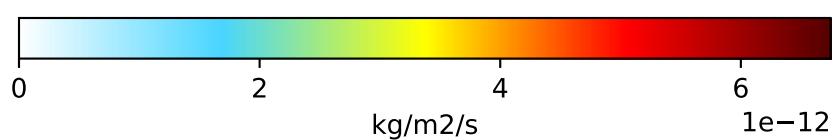
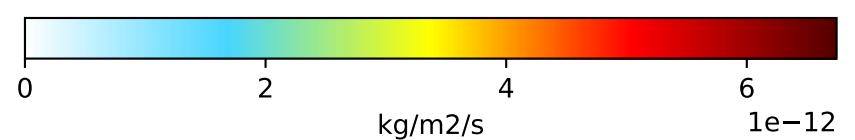
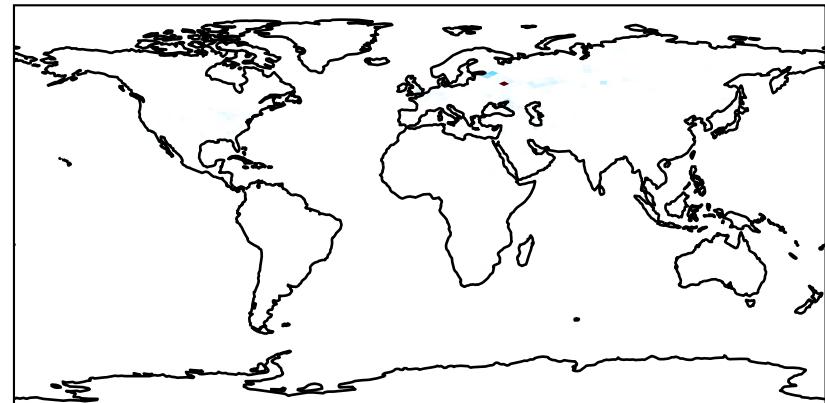


# EmisALK4\_Aircraft (Apr2019)

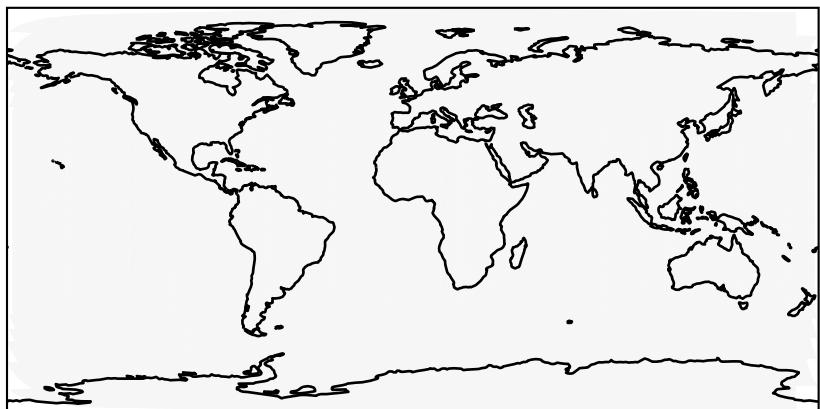
GCHP\_13.0.0-beta.1 (Ref)  
c48



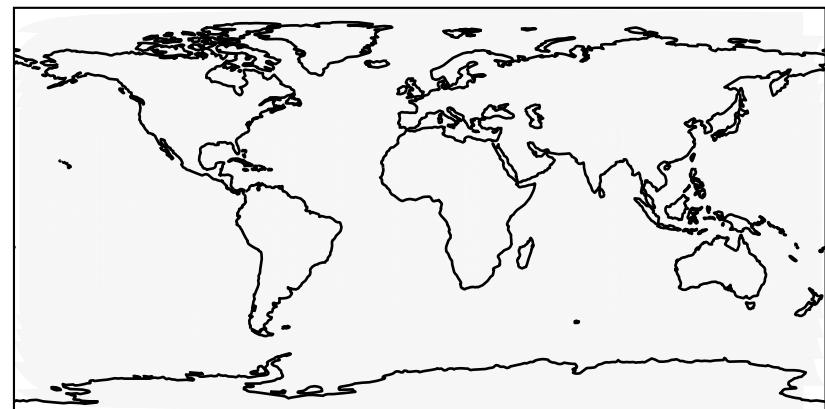
GCHP\_13.0.0-rc.0 (Dev)  
c48



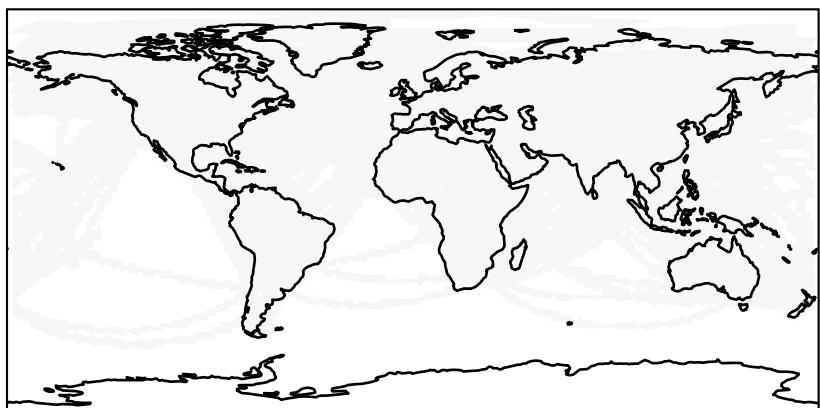
Difference  
Dev - Ref, Dynamic Range



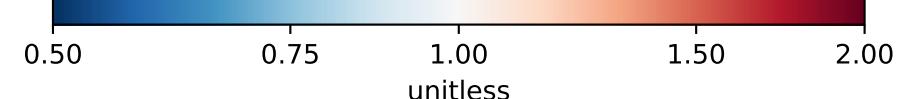
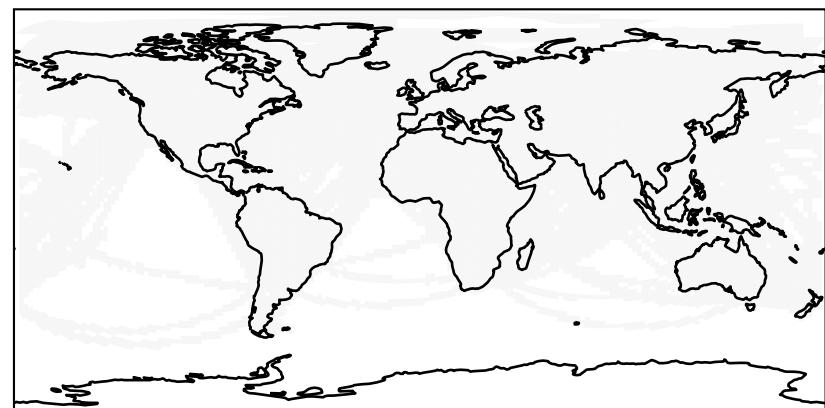
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

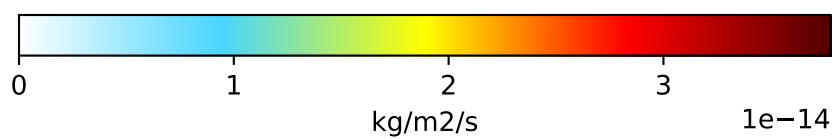
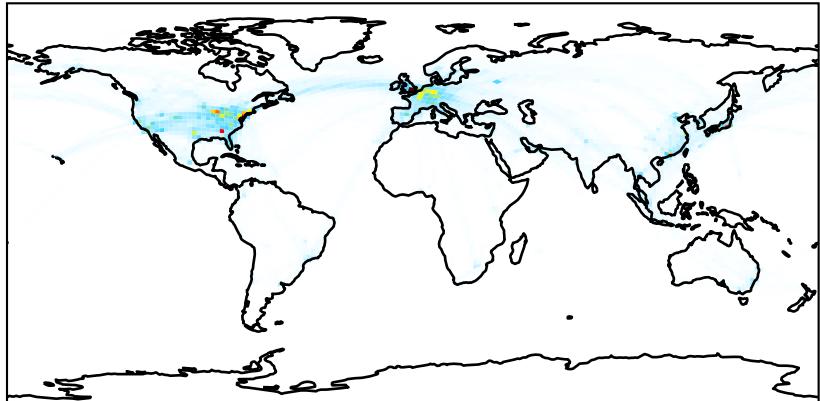


Ratio  
Dev/Ref, Fixed Range

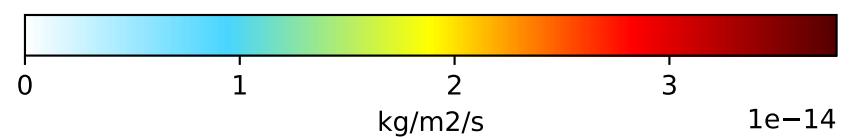
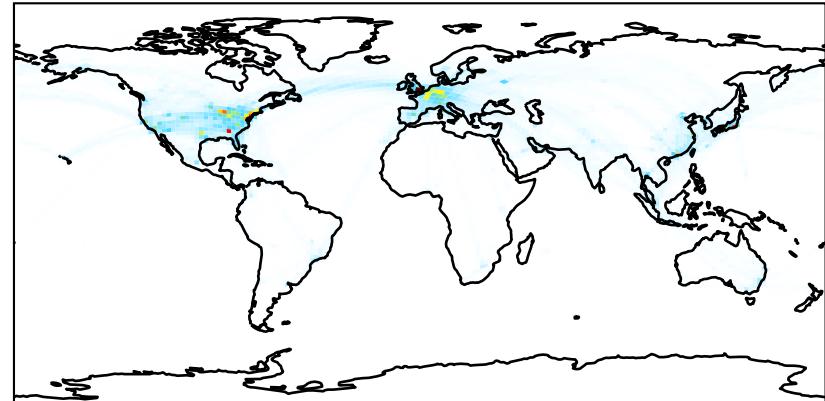


# EmisBCPI\_Aircraft (Apr2019)

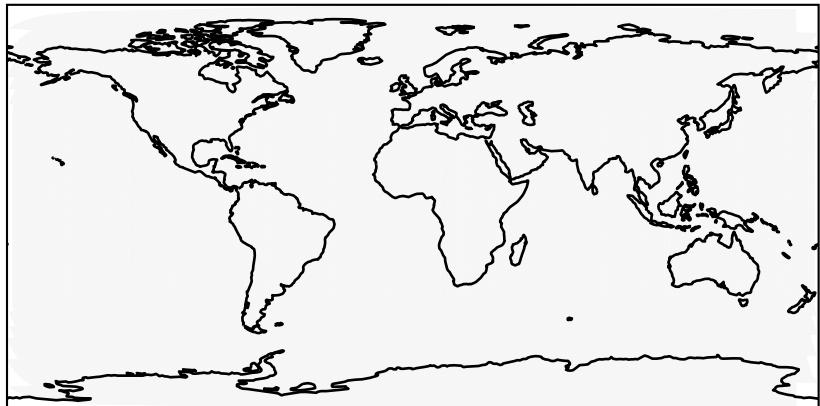
GCHP\_13.0.0-beta.1 (Ref)  
c48



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

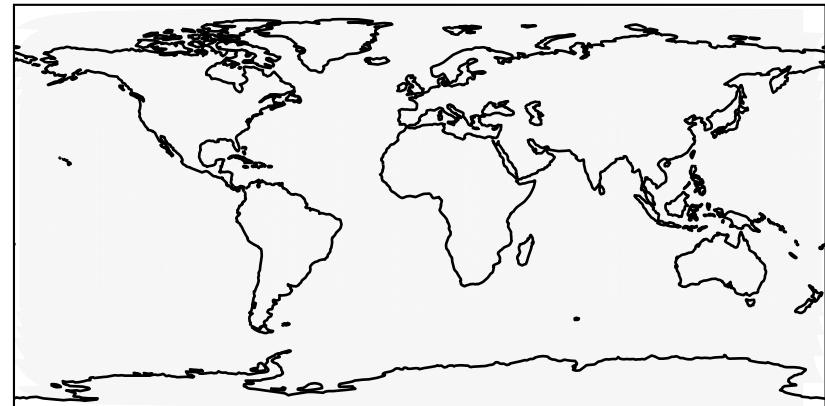


Difference  
Dev - Ref, Dynamic Range



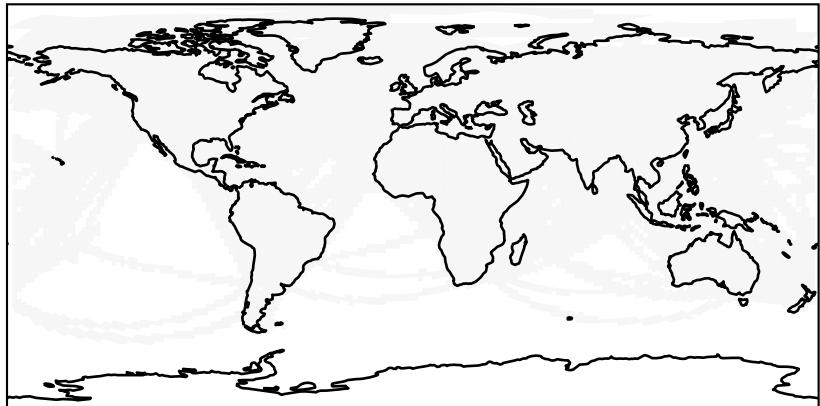
Zero throughout domain  
kg/m2/s

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



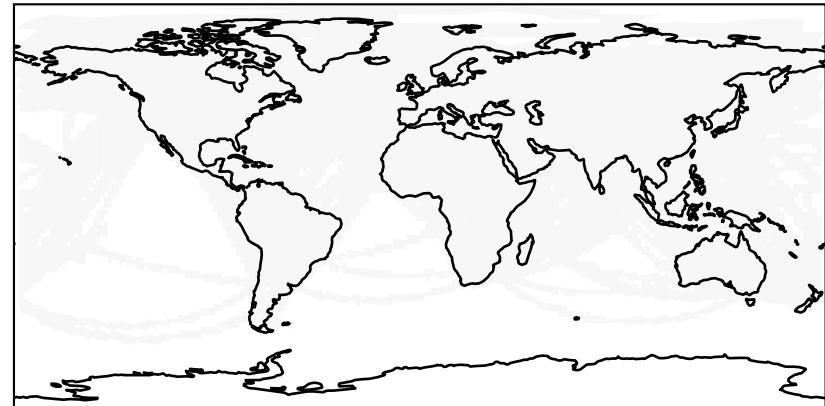
Zero throughout domain  
kg/m2/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

