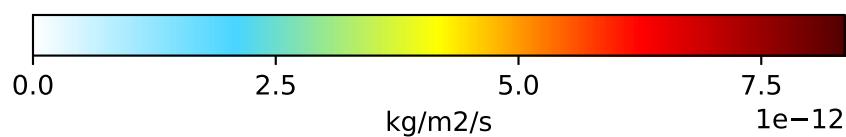
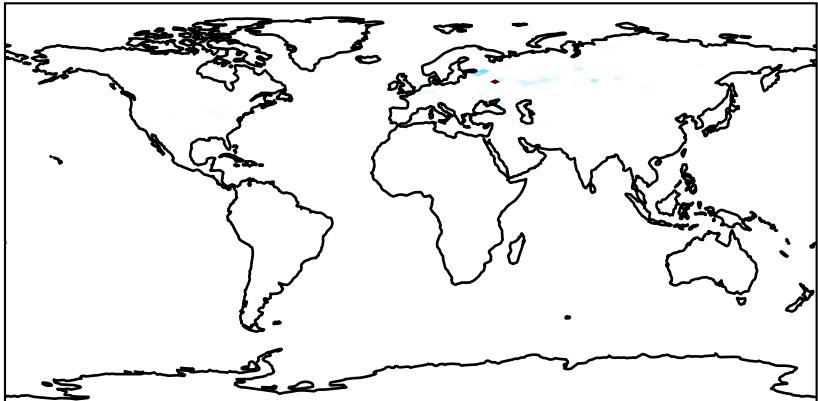
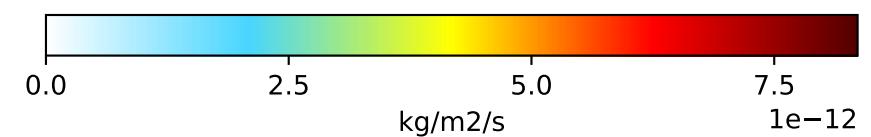


# EmisALK4\_Aircraft (Jul2019)

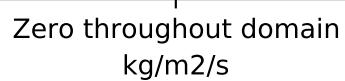
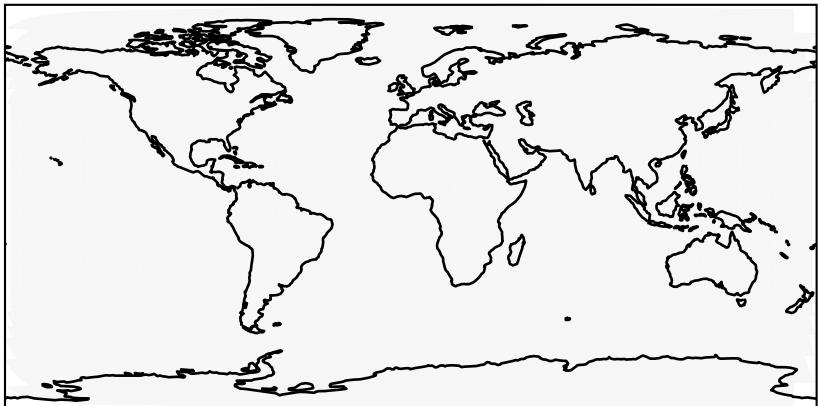
GCHP\_13.0.0-beta.1 (Ref)  
c48



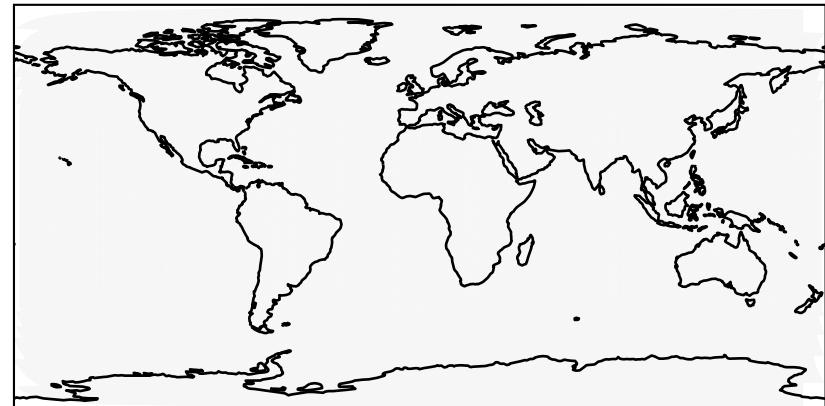
GCHP\_13.0.0-rc.0 (Dev)  
c48



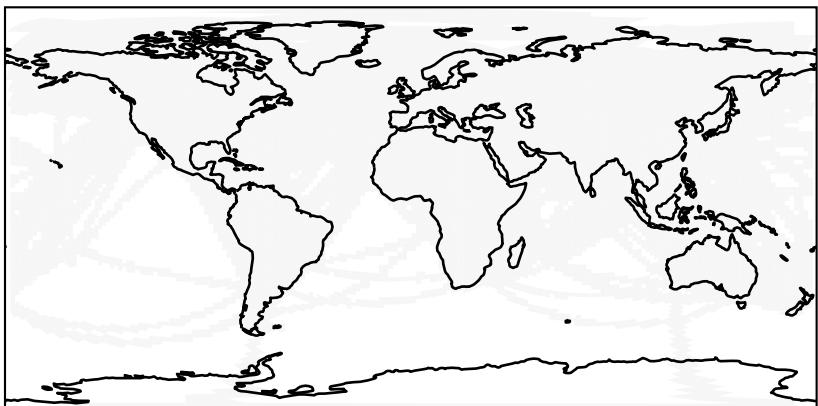
Difference  
Dev - Ref, Dynamic Range



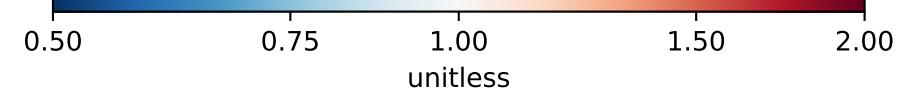
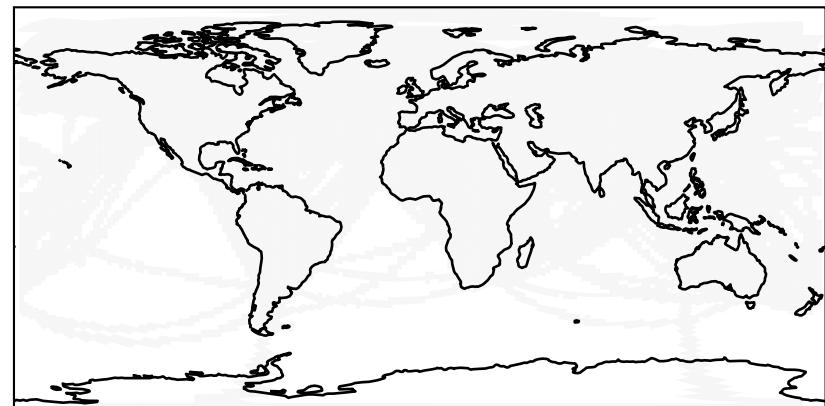
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

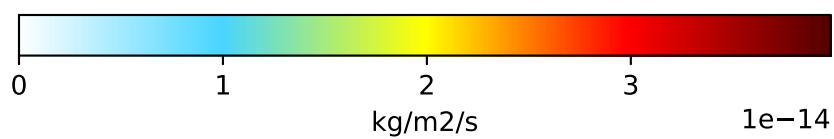
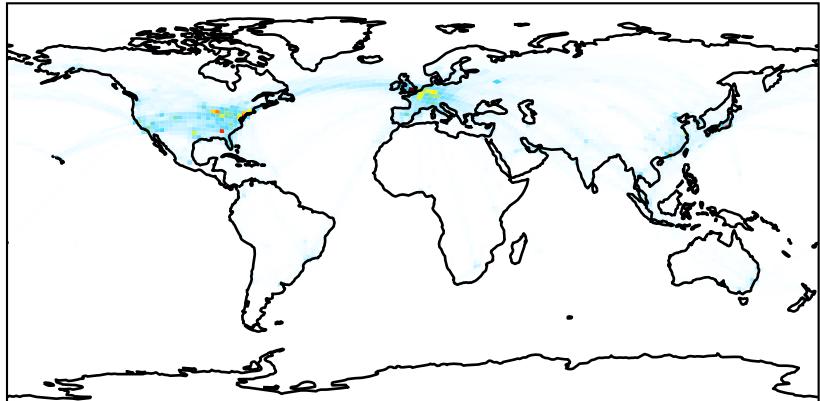


Ratio  
Dev/Ref, Fixed Range

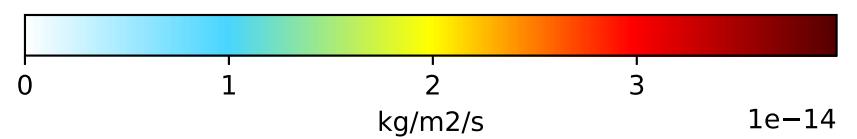
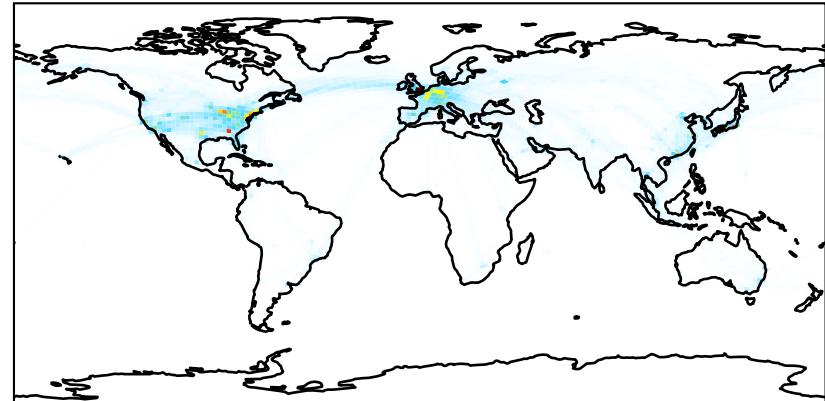


# EmisBCPI\_Aircraft (Jul2019)

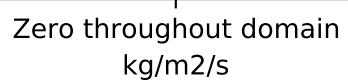
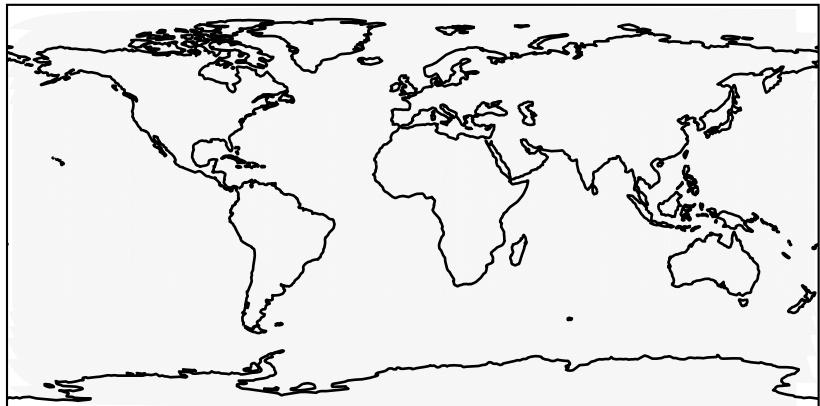
GCHP\_13.0.0-beta.1 (Ref)  
c48



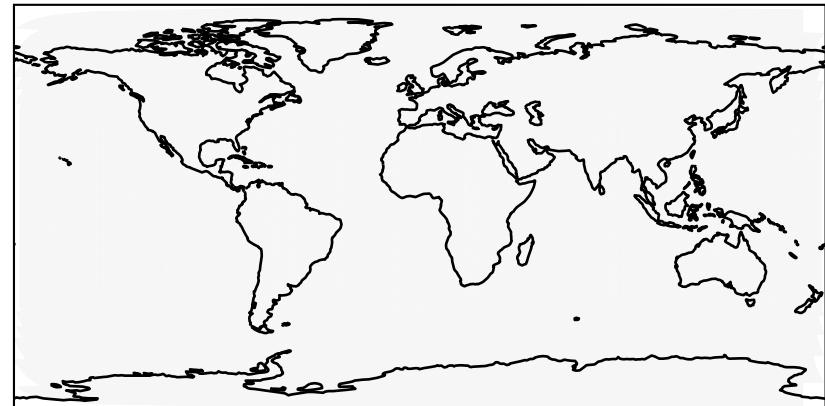
GCHP\_13.0.0-rc.0 (Dev)  
c48



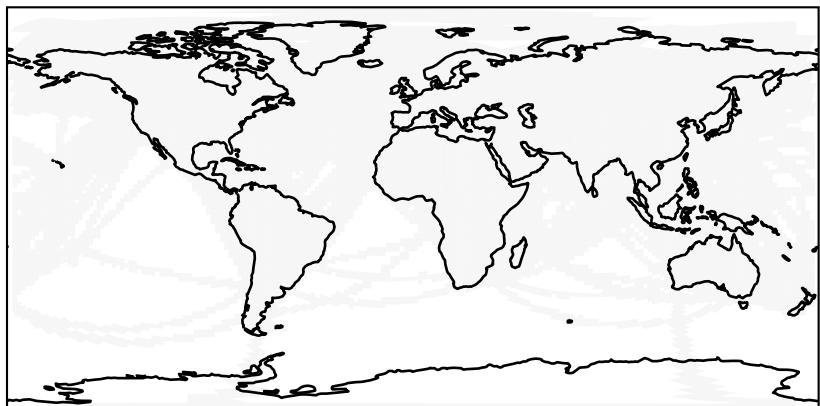
Difference  
Dev - Ref, Dynamic Range



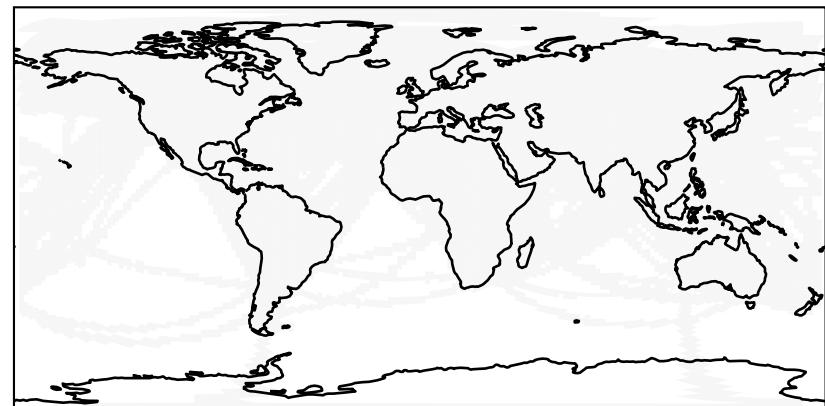
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

