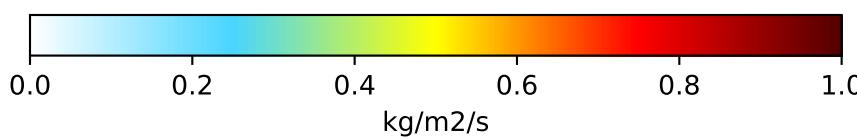
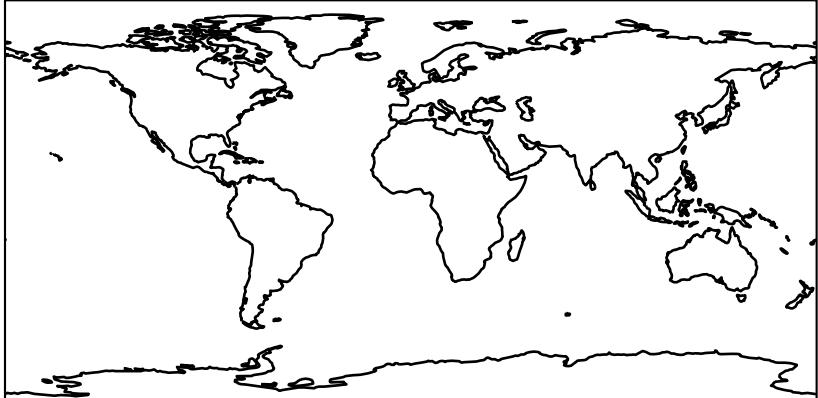
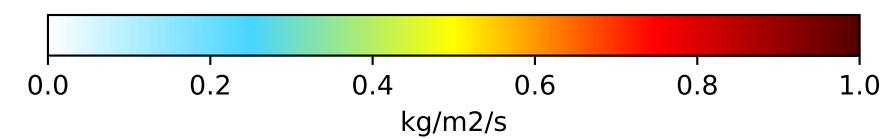


# EmisALK4\_Aircraft

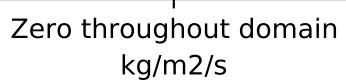
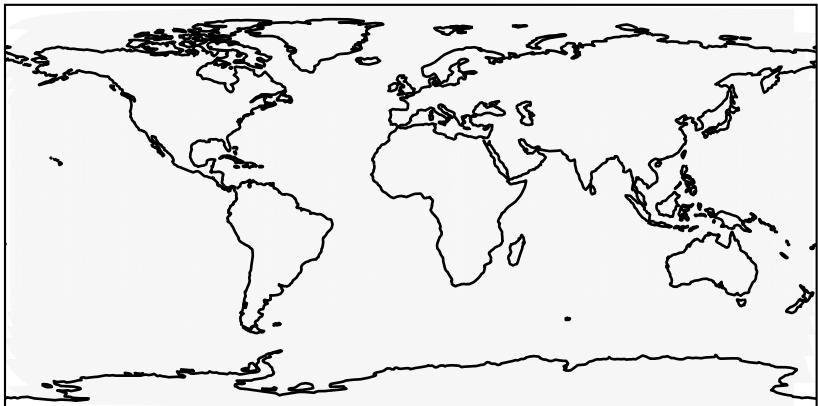
GCHP\_13.0.0-rc.2 (Ref)  
c48



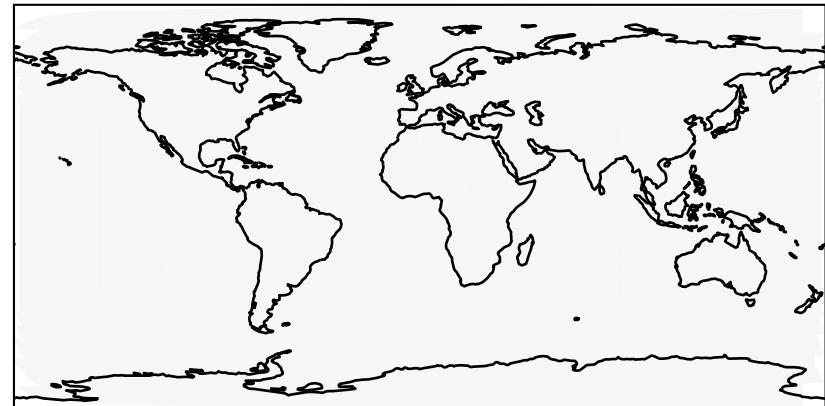
GCHP\_13.1.0-beta.1 (Dev)  
c48



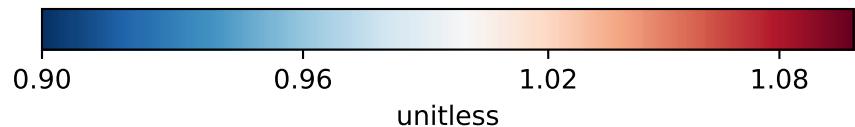
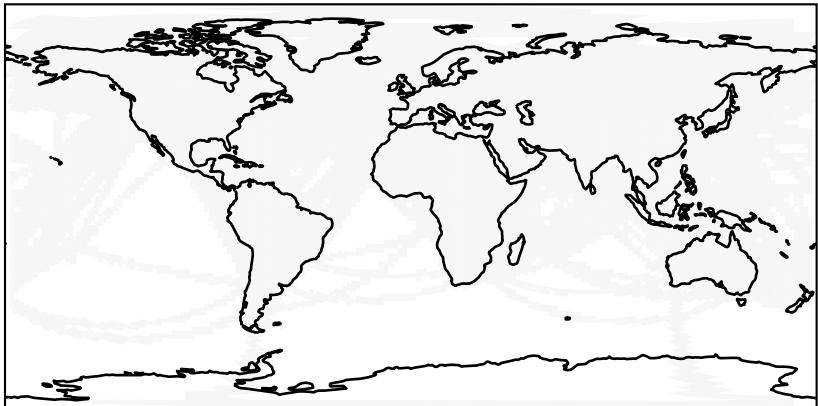
Difference  
Dev - Ref, Dynamic Range



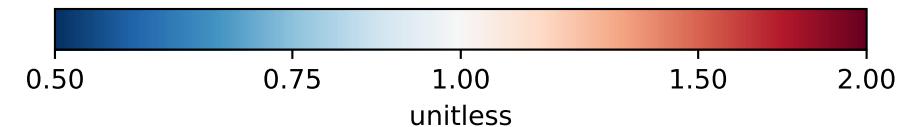
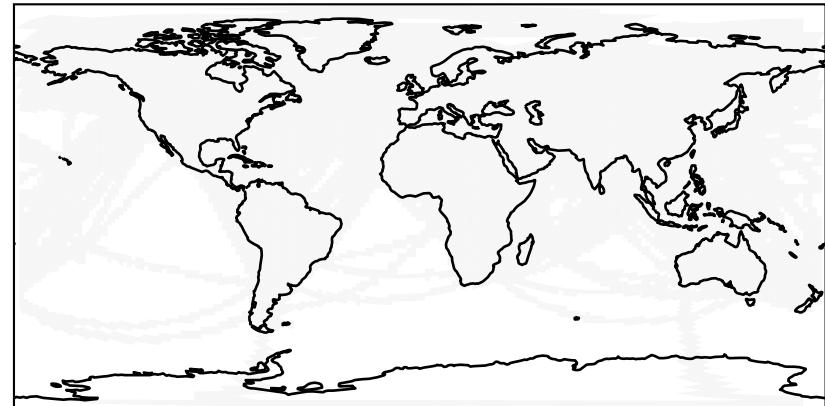
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

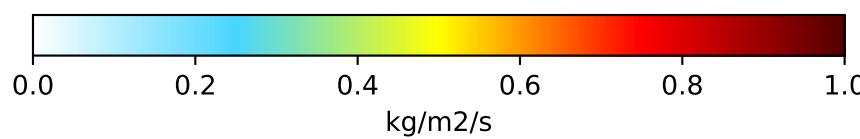


Ratio  
Dev/Ref, Fixed Range

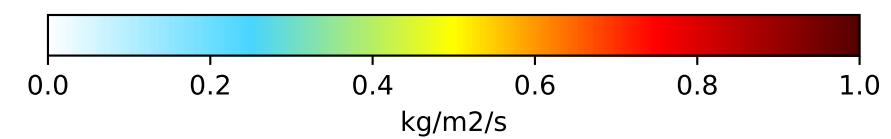


# EmisBCPI\_Aircraft

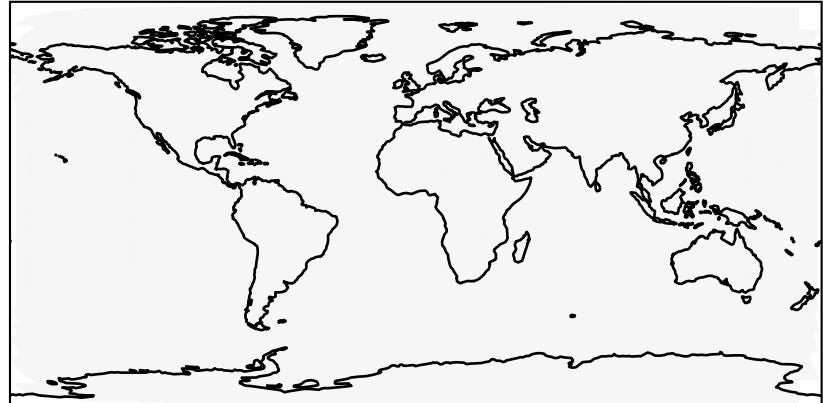
GCHP\_13.0.0-rc.2 (Ref)  
c48



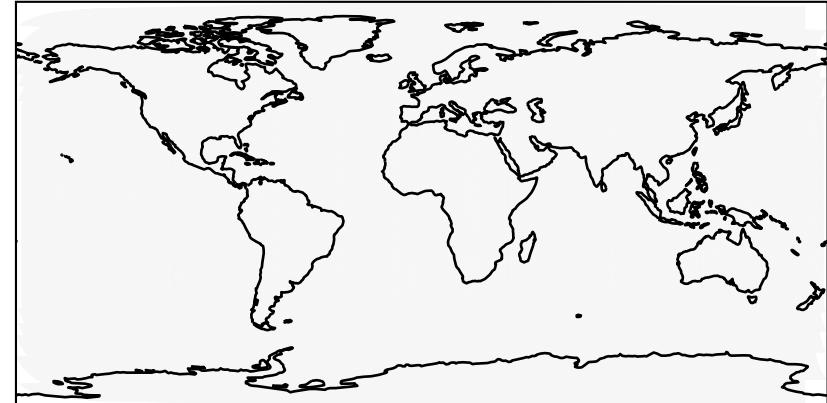
GCHP\_13.1.0-beta.1 (Dev)  
c48



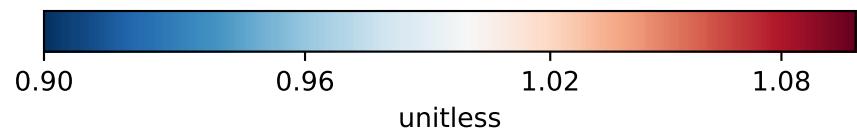
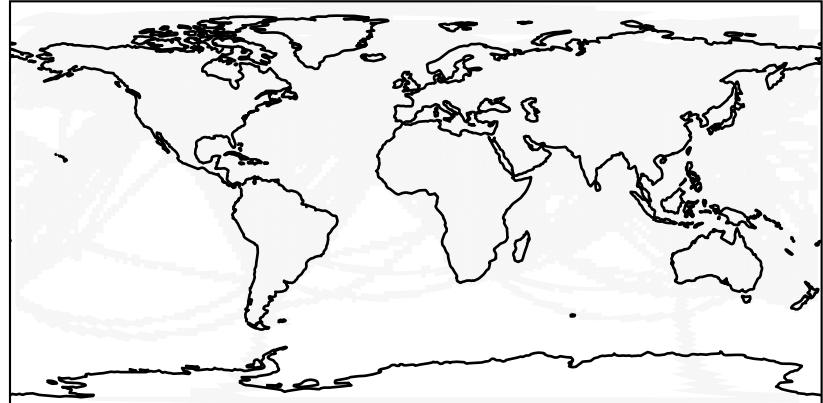
Difference  
Dev - Ref, Dynamic Range



