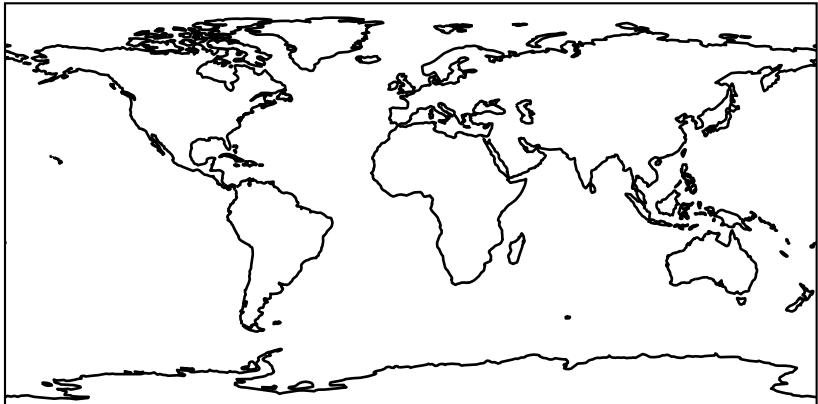


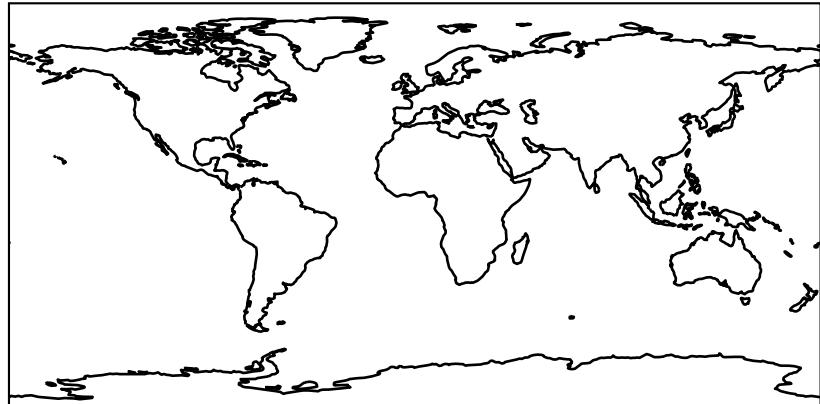
# EmisALD2\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



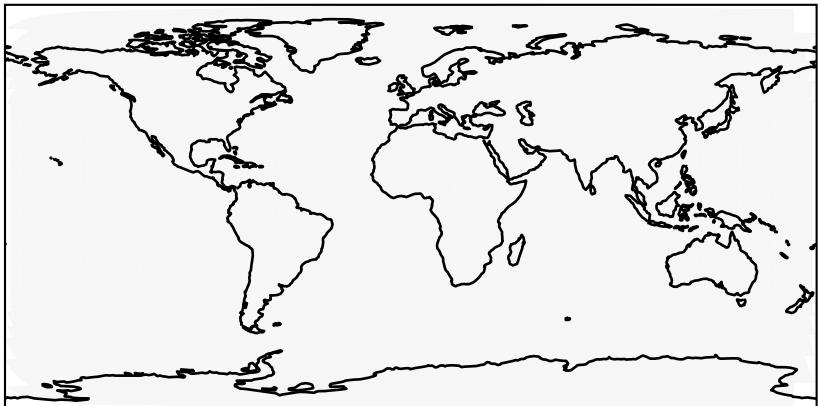
Zero throughout domain  
kg/m<sup>2</sup>/s

GCHP\_13.0.0-offlineEmis (Dev)  
c48



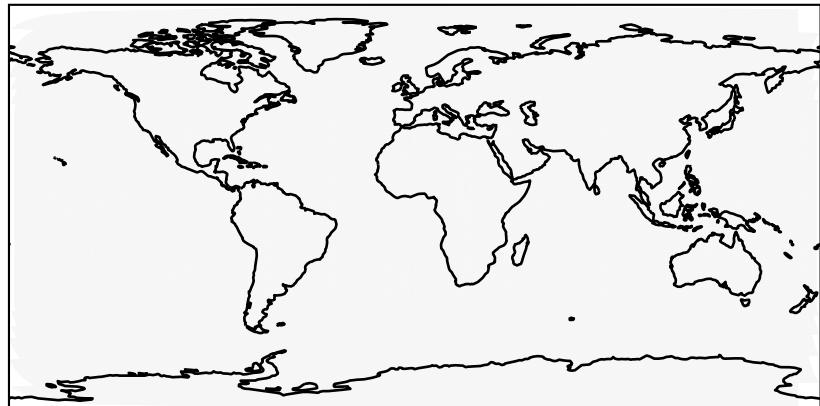
Zero throughout domain  
kg/m<sup>2</sup>/s

Difference  
Dev - Ref, Dynamic Range



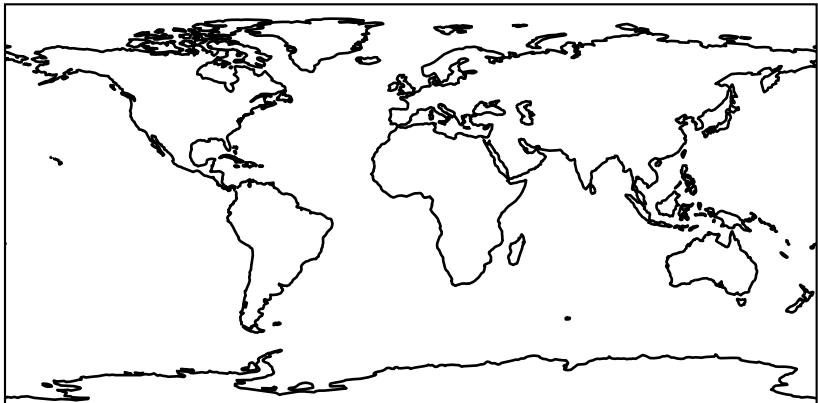
Zero throughout domain  
kg/m<sup>2</sup>/s

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



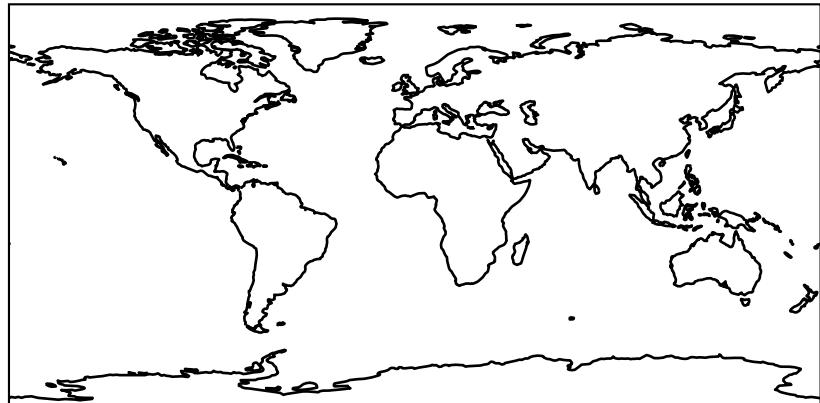
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



Undefined throughout domain  
unitless

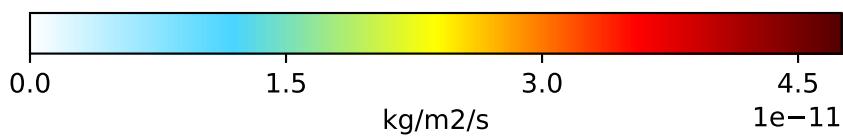
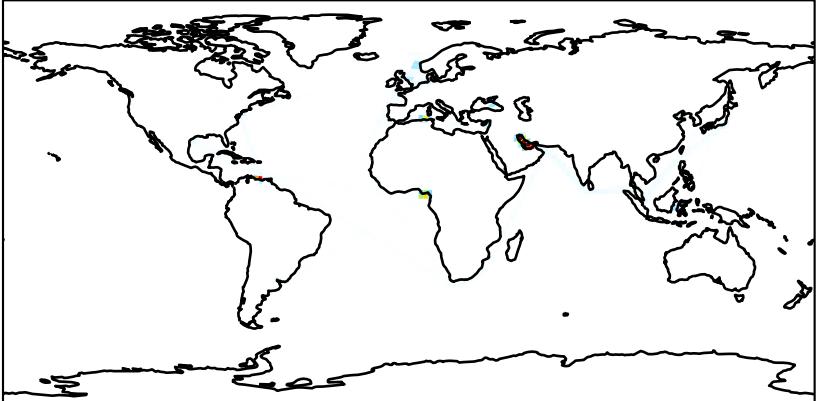
Ratio  
Dev/Ref, Fixed Range



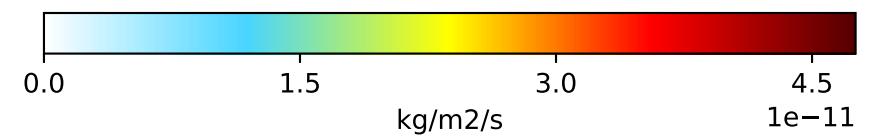
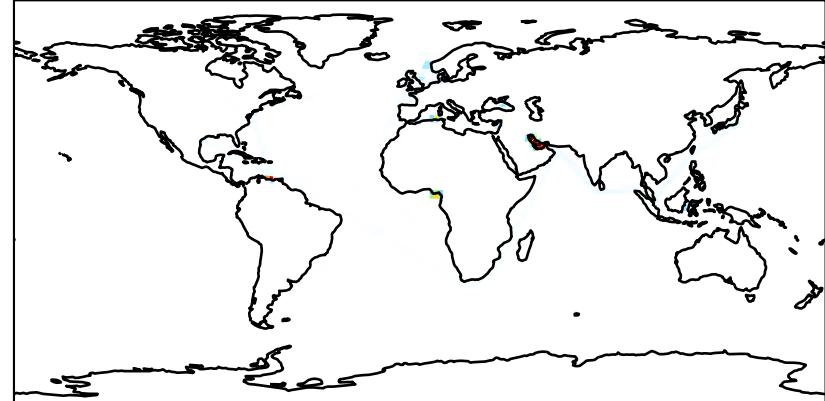
Undefined throughout domain  
unitless

# EmisALK4\_Ship

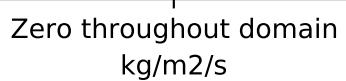
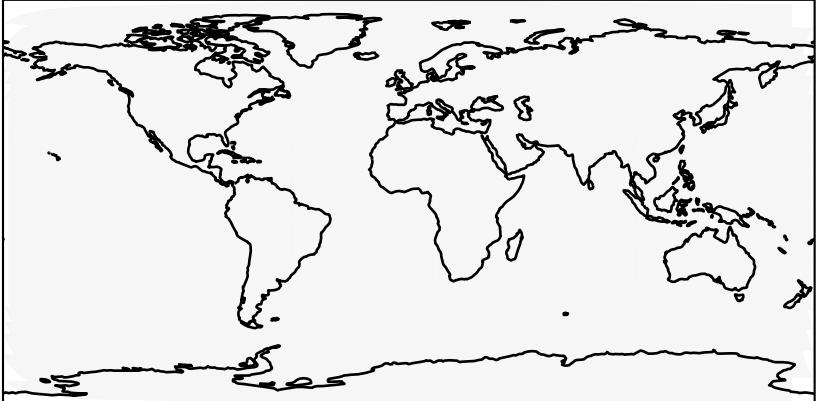
GCHP\_13.0.0-beta.0 (Ref)  
c48



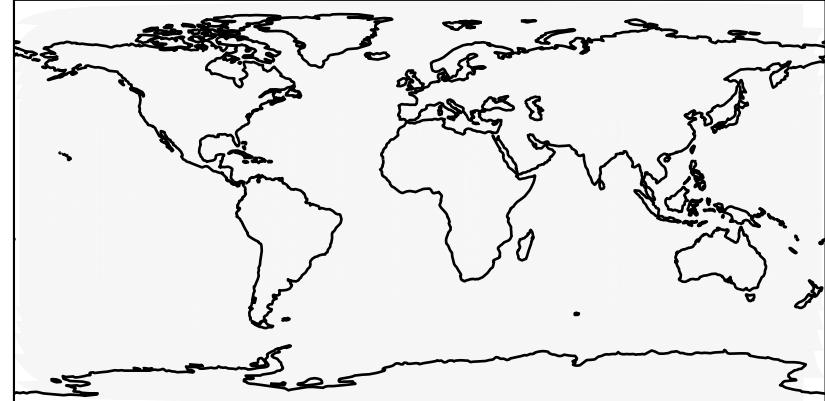
GCHP\_13.0.0-offlineEmis (Dev)  
c48



Difference  
Dev - Ref, Dynamic Range



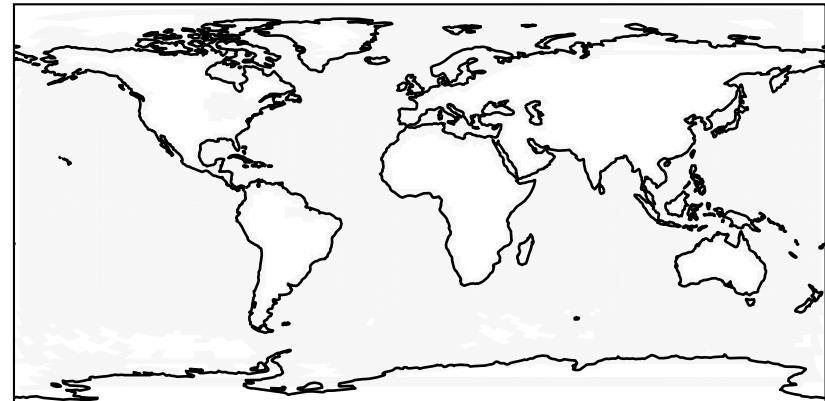
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

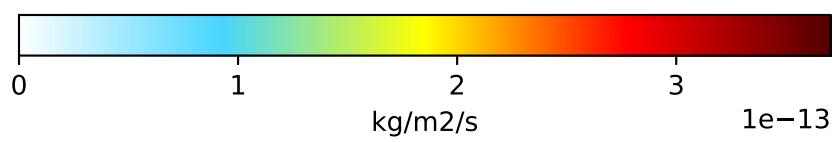
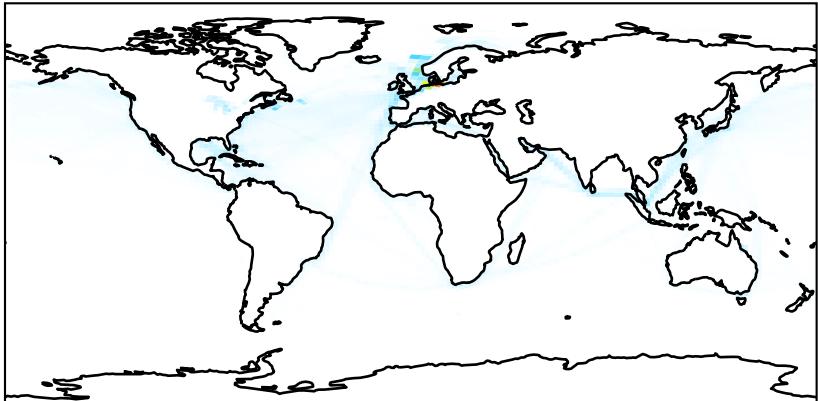


Ratio  
Dev/Ref, Fixed Range

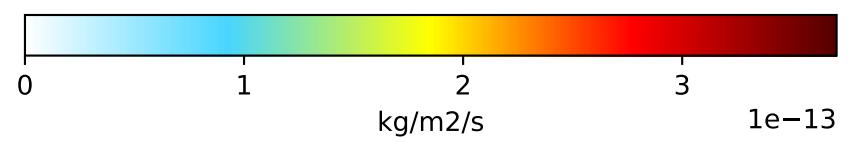
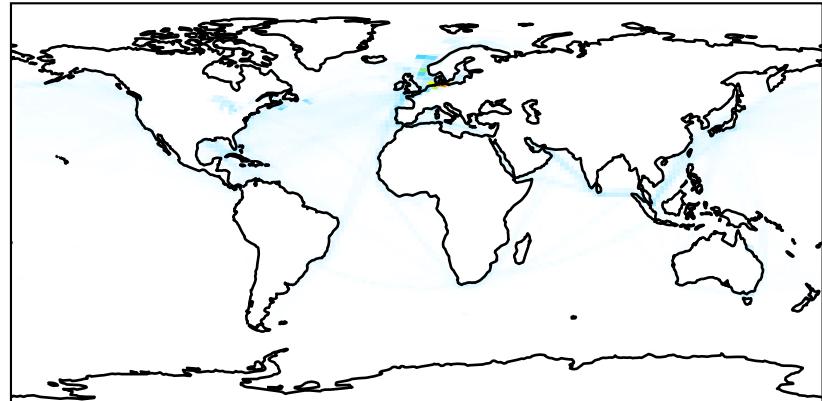


# EmisBCPI\_Ship

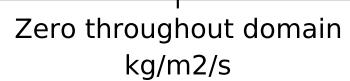
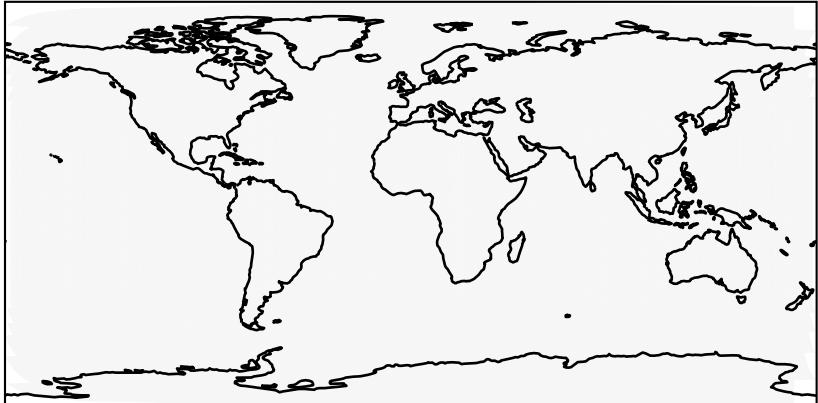
GCHP\_13.0.0-beta.0 (Ref)  
c48



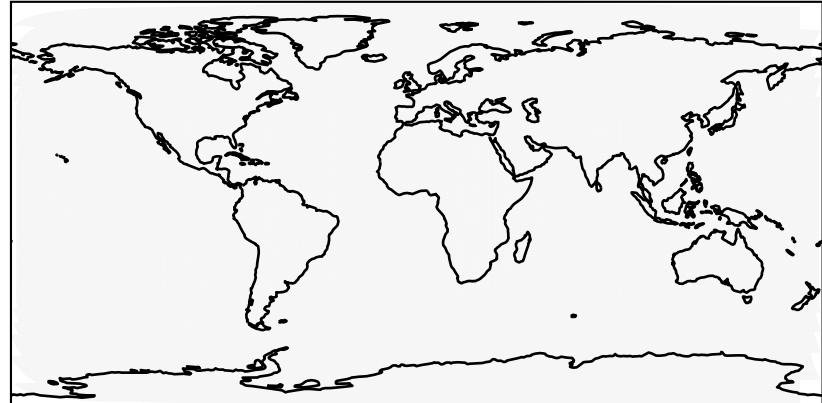
GCHP\_13.0.0-offlineEmis (Dev)  
c48



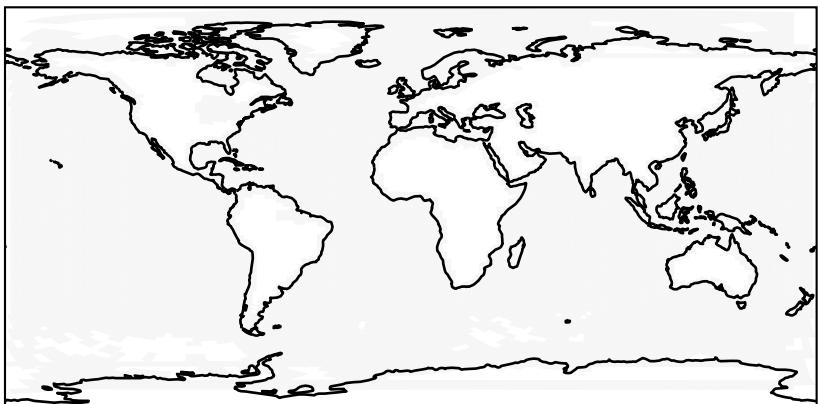
Difference  
Dev - Ref, Dynamic Range



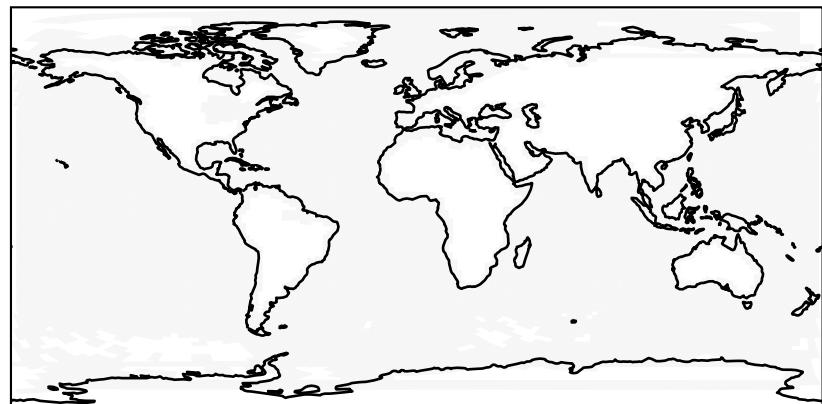
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

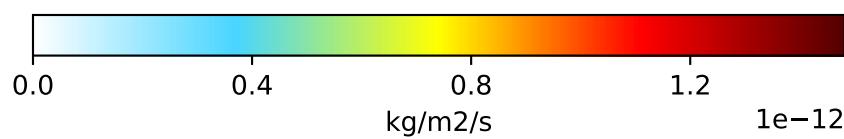
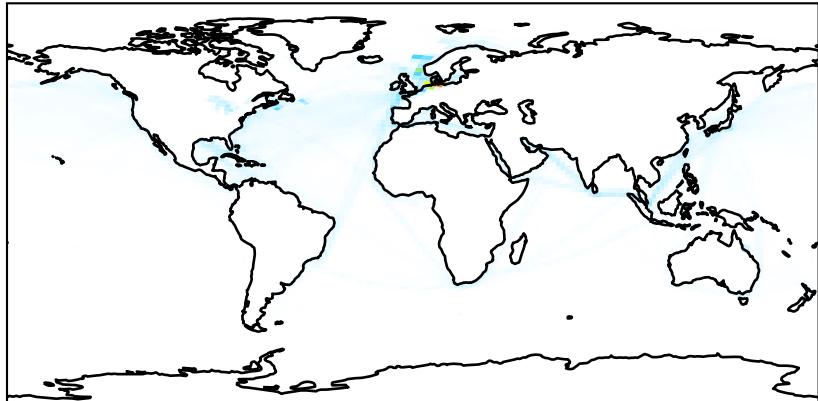


Ratio  
Dev/Ref, Fixed Range

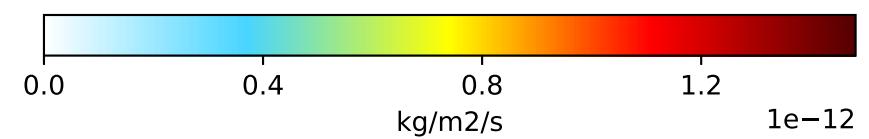
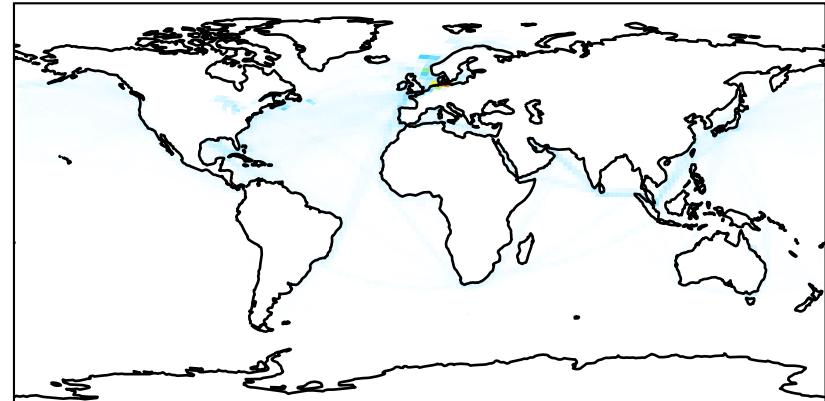


# EmisBCPO\_Ship

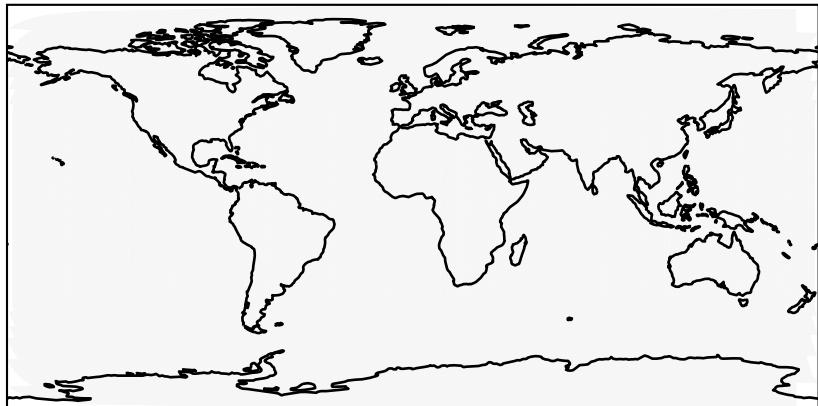
GCHP\_13.0.0-beta.0 (Ref)  
c48



GCHP\_13.0.0-offlineEmis (Dev)  
c48

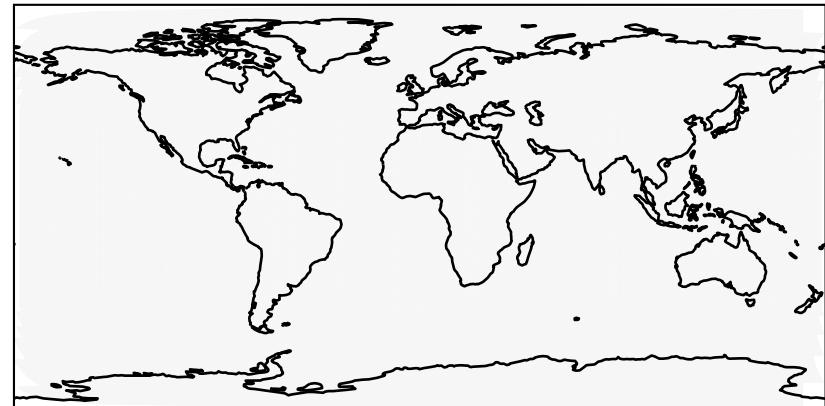


Difference  
Dev - Ref, Dynamic Range



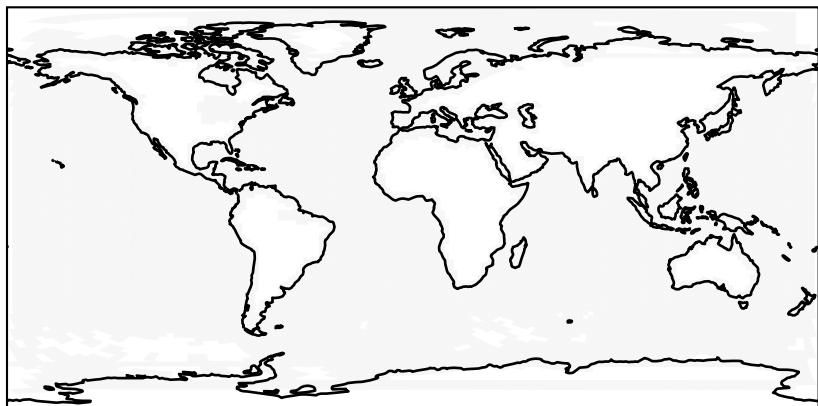
Zero throughout domain  
kg/m<sup>2</sup>/s