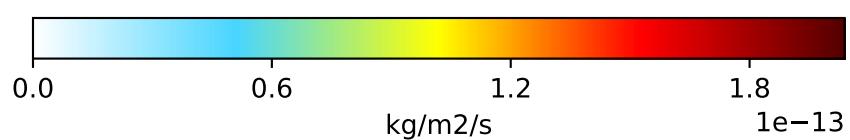
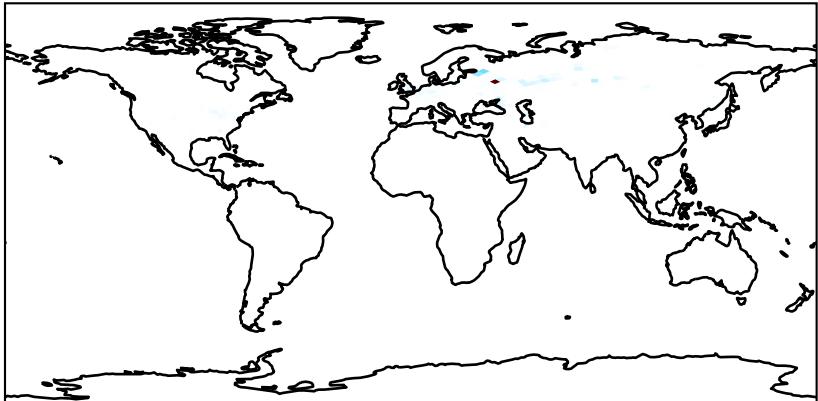


Ratio  
Dev/Ref, Fixed Range

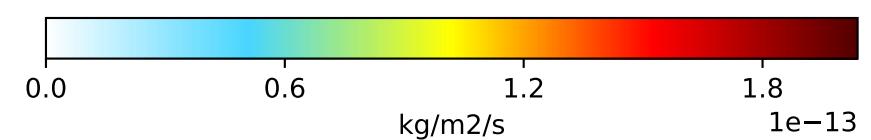
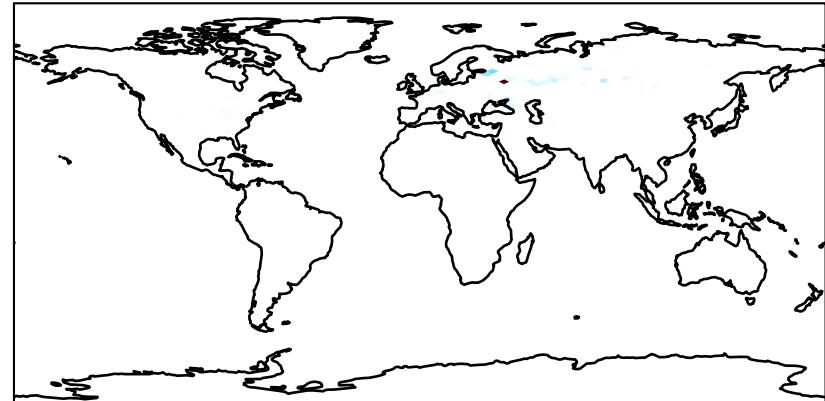


# EmisC2H6\_Aircraft (Jul2019)

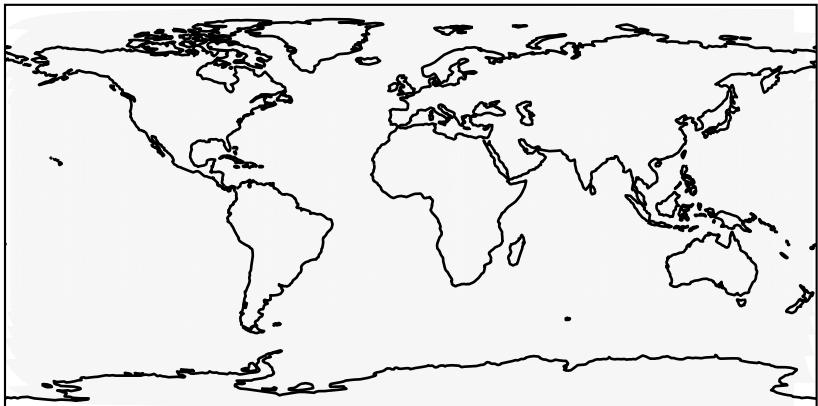
GCHP\_13.0.0-beta.1 (Ref)  
c48



GCHP\_13.0.0-rc.0 (Dev)  
c48

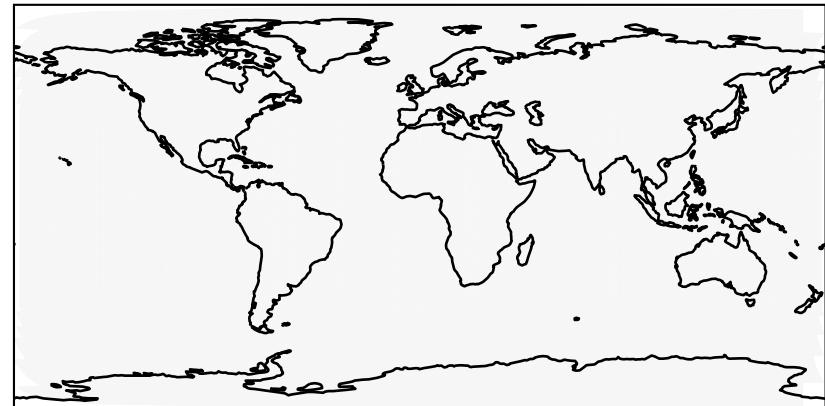


Difference  
Dev - Ref, Dynamic Range



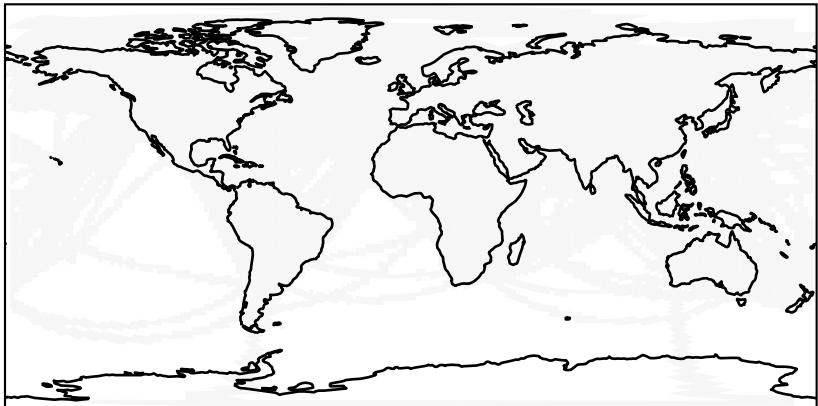
Zero throughout domain  
kg/m2/s

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



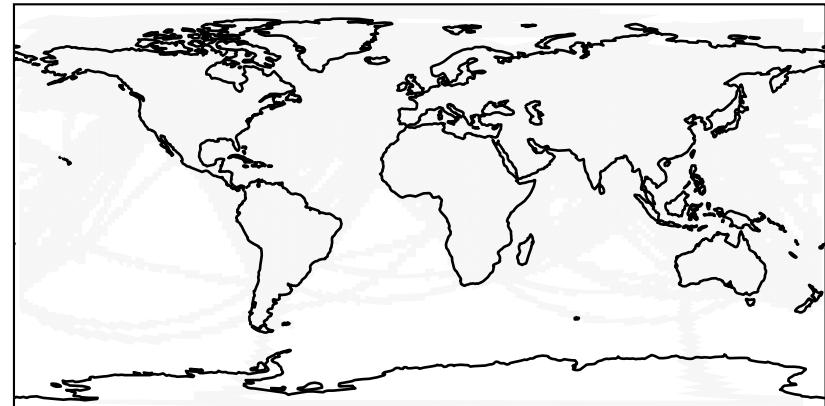
Zero throughout domain  
kg/m2/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

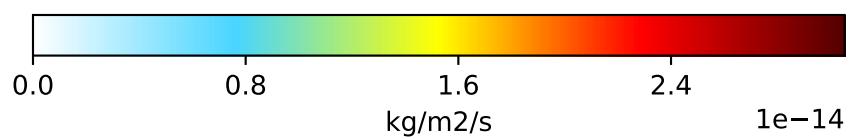
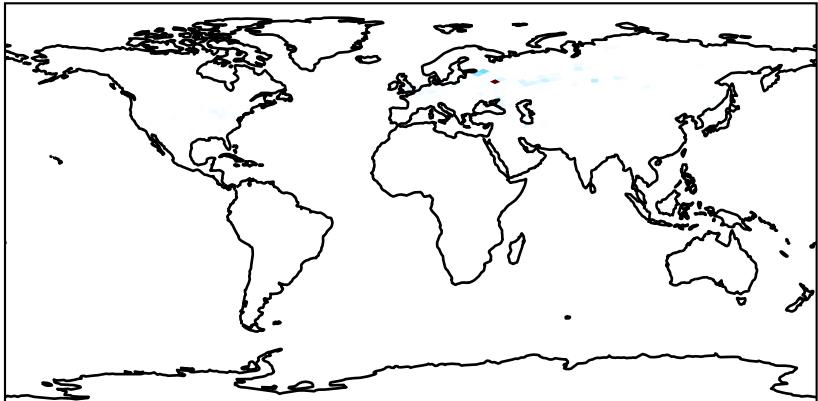
Ratio  
Dev/Ref, Fixed Range



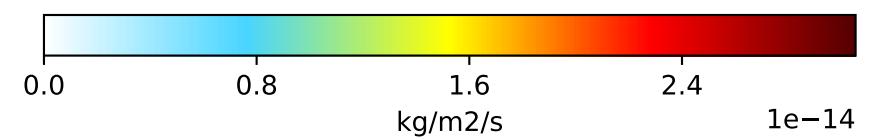
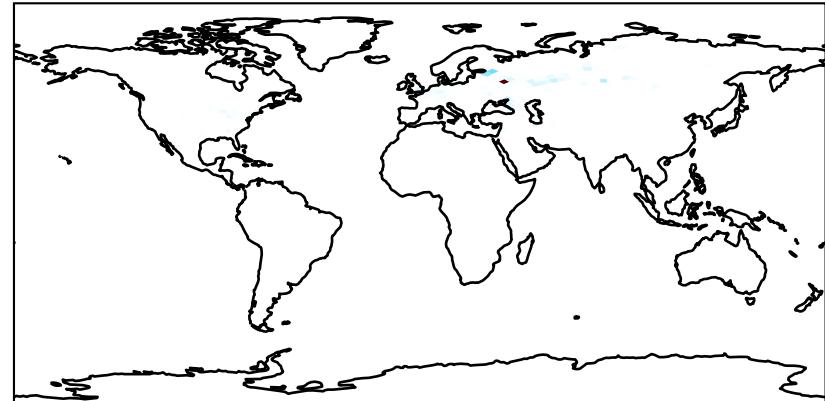
0.50      0.75      1.00      1.50      2.00  
unitless

# EmisC3H8\_Aircraft (Jul2019)

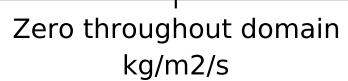
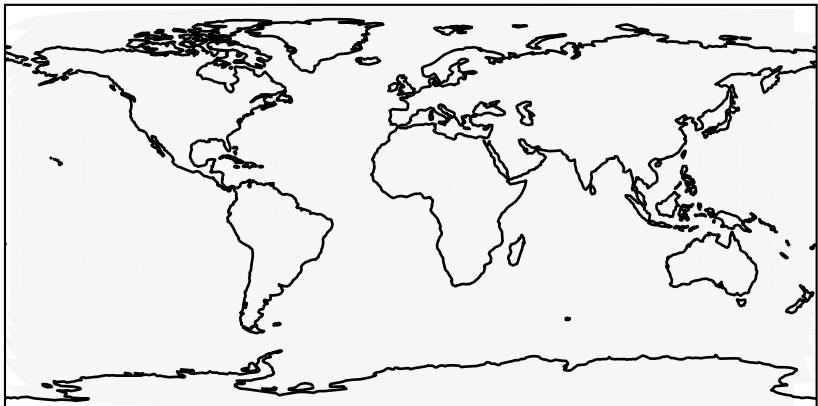
GCHP\_13.0.0-beta.1 (Ref)  
c48



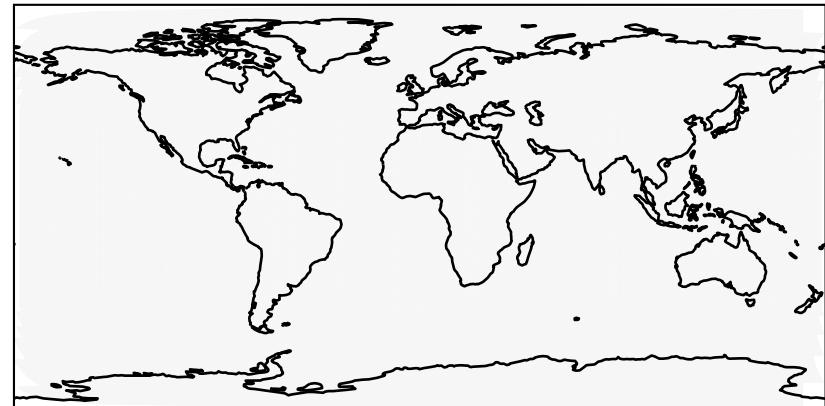
GCHP\_13.0.0-rc.0 (Dev)  
c48



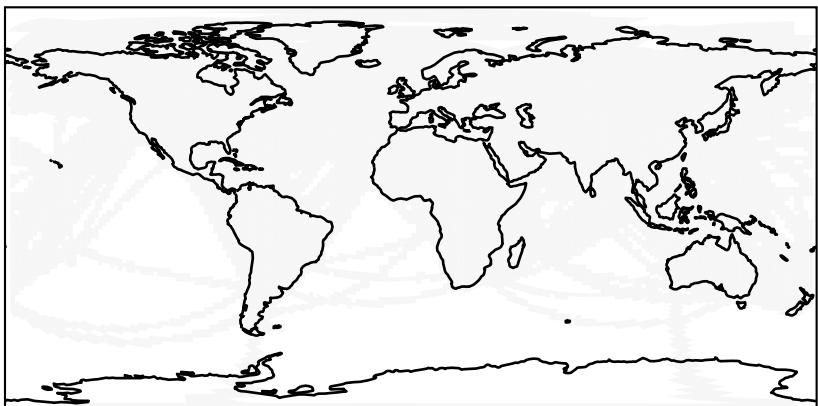
Difference  
Dev - Ref, Dynamic Range



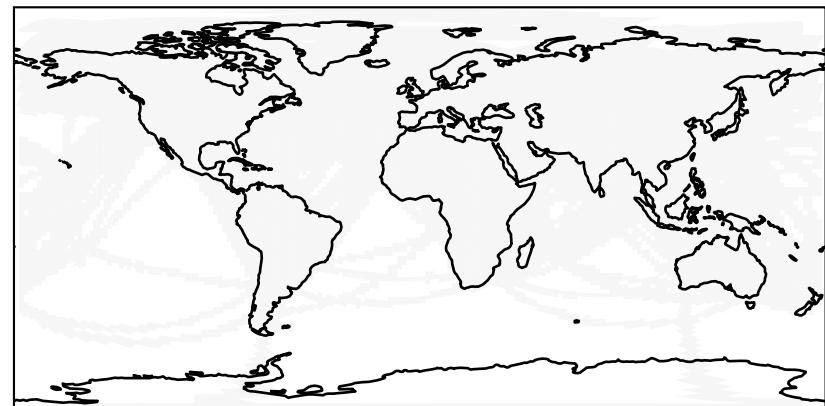
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