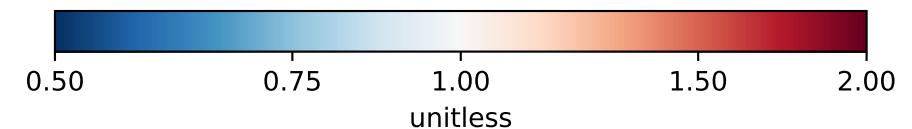
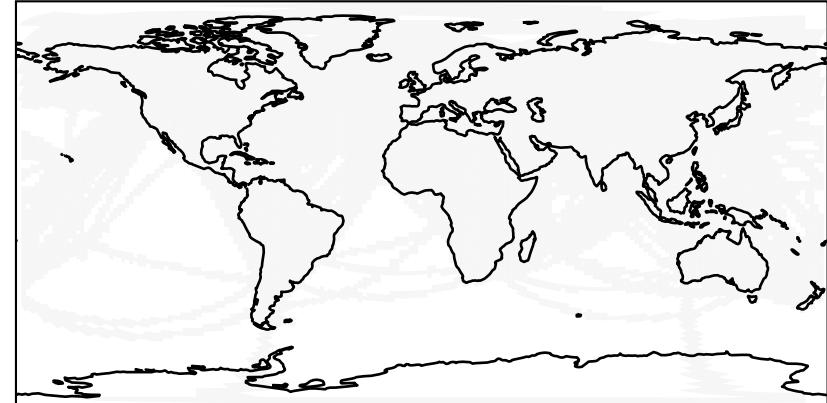
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

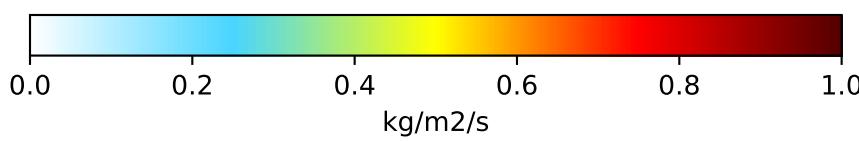
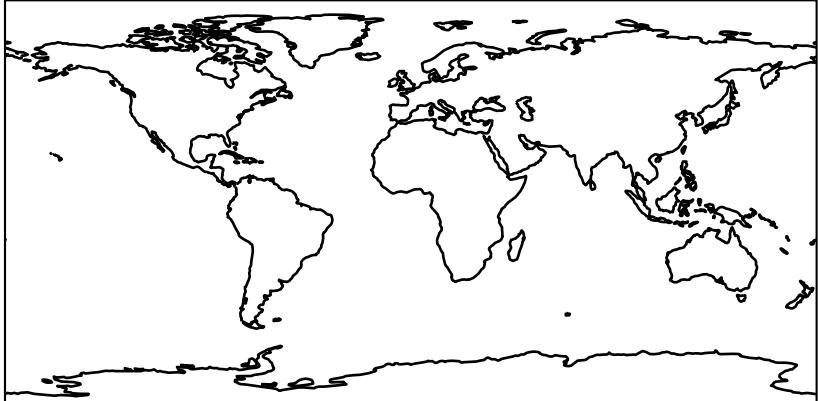


Ratio  
Dev/Ref, Fixed Range

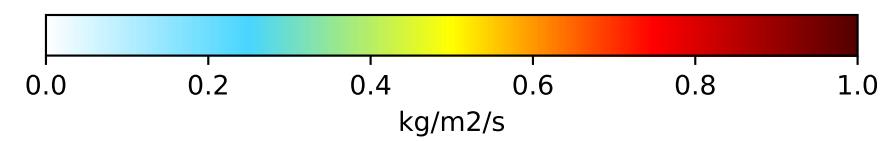
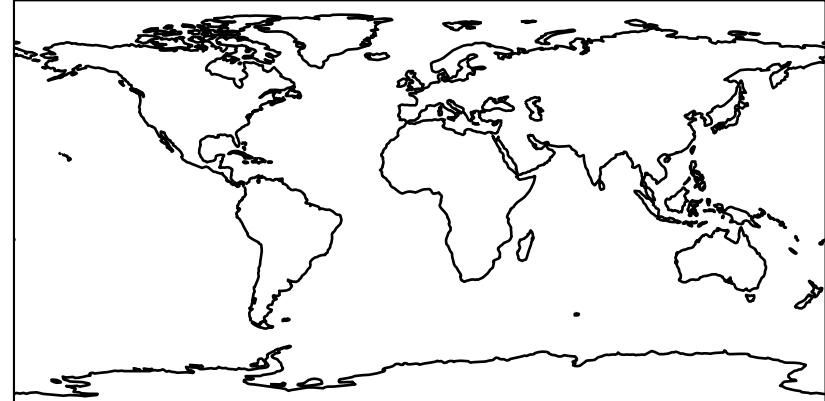


# EmisC2H6\_Aircraft

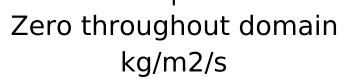
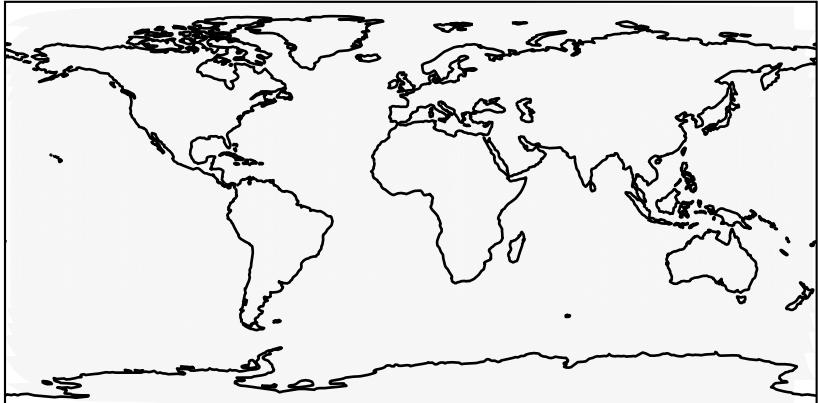
GCHP\_13.0.0-rc.2 (Ref)  
c48



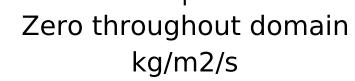
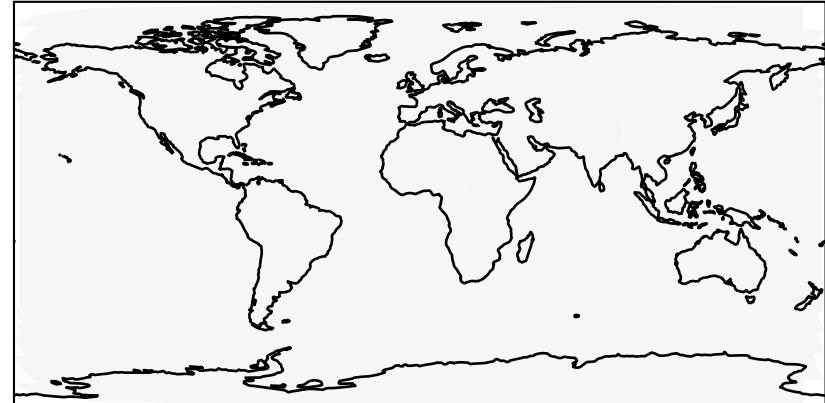
GCHP\_13.1.0-beta.1 (Dev)  
c48



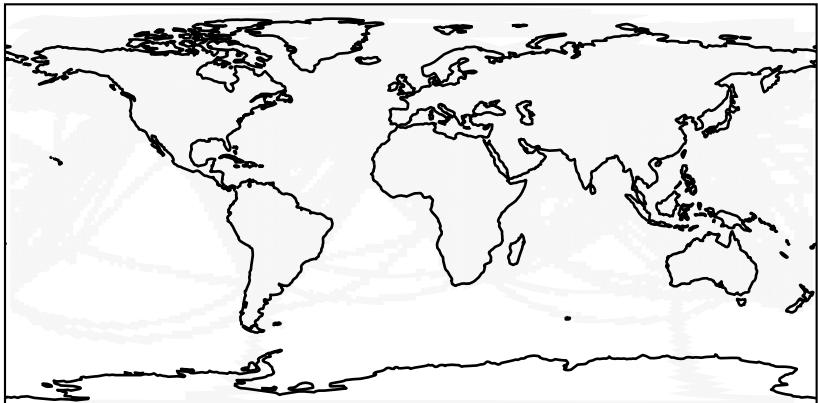
Difference  
Dev - Ref, Dynamic Range



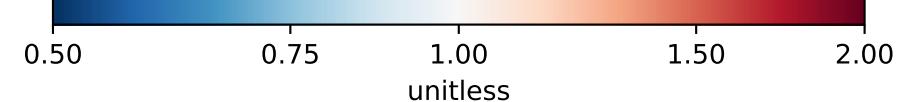
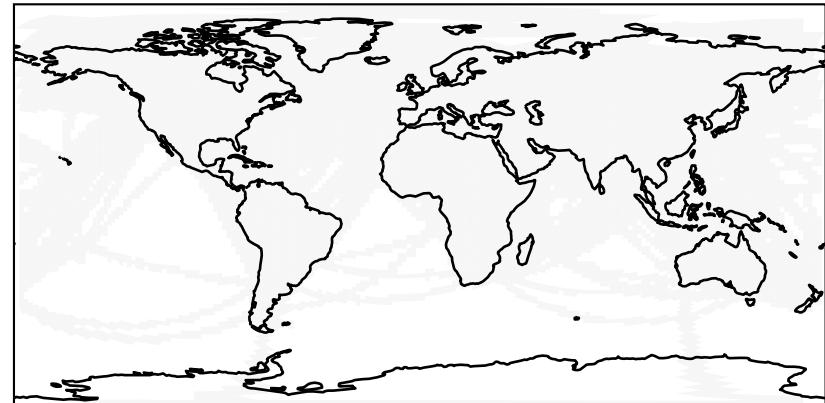
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

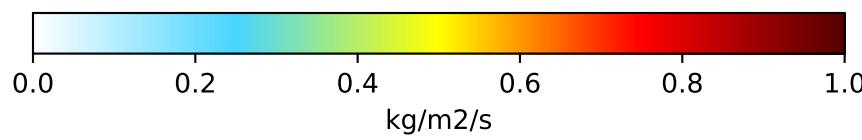
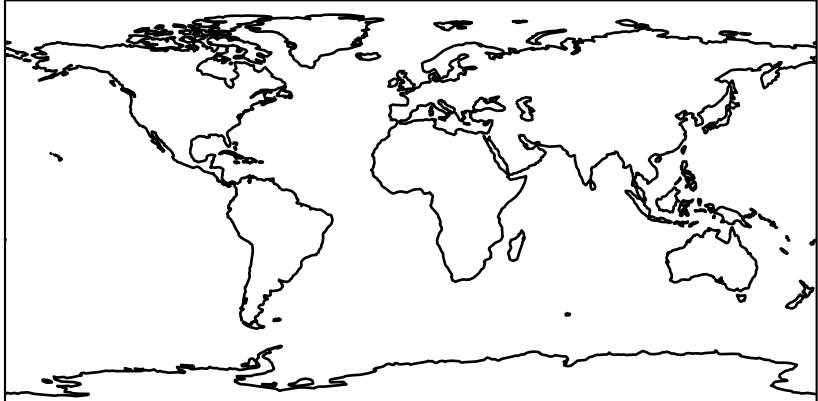


Ratio  
Dev/Ref, Fixed Range

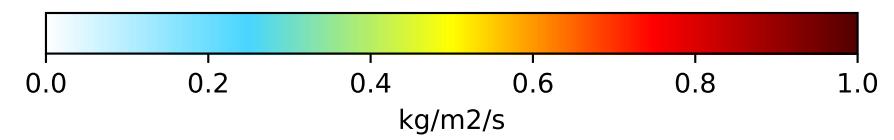


# EmisC3H8\_Aircraft

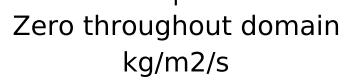
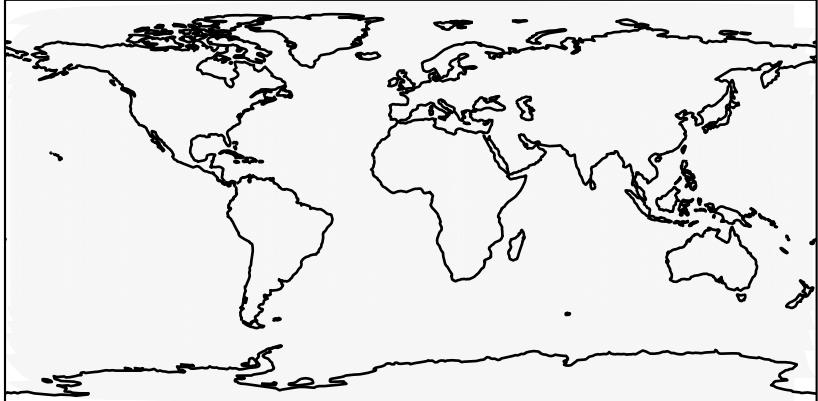
GCHP\_13.0.0-rc.2 (Ref)  
c48



