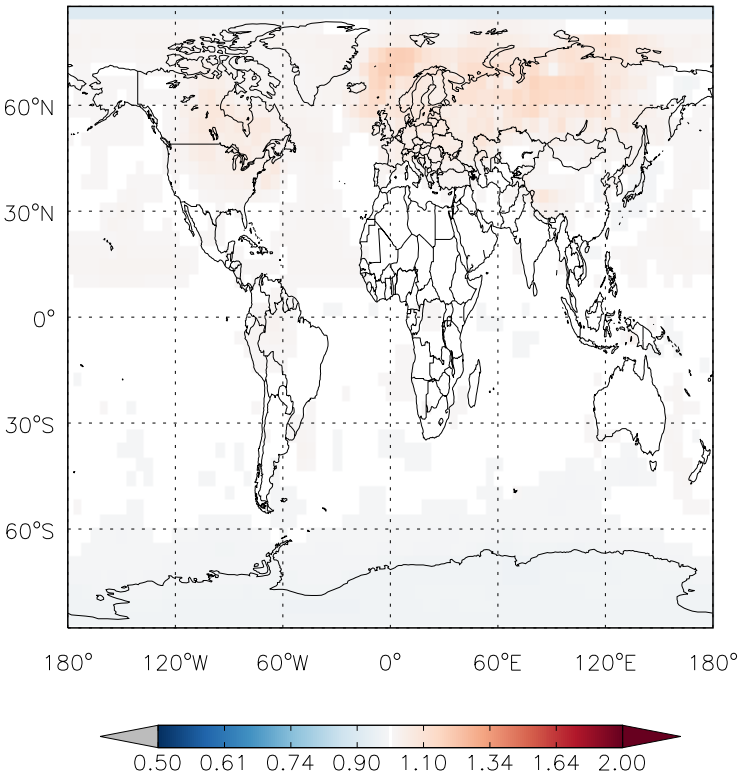
GEOS−Chem Ratio Maps at surface and 500 hPa

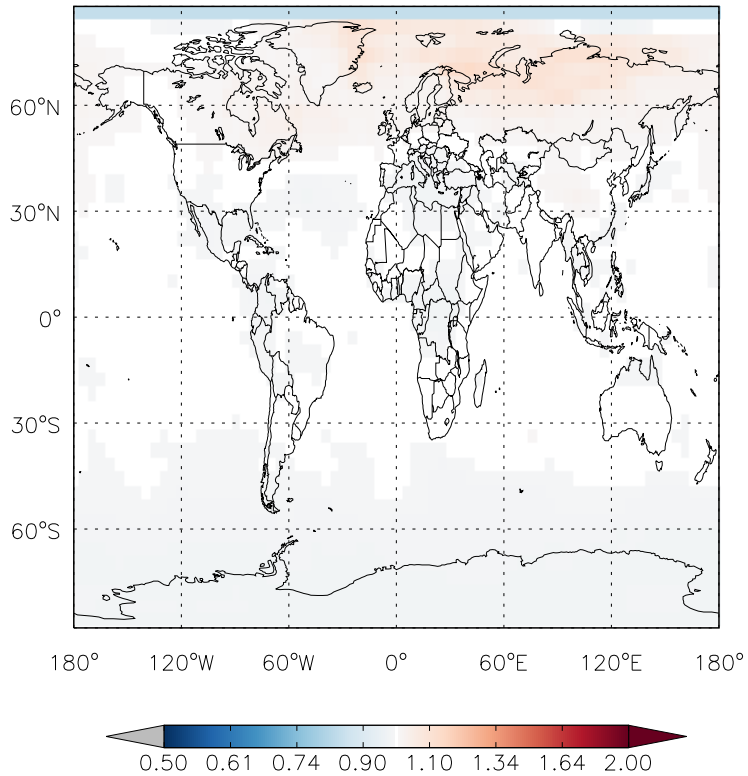
v11−01g−Run0 / v11−01f−geosfp−Run0

NO / Ratio @ Surface for Oct



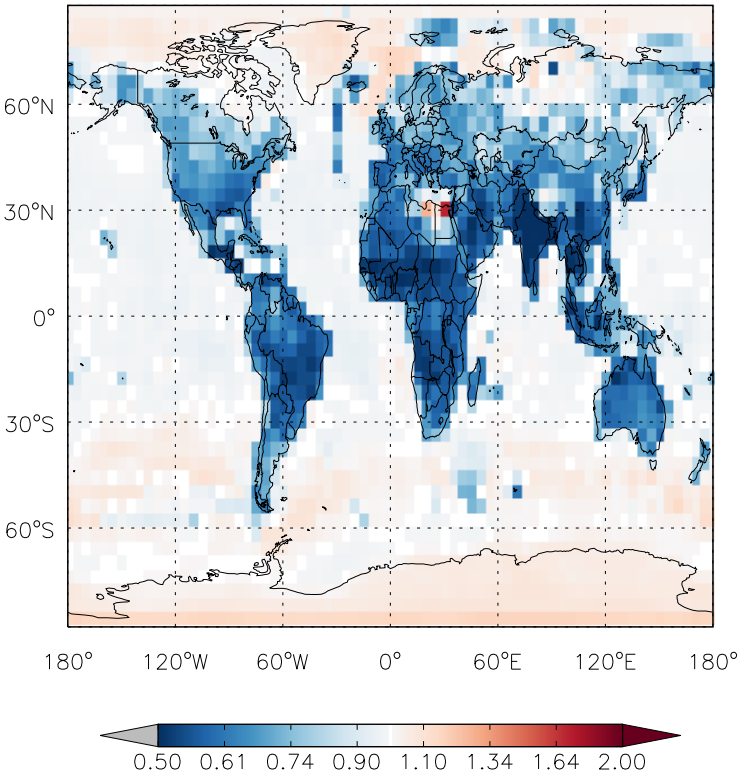
v11−01g−Run0 / v11−01f−geosfp−Run0

NO/ Ratio @ 500 hPa for Oct



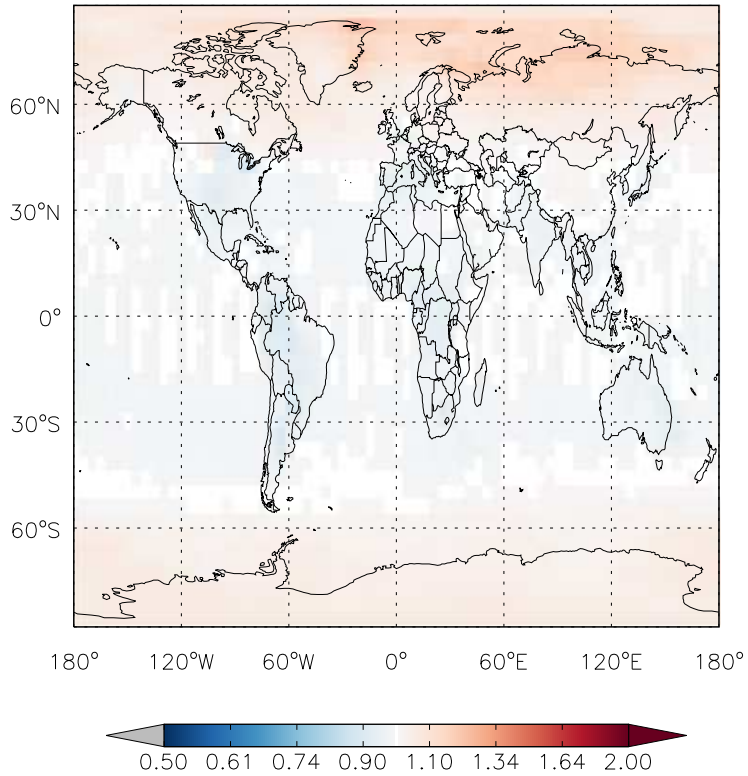
v11−01g−Run0 / v11−01d−Run1

NO / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

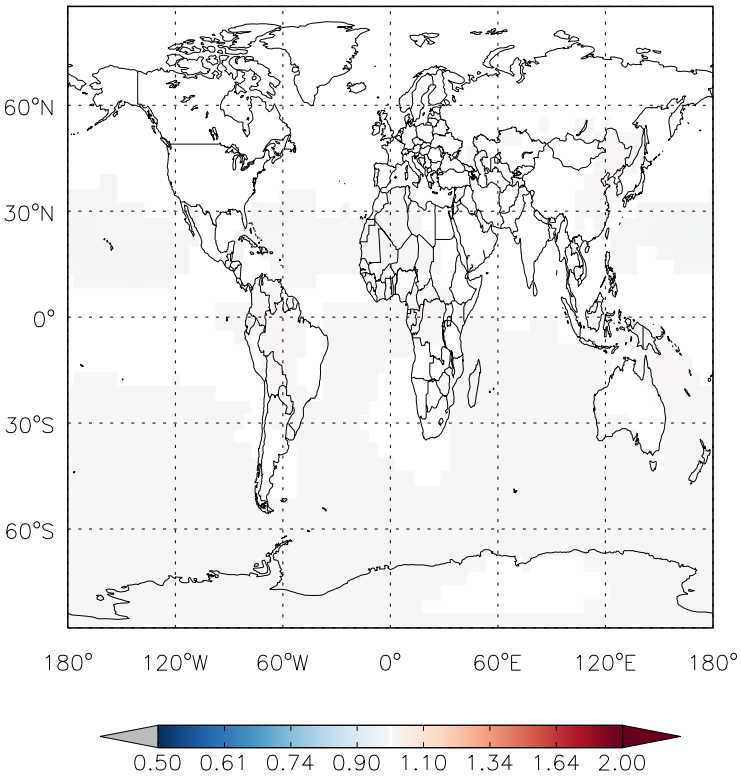
NO/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

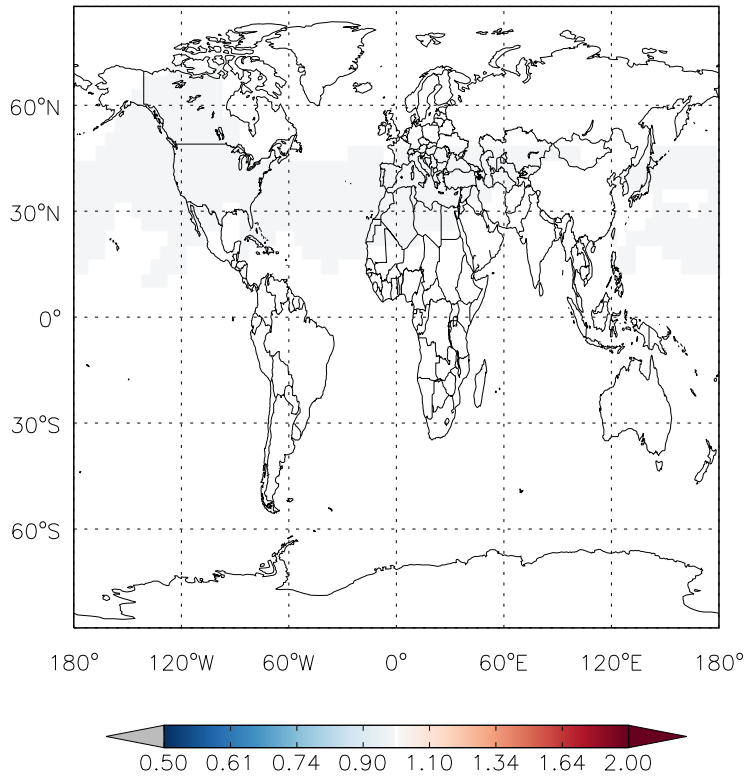
v11-01g-Run0 / v11-01f-geosfp-Run0

O3 / Ratio @ Surface for Oct



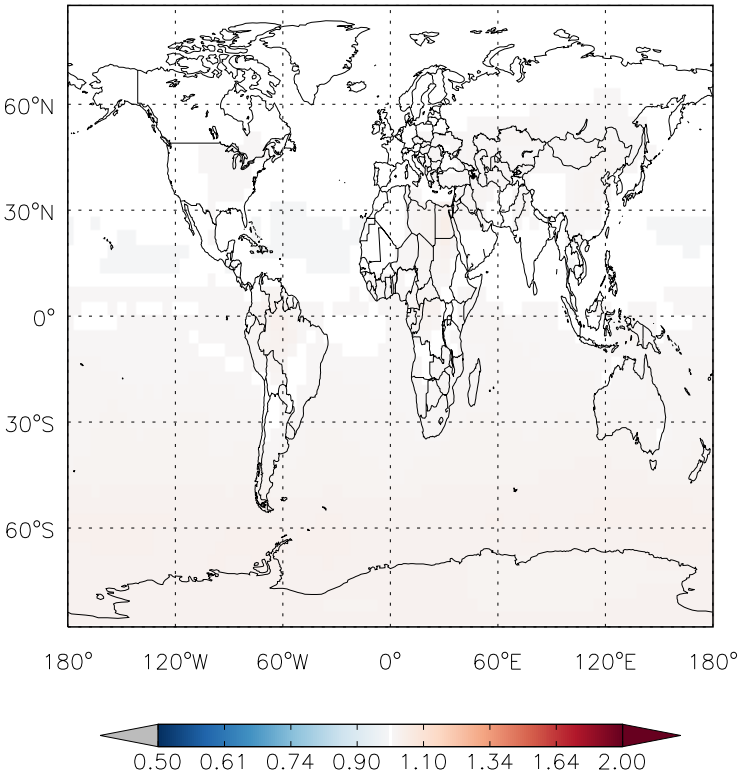
v11-01g-Run0 / v11-01f-geosfp-Run0

O3/ Ratio @ 500 hPa for Oct



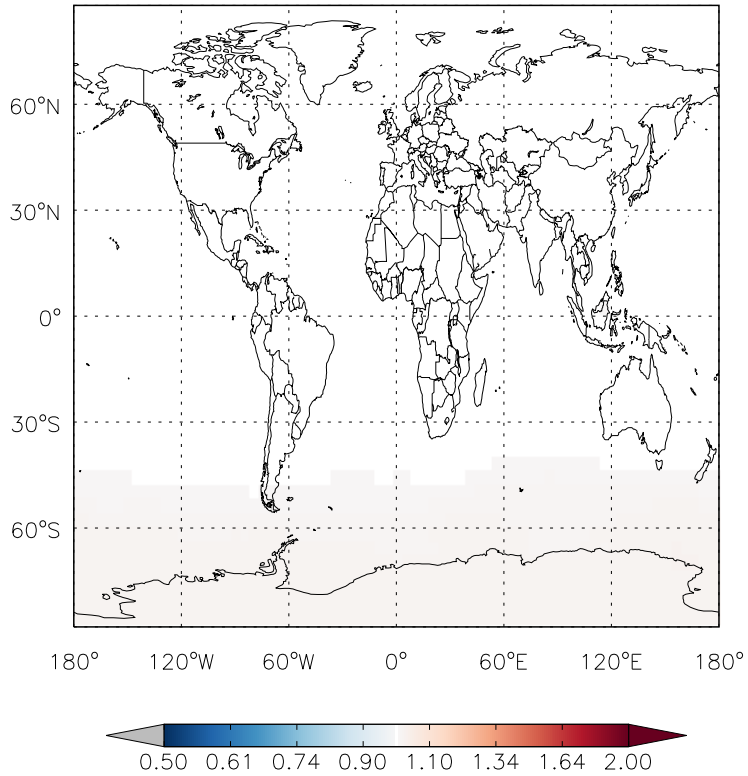
v11-01g-Run0 / v11-01d-Run1

O3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

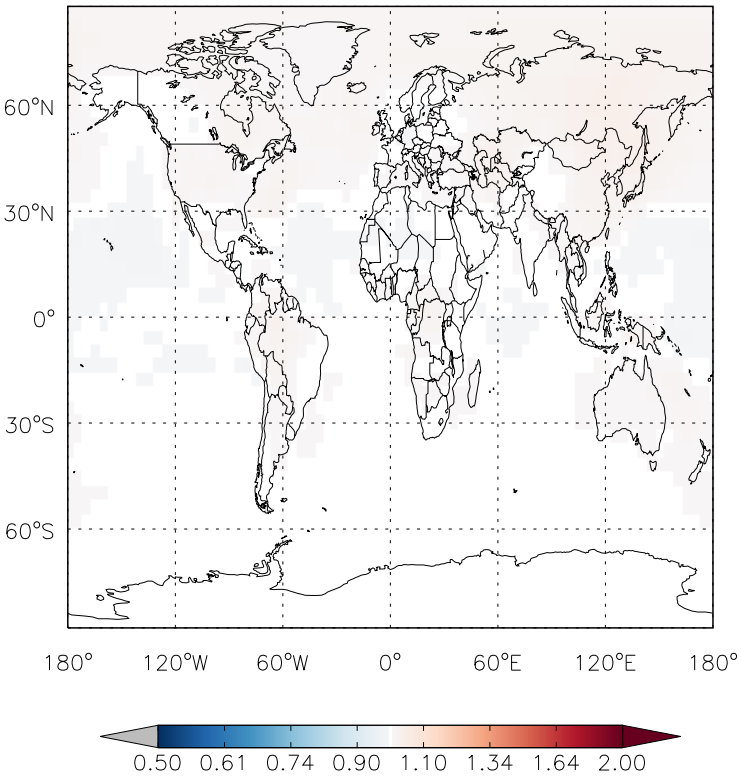
O3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

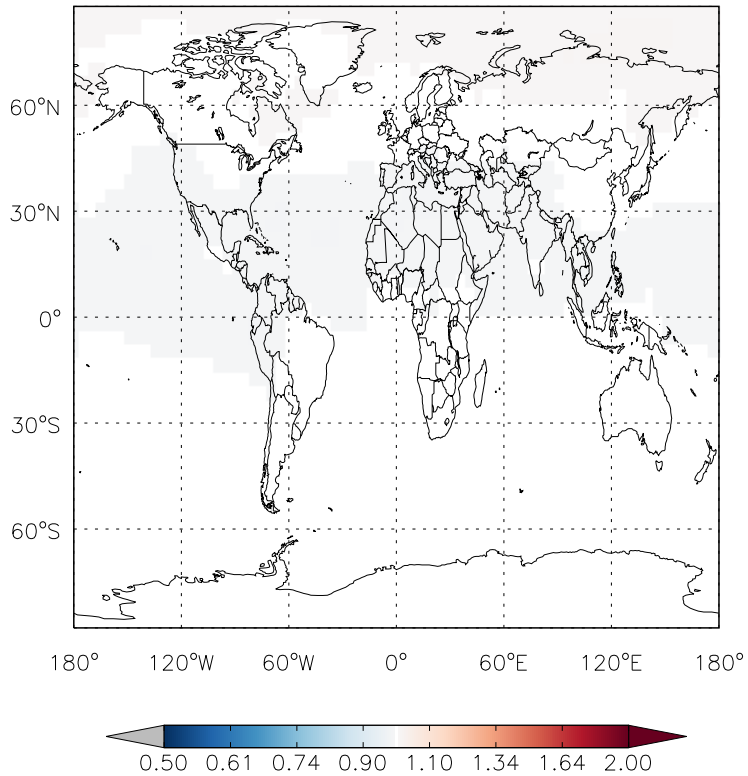
v11-01g-Run0 / v11-01f-geosfp-Run0

PAN / Ratio @ Surface for Oct



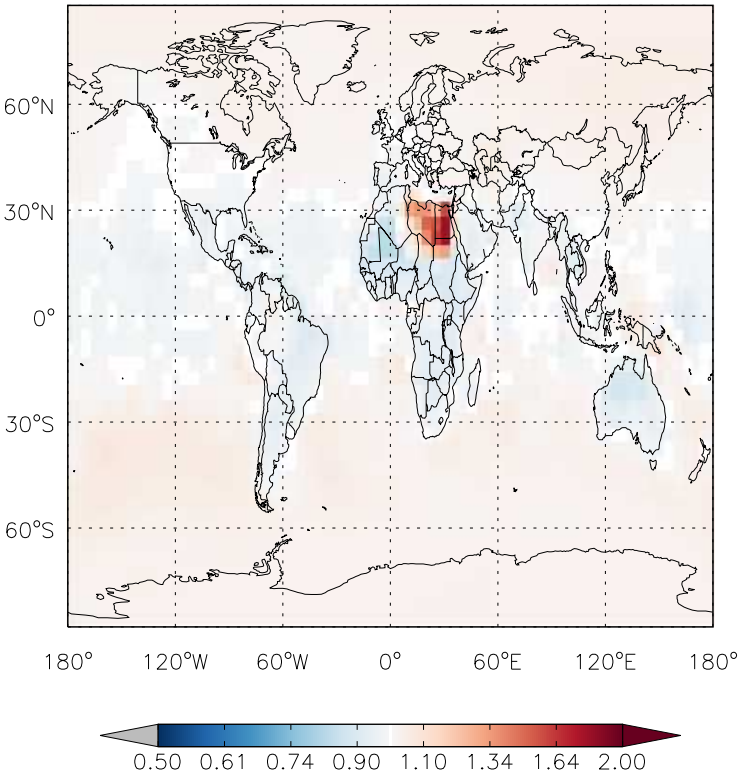
v11-01g-Run0 / v11-01f-geosfp-Run0

PAN/ Ratio @ 500 hPa for Oct



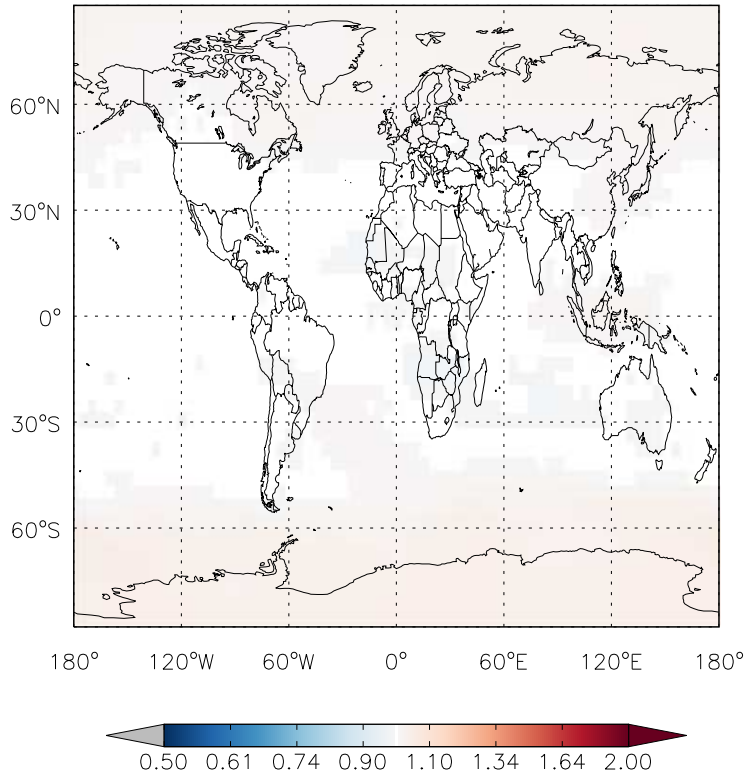
v11-01g-Run0 / v11-01d-Run1

PAN / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

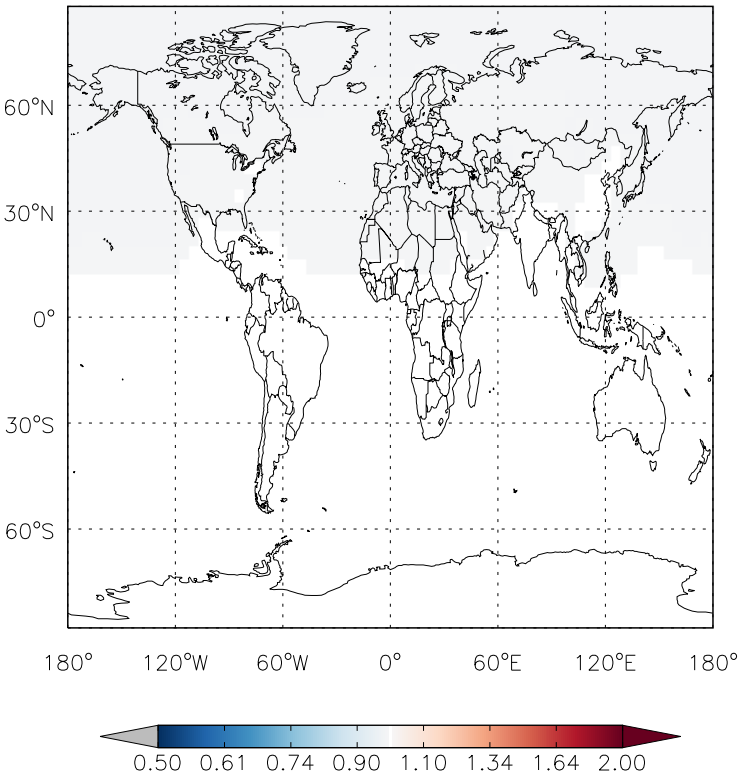
PAN/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

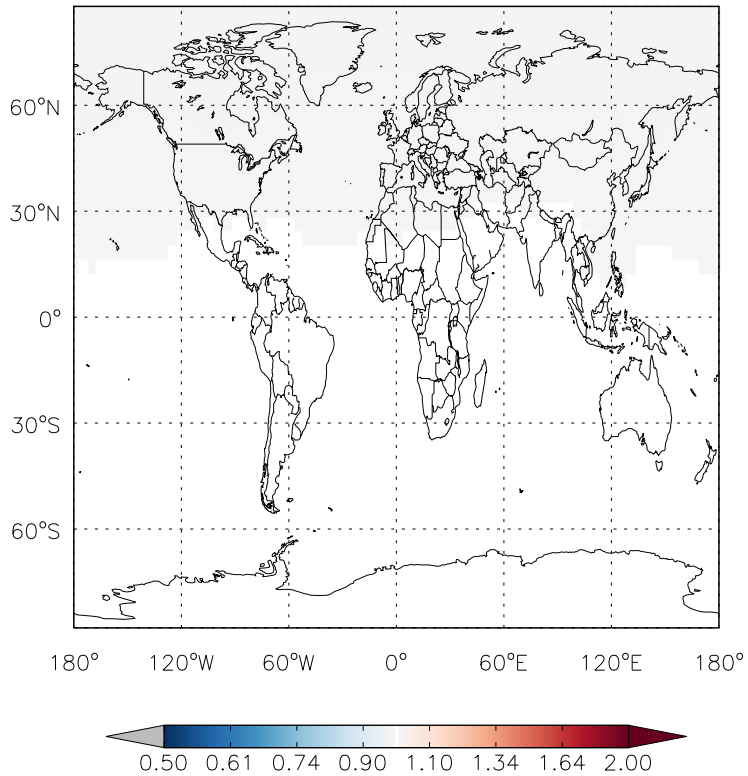
v11-01g-Run0 / v11-01f-geosfp-Run0

CO / Ratio @ Surface for Oct



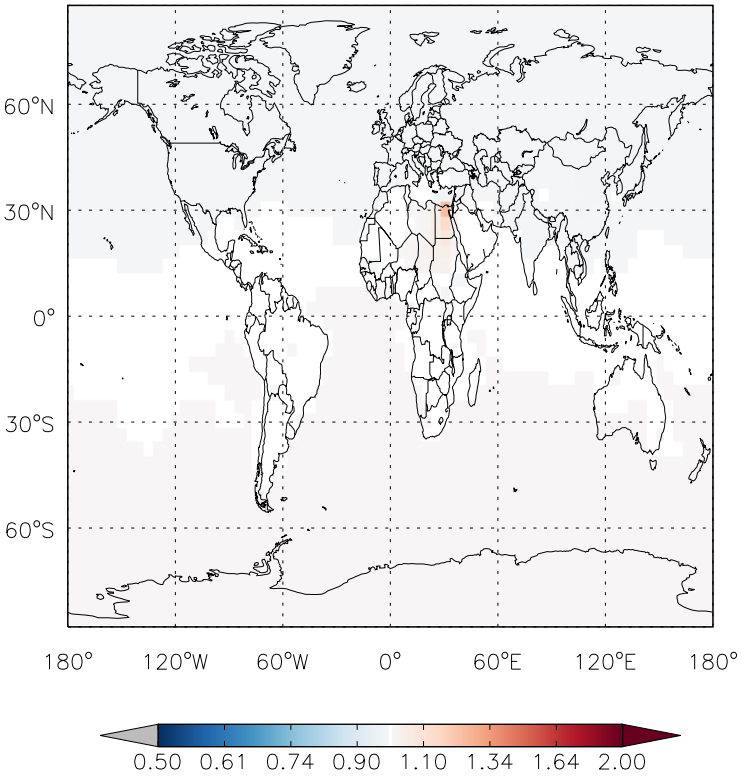
v11-01g-Run0 / v11-01f-geosfp-Run0

CO/ Ratio @ 500 hPa for Oct



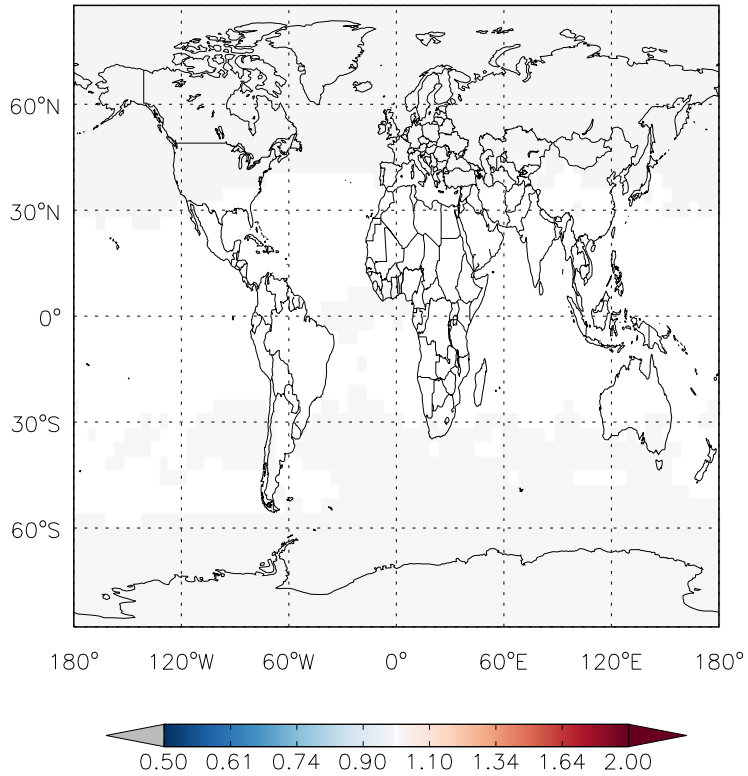
v11-01g-Run0 / v11-01d-Run1

CO / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

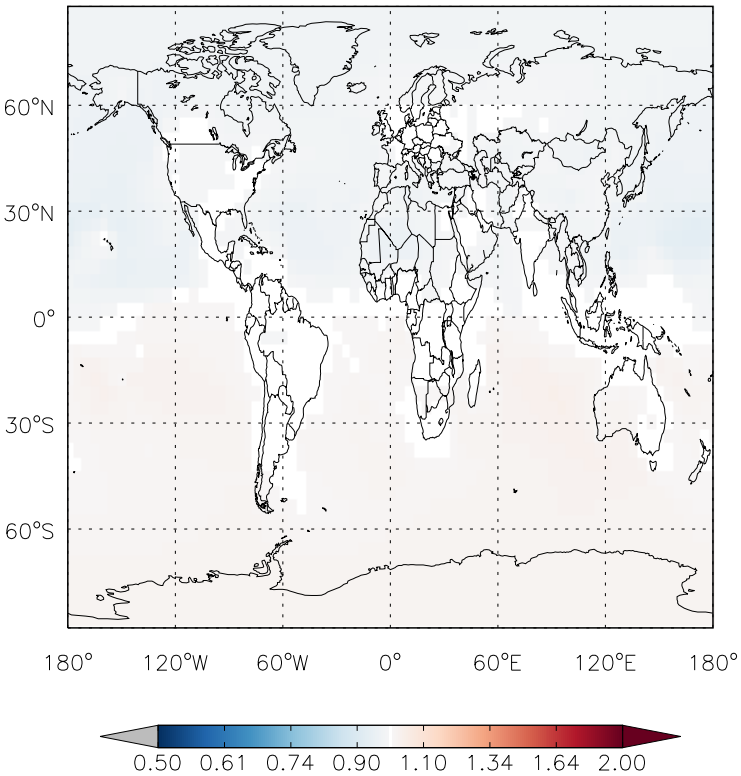
CO/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