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



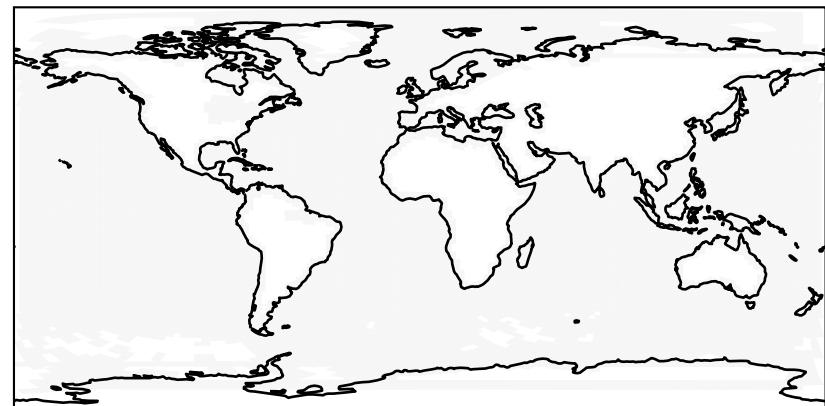
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

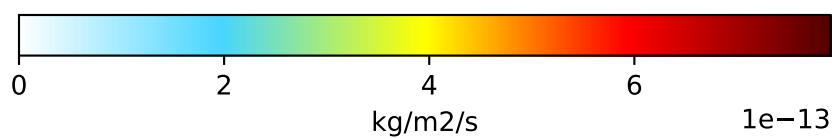
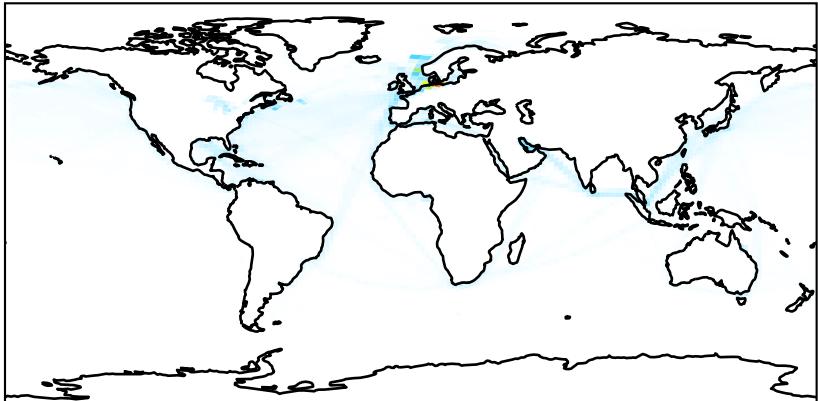
Ratio  
Dev/Ref, Fixed Range



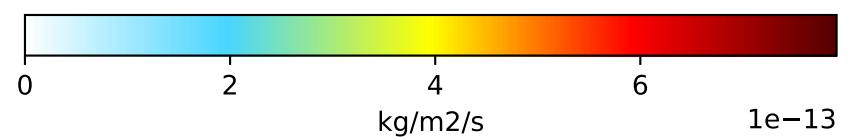
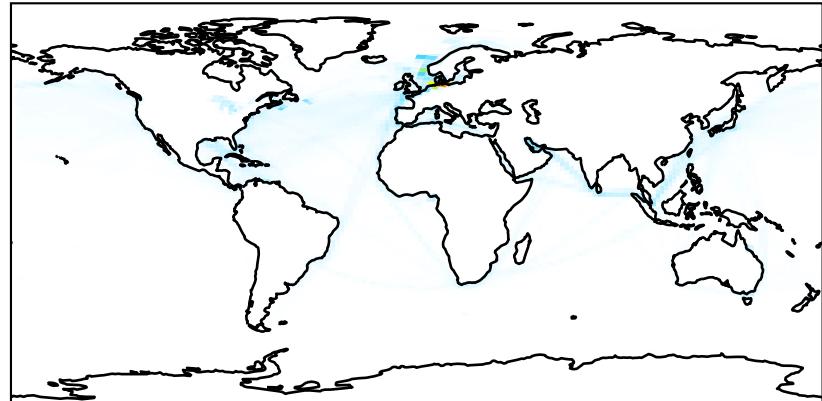
0.50      0.75      1.00      1.50      2.00  
unitless

# EmisBENZ\_Ship

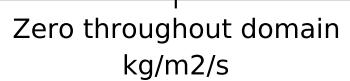
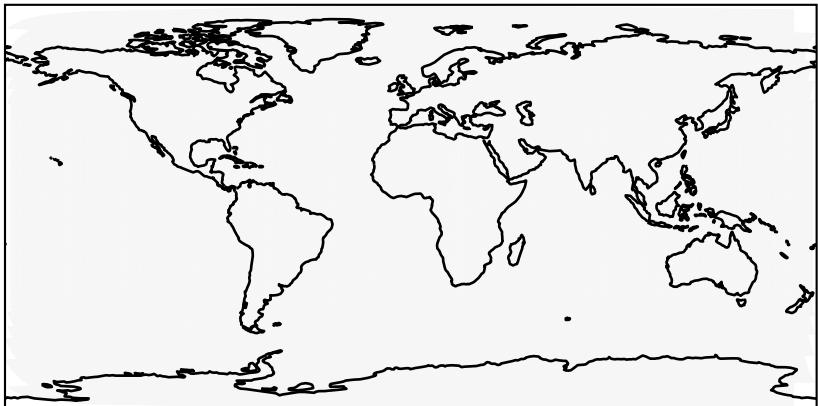
GCHP\_13.0.0-beta.0 (Ref)  
c48



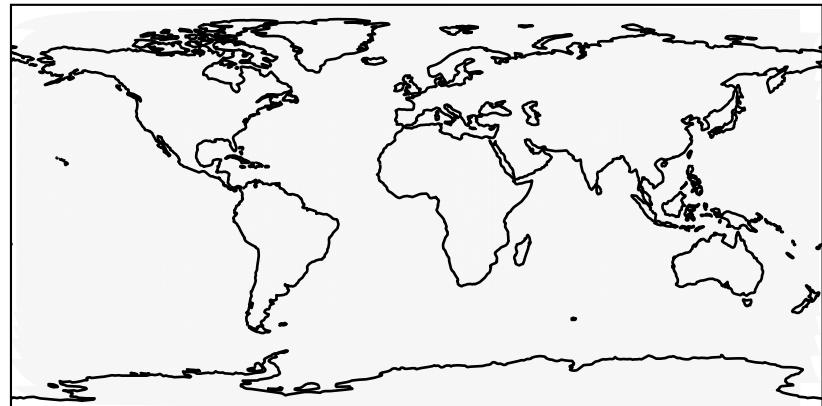
GCHP\_13.0.0-offlineEmis (Dev)  
c48



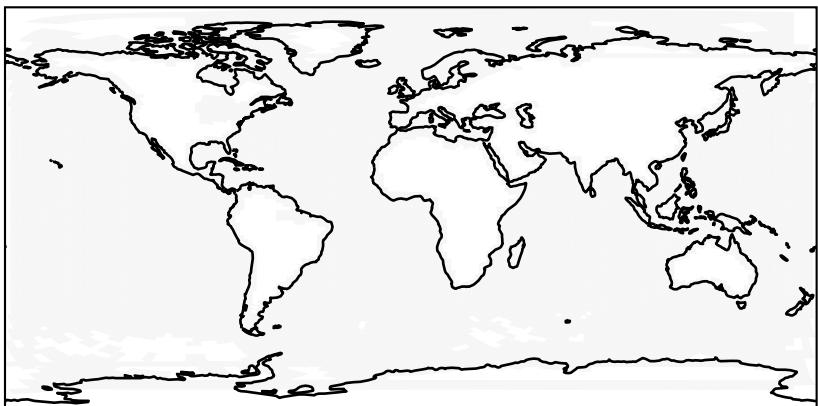
Difference  
Dev - Ref, Dynamic Range



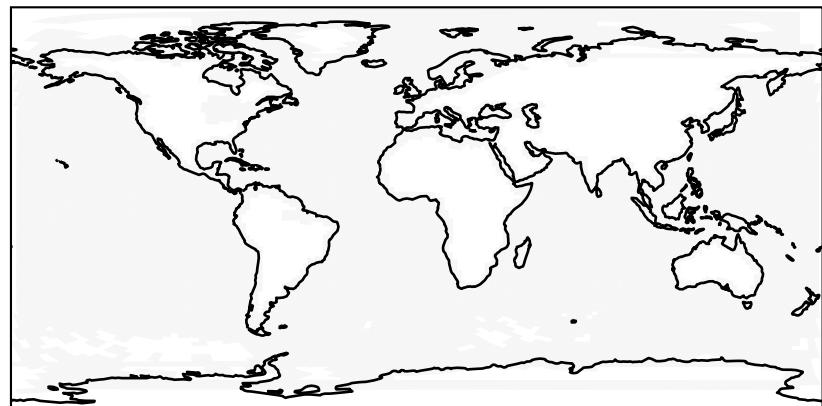
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

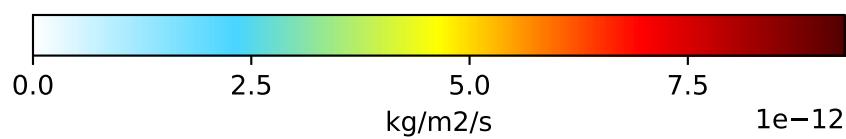
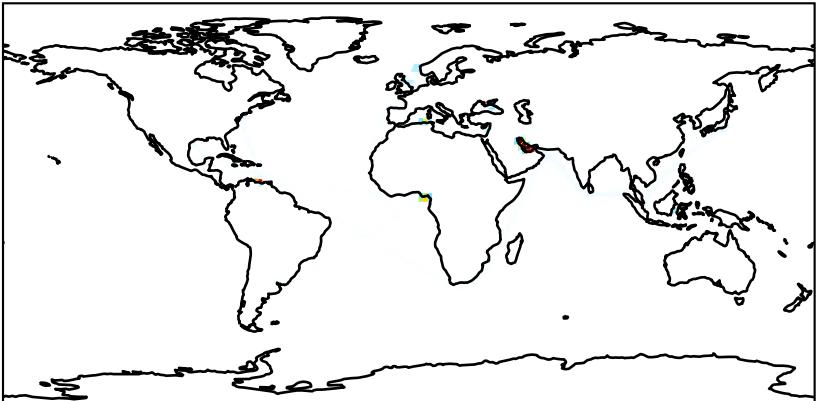


Ratio  
Dev/Ref, Fixed Range

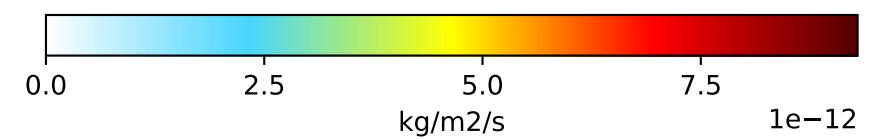
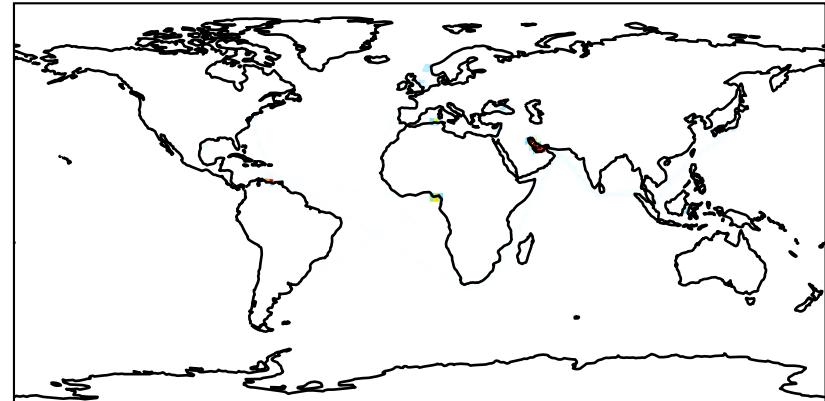


# EmisC2H6\_Ship

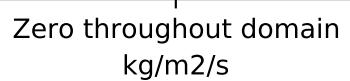
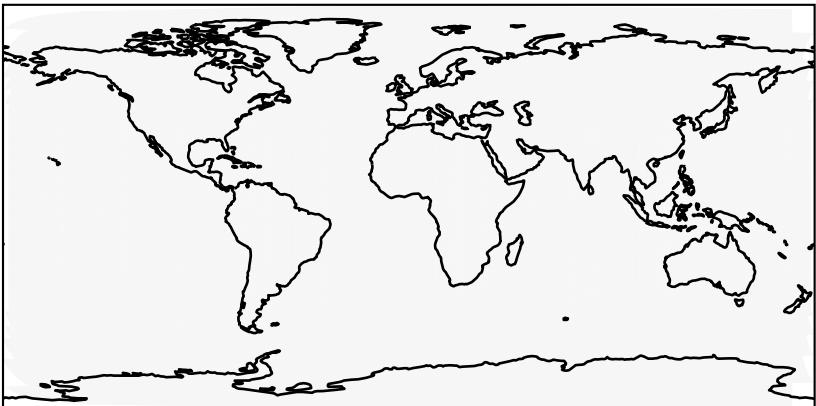
GCHP\_13.0.0-beta.0 (Ref)  
c48



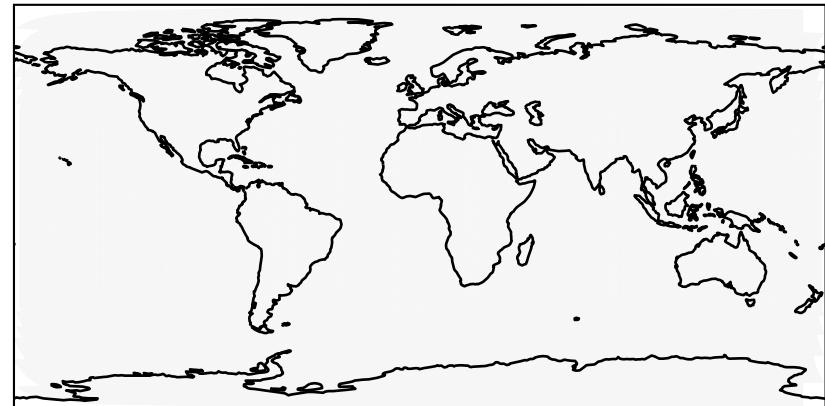
GCHP\_13.0.0-offlineEmis (Dev)  
c48



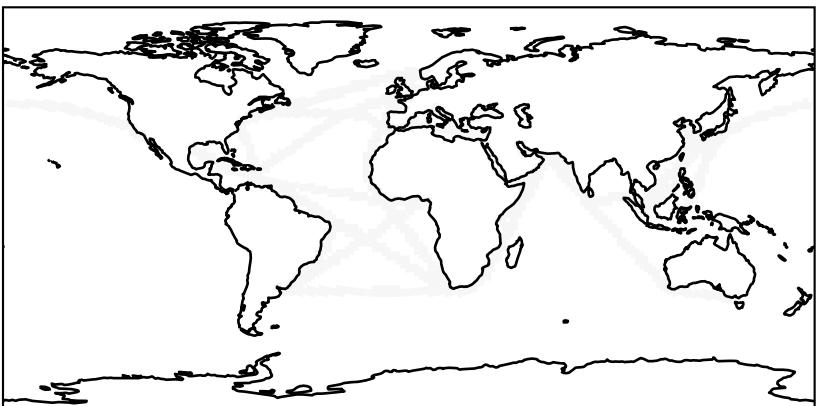
Difference  
Dev - Ref, Dynamic Range



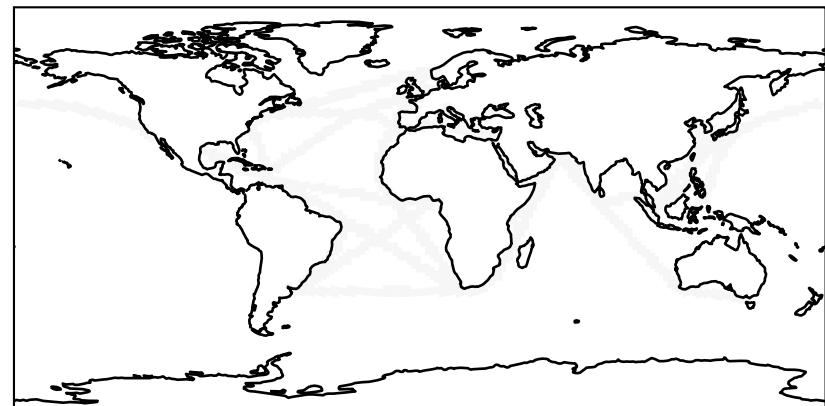
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

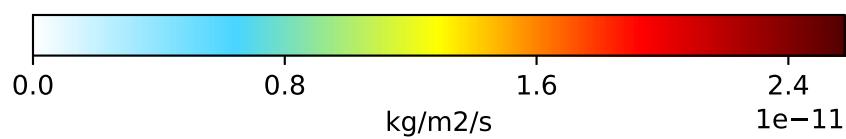
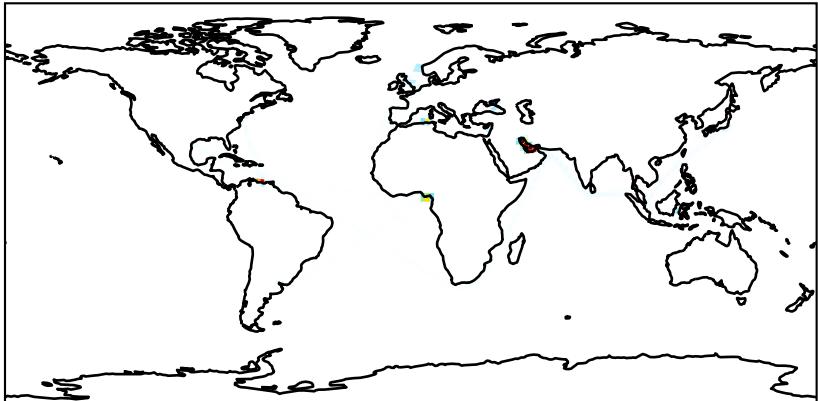


Ratio  
Dev/Ref, Fixed Range

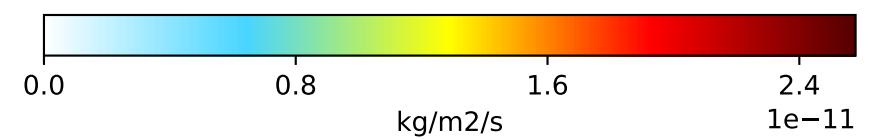
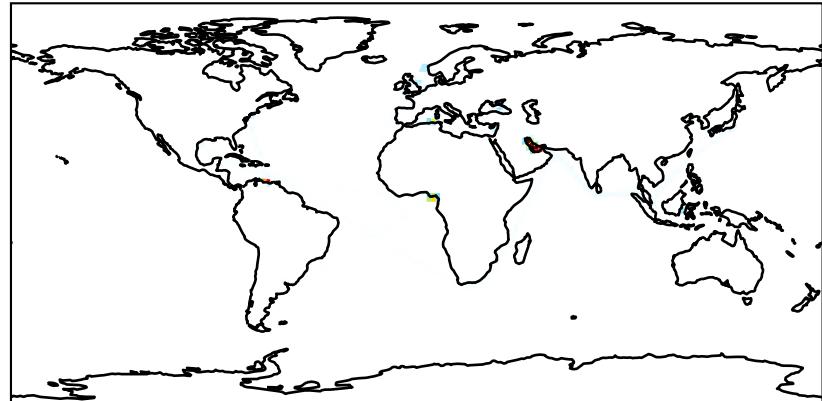


# EmisC3H8\_Ship

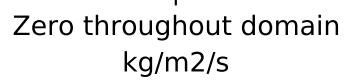
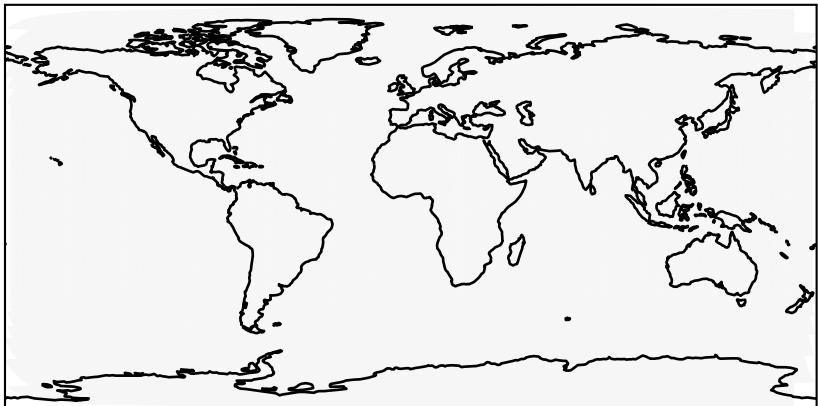
GCHP\_13.0.0-beta.0 (Ref)  
c48



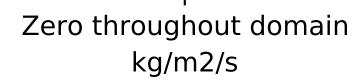
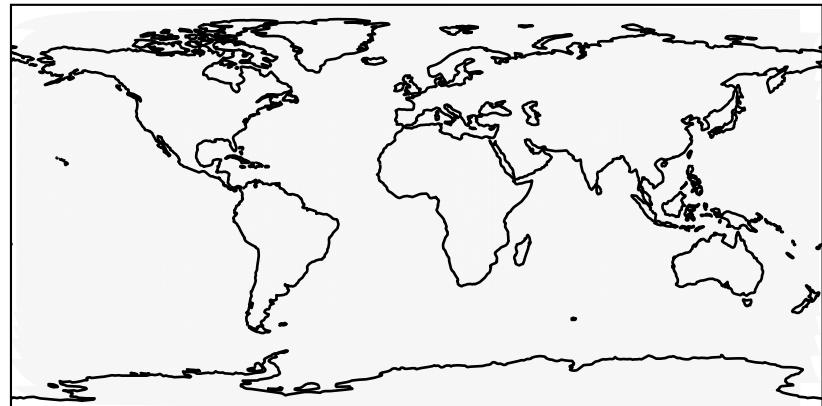
GCHP\_13.0.0-offlineEmis (Dev)  
c48



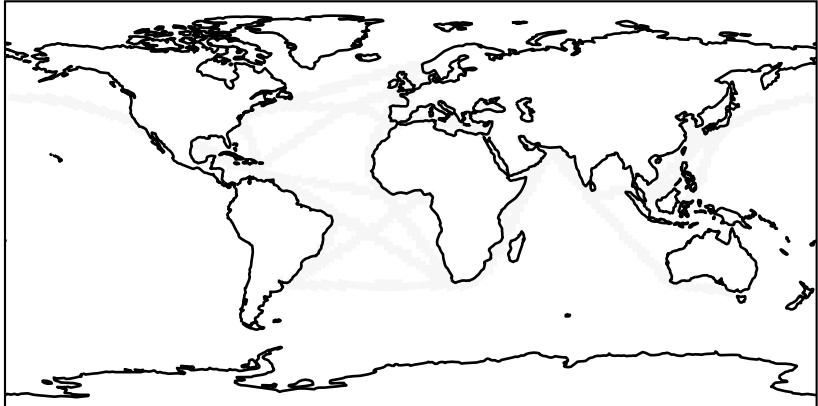
Difference  
Dev - Ref, Dynamic Range



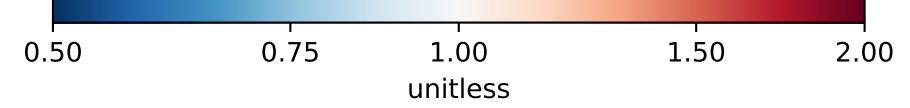
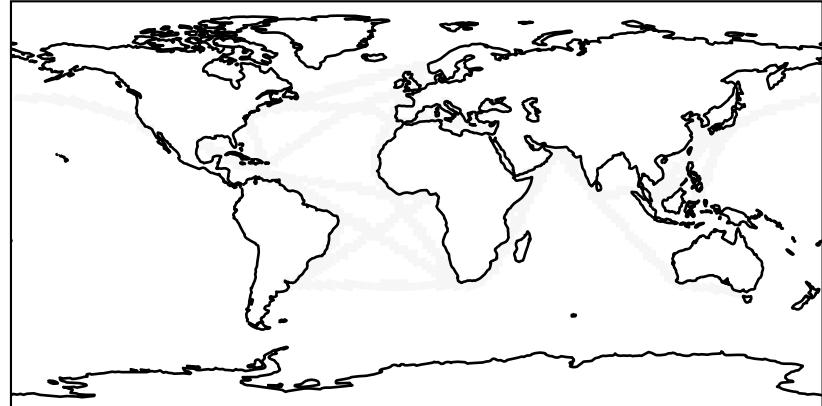
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

