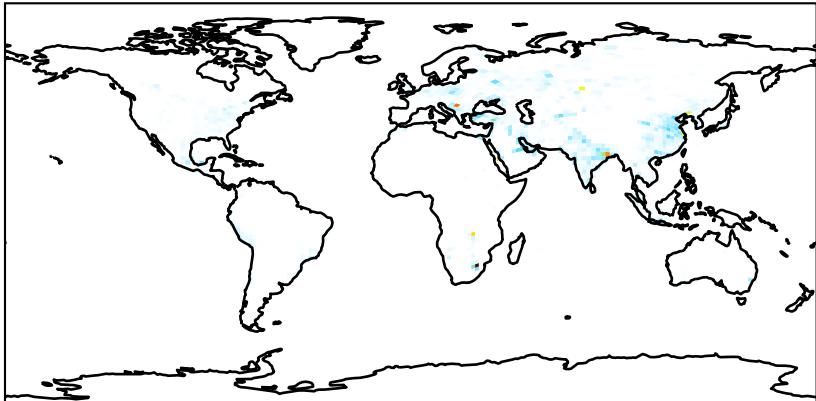


Ratio
Dev/Ref, Fixed Range

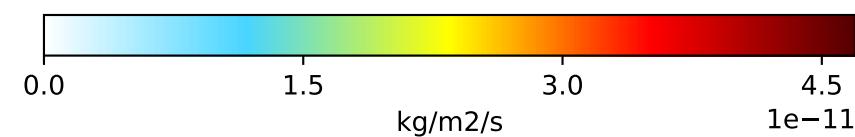
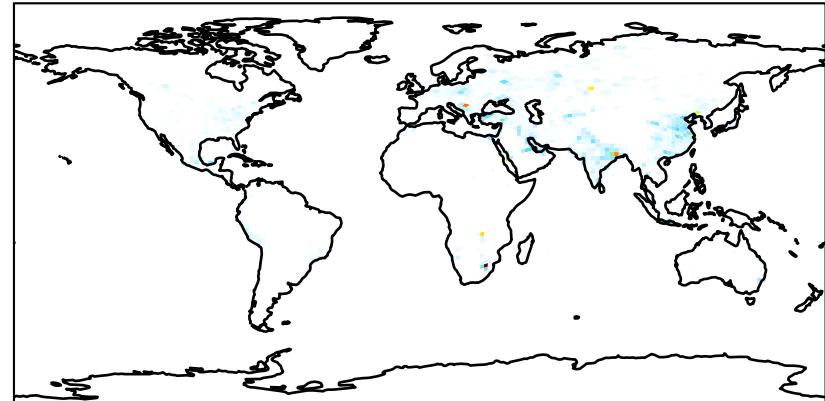


EmisSO4_Anthro (Jan2019)

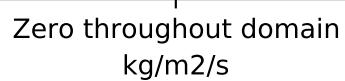
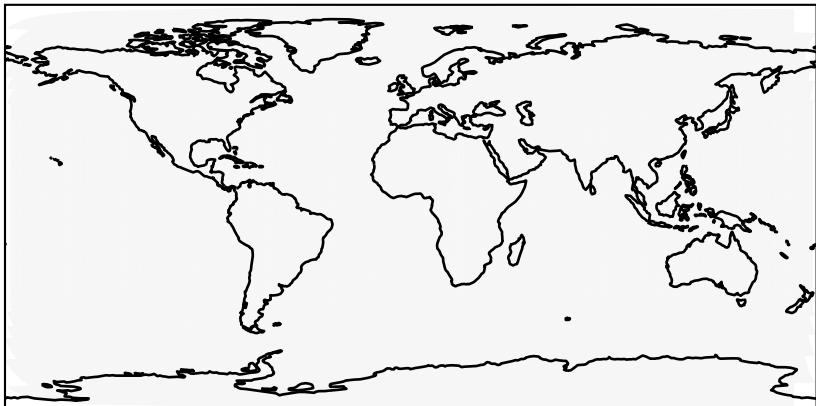
GCHP_13.0.0-beta.1 (Ref)
c48