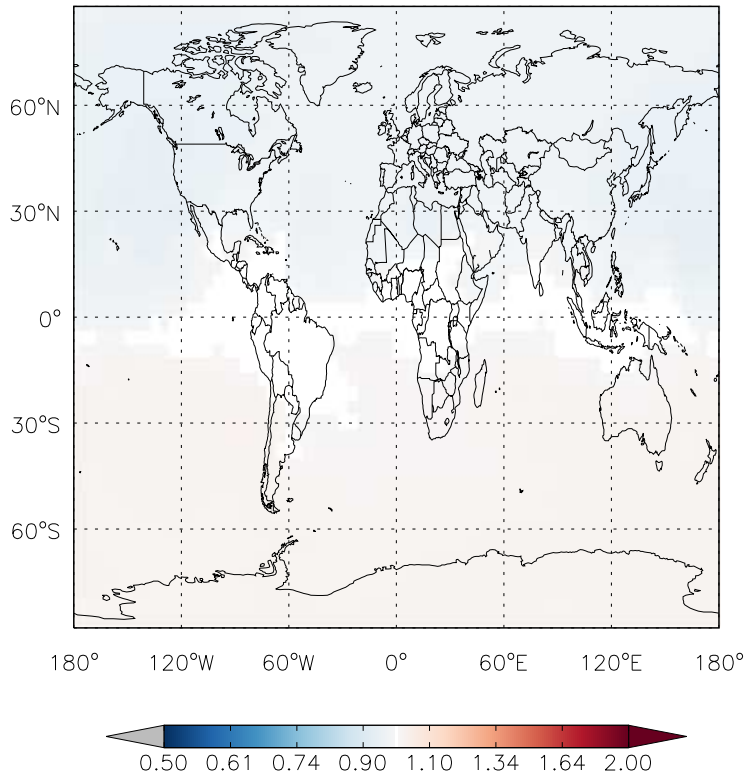
v11-01g-Run0 / v11-01f-geosfp-Run0

ALK4 / Ratio @ Surface for Oct



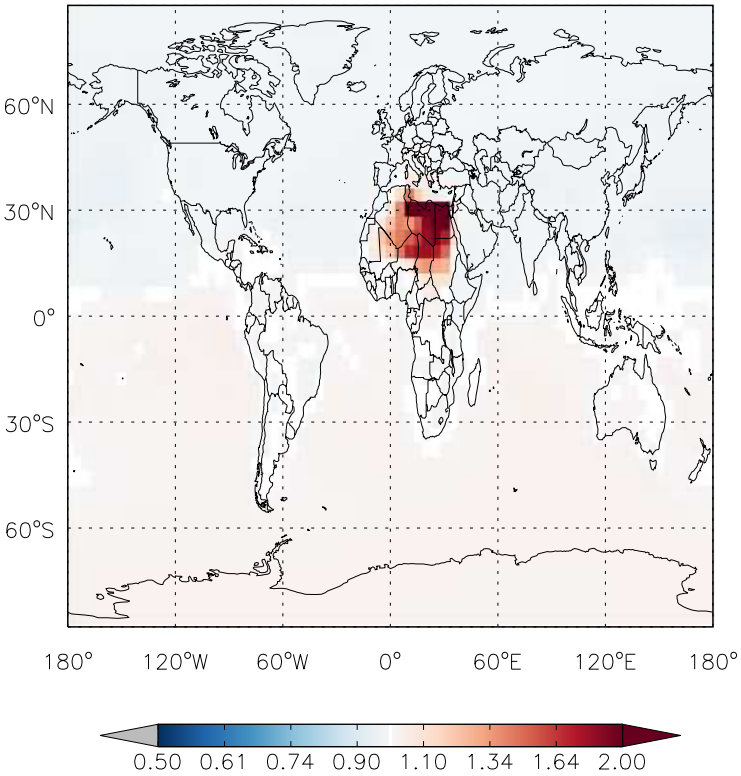
v11-01g-Run0 / v11-01f-geosfp-Run0

ALK4/ Ratio @ 500 hPa for Oct



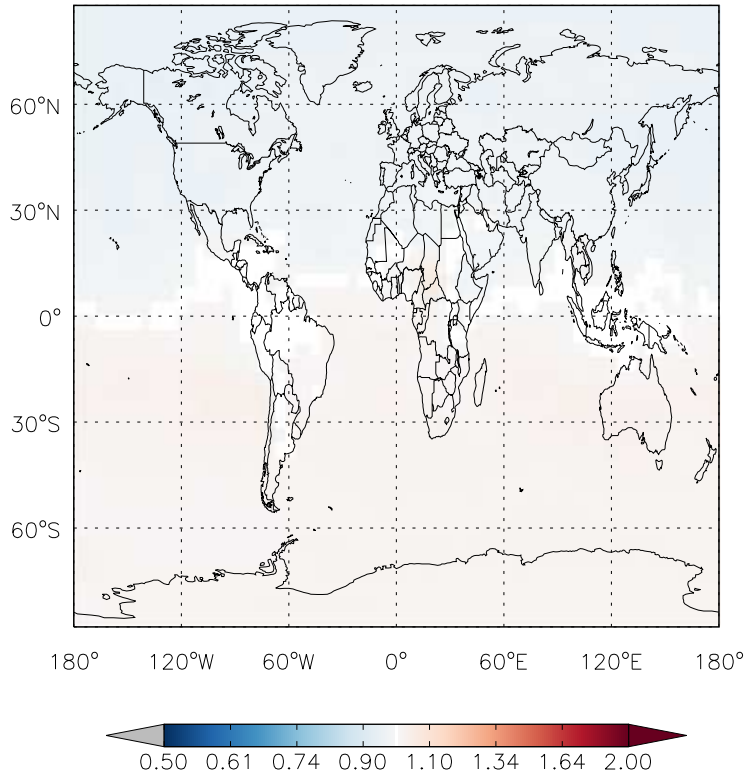
v11-01g-Run0 / v11-01d-Run1

ALK4 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

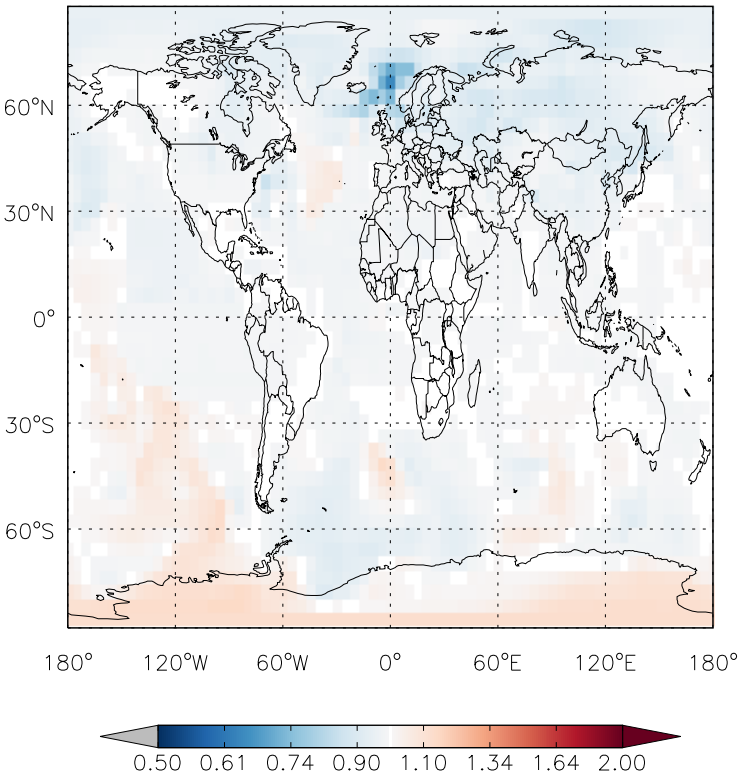
ALK4/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

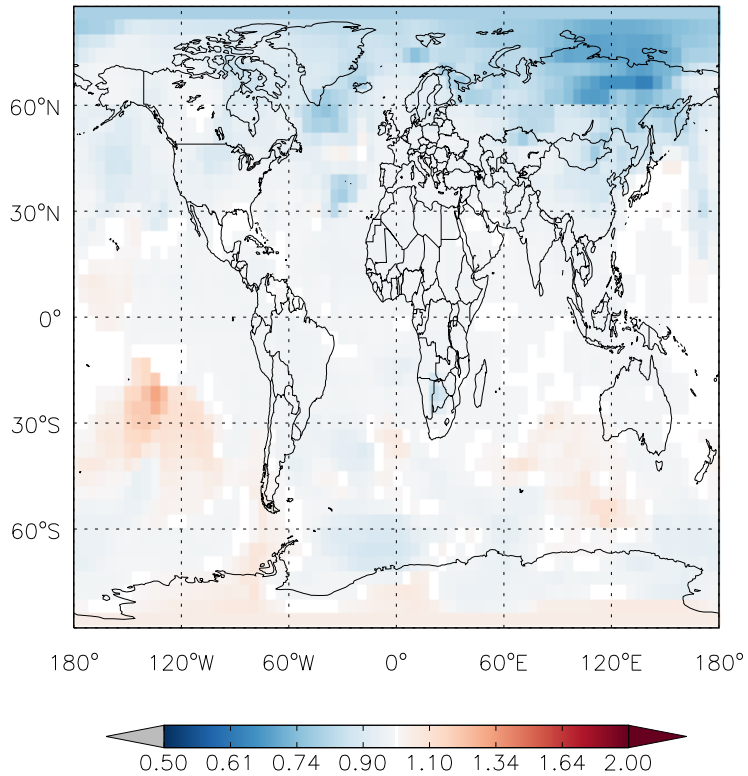
v11-01g-Run0 / v11-01f-geosfp-Run0

ISOP / Ratio @ Surface for Oct



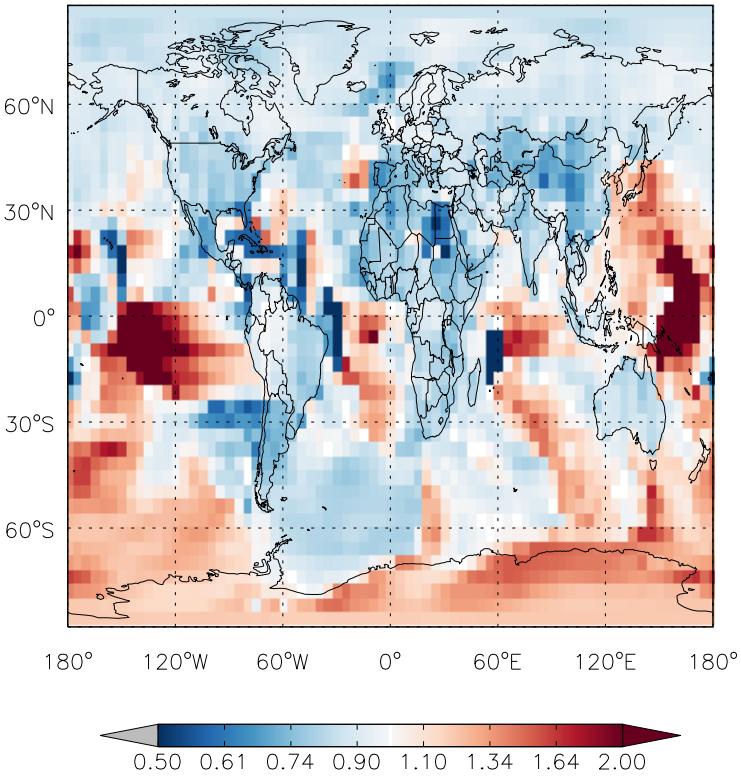
v11-01g-Run0 / v11-01f-geosfp-Run0

ISOP/ Ratio @ 500 hPa for Oct



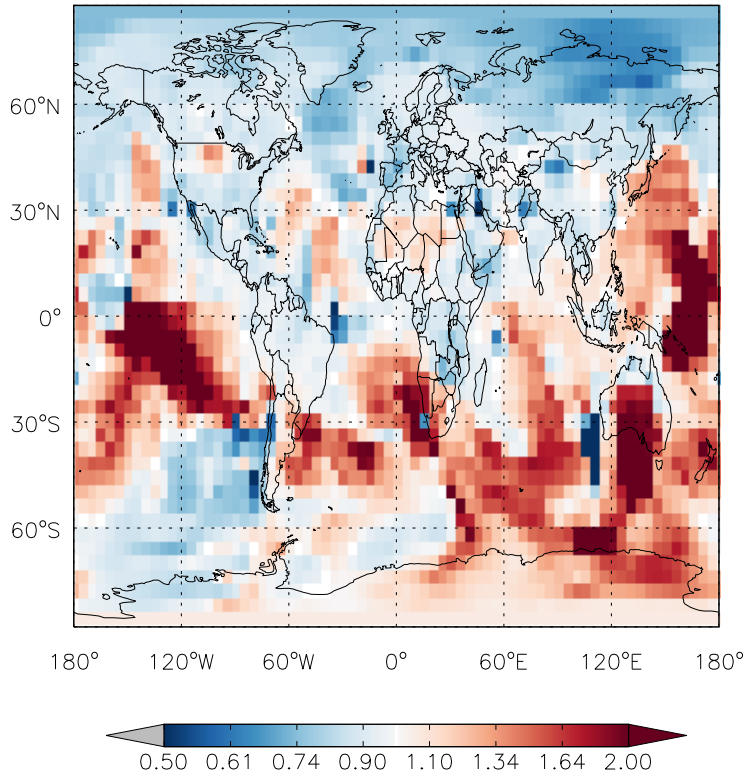
v11-01g-Run0 / v11-01d-Run1

ISOP / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

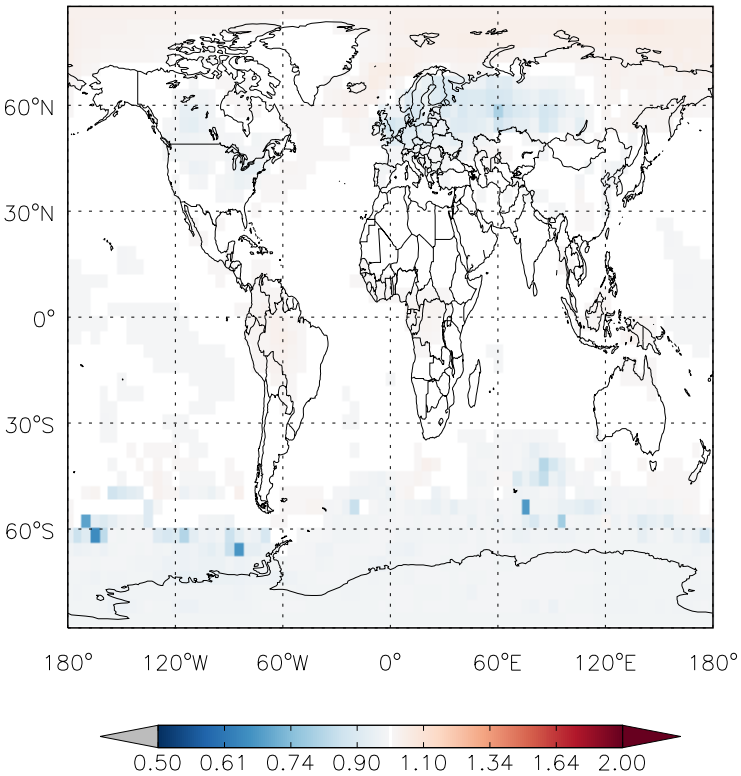
ISOP/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

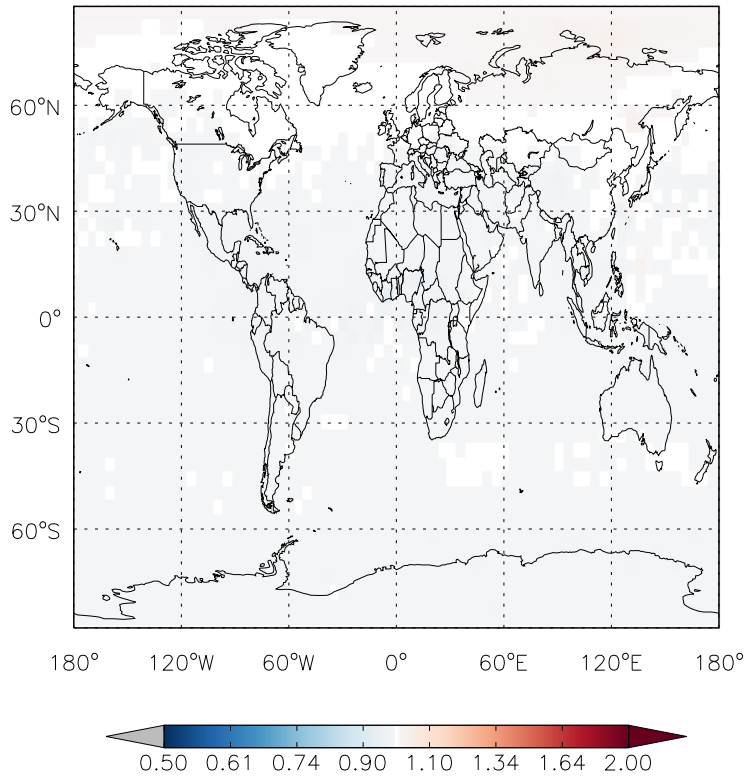
v11−01g−Run0 / v11−01f−geosfp−Run0

HNO3 / Ratio @ Surface for Oct



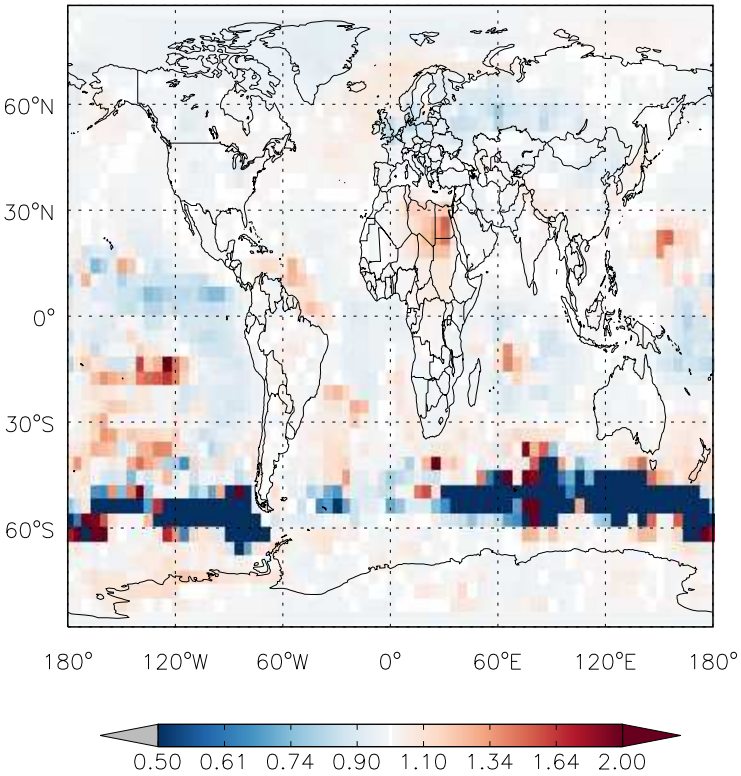
v11−01g−Run0 / v11−01f−geosfp−Run0

HNO3/ Ratio @ 500 hPa for Oct



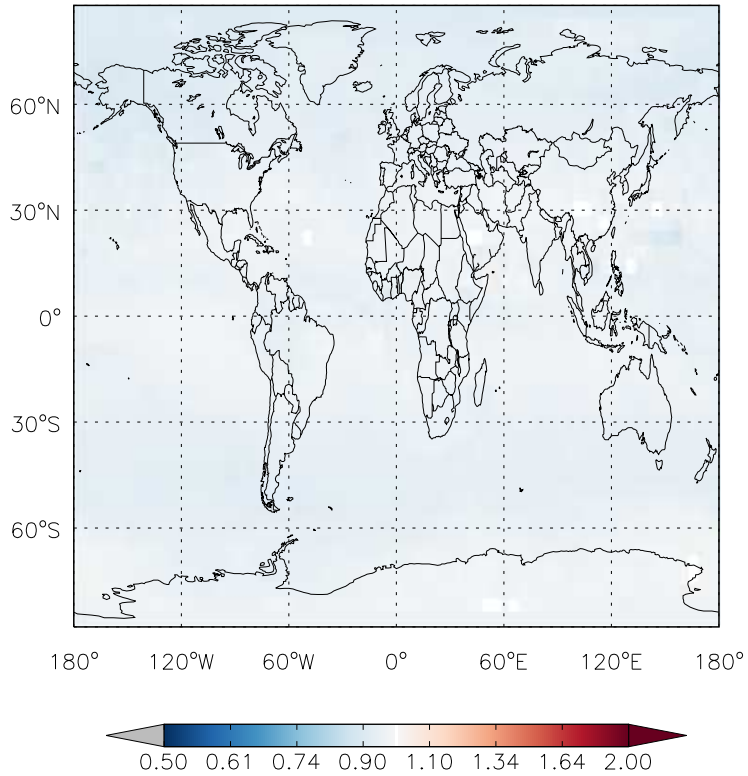
v11−01g−Run0 / v11−01d−Run1

HNO3 / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

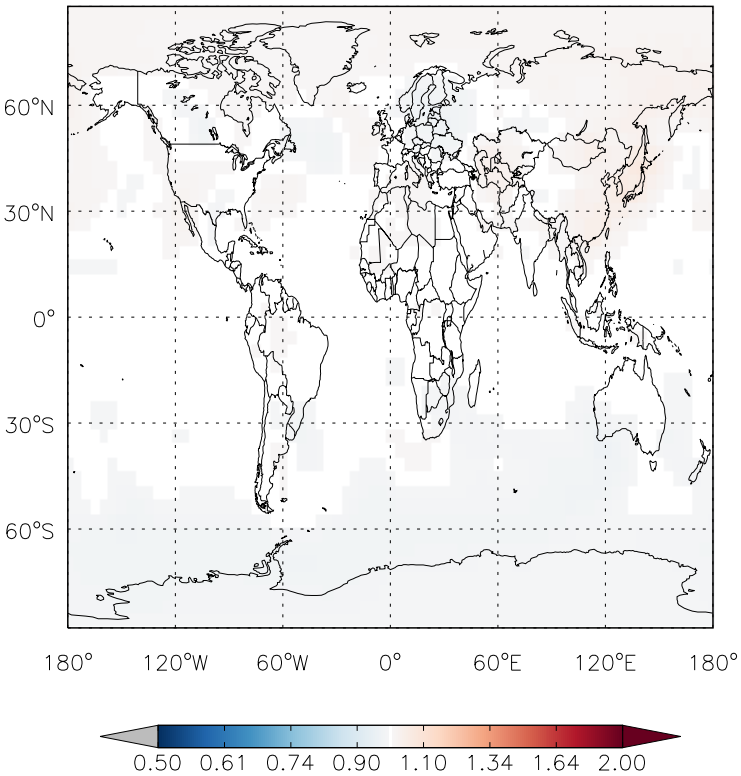
HNO3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

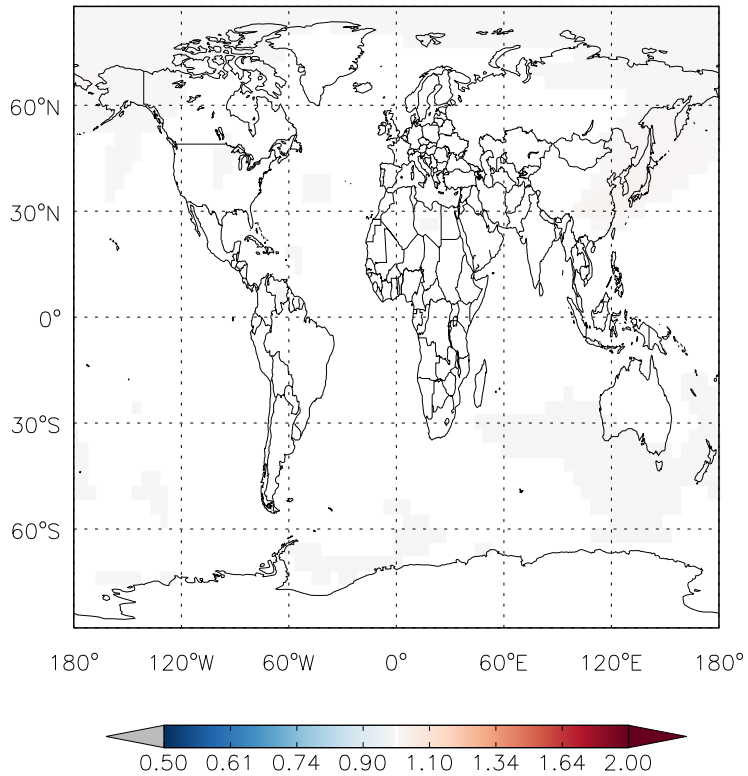
v11-01g-Run0 / v11-01f-geosfp-Run0

H2O2 / Ratio @ Surface for Oct



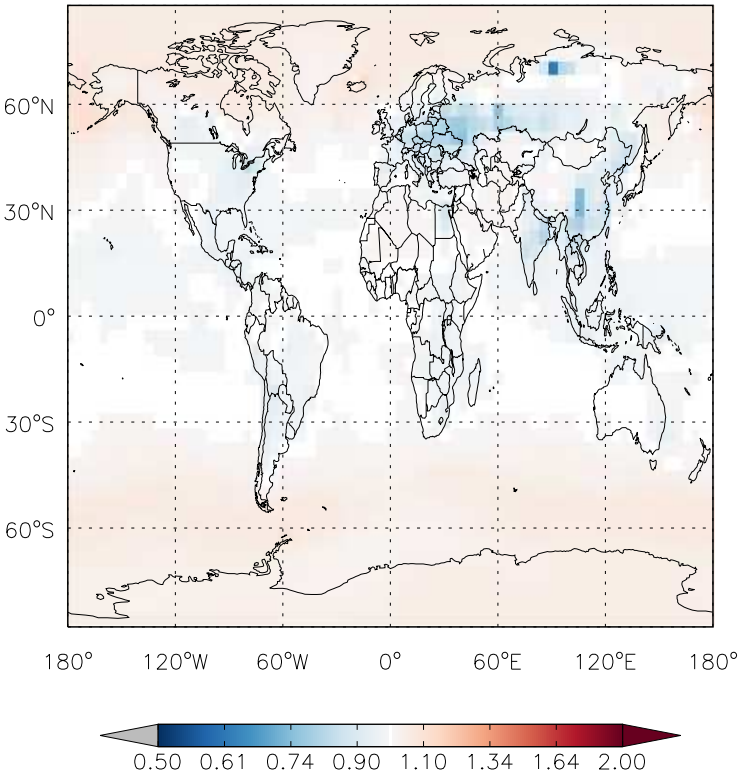
v11-01g-Run0 / v11-01f-geosfp-Run0

H2O2/ Ratio @ 500 hPa for Oct



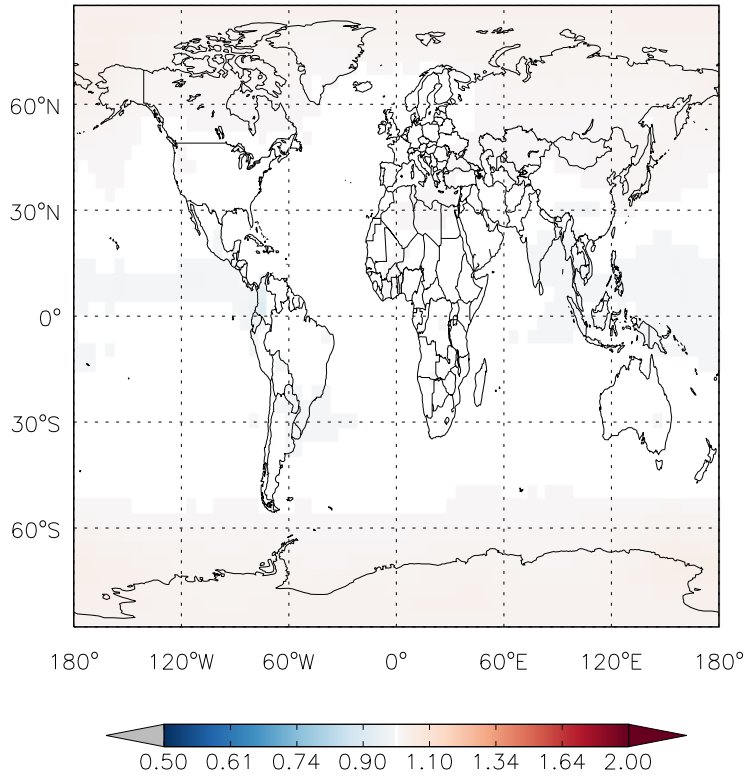
v11-01g-Run0 / v11-01d-Run1

H2O2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

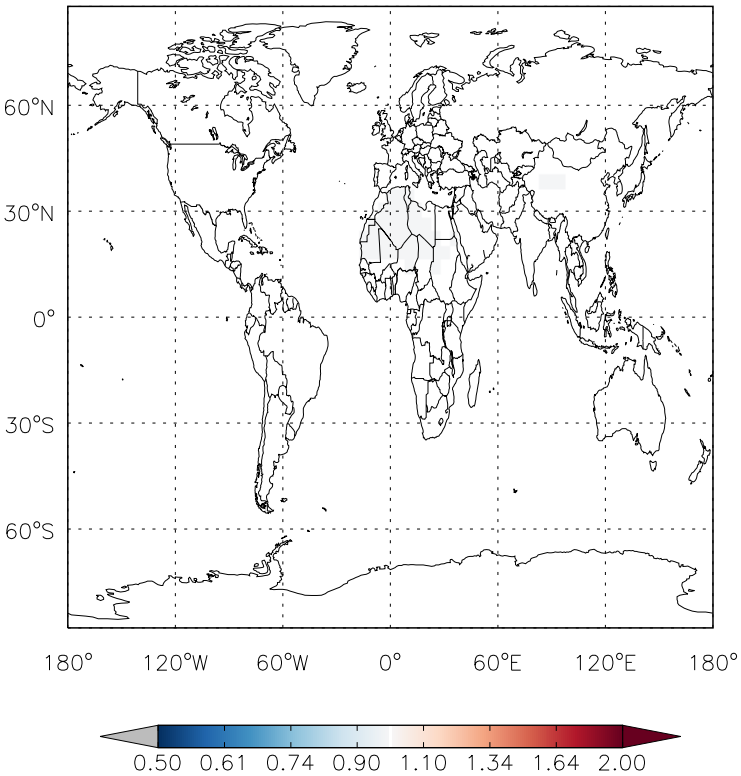
H2O2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