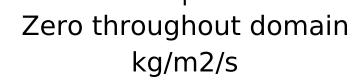
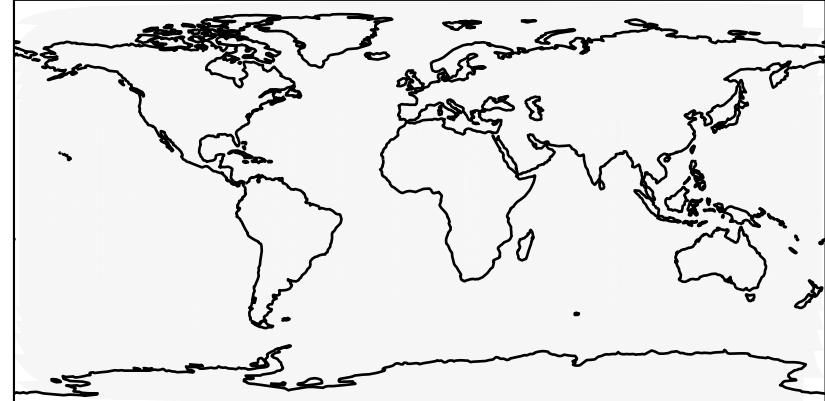
GCHP\_13.1.0-beta.1 (Dev)  
c48



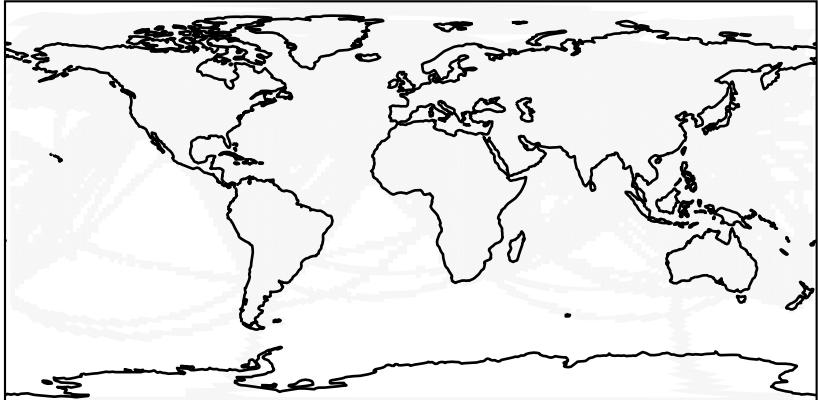
Difference  
Dev - Ref, Dynamic Range



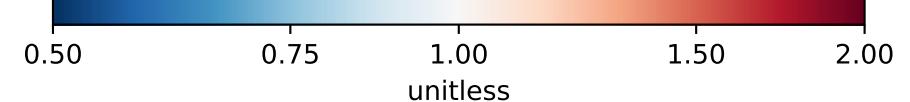
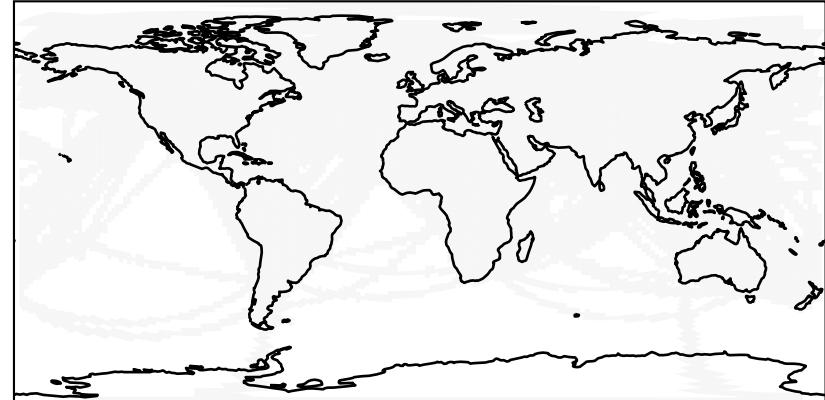
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

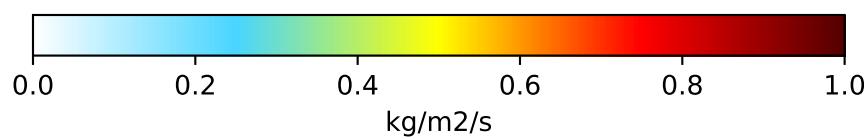
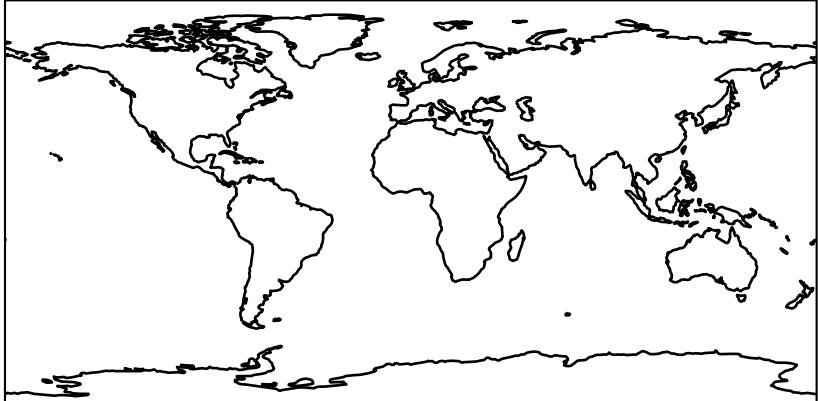


Ratio  
Dev/Ref, Fixed Range

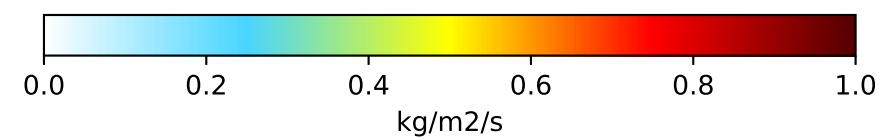
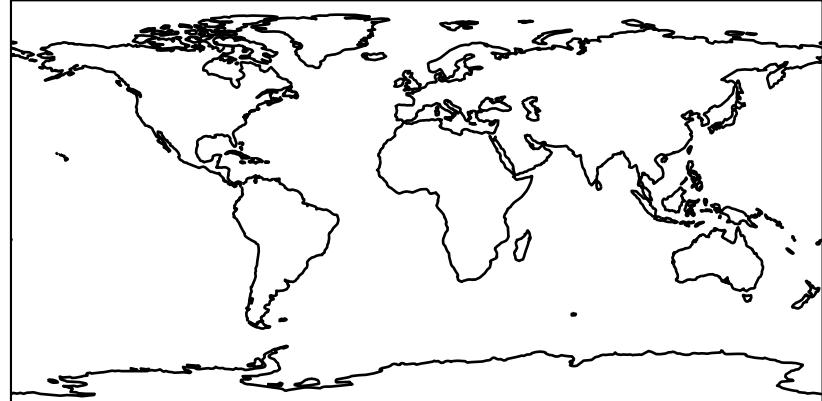


# EmisCH2O\_Aircraft

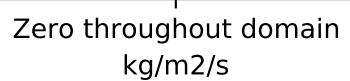
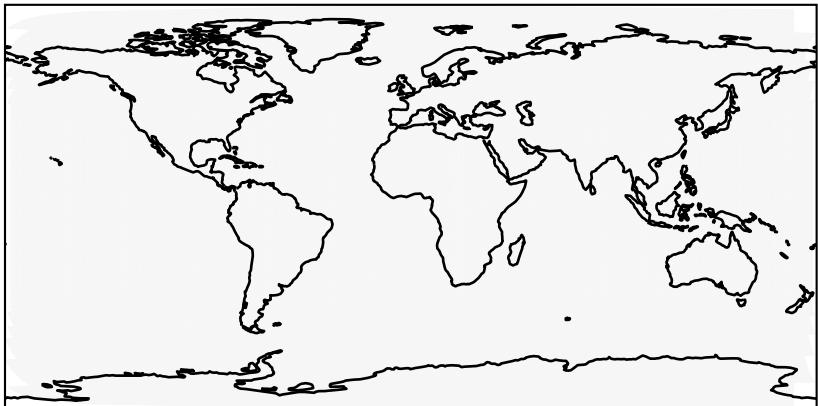
GCHP\_13.0.0-rc.2 (Ref)  
c48



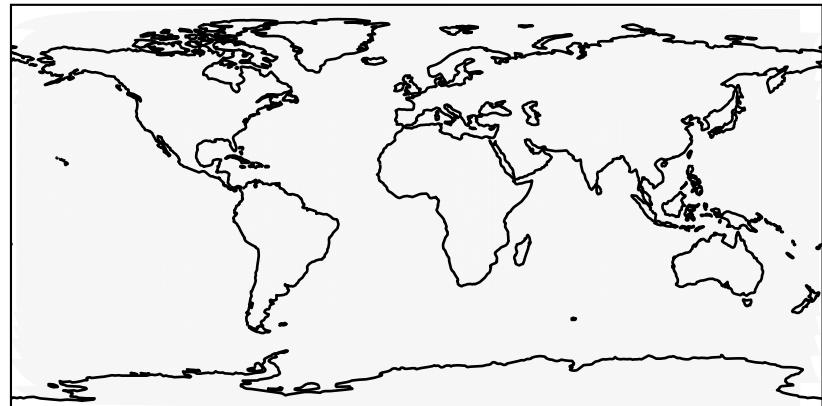
GCHP\_13.1.0-beta.1 (Dev)  
c48



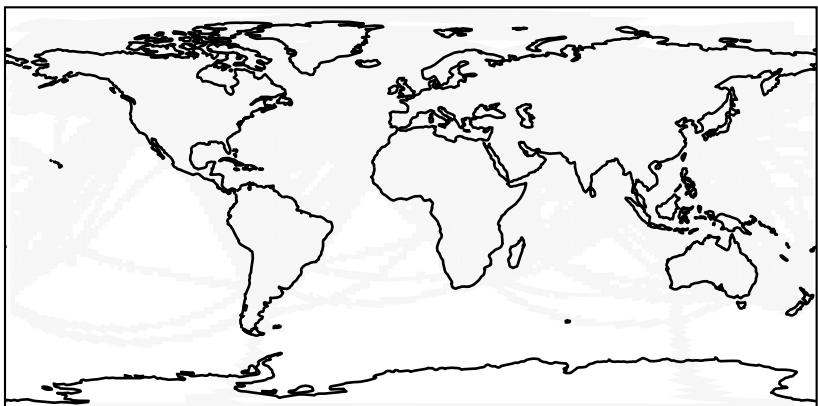
Difference  
Dev - Ref, Dynamic Range



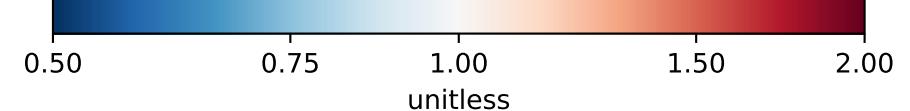
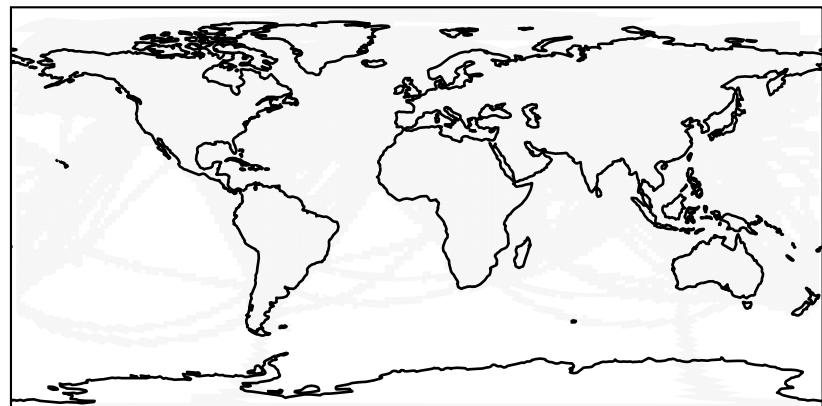
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

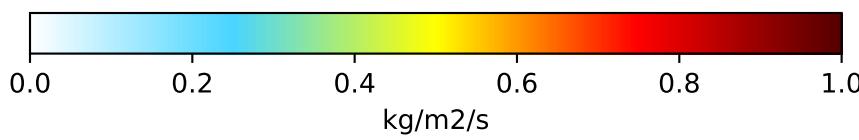
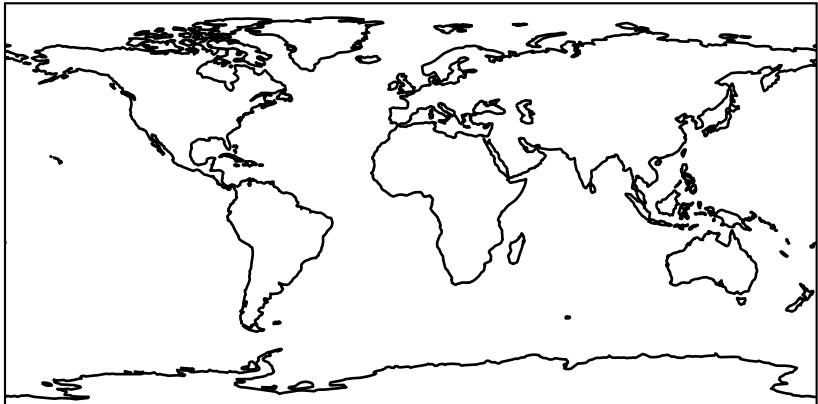