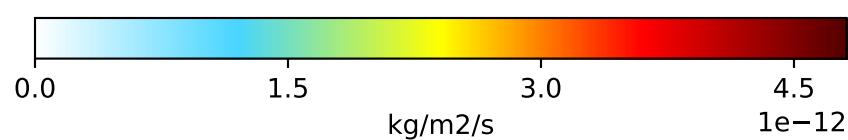


Ratio  
Dev/Ref, Fixed Range

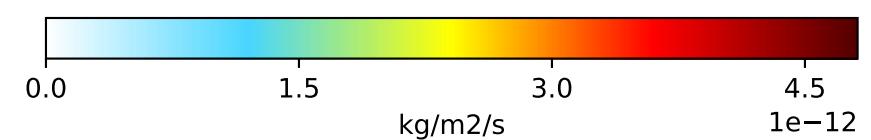
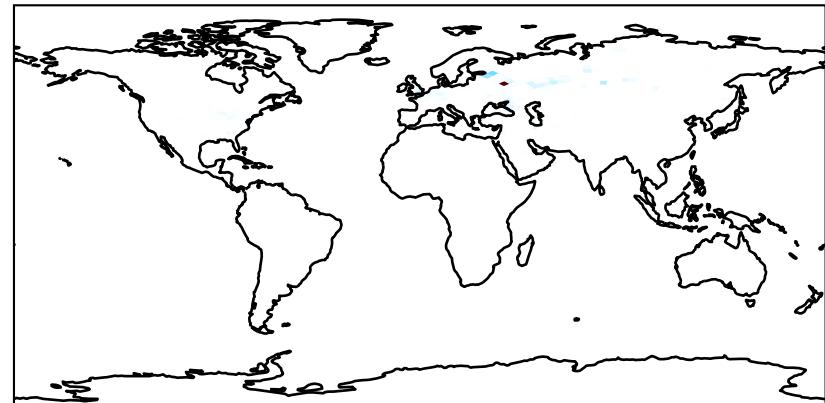


# EmisCH2O\_Aircraft (Jul2019)

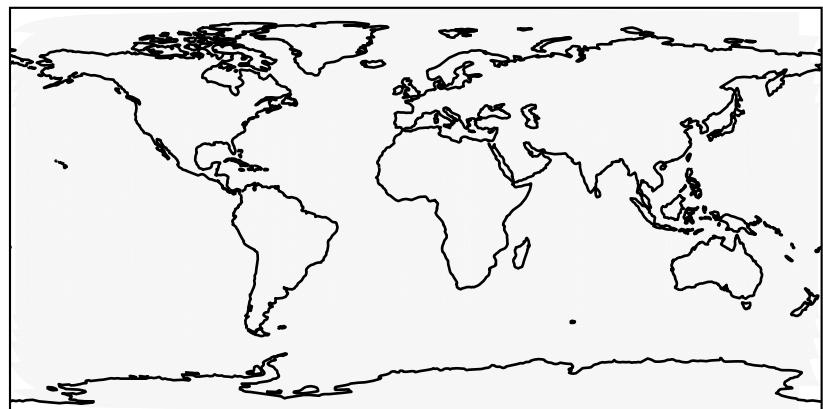
GCHP\_13.0.0-beta.1 (Ref)  
c48



GCHP\_13.0.0-rc.0 (Dev)  
c48

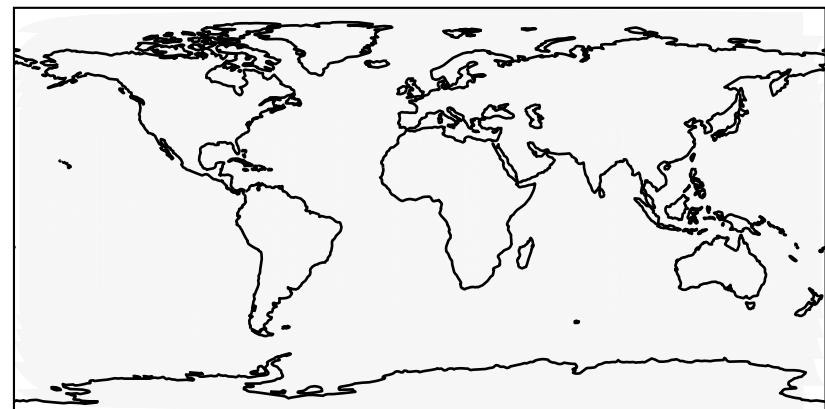


Difference  
Dev - Ref, Dynamic Range



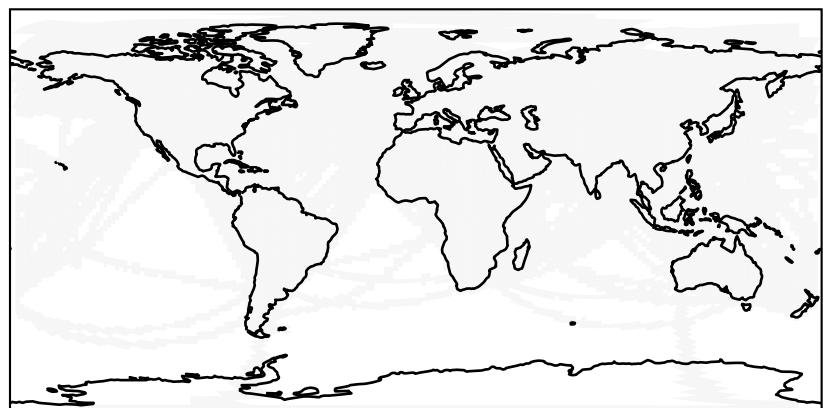
Zero throughout domain  
kg/m<sup>2</sup>/s

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



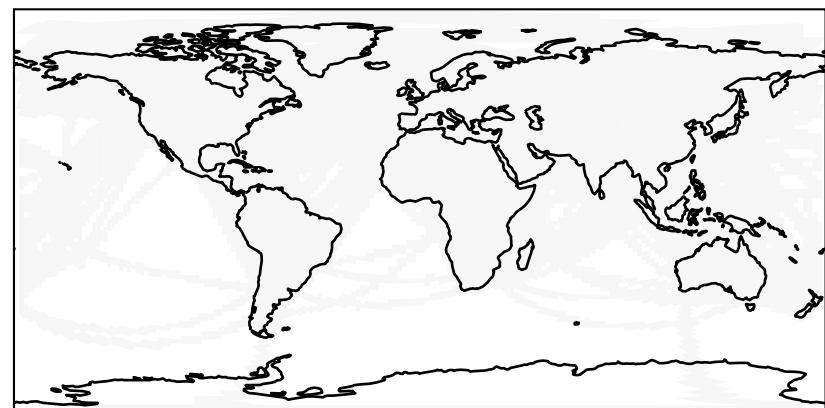
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

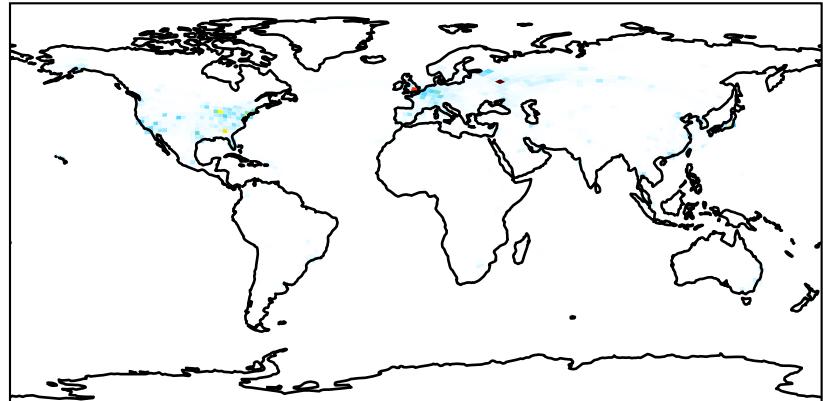
Ratio  
Dev/Ref, Fixed Range



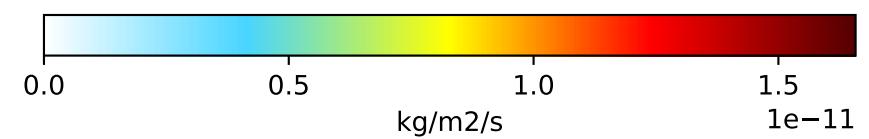
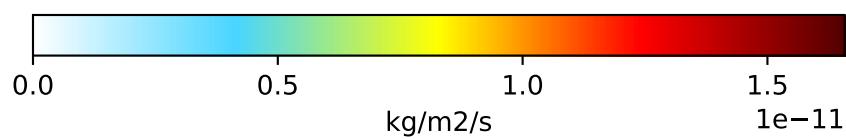
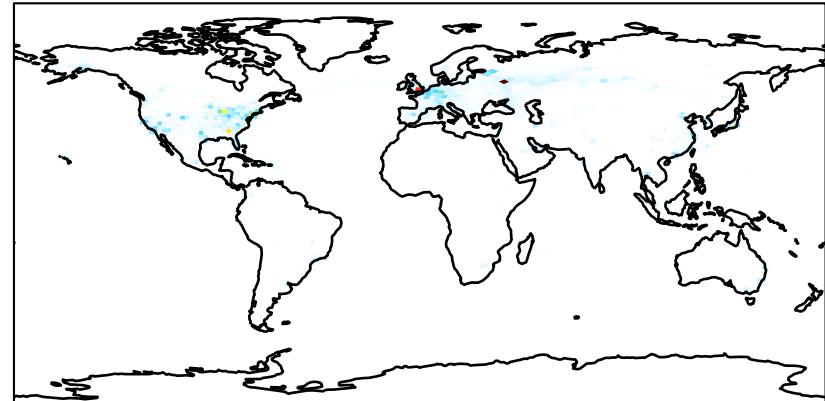
0.50      0.75      1.00      1.50      2.00  
unitless

# EmisCO\_Aircraft (Jul2019)

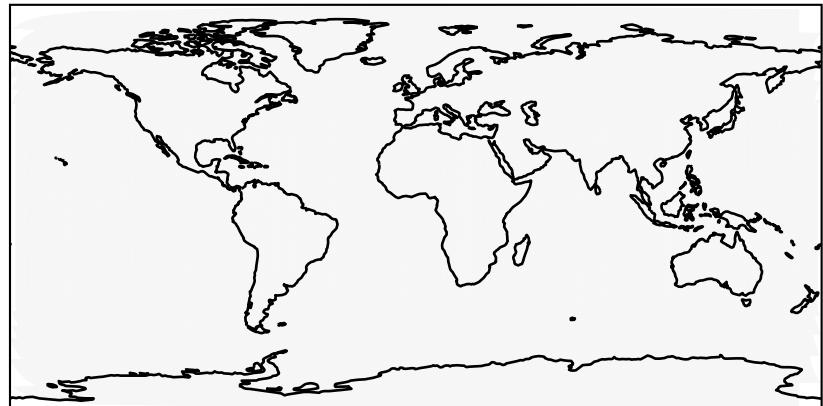
GCHP\_13.0.0-beta.1 (Ref)  
c48



GCHP\_13.0.0-rc.0 (Dev)  
c48

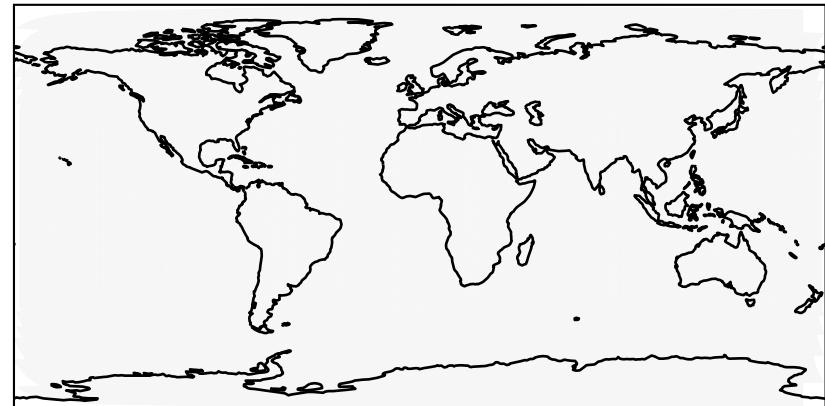


Difference  
Dev - Ref, Dynamic Range



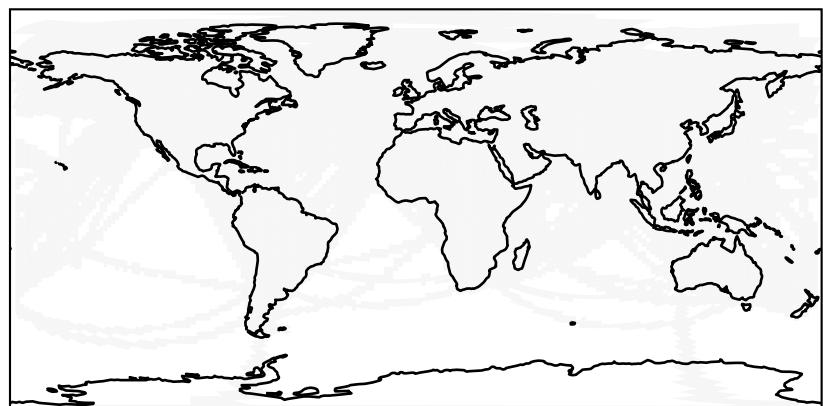
Zero throughout domain  
kg/m<sup>2</sup>/s