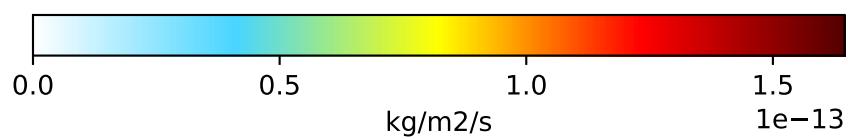
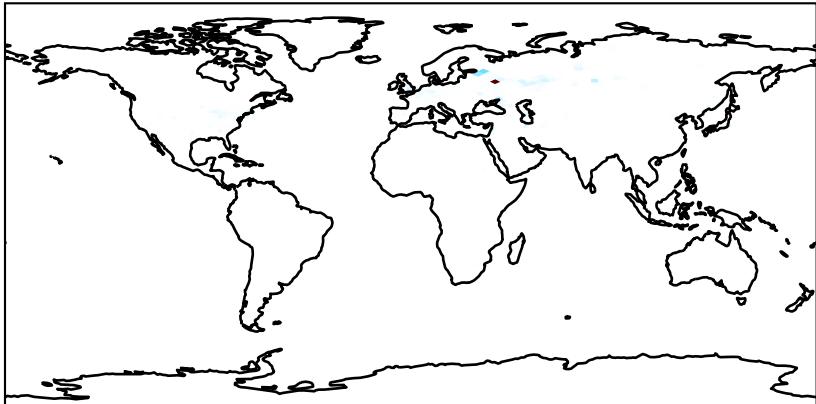
Ratio  
Dev/Ref, Fixed Range



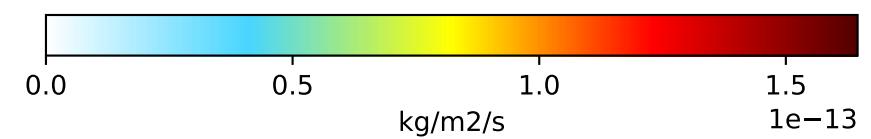
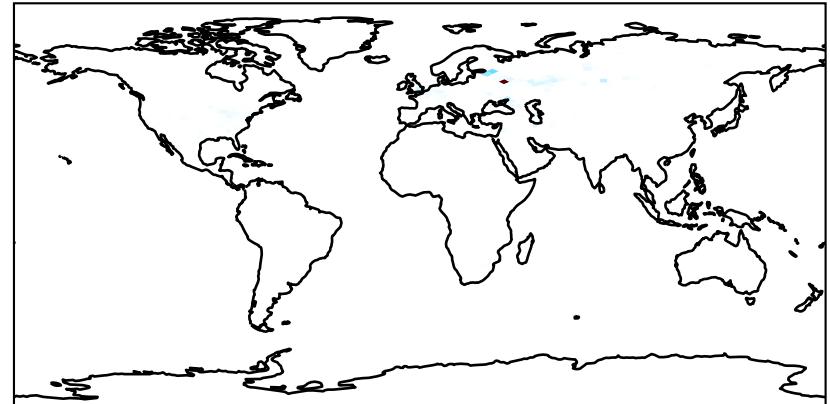
0.50      0.75      1.00      1.50      2.00  
unitless

# EmisC2H6\_Aircraft (Apr2019)

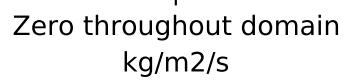
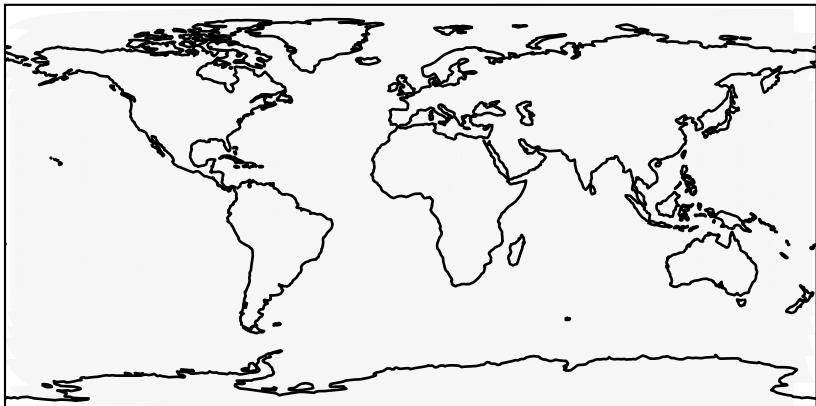
GCHP\_13.0.0-beta.1 (Ref)  
c48



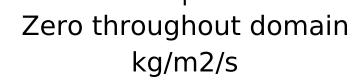
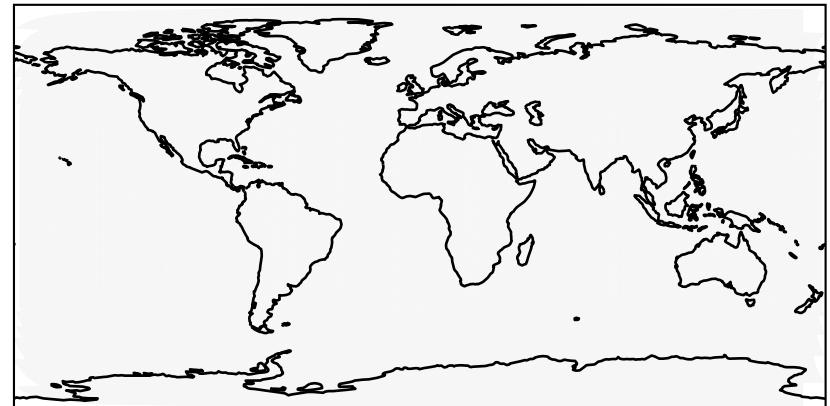
GCHP\_13.0.0-rc.0 (Dev)  
c48



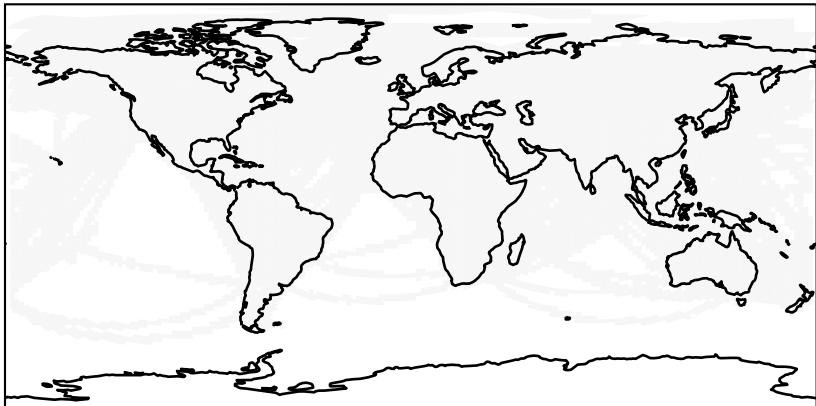
Difference  
Dev - Ref, Dynamic Range



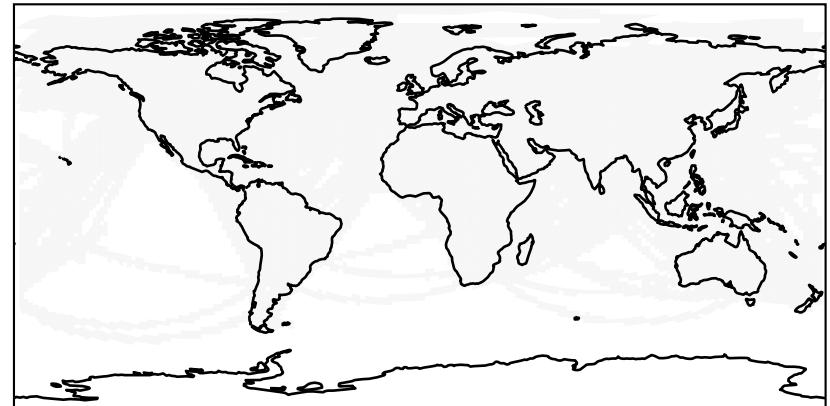
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

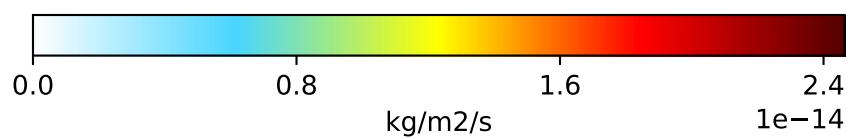
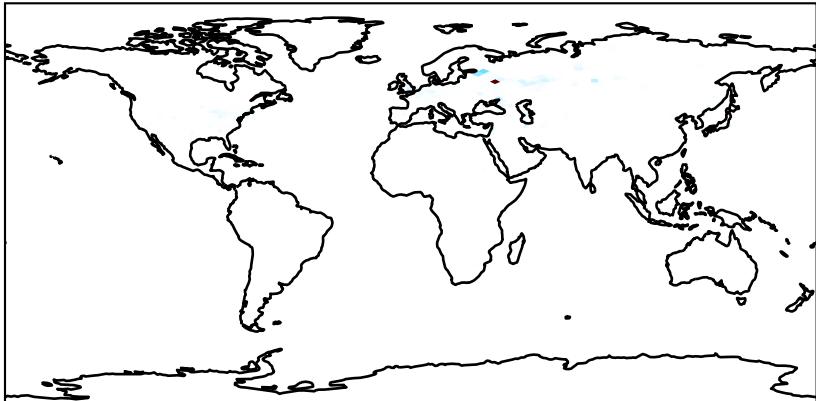


Ratio  
Dev/Ref, Fixed Range

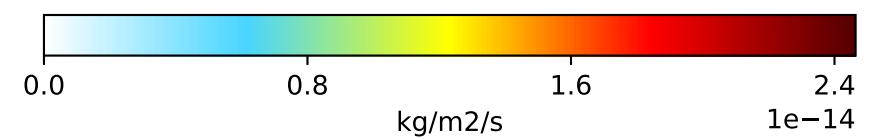
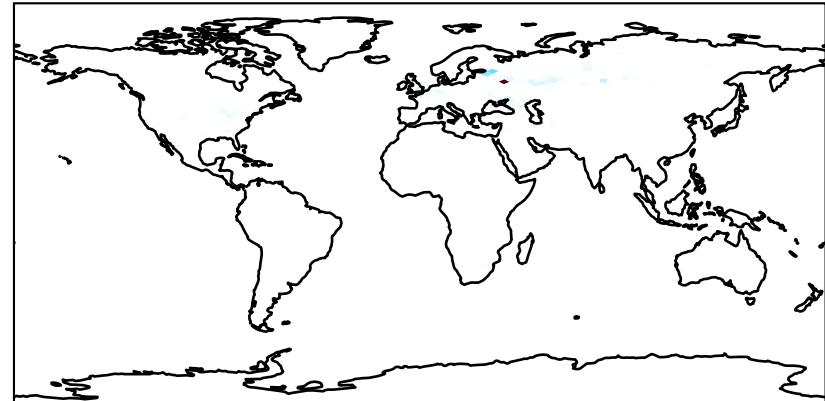


# EmisC3H8\_Aircraft (Apr2019)

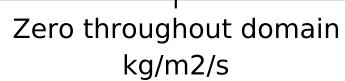
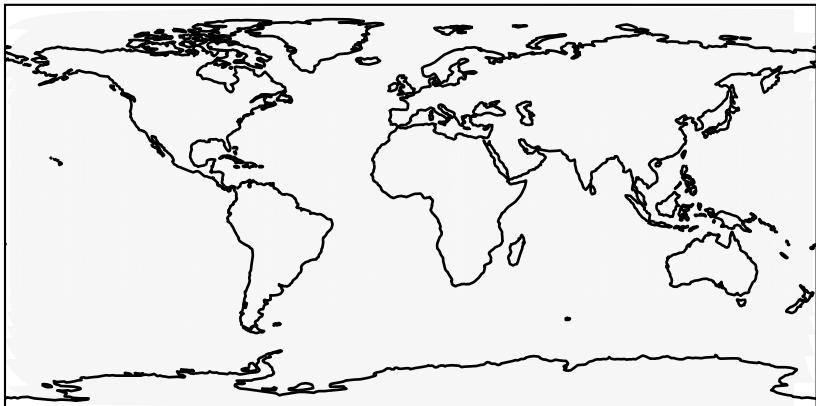
GCHP\_13.0.0-beta.1 (Ref)  
c48