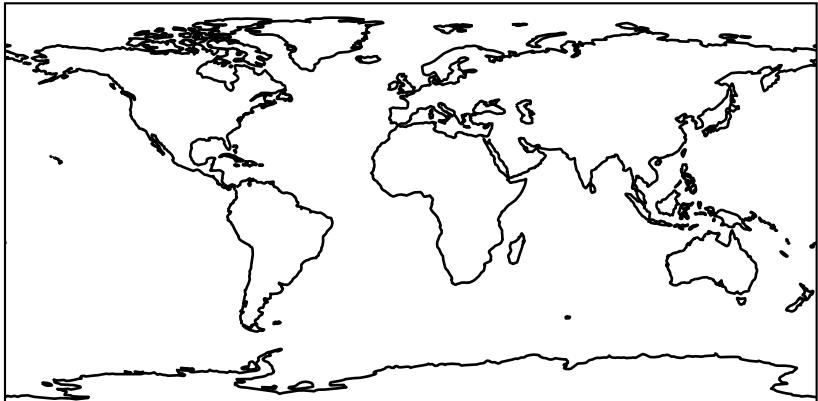


Ratio  
Dev/Ref, Fixed Range

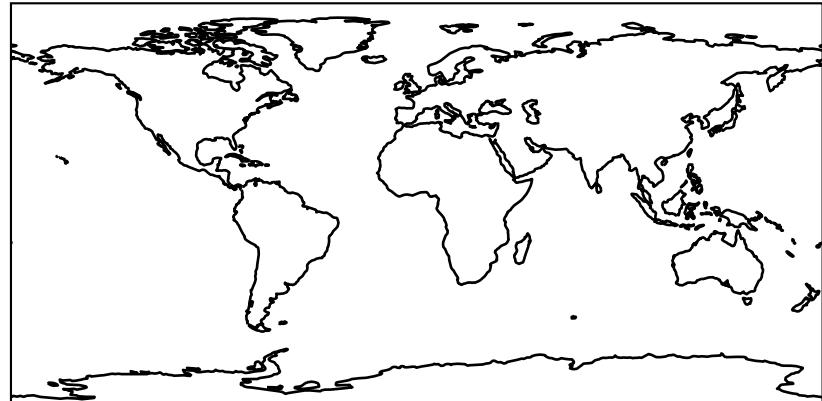


# EmisCH2O\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



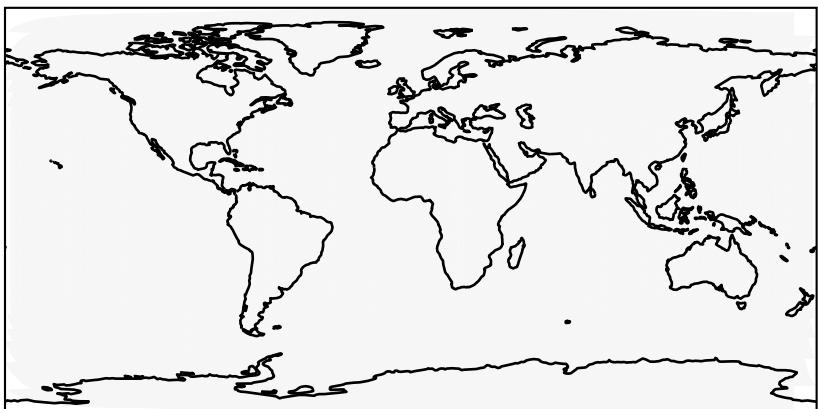
GCHP\_13.0.0-offlineEmis (Dev)  
c48



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

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

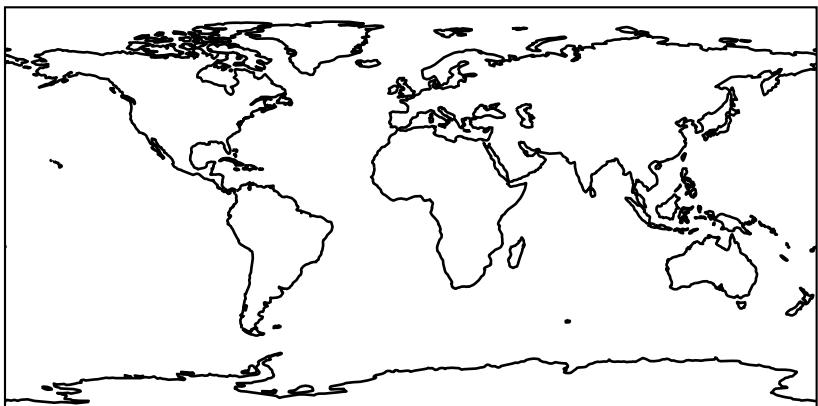
Difference  
Dev - Ref, Dynamic Range



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

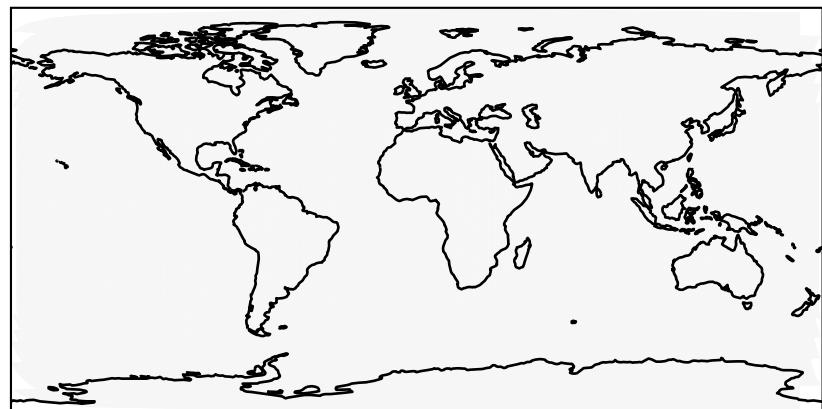
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



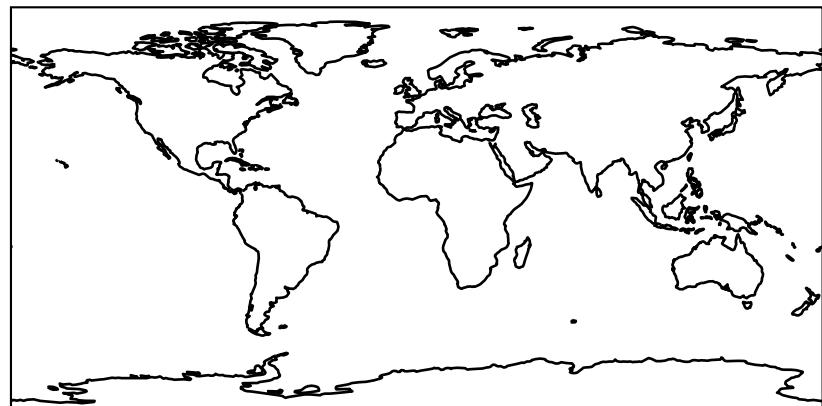
Undefined throughout domain  
unitless

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



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

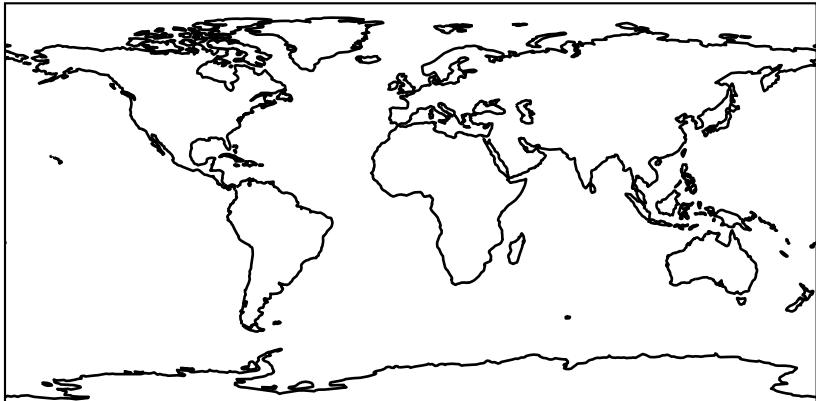
Ratio  
Dev/Ref, Fixed Range



Undefined throughout domain  
unitless

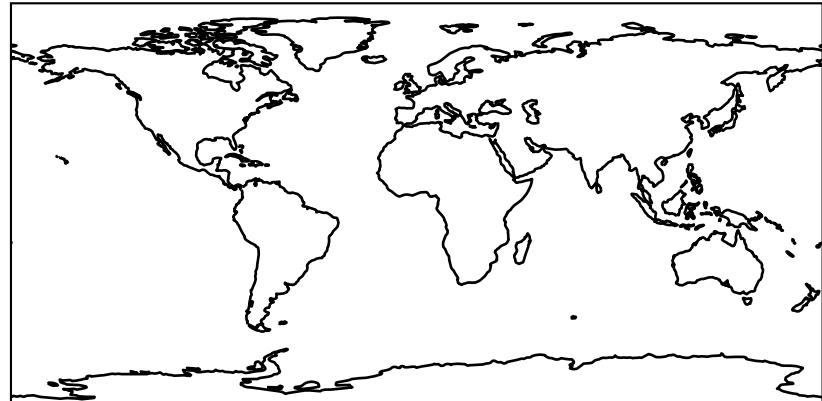
# EmisCH4\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



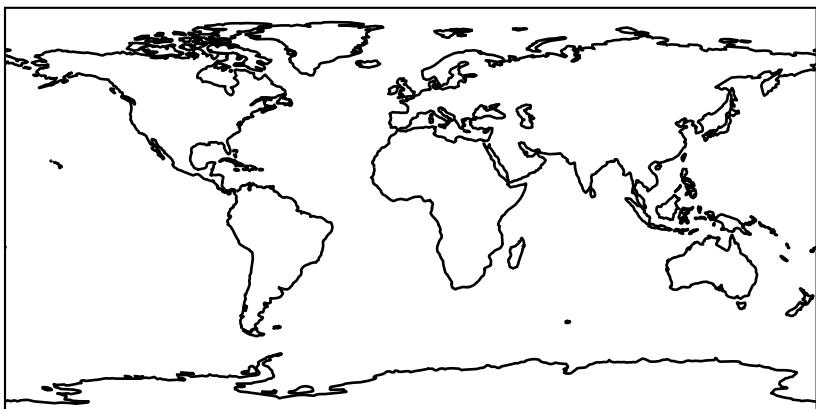
Zero throughout domain  
kg/m<sup>2</sup>/s

GCHP\_13.0.0-offlineEmis (Dev)  
c48



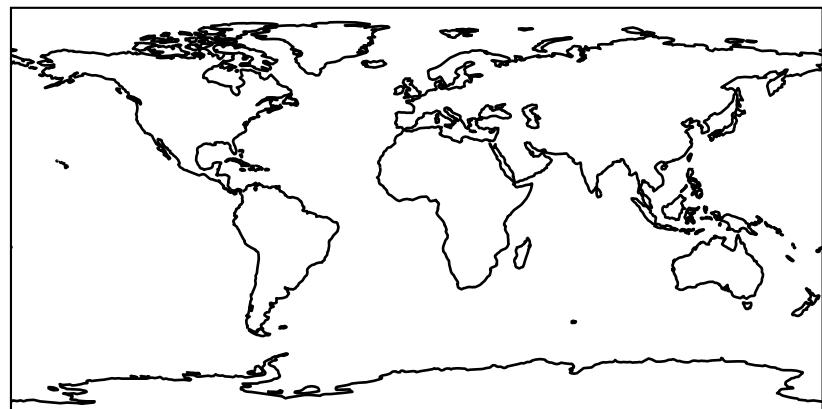
Undefined throughout domain  
kg/m<sup>2</sup>/s

Difference  
Dev - Ref, Dynamic Range



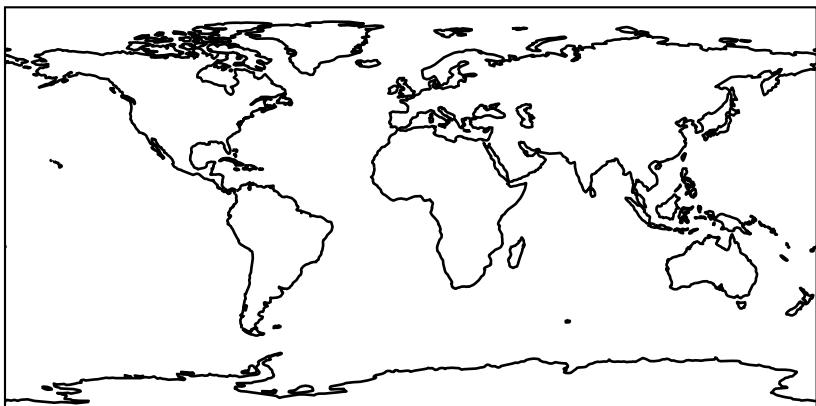
Undefined throughout domain  
kg/m<sup>2</sup>/s

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



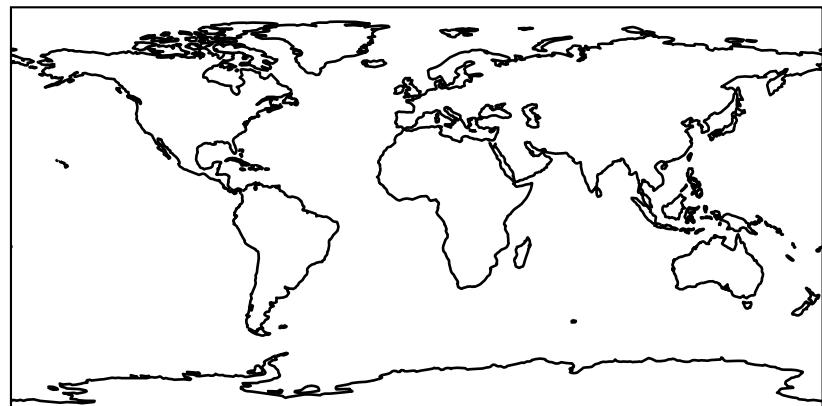
Undefined throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



Undefined throughout domain  
unitless

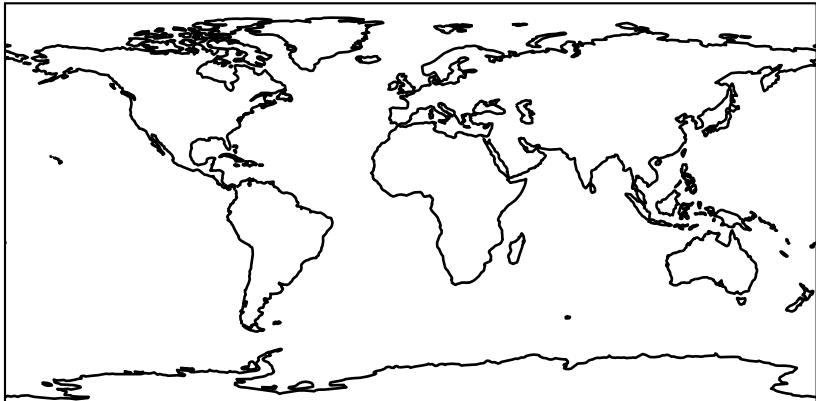
Ratio  
Dev/Ref, Fixed Range



Undefined throughout domain  
unitless

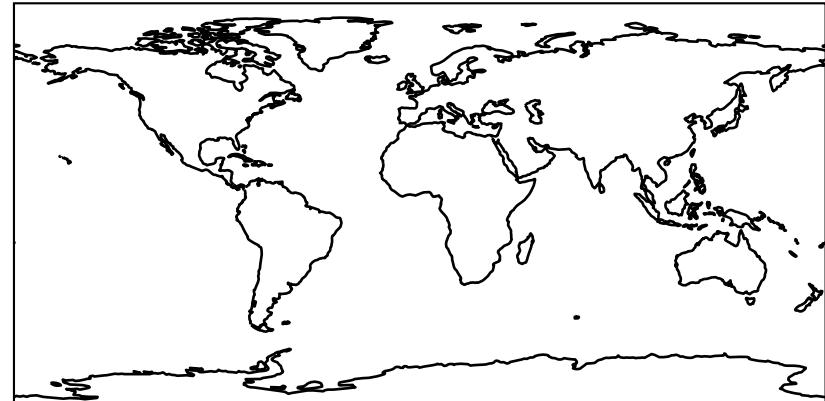
# EmisCO2\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



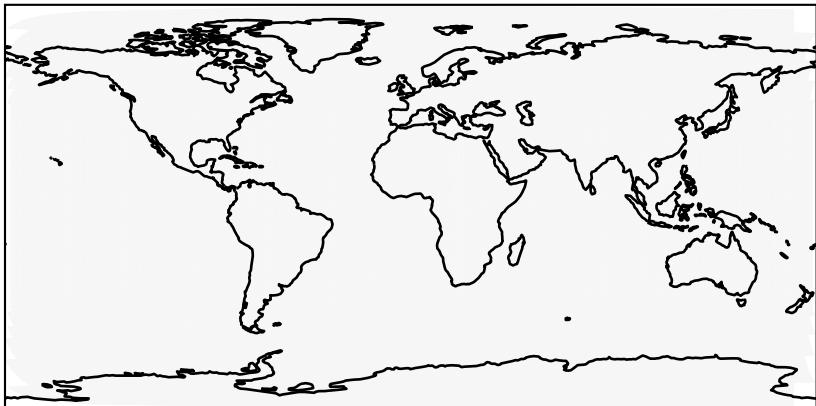
Zero throughout domain  
kg/m<sup>2</sup>/s

GCHP\_13.0.0-offlineEmis (Dev)  
c48



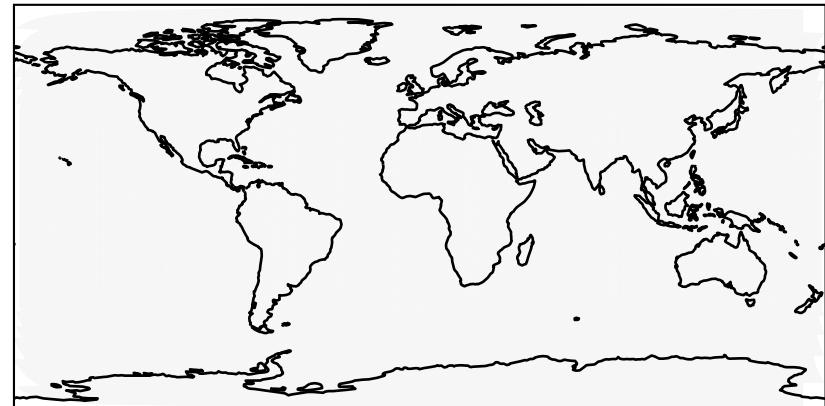
Zero throughout domain  
kg/m<sup>2</sup>/s

Difference  
Dev - Ref, Dynamic Range



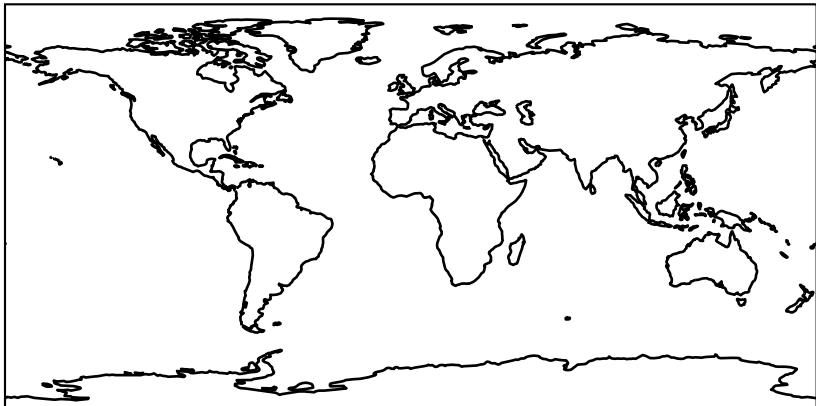
Zero throughout domain  
kg/m<sup>2</sup>/s

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



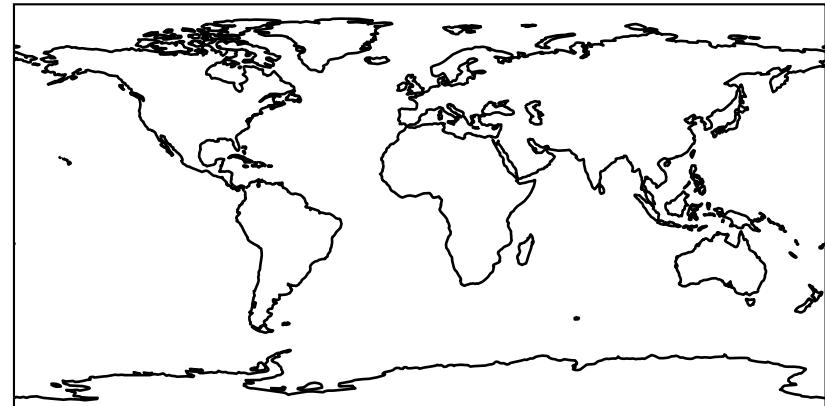
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



Undefined throughout domain  
unitless

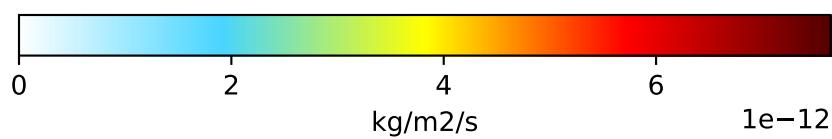
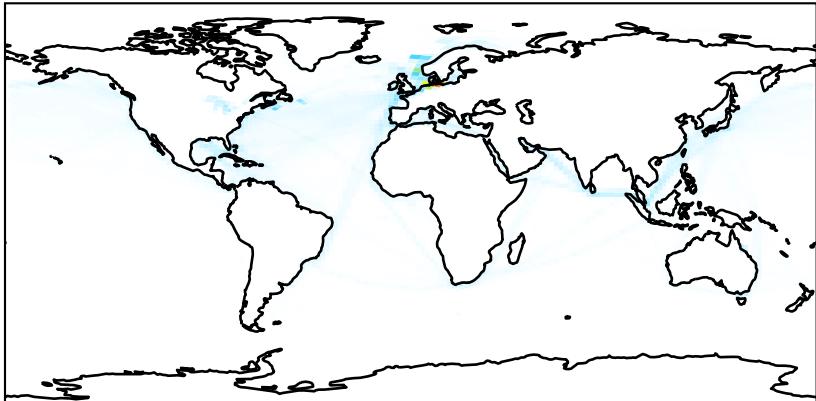
Ratio  
Dev/Ref, Fixed Range



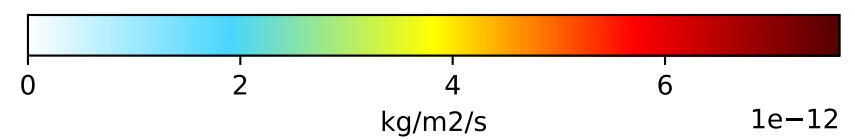
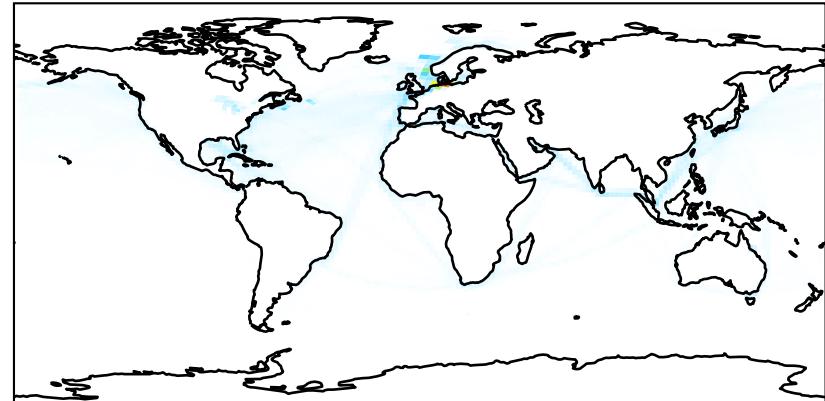
Undefined throughout domain  
unitless

# EmisCO\_Ship

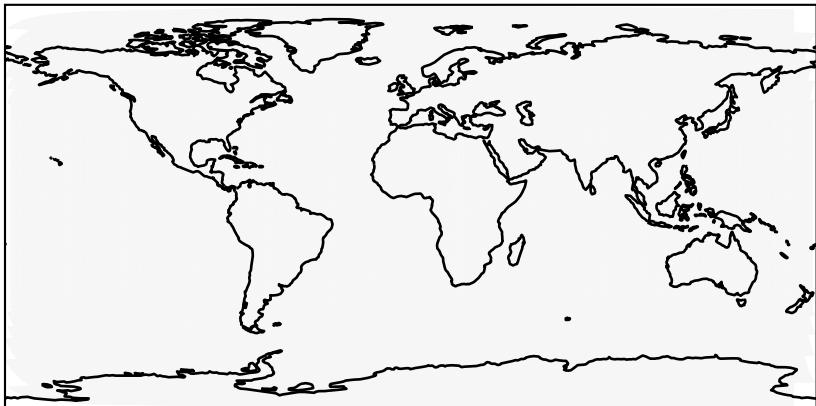
GCHP\_13.0.0-beta.0 (Ref)  
c48



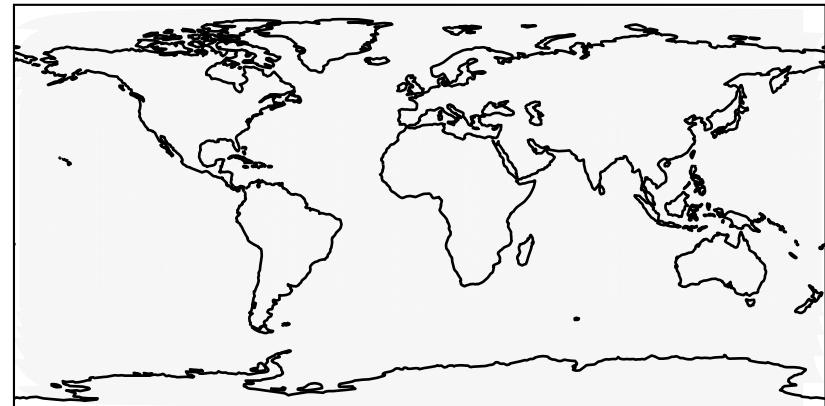
GCHP\_13.0.0-offlineEmis (Dev)  
c48



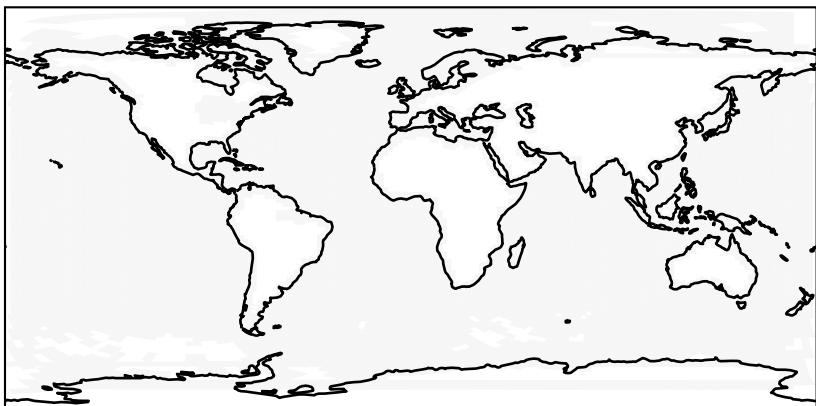
Difference  
Dev - Ref, Dynamic Range



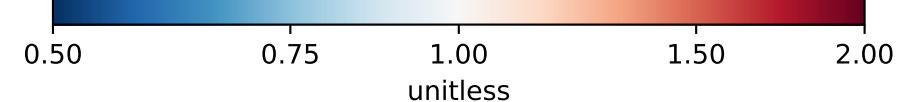
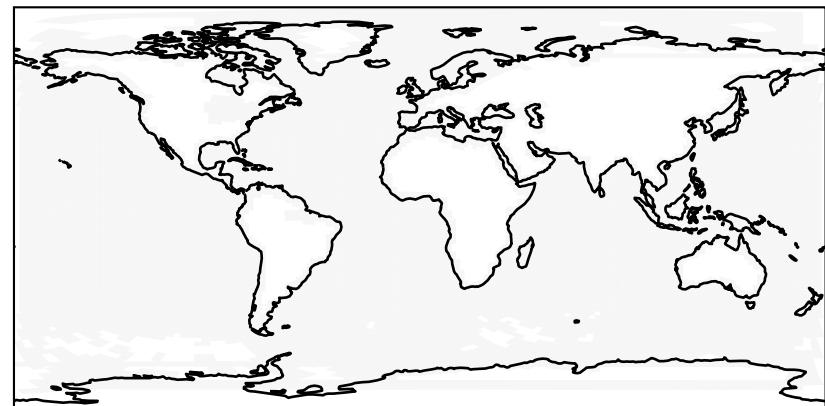
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