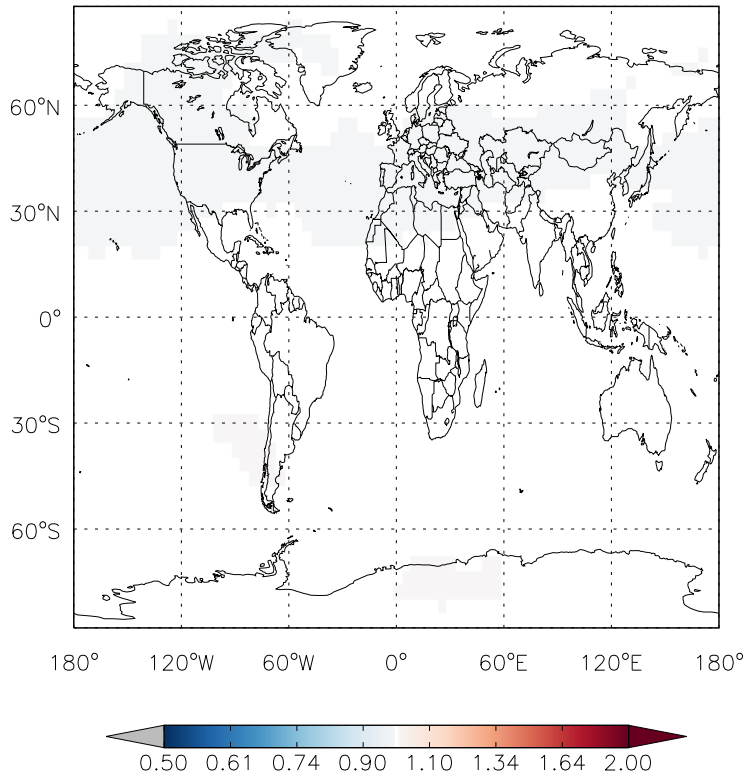
v11-01g-Run0 / v11-01f-geosfp-Run0

ACET / Ratio @ Surface for Oct



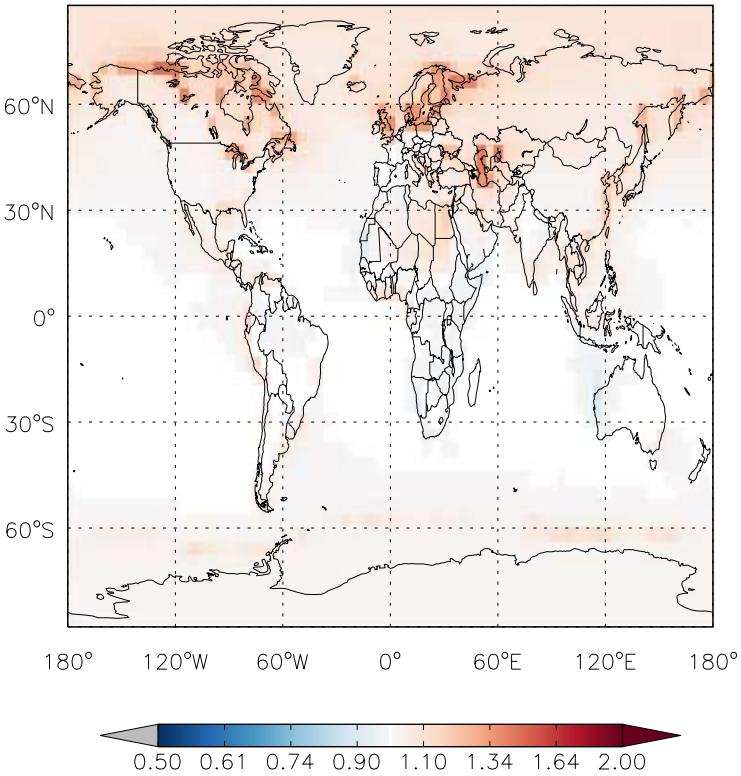
v11-01g-Run0 / v11-01f-geosfp-Run0

ACET/ Ratio @ 500 hPa for Oct



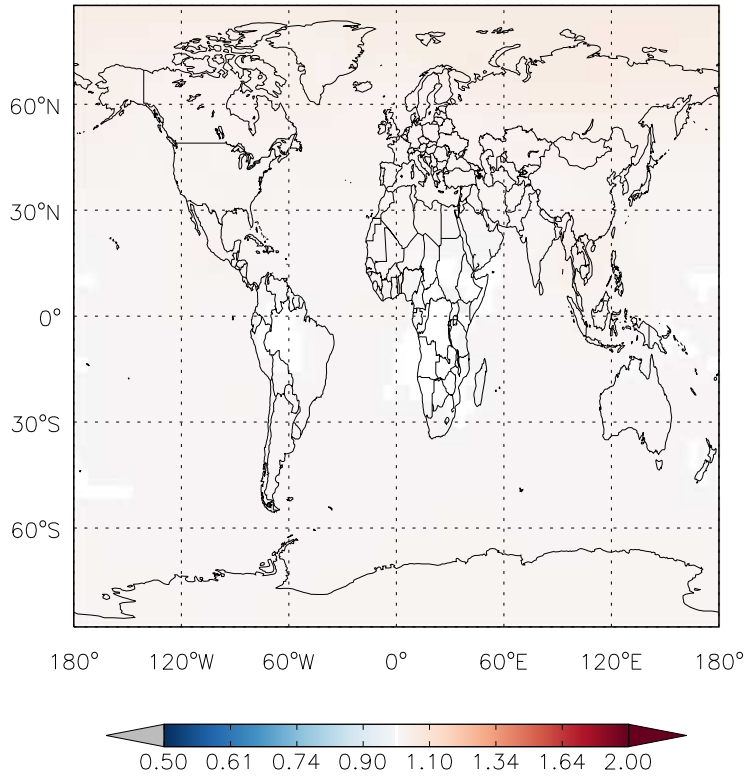
v11-01g-Run0 / v11-01d-Run1

ACET / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

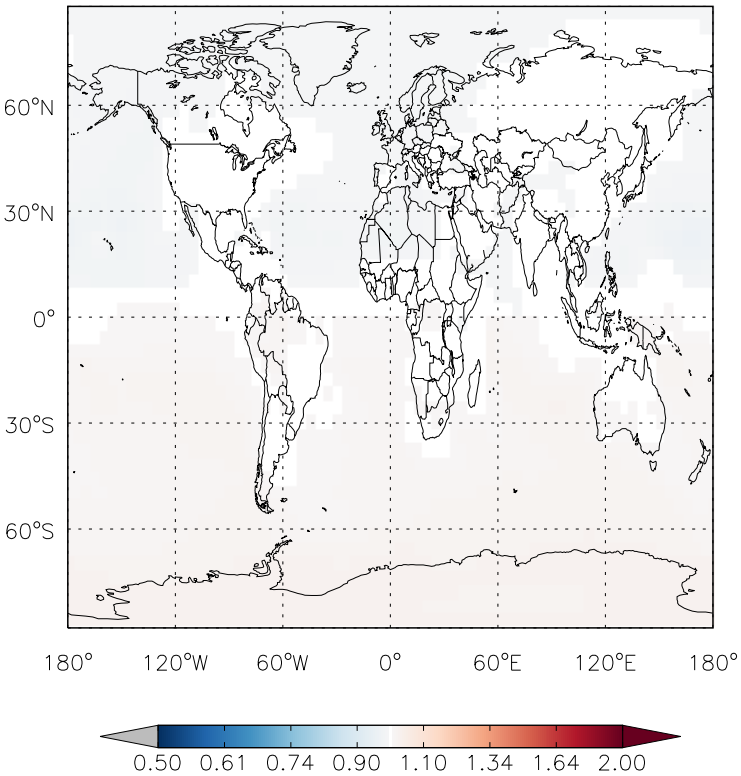
ACET/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

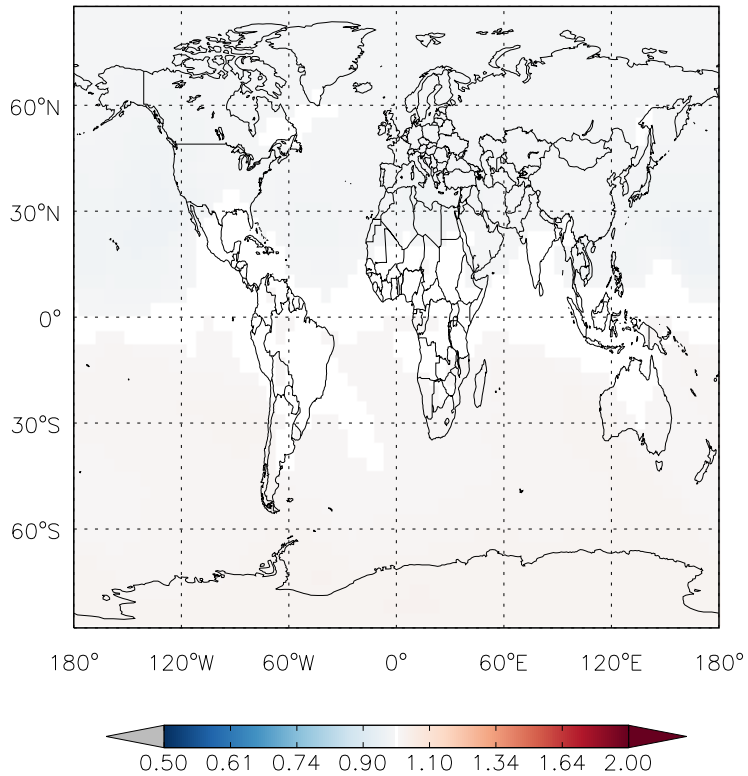
v11-01g-Run0 / v11-01f-geosfp-Run0

MEK / Ratio @ Surface for Oct



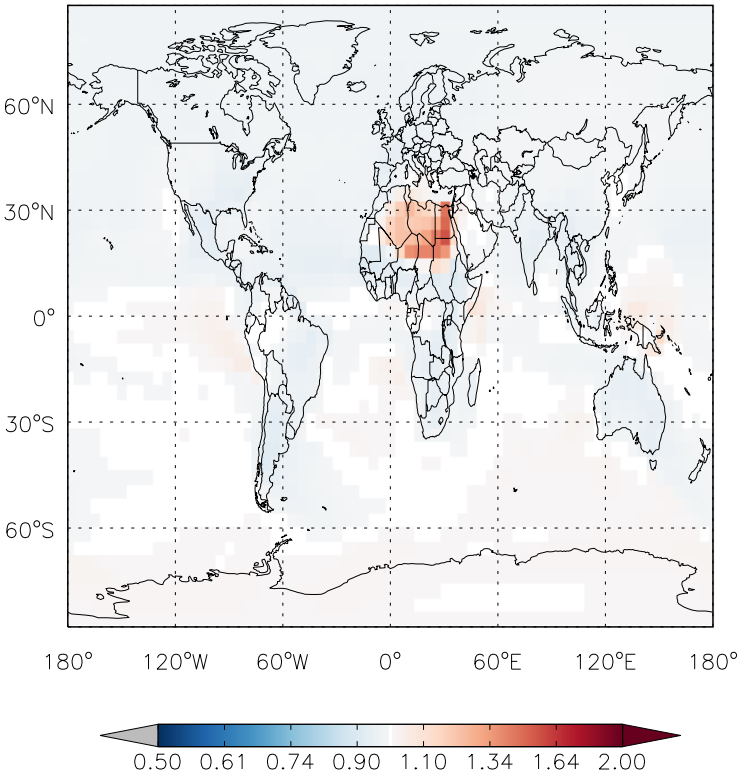
v11-01g-Run0 / v11-01f-geosfp-Run0

MEK/ Ratio @ 500 hPa for Oct



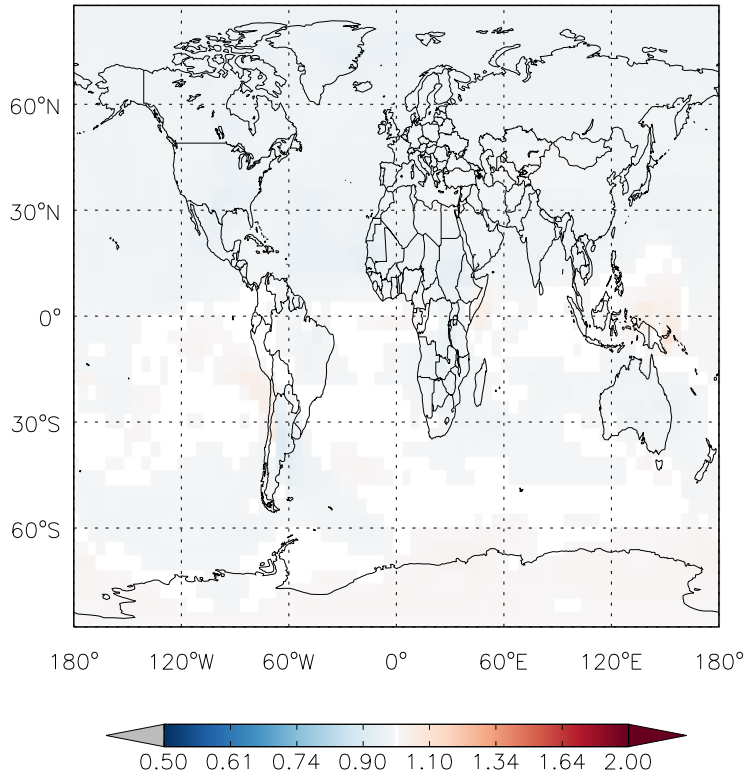
v11-01g-Run0 / v11-01d-Run1

MEK / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

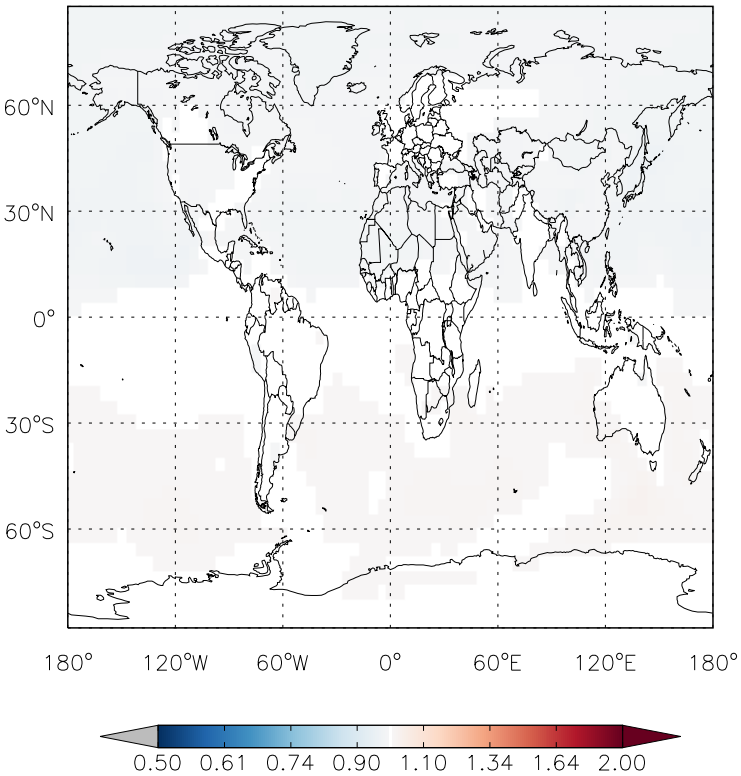
MEK/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

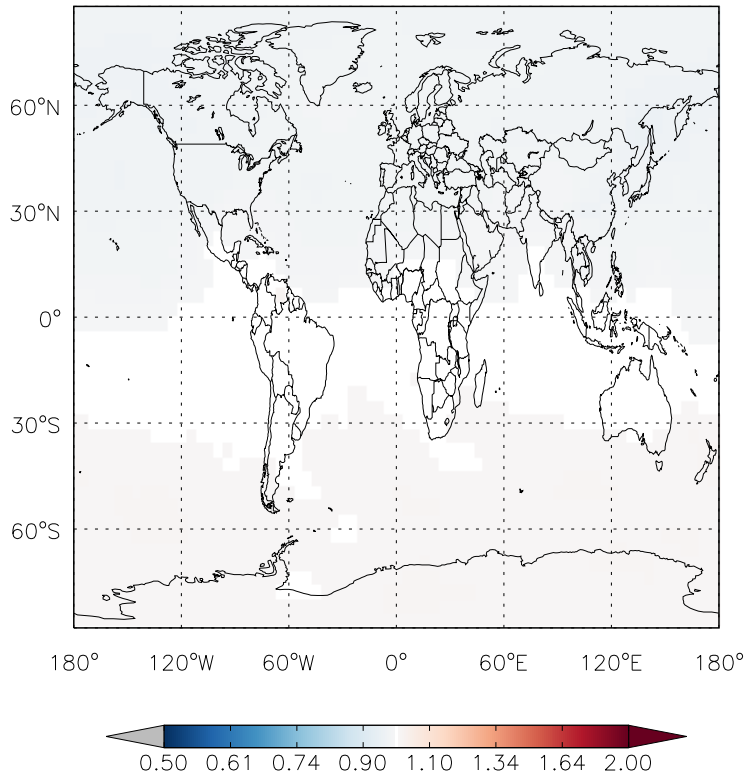
v11-01g-Run0 / v11-01f-geosfp-Run0

ALD2 / Ratio @ Surface for Oct



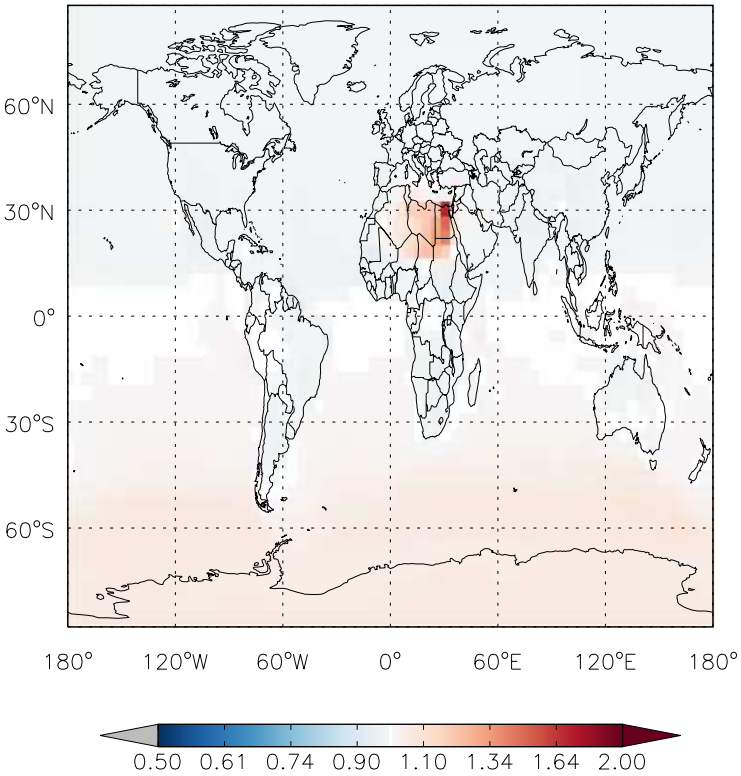
v11-01g-Run0 / v11-01f-geosfp-Run0

ALD2/ Ratio @ 500 hPa for Oct



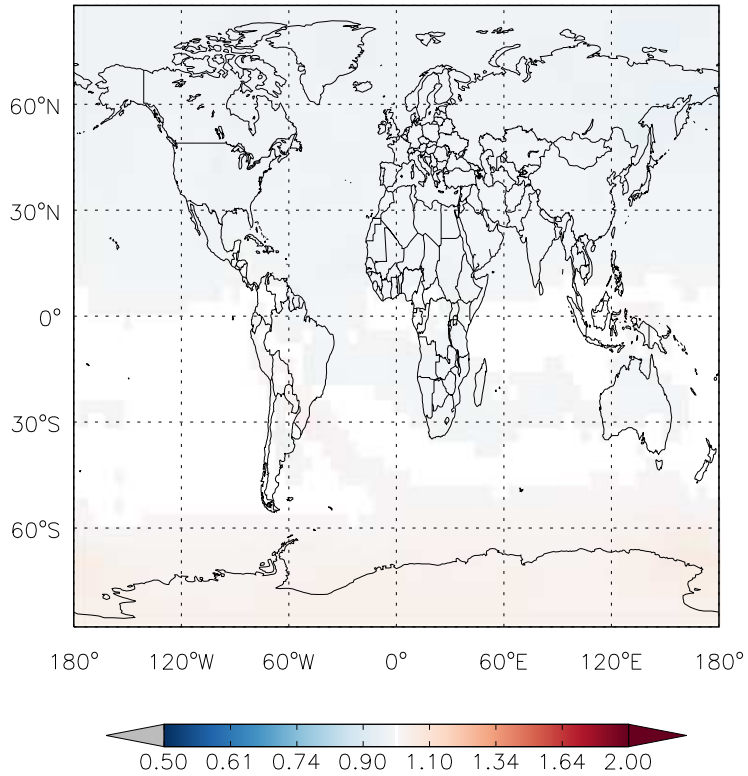
v11-01g-Run0 / v11-01d-Run1

ALD2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

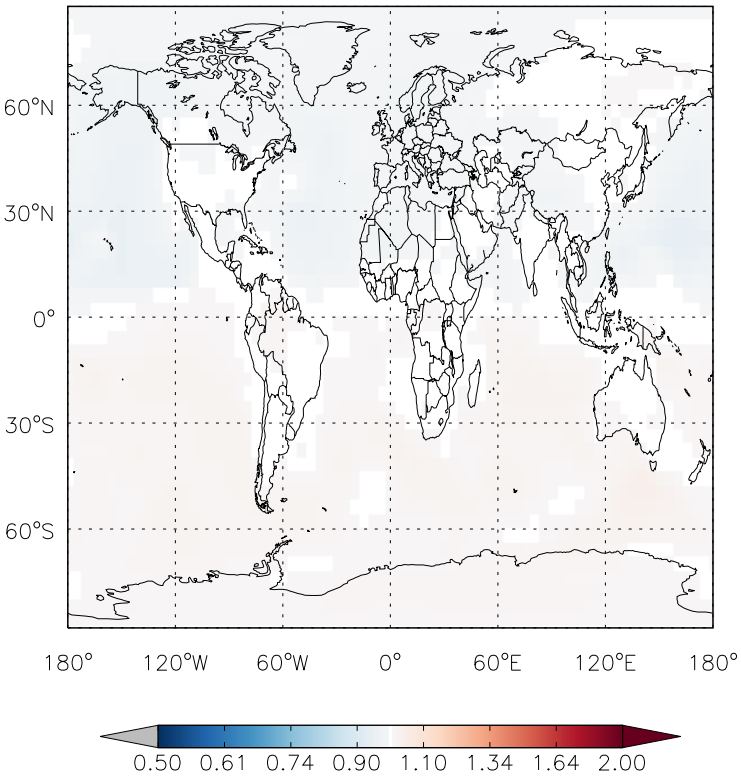
ALD2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

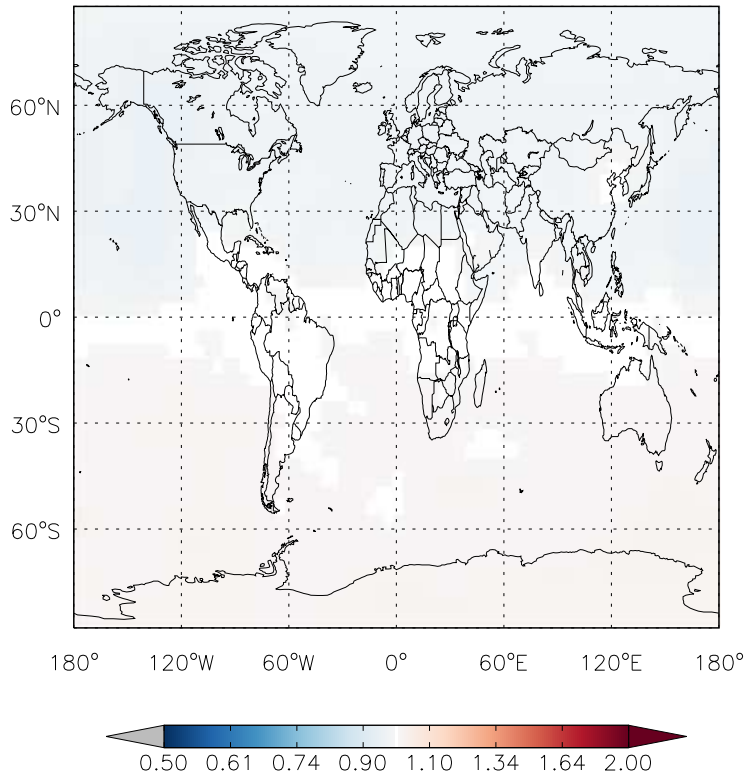
v11-01g-Run0 / v11-01f-geosfp-Run0

RCHO / Ratio @ Surface for Oct



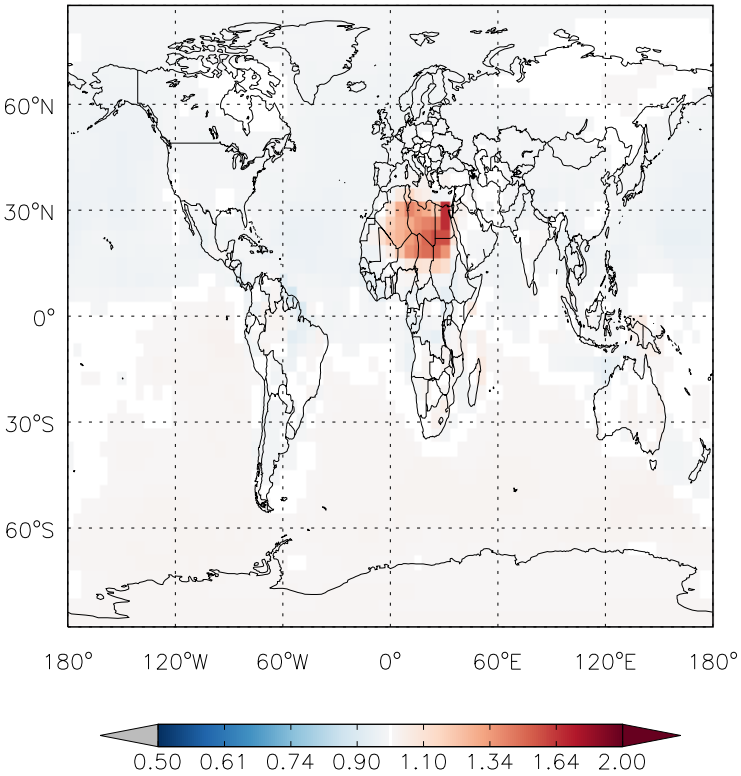
v11-01g-Run0 / v11-01f-geosfp-Run0

RCHO/ Ratio @ 500 hPa for Oct



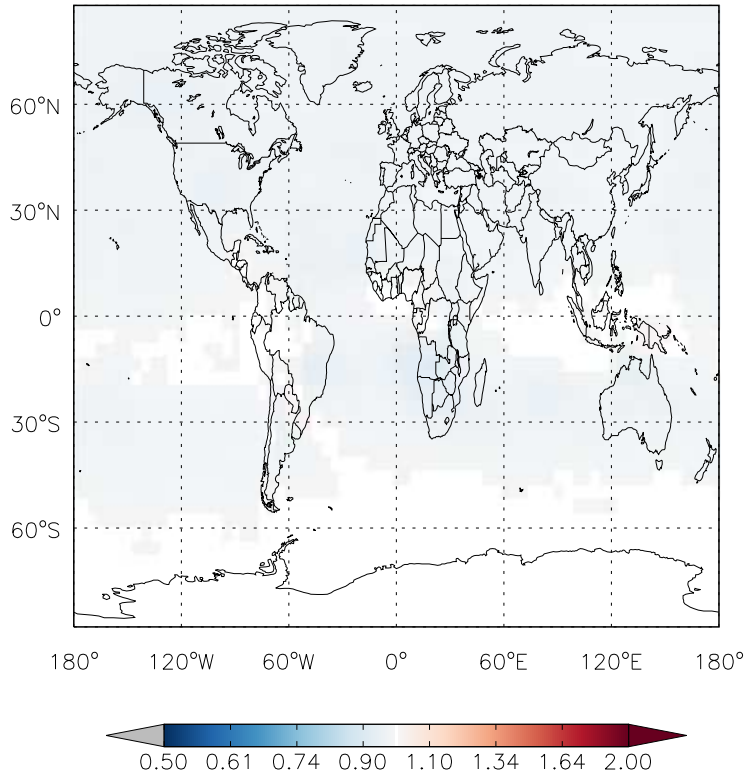
v11-01g-Run0 / v11-01d-Run1

RCHO / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

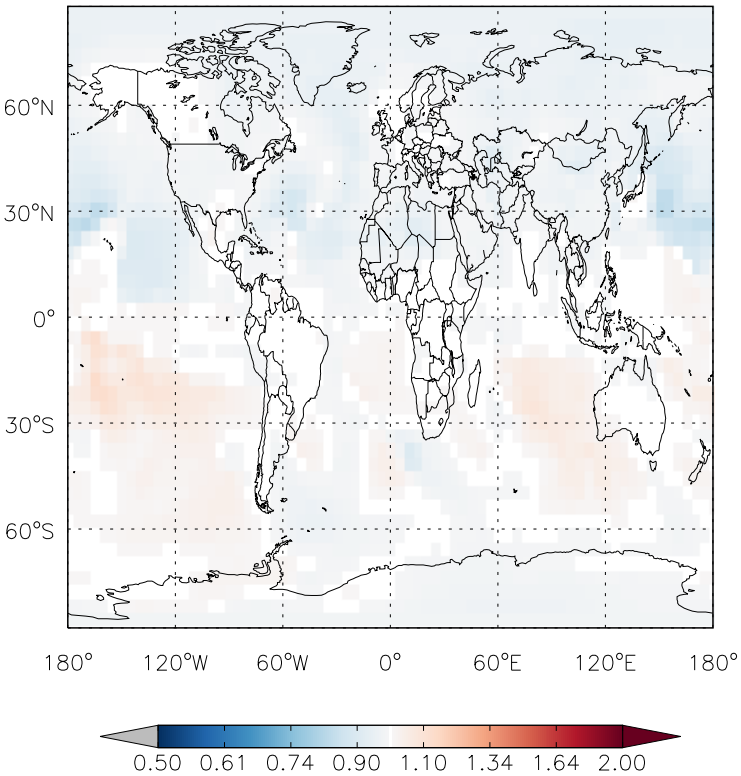
RCHO/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