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



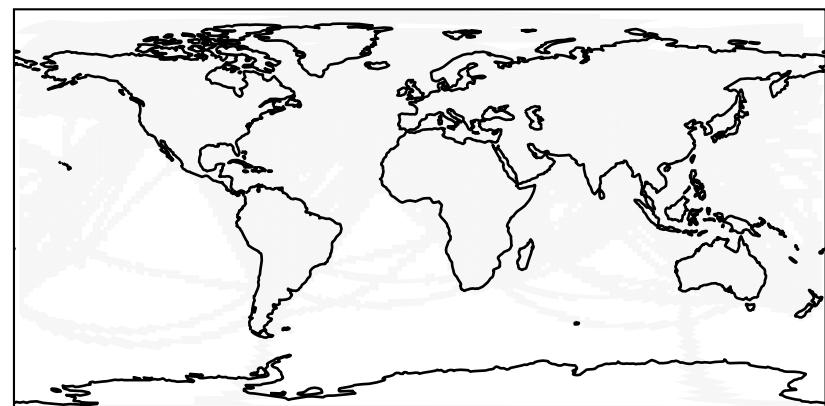
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



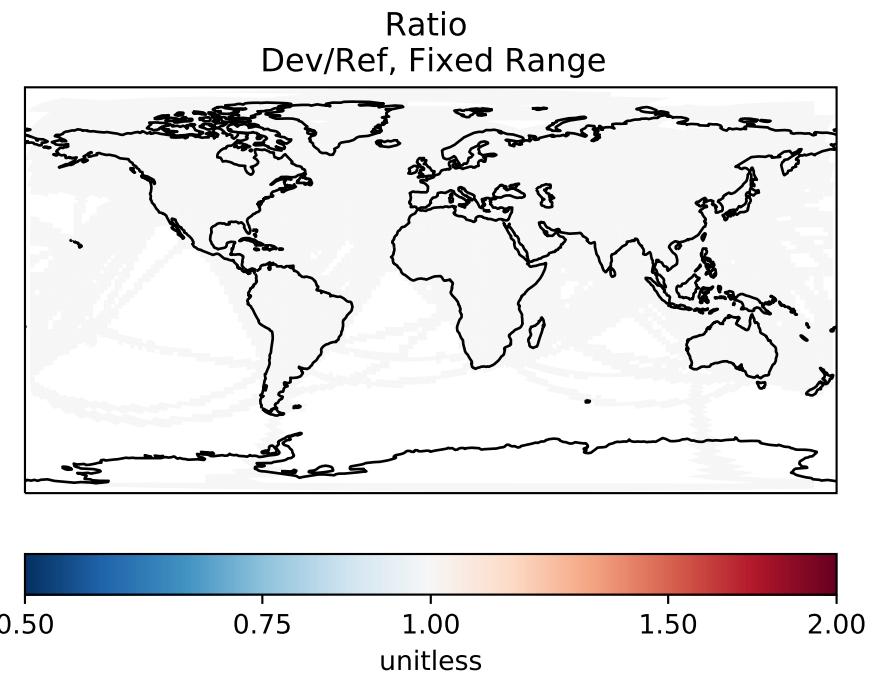
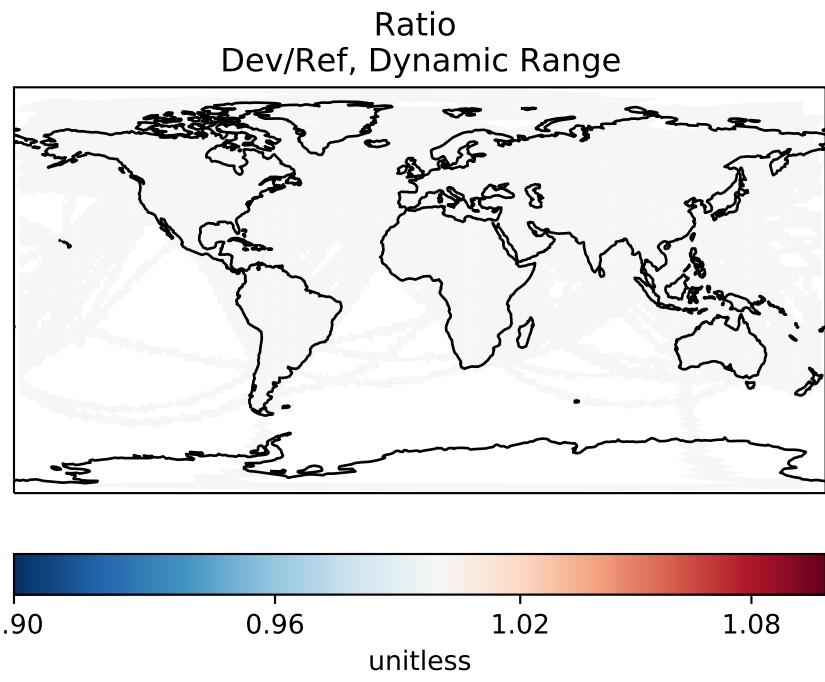
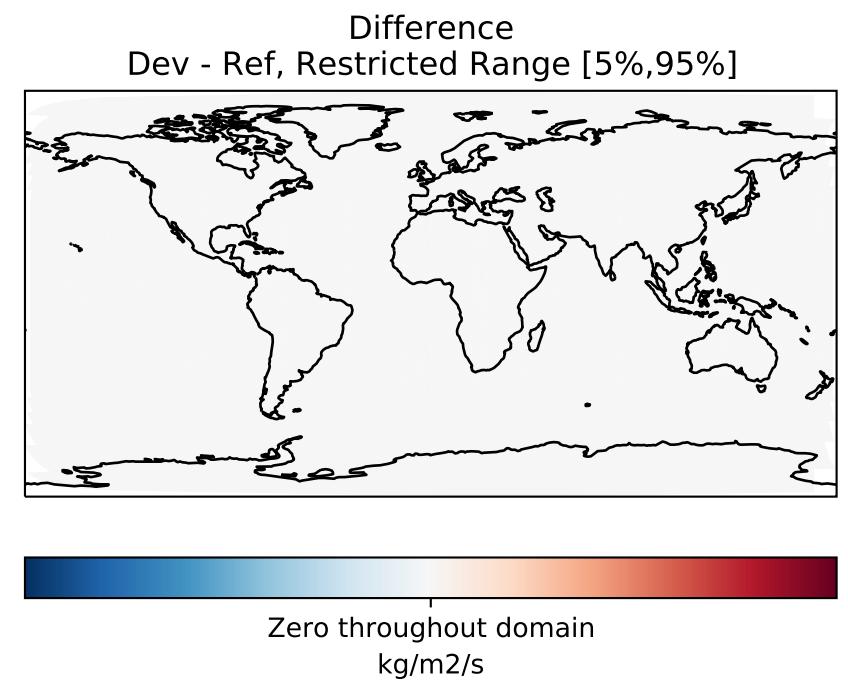
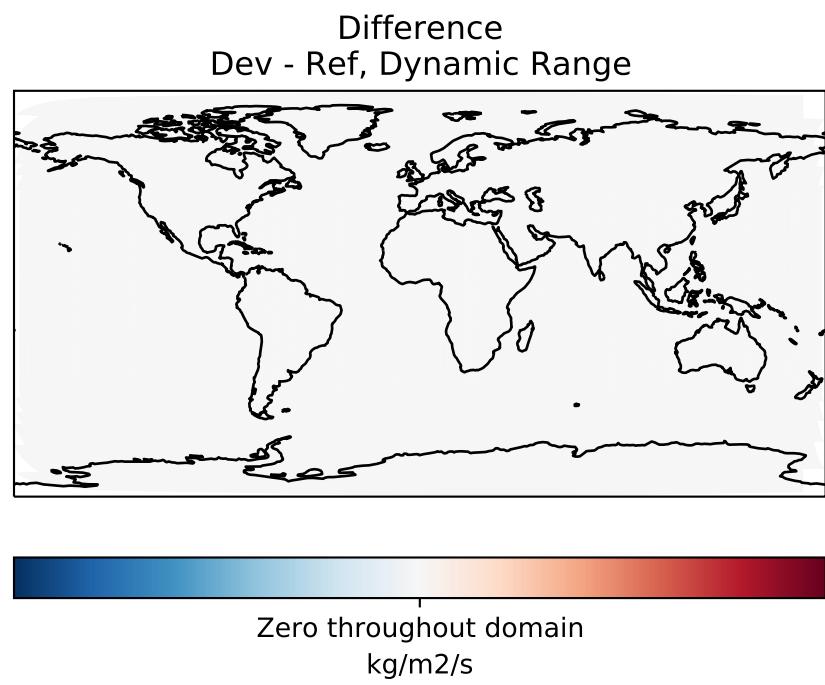
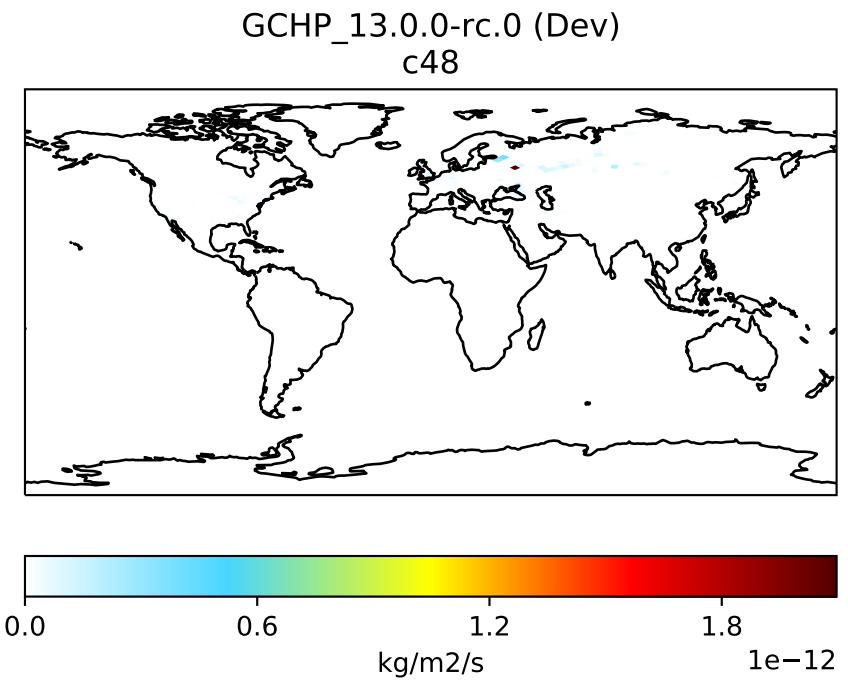
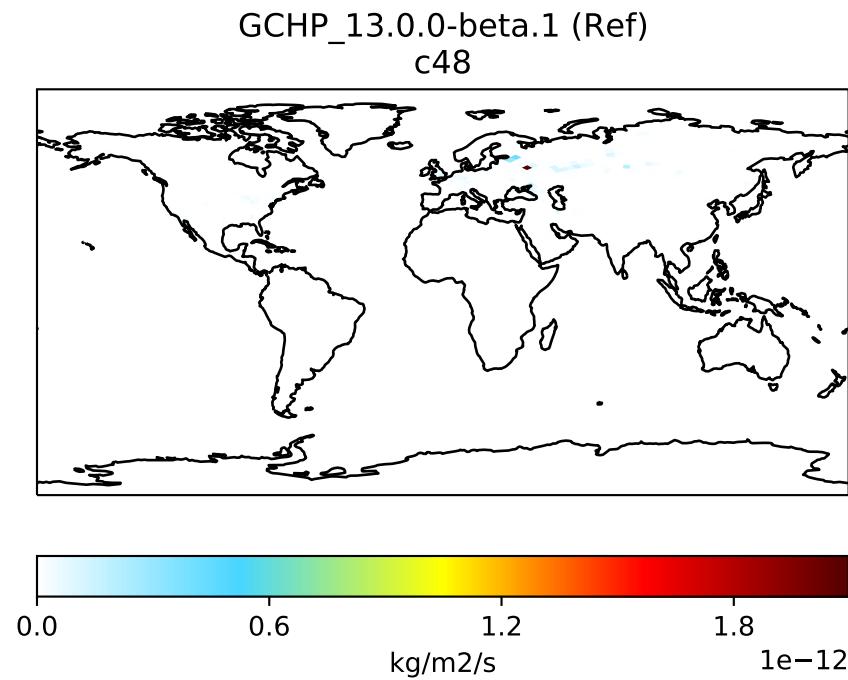
0.90 0.96 1.02 1.08  
unitless