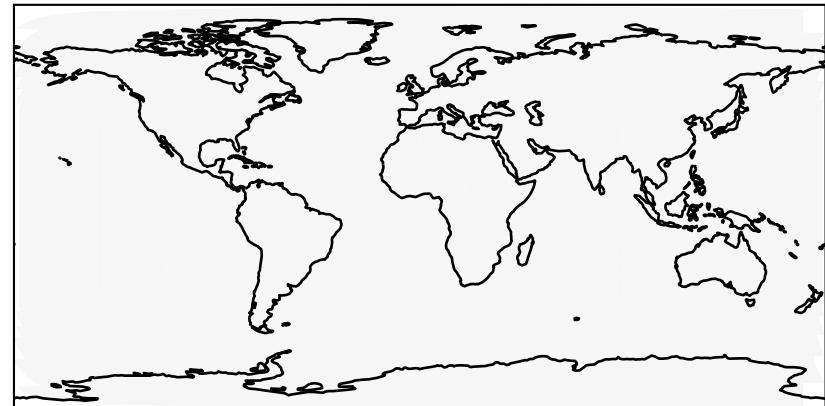
GCHP_13.0.0-rc.0 (Dev)
c48



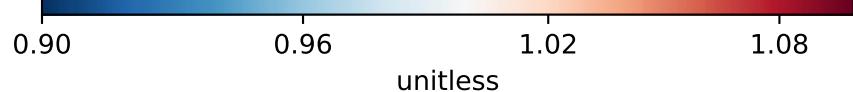
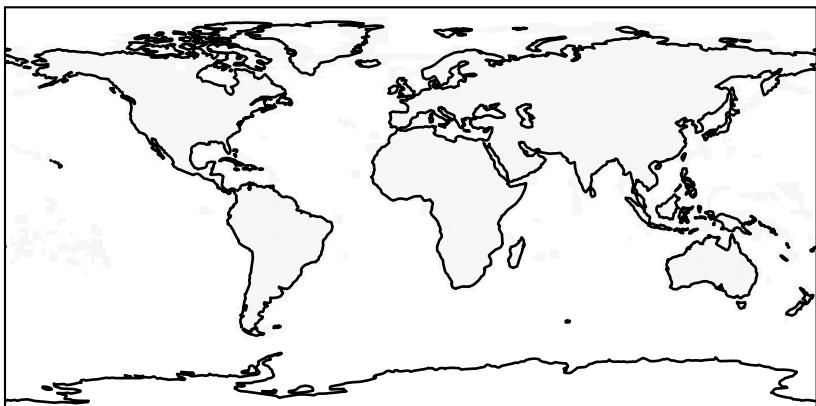
Difference
Dev - Ref, Dynamic Range



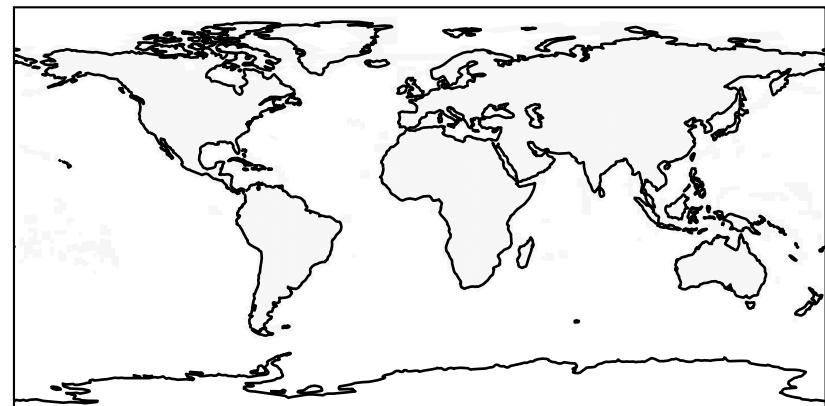
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