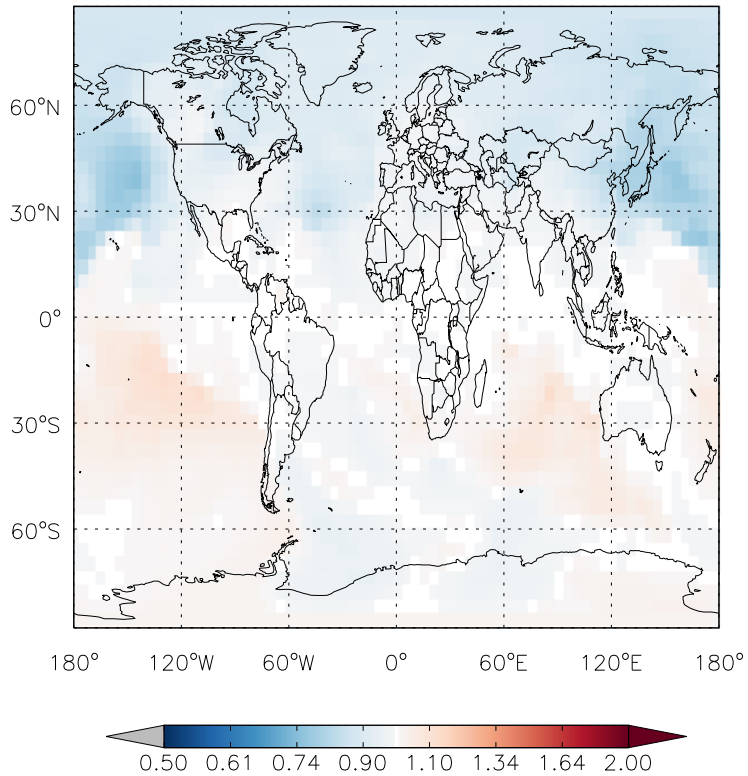
v11-01g-Run0 / v11-01f-geosfp-Run0

MVK / Ratio @ Surface for Oct



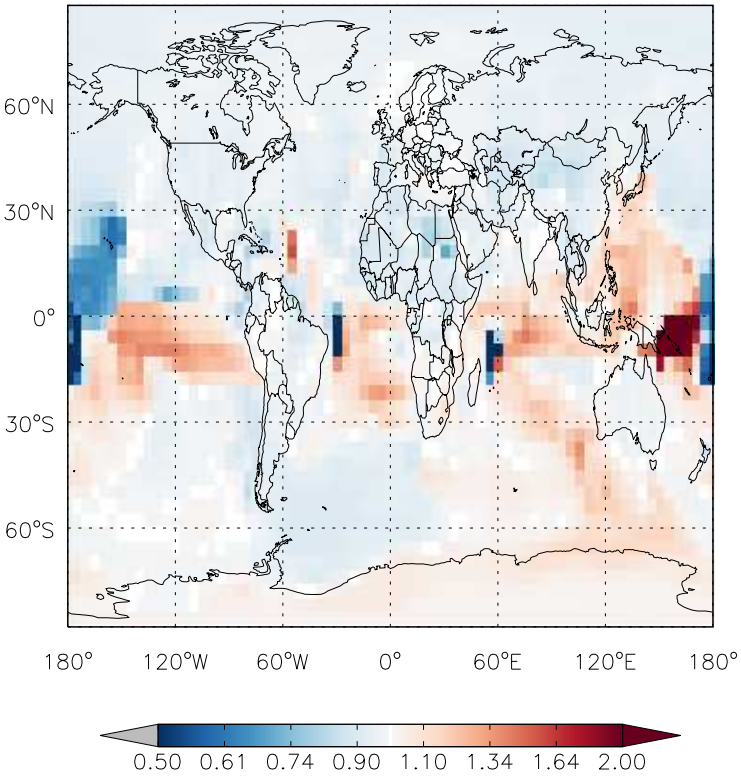
v11-01g-Run0 / v11-01f-geosfp-Run0

MVK/ Ratio @ 500 hPa for Oct



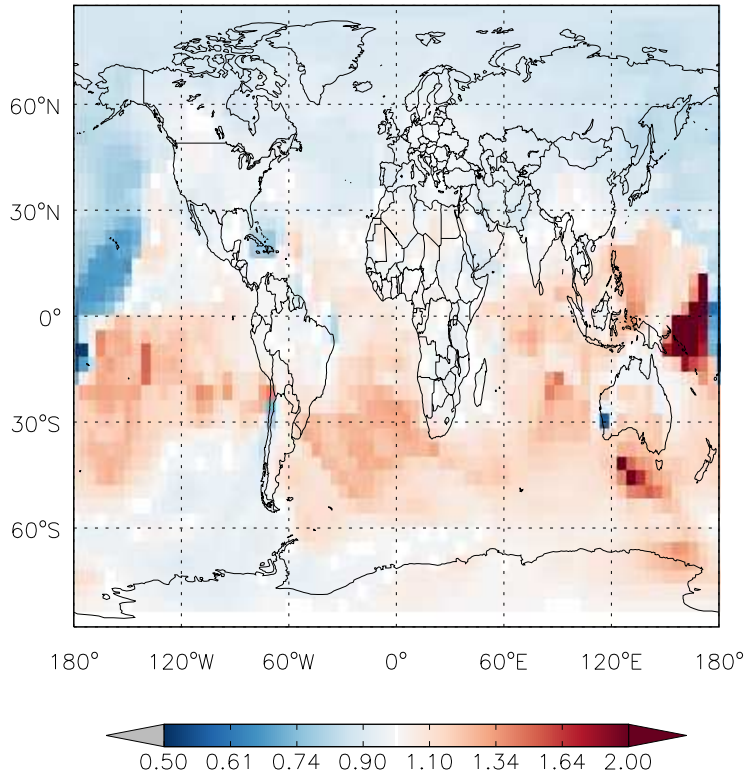
v11-01g-Run0 / v11-01d-Run1

MVK / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

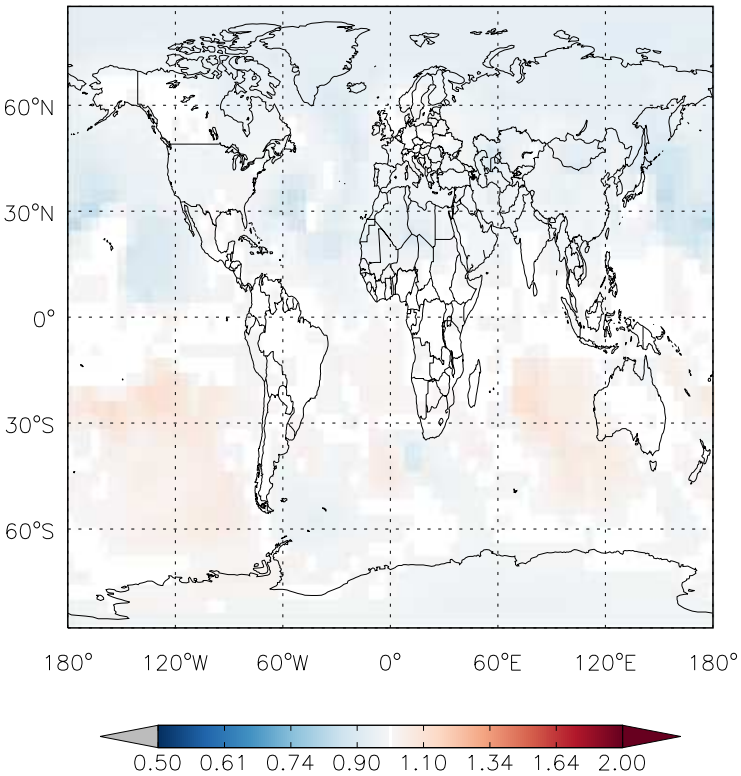
MVK/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

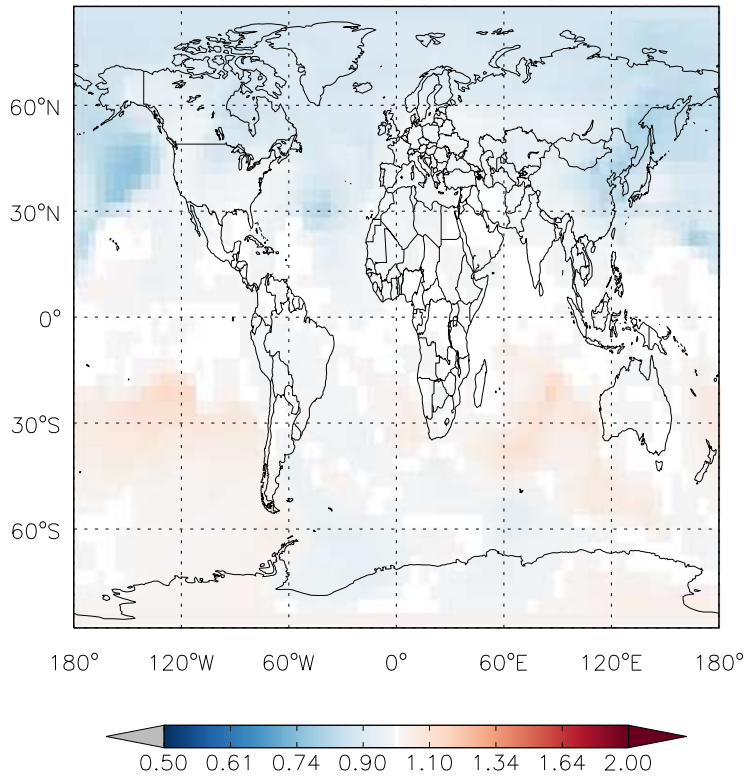
v11-01g-Run0 / v11-01f-geosfp-Run0

MACR / Ratio @ Surface for Oct



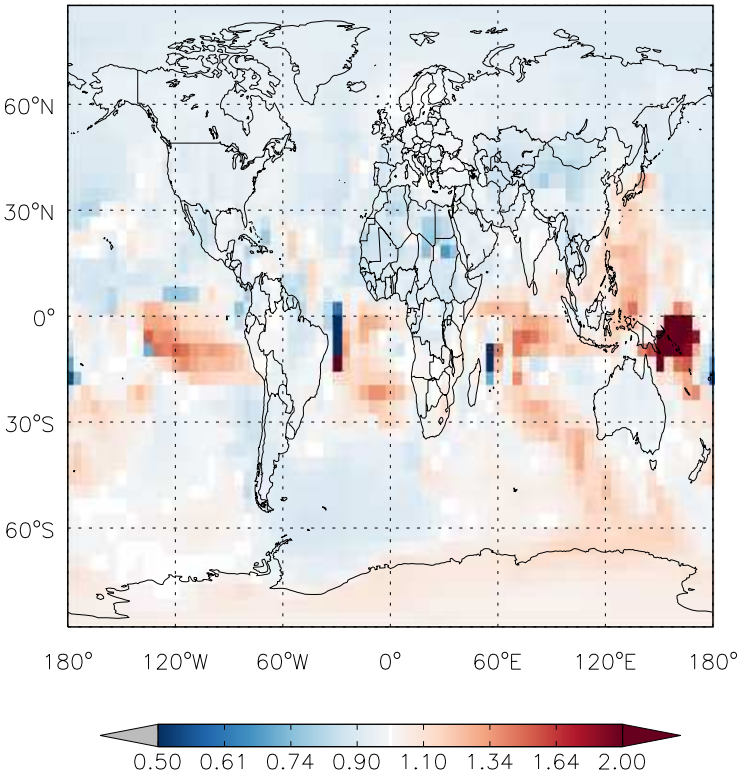
v11-01g-Run0 / v11-01f-geosfp-Run0

MACR/ Ratio @ 500 hPa for Oct



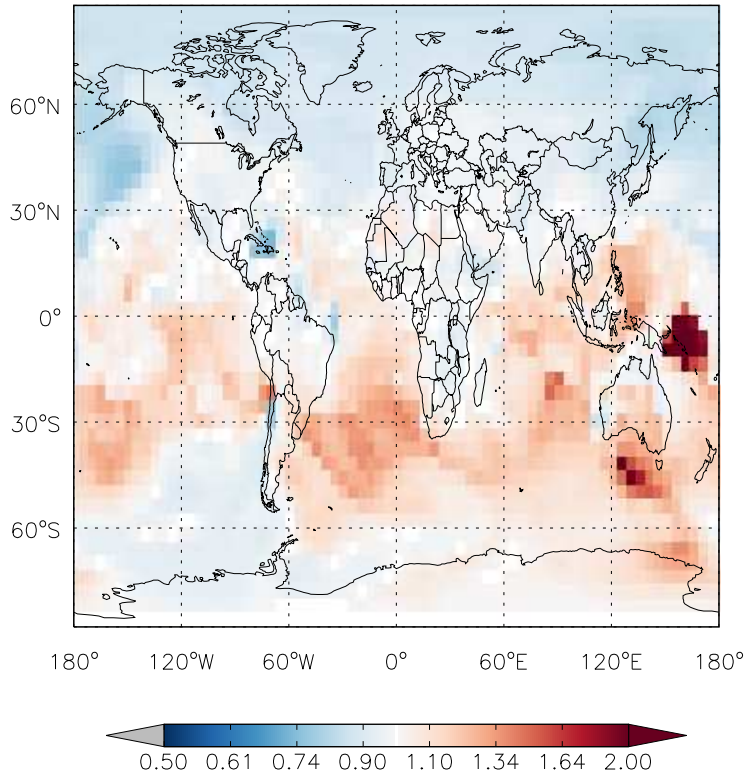
v11-01g-Run0 / v11-01d-Run1

MACR / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

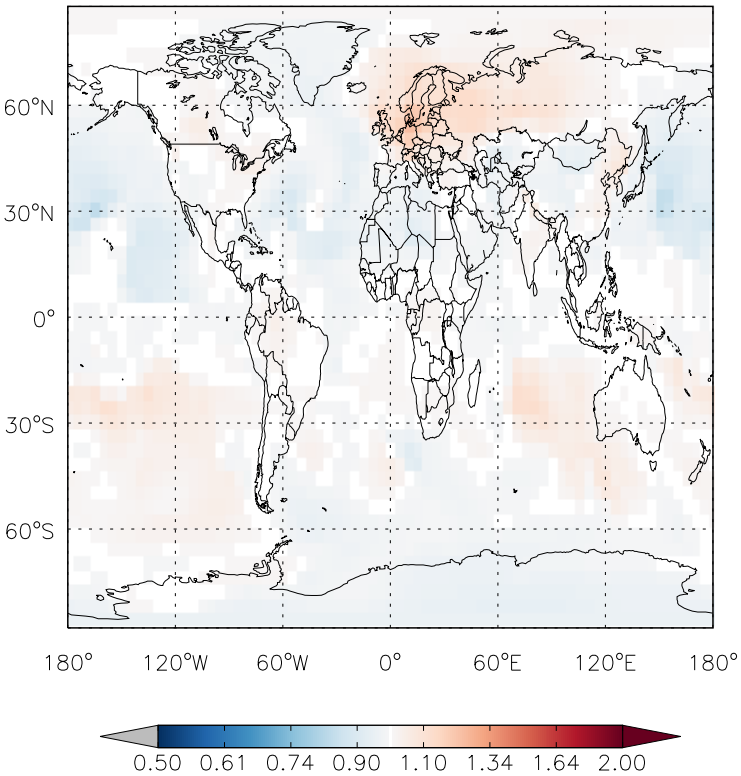
MACR/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

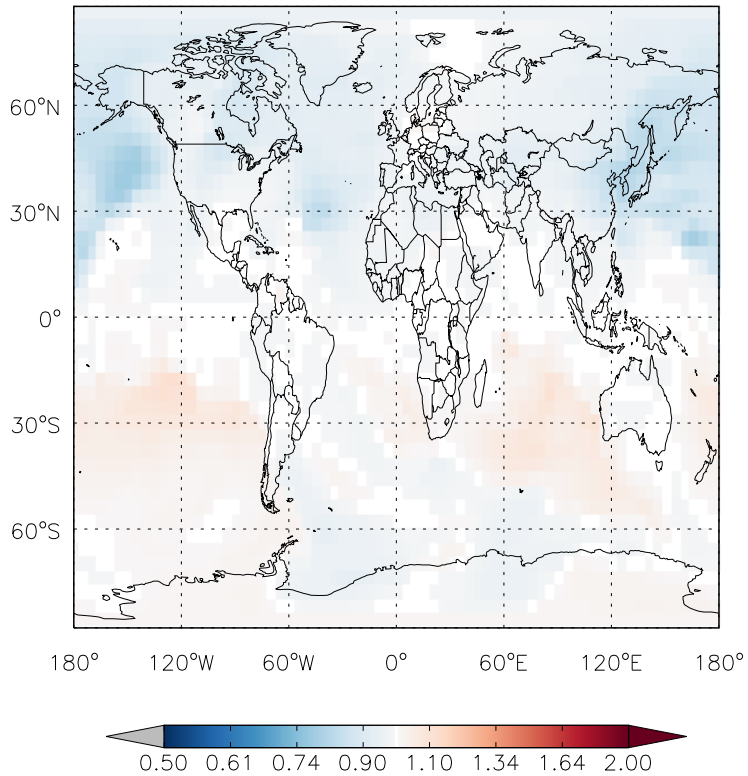
v11-01g-Run0 / v11-01f-geosfp-Run0

PMN / Ratio @ Surface for Oct



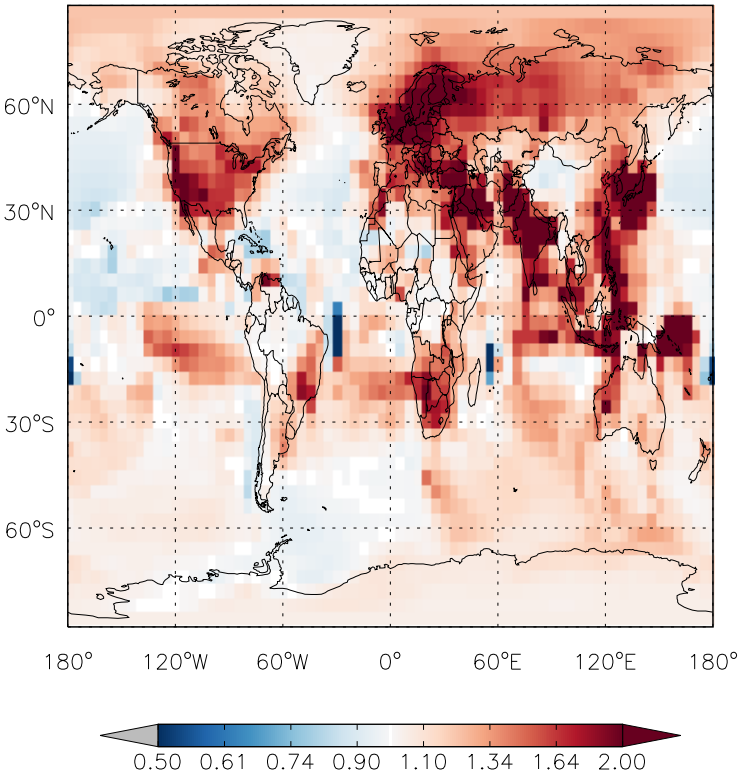
v11-01g-Run0 / v11-01f-geosfp-Run0

PMN/ Ratio @ 500 hPa for Oct



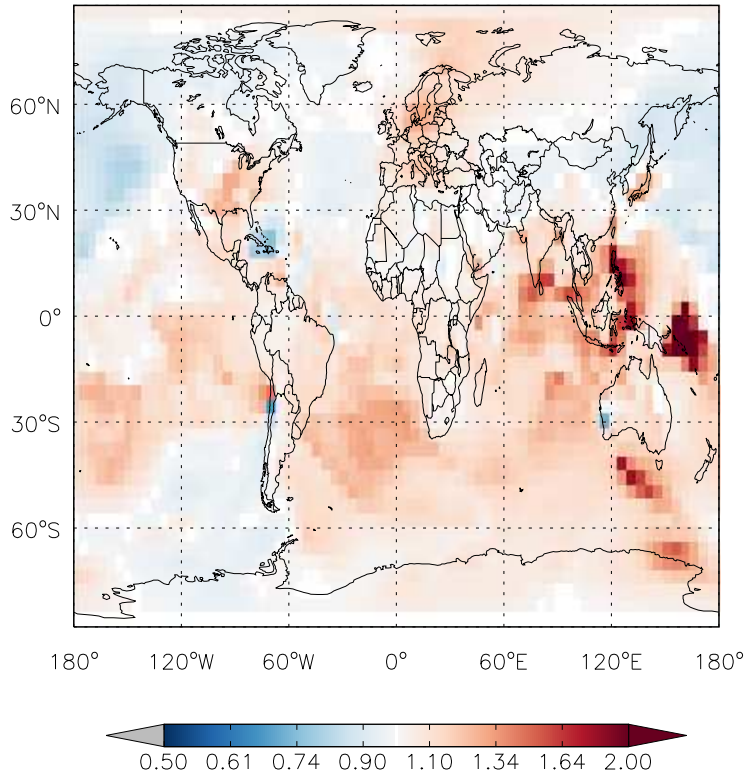
v11-01g-Run0 / v11-01d-Run1

PMN / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

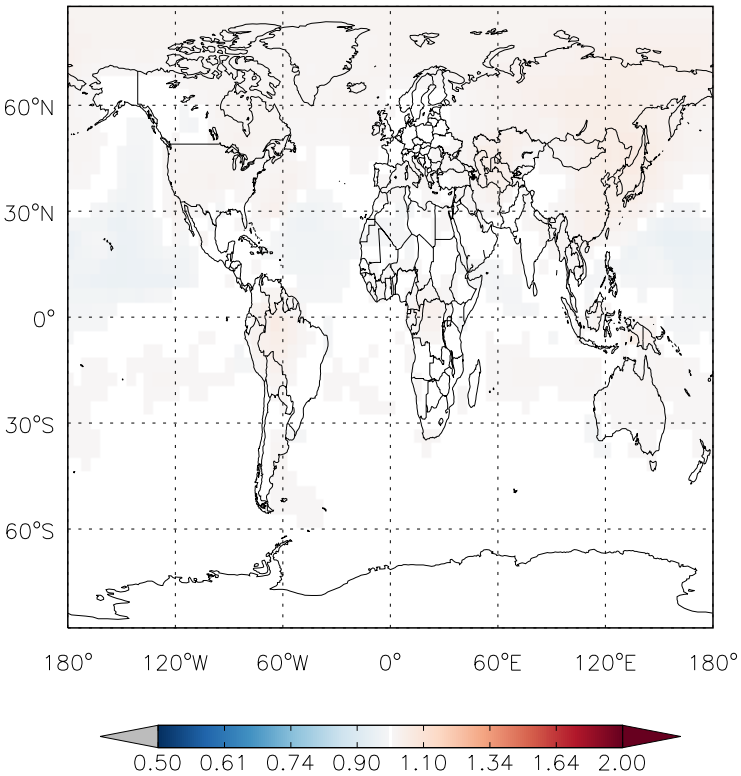
PMN/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

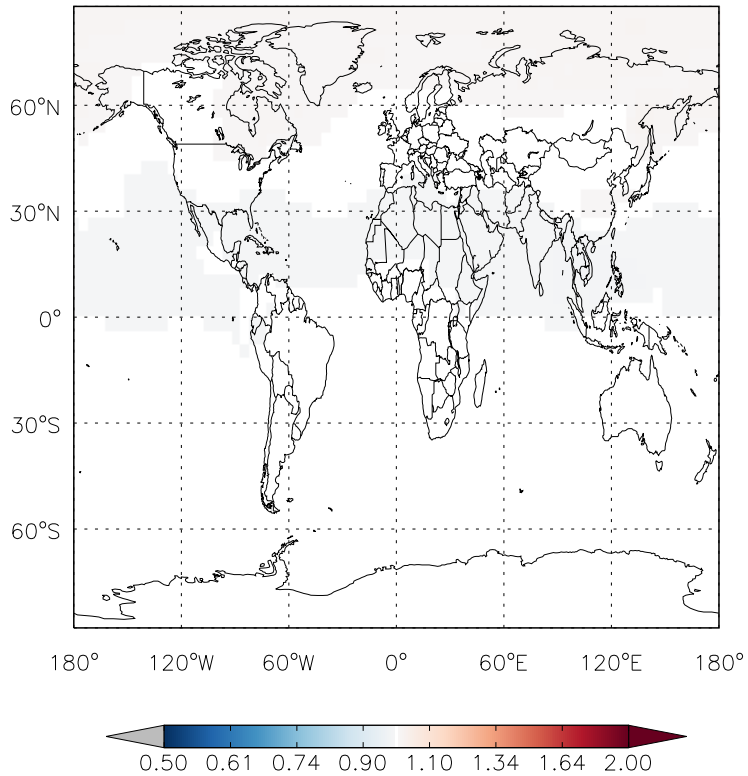
v11-01g-Run0 / v11-01f-geosfp-Run0

PPN / Ratio @ Surface for Oct



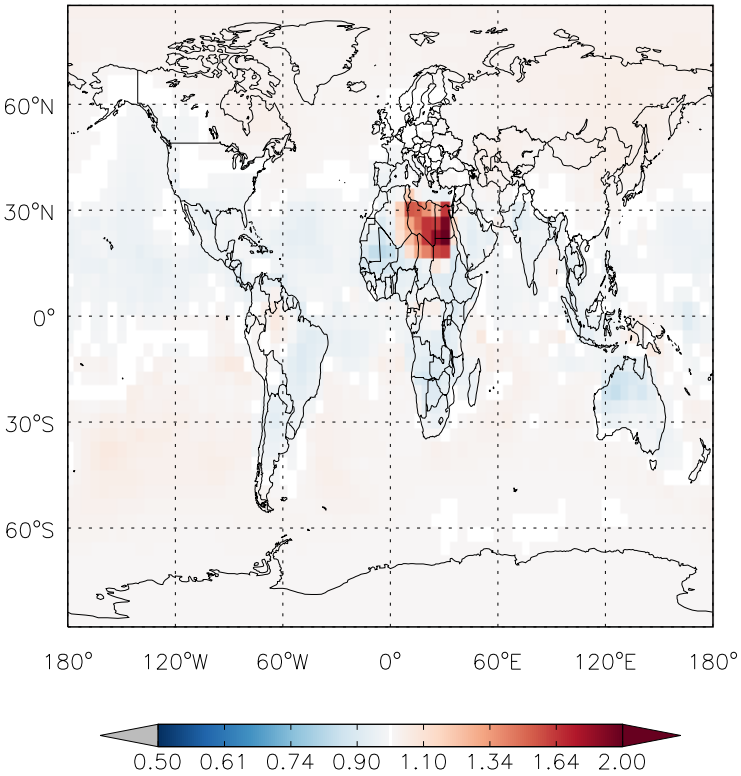
v11-01g-Run0 / v11-01f-geosfp-Run0

PPN/ Ratio @ 500 hPa for Oct



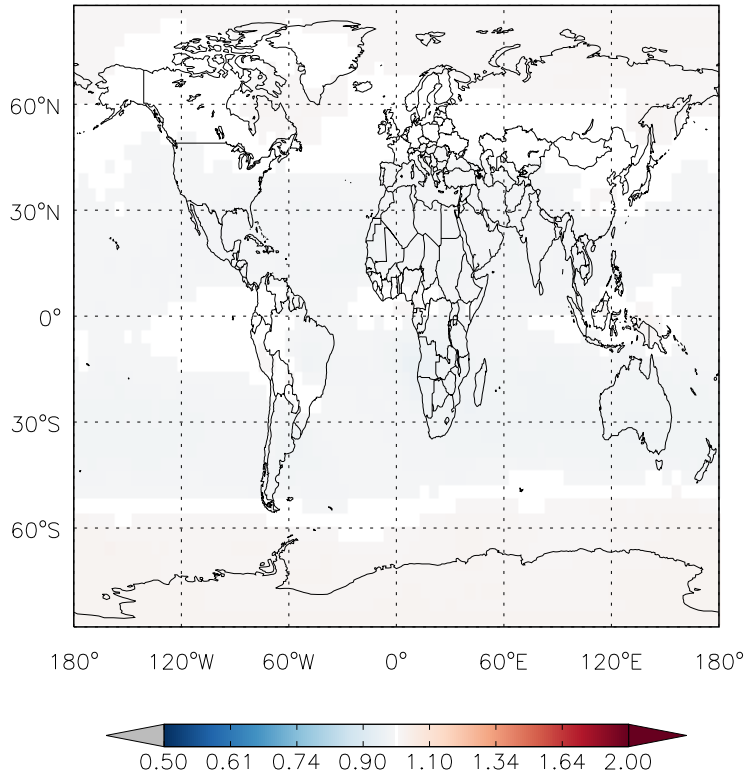
v11-01g-Run0 / v11-01d-Run1

PPN / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

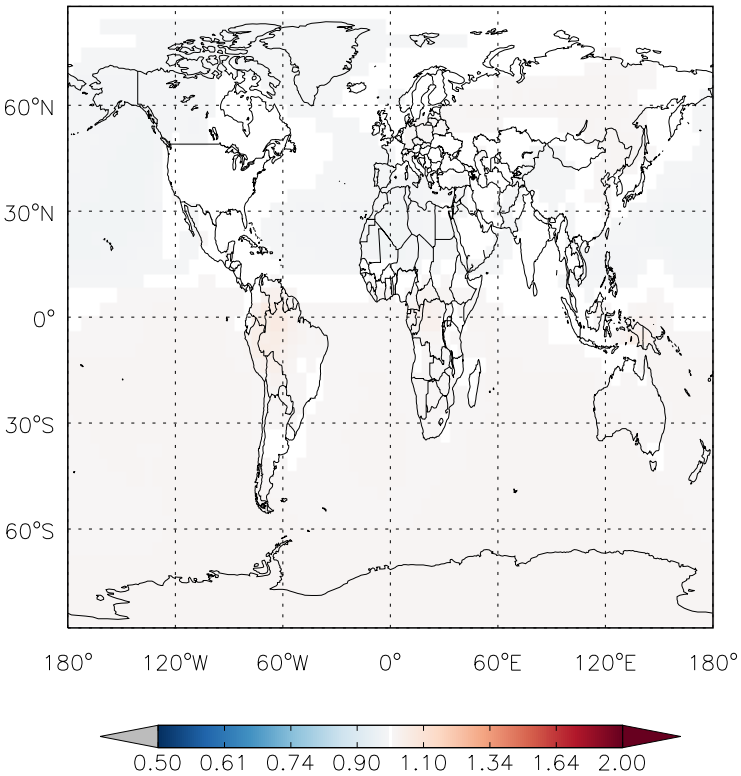
PPN/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