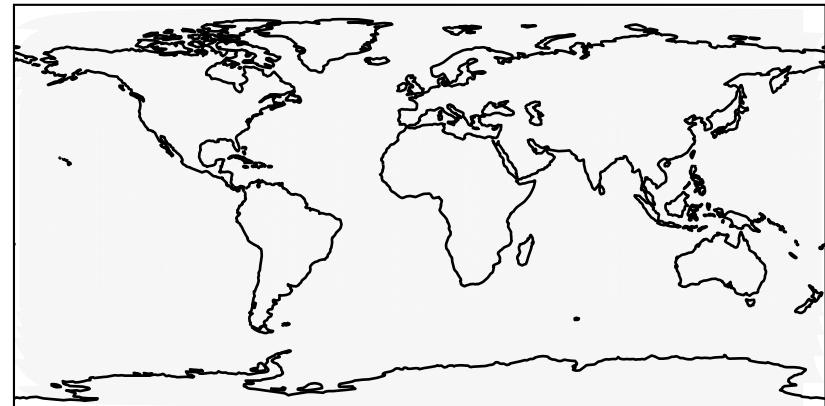
GCHP\_13.0.0-rc.0 (Dev)  
c48



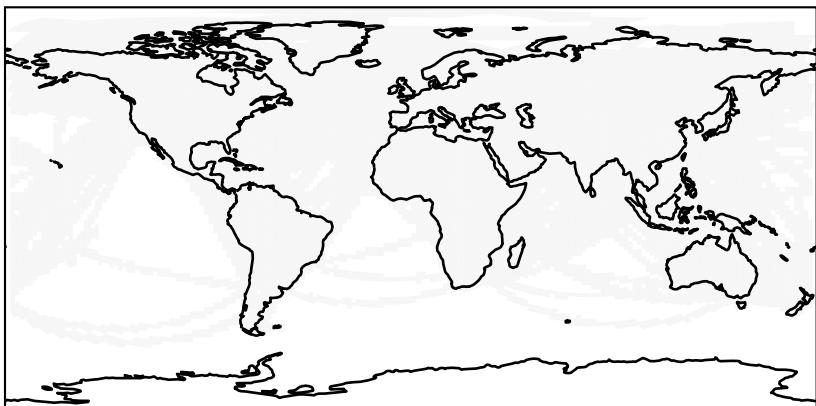
Difference  
Dev - Ref, Dynamic Range



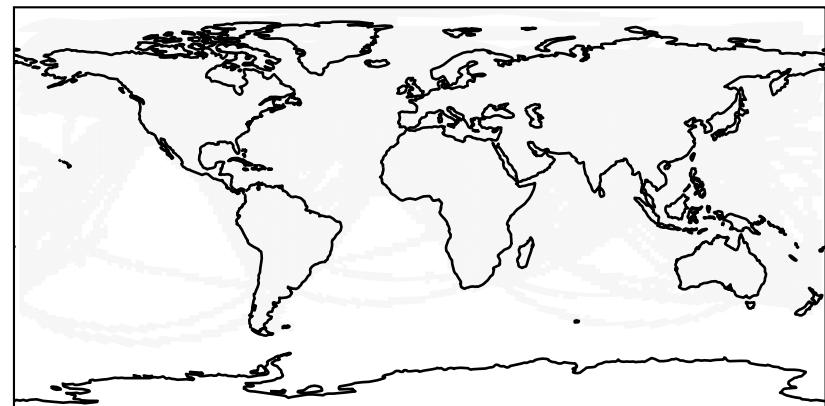
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

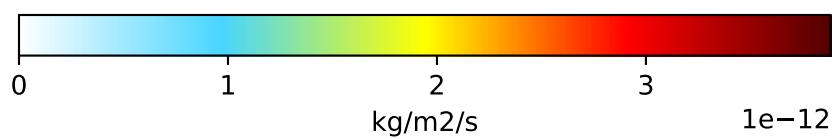
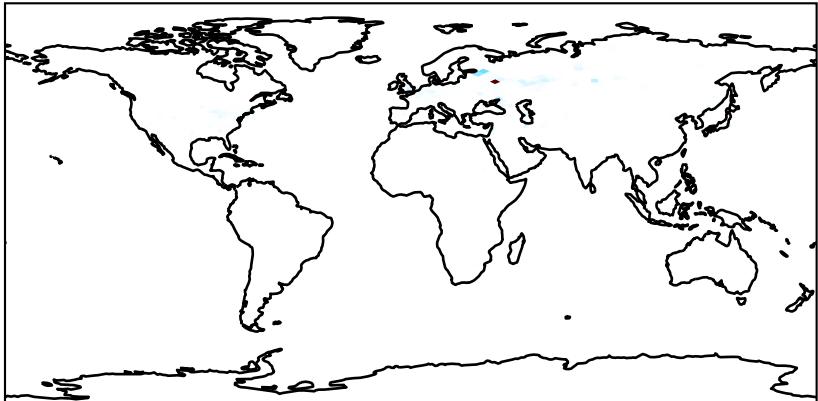


Ratio  
Dev/Ref, Fixed Range

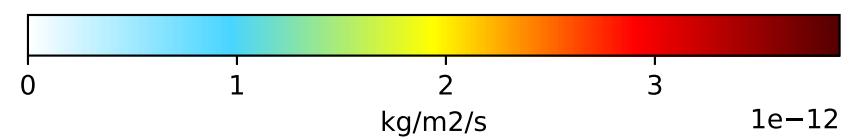
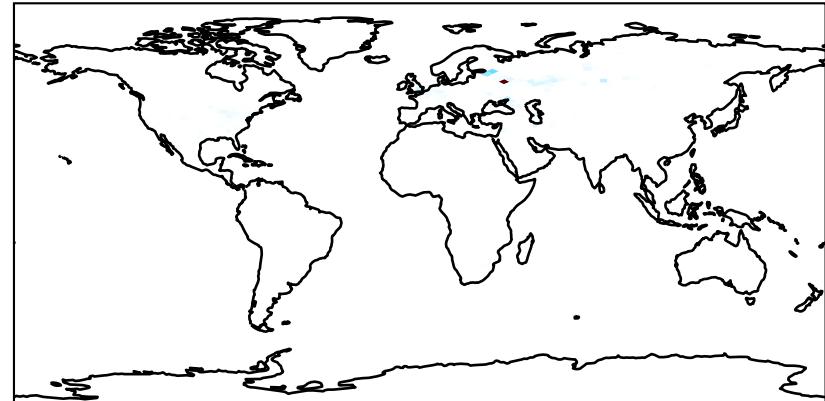


# EmisCH2O\_Aircraft (Apr2019)

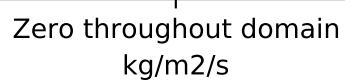
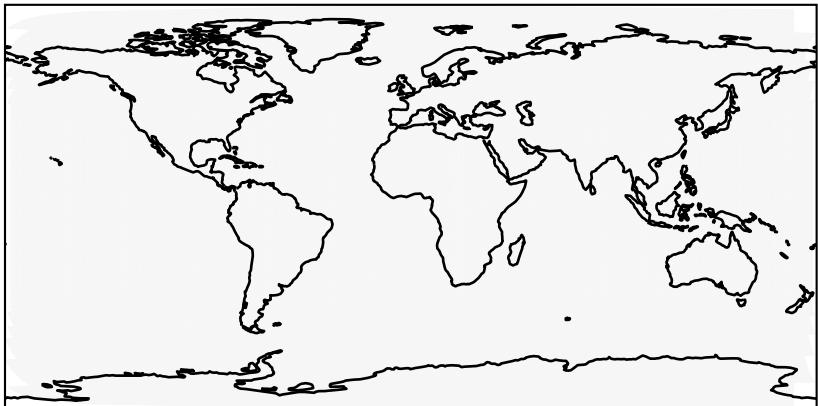
GCHP\_13.0.0-beta.1 (Ref)  
c48



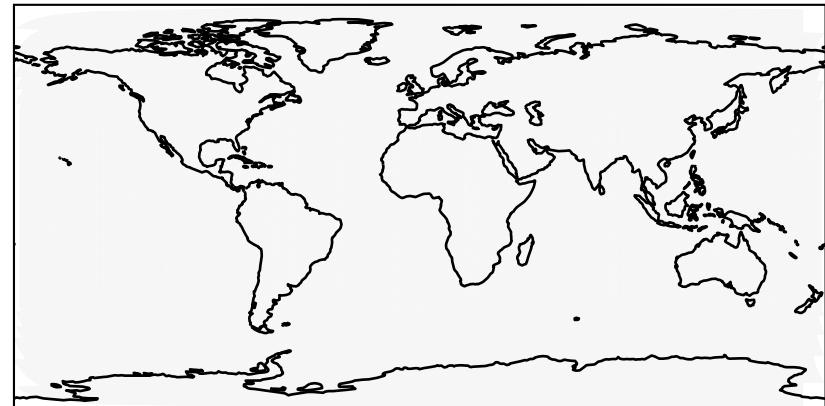
GCHP\_13.0.0-rc.0 (Dev)  
c48



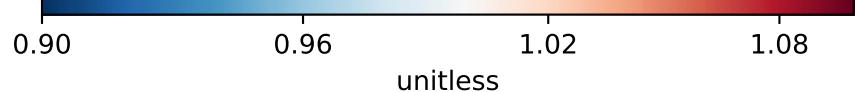
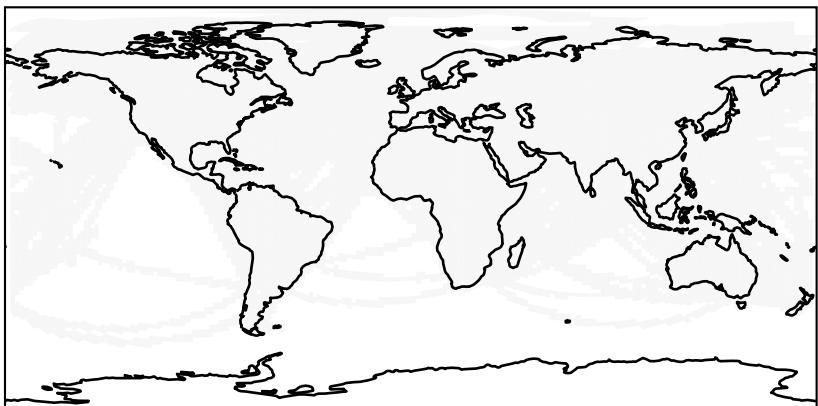
Difference  
Dev - Ref, Dynamic Range



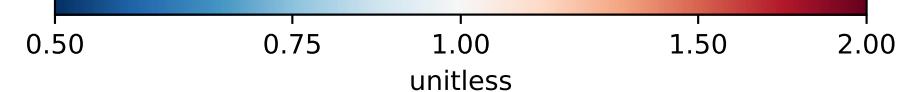
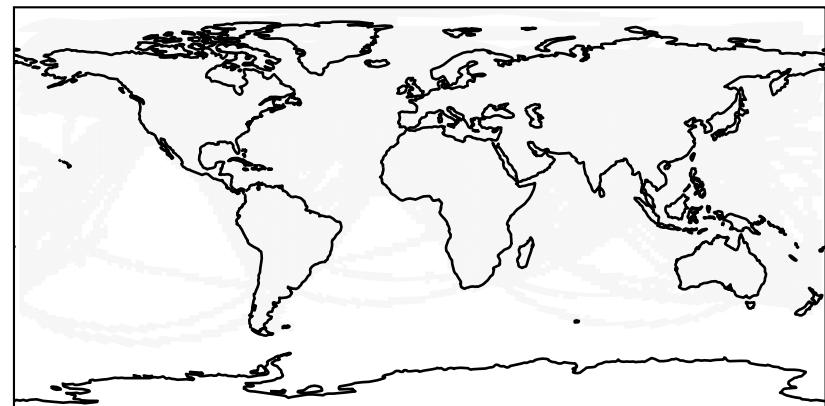
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

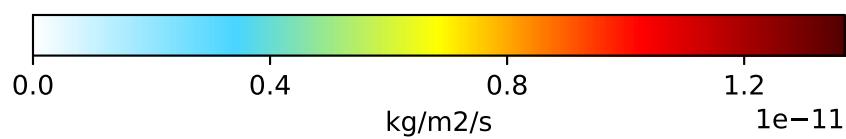
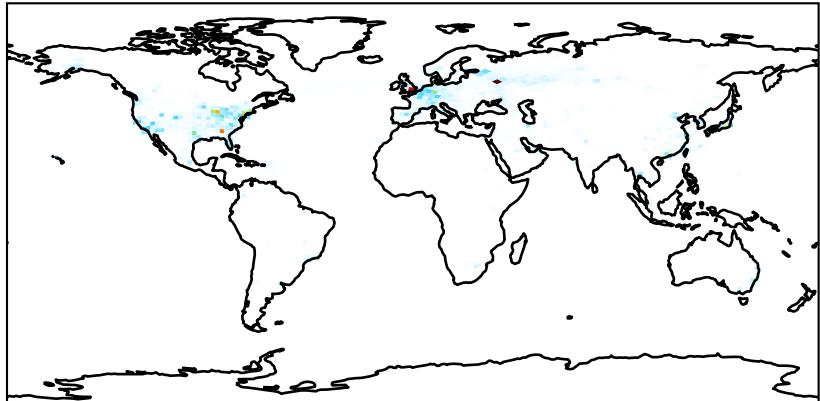


Ratio  
Dev/Ref, Fixed Range

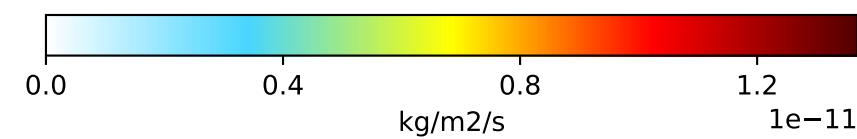
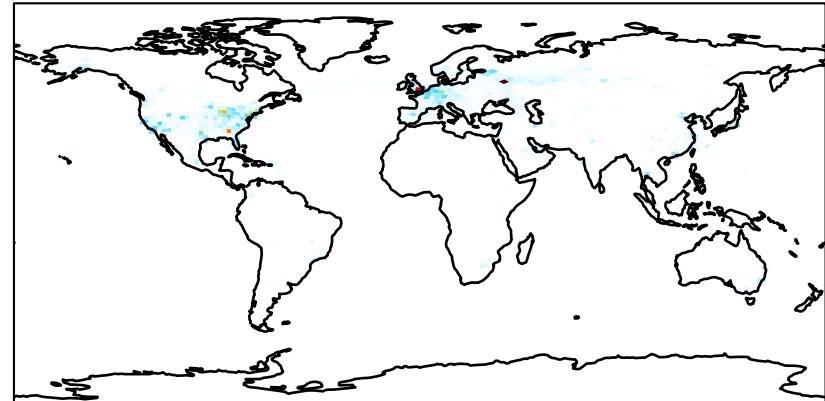