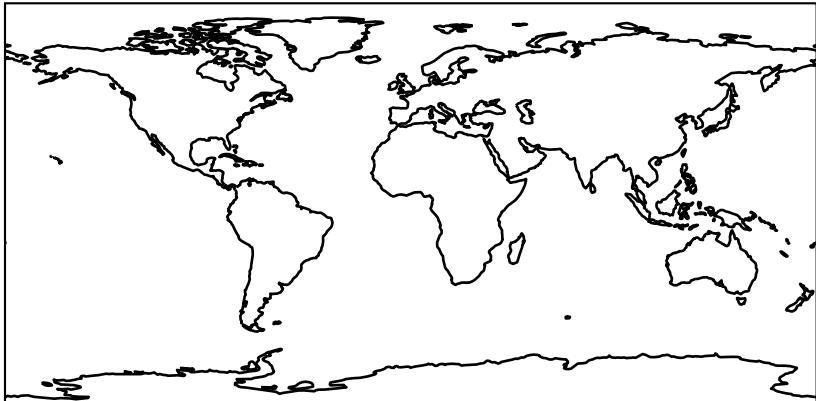


Ratio  
Dev/Ref, Fixed Range



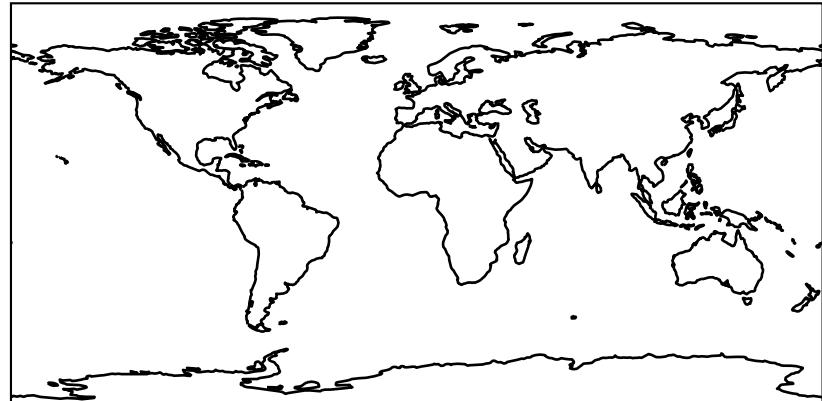
# EmisEOH\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



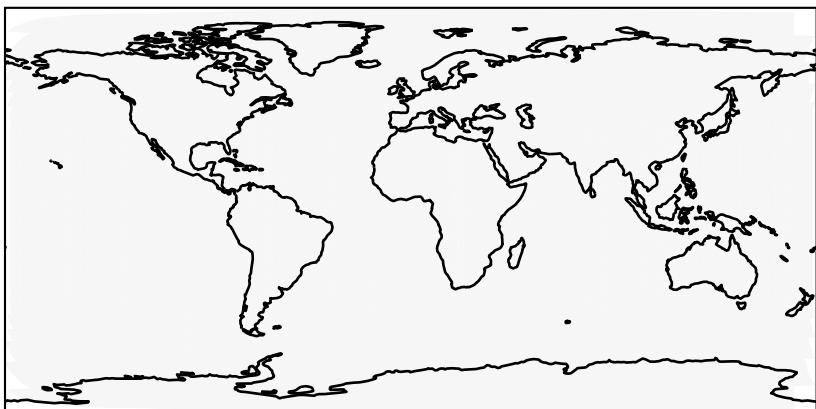
Zero throughout domain  
kg/m<sup>2</sup>/s

GCHP\_13.0.0-offlineEmis (Dev)  
c48



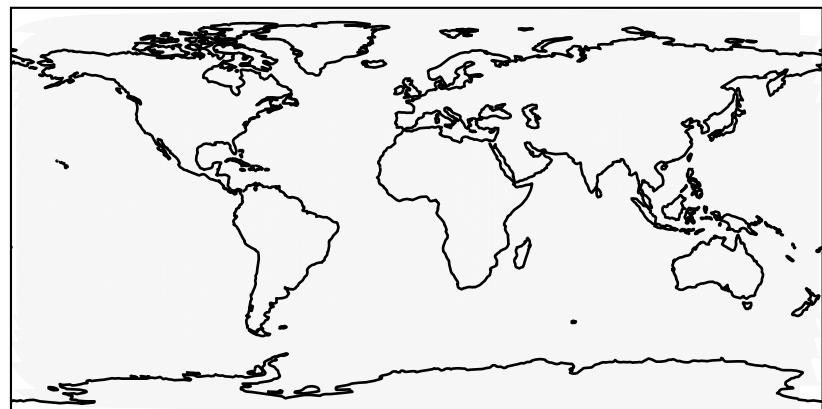
Zero throughout domain  
kg/m<sup>2</sup>/s

Difference  
Dev - Ref, Dynamic Range



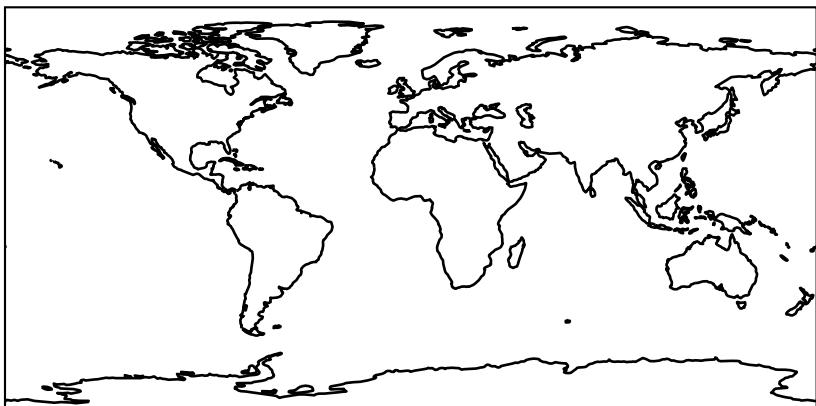
Zero throughout domain  
kg/m<sup>2</sup>/s

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



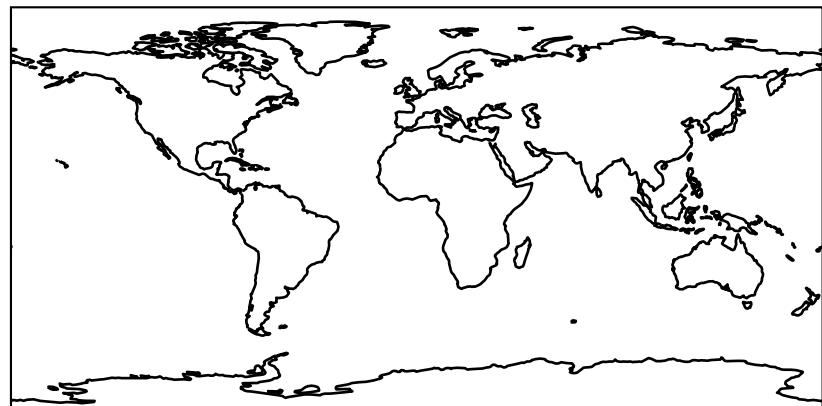
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



Undefined throughout domain  
unitless

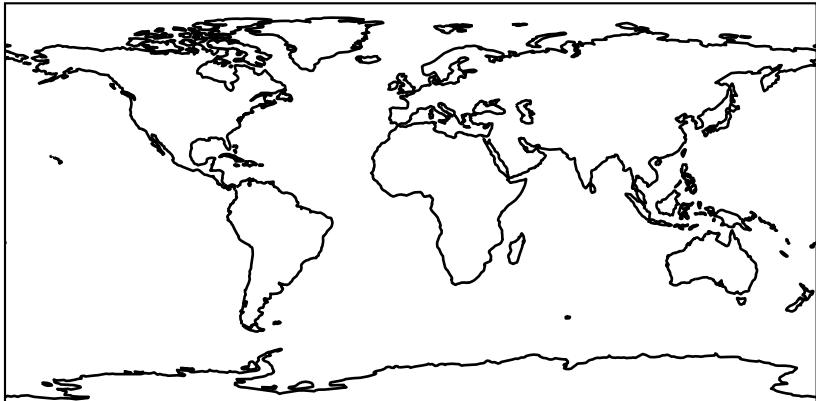
Ratio  
Dev/Ref, Fixed Range



Undefined throughout domain  
unitless

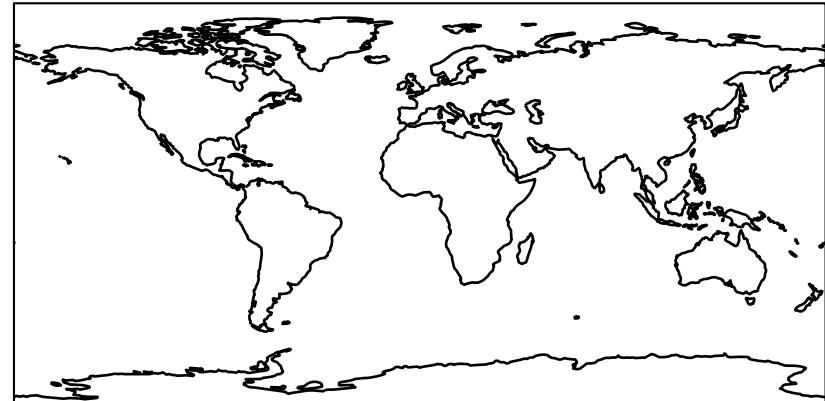
# EmisHCOOH\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



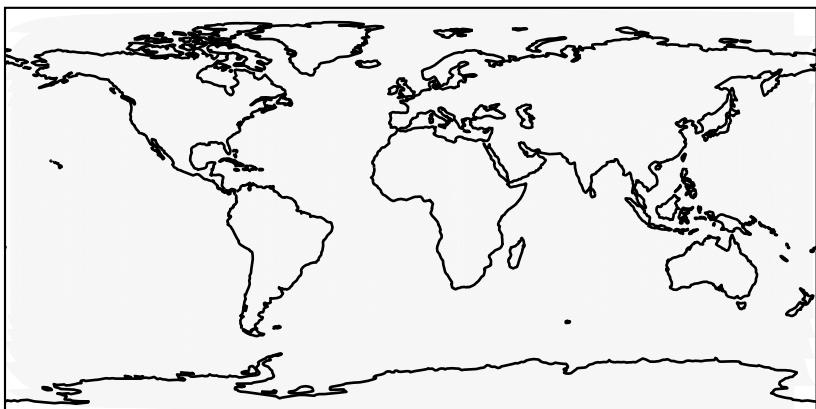
Zero throughout domain  
kg/m<sup>2</sup>/s

GCHP\_13.0.0-offlineEmis (Dev)  
c48



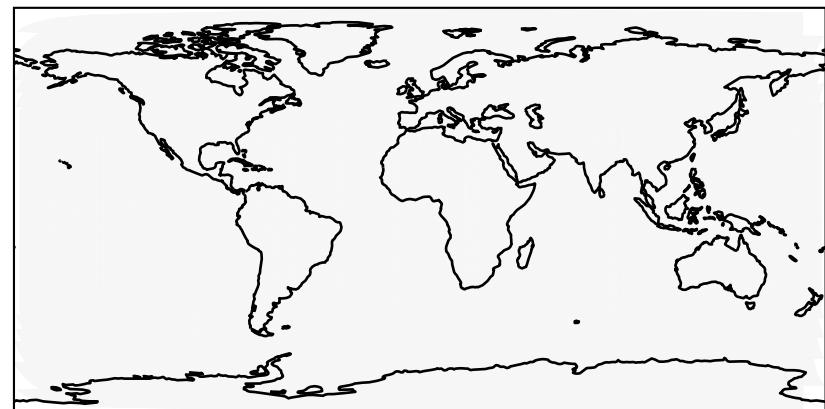
Zero throughout domain  
kg/m<sup>2</sup>/s

Difference  
Dev - Ref, Dynamic Range



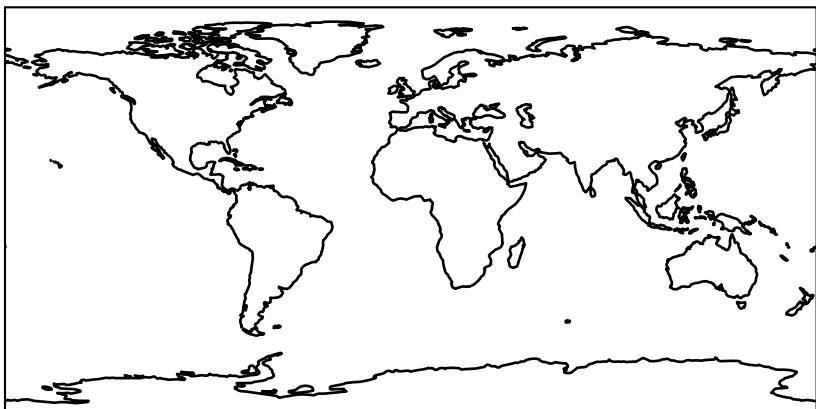
Zero throughout domain  
kg/m<sup>2</sup>/s

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



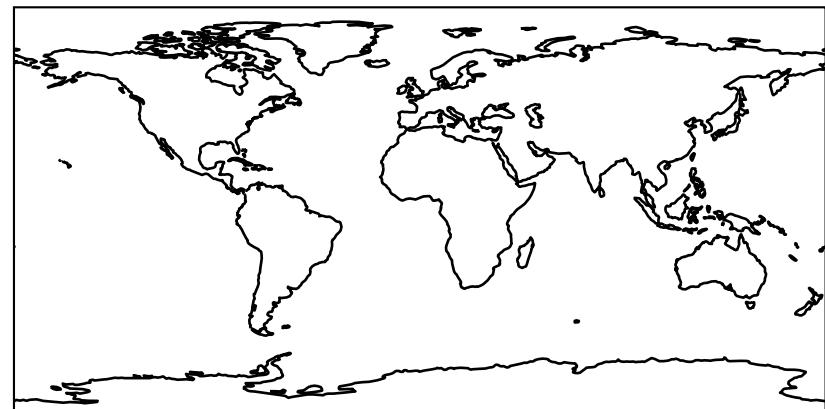
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



Undefined throughout domain  
unitless

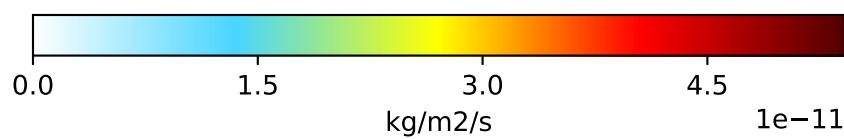
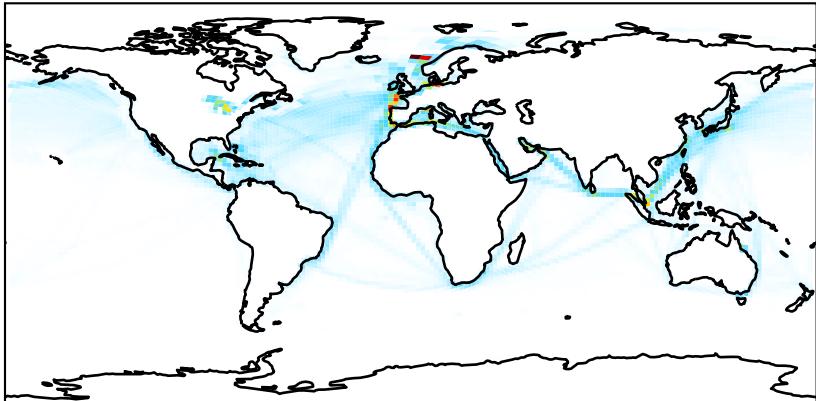
Ratio  
Dev/Ref, Fixed Range



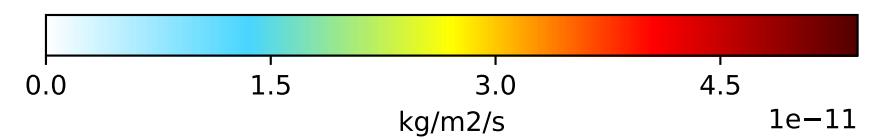
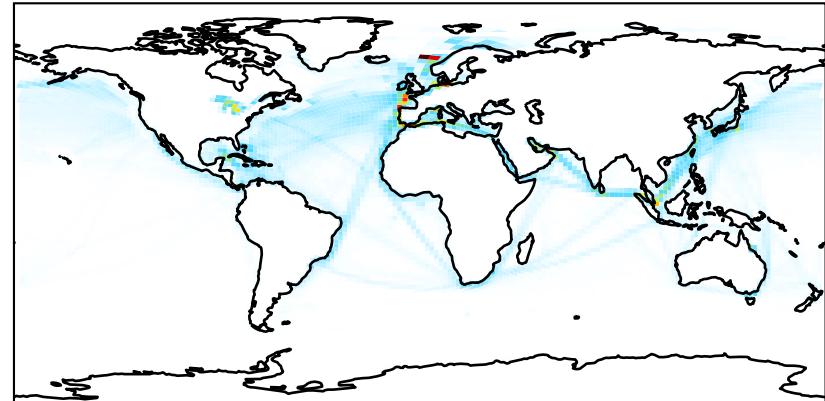
Undefined throughout domain  
unitless

# EmisHNO3\_Ship

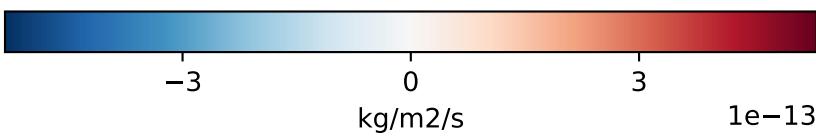
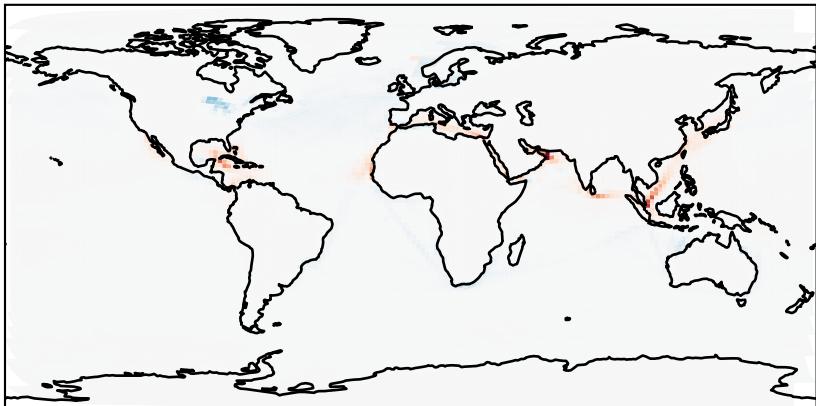
GCHP\_13.0.0-beta.0 (Ref)  
c48



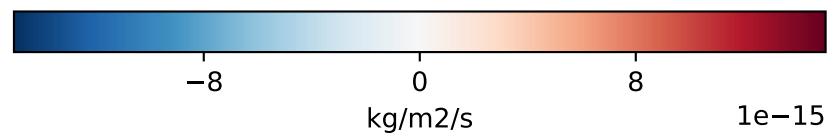
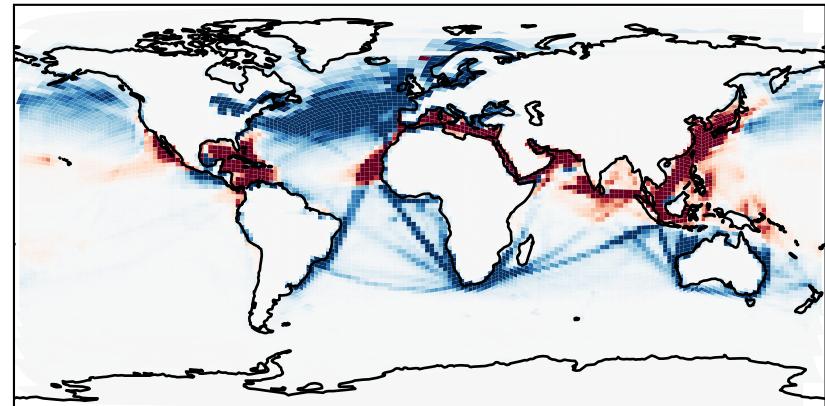
GCHP\_13.0.0-offlineEmis (Dev)  
c48



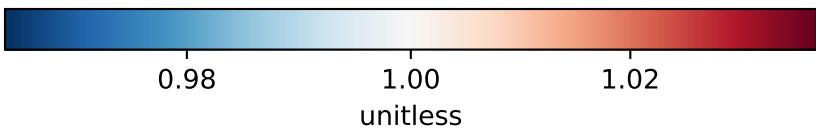
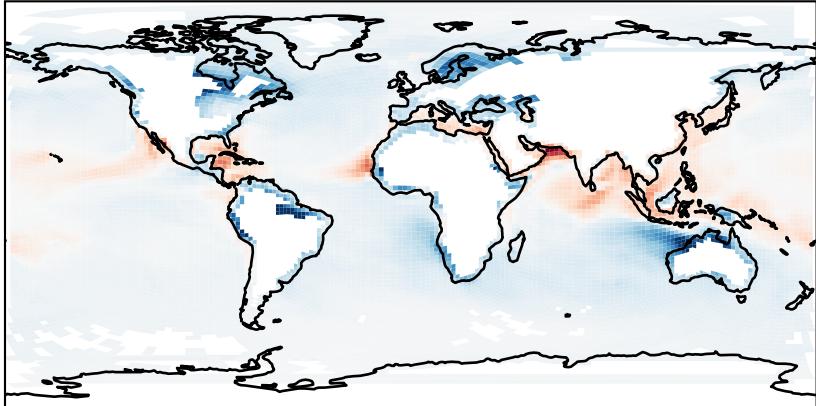
Difference  
Dev - Ref, Dynamic Range



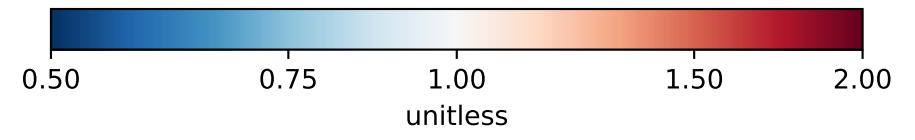
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

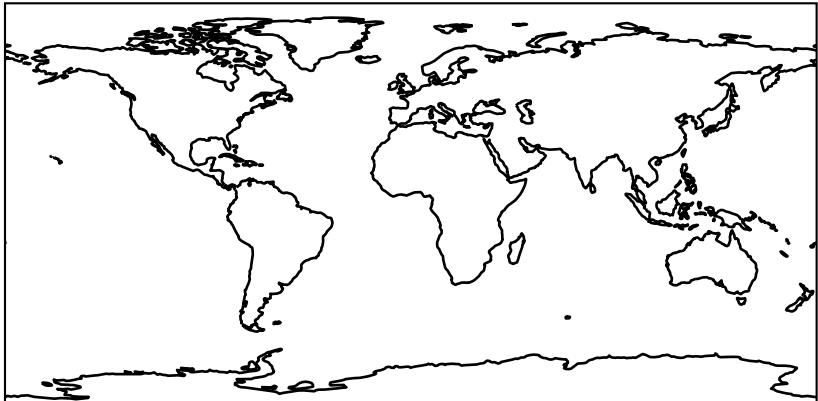


Ratio  
Dev/Ref, Fixed Range



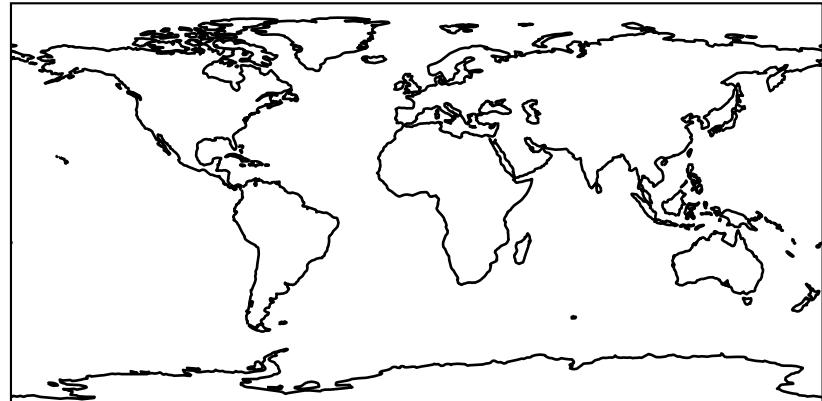
# EmisMEK\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



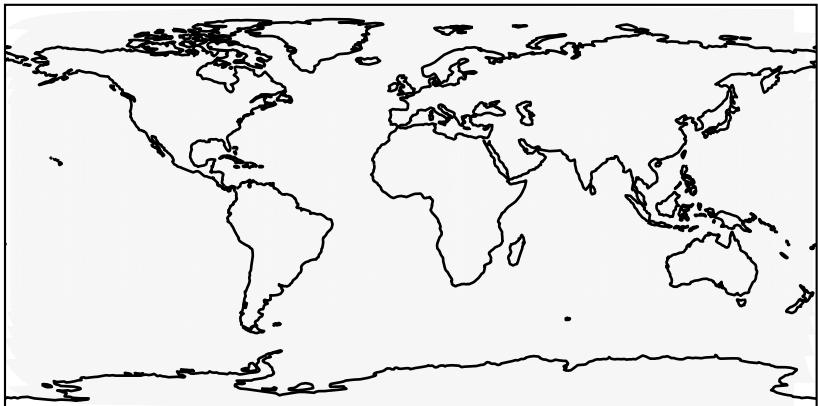
Zero throughout domain  
kg/m<sup>2</sup>/s

GCHP\_13.0.0-offlineEmis (Dev)  
c48



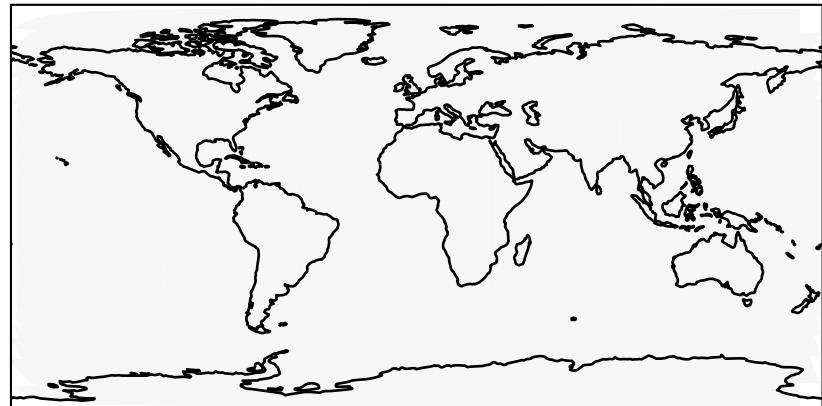
Zero throughout domain  
kg/m<sup>2</sup>/s

Difference  
Dev - Ref, Dynamic Range



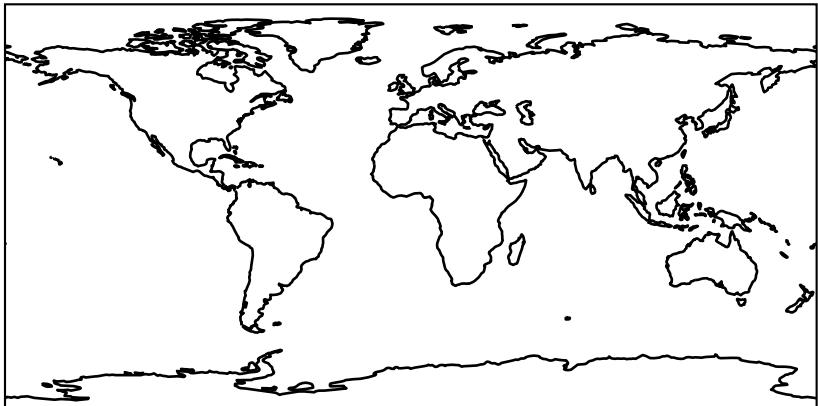
Zero throughout domain  
kg/m<sup>2</sup>/s