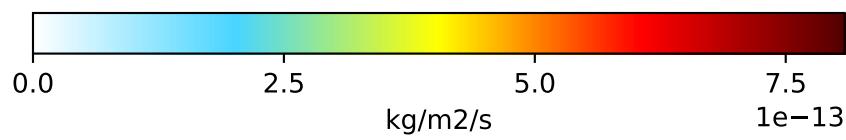
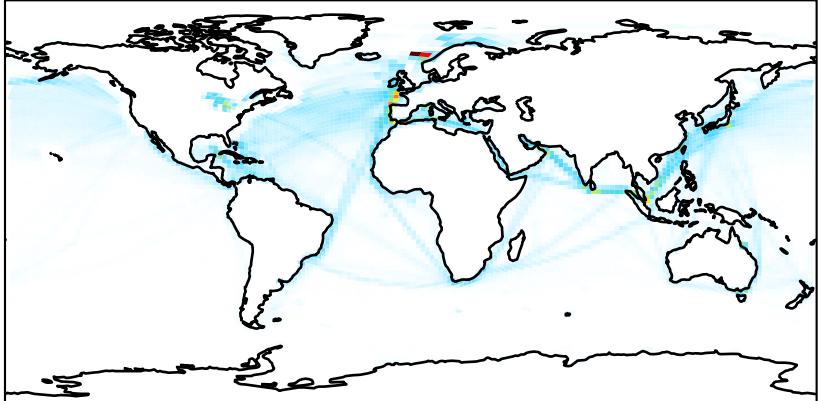


Ratio
Dev/Ref, Fixed Range

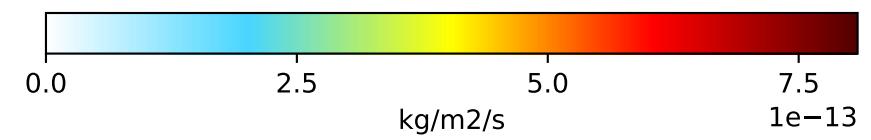
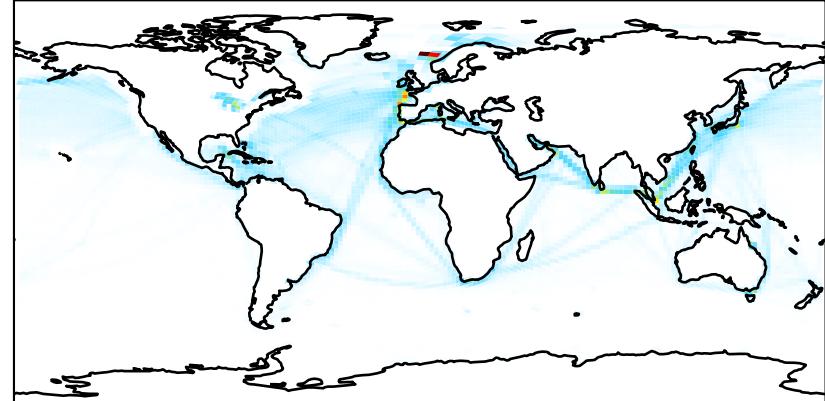


EmisSO4_Ship (Jan2019)