# EmisCO\_Aircraft (Apr2019)

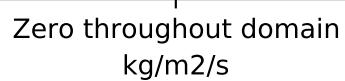
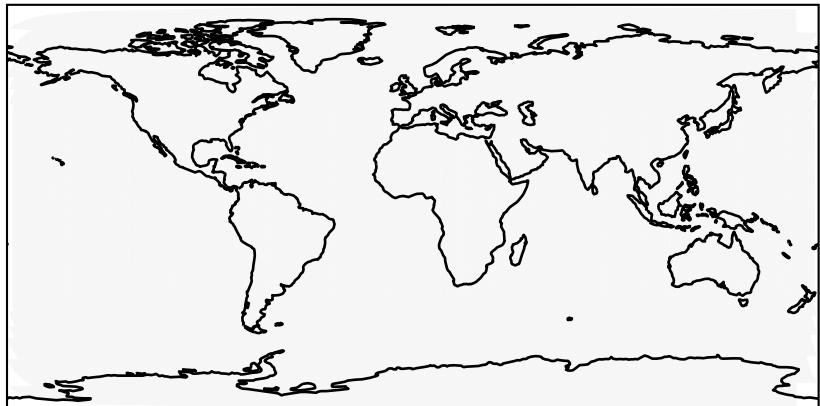
GCHP\_13.0.0-beta.1 (Ref)  
c48



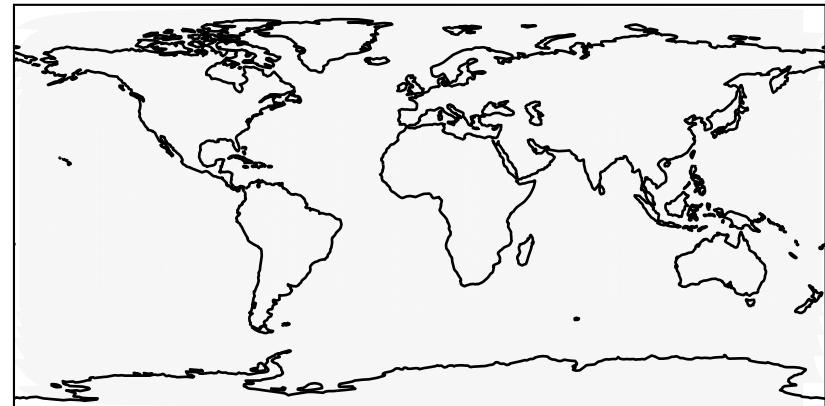
GCHP\_13.0.0-rc.0 (Dev)  
c48



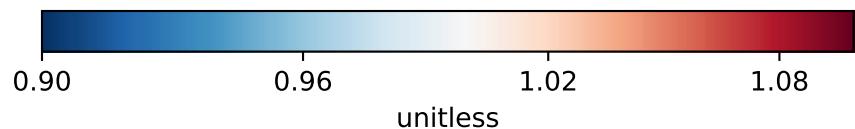
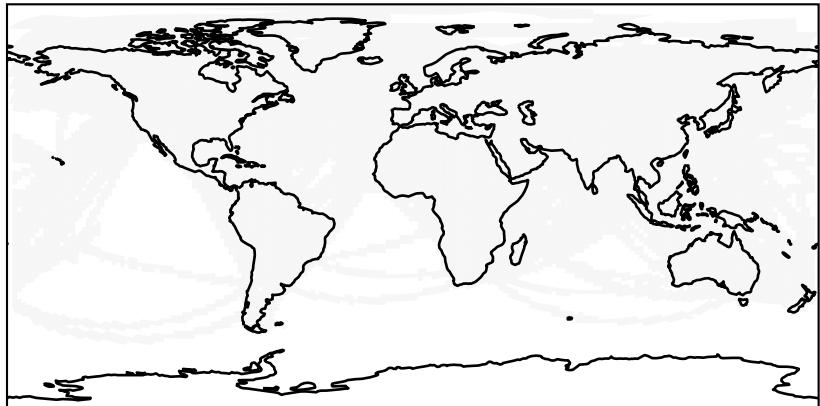
Difference  
Dev - Ref, Dynamic Range



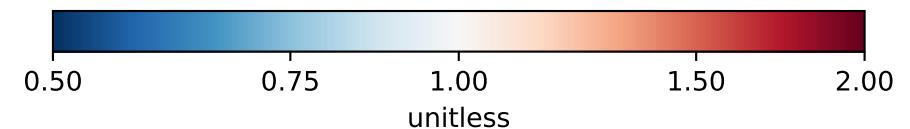
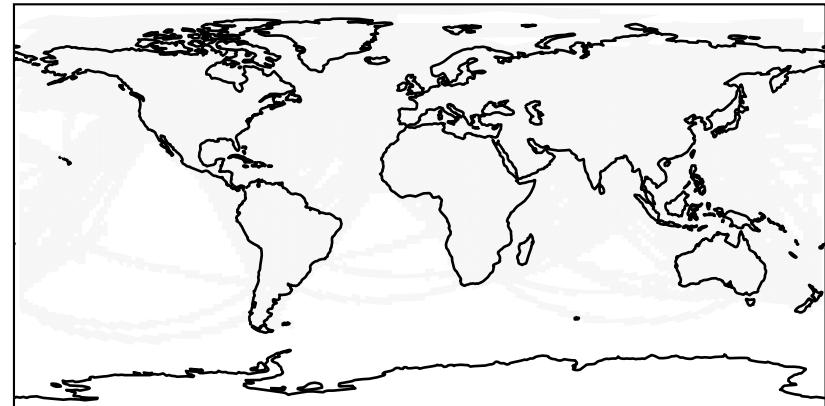
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

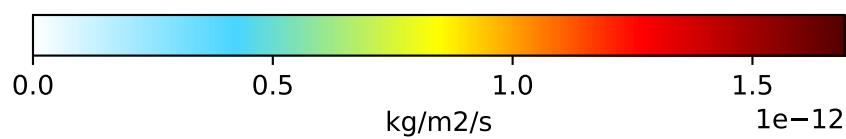
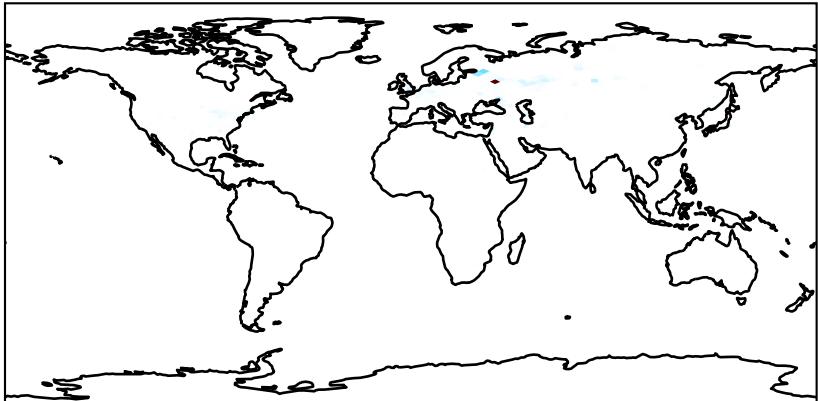


Ratio  
Dev/Ref, Fixed Range

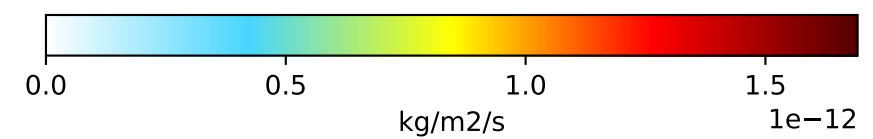
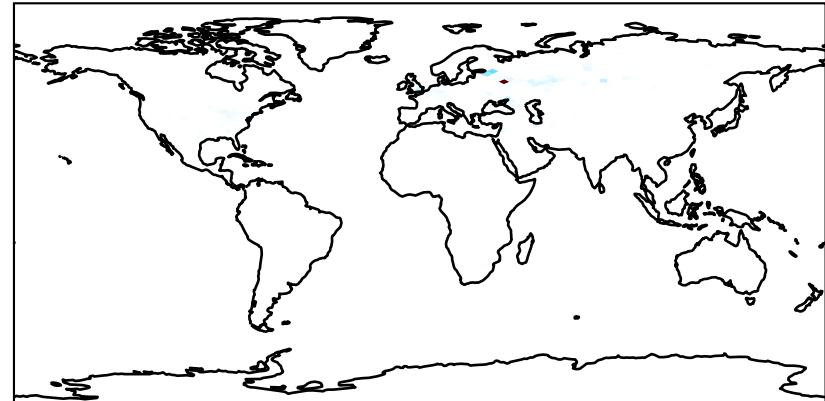


# EmisMACR\_Aircraft (Apr2019)

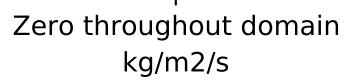
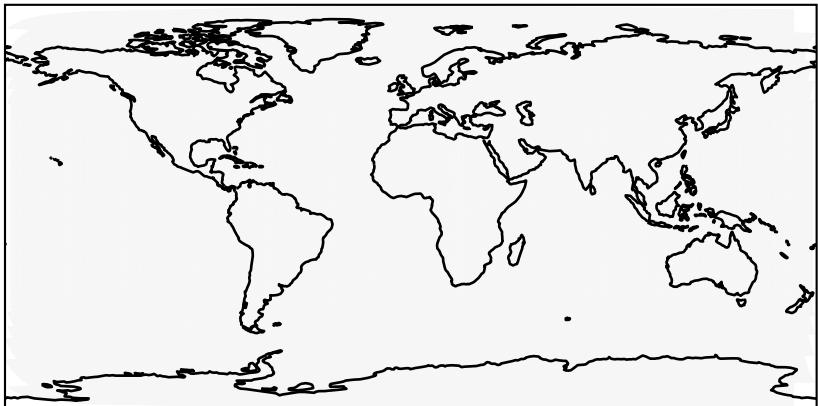
GCHP\_13.0.0-beta.1 (Ref)  
c48



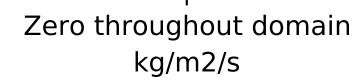
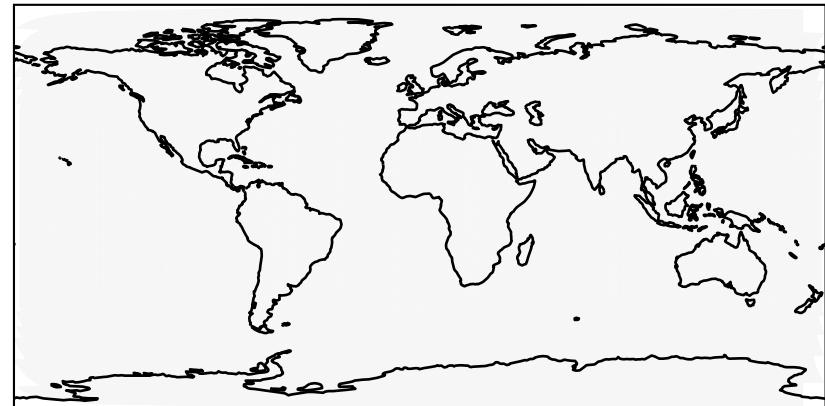
GCHP\_13.0.0-rc.0 (Dev)  
c48



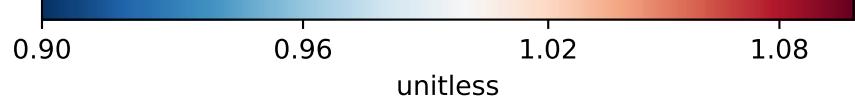
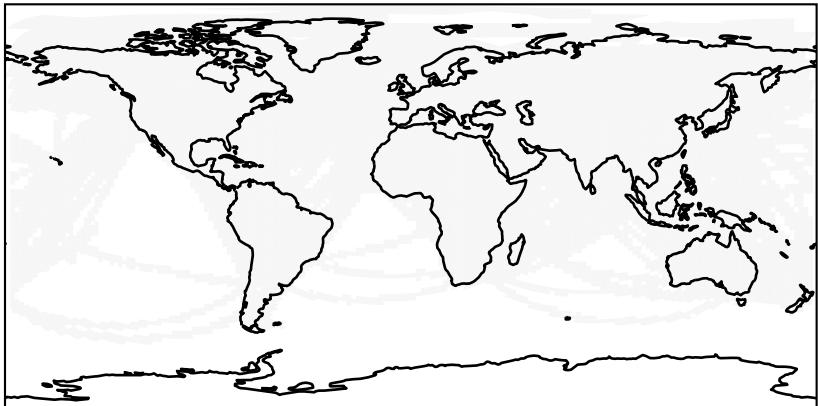
Difference  
Dev - Ref, Dynamic Range



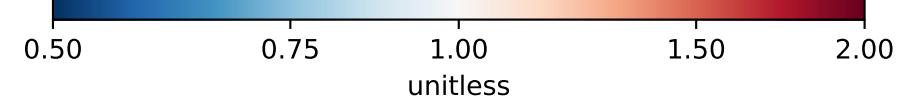
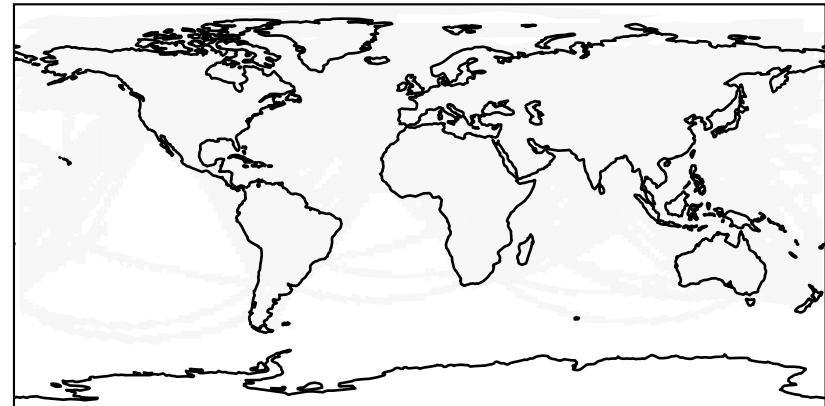
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