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



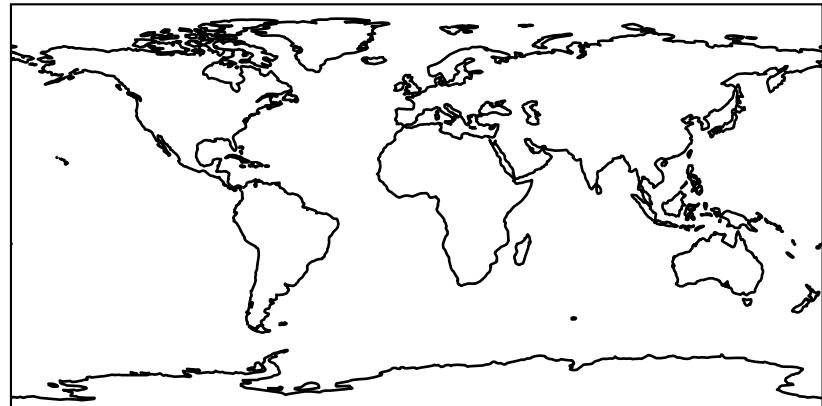
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



Undefined throughout domain  
unitless

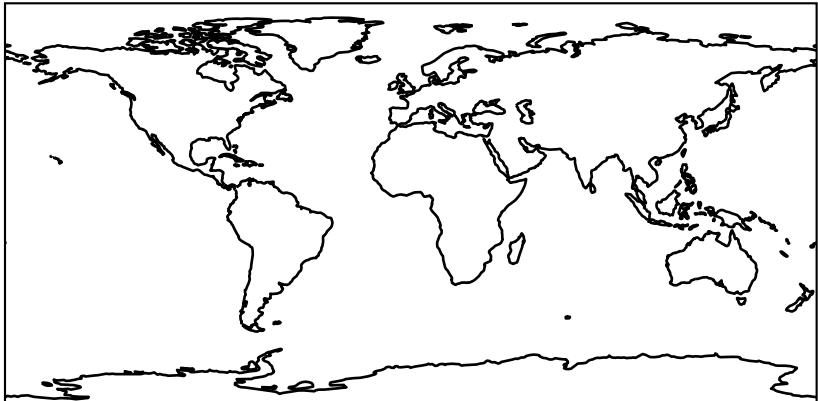
Ratio  
Dev/Ref, Fixed Range



Undefined throughout domain  
unitless

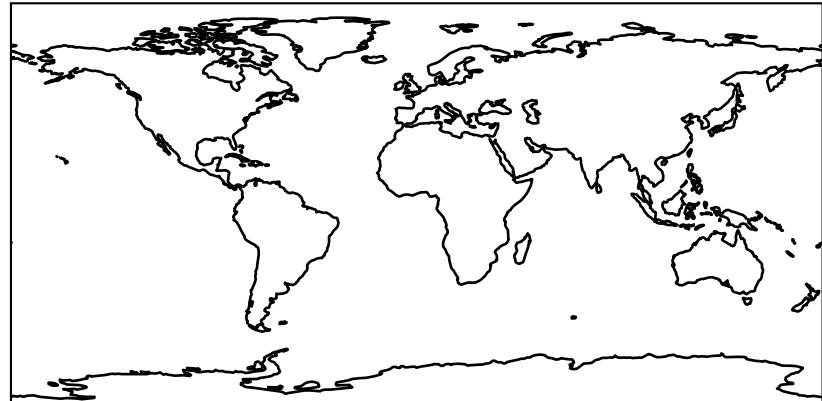
# EmisMOH\_Ship

GCHP\_13.0.0-beta.0 (Ref)  
c48



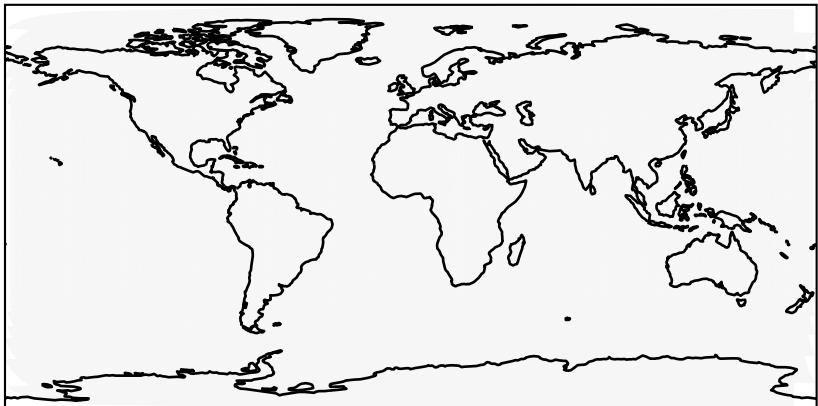
Zero throughout domain  
kg/m<sup>2</sup>/s

GCHP\_13.0.0-offlineEmis (Dev)  
c48



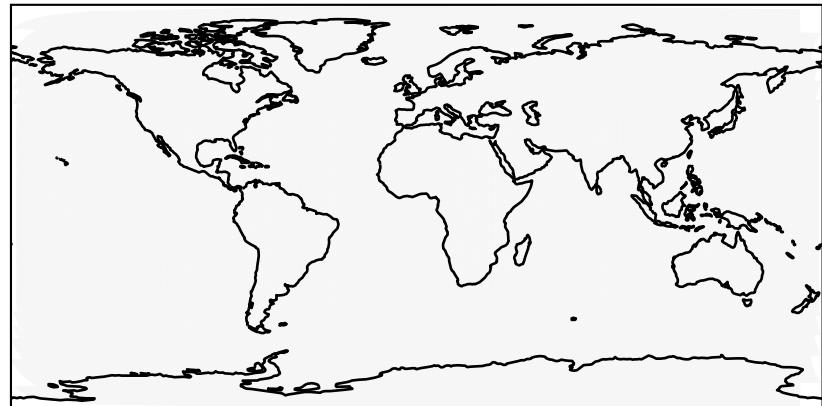
Zero throughout domain  
kg/m<sup>2</sup>/s

Difference  
Dev - Ref, Dynamic Range



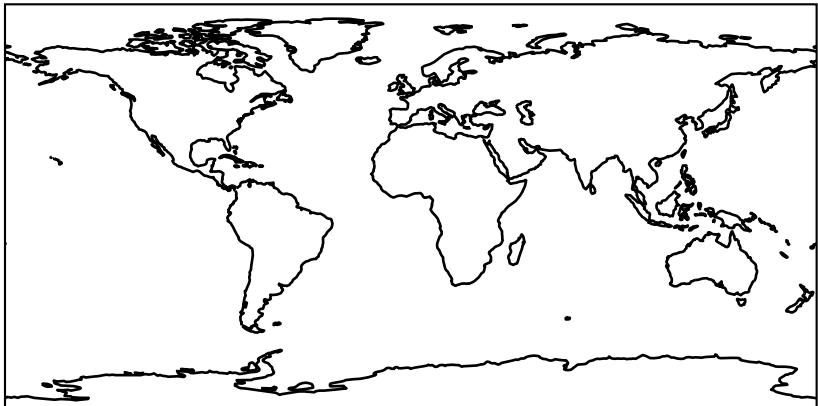
Zero throughout domain  
kg/m<sup>2</sup>/s

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



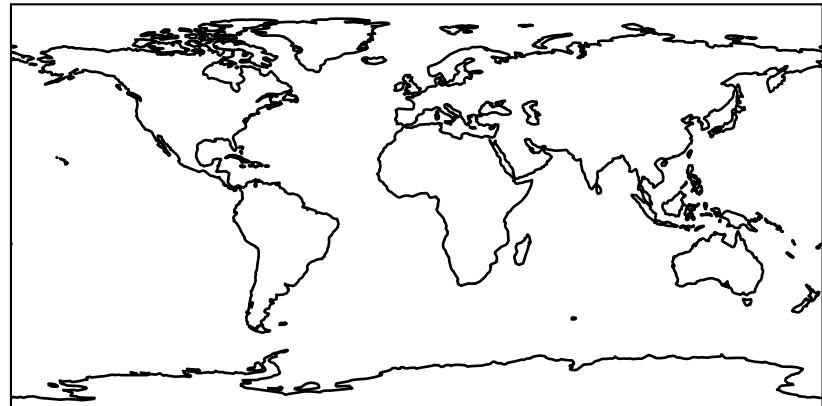
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



Undefined throughout domain  
unitless

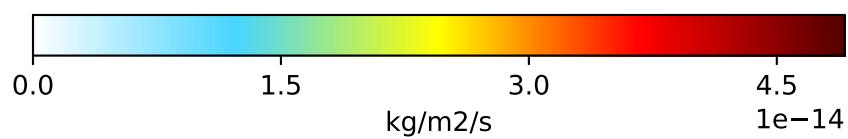
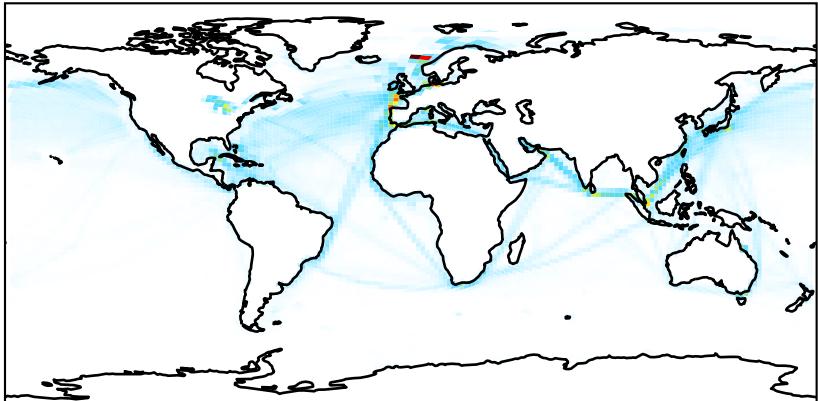
Ratio  
Dev/Ref, Fixed Range



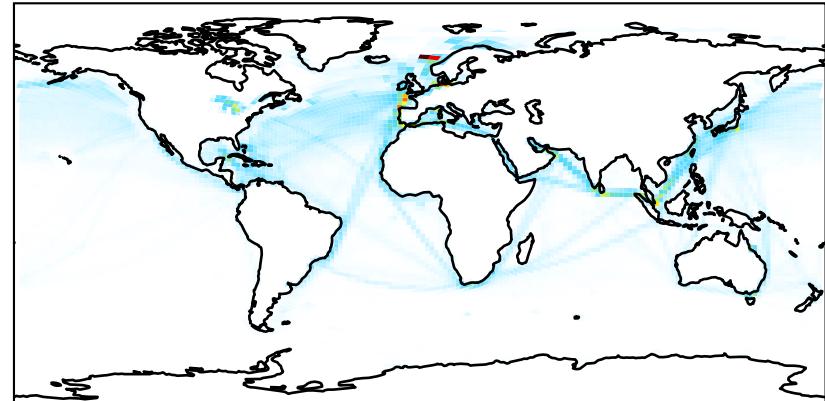
Undefined throughout domain  
unitless

# EmisNH3\_Ship

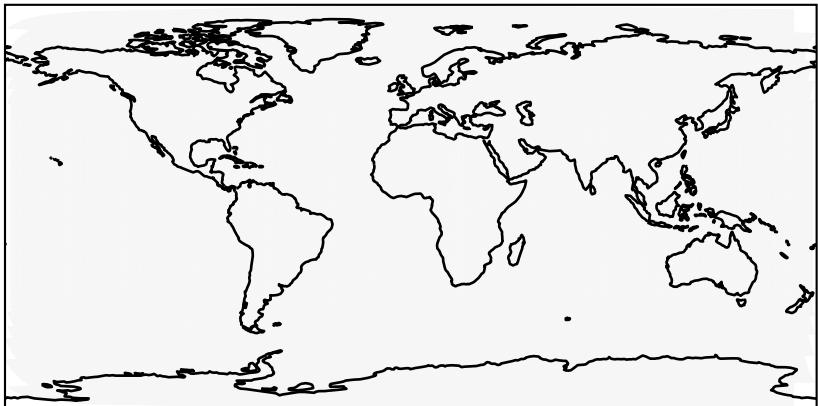
GCHP\_13.0.0-beta.0 (Ref)  
c48



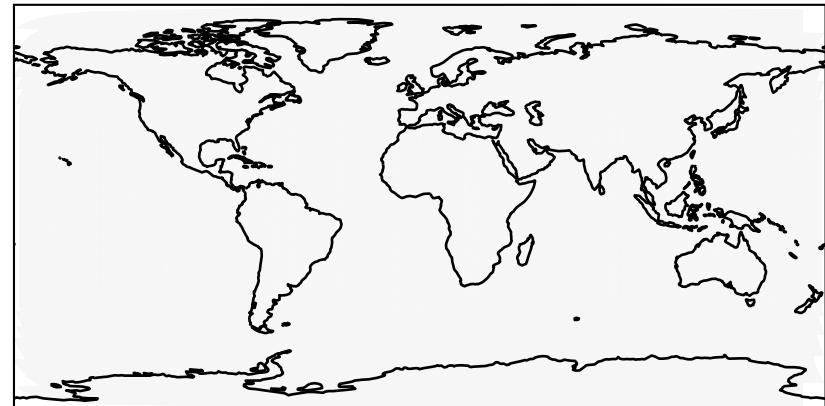
GCHP\_13.0.0-offlineEmis (Dev)  
c48



Difference  
Dev - Ref, Dynamic Range



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



Ratio  
Dev/Ref, Dynamic Range

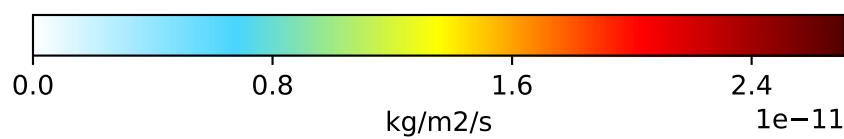
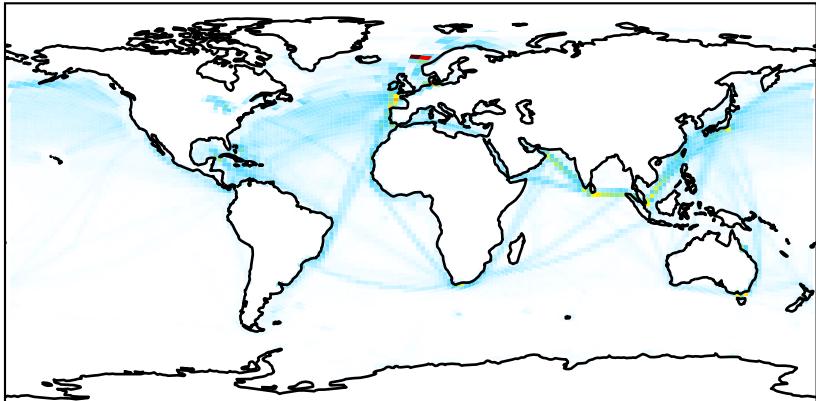


Ratio  
Dev/Ref, Fixed Range

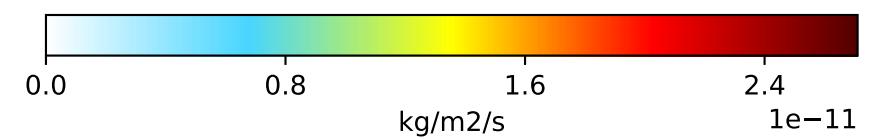
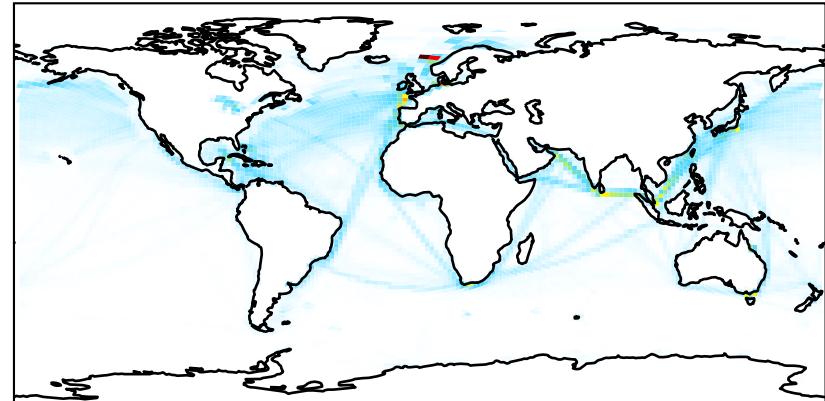


# EmisNO2\_Ship

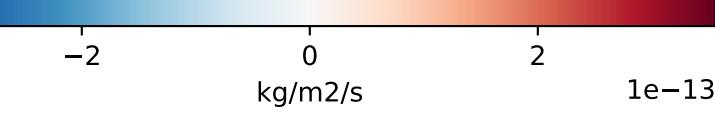
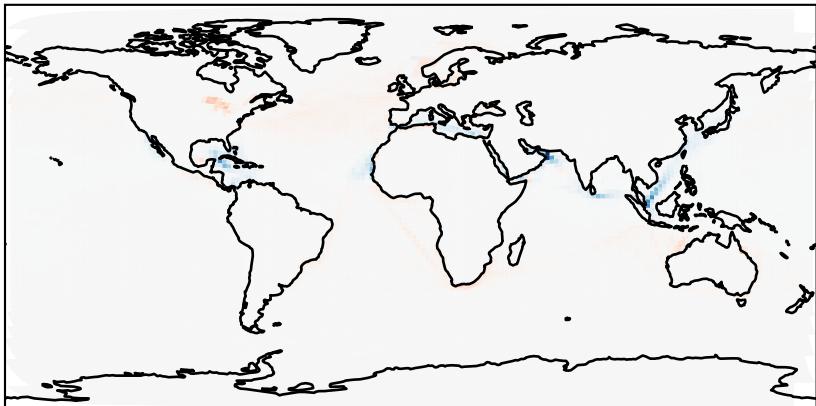
GCHP\_13.0.0-beta.0 (Ref)  
c48



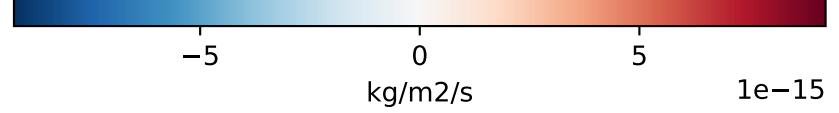
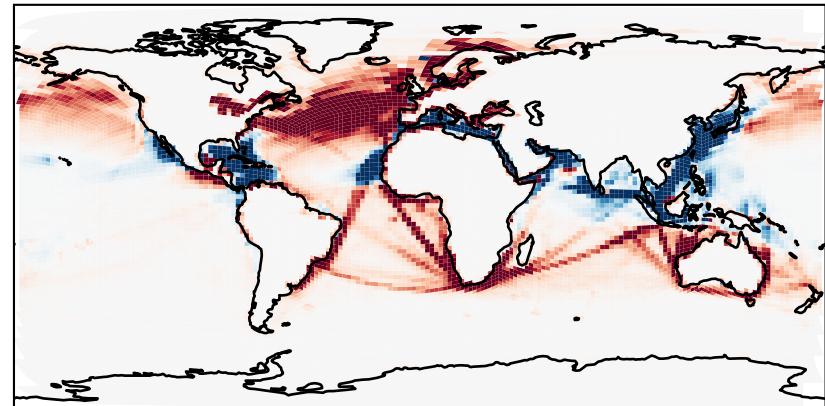
GCHP\_13.0.0-offlineEmis (Dev)  
c48



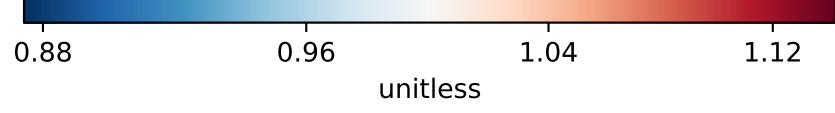
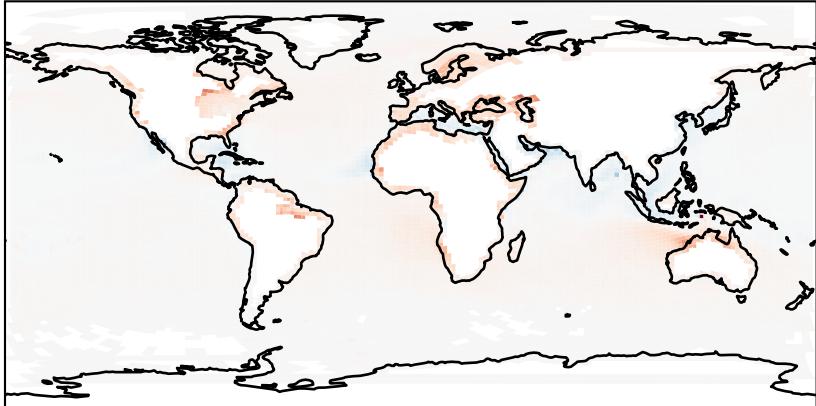
Difference  
Dev - Ref, Dynamic Range



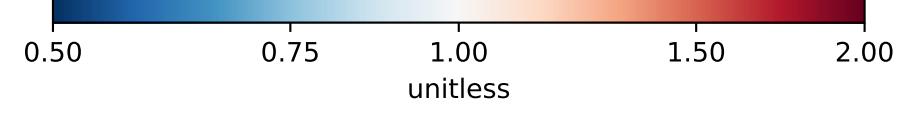
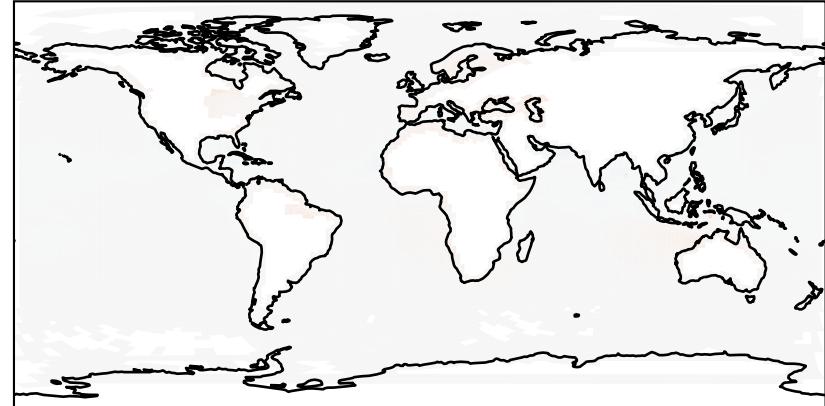
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

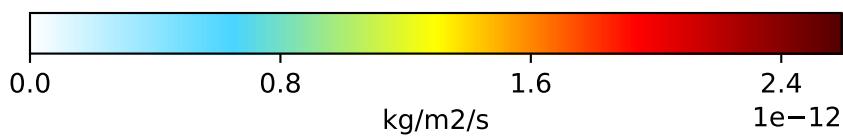
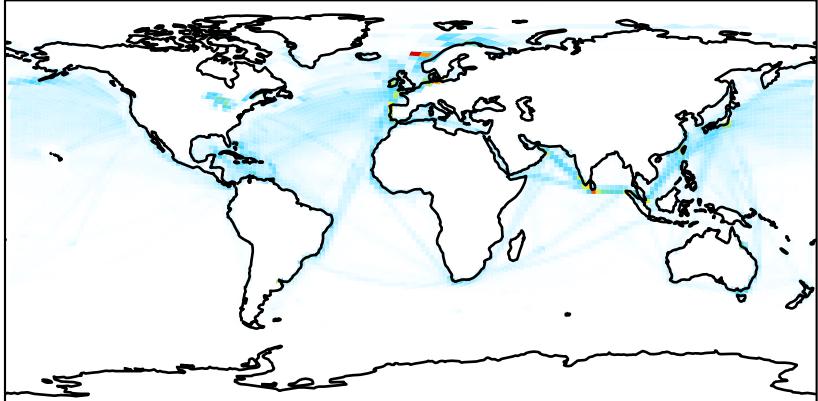


Ratio  
Dev/Ref, Fixed Range

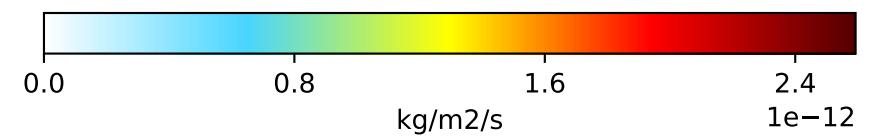
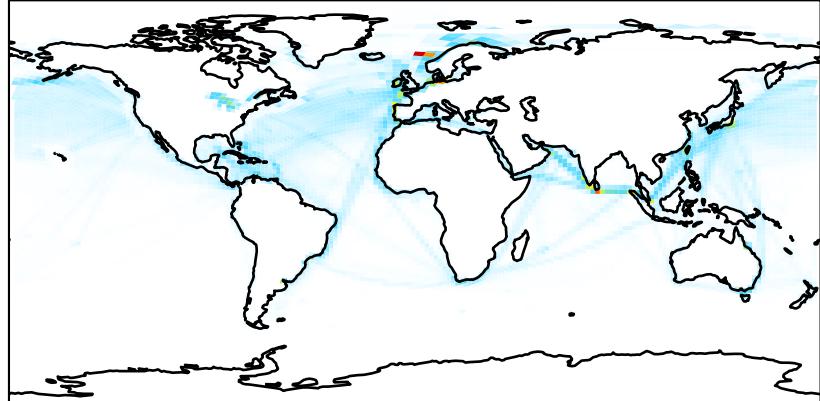


# EmisNO\_Ship

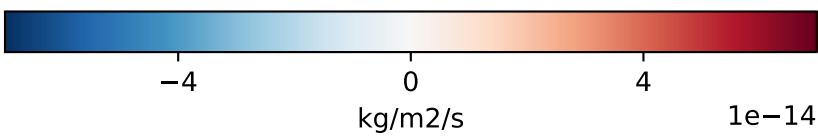
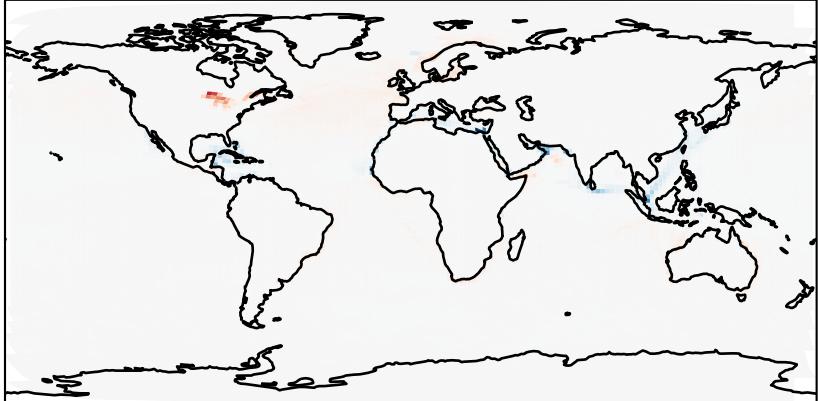
GCHP\_13.0.0-beta.0 (Ref)  
c48