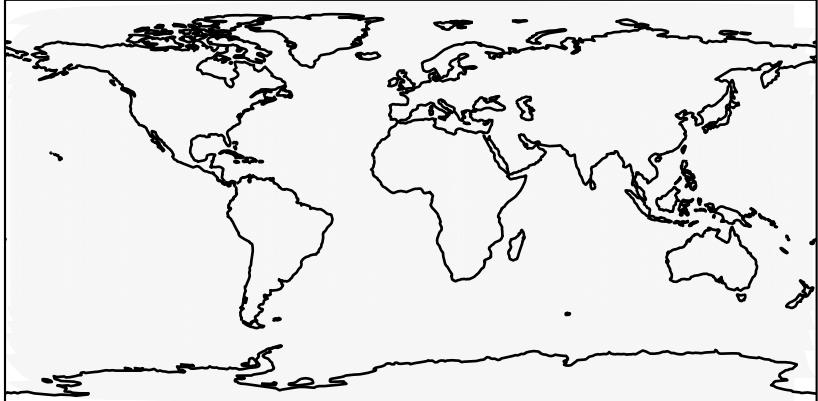
GCHP_13.0.0-beta.1 (Ref)
c48



GCHP_13.0.0-rc.0 (Dev)
c48

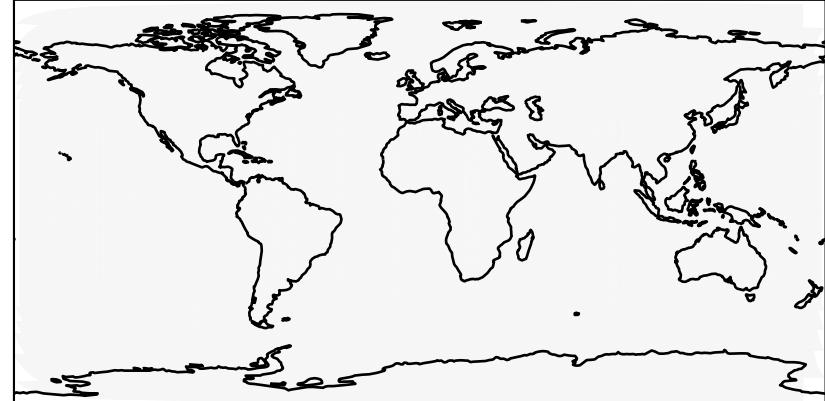


Difference
Dev - Ref, Dynamic Range



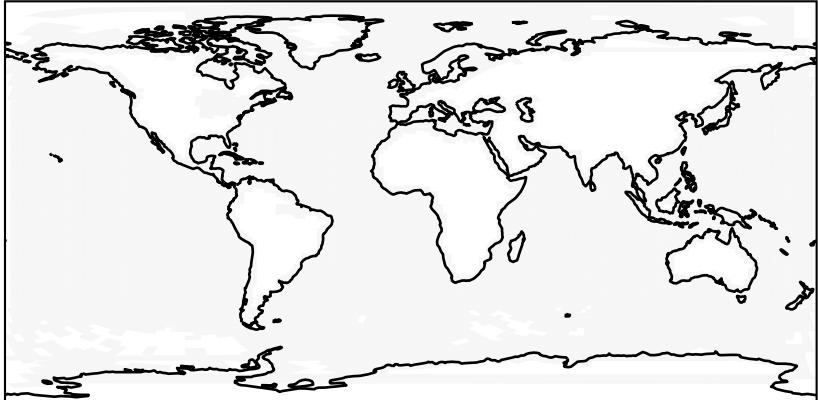
Zero throughout domain
kg/m²/s

Difference
Dev - Ref, Restricted Range [5%,95%]