Ratio  
Dev/Ref, Fixed Range

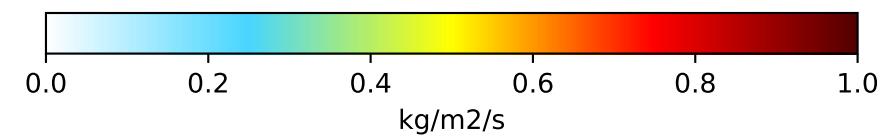
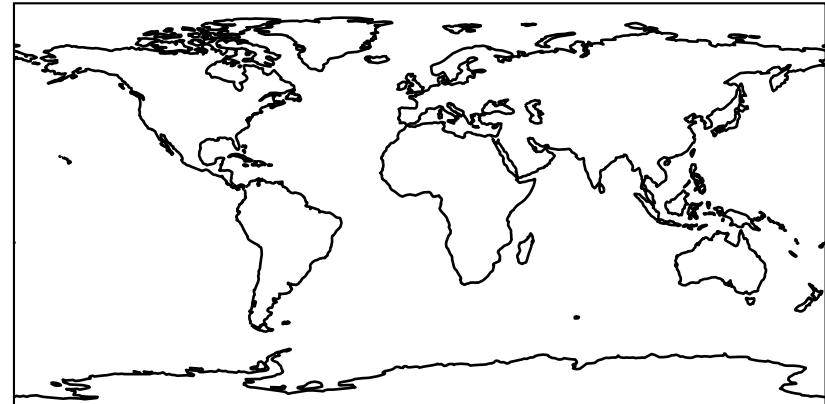


# EmisCO\_Aircraft

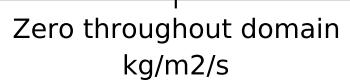
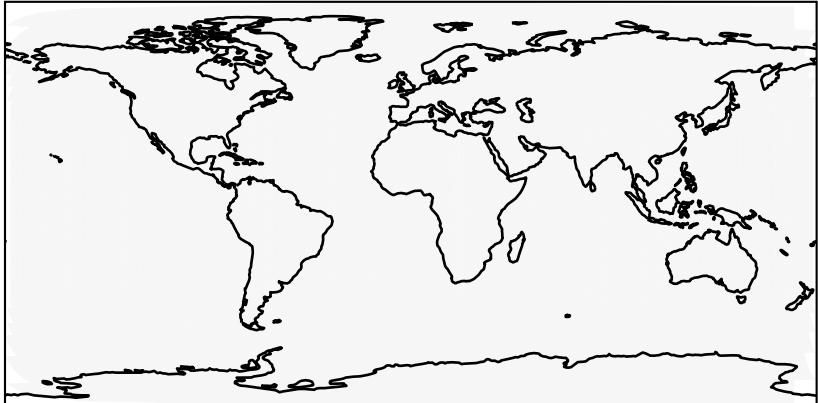
GCHP\_13.0.0-rc.2 (Ref)  
c48



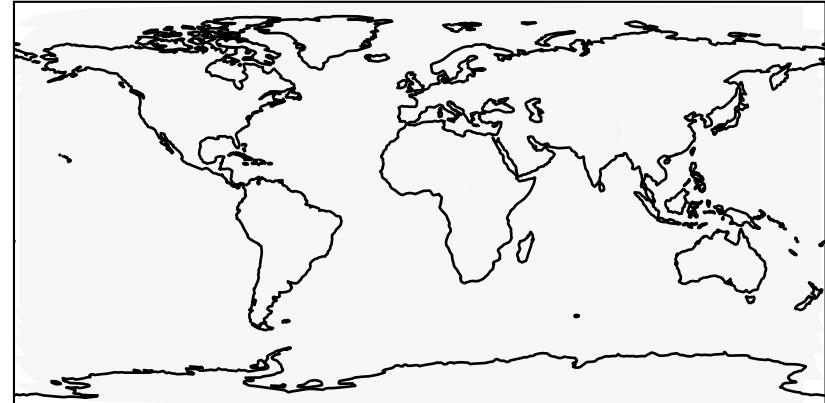
GCHP\_13.1.0-beta.1 (Dev)  
c48



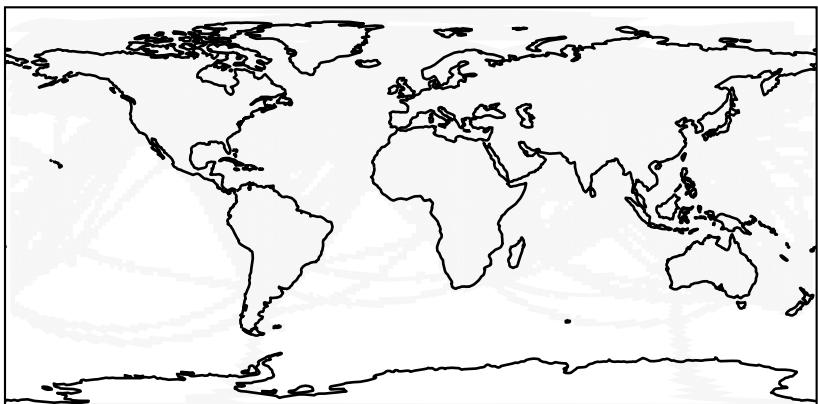
Difference  
Dev - Ref, Dynamic Range



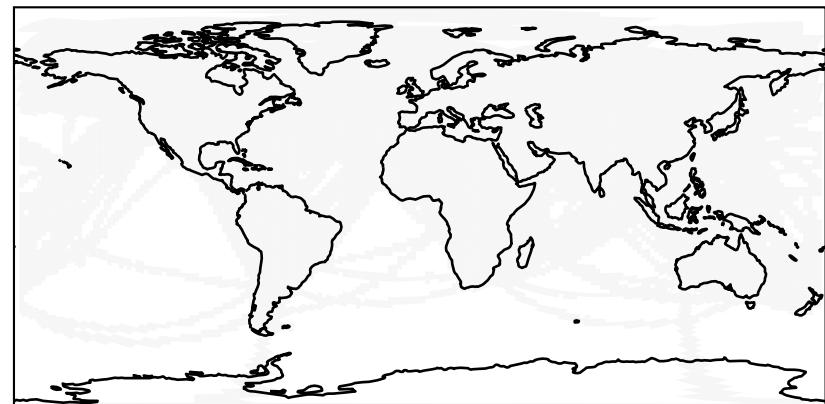
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

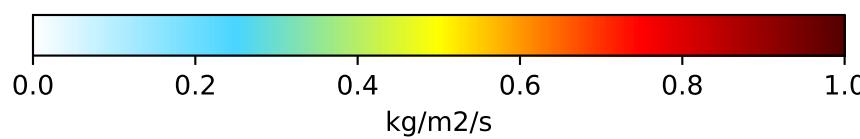


Ratio  
Dev/Ref, Fixed Range

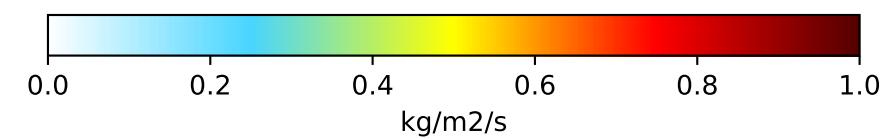
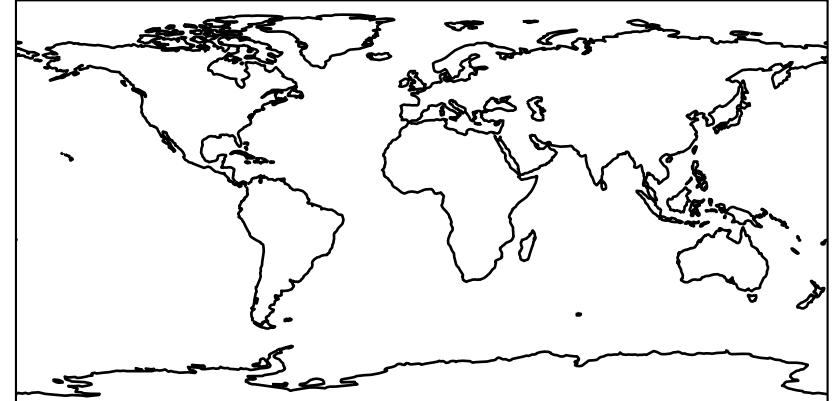


# EmisMACR\_Aircraft

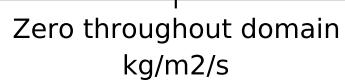
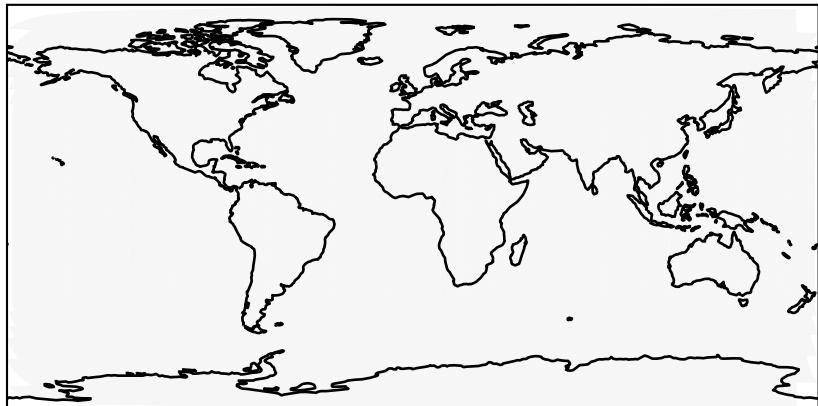
GCHP\_13.0.0-rc.2 (Ref)  
c48



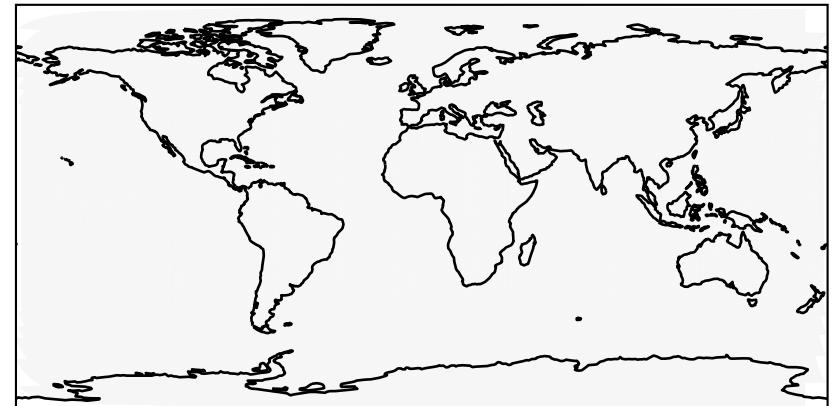
GCHP\_13.1.0-beta.1 (Dev)  
c48



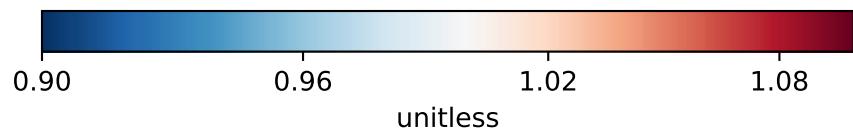
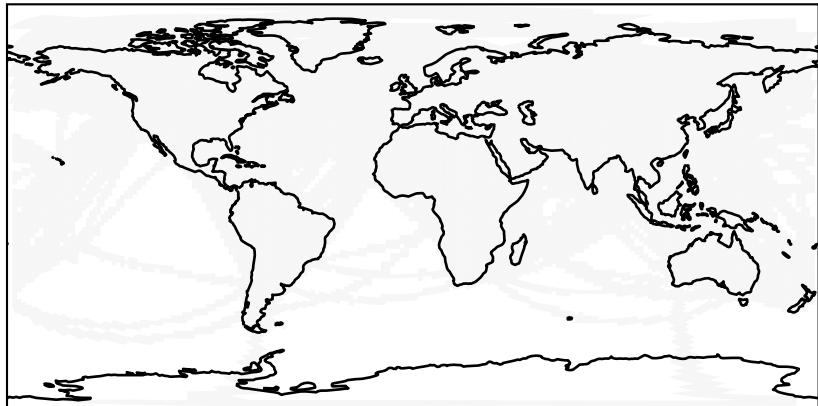
Difference  
Dev - Ref, Dynamic Range