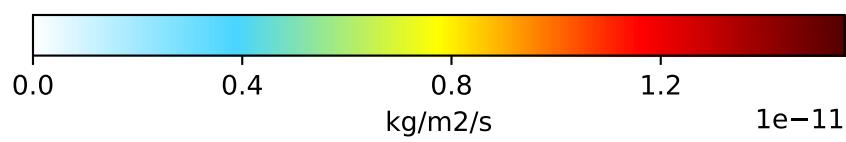
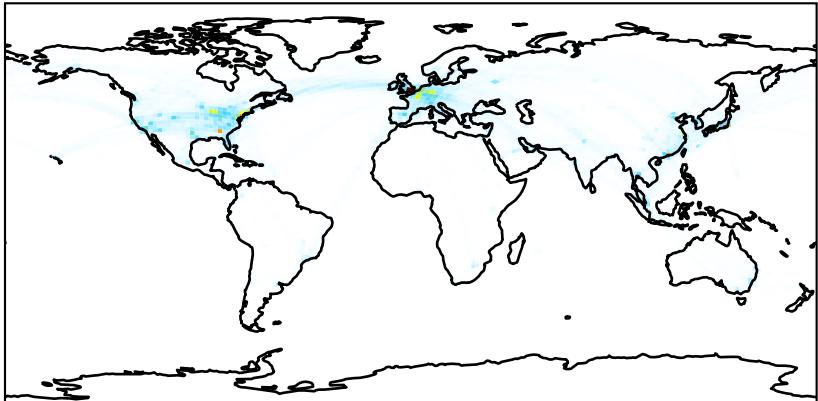


Ratio  
Dev/Ref, Fixed Range

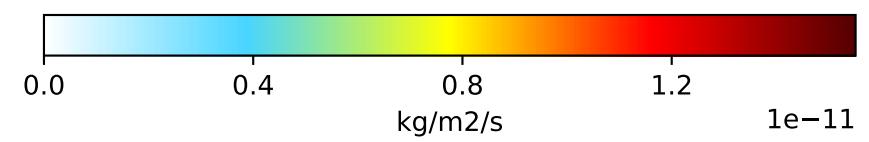
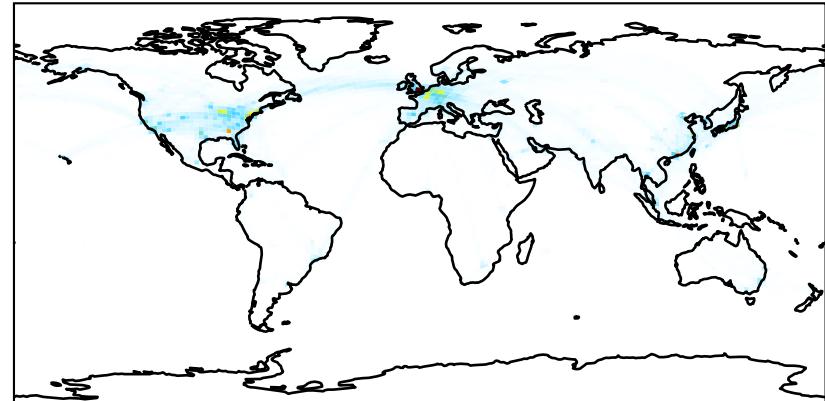


# EmisNO\_Aircraft (Apr2019)

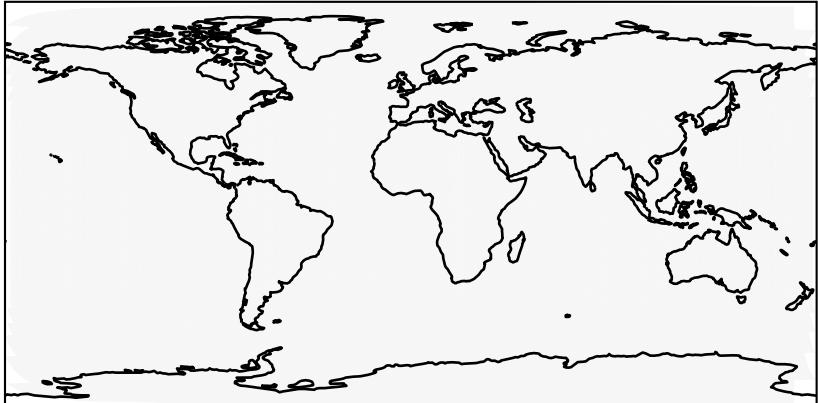
GCHP\_13.0.0-beta.1 (Ref)  
c48



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

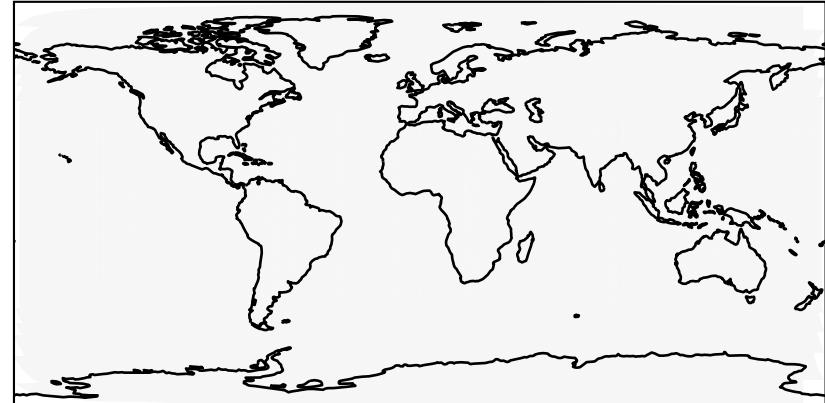


Difference  
Dev - Ref, Dynamic Range



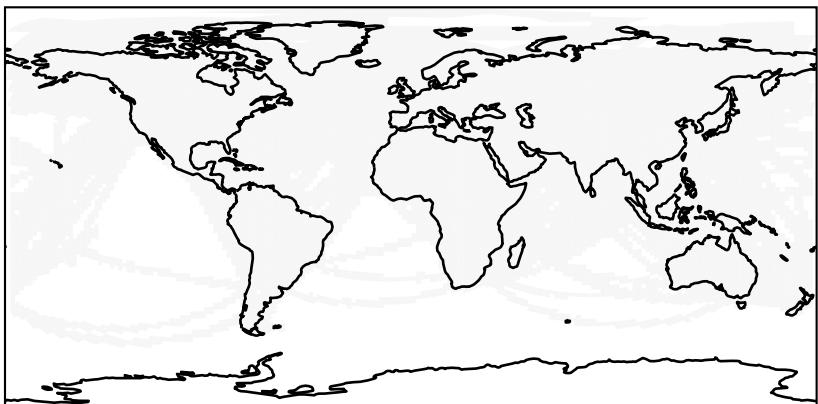
Zero throughout domain  
kg/m<sup>2</sup>/s

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

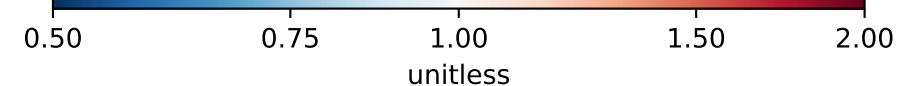
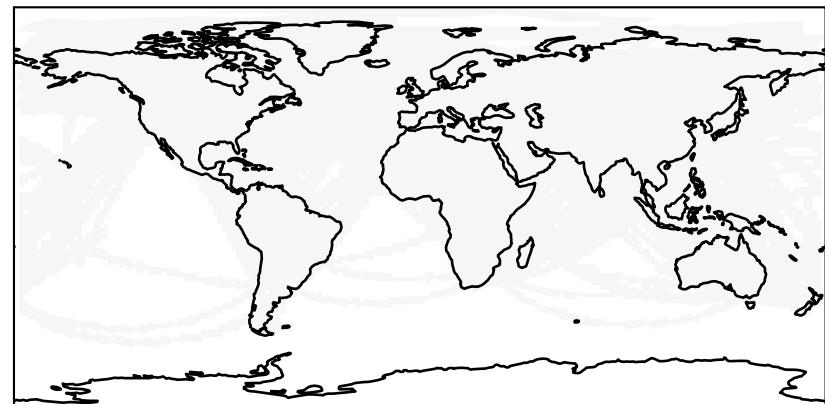


Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range

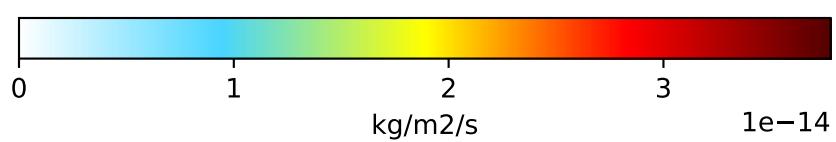
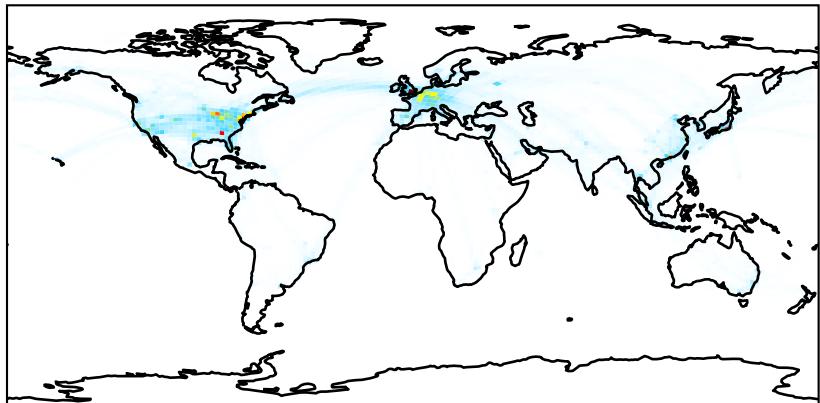


Ratio  
Dev/Ref, Fixed Range

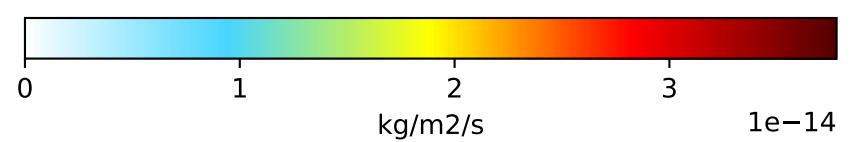
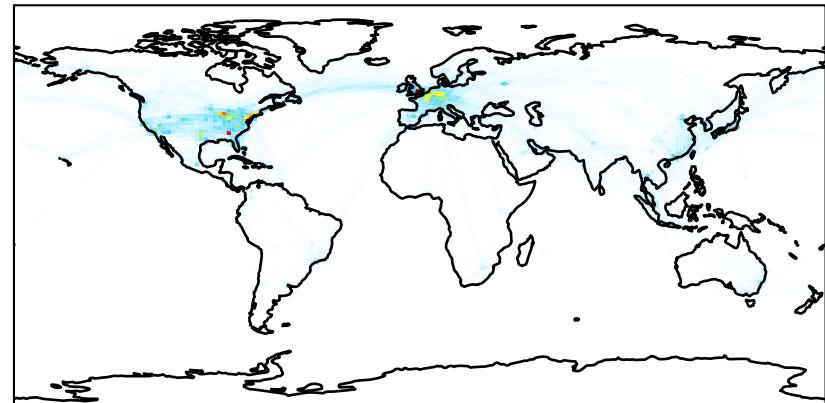


# EmisOCPI\_Aircraft (Apr2019)

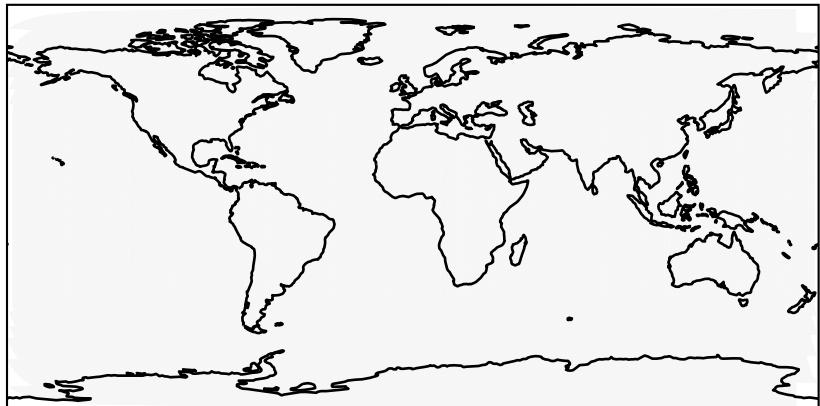
GCHP\_13.0.0-beta.1 (Ref)  
c48



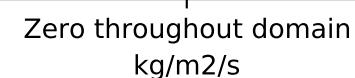
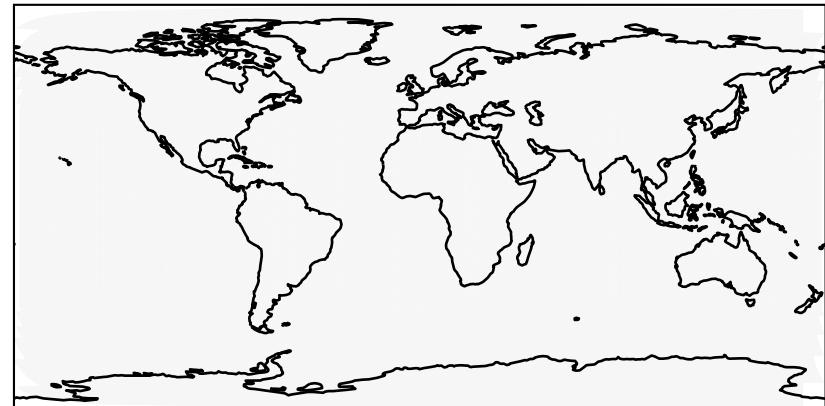
GCHP\_13.0.0-rc.0 (Dev)  
c48