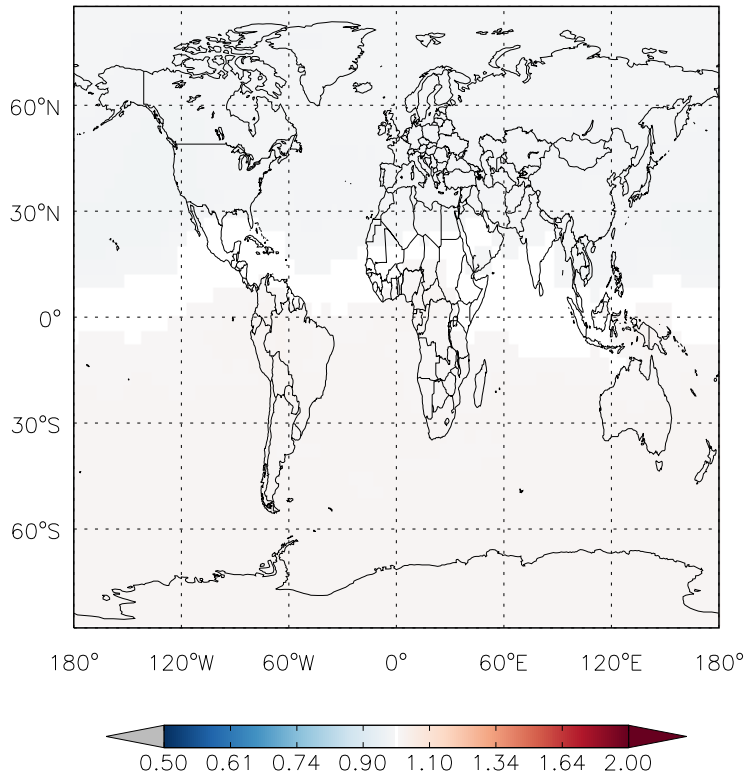
v11-01g-Run0 / v11-01f-geosfp-Run0

R4N2 / Ratio @ Surface for Oct



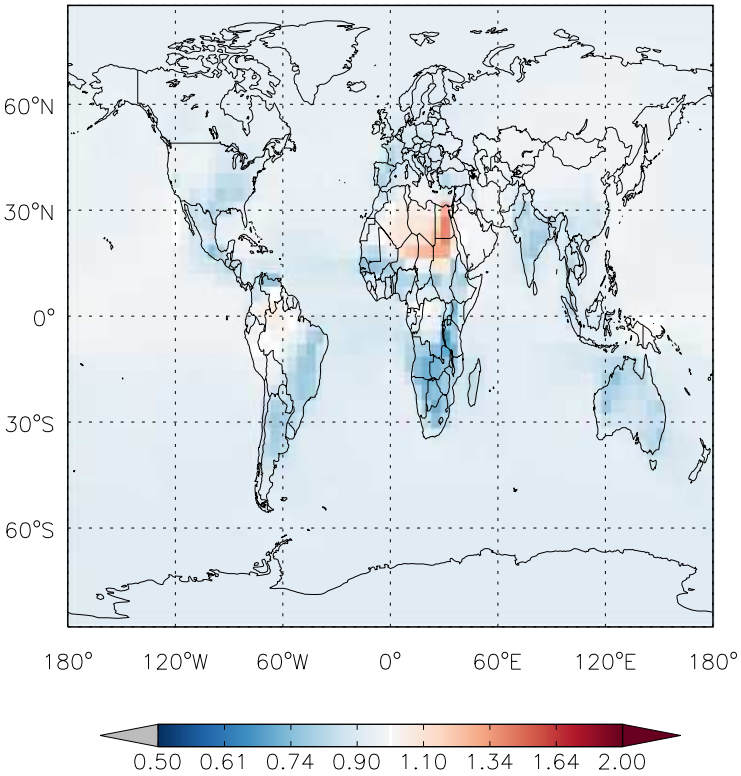
v11-01g-Run0 / v11-01f-geosfp-Run0

R4N2/ Ratio @ 500 hPa for Oct



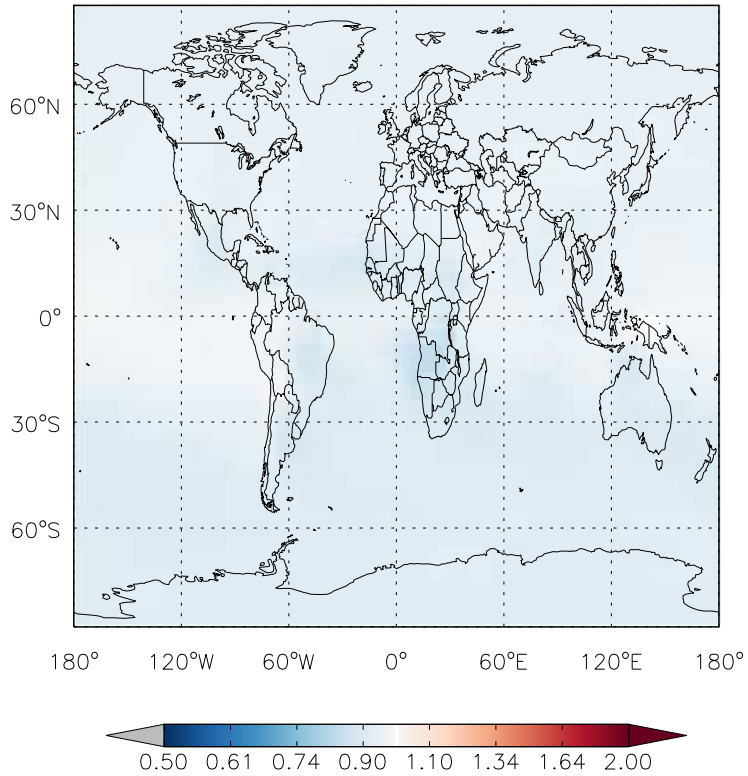
v11-01g-Run0 / v11-01d-Run1

R4N2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

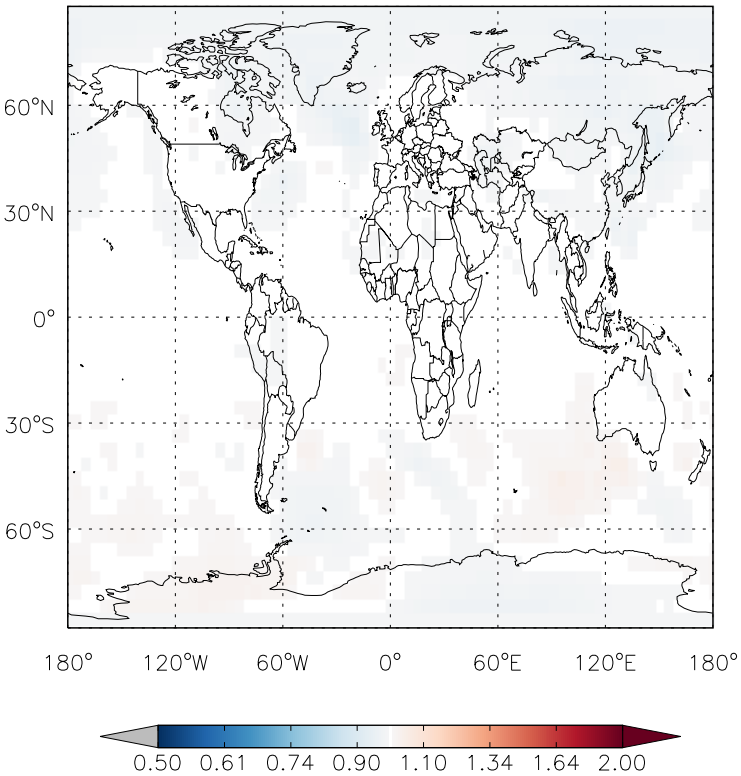
R4N2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

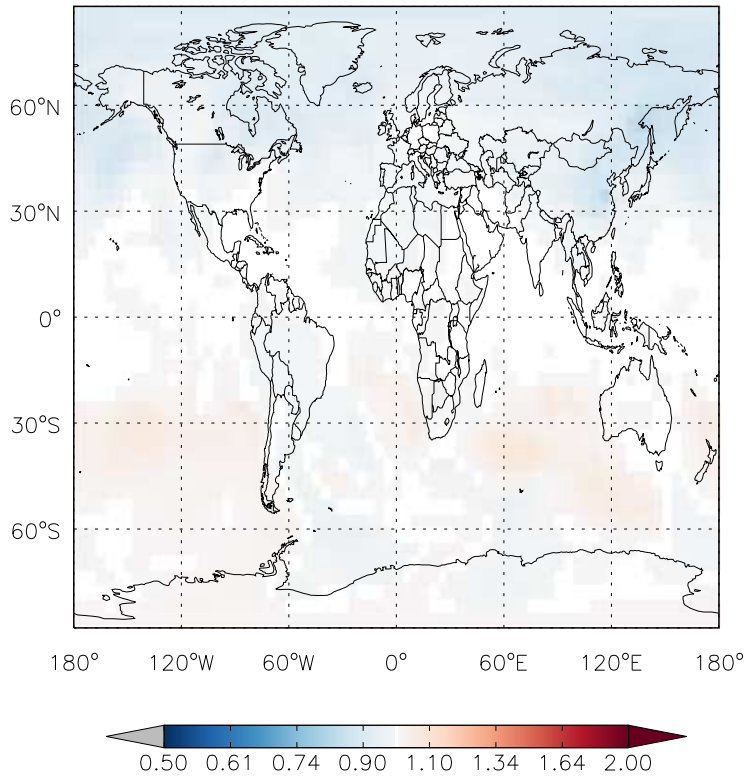
v11-01g-Run0 / v11-01f-geosfp-Run0

PRPE / Ratio @ Surface for Oct



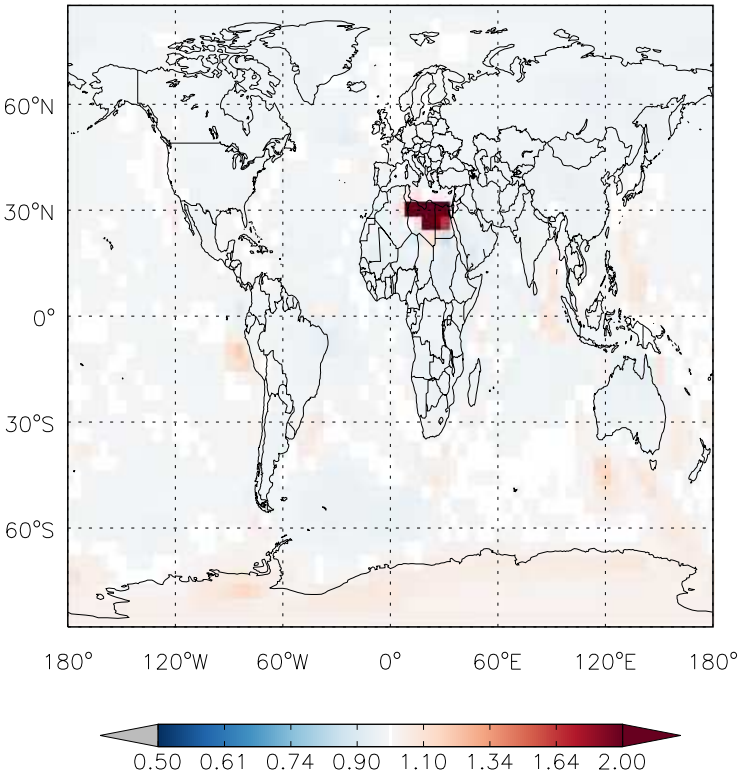
v11-01g-Run0 / v11-01f-geosfp-Run0

PRPE/ Ratio @ 500 hPa for Oct



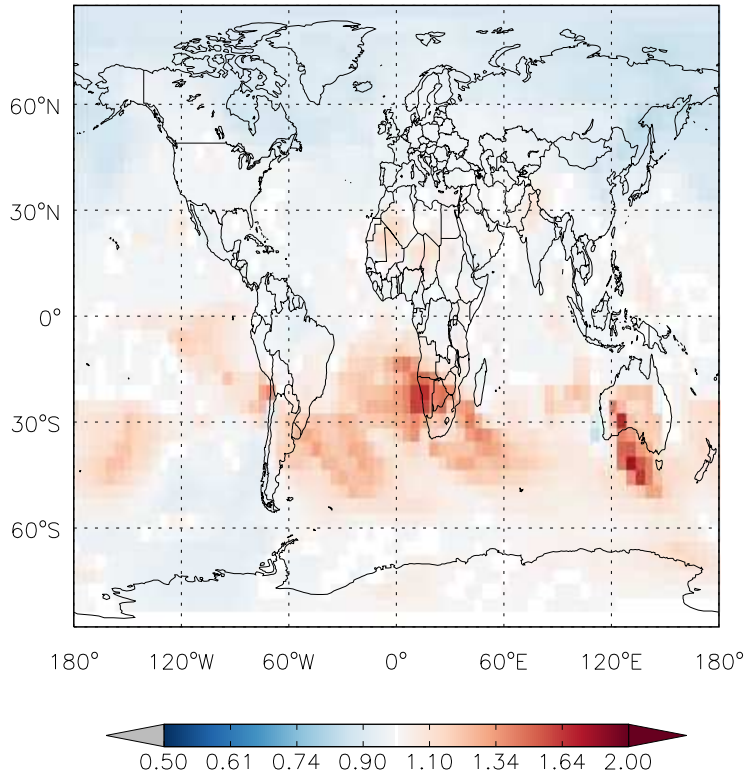
v11-01g-Run0 / v11-01d-Run1

PRPE / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

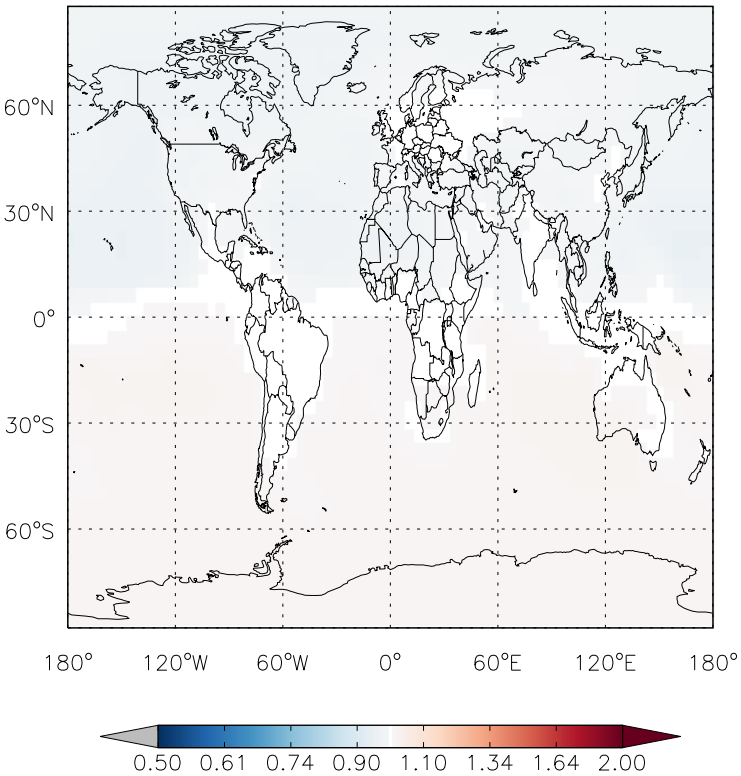
PRPE/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

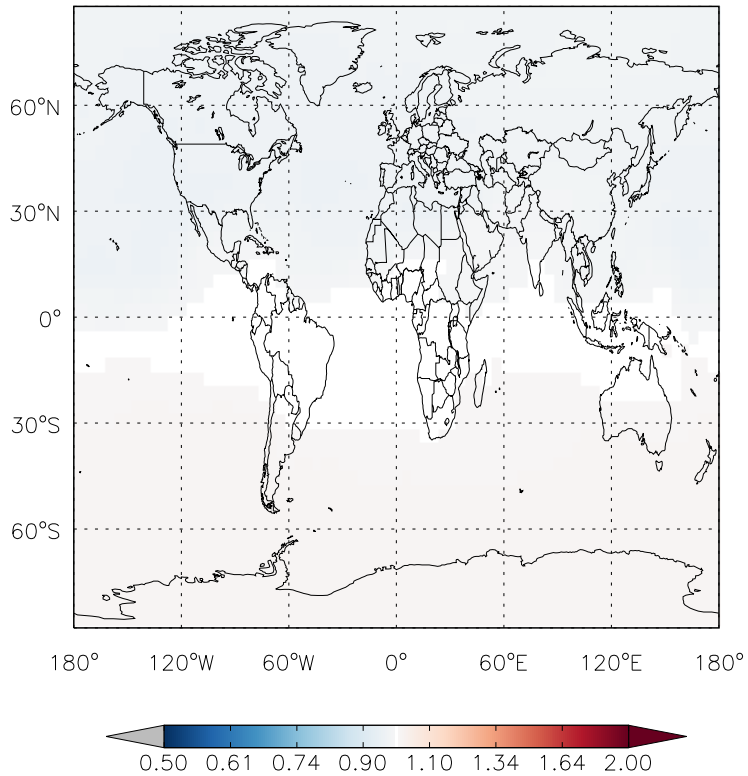
v11-01g-Run0 / v11-01f-geosfp-Run0

C3H8 / Ratio @ Surface for Oct



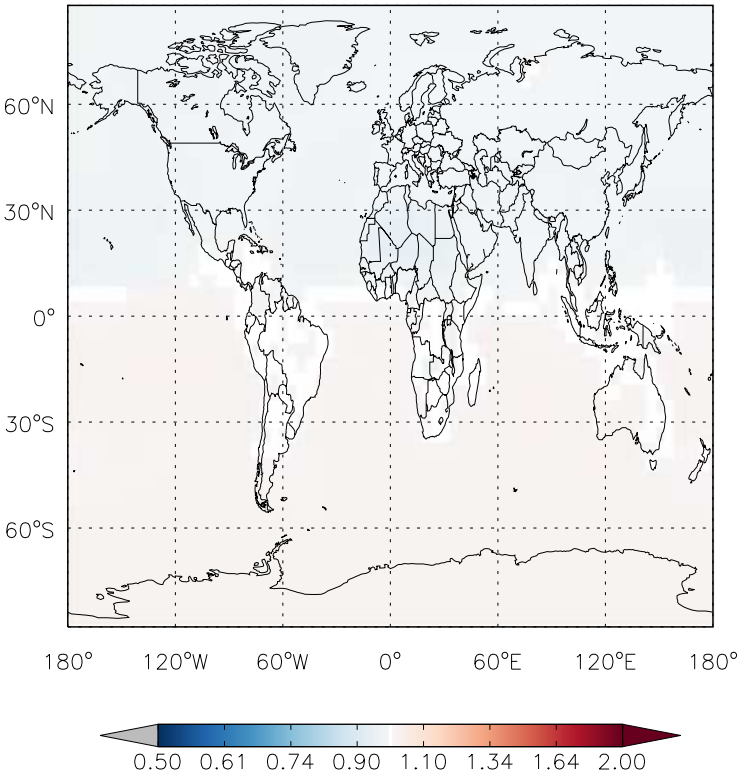
v11-01g-Run0 / v11-01f-geosfp-Run0

C3H8/ Ratio @ 500 hPa for Oct



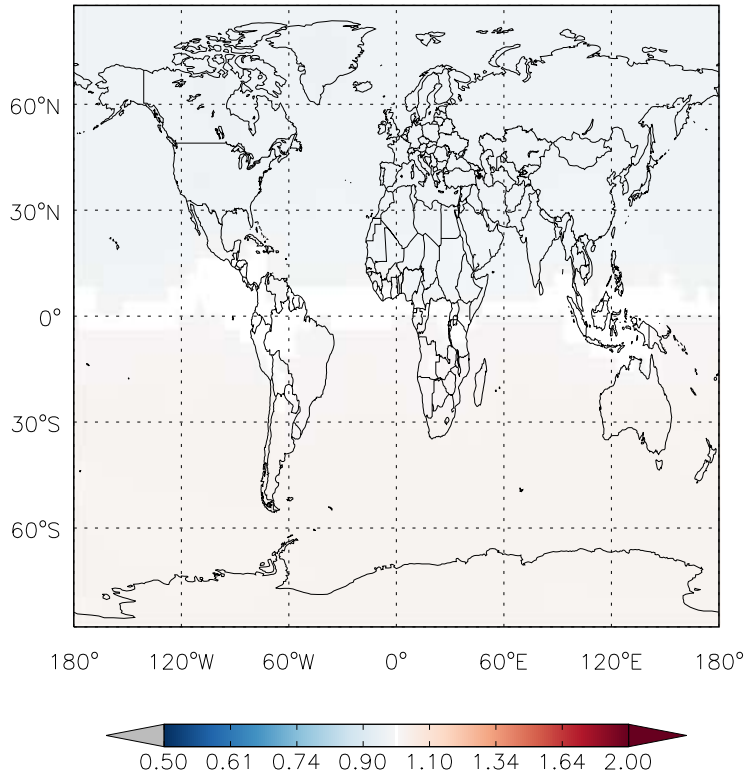
v11-01g-Run0 / v11-01d-Run1

C3H8 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

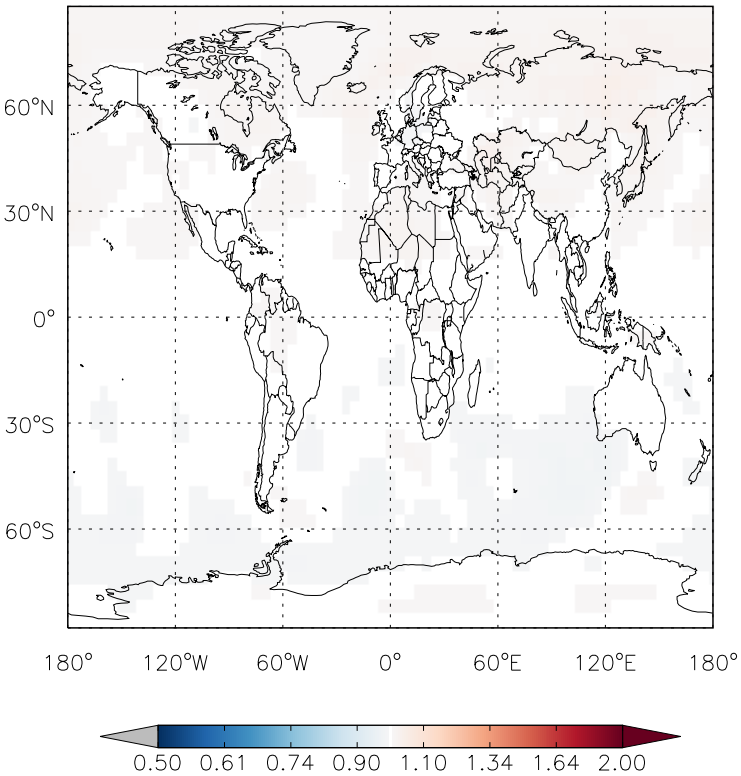
C3H8/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

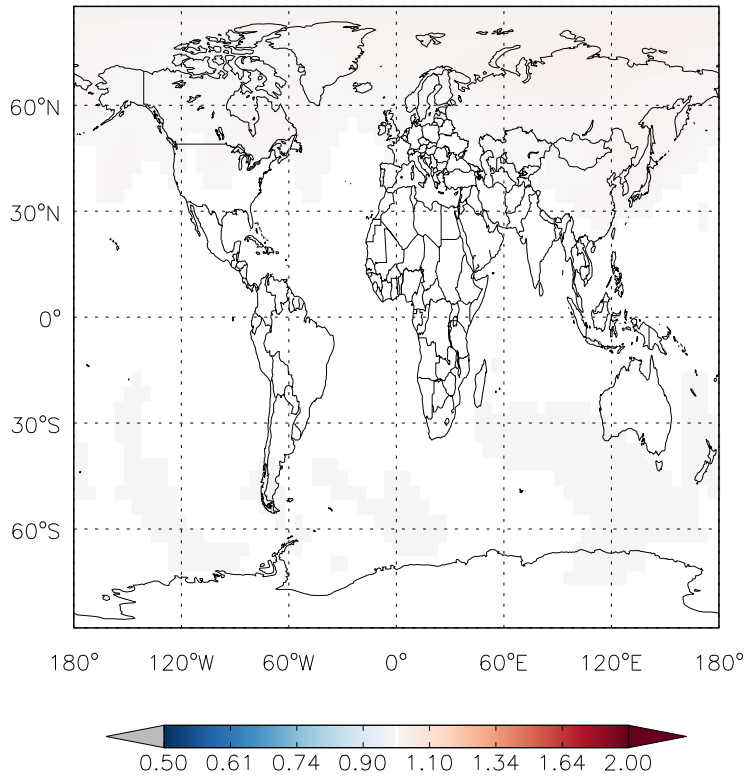
v11−01g−Run0 / v11−01f−geosfp−Run0

CH2O / Ratio @ Surface for Oct



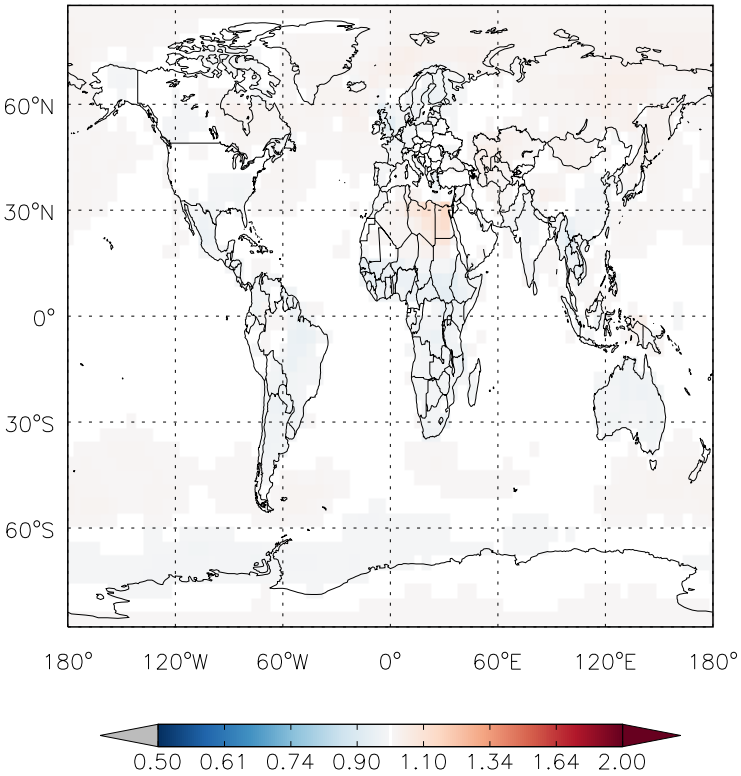
v11−01g−Run0 / v11−01f−geosfp−Run0

CH2O/ Ratio @ 500 hPa for Oct



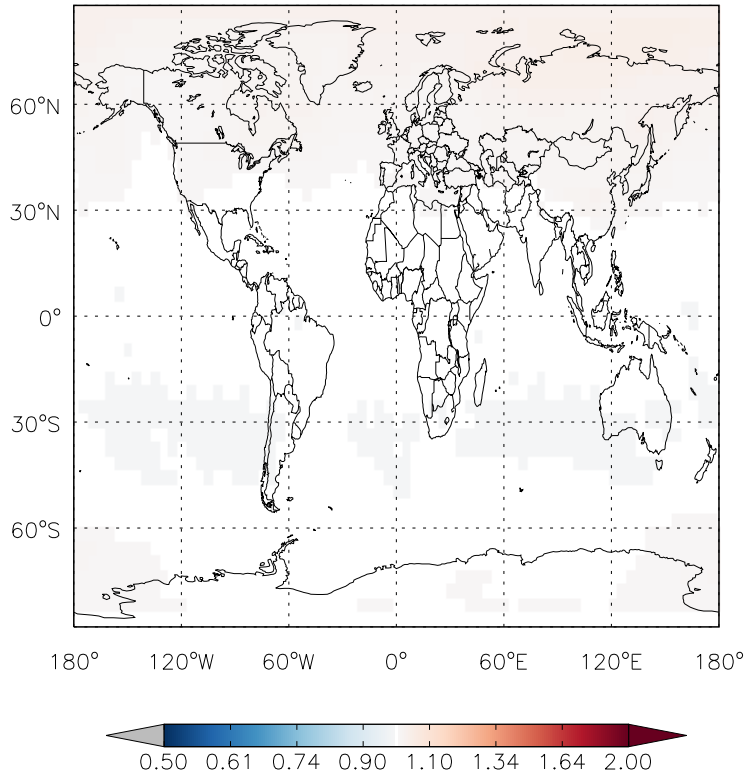
v11−01g−Run0 / v11−01d−Run1

CH2O / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

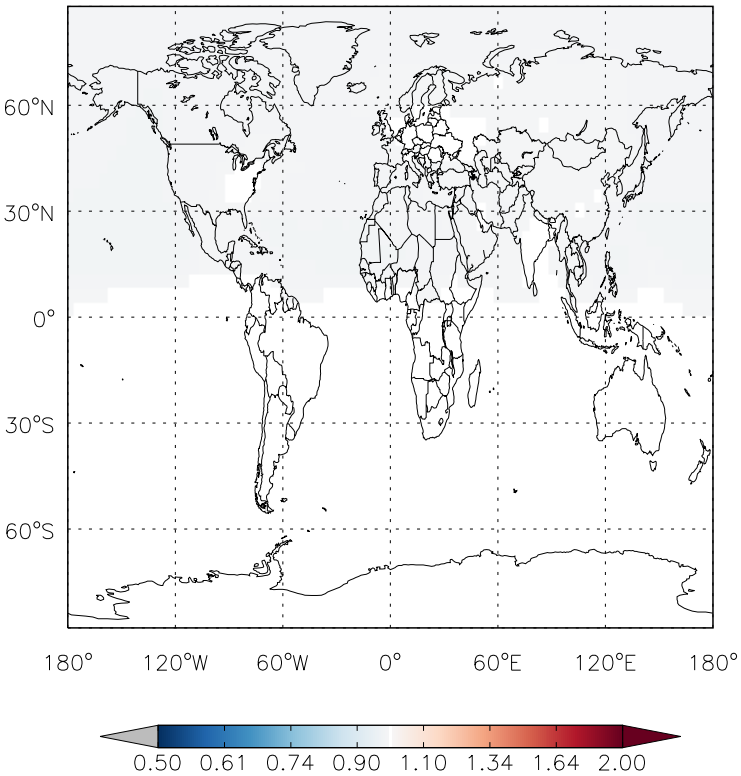
CH2O/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