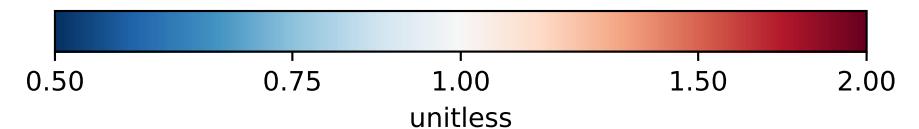
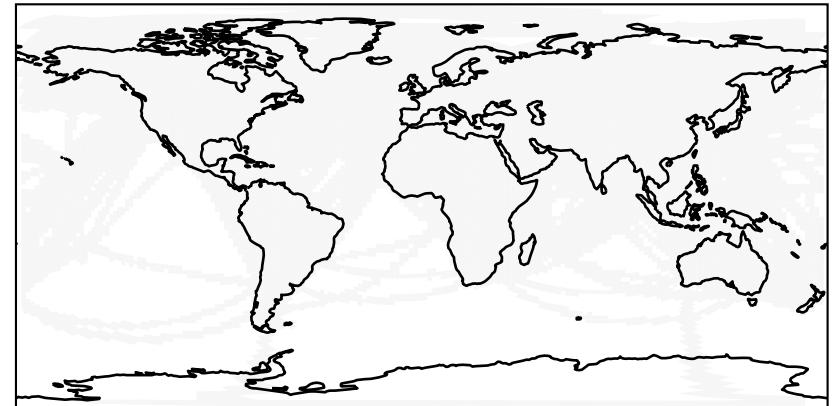
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

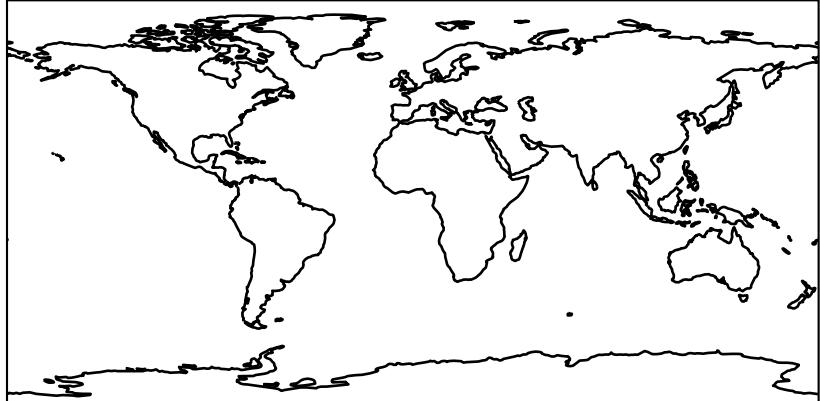


Ratio  
Dev/Ref, Fixed Range

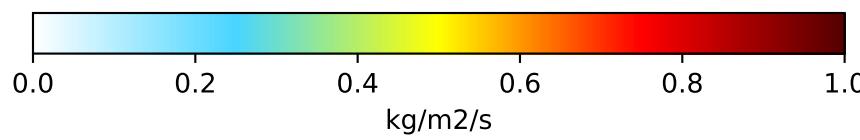
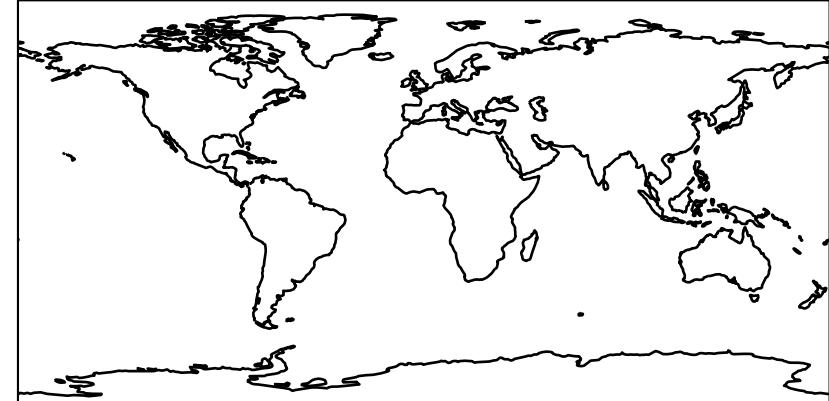


# EmisNO\_Aircraft

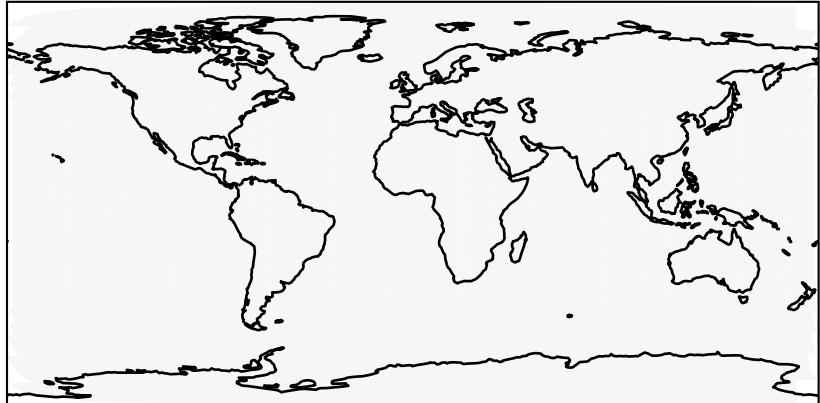
GCHP\_13.0.0-rc.2 (Ref)  
c48



GCHP\_13.1.0-beta.1 (Dev)  
c48



Difference  
Dev - Ref, Dynamic Range



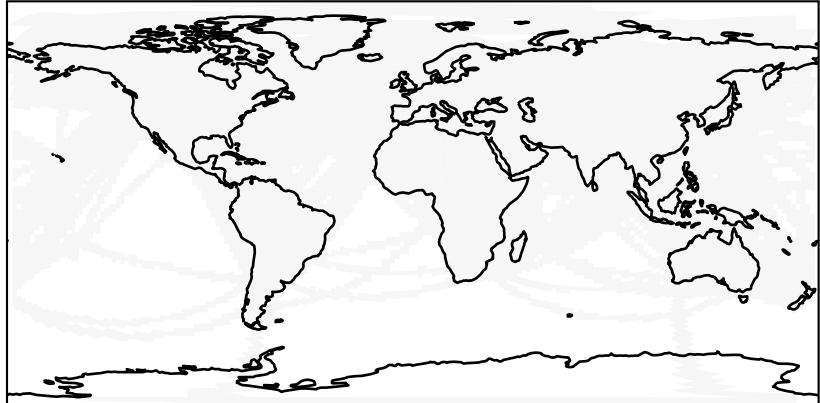
Zero throughout domain  
kg/m<sup>2</sup>/s

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



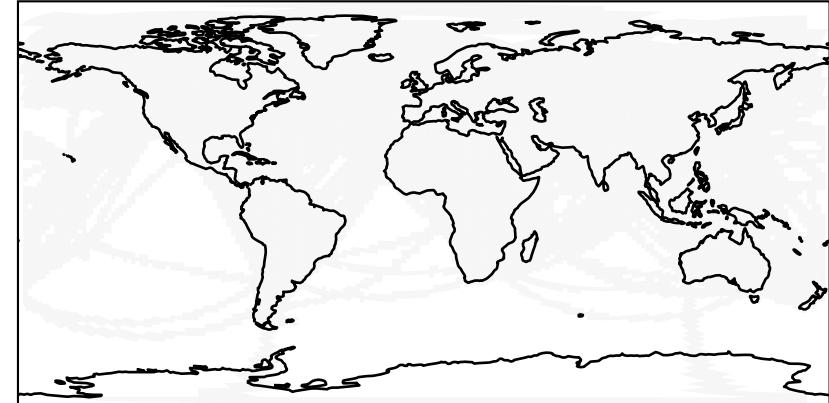
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08  
unitless

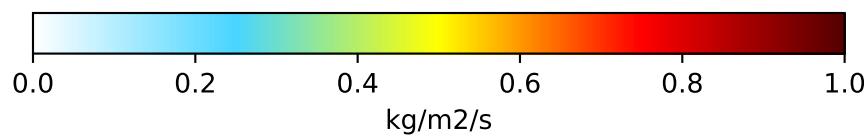
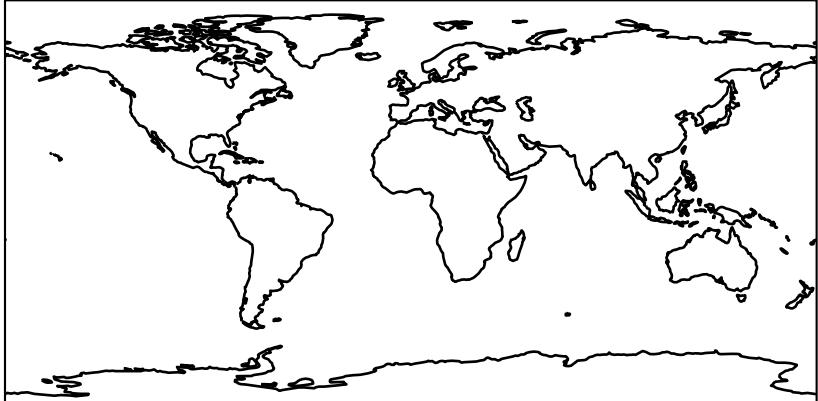
Ratio  
Dev/Ref, Fixed Range



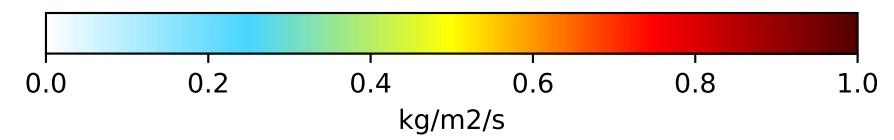
0.50 0.75 1.00 1.50 2.00  
unitless

# EmisOCPI\_Aircraft

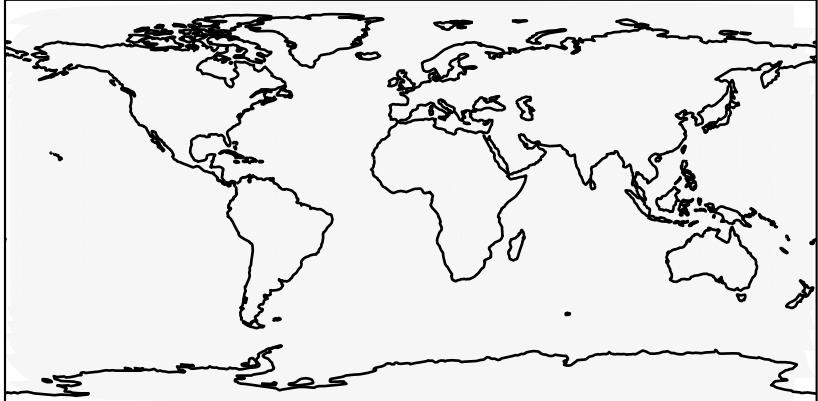
GCHP\_13.0.0-rc.2 (Ref)  
c48



GCHP\_13.1.0-beta.1 (Dev)  
c48

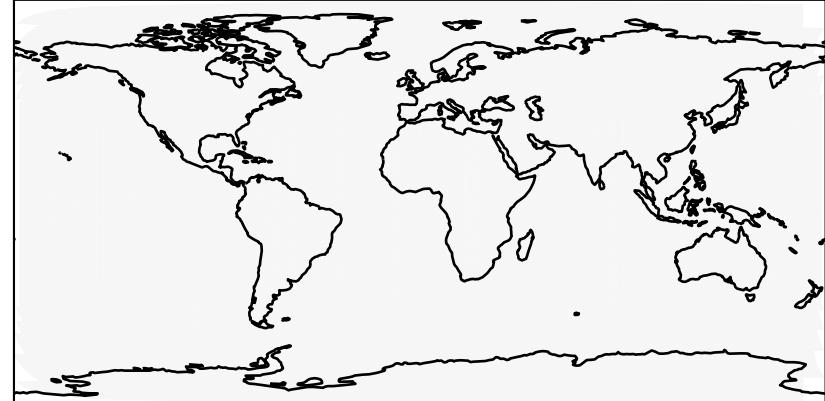


Difference  
Dev - Ref, Dynamic Range



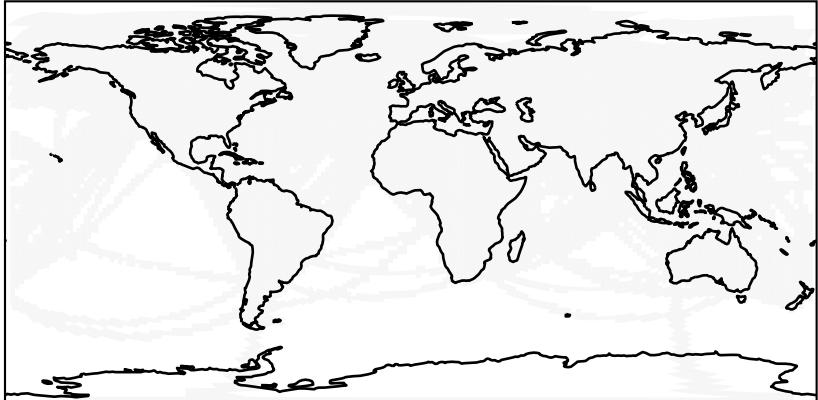
Zero throughout domain  
kg/m<sup>2</sup>/s