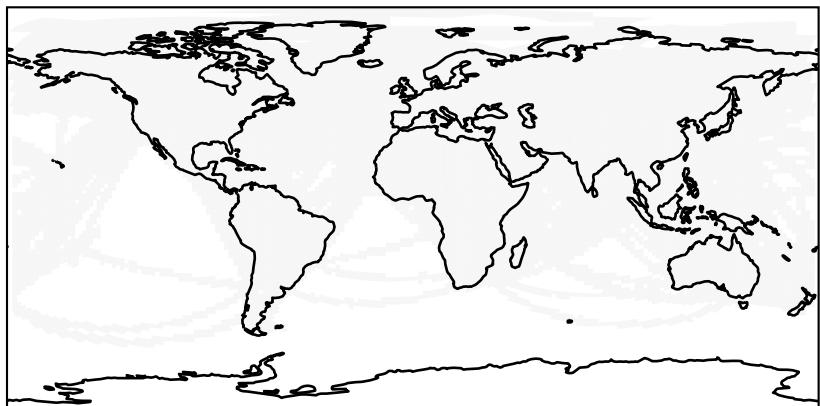
Difference  
Dev - Ref, Dynamic Range



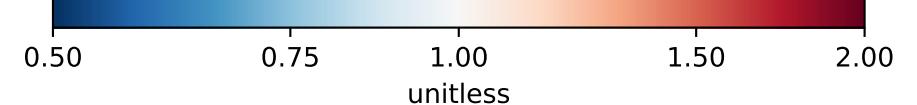
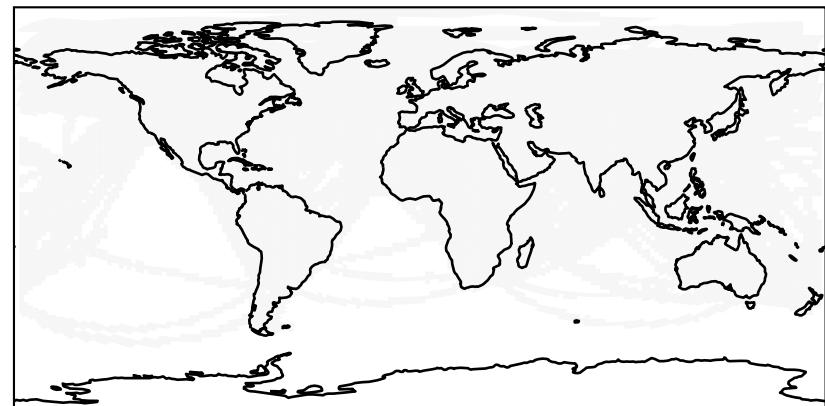
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

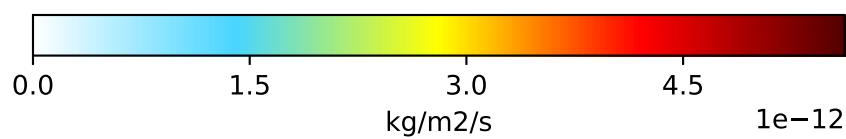
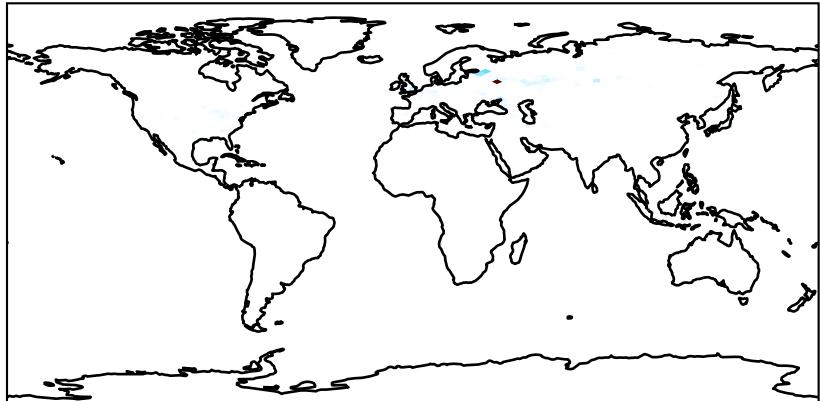


Ratio  
Dev/Ref, Fixed Range

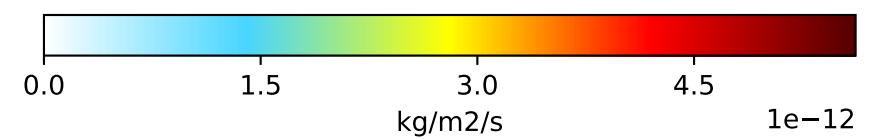
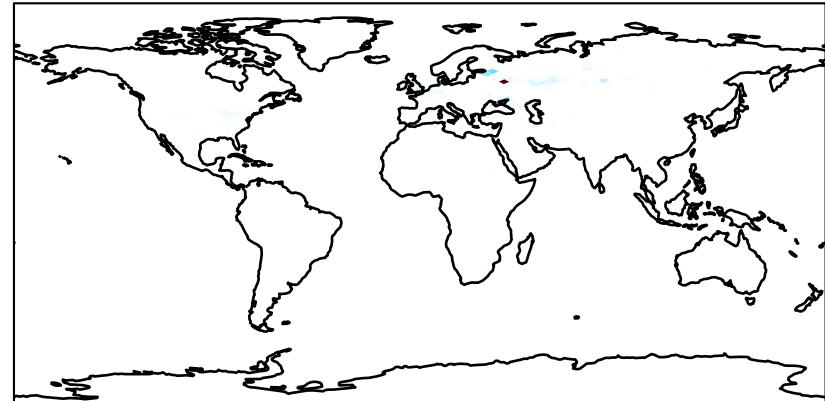


# EmisPRPE\_Aircraft (Apr2019)

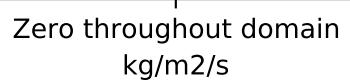
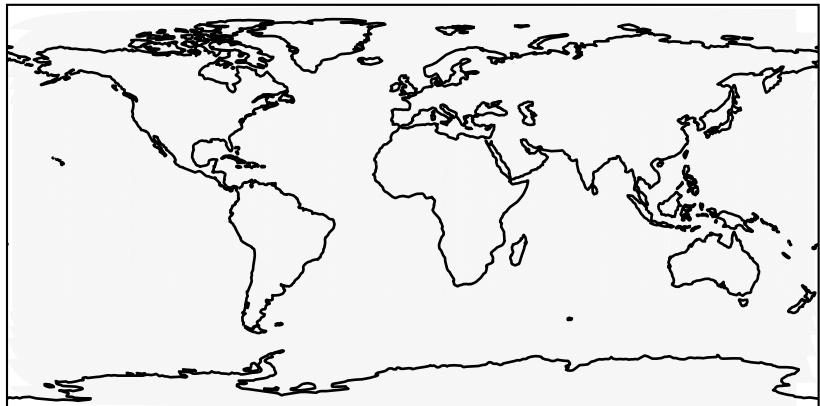
GCHP\_13.0.0-beta.1 (Ref)  
c48



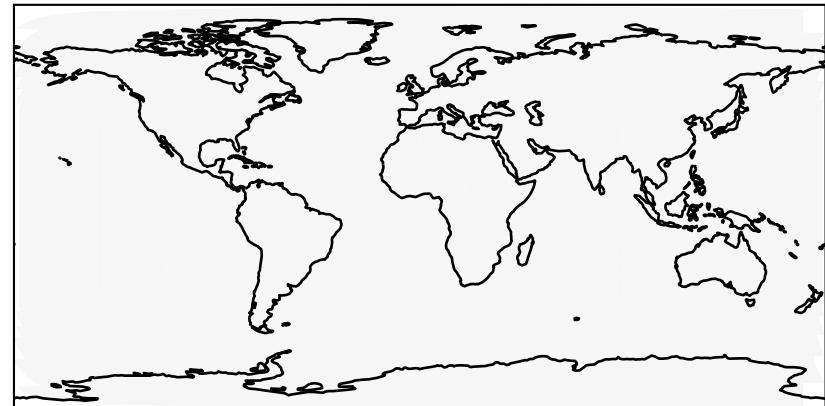
GCHP\_13.0.0-rc.0 (Dev)  
c48



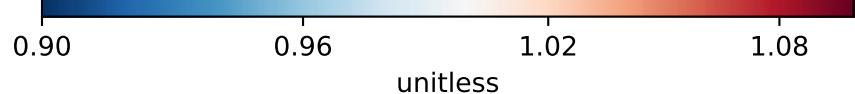
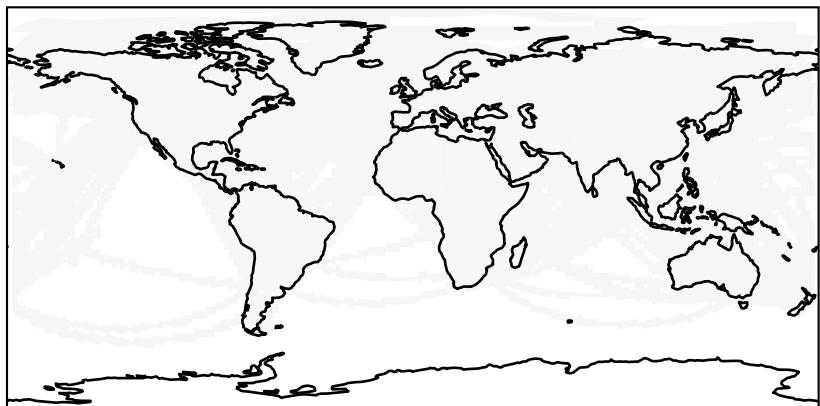
Difference  
Dev - Ref, Dynamic Range



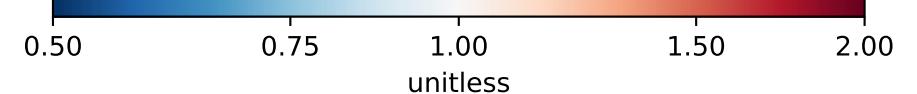
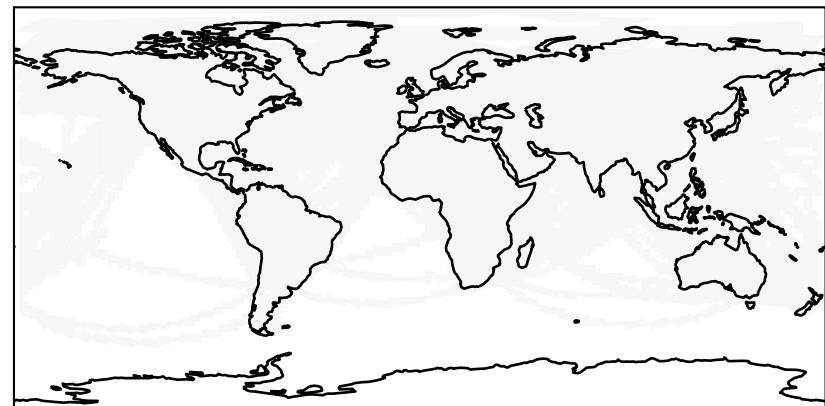
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

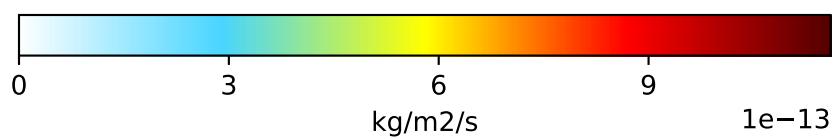
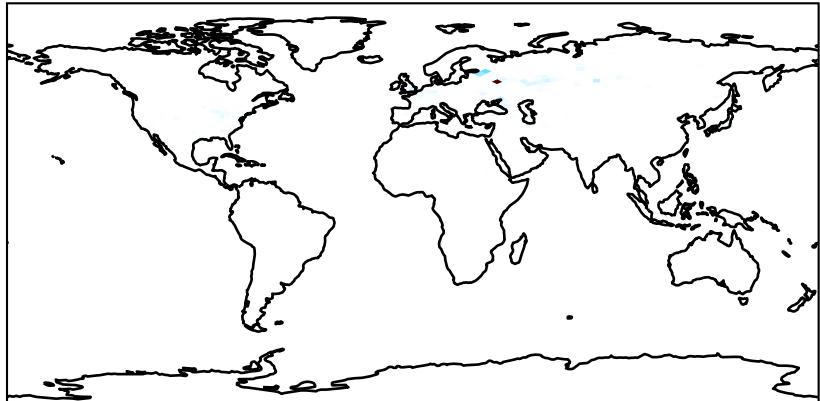


Ratio  
Dev/Ref, Fixed Range

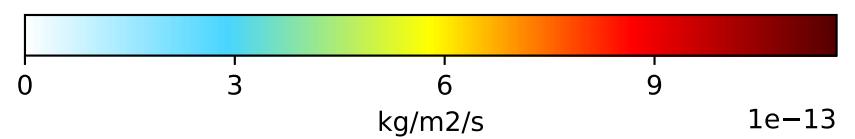
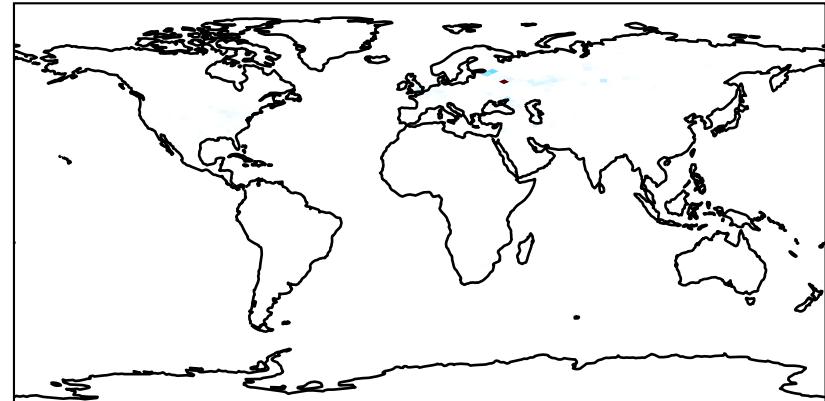