Ratio  
Dev/Ref, Fixed Range



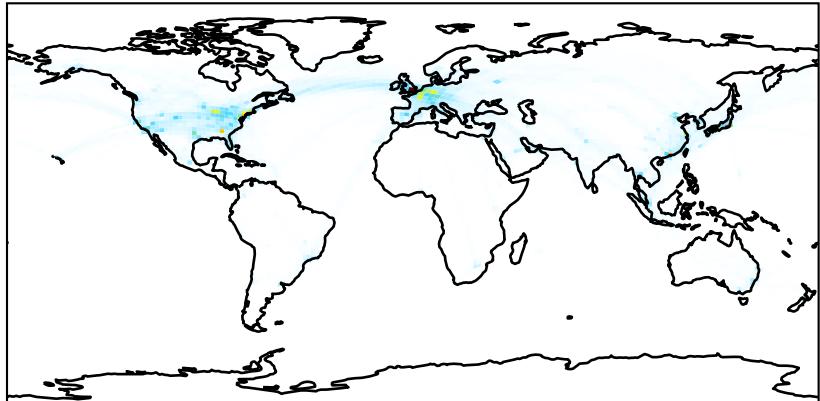
0.50 0.75 1.00 1.50 2.00  
unitless

# EmisMACR\_Aircraft (Jul2019)

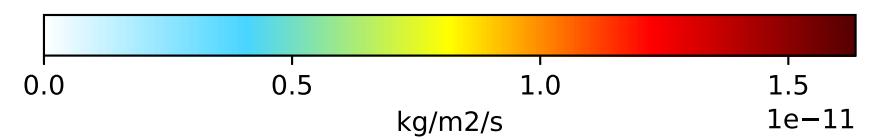
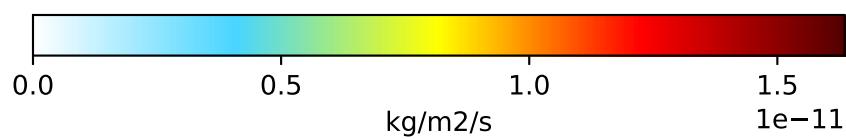
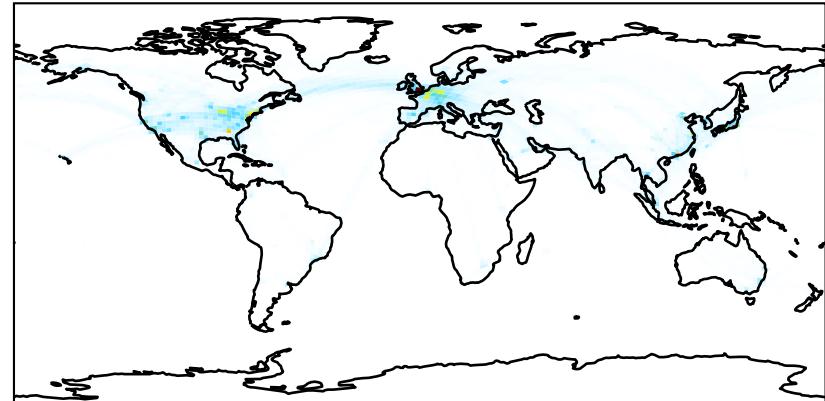


# EmisNO\_Aircraft (Jul2019)

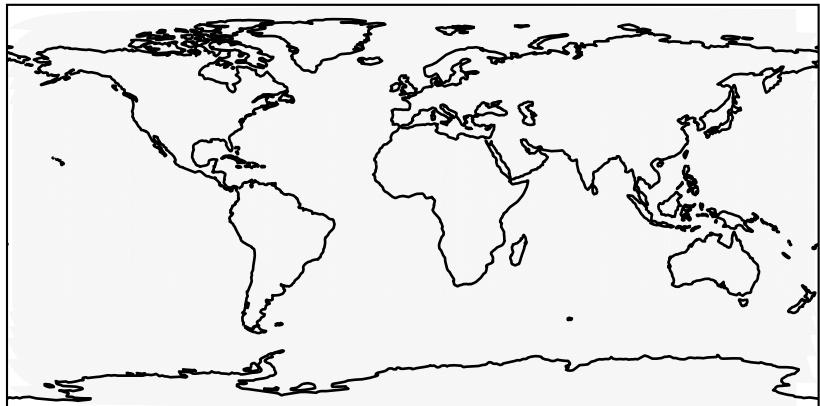
GCHP\_13.0.0-beta.1 (Ref)  
c48



GCHP\_13.0.0-rc.0 (Dev)  
c48

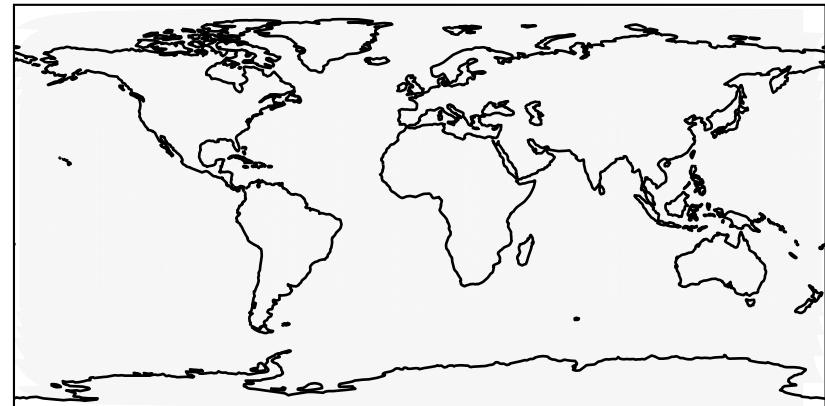


Difference  
Dev - Ref, Dynamic Range



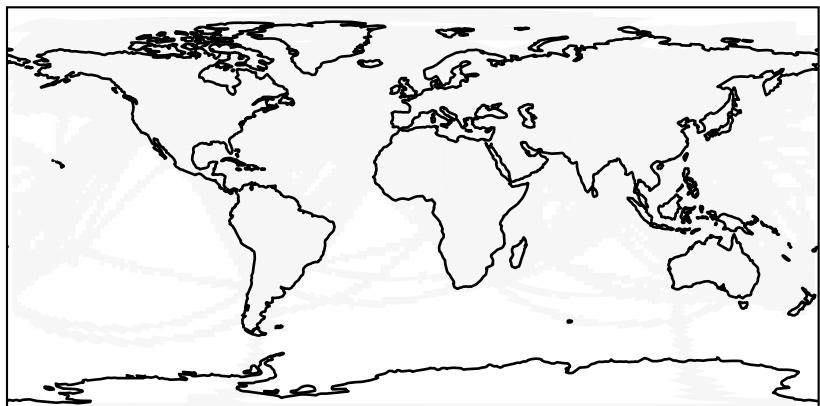
Zero throughout domain  
kg/m<sup>2</sup>/s

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



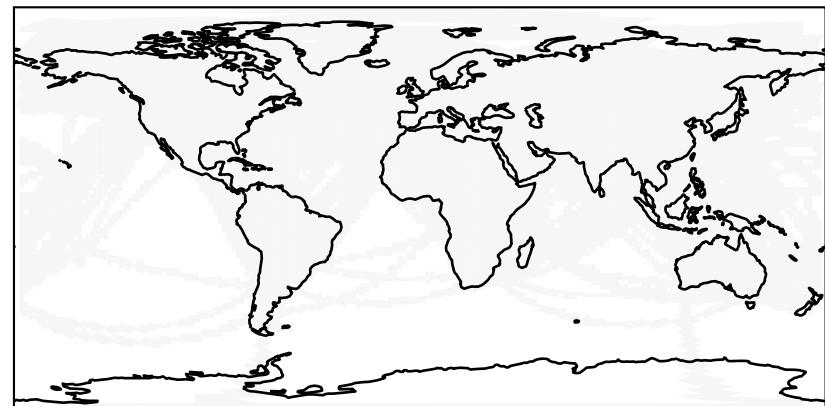
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08  
unitless

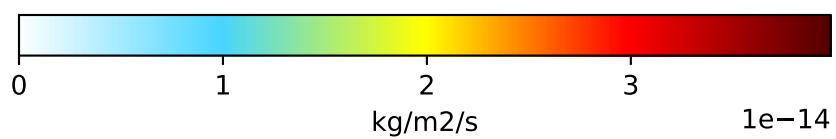
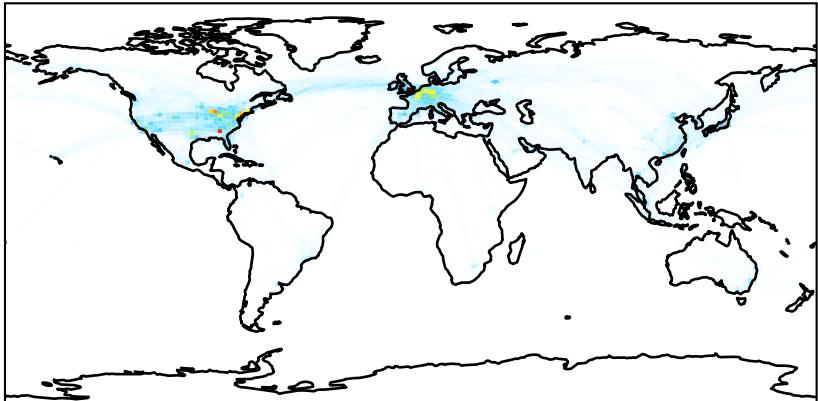
Ratio  
Dev/Ref, Fixed Range



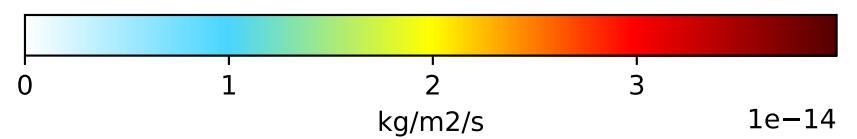
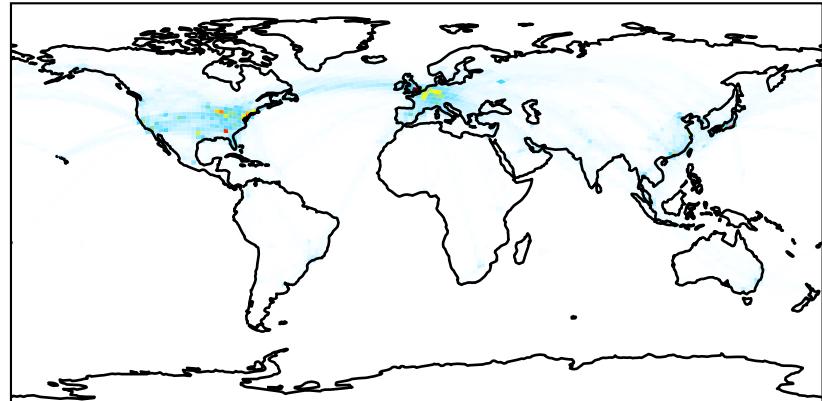
0.50 0.75 1.00 1.50 2.00  
unitless

# EmisOCPI\_Aircraft (Jul2019)

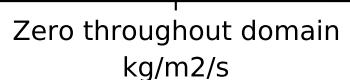
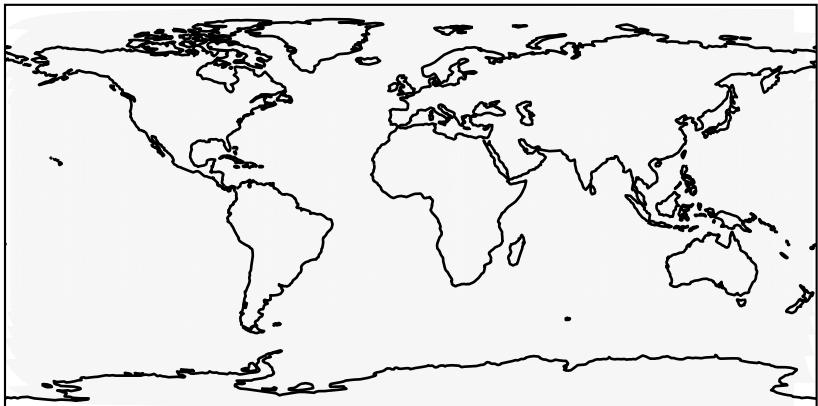
GCHP\_13.0.0-beta.1 (Ref)  
c48



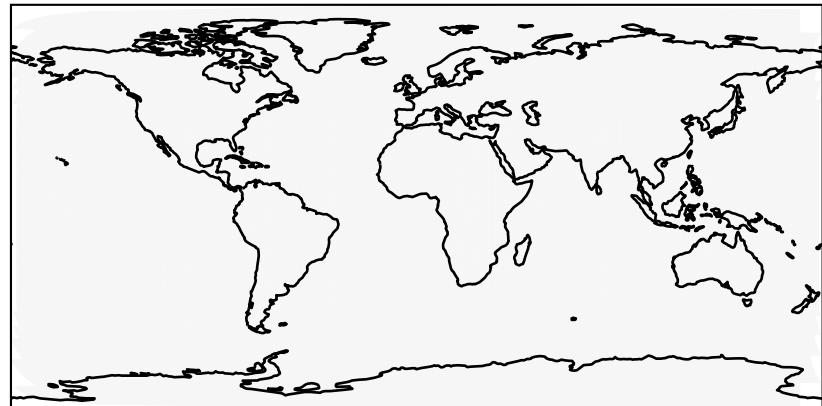
GCHP\_13.0.0-rc.0 (Dev)  
c48



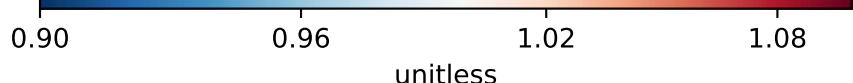
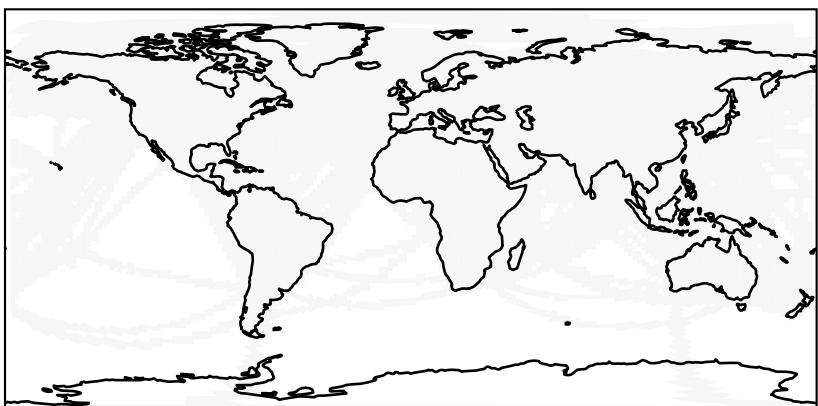
Difference  
Dev - Ref, Dynamic Range



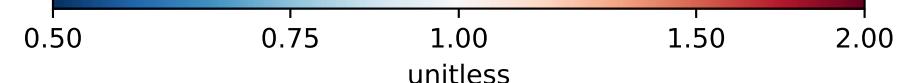
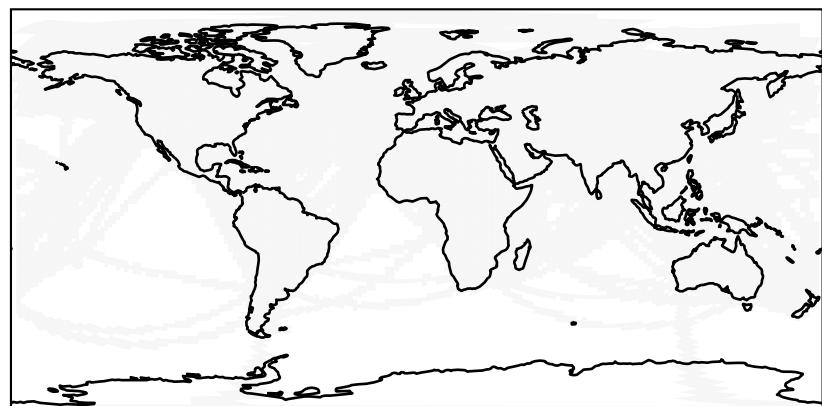
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