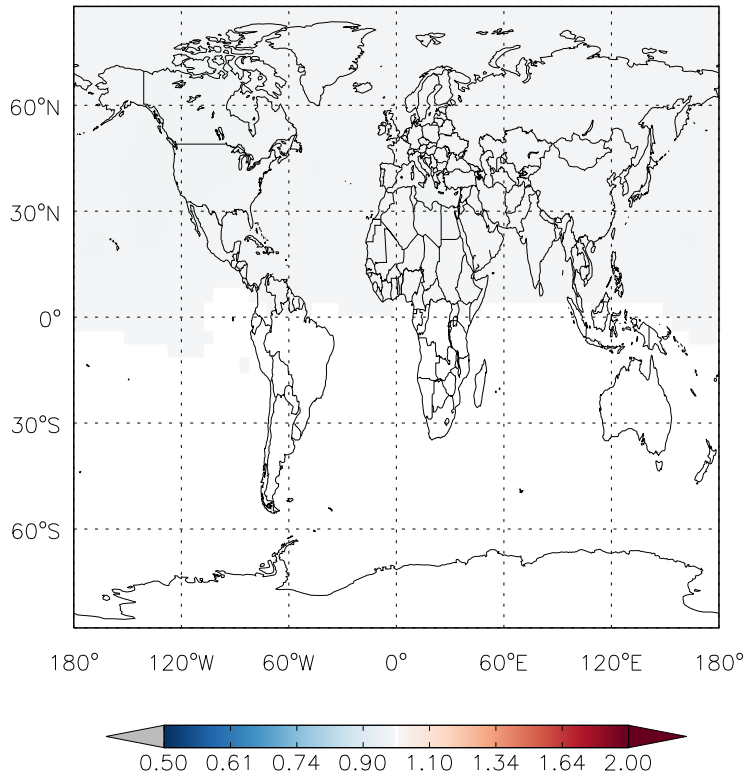
v11-01g-Run0 / v11-01f-geosfp-Run0

C2H6 / Ratio @ Surface for Oct



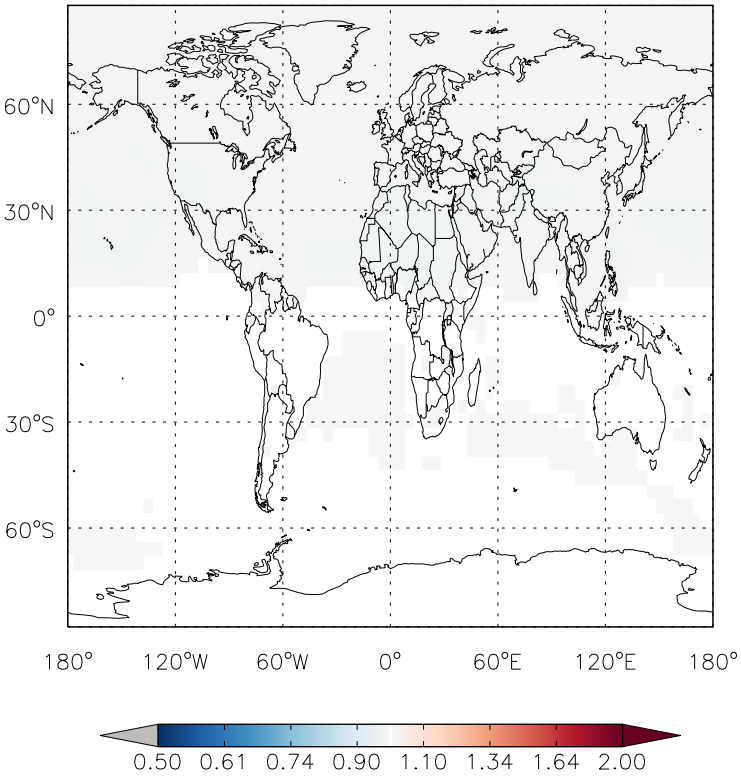
v11-01g-Run0 / v11-01f-geosfp-Run0

C2H6/ Ratio @ 500 hPa for Oct



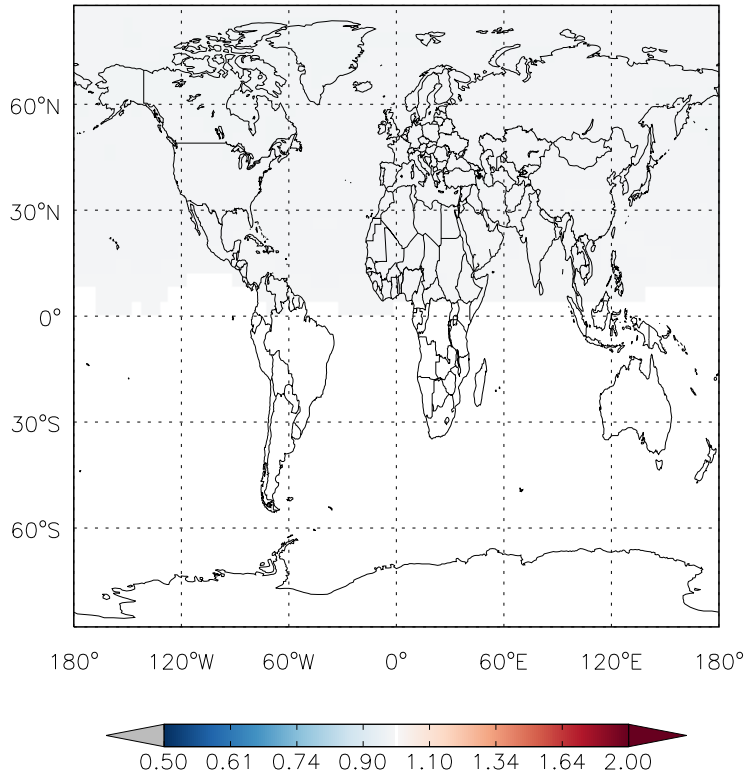
v11-01g-Run0 / v11-01d-Run1

C2H6 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

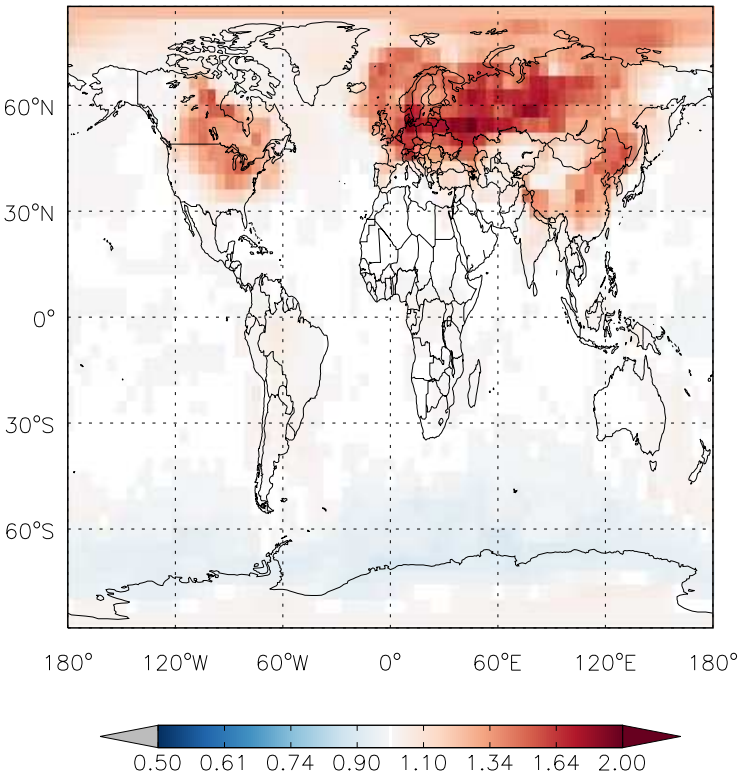
C2H6/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

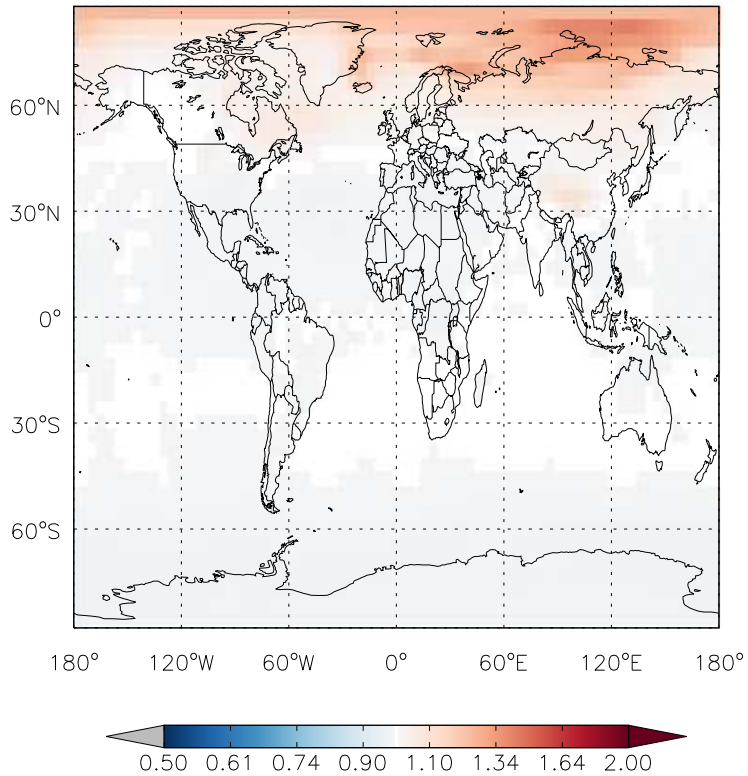
v11-01g-Run0 / v11-01f-geosfp-Run0

N2O5 / Ratio @ Surface for Oct



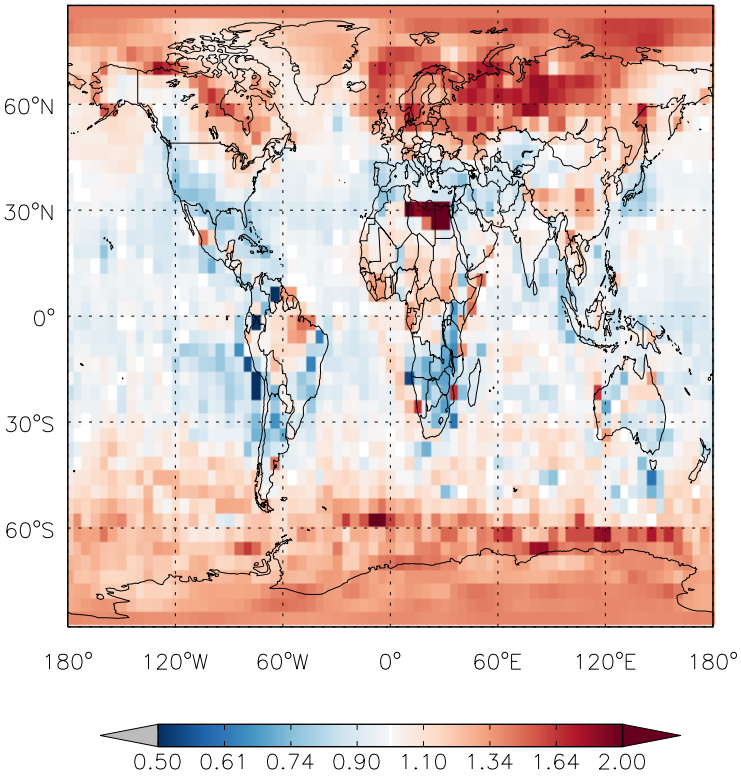
v11-01g-Run0 / v11-01f-geosfp-Run0

N2O5/ Ratio @ 500 hPa for Oct



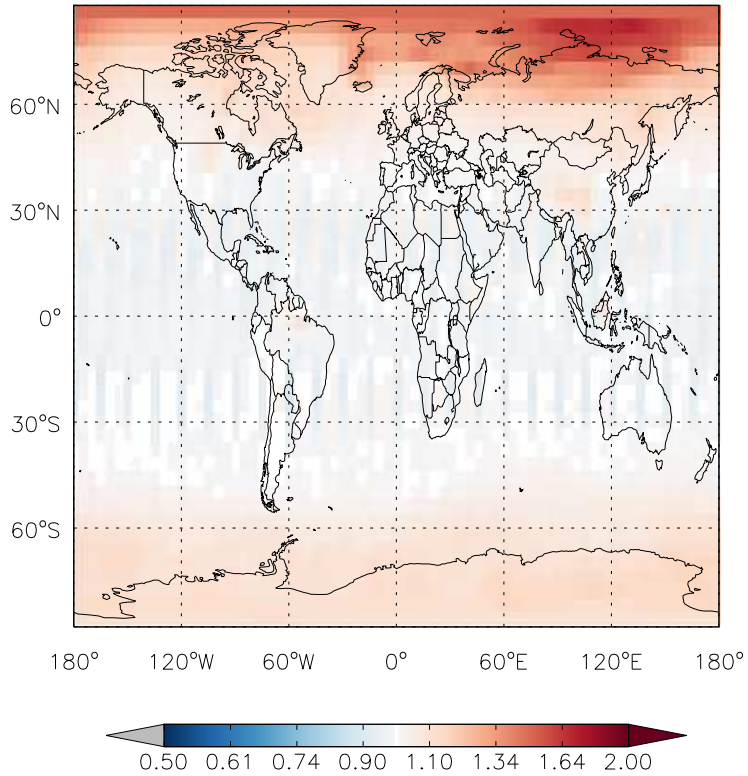
v11-01g-Run0 / v11-01d-Run1

N2O5 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

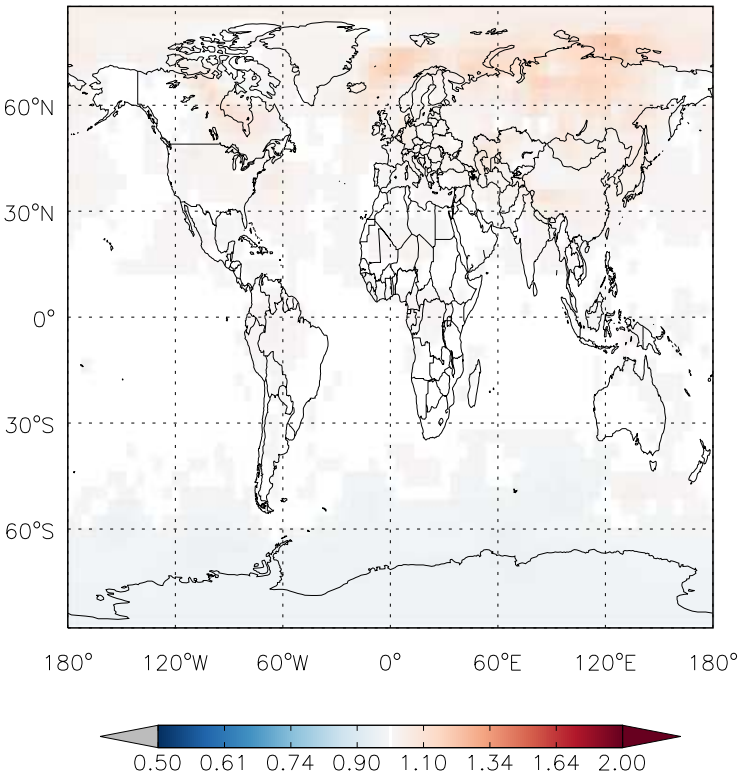
N2O5/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

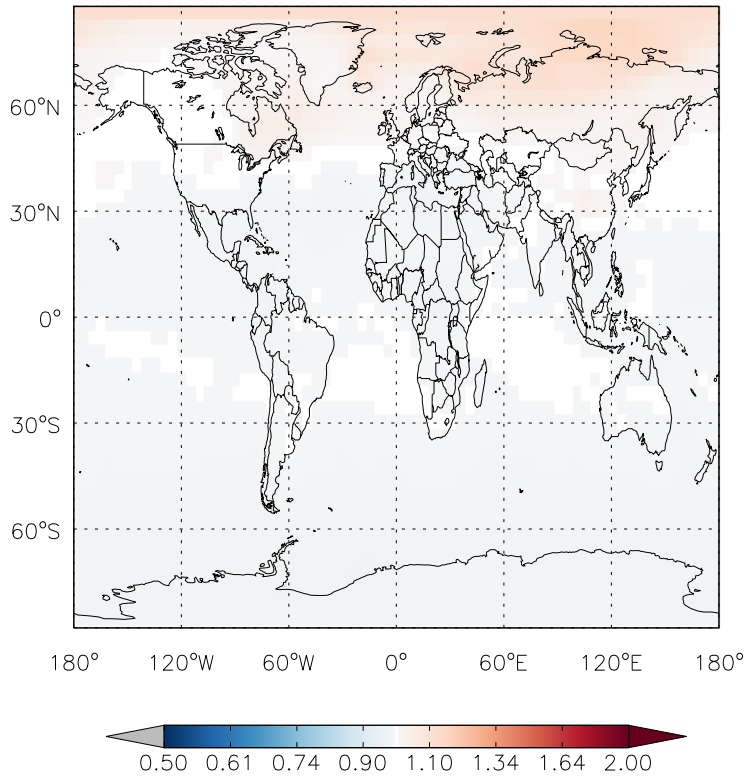
v11-01g-Run0 / v11-01f-geosfp-Run0

HNO4 / Ratio @ Surface for Oct



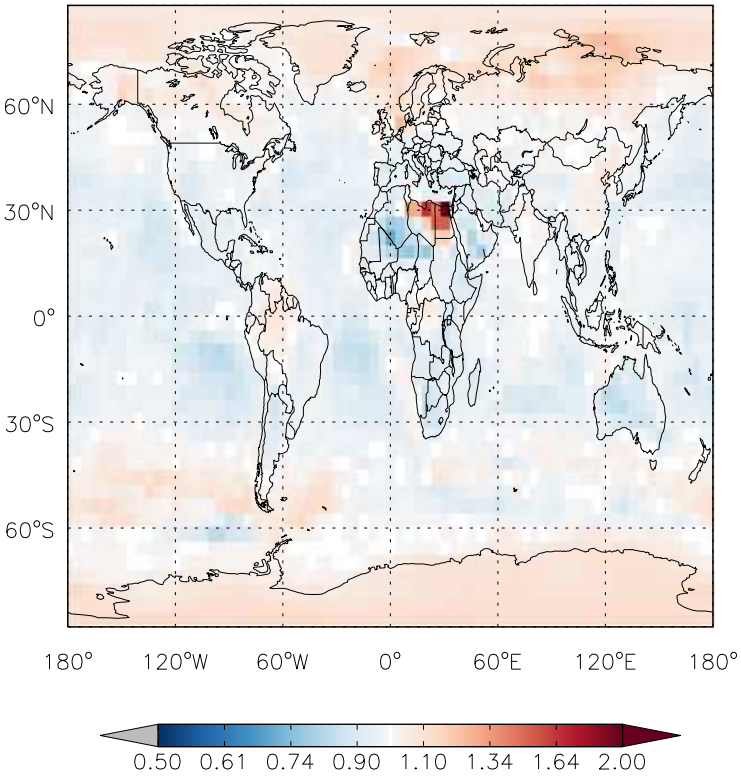
v11-01g-Run0 / v11-01f-geosfp-Run0

HNO4/ Ratio @ 500 hPa for Oct



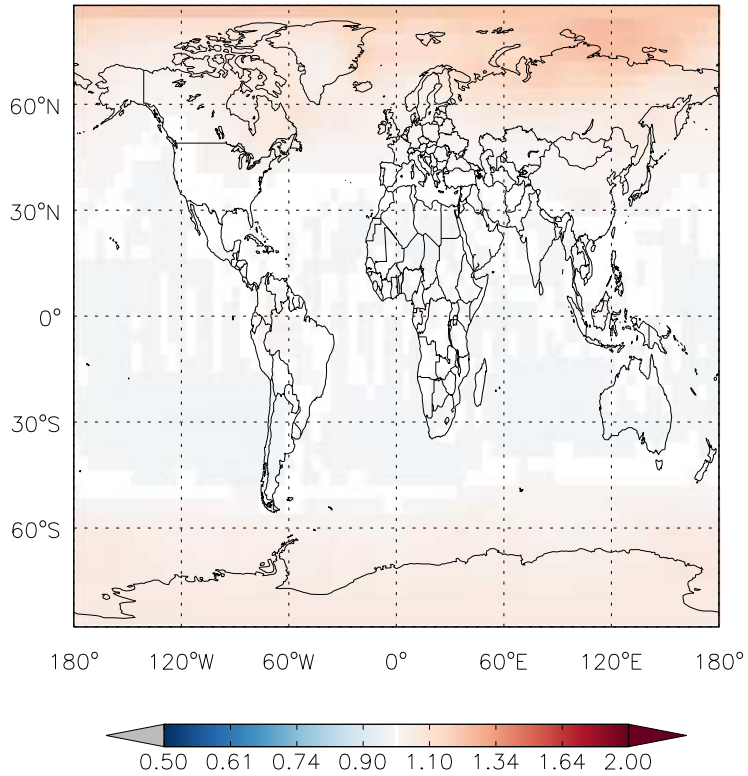
v11-01g-Run0 / v11-01d-Run1

HNO4 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

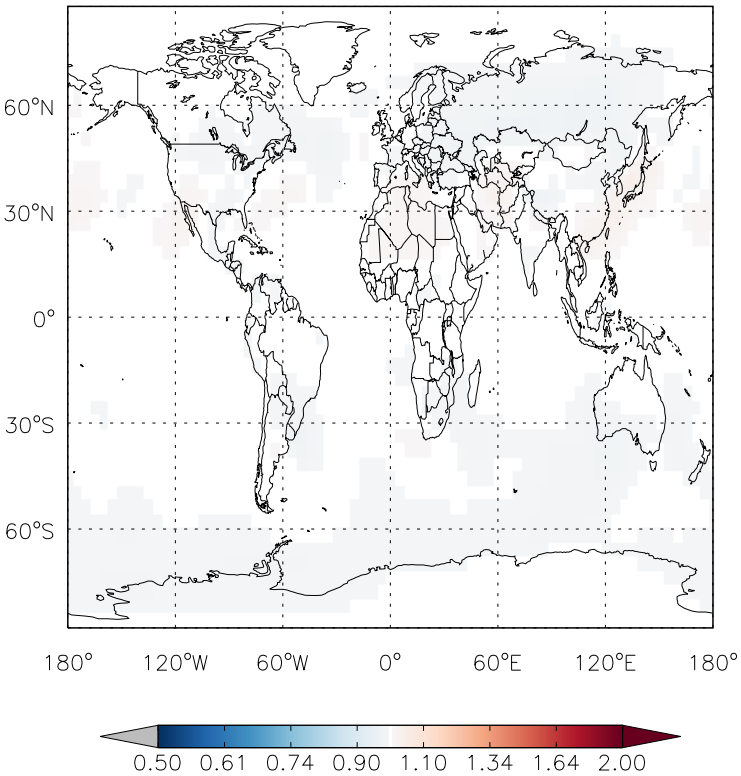
HNO4/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

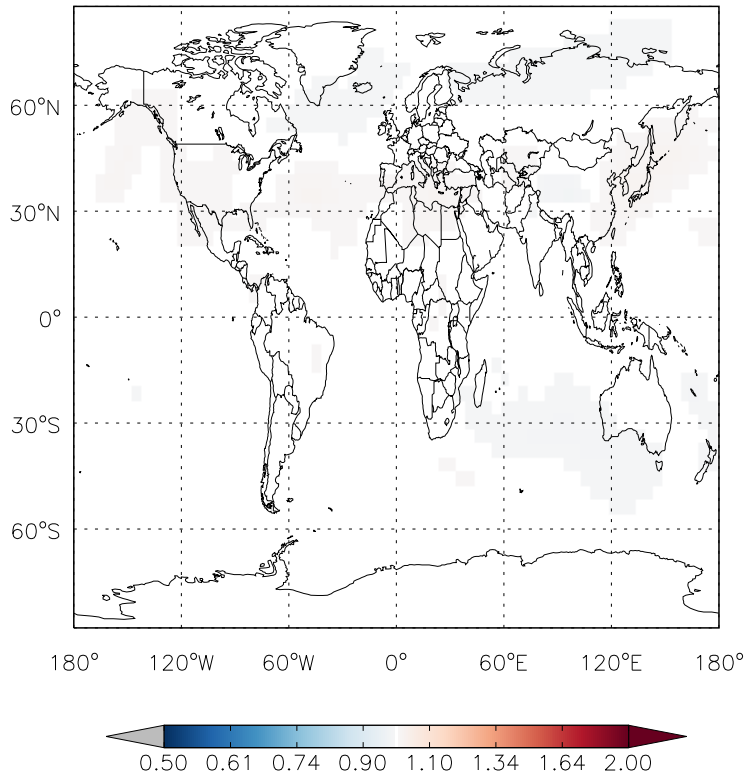
v11-01g-Run0 / v11-01f-geosfp-Run0

MP / Ratio @ Surface for Oct



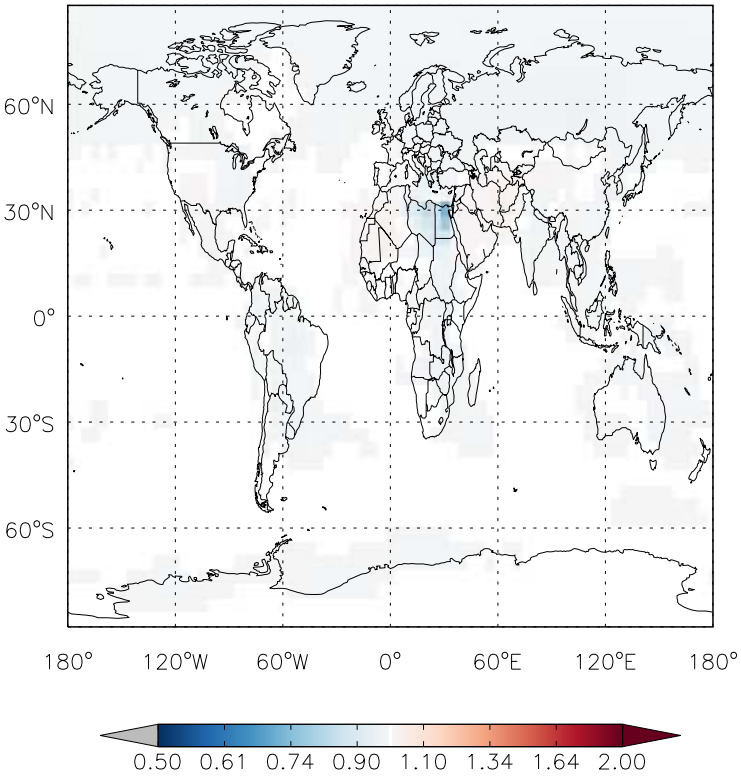
v11-01g-Run0 / v11-01f-geosfp-Run0

MP/ Ratio @ 500 hPa for Oct



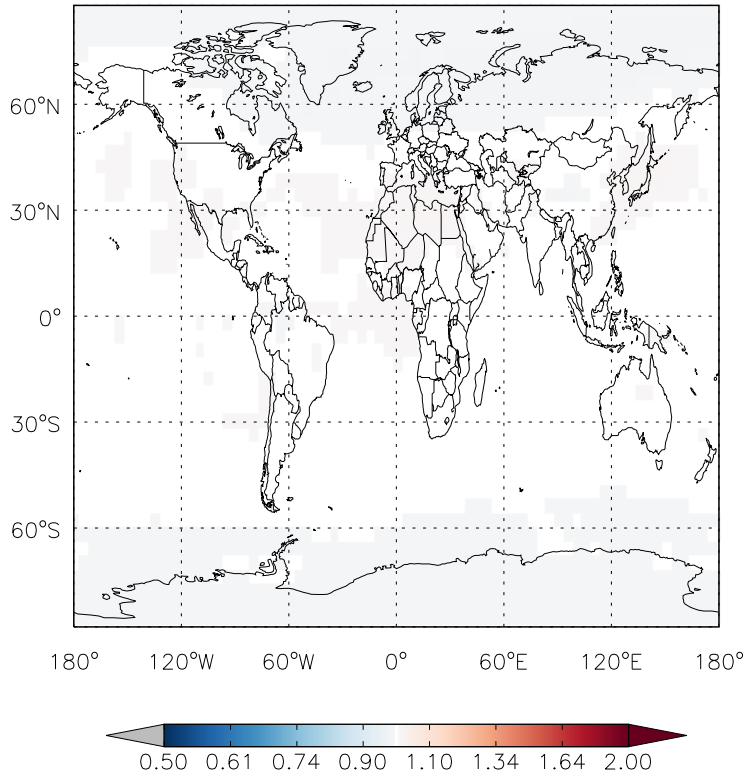
v11-01g-Run0 / v11-01d-Run1

MP / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

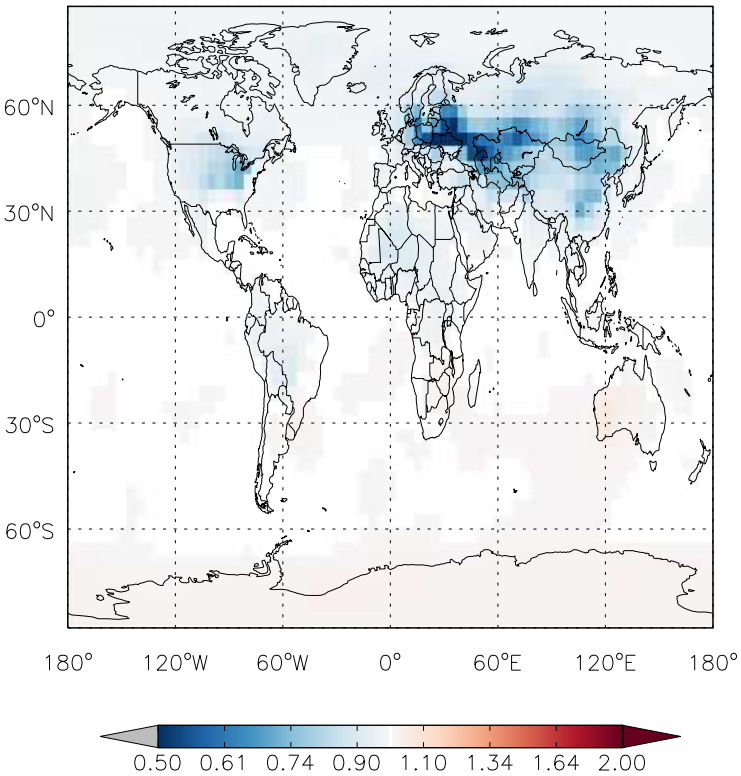
MP/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