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



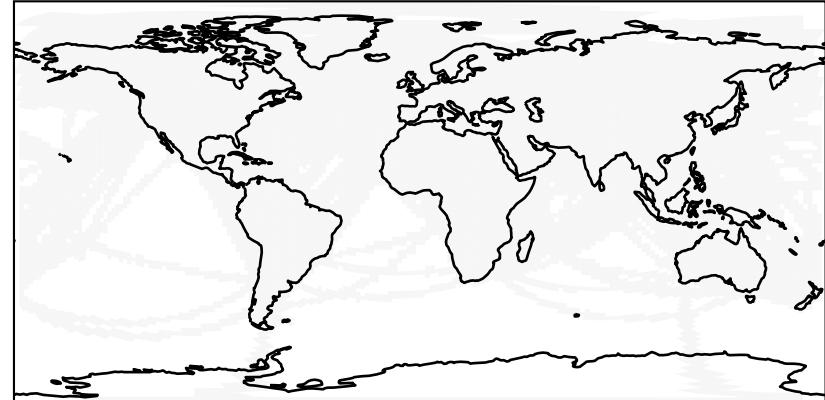
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

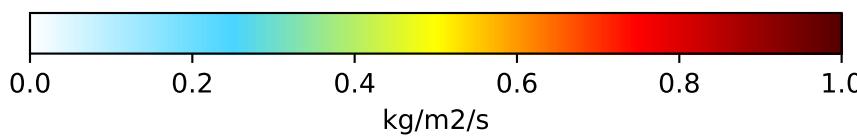
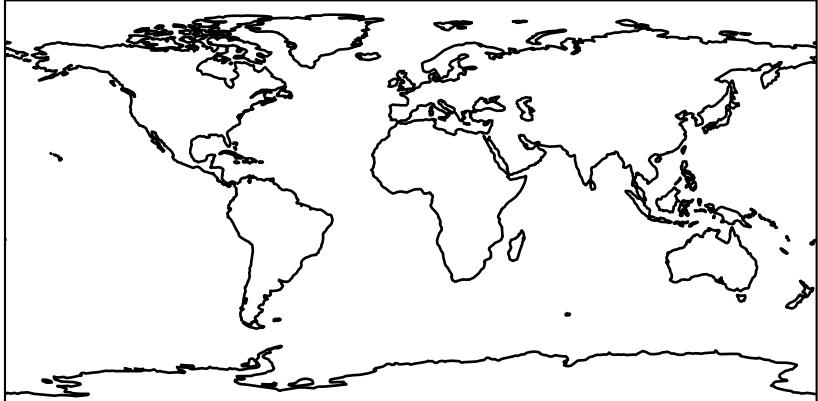
Ratio  
Dev/Ref, Fixed Range



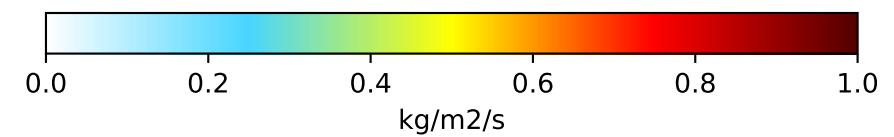
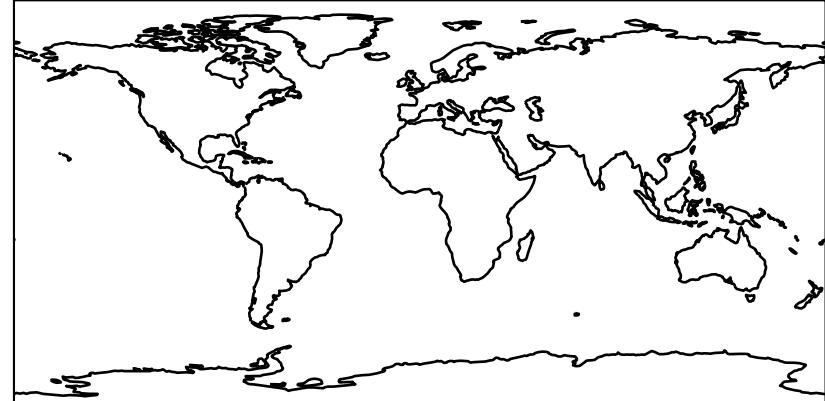
0.50      0.75      1.00      1.50      2.00  
unitless

# EmisPRPE\_Aircraft

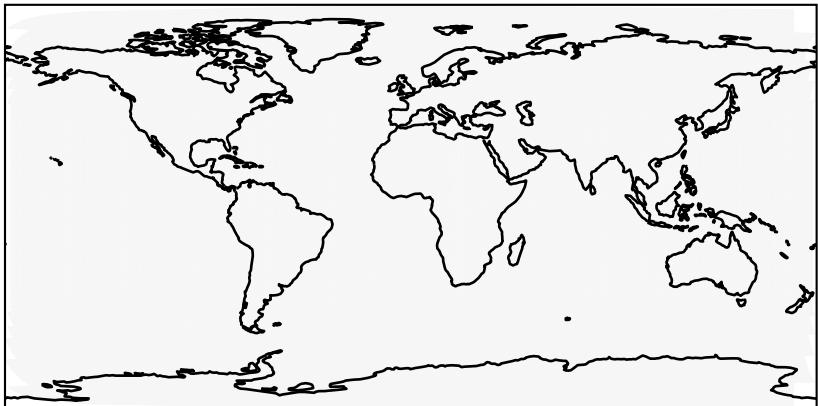
GCHP\_13.0.0-rc.2 (Ref)  
c48



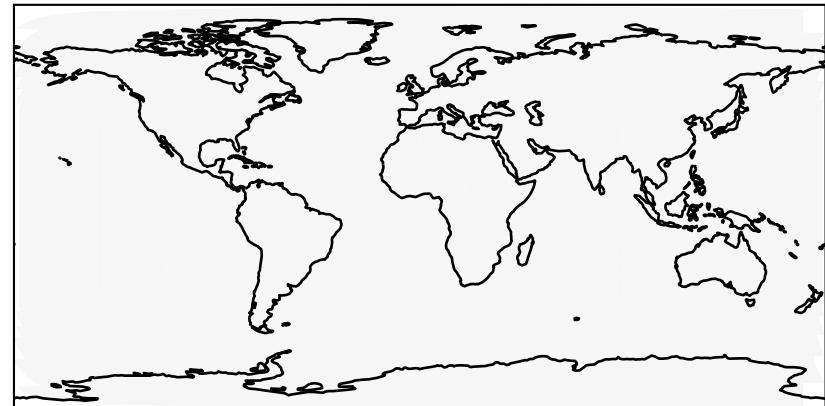
GCHP\_13.1.0-beta.1 (Dev)  
c48



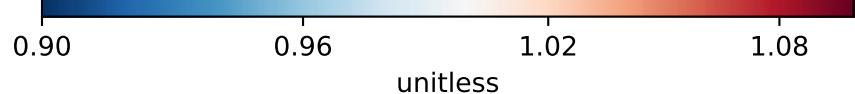
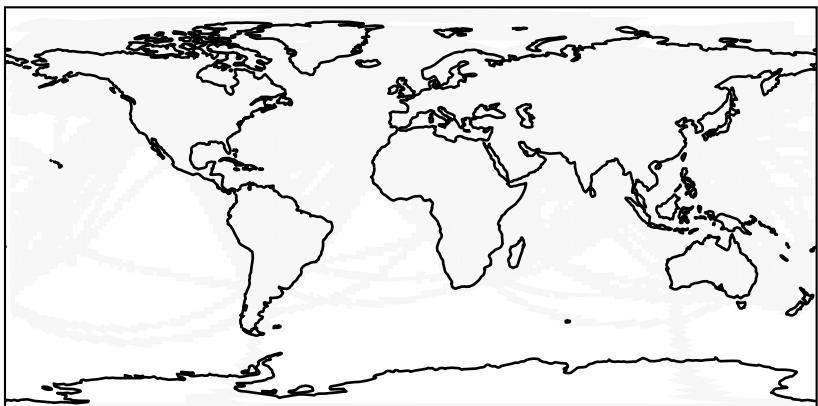
Difference  
Dev - Ref, Dynamic Range



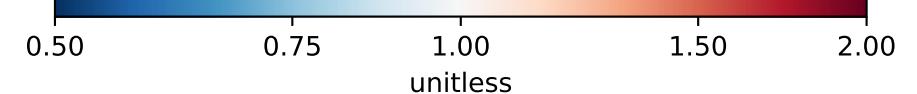
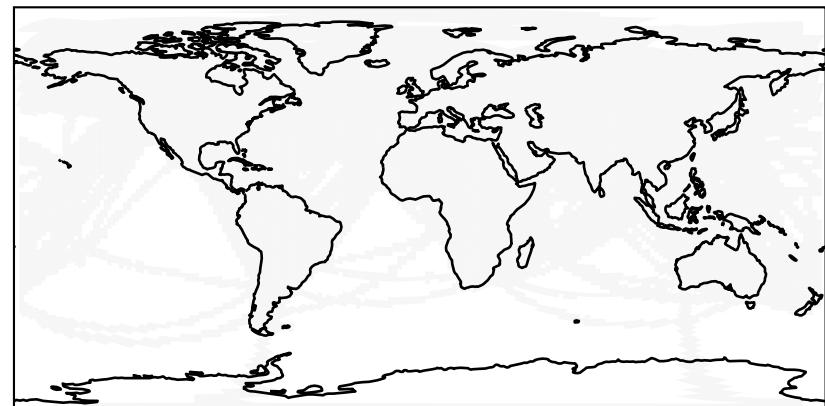
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

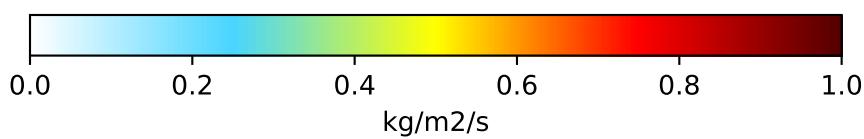
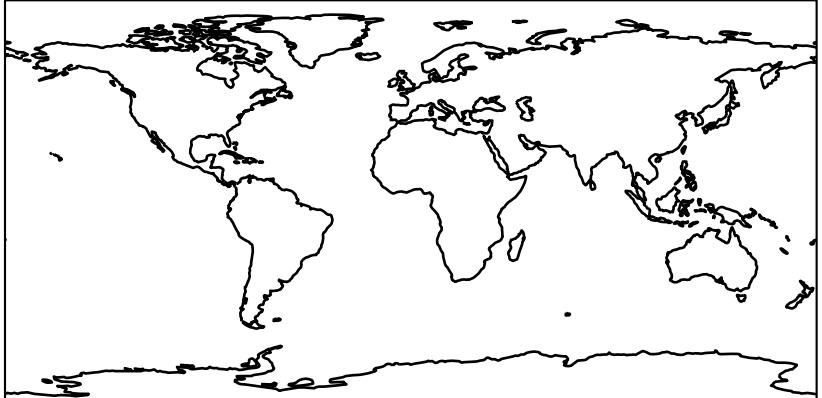


Ratio  
Dev/Ref, Fixed Range

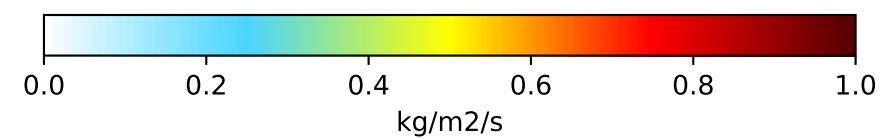


# EmisRCHO\_Aircraft

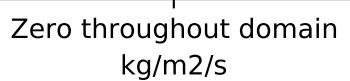
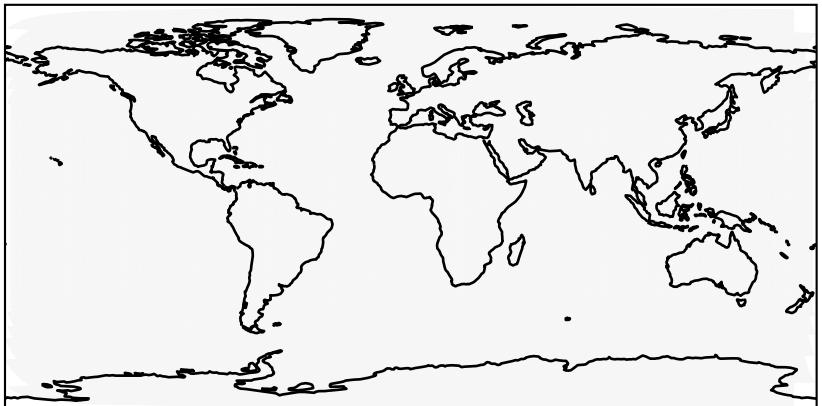
GCHP\_13.0.0-rc.2 (Ref)  
c48