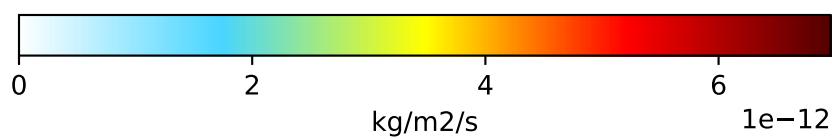
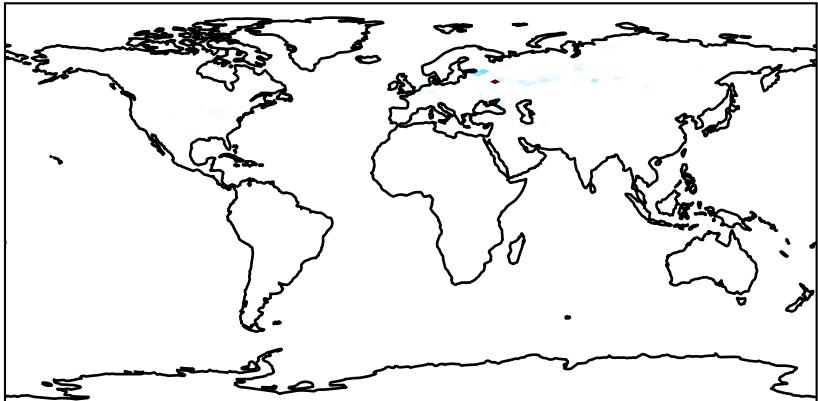


Ratio  
Dev/Ref, Fixed Range

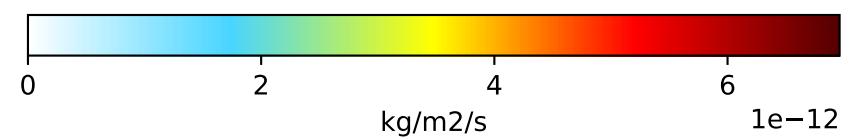
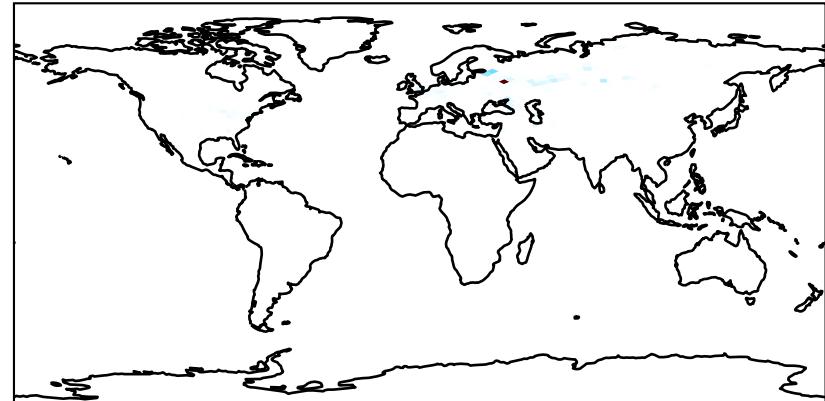


# EmisPRPE\_Aircraft (Jul2019)

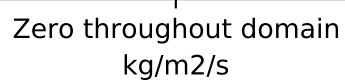
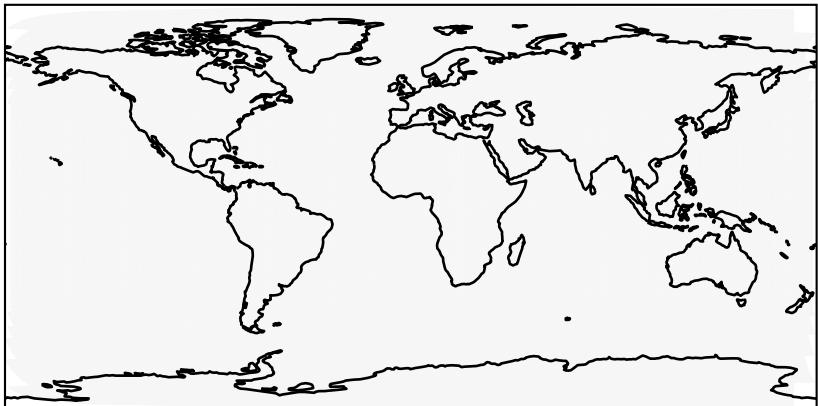
GCHP\_13.0.0-beta.1 (Ref)  
c48



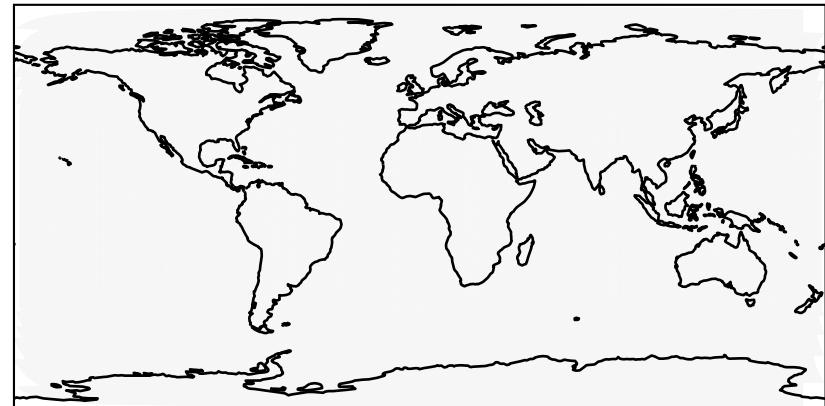
GCHP\_13.0.0-rc.0 (Dev)  
c48



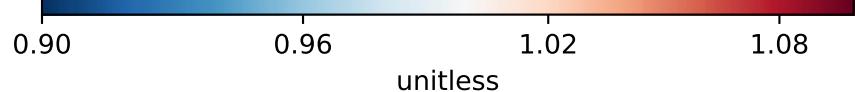
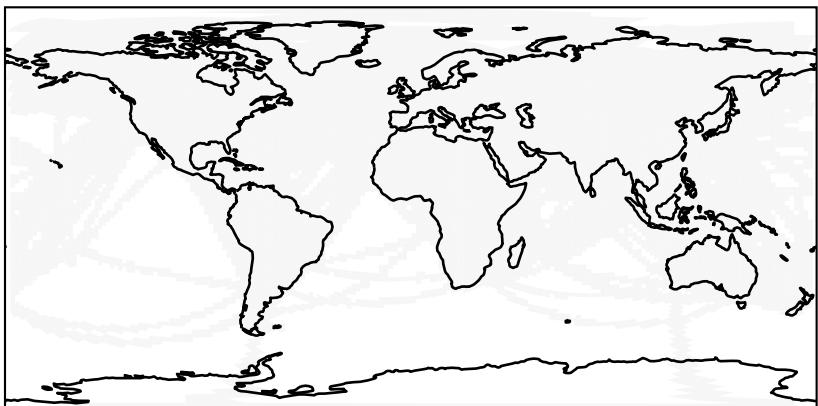
Difference  
Dev - Ref, Dynamic Range



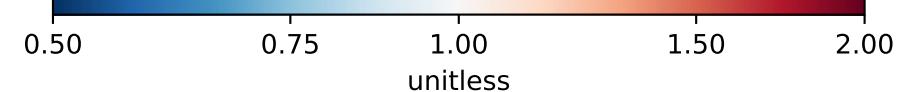
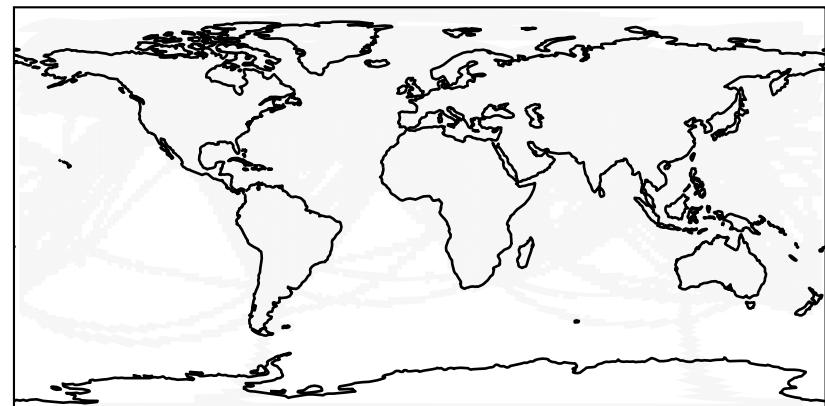
Difference  
Dev - Ref, Restricted Range [5%,95%]