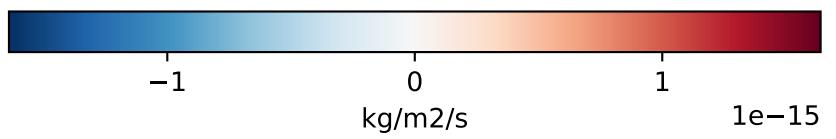
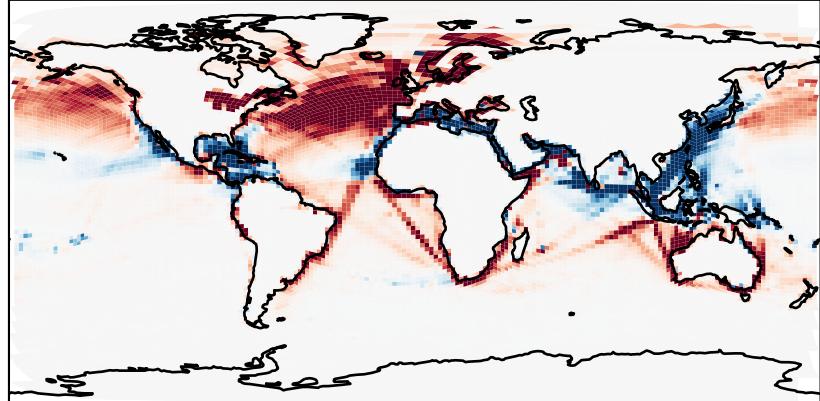
GCHP\_13.0.0-offlineEmis (Dev)  
c48



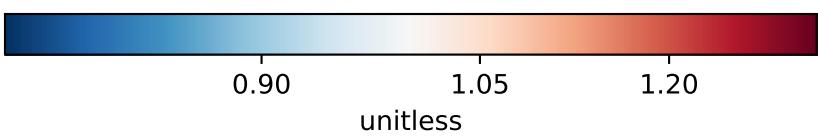
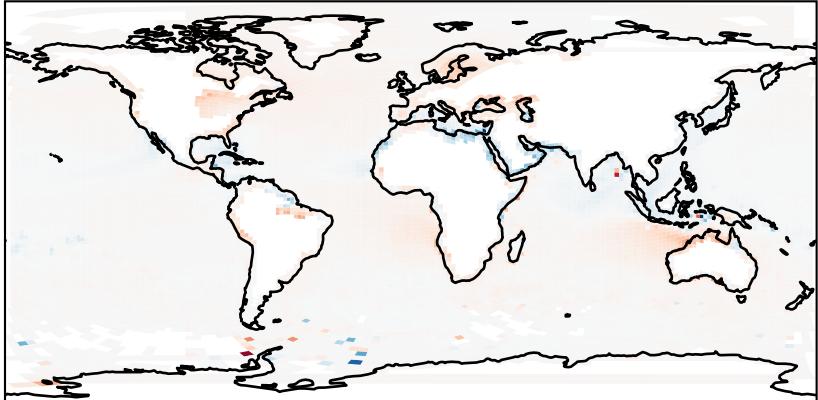
Difference  
Dev - Ref, Dynamic Range



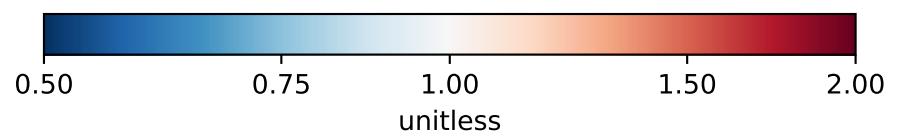
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

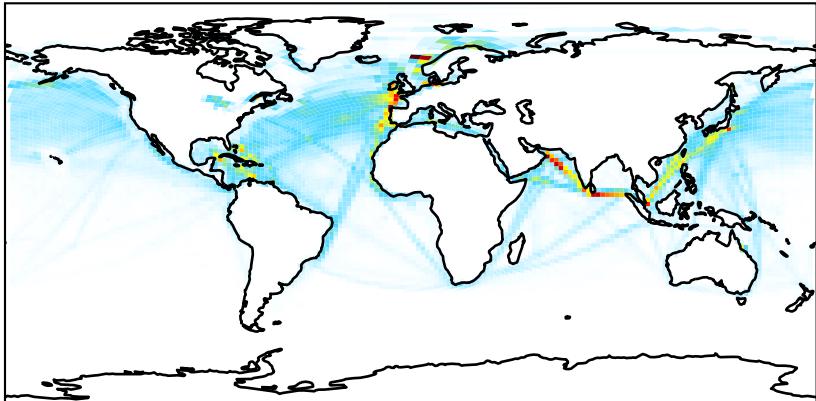


Ratio  
Dev/Ref, Fixed Range

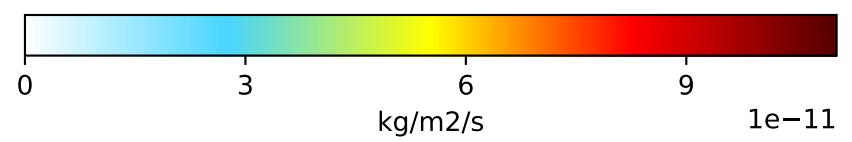
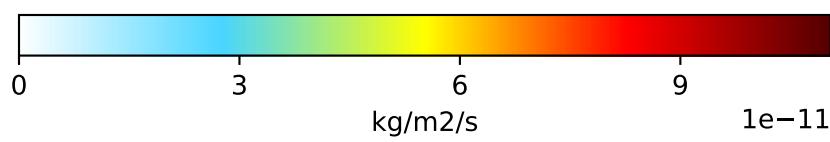
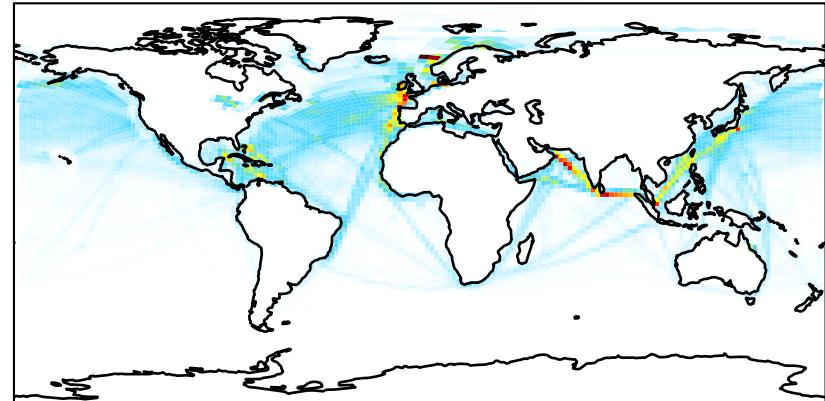


# EmisO3\_Ship

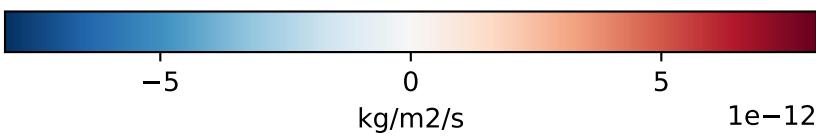
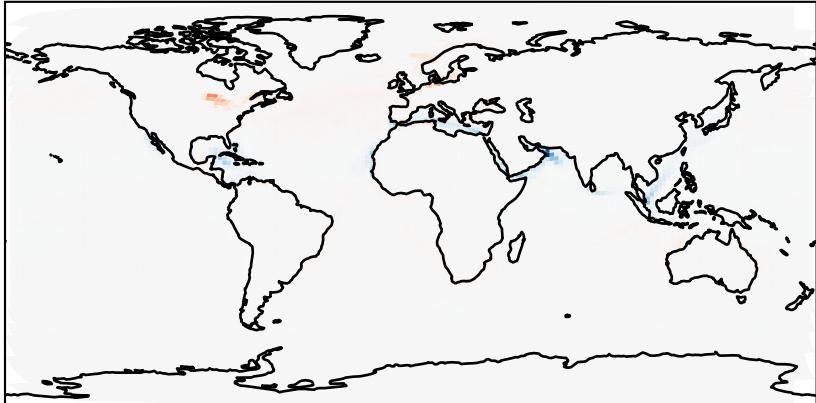
GCHP\_13.0.0-beta.0 (Ref)  
c48



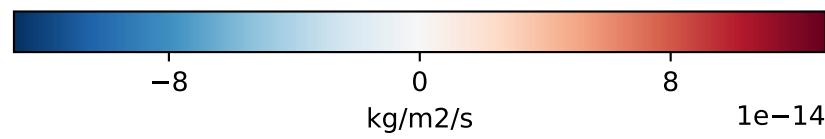
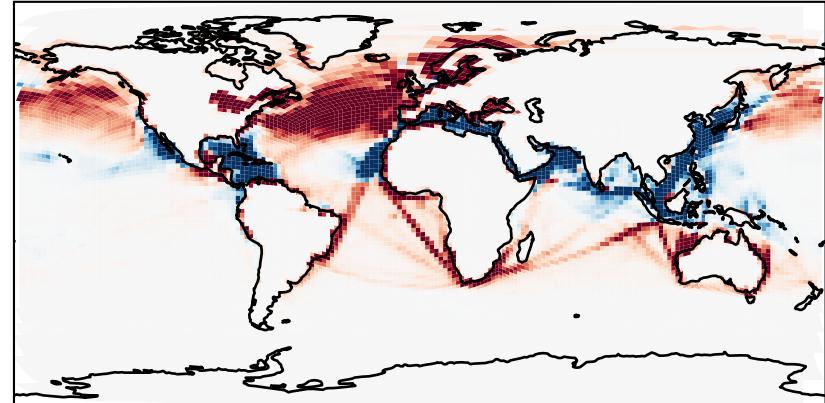
GCHP\_13.0.0-offlineEmis (Dev)  
c48



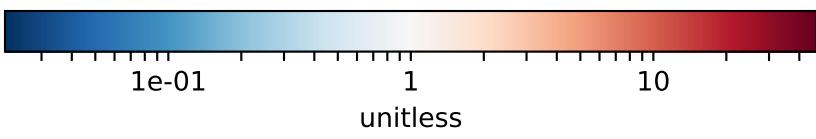
Difference  
Dev - Ref, Dynamic Range



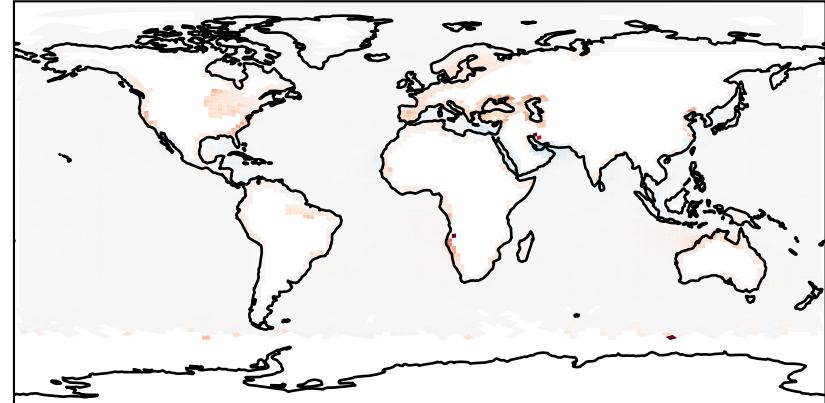
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

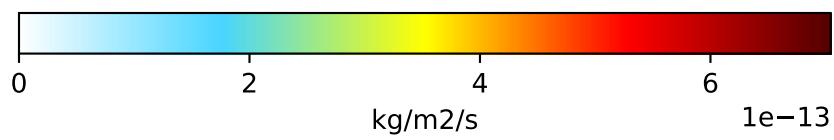
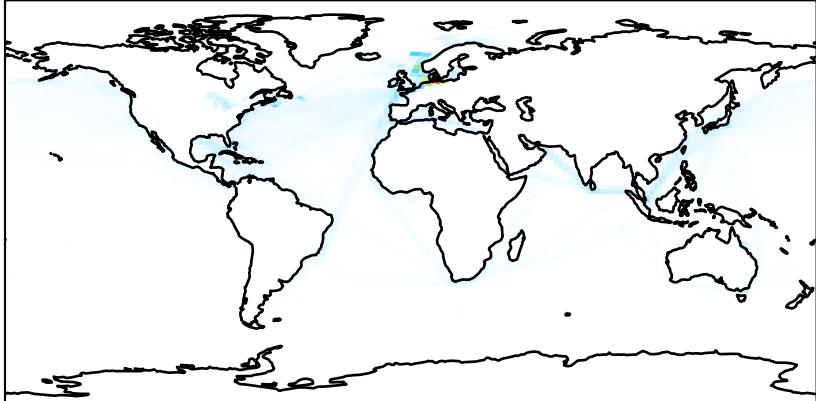


Ratio  
Dev/Ref, Fixed Range

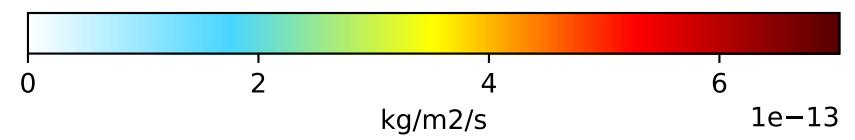


# EmisOCPI\_Ship

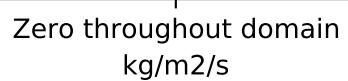
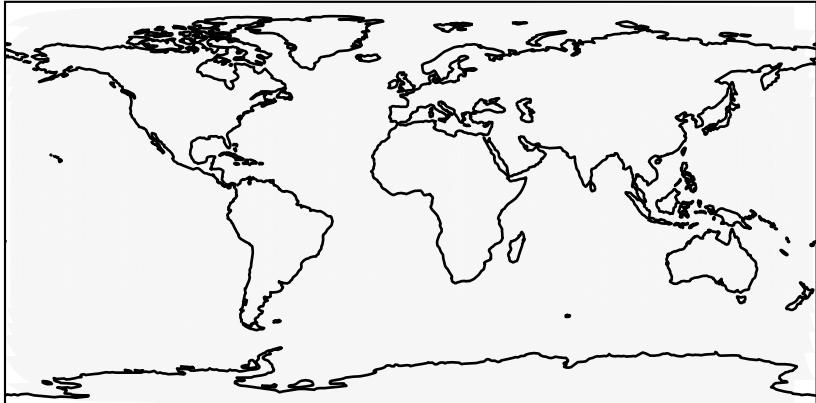
GCHP\_13.0.0-beta.0 (Ref)  
c48



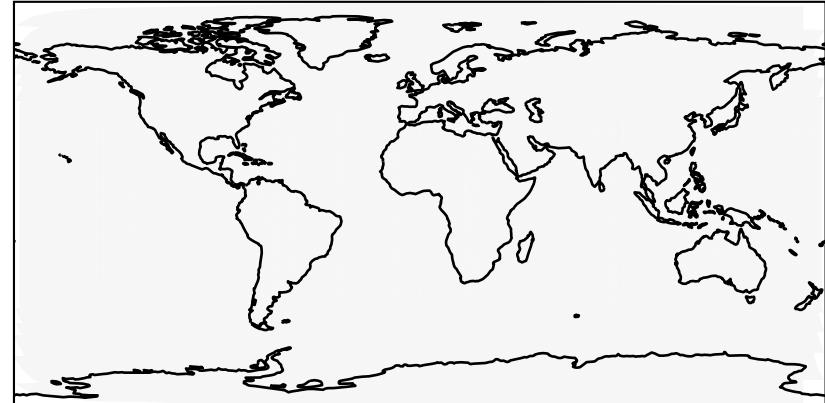
GCHP\_13.0.0-offlineEmis (Dev)  
c48



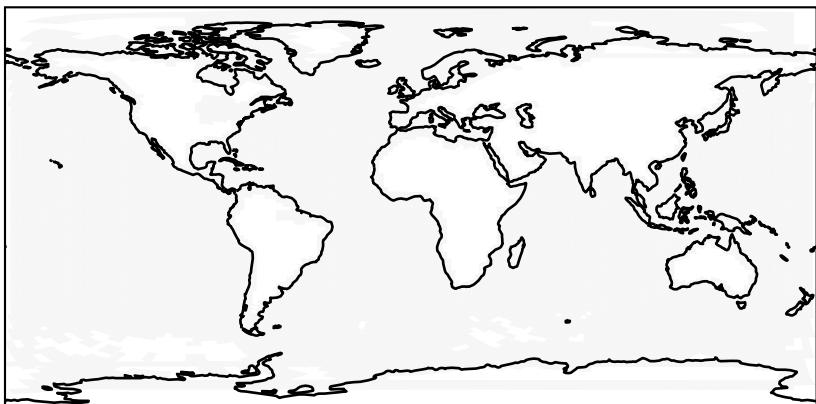
Difference  
Dev - Ref, Dynamic Range



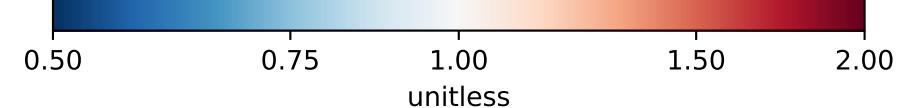
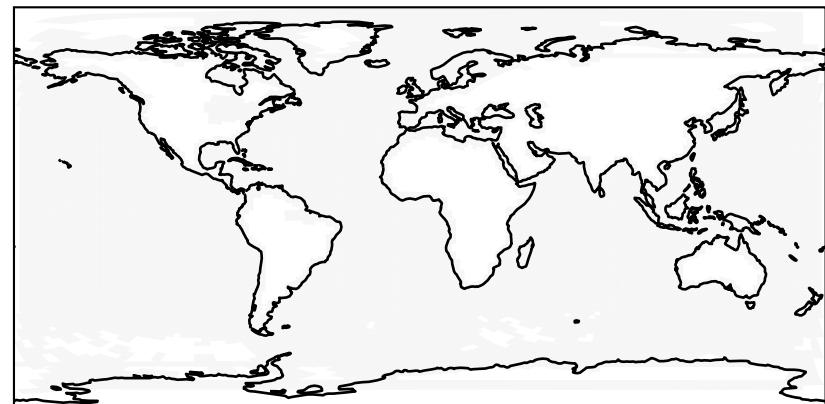
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

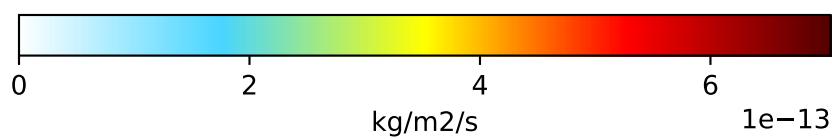
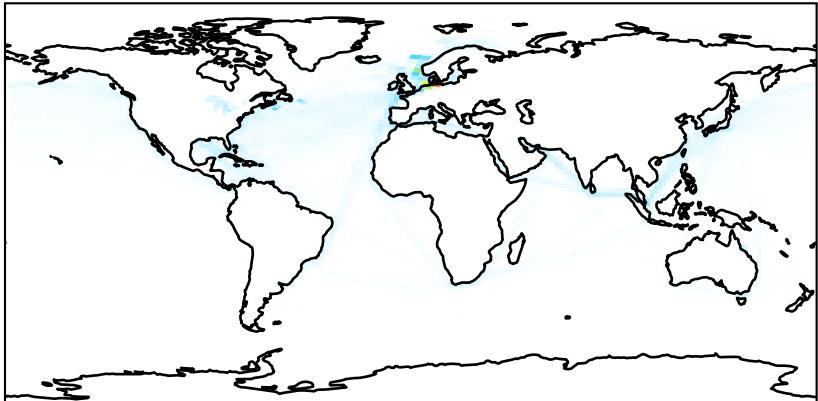


Ratio  
Dev/Ref, Fixed Range

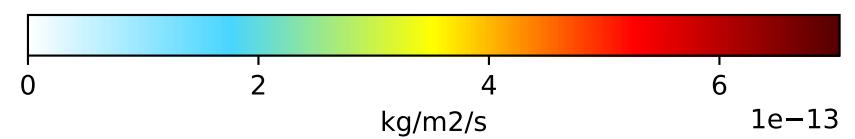
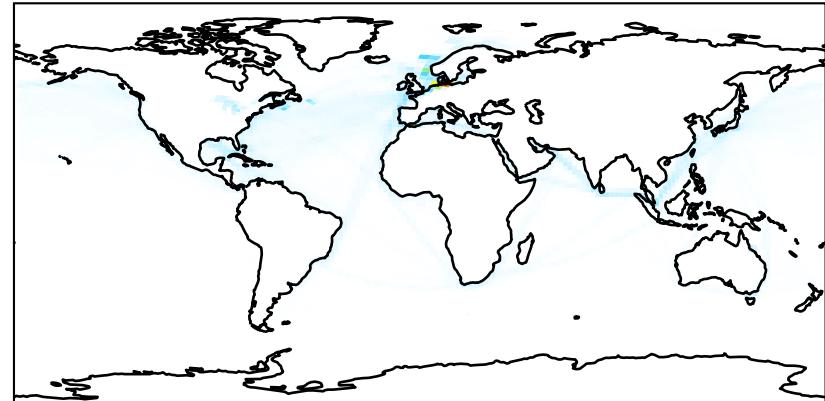


# EmisOCPO\_Ship

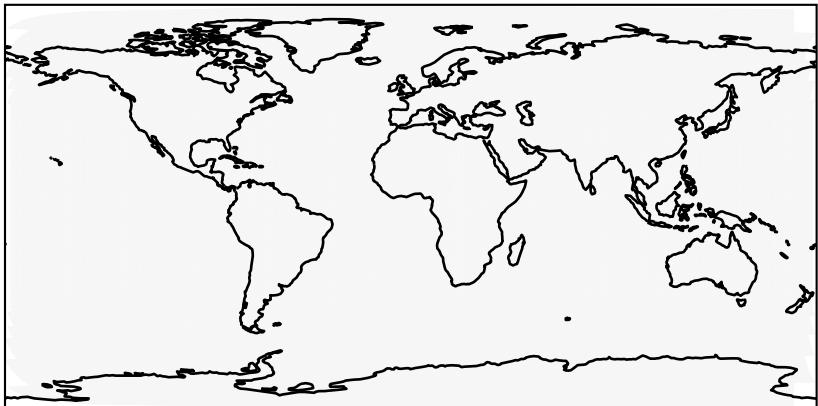
GCHP\_13.0.0-beta.0 (Ref)  
c48



GCHP\_13.0.0-offlineEmis (Dev)  
c48

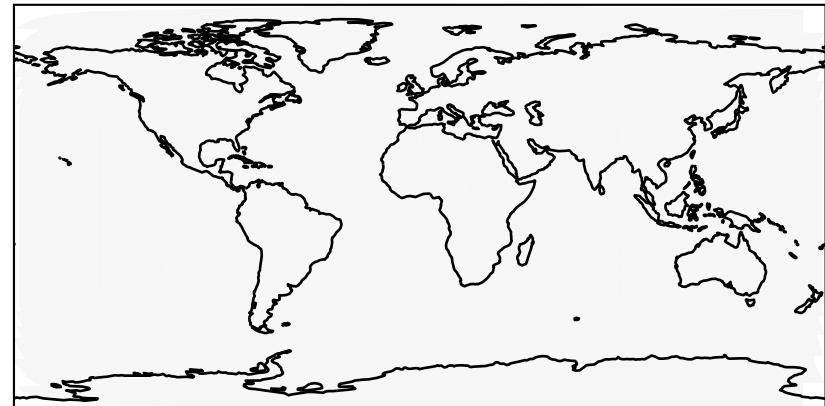


Difference  
Dev - Ref, Dynamic Range



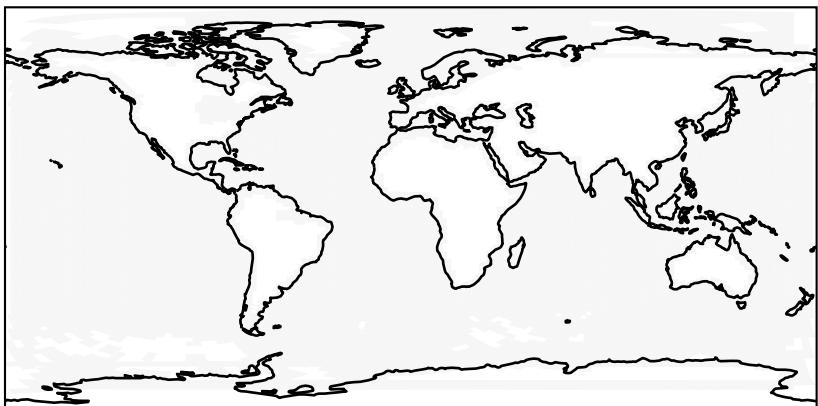
Zero throughout domain  
kg/m<sup>2</sup>/s

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



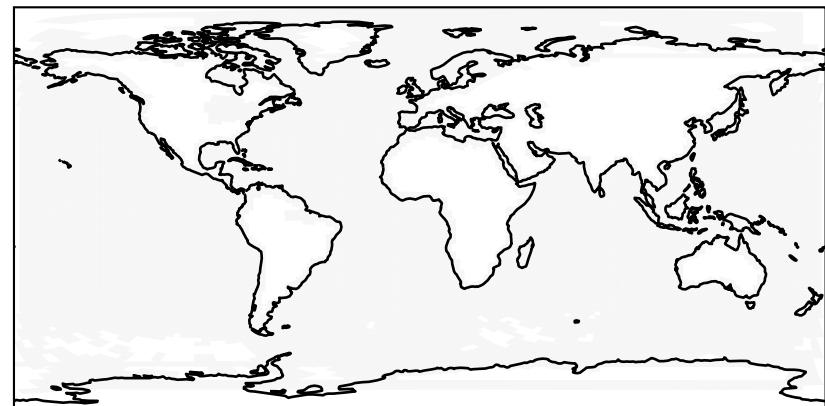
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90      0.96      1.02      1.08  
unitless

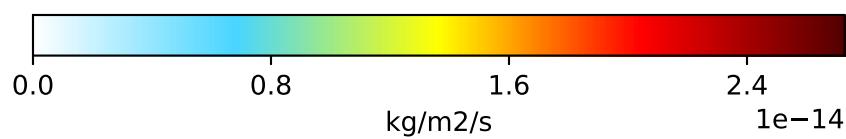
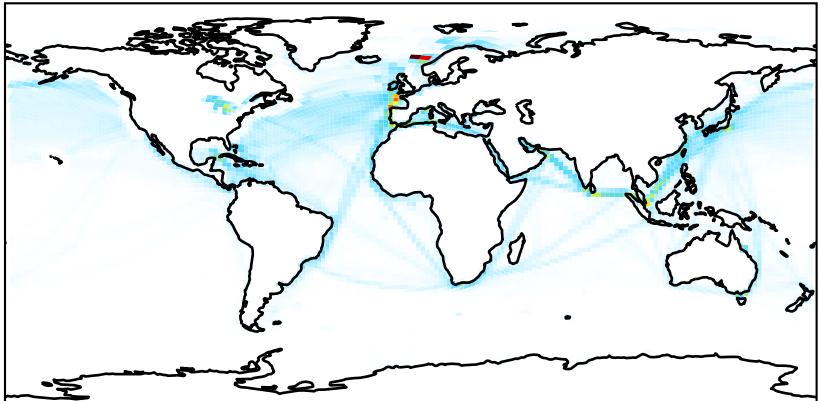
Ratio  
Dev/Ref, Fixed Range