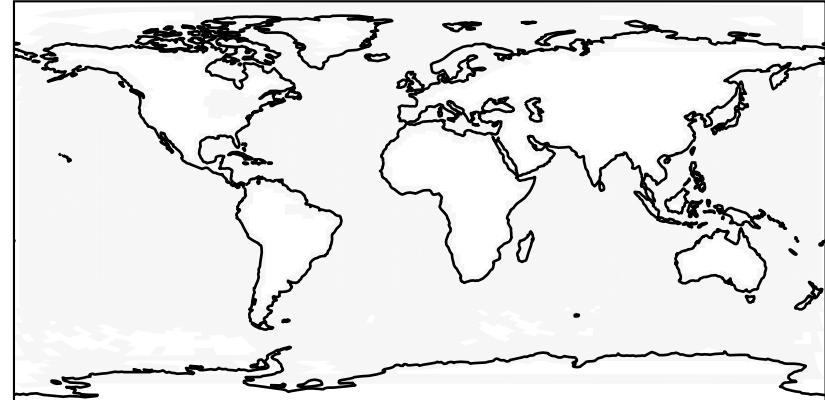
Zero throughout domain
kg/m²/s

Ratio
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08
unitless

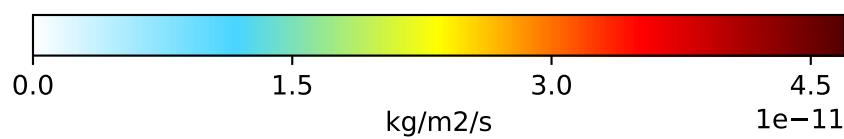
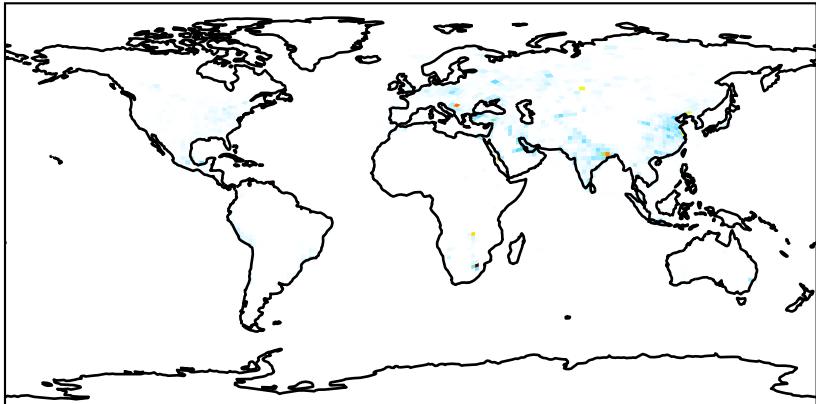
Ratio
Dev/Ref, Fixed Range



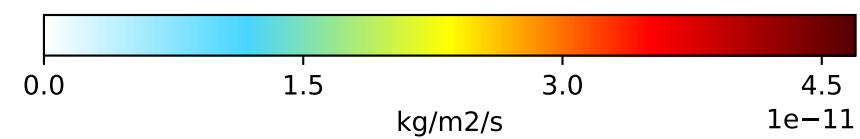
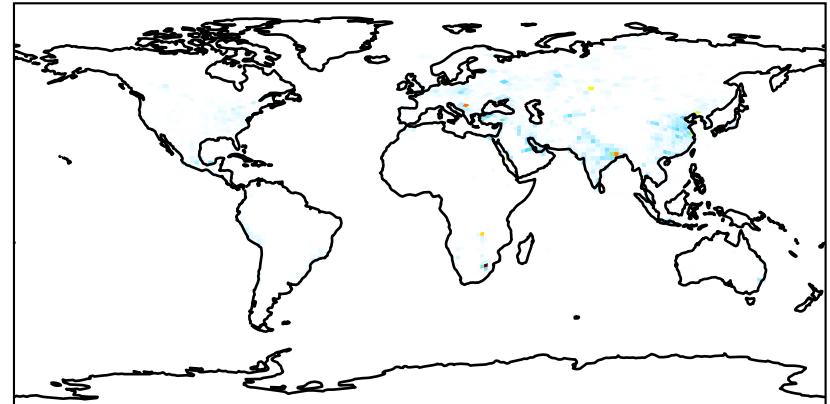
0.50 0.75 1.00 1.50 2.00
unitless

EmisSO4_Total (Jan2019)