# EmisRCHO\_Aircraft (Apr2019)

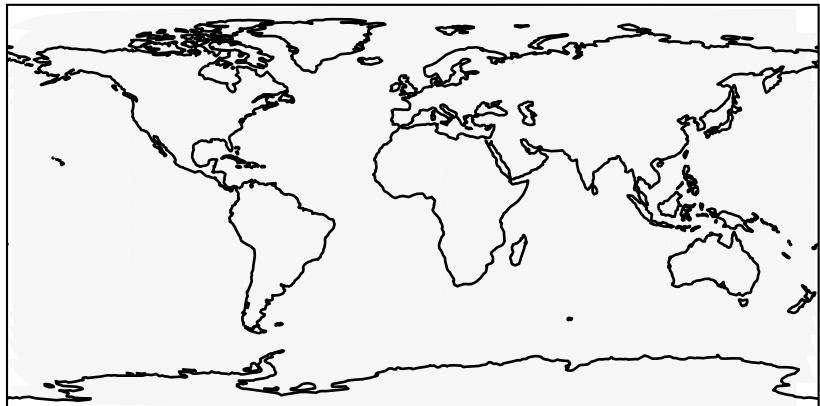
GCHP\_13.0.0-beta.1 (Ref)  
c48



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

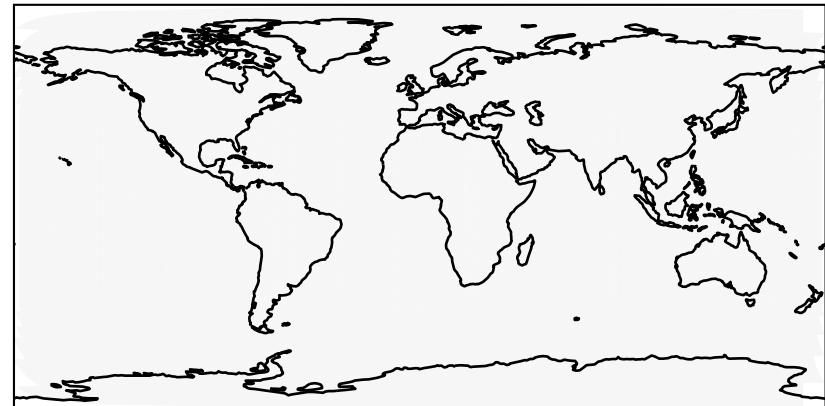


Difference  
Dev - Ref, Dynamic Range



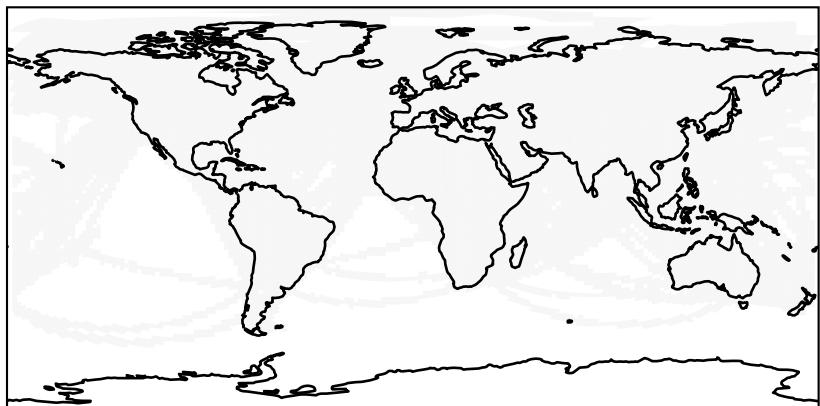
Zero throughout domain  
kg/m<sup>2</sup>/s

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



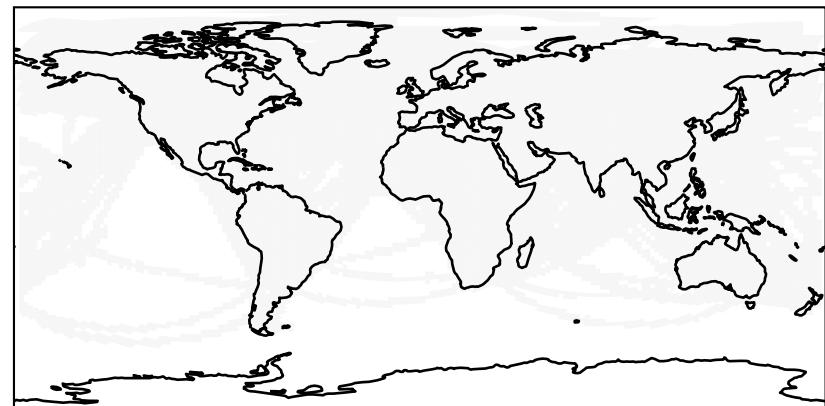
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

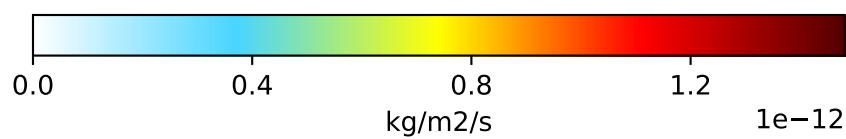
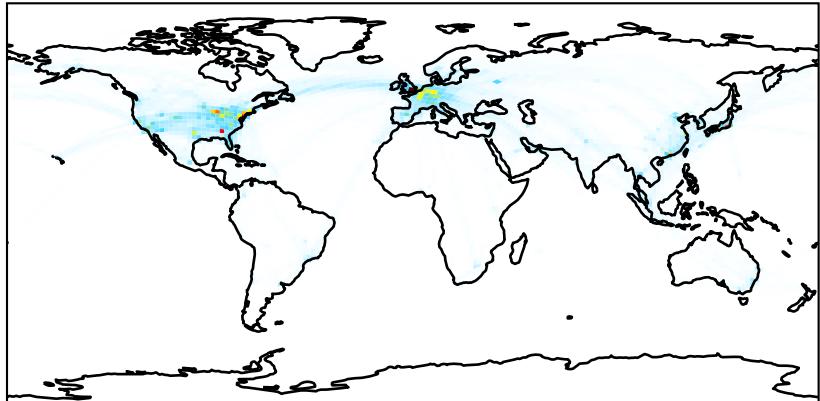
Ratio  
Dev/Ref, Fixed Range



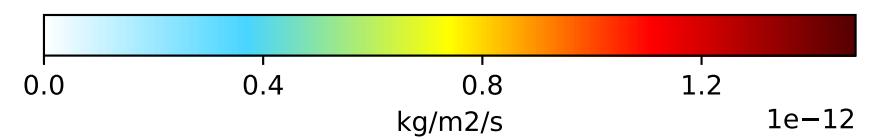
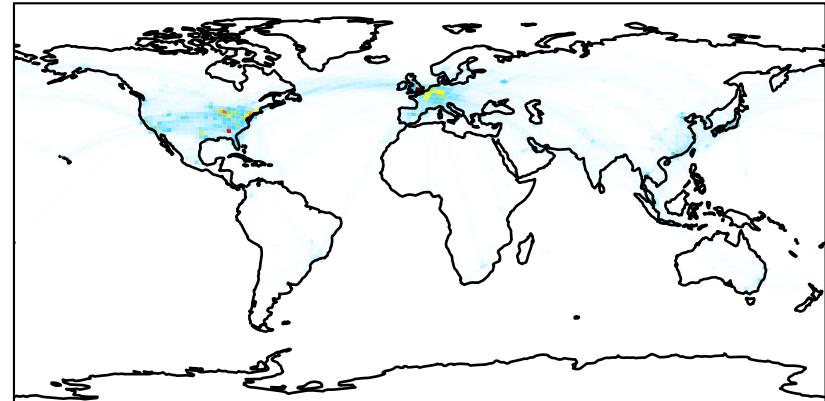
0.50      0.75      1.00      1.50      2.00  
unitless

# EmisSO2\_Aircraft (Apr2019)

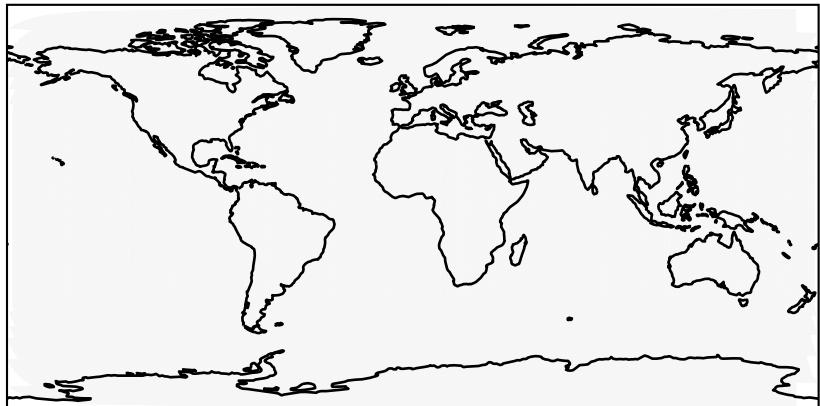
GCHP\_13.0.0-beta.1 (Ref)  
c48



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

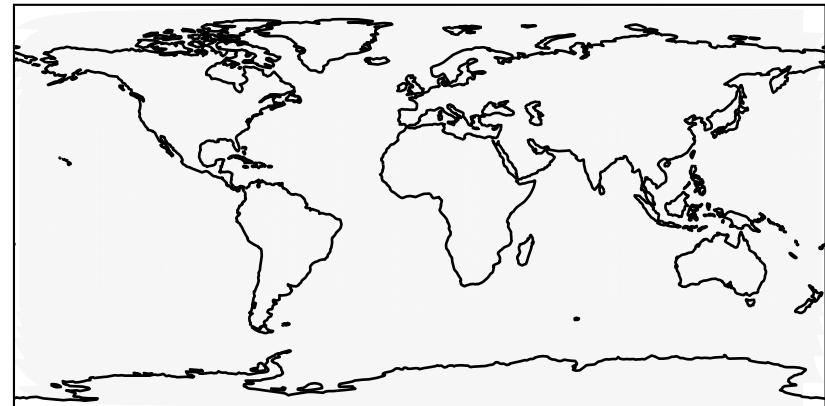


Difference  
Dev - Ref, Dynamic Range



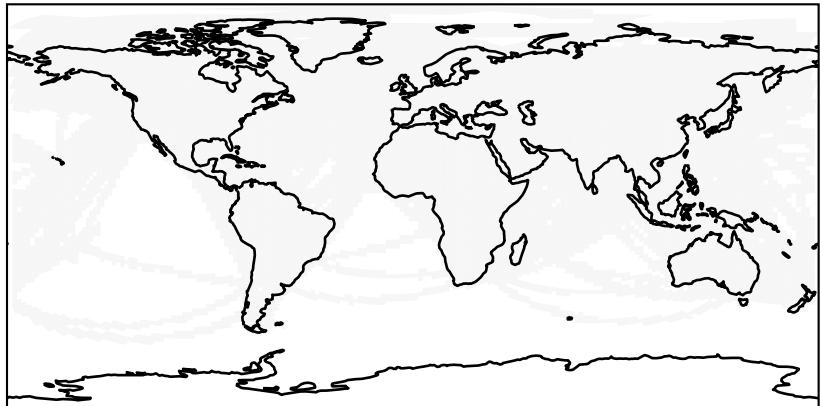
Zero throughout domain  
kg/m<sup>2</sup>/s

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

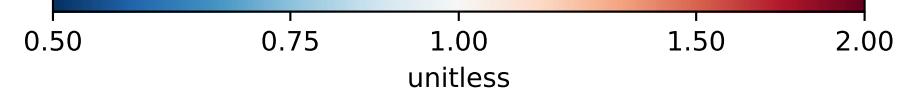
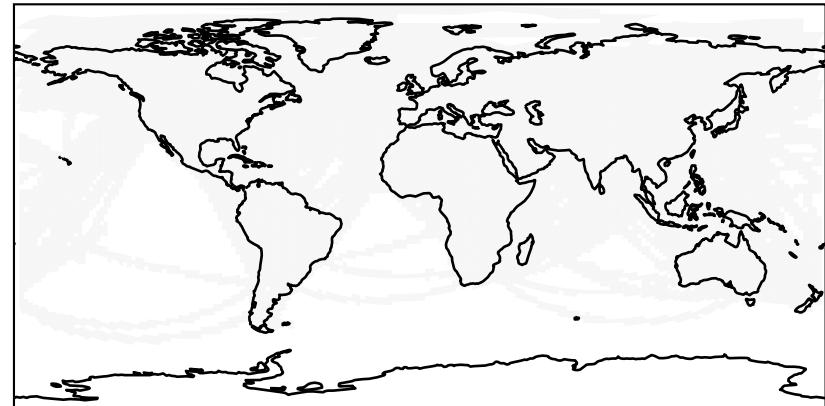


Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range

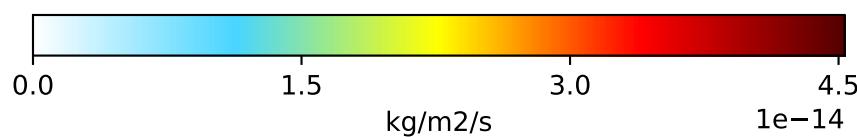
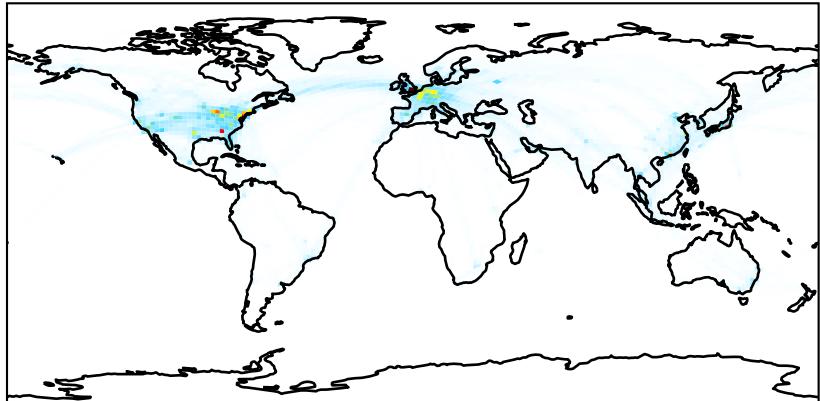