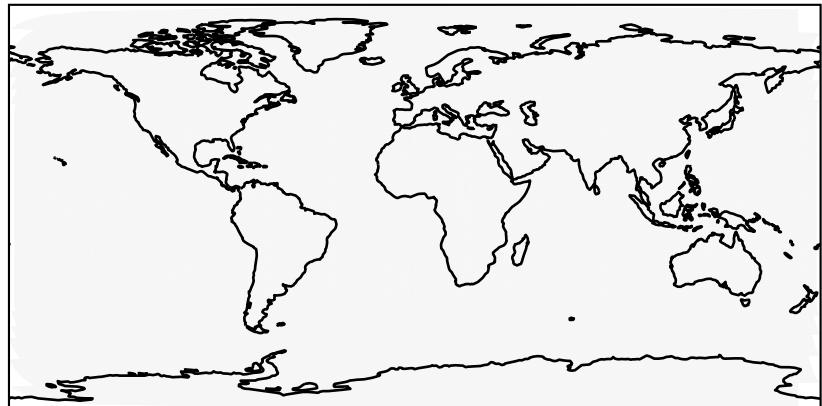
GCHP\_13.1.0-beta.1 (Dev)  
c48



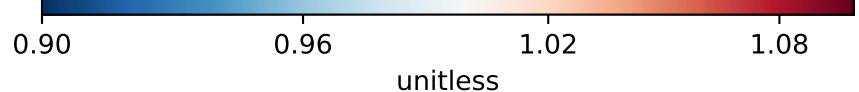
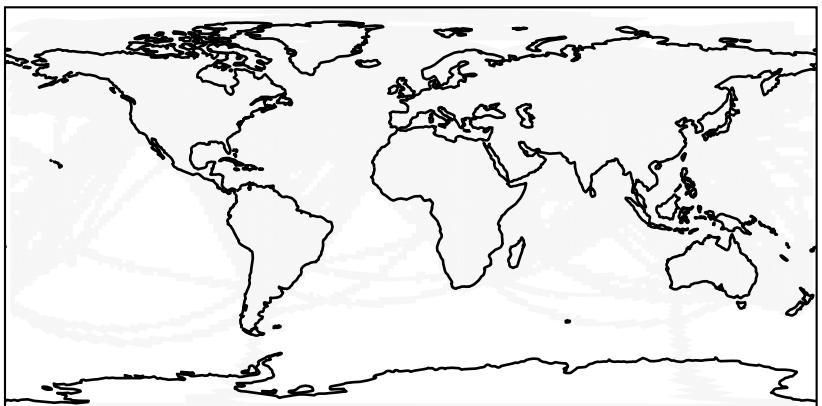
Difference  
Dev - Ref, Dynamic Range



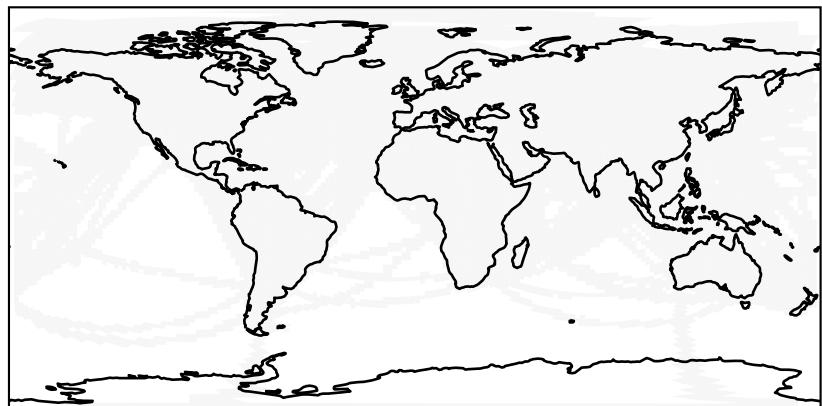
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

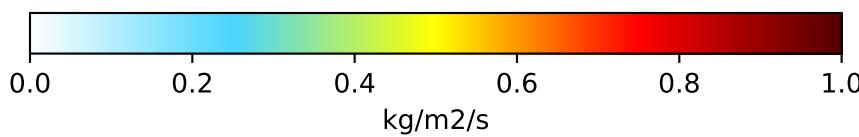
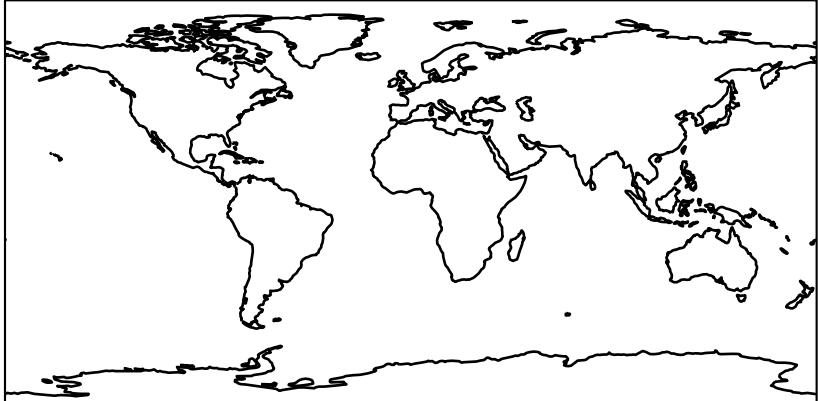


Ratio  
Dev/Ref, Fixed Range

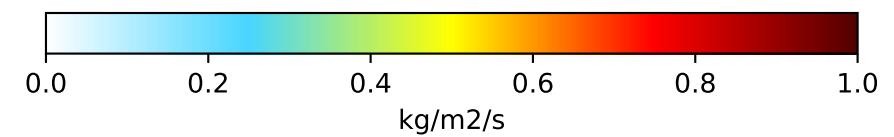
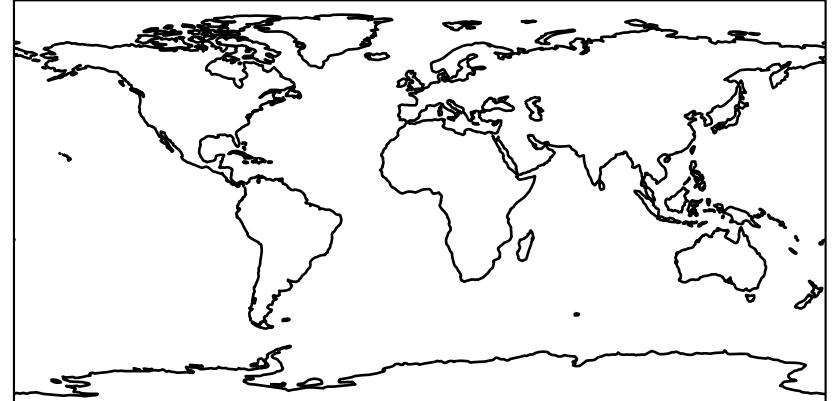


# EmisSO2\_Aircraft

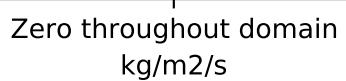
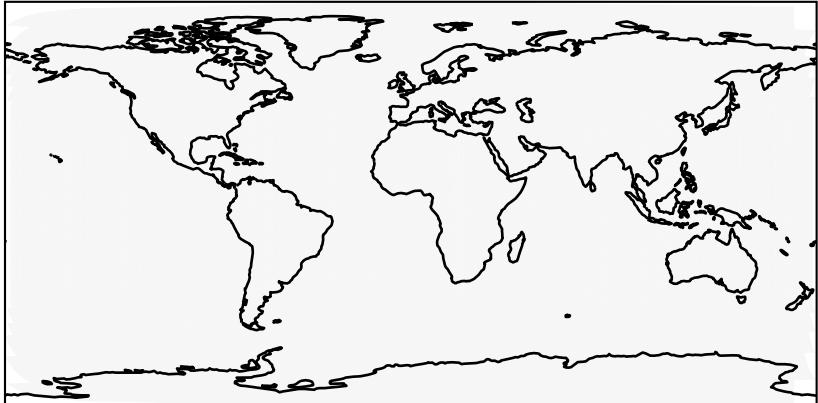
GCHP\_13.0.0-rc.2 (Ref)  
c48



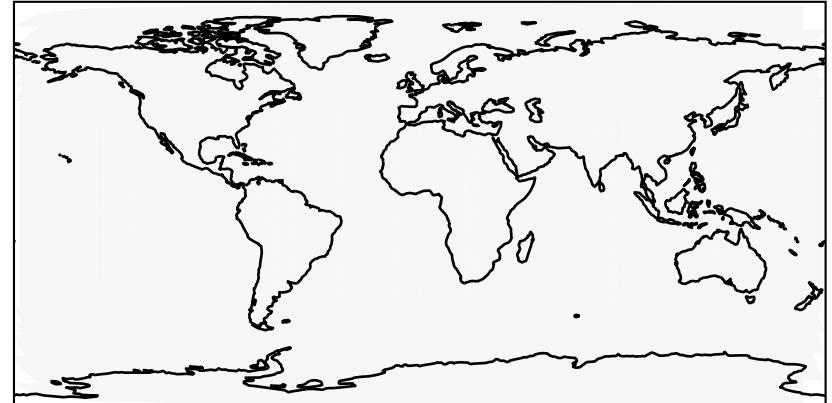
GCHP\_13.1.0-beta.1 (Dev)  
c48



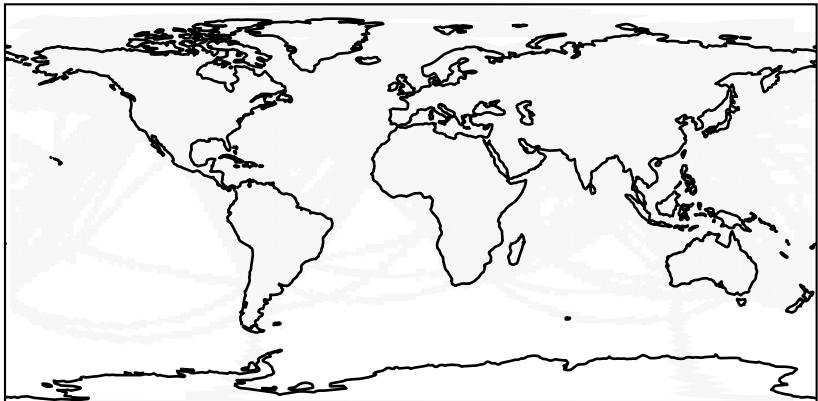
Difference  
Dev - Ref, Dynamic Range



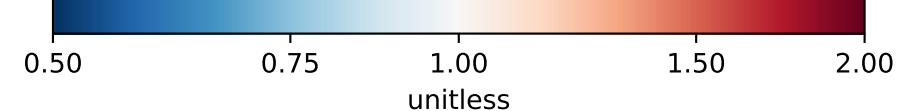
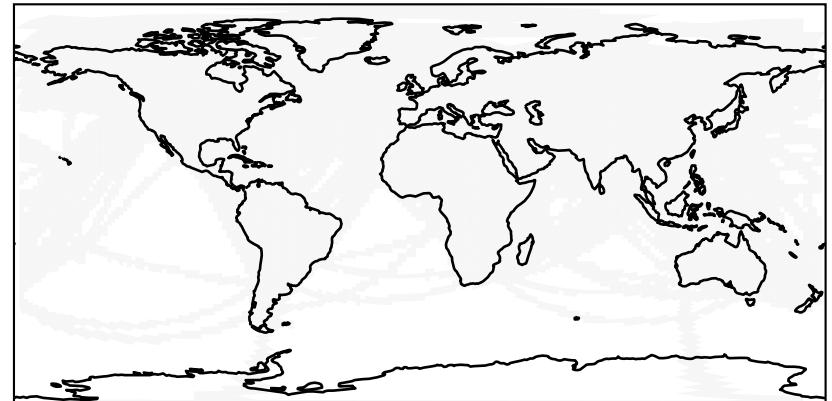
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