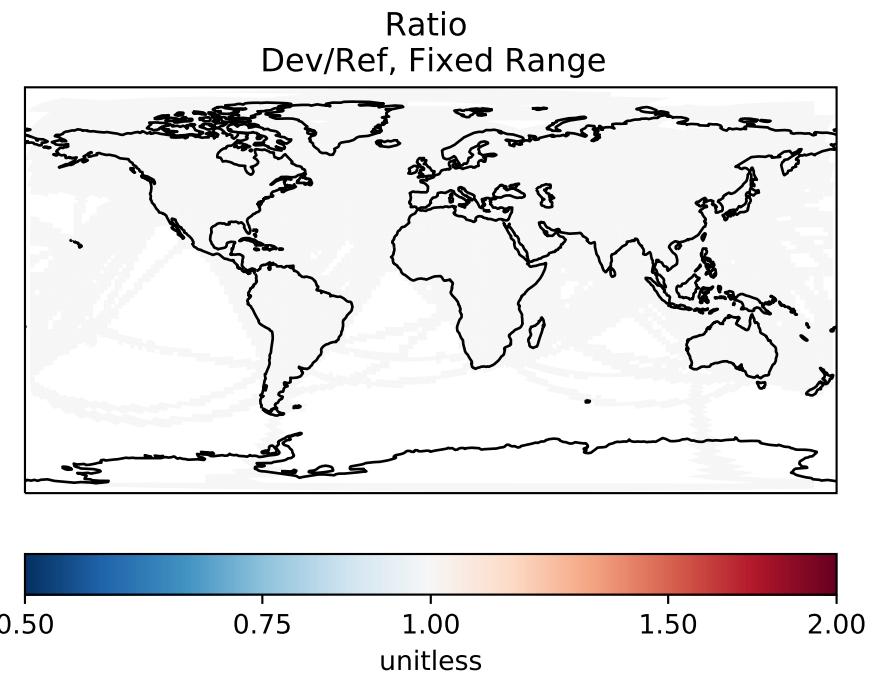
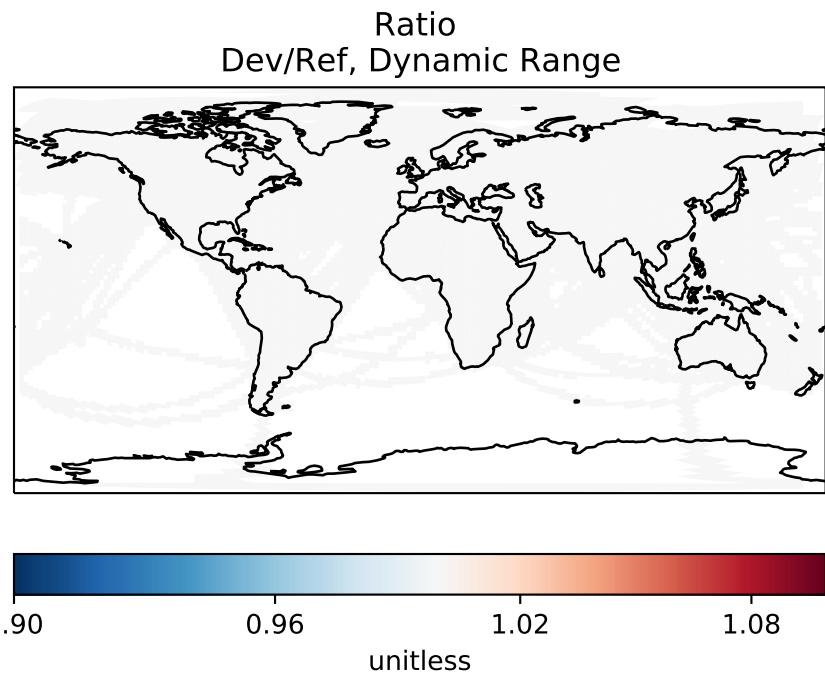
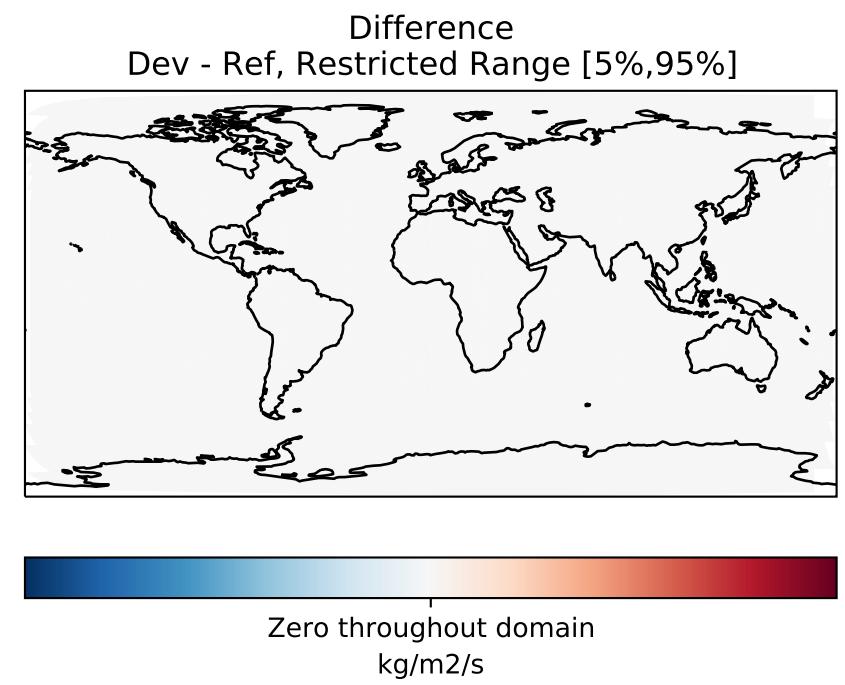
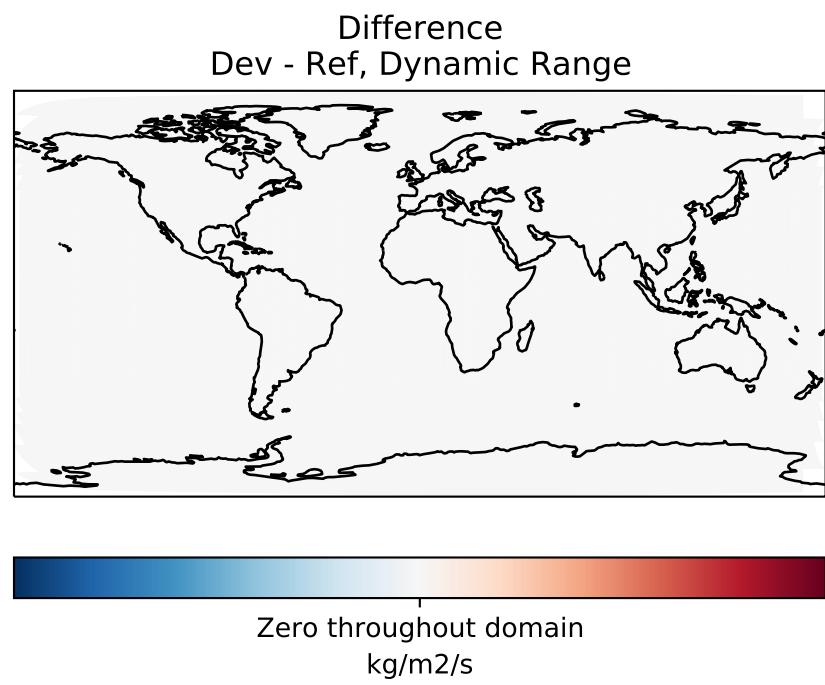
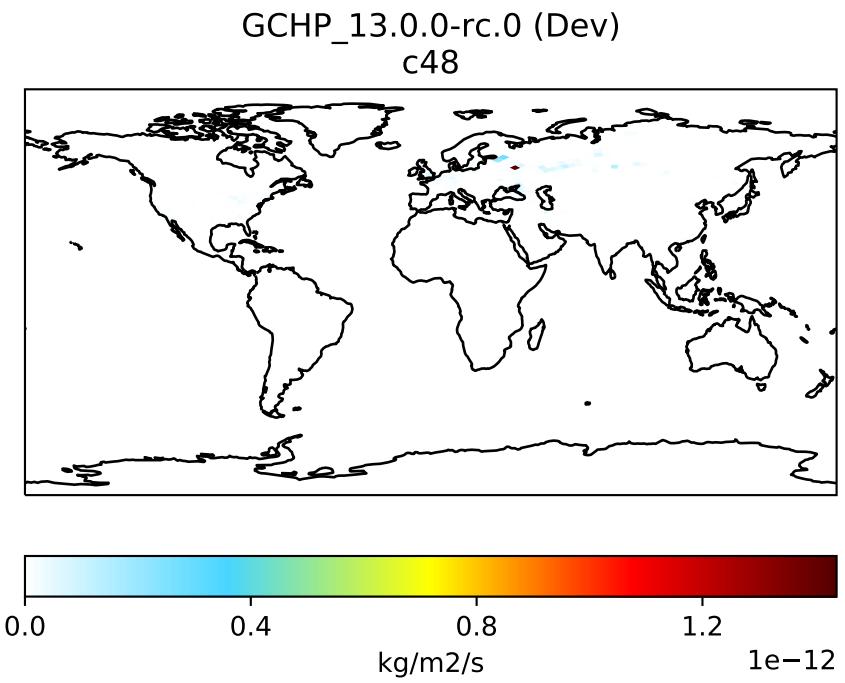
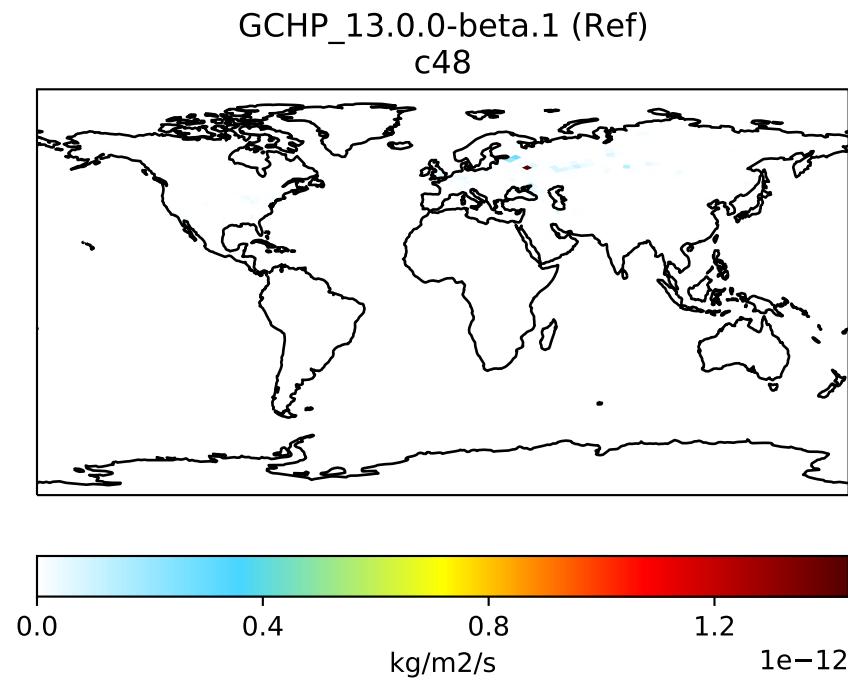
Ratio  
Dev/Ref, Dynamic Range



Ratio  
Dev/Ref, Fixed Range

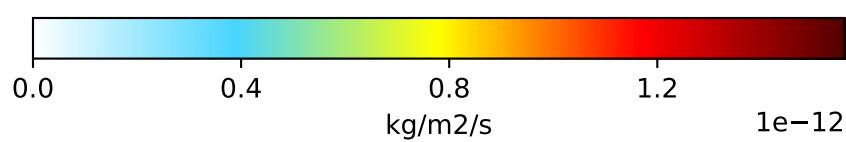
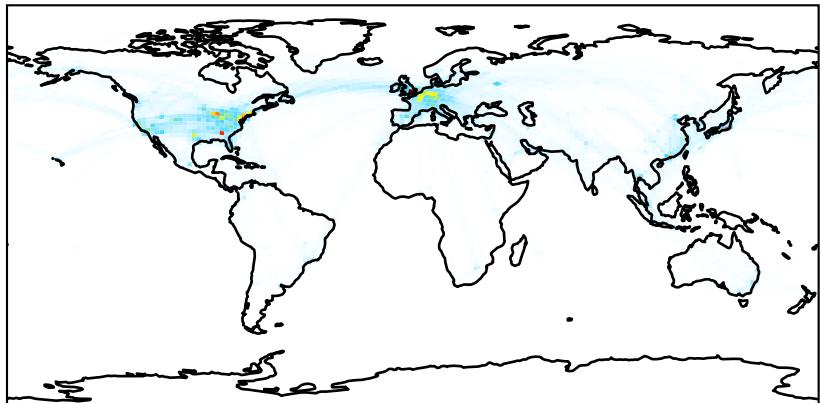


# EmisRCHO\_Aircraft (Jul2019)

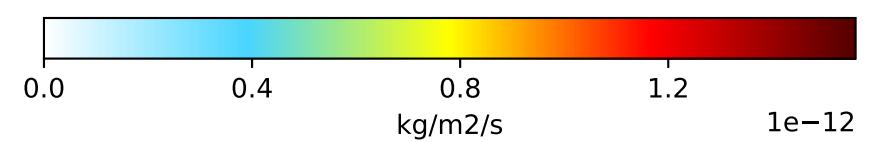
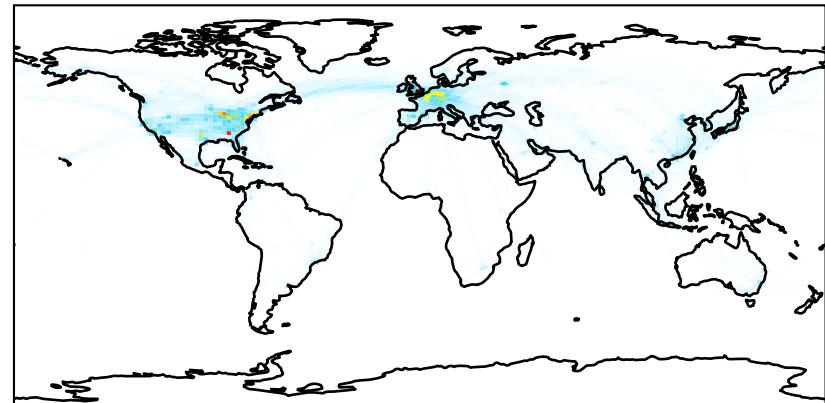


# EmisSO2\_Aircraft (Jul2019)

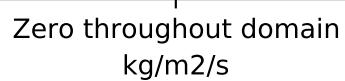
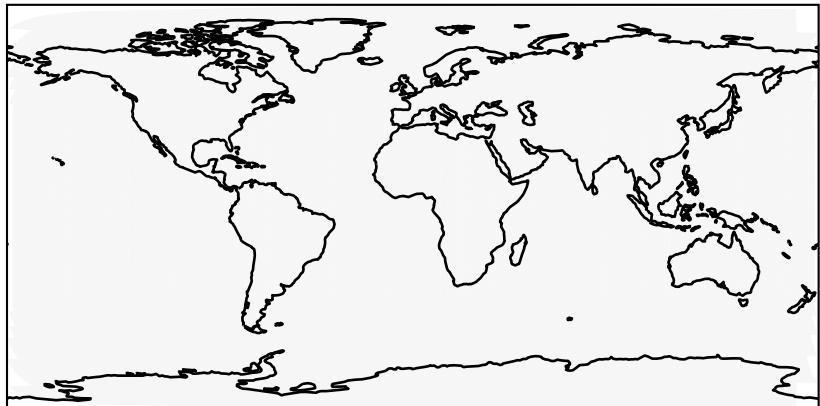
GCHP\_13.0.0-beta.1 (Ref)  
c48



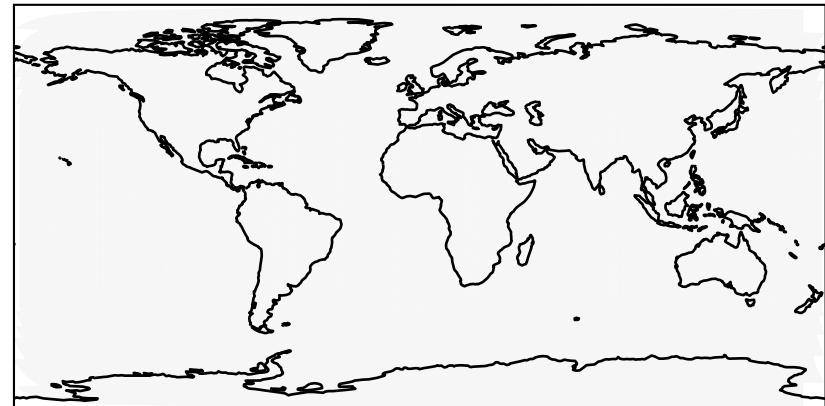
GCHP\_13.0.0-rc.0 (Dev)  
c48



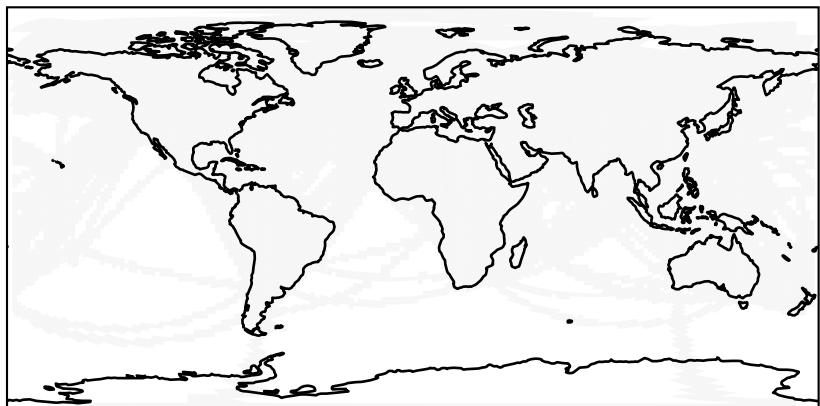
Difference  
Dev - Ref, Dynamic Range



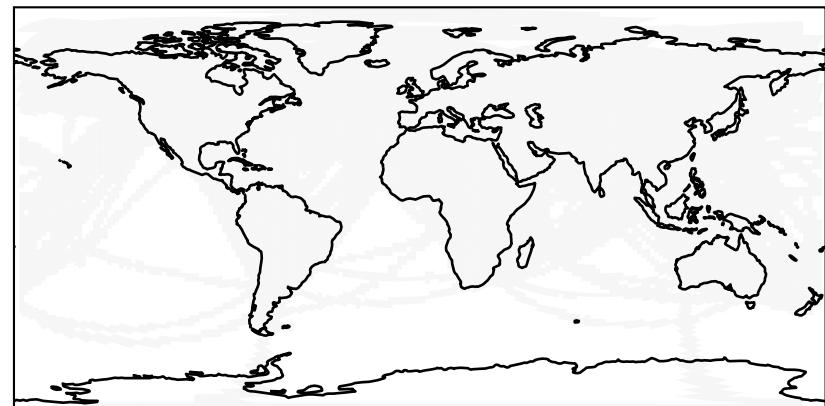
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