Ratio  
Dev/Ref, Fixed Range

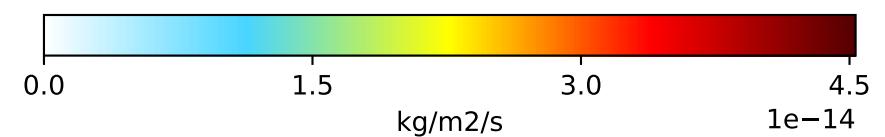
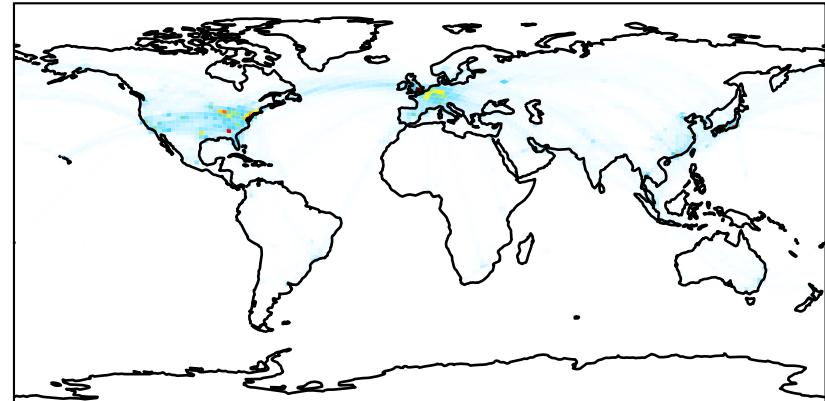


# EmisSO4\_Aircraft (Apr2019)

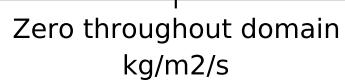
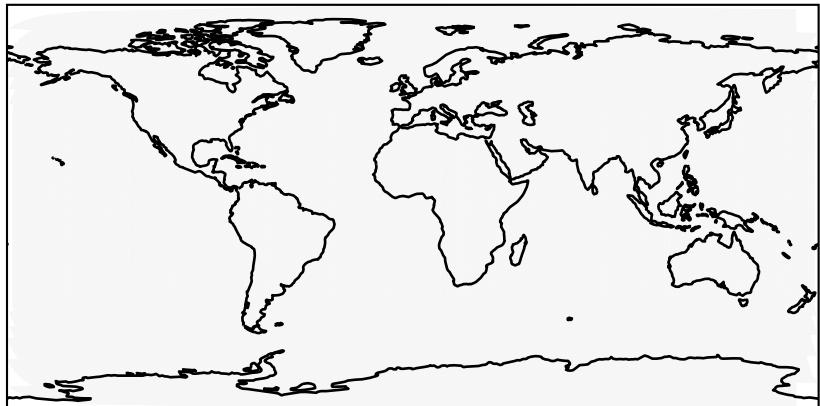
GCHP\_13.0.0-beta.1 (Ref)  
c48



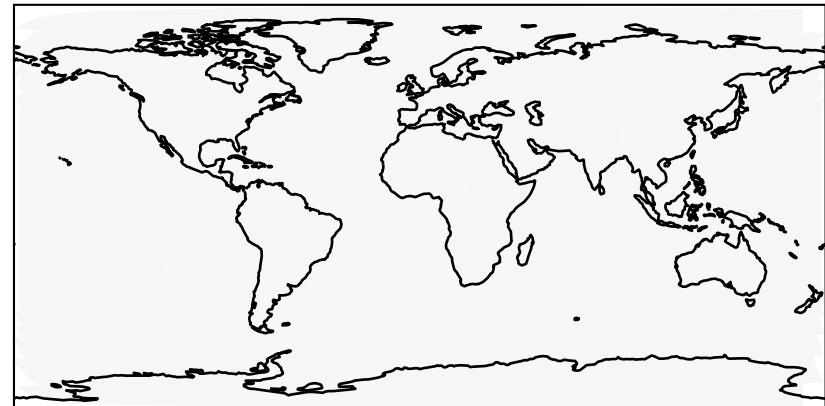
GCHP\_13.0.0-rc.0 (Dev)  
c48



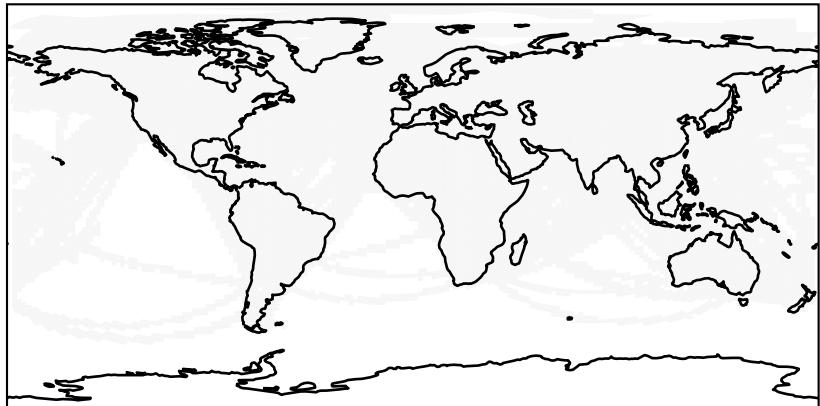
Difference  
Dev - Ref, Dynamic Range



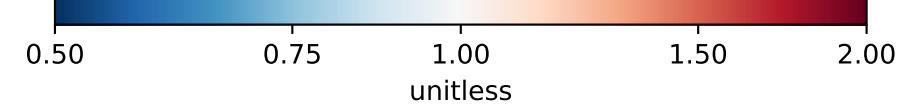
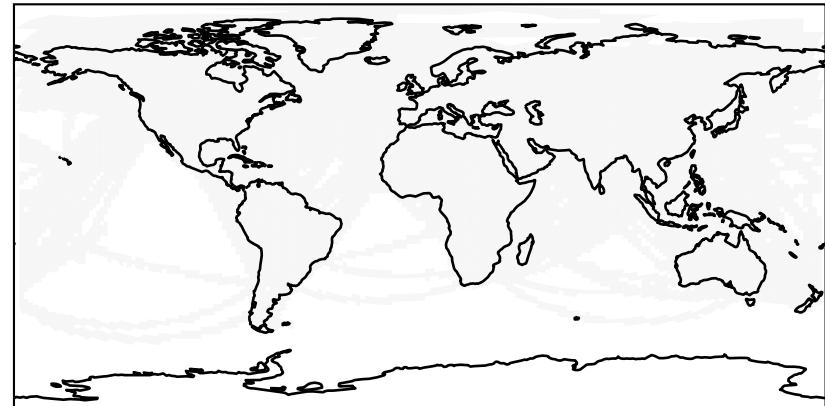
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

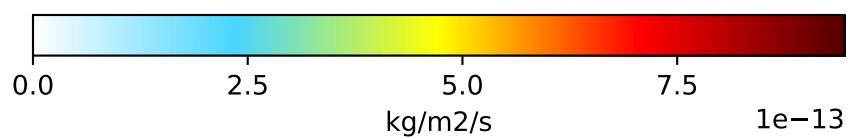
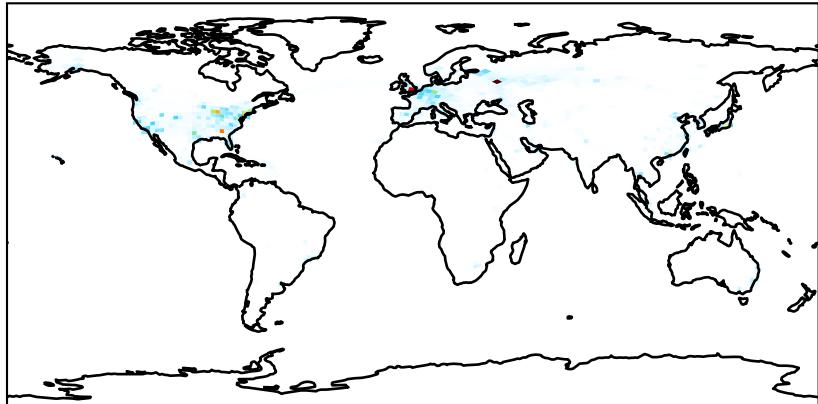


Ratio  
Dev/Ref, Fixed Range

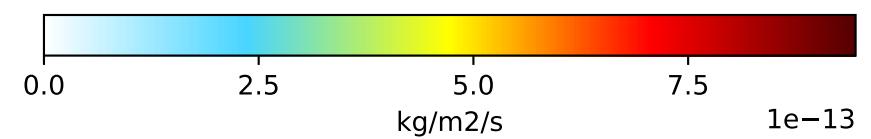
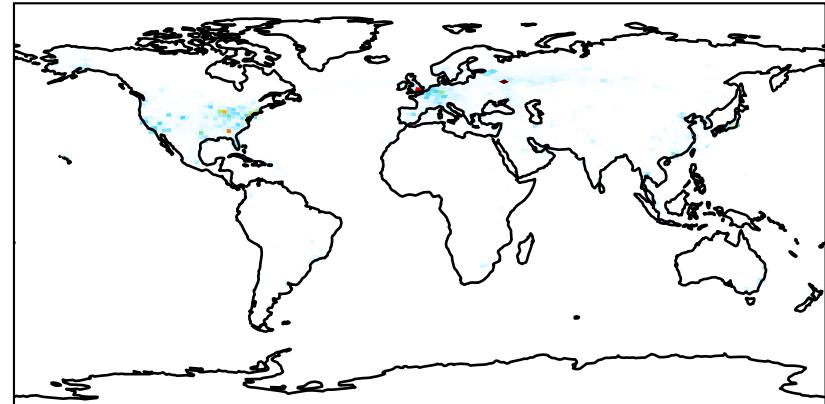


# EmisSOAP\_Aircraft (Apr2019)

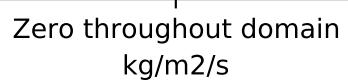
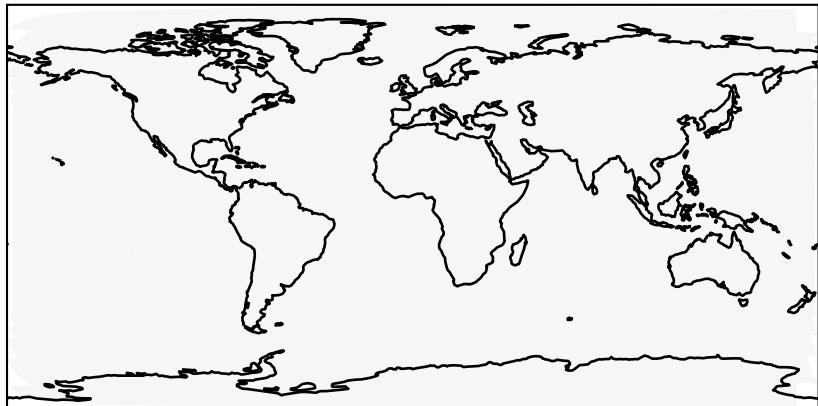
GCHP\_13.0.0-beta.1 (Ref)  
c48



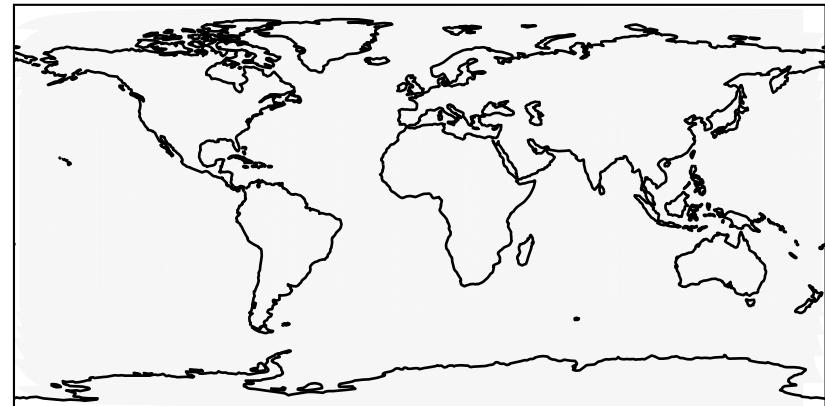
GCHP\_13.0.0-rc.0 (Dev)  
c48



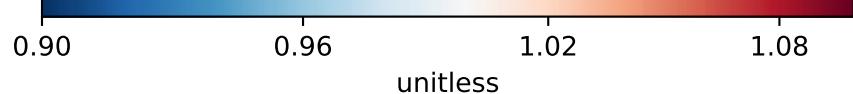
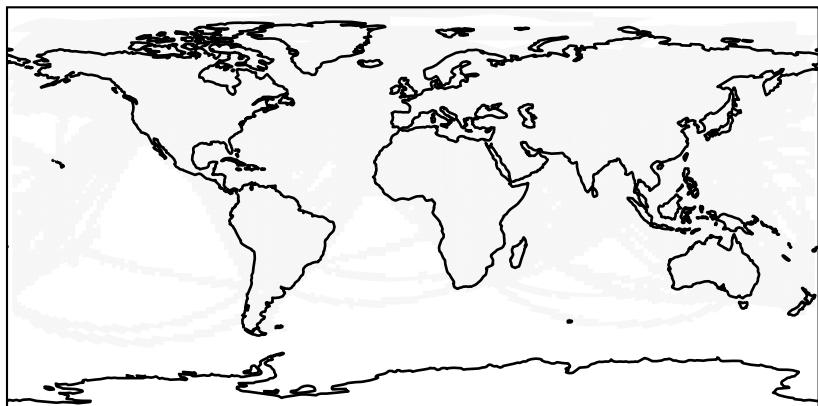
Difference  
Dev - Ref, Dynamic Range



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



Ratio  
Dev/Ref, Dynamic Range



Ratio  
Dev/Ref, Fixed Range