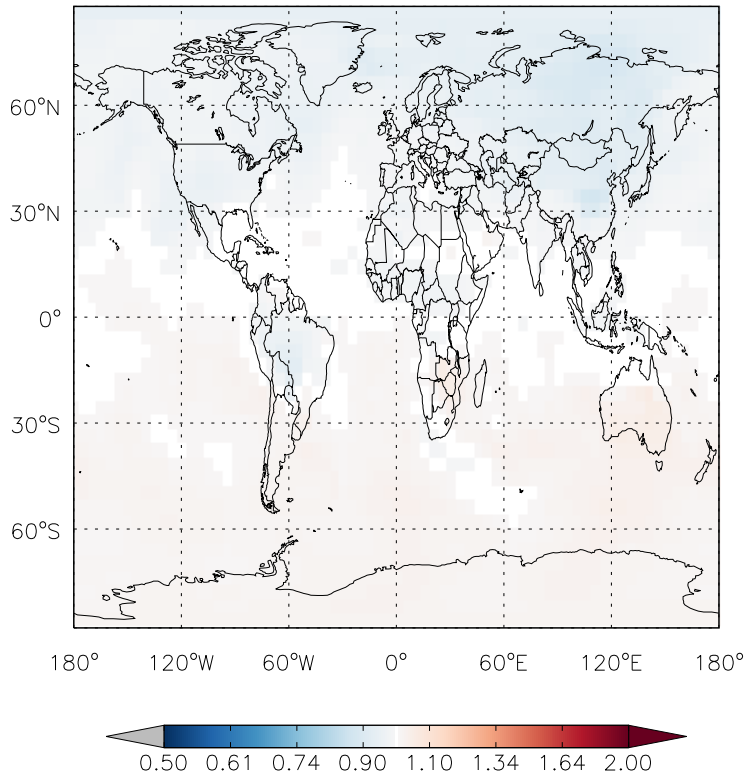
v11-01g-Run0 / v11-01f-geosfp-Run0

DMS / Ratio @ Surface for Oct



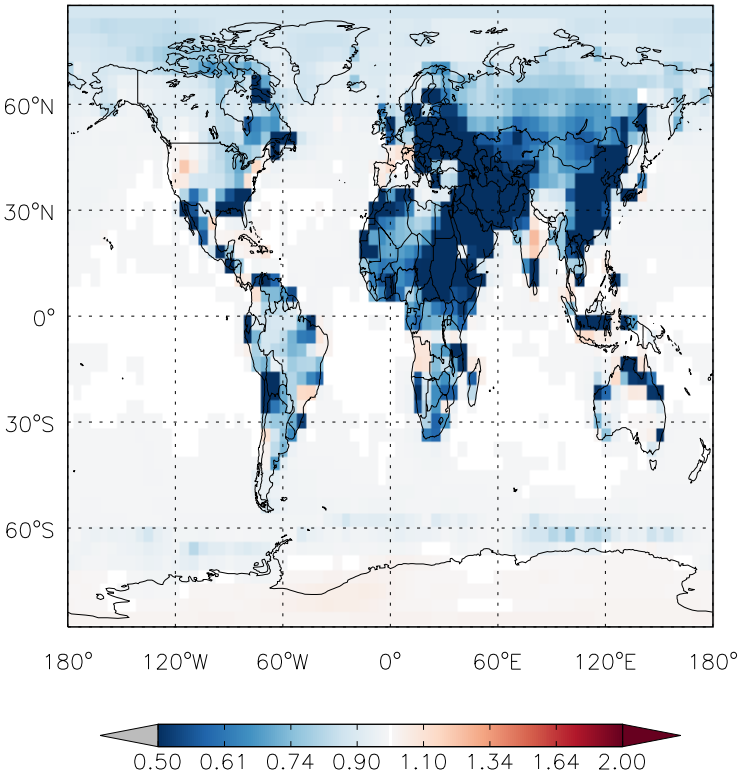
v11-01g-Run0 / v11-01f-geosfp-Run0

DMS/ Ratio @ 500 hPa for Oct



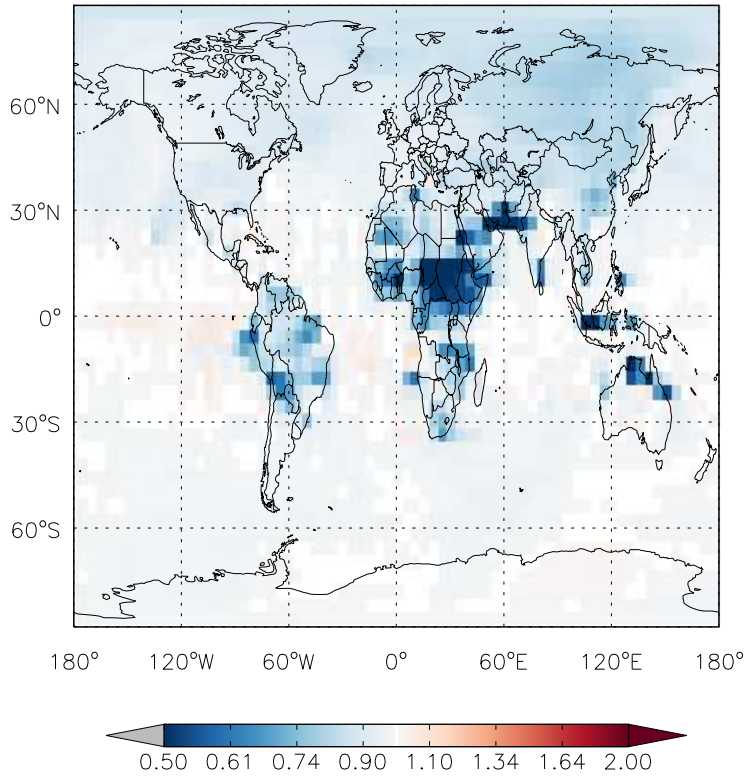
v11-01g-Run0 / v11-01d-Run1

DMS / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

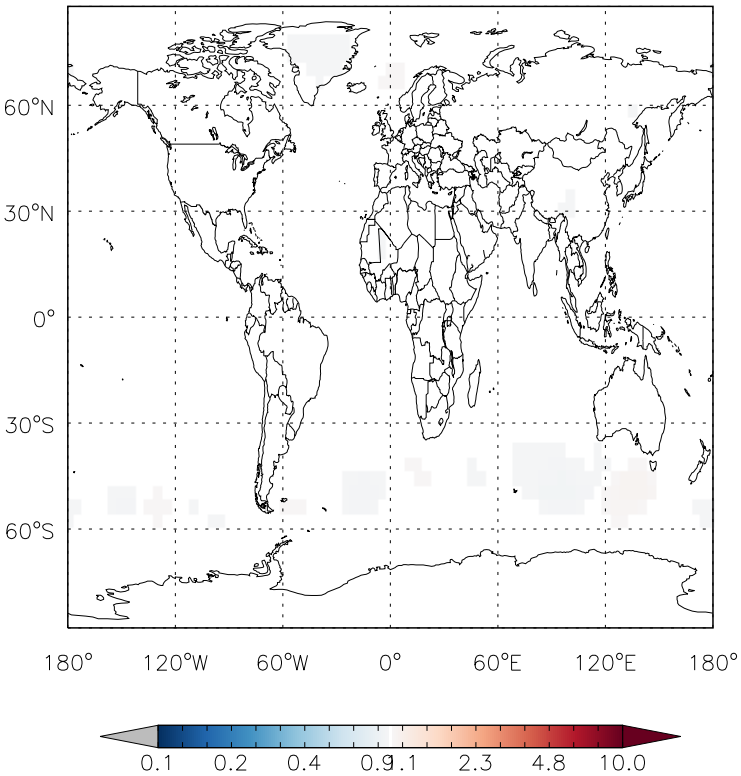
DMS/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

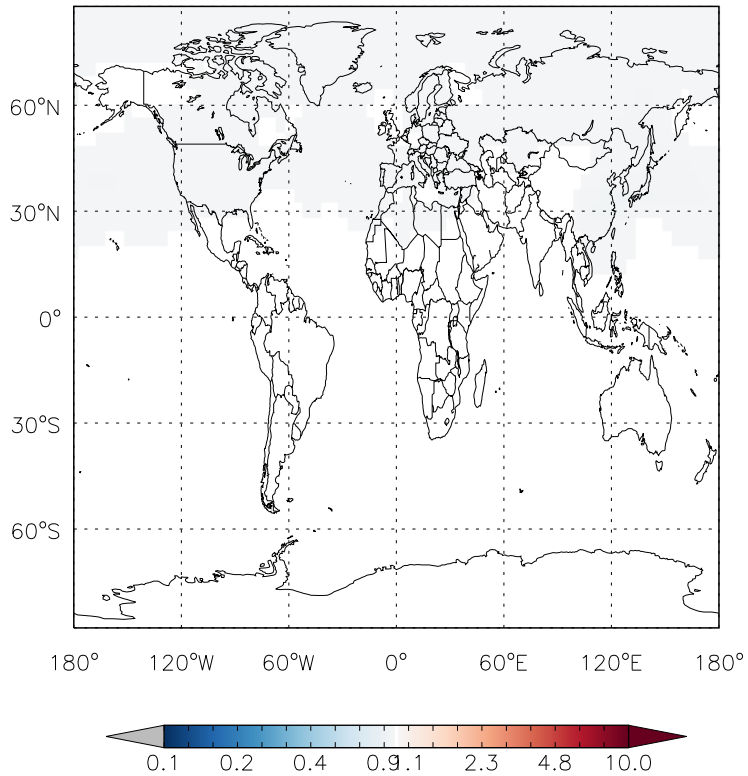
v11-01g-Run0 / v11-01f-geosfp-Run0

SO2 / Ratio @ Surface for Oct



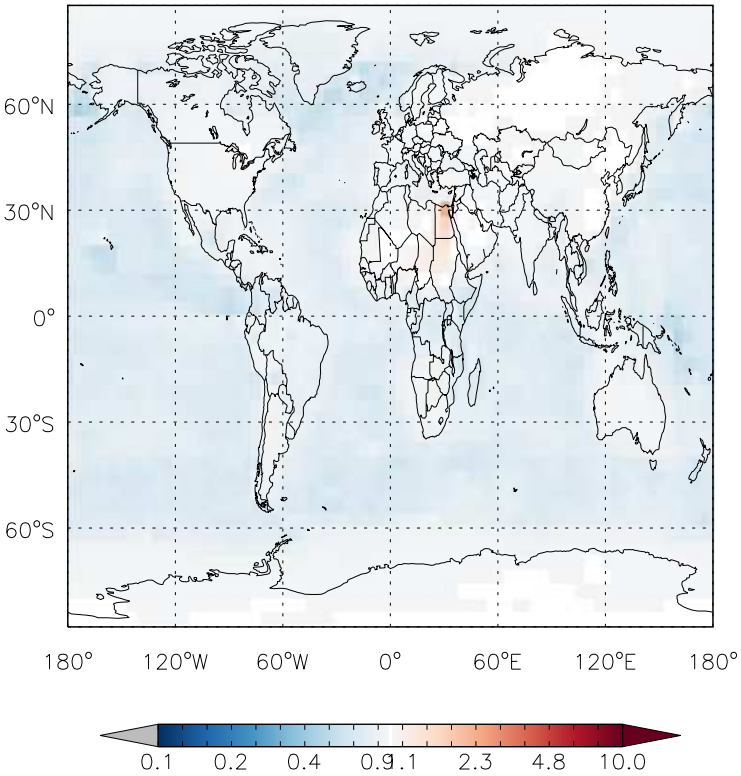
v11-01g-Run0 / v11-01f-geosfp-Run0

SO2/ Ratio @ 500 hPa for Oct



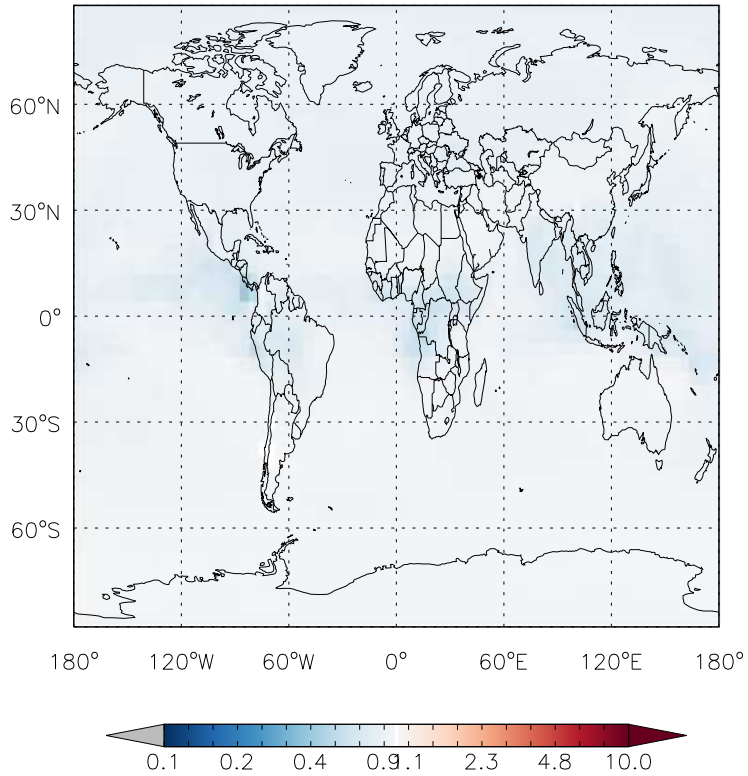
v11-01g-Run0 / v11-01d-Run1

SO2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

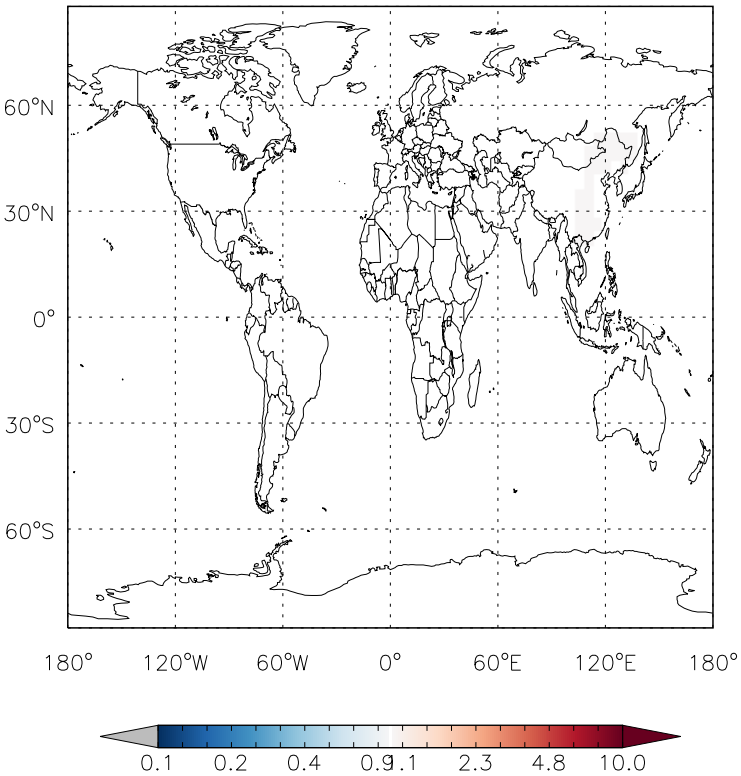
SO2/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

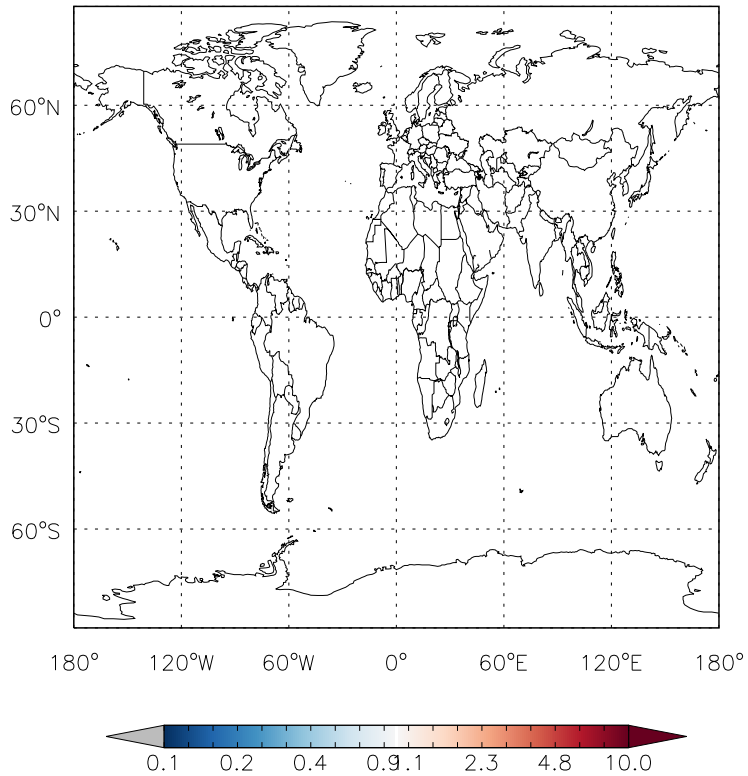
v11−01g−Run0 / v11−01f−geosfp−Run0

SO4 / Ratio @ Surface for Oct



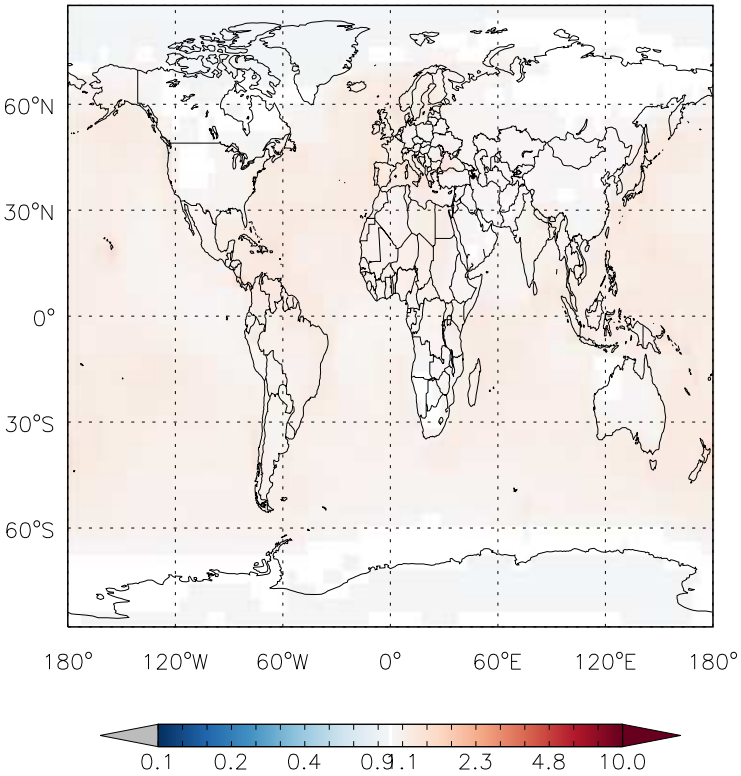
v11−01g−Run0 / v11−01f−geosfp−Run0

SO4/ Ratio @ 500 hPa for Oct



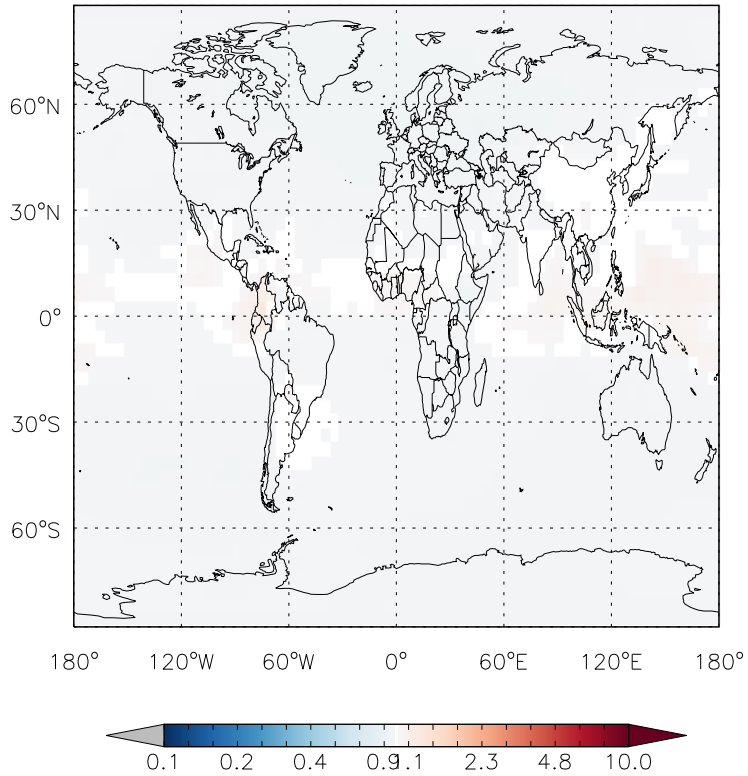
v11−01g−Run0 / v11−01d−Run1

SO4 / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

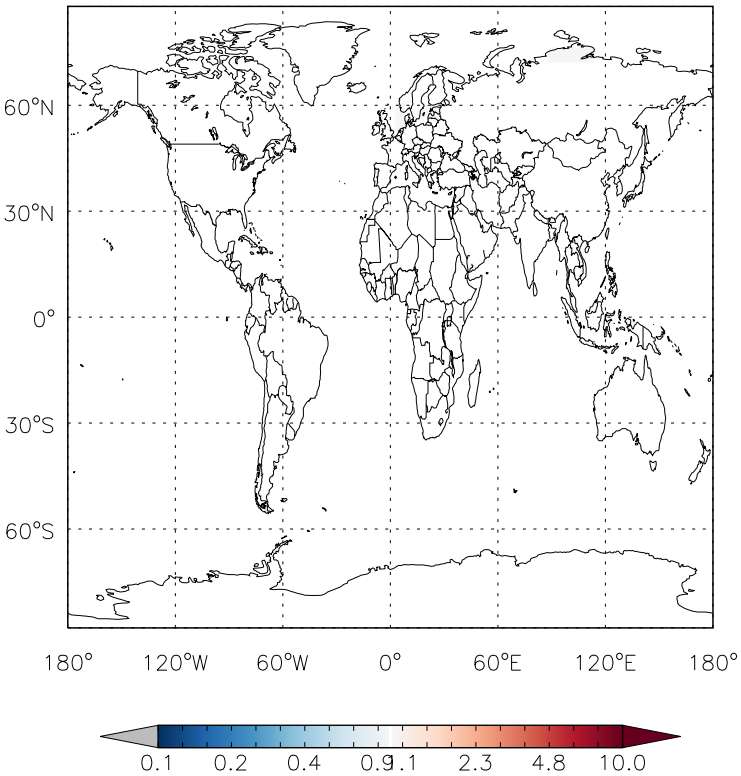
SO4/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

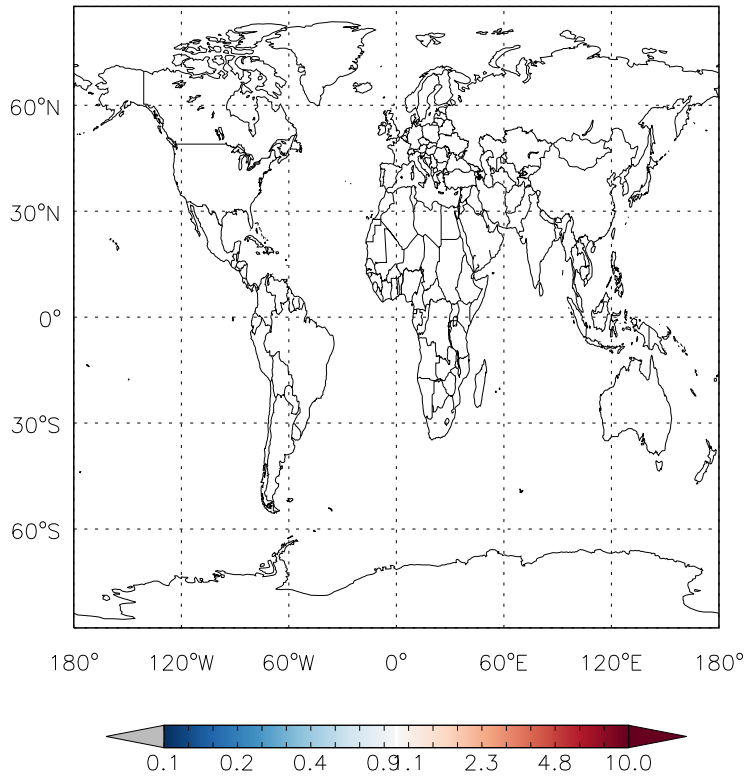
v11-01g-Run0 / v11-01f-geosfp-Run0

SO4s / Ratio @ Surface for Oct



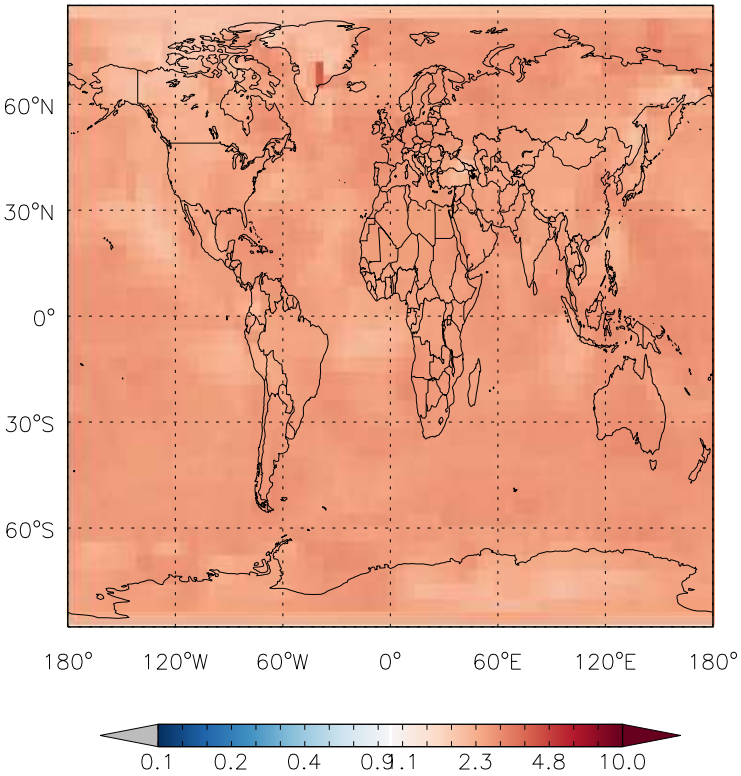
v11-01g-Run0 / v11-01f-geosfp-Run0

SO4s/ Ratio @ 500 hPa for Oct



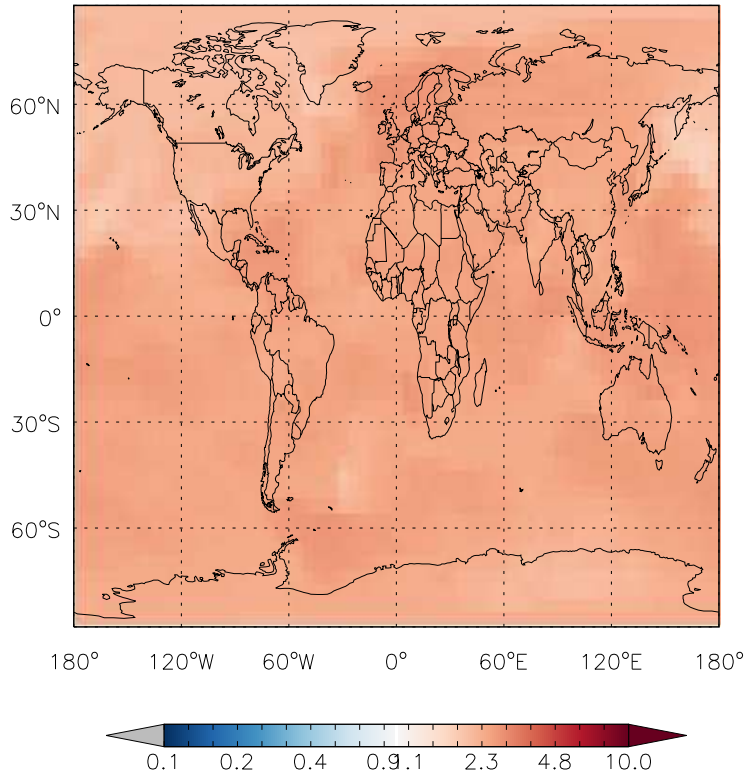
v11-01g-Run0 / v11-01d-Run1

SO4s / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

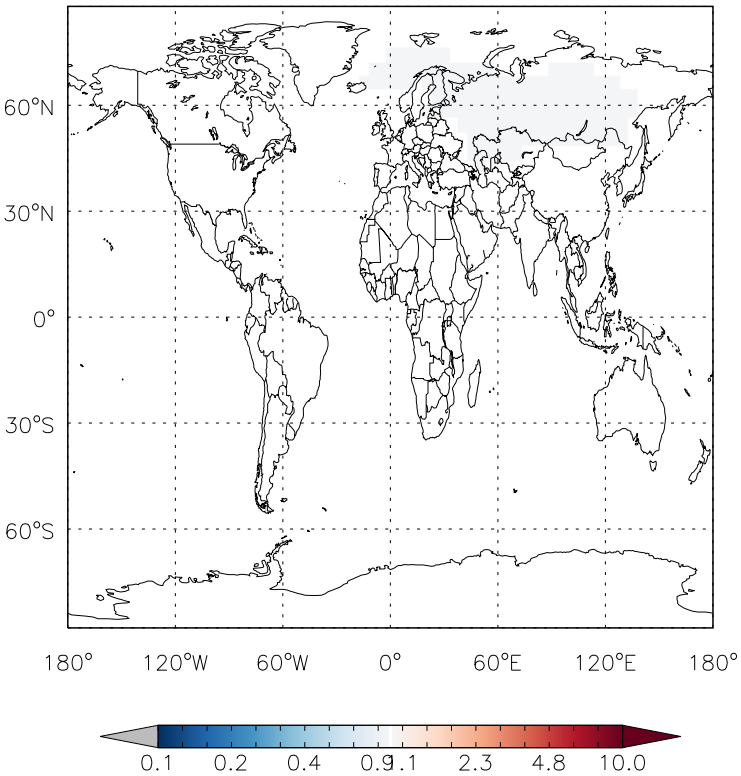
SO4s/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