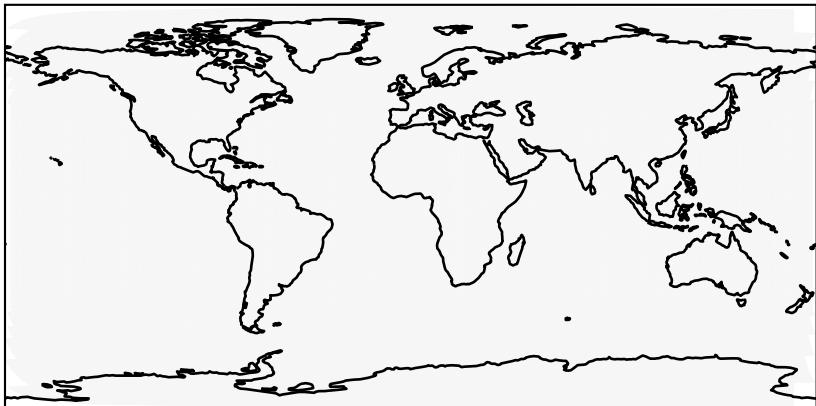
GCHP_13.0.0-beta.1 (Ref)
c48



GCHP_13.0.0-rc.0 (Dev)
c48

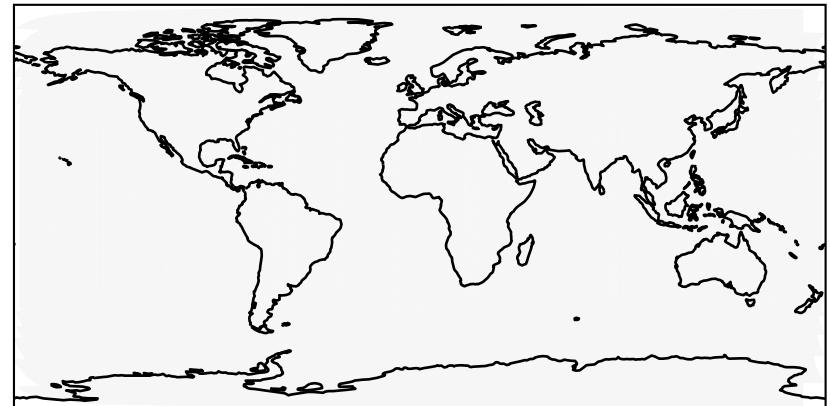


Difference
Dev - Ref, Dynamic Range



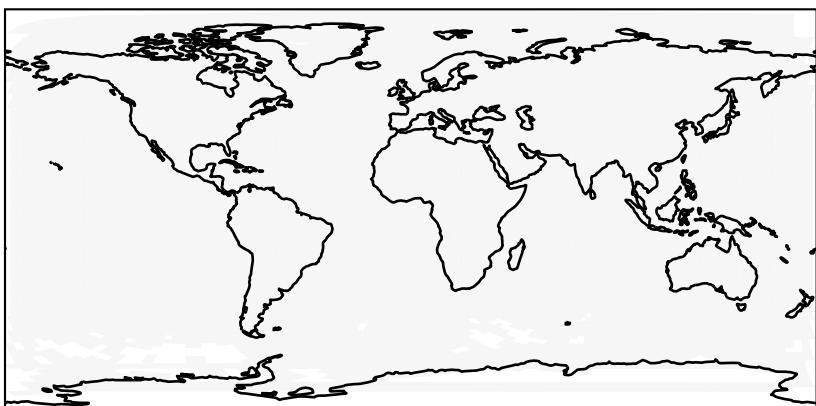
Zero throughout domain
kg/m²/s

Difference
Dev - Ref, Restricted Range [5%,95%]



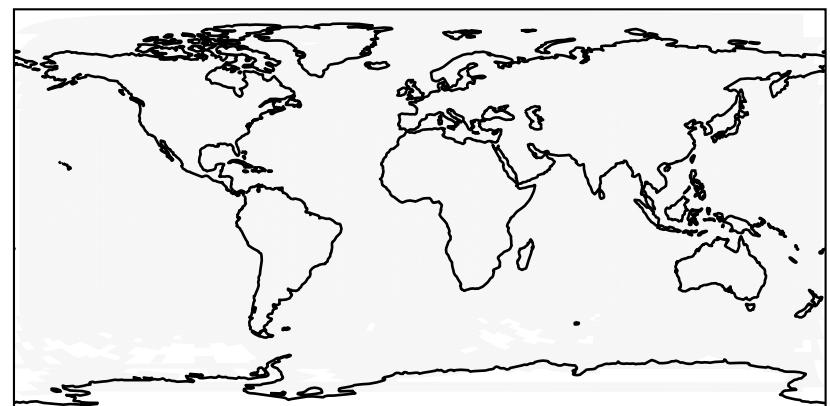
Zero throughout domain
kg/m²/s

Ratio
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08
unitless

Ratio
Dev/Ref, Fixed Range



0.50 0.75 1.00 1.50 2.00
unitless