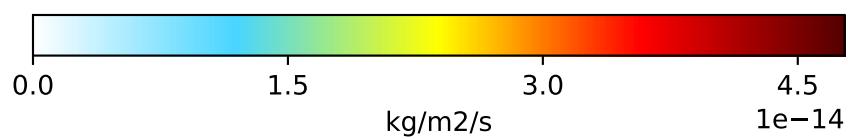
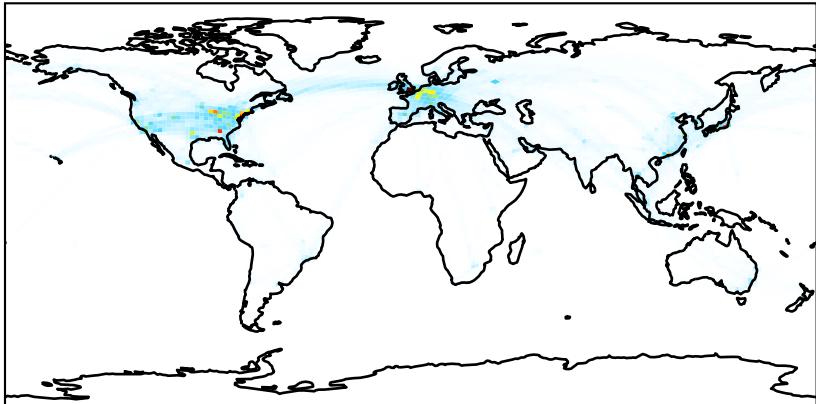


Ratio  
Dev/Ref, Fixed Range

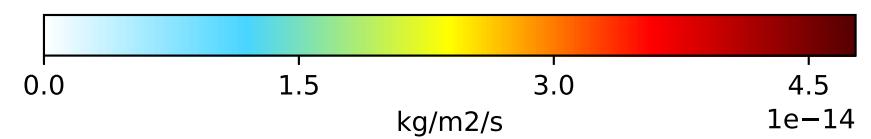
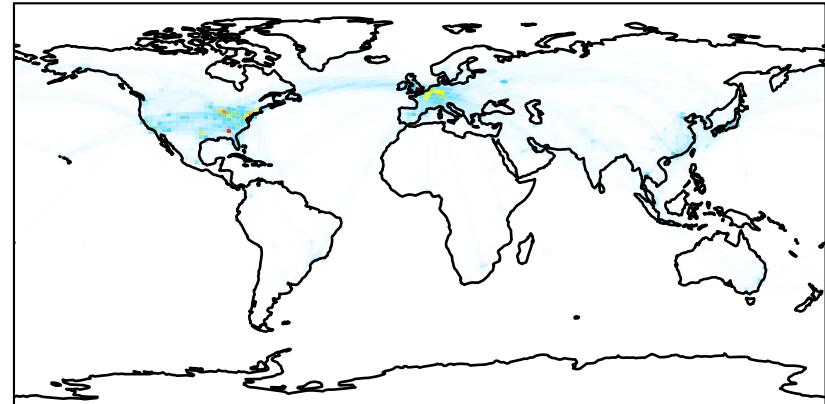


# EmisSO4\_Aircraft (Jul2019)

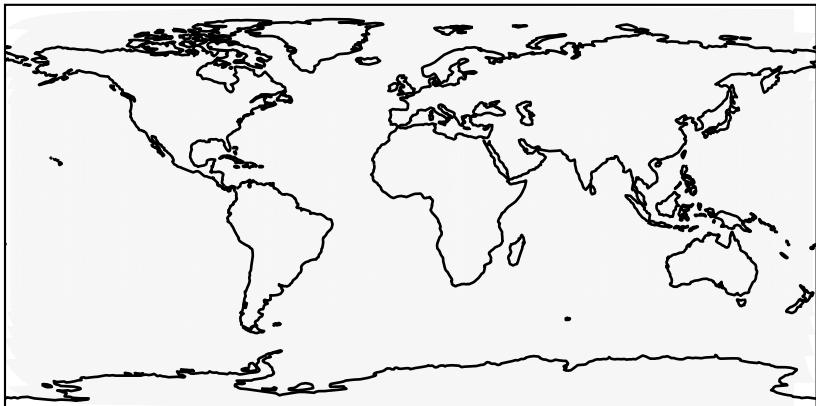
GCHP\_13.0.0-beta.1 (Ref)  
c48



GCHP\_13.0.0-rc.0 (Dev)  
c48

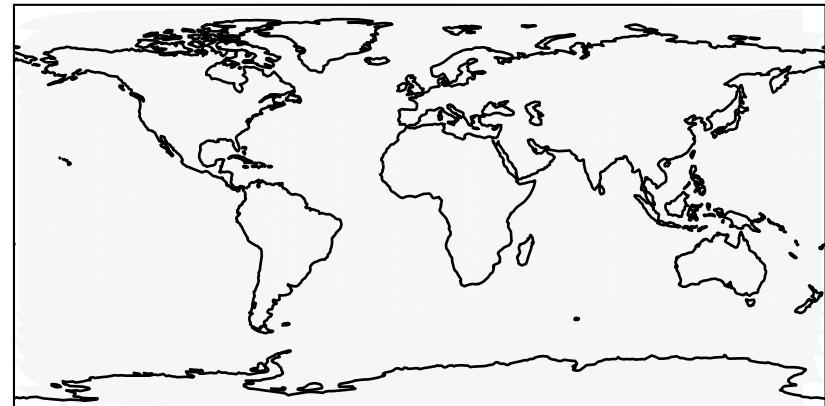


Difference  
Dev - Ref, Dynamic Range



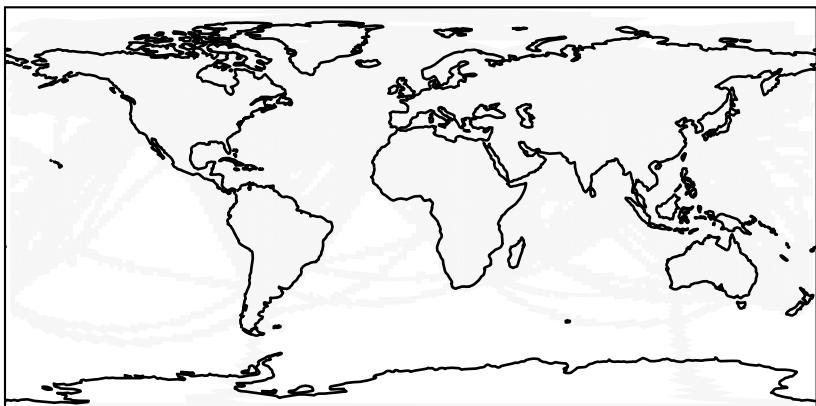
Zero throughout domain  
kg/m2/s

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



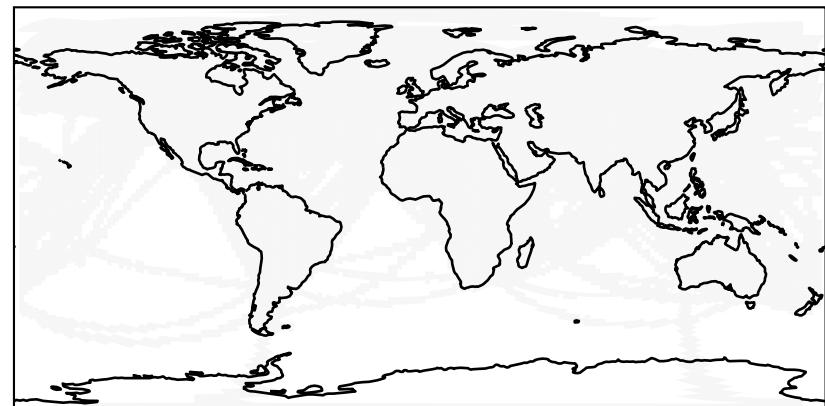
Zero throughout domain  
kg/m2/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

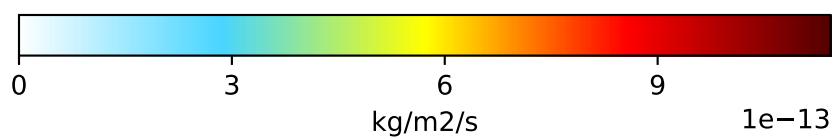
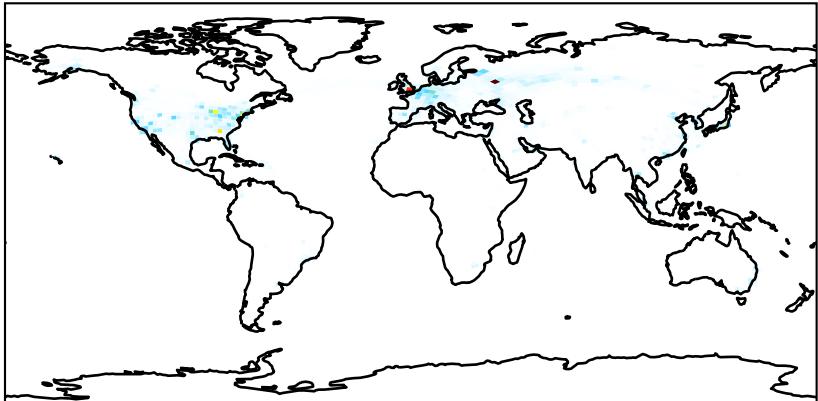
Ratio  
Dev/Ref, Fixed Range



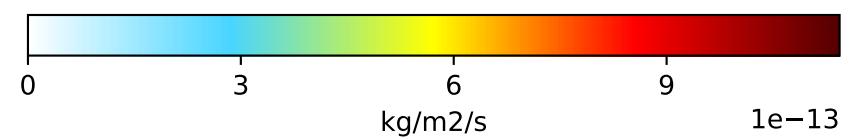
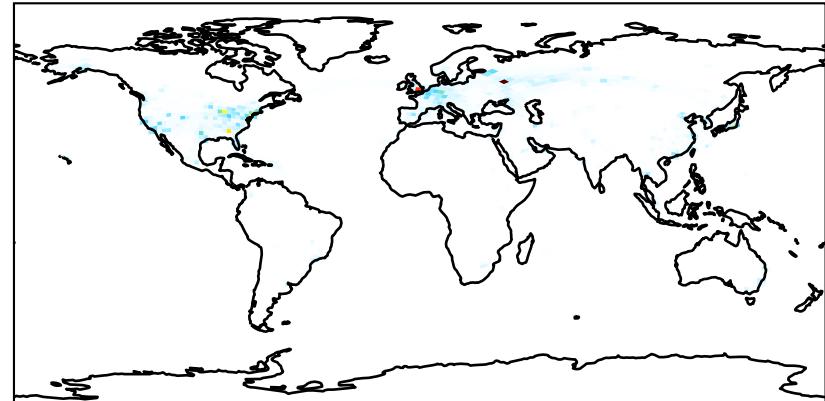
0.50      0.75      1.00      1.50      2.00  
unitless

# EmisSOAP\_Aircraft (Jul2019)

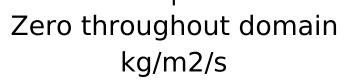
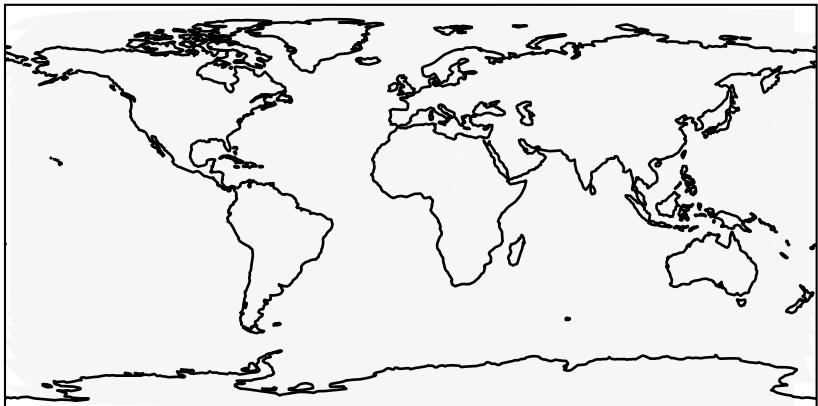
GCHP\_13.0.0-beta.1 (Ref)  
c48



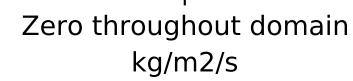
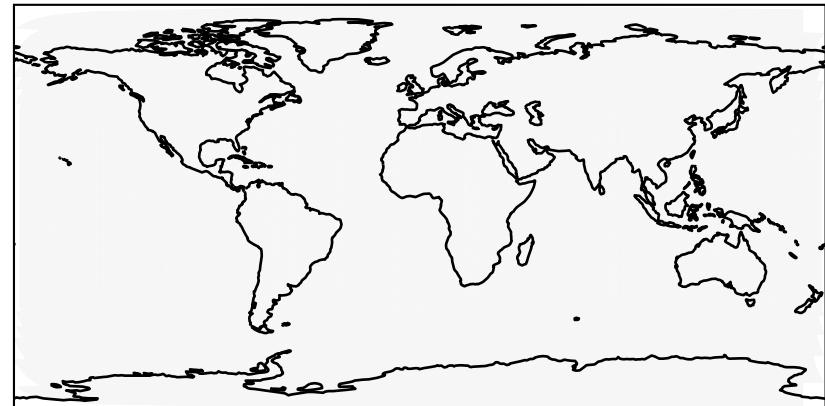
GCHP\_13.0.0-rc.0 (Dev)  
c48



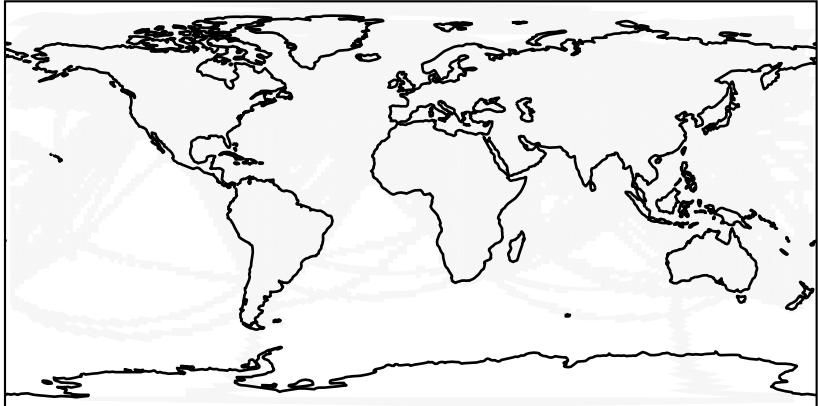
Difference  
Dev - Ref, Dynamic Range



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



Ratio  
Dev/Ref, Dynamic Range



Ratio  
Dev/Ref, Fixed Range