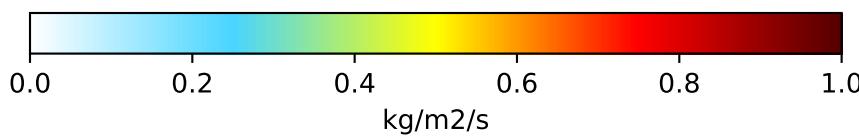


Ratio  
Dev/Ref, Fixed Range

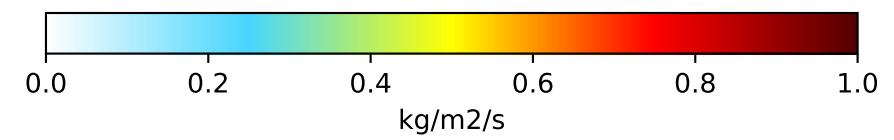


# EmisSO4\_Aircraft

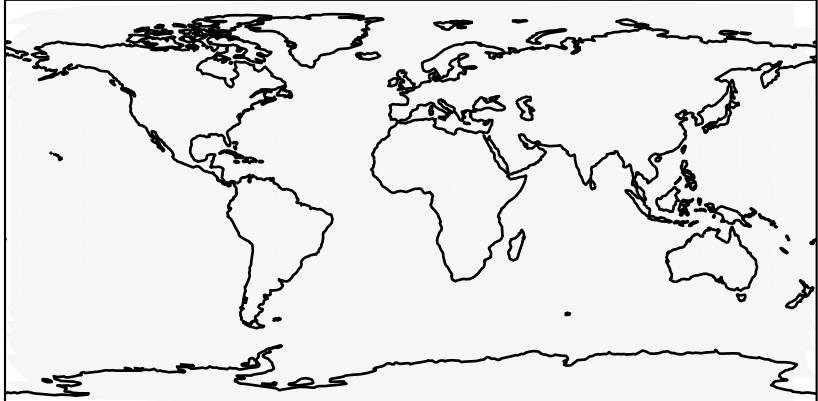
GCHP\_13.0.0-rc.2 (Ref)  
c48



GCHP\_13.1.0-beta.1 (Dev)  
c48

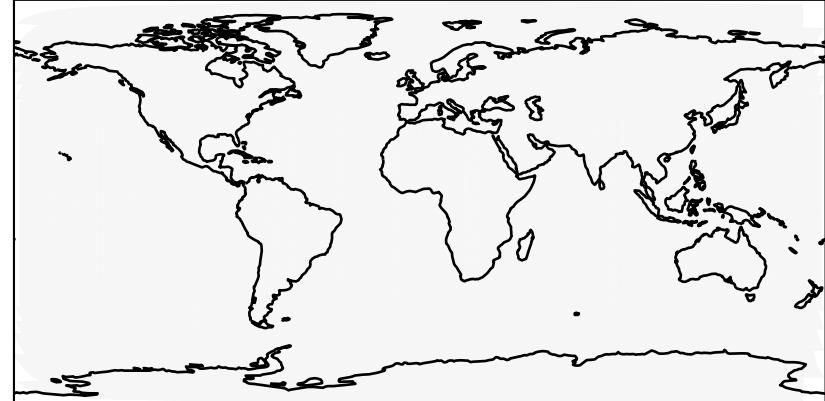


Difference  
Dev - Ref, Dynamic Range



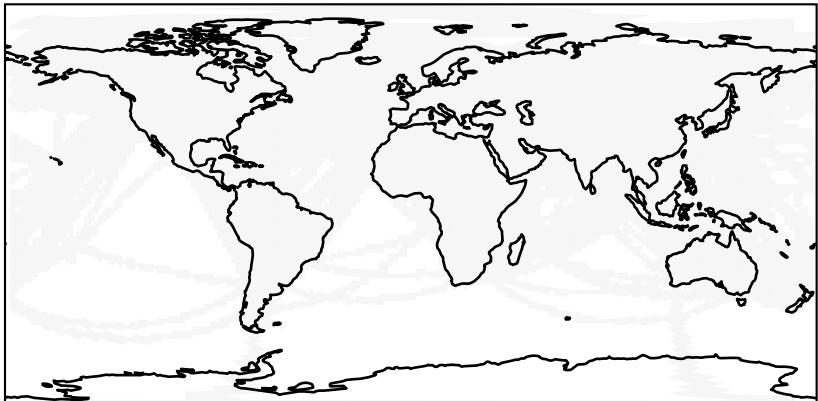
Zero throughout domain  
kg/m<sup>2</sup>/s

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



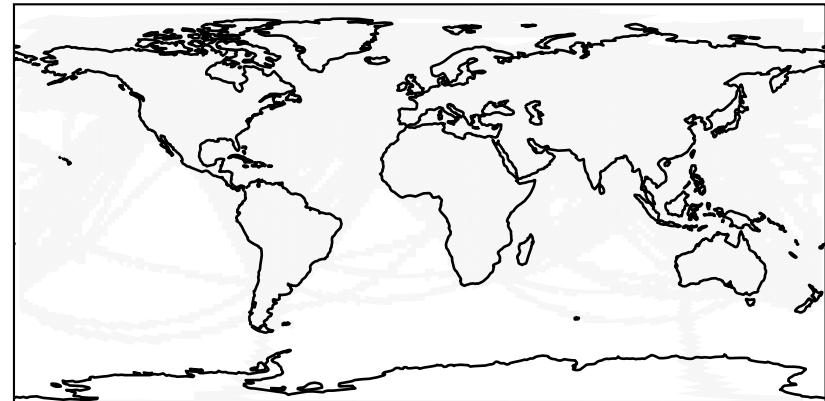
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08  
unitless

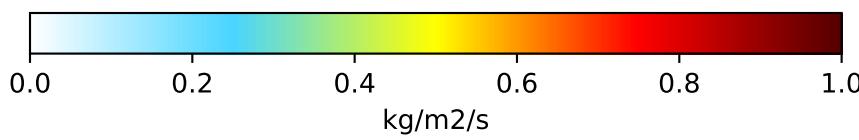
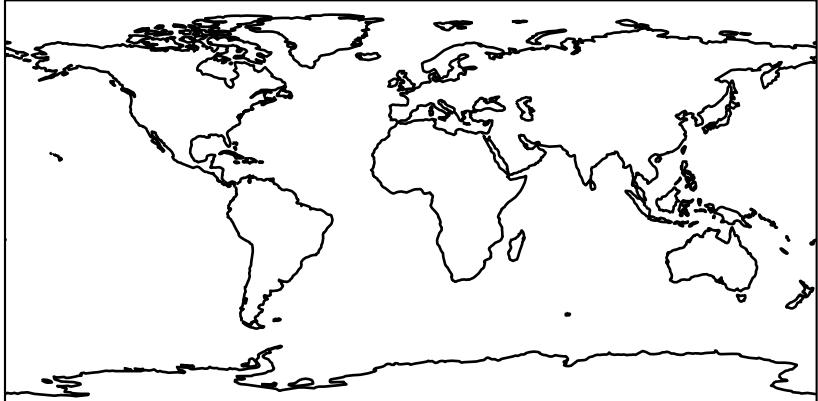
Ratio  
Dev/Ref, Fixed Range



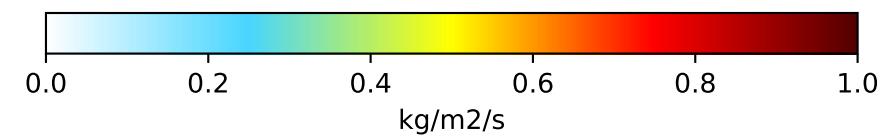
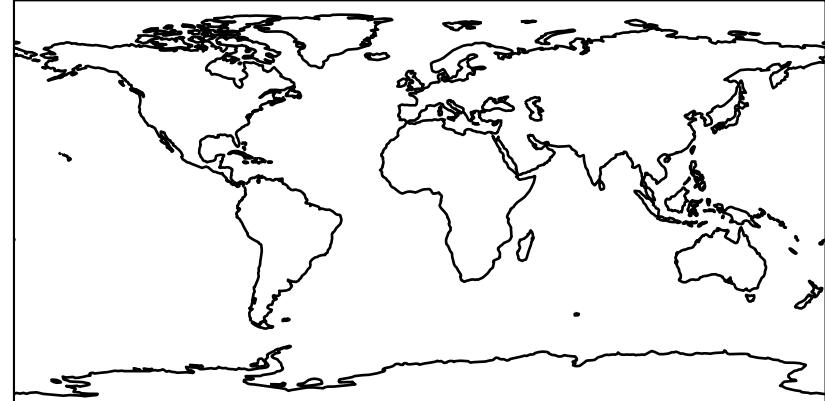
0.50 0.75 1.00 1.50 2.00  
unitless

# EmisSOAP\_Aircraft

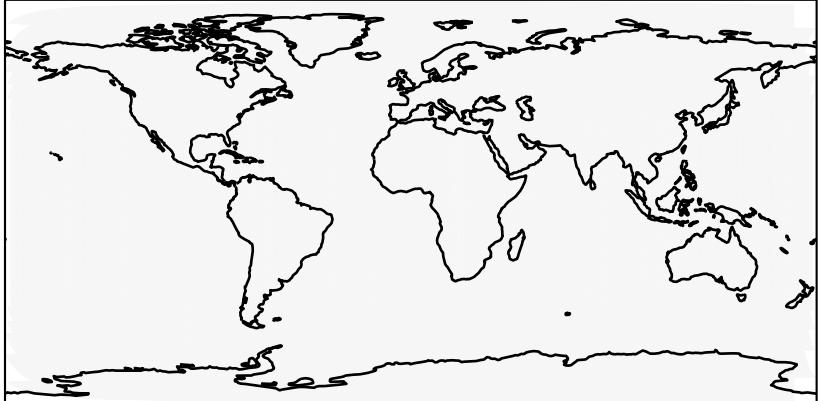
GCHP\_13.0.0-rc.2 (Ref)  
c48



GCHP\_13.1.0-beta.1 (Dev)  
c48

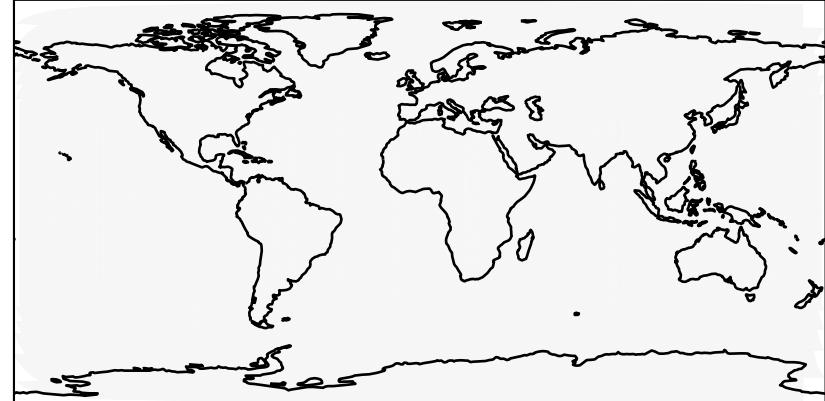


Difference  
Dev - Ref, Dynamic Range



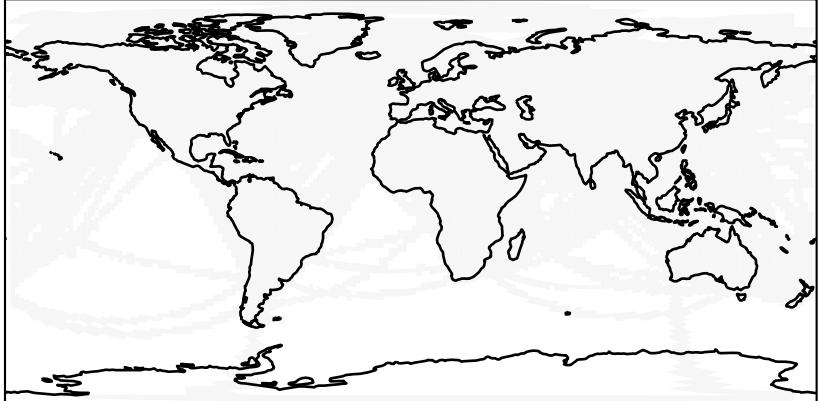
Zero throughout domain  
kg/m<sup>2</sup>/s

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



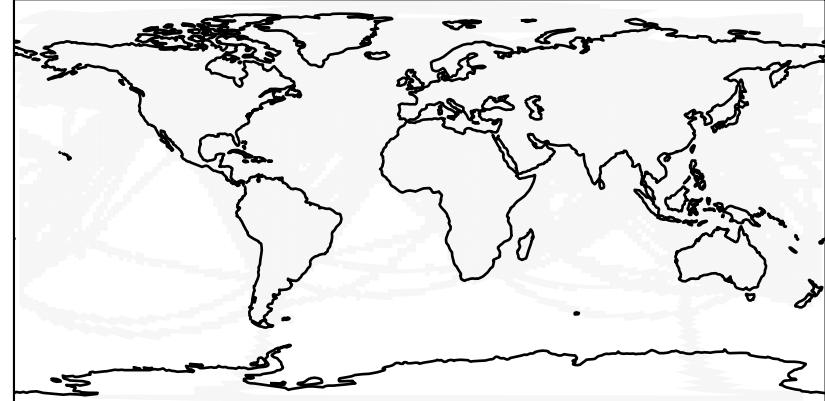
Zero throughout domain  
kg/m<sup>2</sup>/s

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