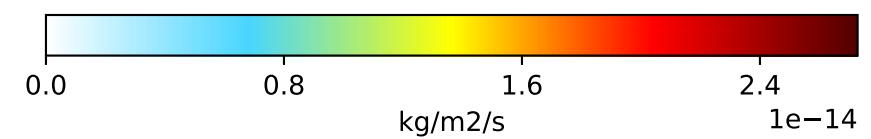
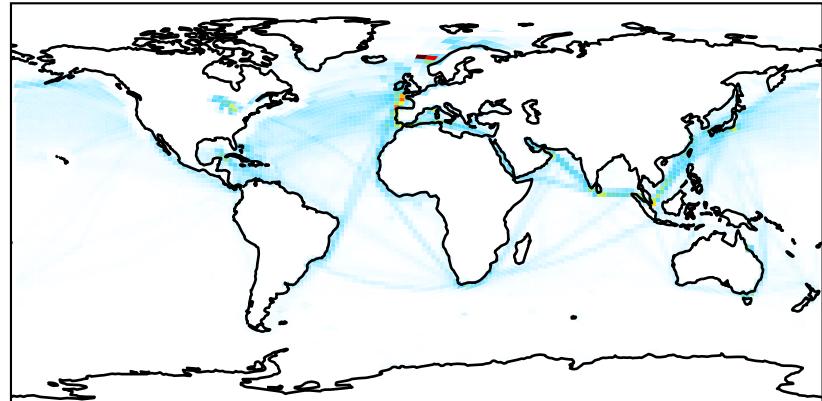
0.50      0.75      1.00      1.50      2.00  
unitless

# EmispFe\_Ship

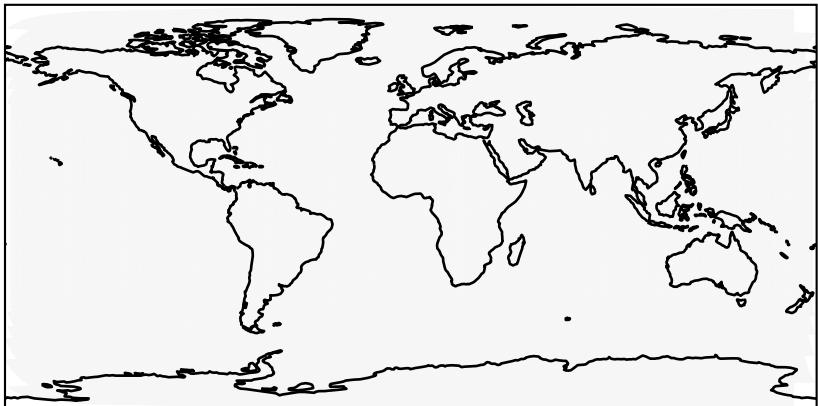
GCHP\_13.0.0-beta.0 (Ref)  
c48



GCHP\_13.0.0-offlineEmis (Dev)  
c48

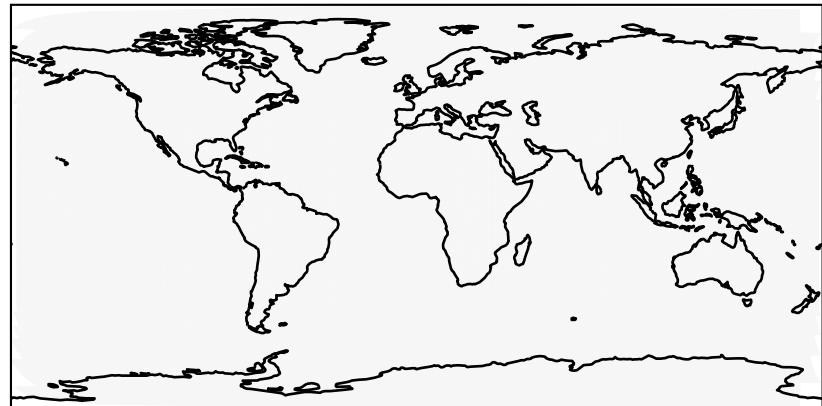


Difference  
Dev - Ref, Dynamic Range



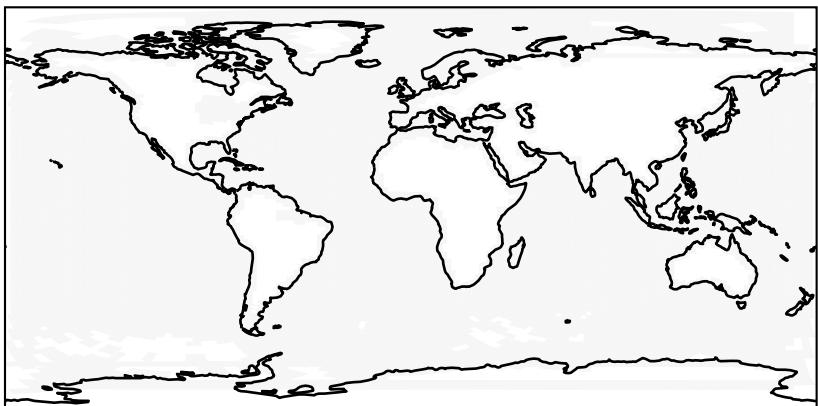
Zero throughout domain  
kg/m<sup>2</sup>/s

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



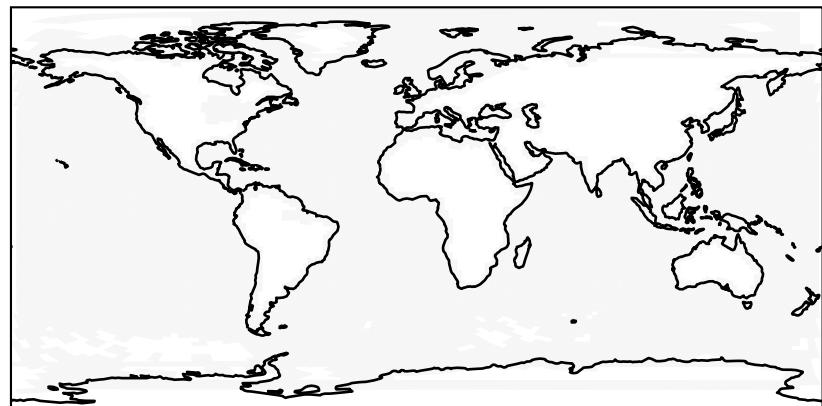
Zero throughout domain  
kg/m<sup>2</sup>/s

Ratio  
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08  
unitless

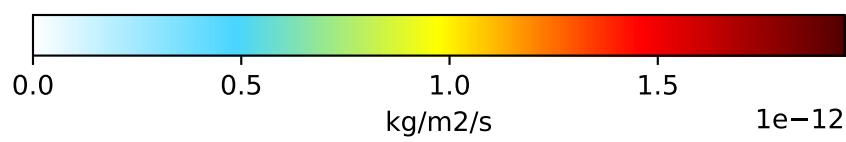
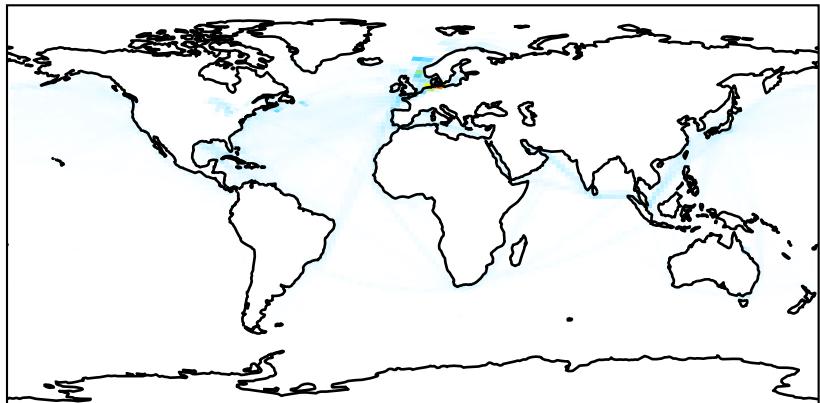
Ratio  
Dev/Ref, Fixed Range



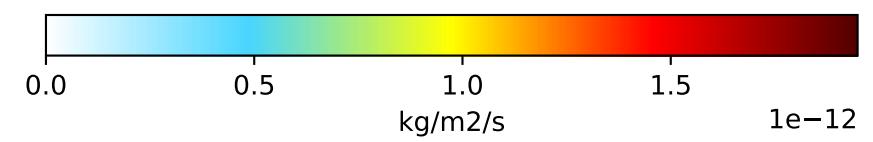
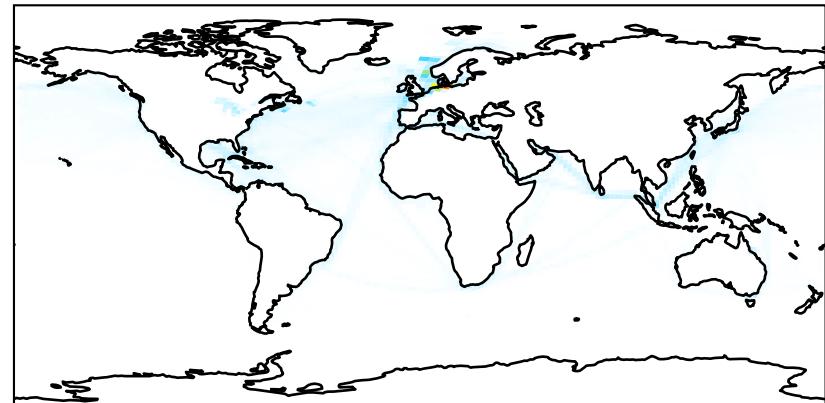
0.50 0.75 1.00 1.50 2.00  
unitless

# EmisPRPE\_Ship

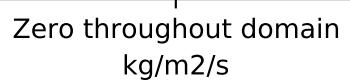
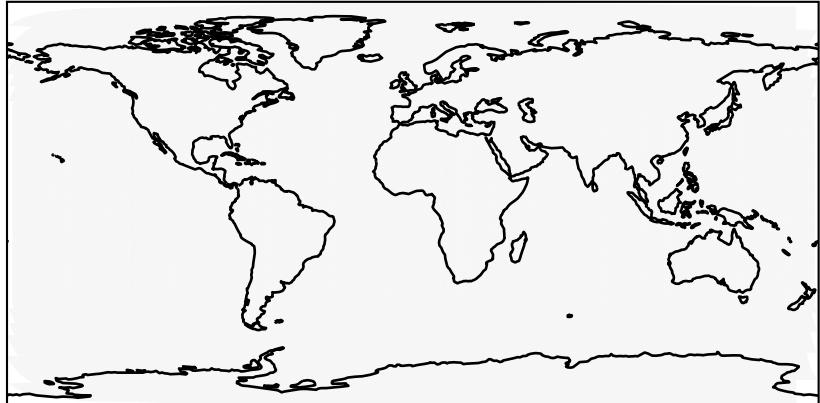
GCHP\_13.0.0-beta.0 (Ref)  
c48



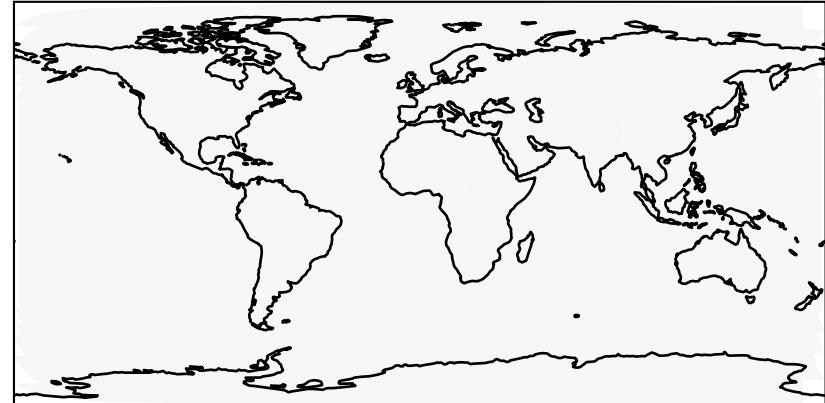
GCHP\_13.0.0-offlineEmis (Dev)  
c48



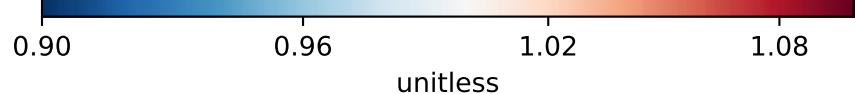
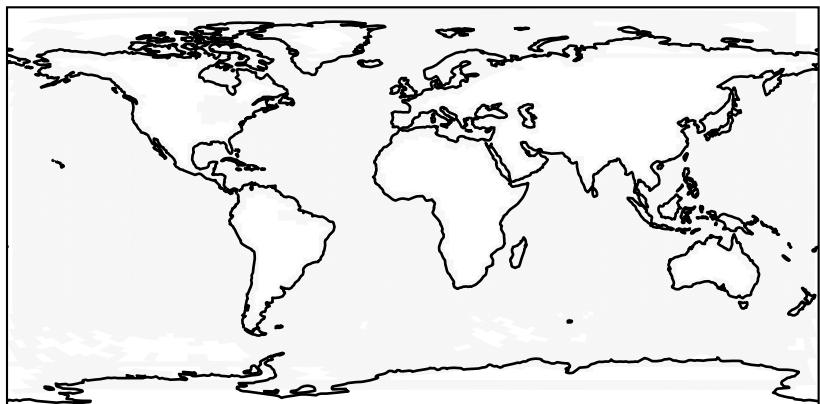
Difference  
Dev - Ref, Dynamic Range



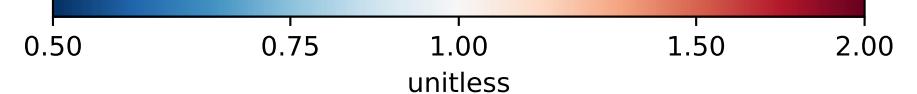
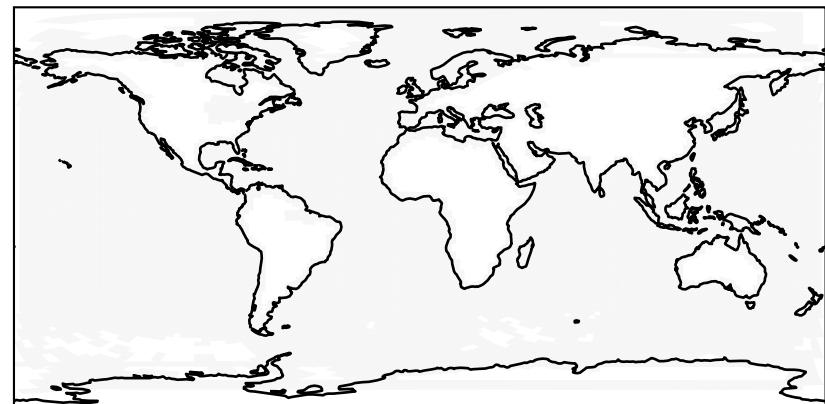
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

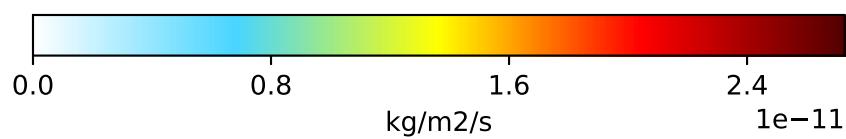
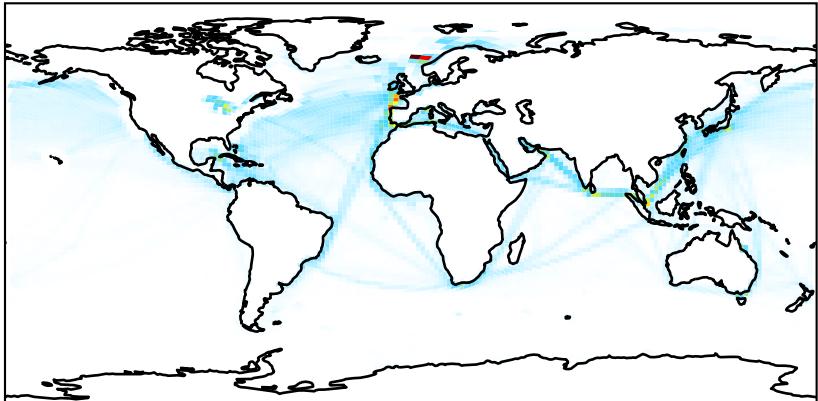


Ratio  
Dev/Ref, Fixed Range

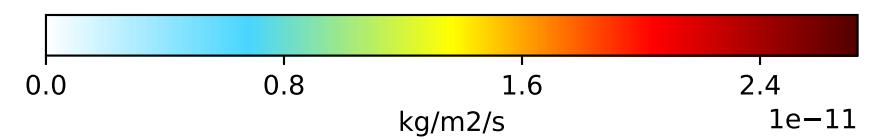
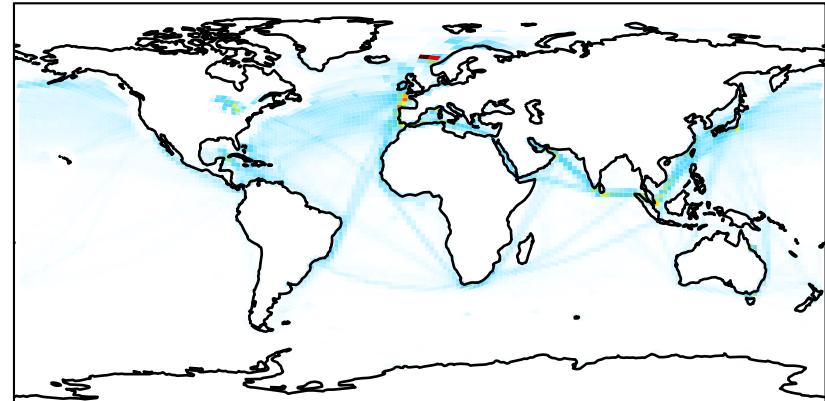


# EmisSO2\_Ship

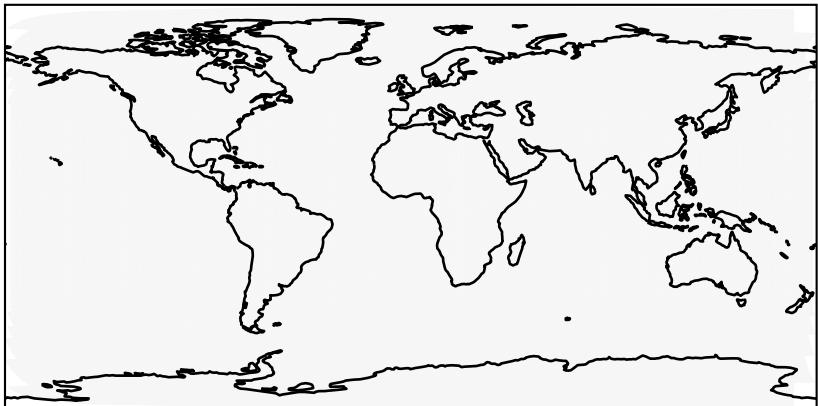
GCHP\_13.0.0-beta.0 (Ref)  
c48



GCHP\_13.0.0-offlineEmis (Dev)  
c48

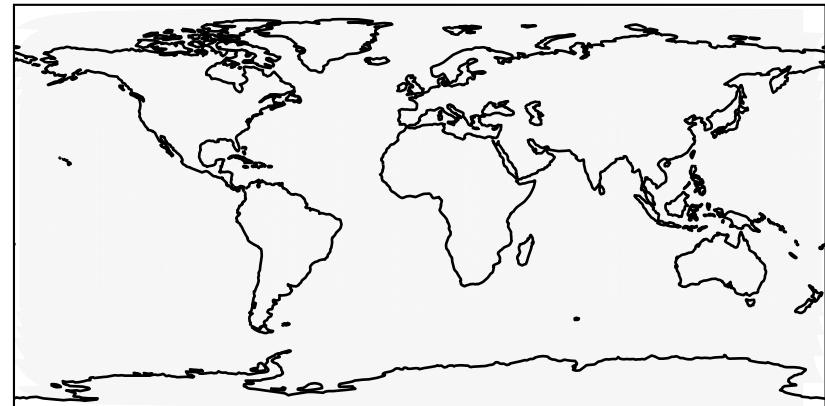


Difference  
Dev - Ref, Dynamic Range



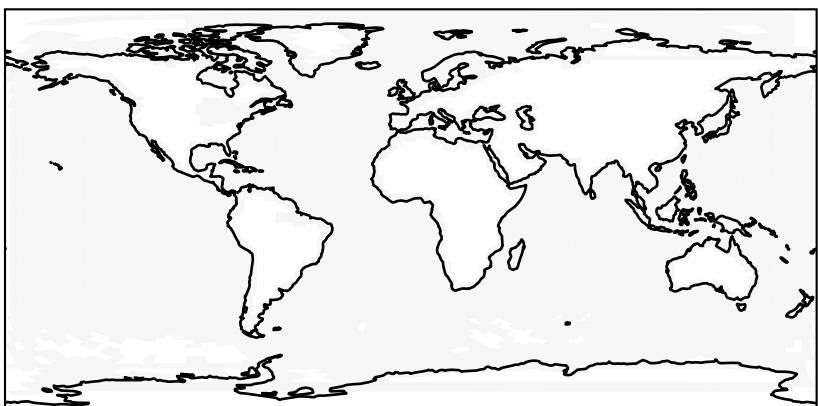
Zero throughout domain  
kg/m<sup>2</sup>/s

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



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

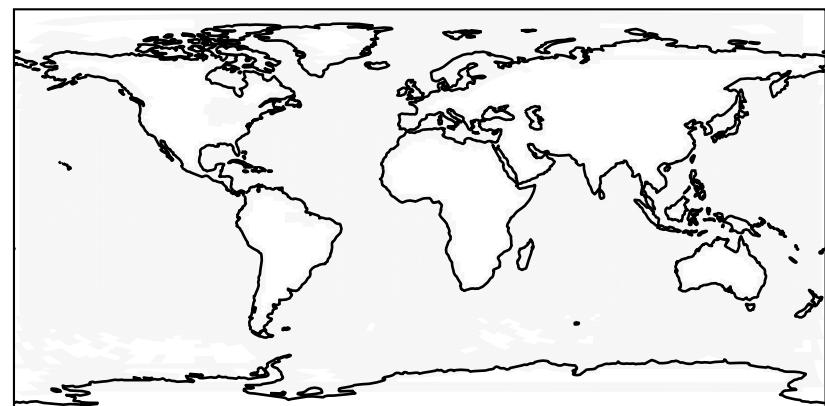
Ratio  
Dev/Ref, Dynamic Range



0.90 0.96 1.02 1.08

unitless

Ratio  
Dev/Ref, Fixed Range

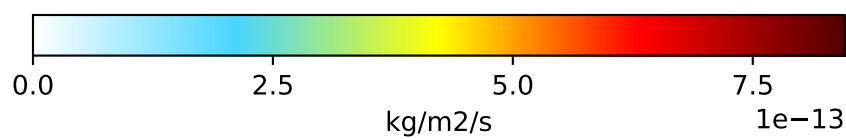
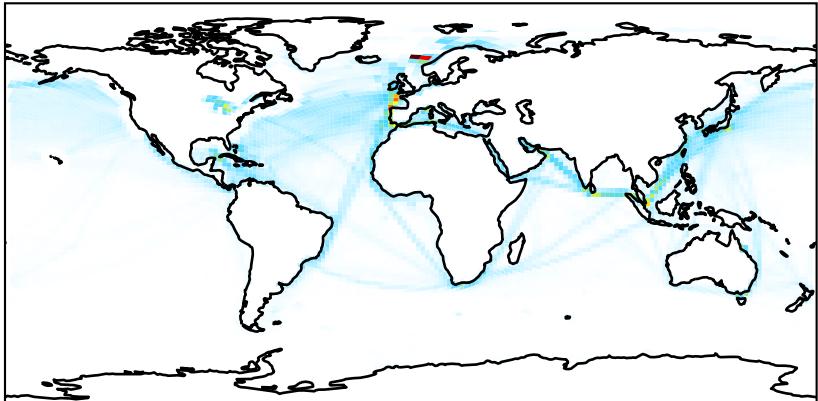


0.50 0.75 1.00 1.50 2.00

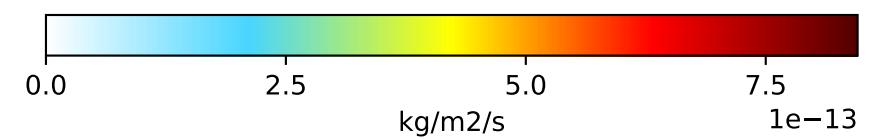
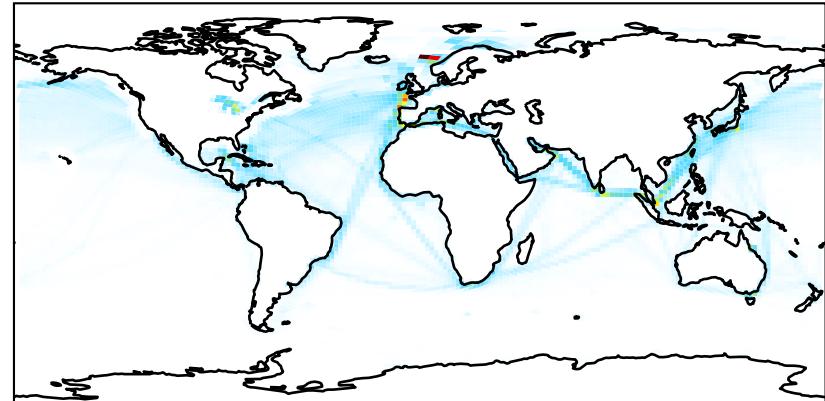
unitless

# EmisSO4\_Ship

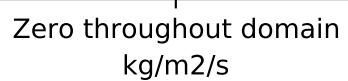
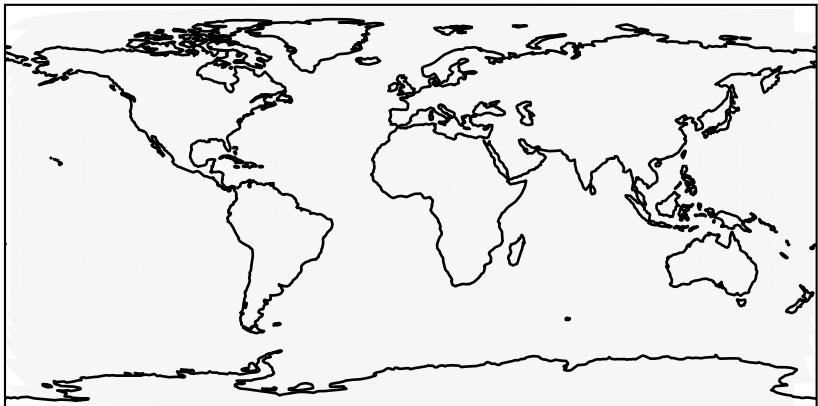
GCHP\_13.0.0-beta.0 (Ref)  
c48



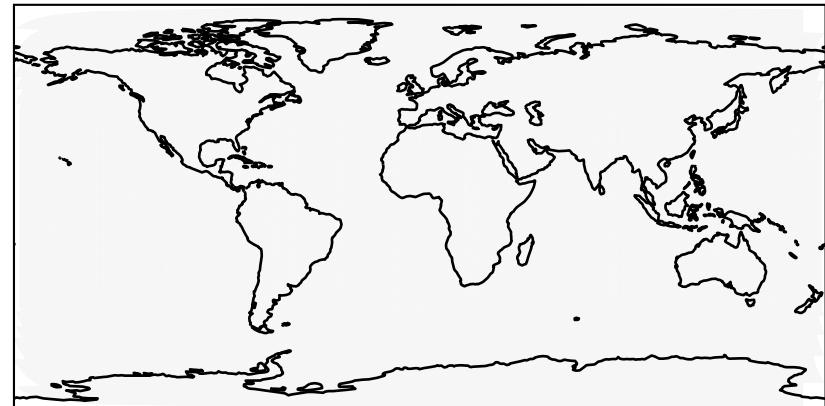
GCHP\_13.0.0-offlineEmis (Dev)  
c48



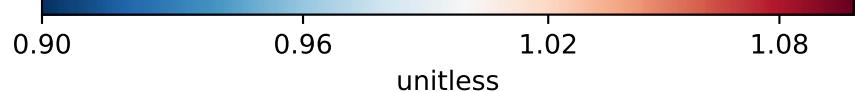
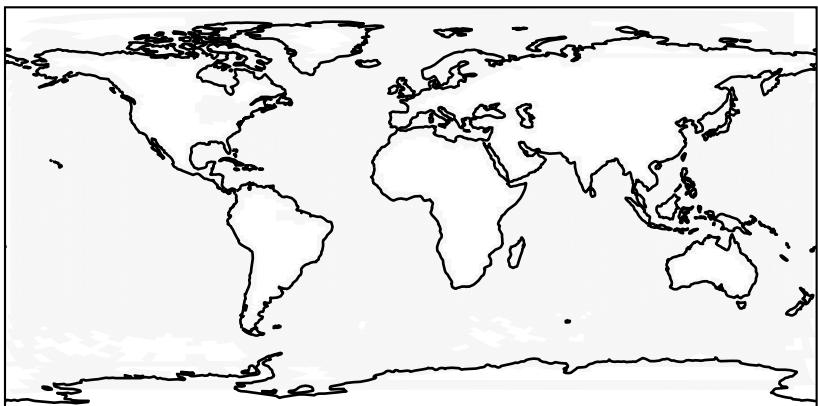
Difference  
Dev - Ref, Dynamic Range



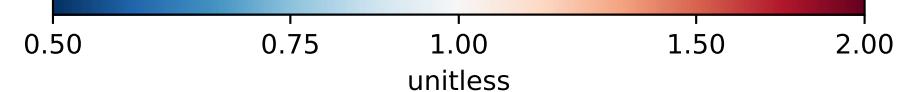
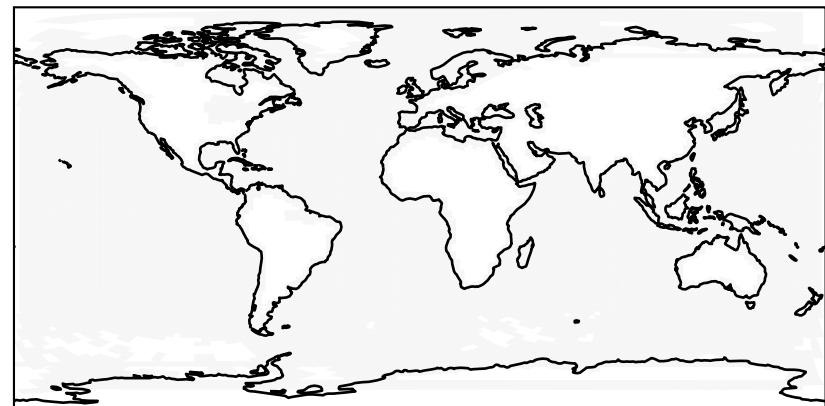
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

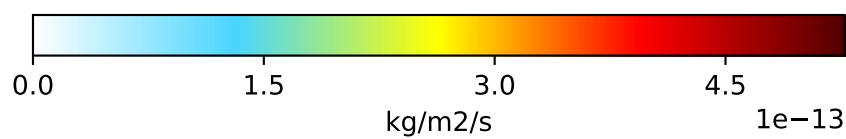
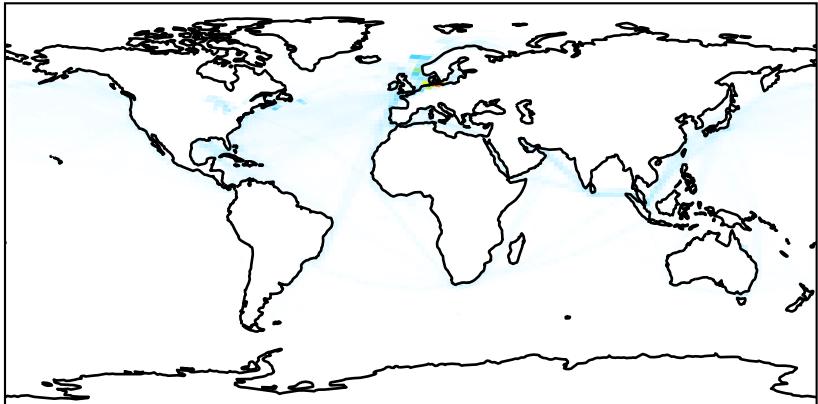


Ratio  
Dev/Ref, Fixed Range

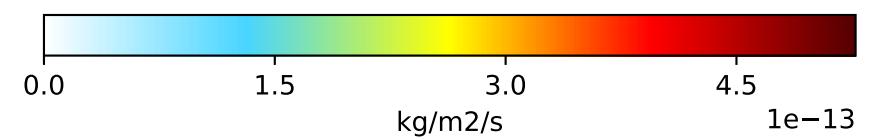
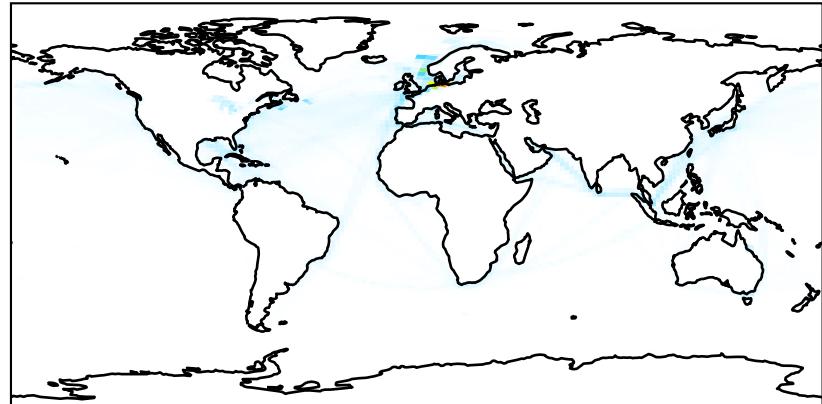


# EmisSOAP\_Ship

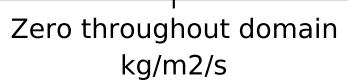
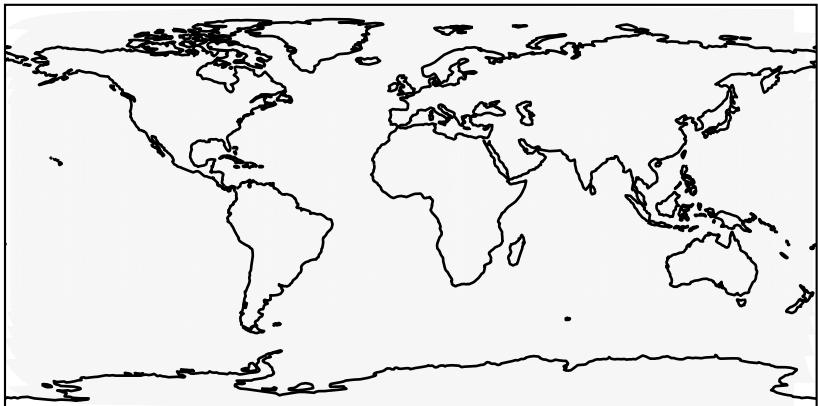
GCHP\_13.0.0-beta.0 (Ref)  
c48



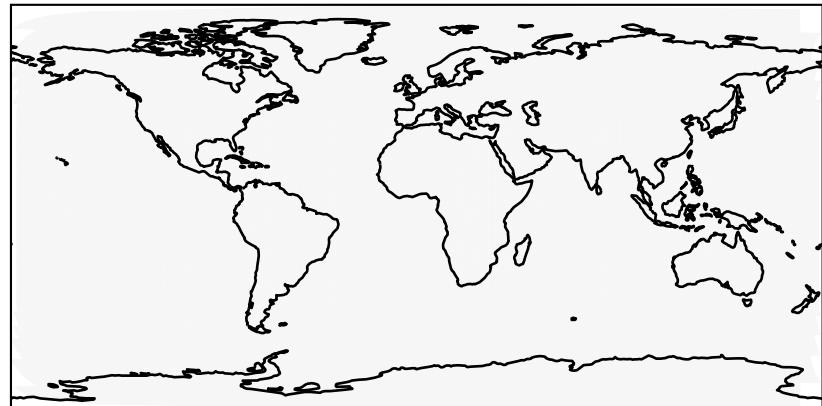
GCHP\_13.0.0-offlineEmis (Dev)  
c48



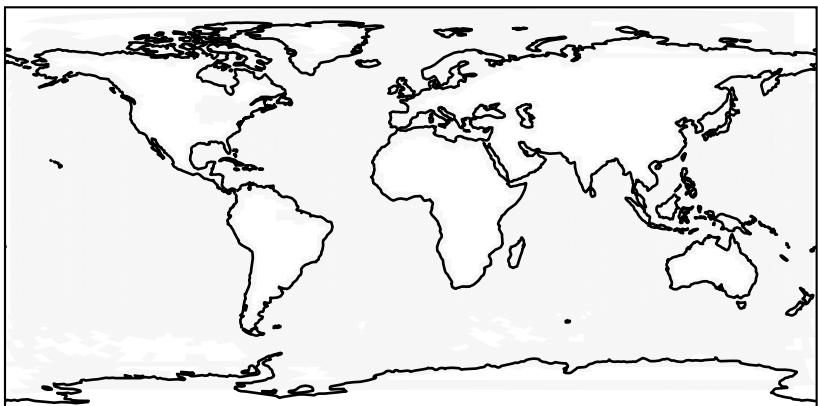
Difference  
Dev - Ref, Dynamic Range



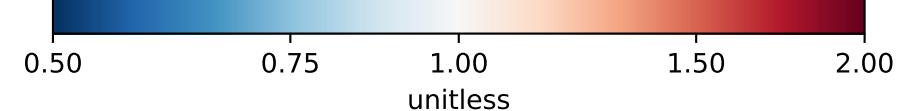
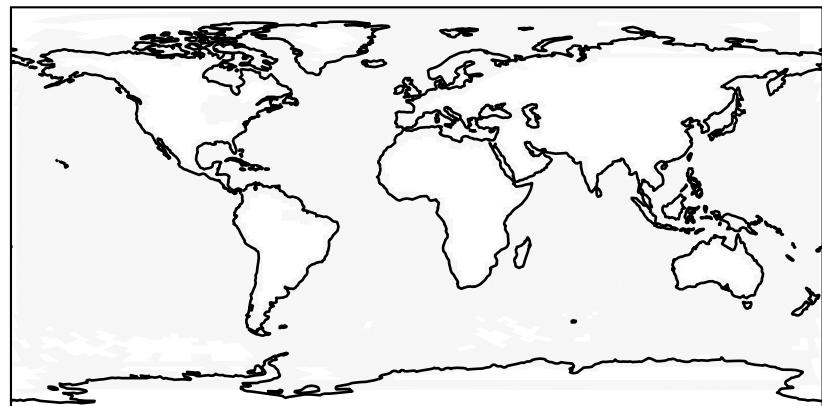
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

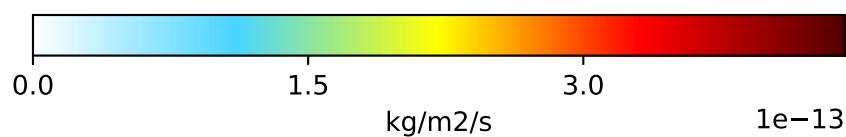
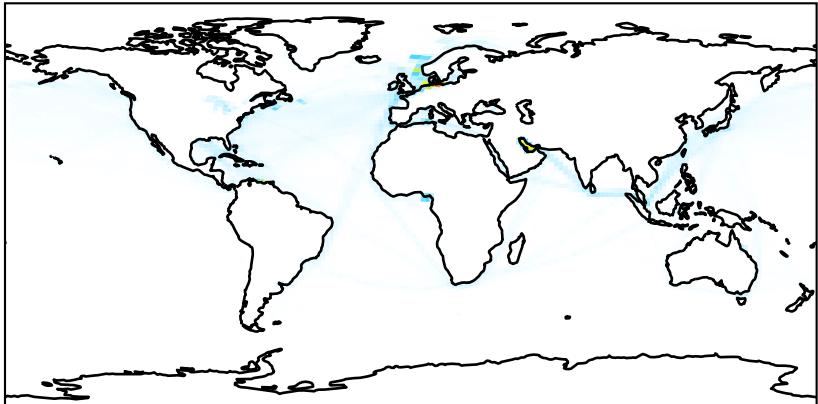


Ratio  
Dev/Ref, Fixed Range

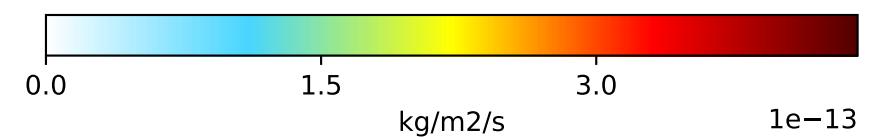
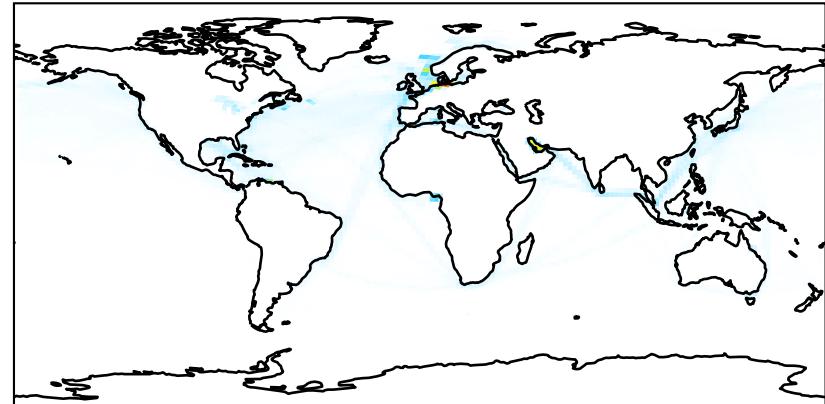


# EmisTOLU\_Ship

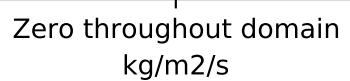
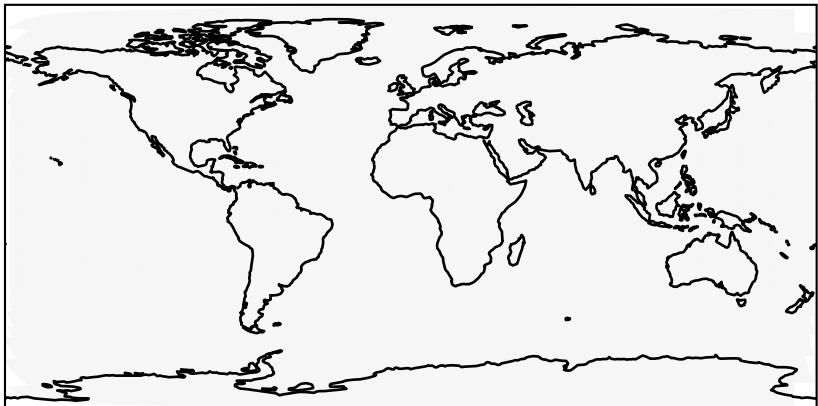
GCHP\_13.0.0-beta.0 (Ref)  
c48



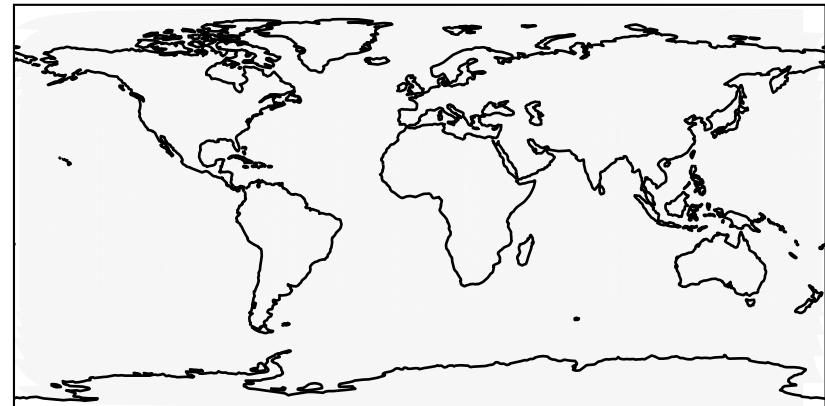
GCHP\_13.0.0-offlineEmis (Dev)  
c48



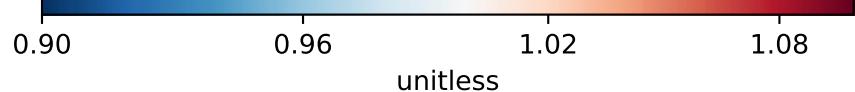
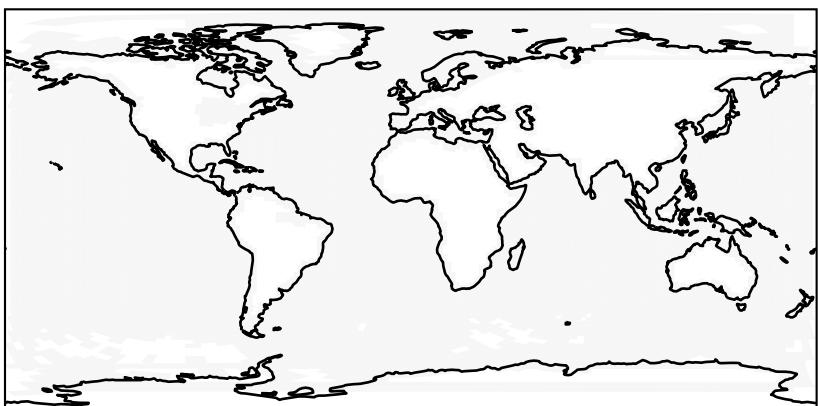
Difference  
Dev - Ref, Dynamic Range



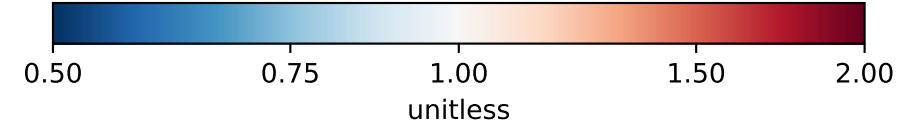
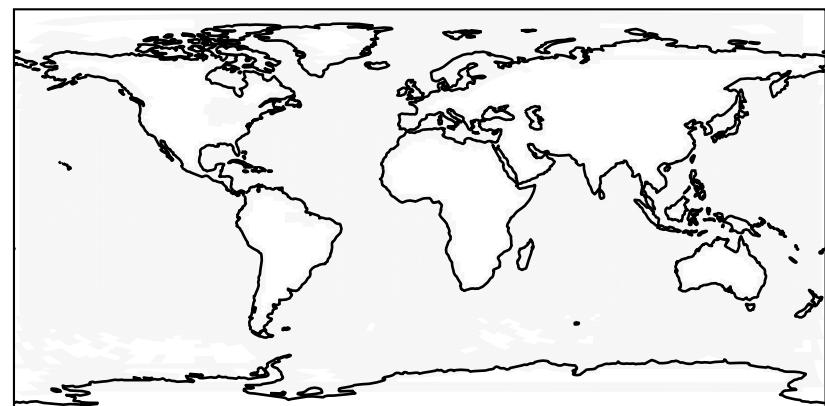
Difference  
Dev - Ref, Restricted Range [5%,95%]



Ratio  
Dev/Ref, Dynamic Range

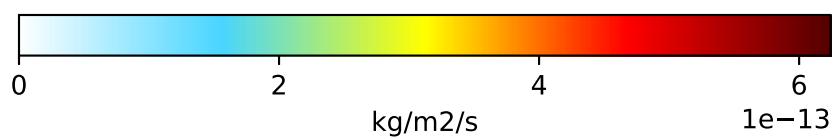
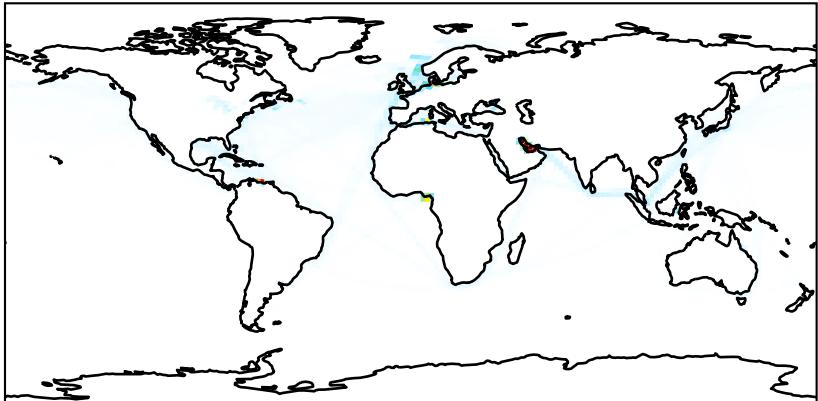


Ratio  
Dev/Ref, Fixed Range

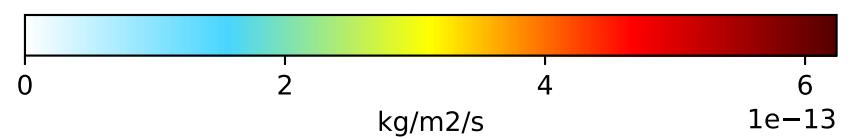
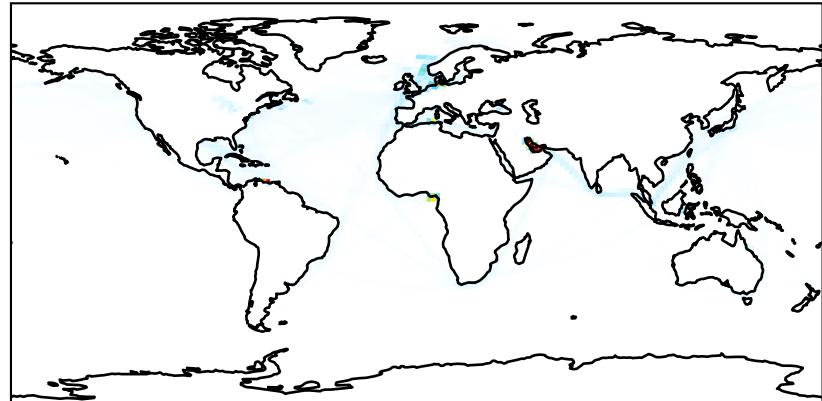


# EmisXYLE\_Ship

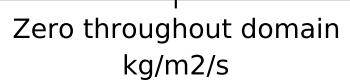
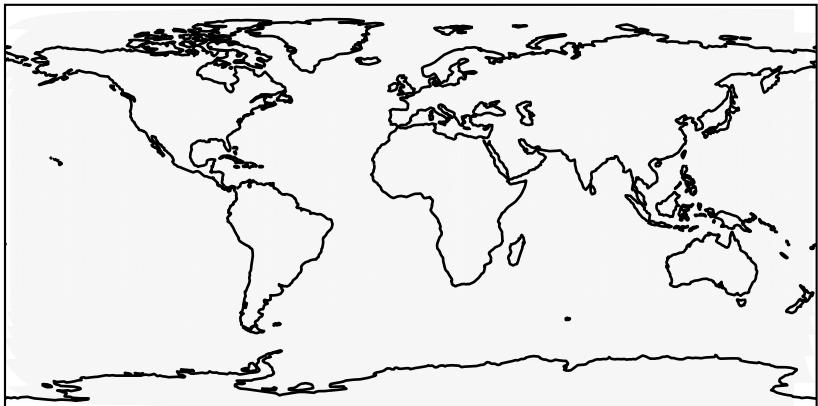
GCHP\_13.0.0-beta.0 (Ref)  
c48



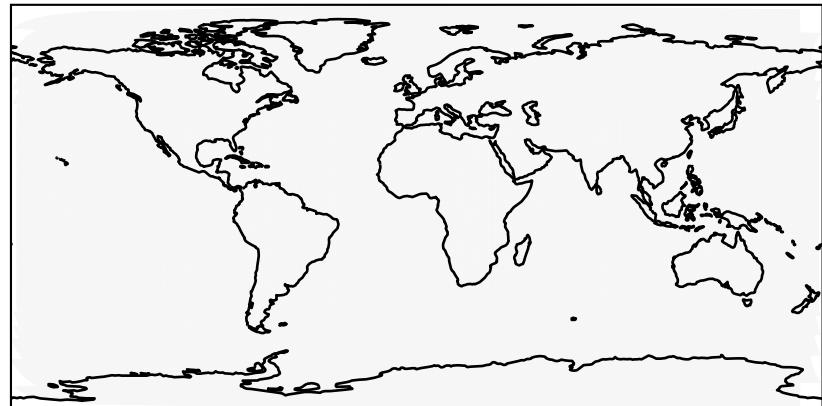
GCHP\_13.0.0-offlineEmis (Dev)  
c48



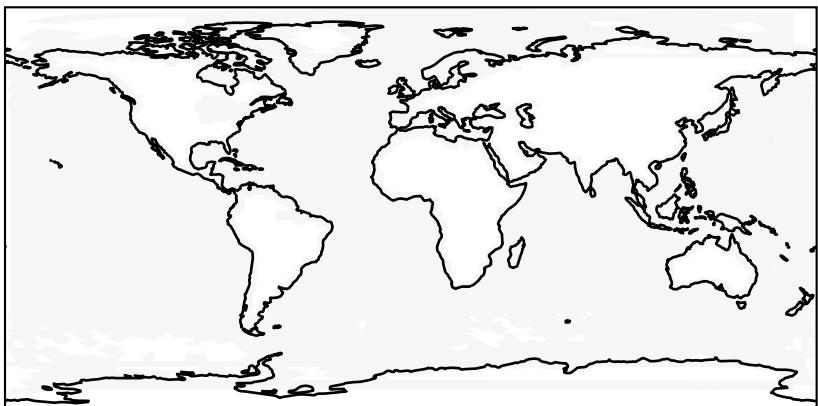
Difference  
Dev - Ref, Dynamic Range



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



Ratio  
Dev/Ref, Dynamic Range



Ratio  
Dev/Ref, Fixed Range