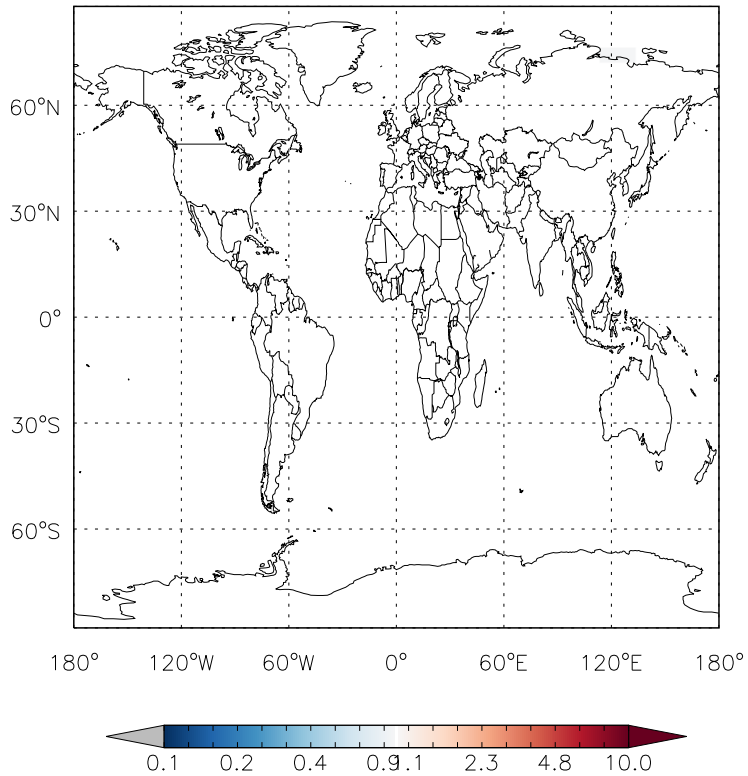
v11-01g-Run0 / v11-01f-geosfp-Run0

MSA / Ratio @ Surface for Oct



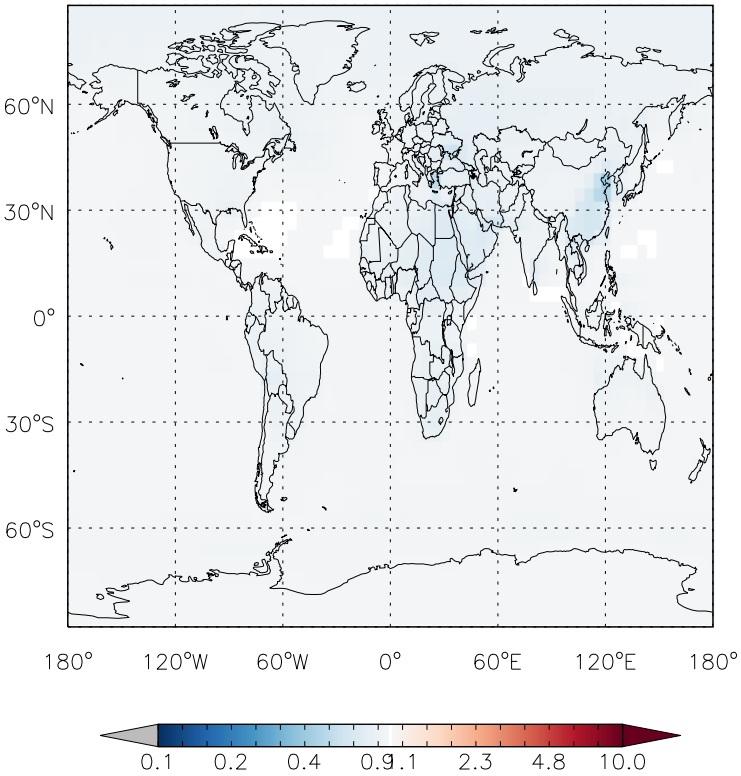
v11-01g-Run0 / v11-01f-geosfp-Run0

MSA/ Ratio @ 500 hPa for Oct



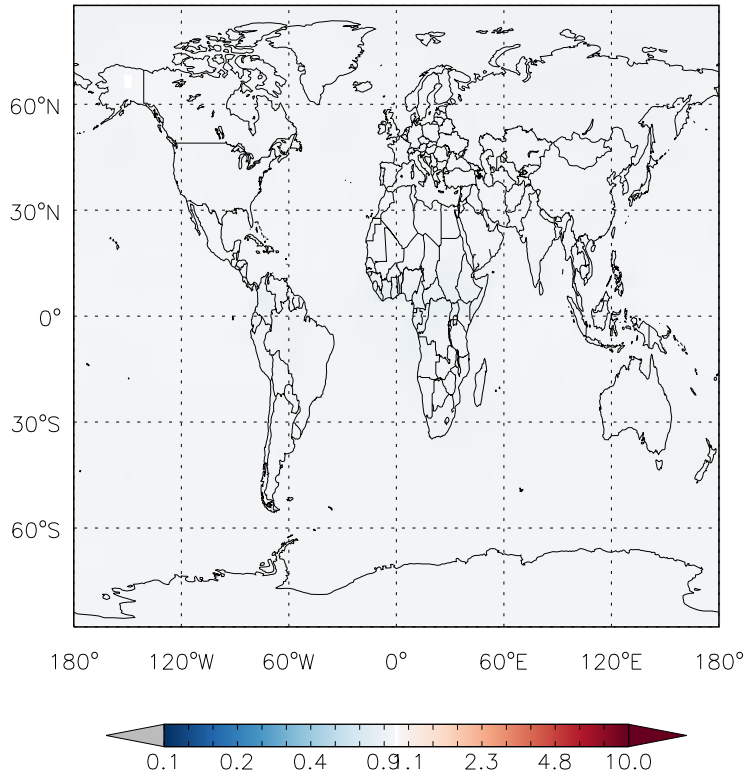
v11-01g-Run0 / v11-01d-Run1

MSA / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

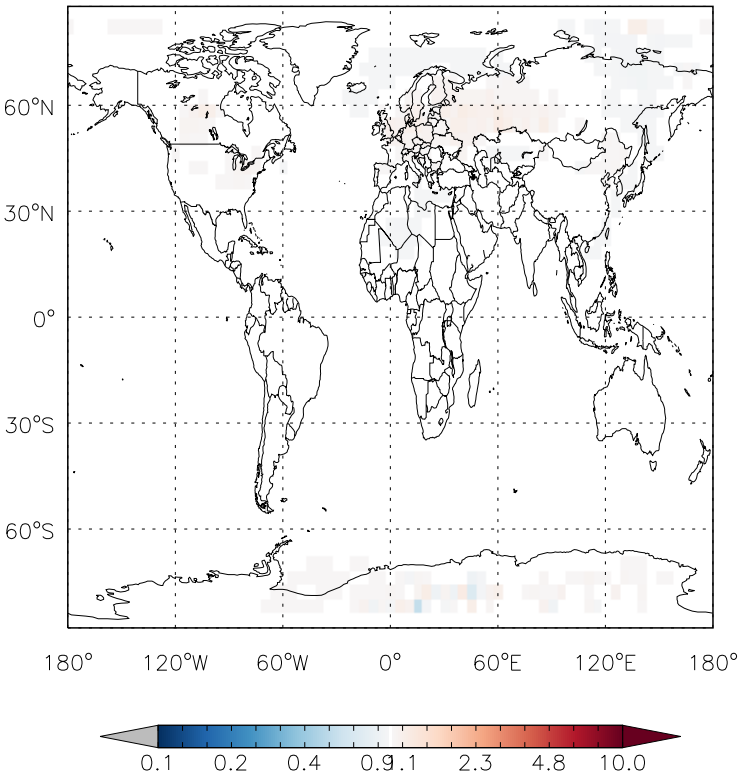
MSA/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

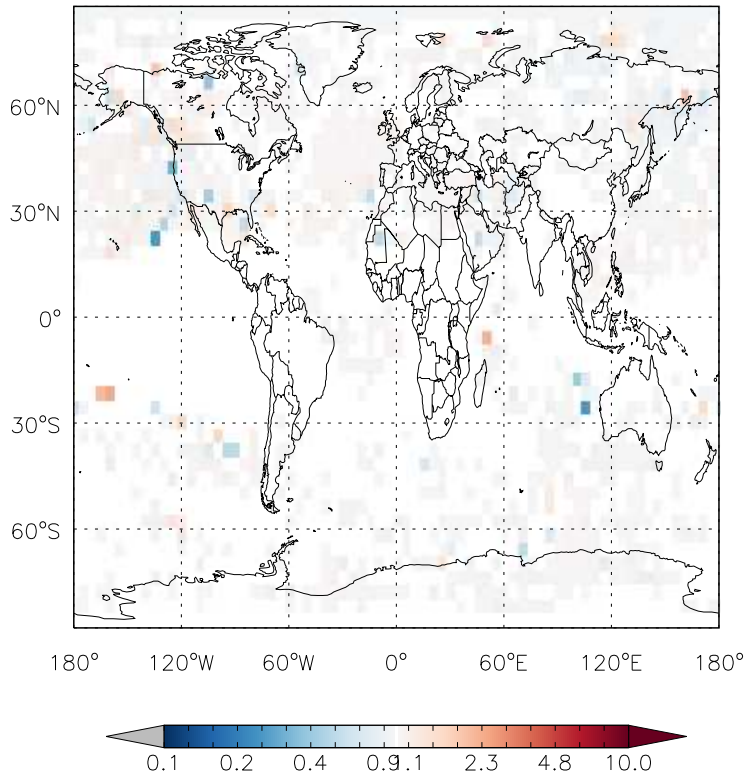
v11-01g-Run0 / v11-01f-geosfp-Run0

NH3 / Ratio @ Surface for Oct



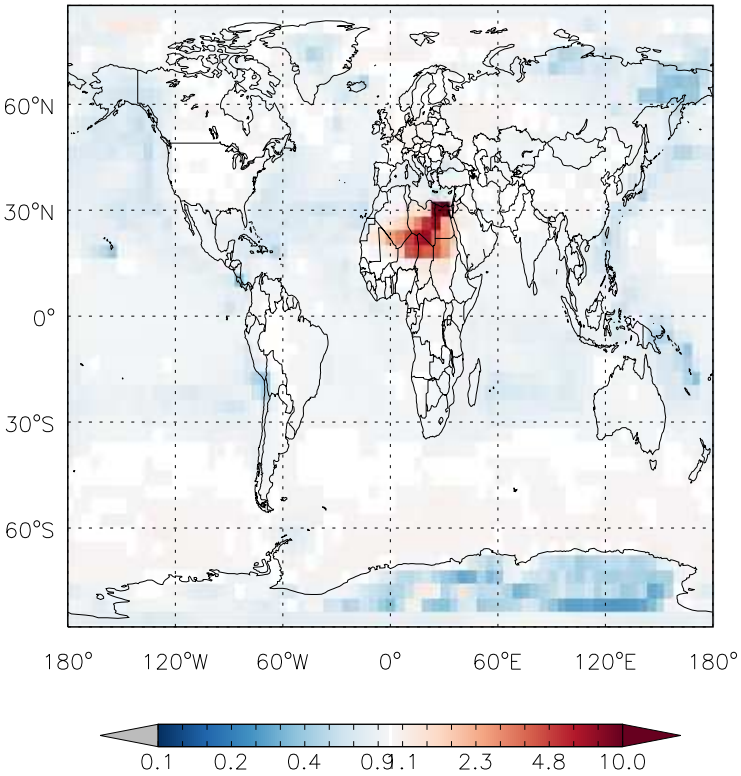
v11-01g-Run0 / v11-01f-geosfp-Run0

NH3/ Ratio @ 500 hPa for Oct



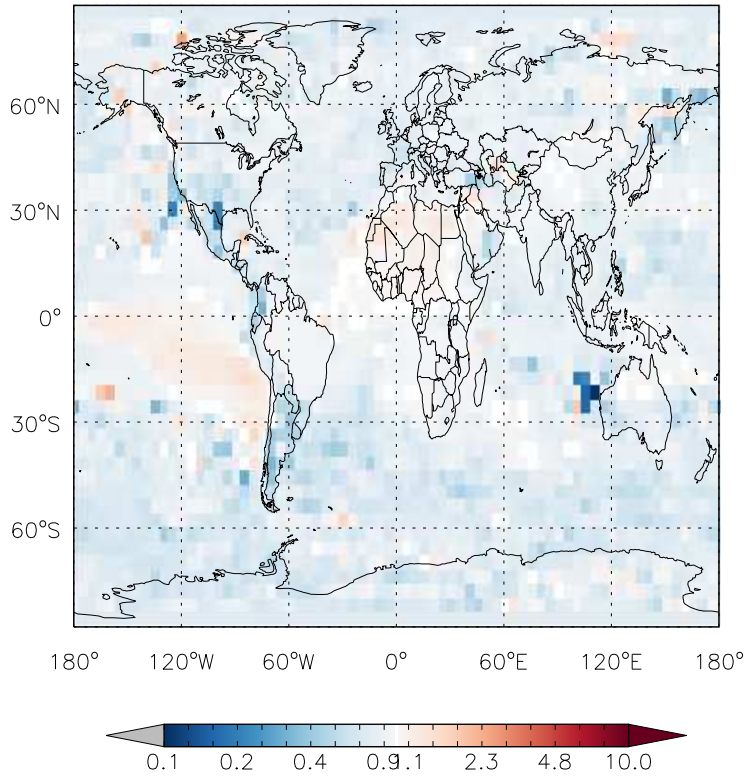
v11-01g-Run0 / v11-01d-Run1

NH3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

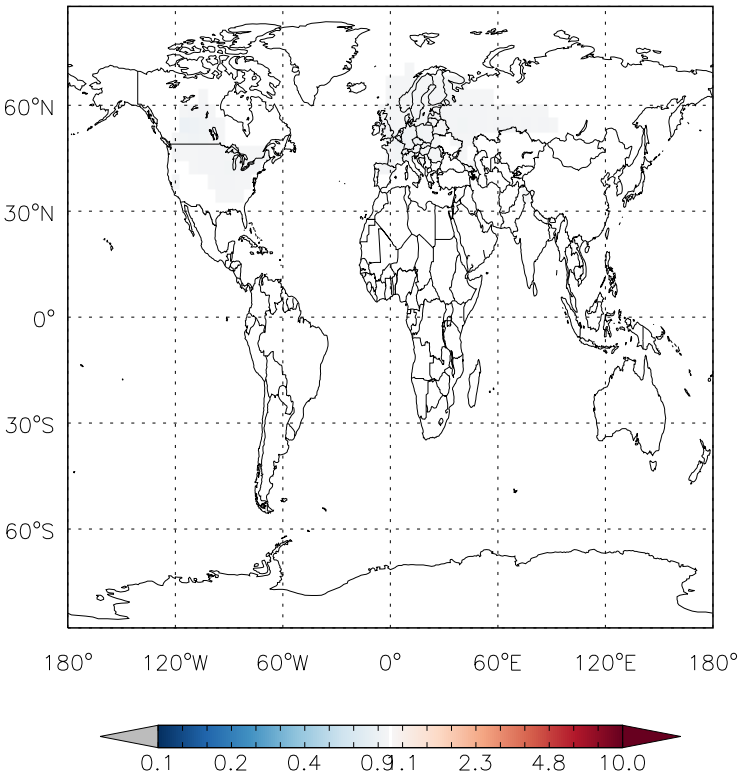
NH3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

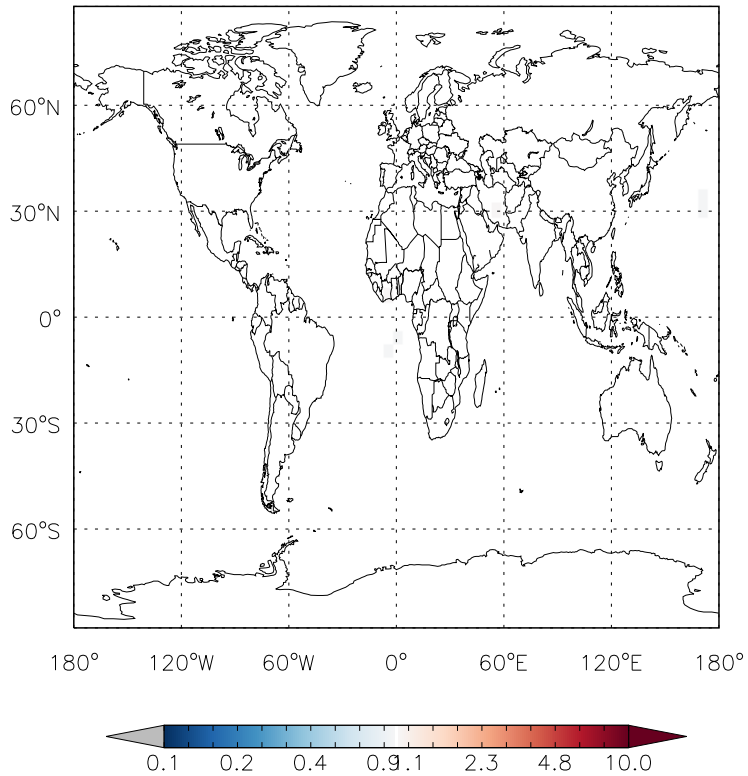
v11-01g-Run0 / v11-01f-geosfp-Run0

NH4 / Ratio @ Surface for Oct



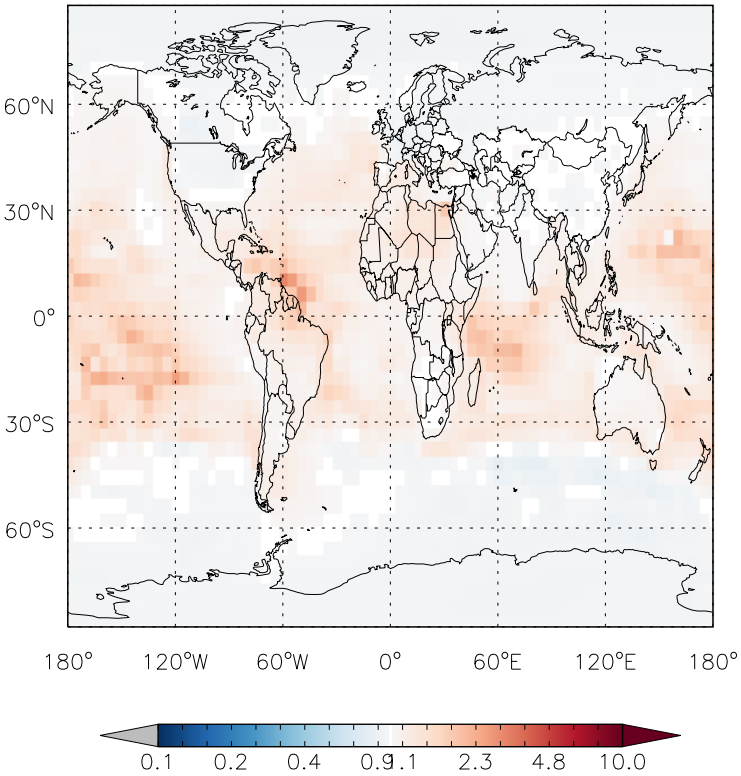
v11-01g-Run0 / v11-01f-geosfp-Run0

NH4/ Ratio @ 500 hPa for Oct



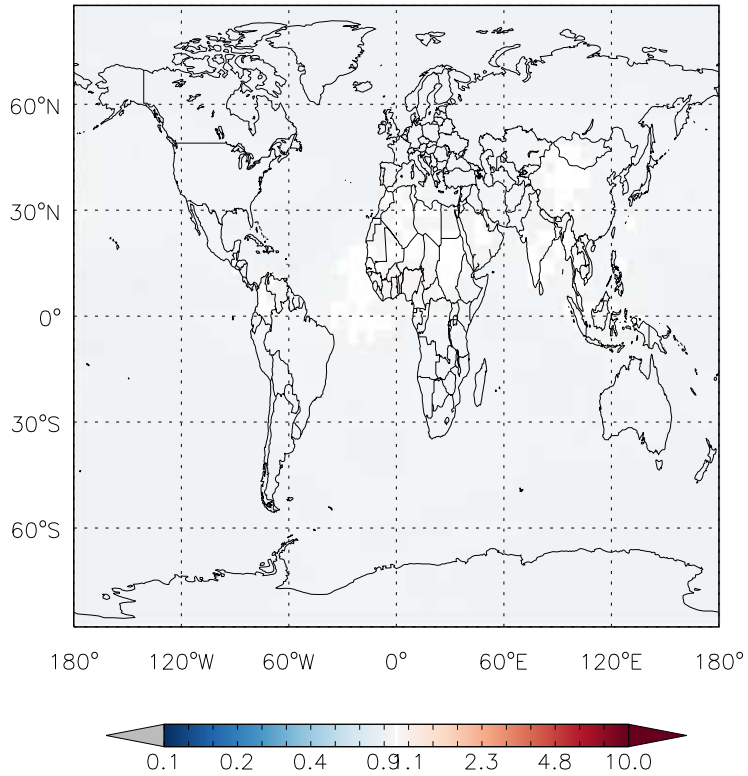
v11-01g-Run0 / v11-01d-Run1

NH4 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

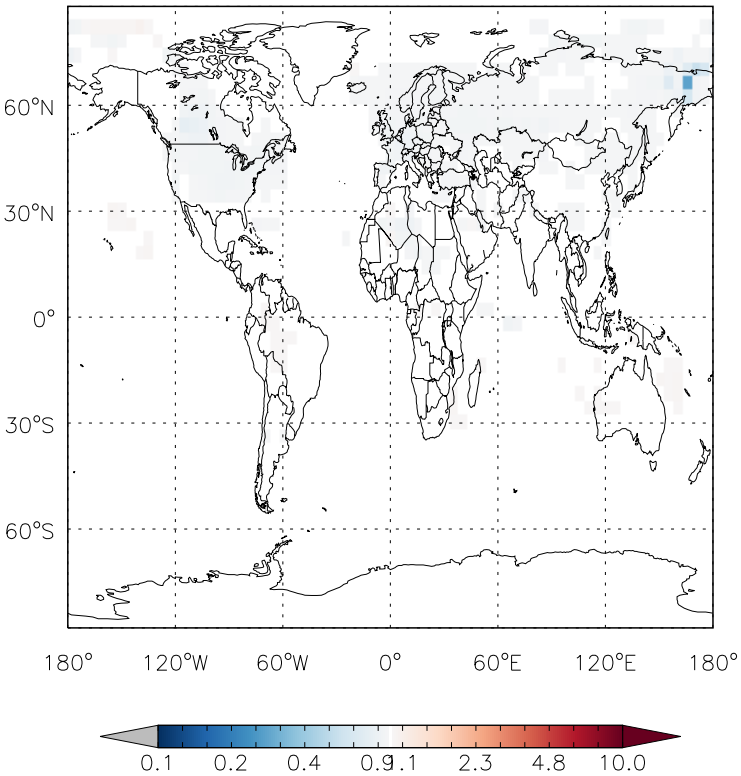
NH4/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

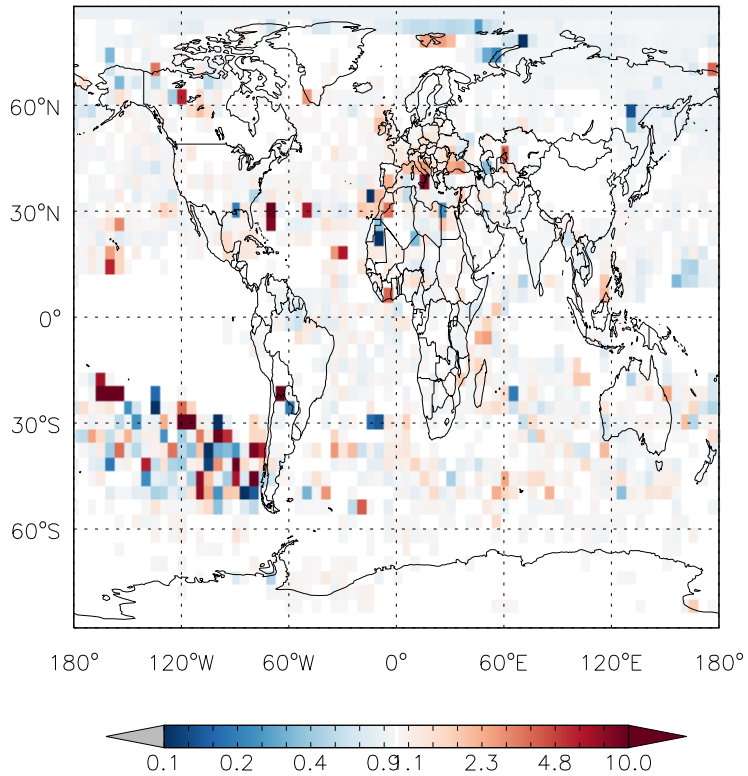
v11-01g-Run0 / v11-01f-geosfp-Run0

NIT / Ratio @ Surface for Oct



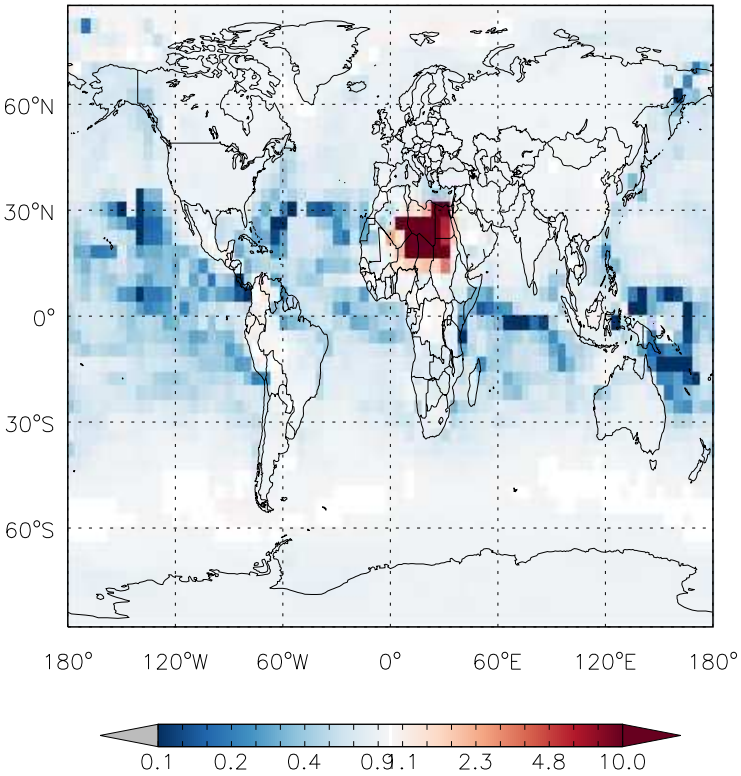
v11-01g-Run0 / v11-01f-geosfp-Run0

NIT/ Ratio @ 500 hPa for Oct



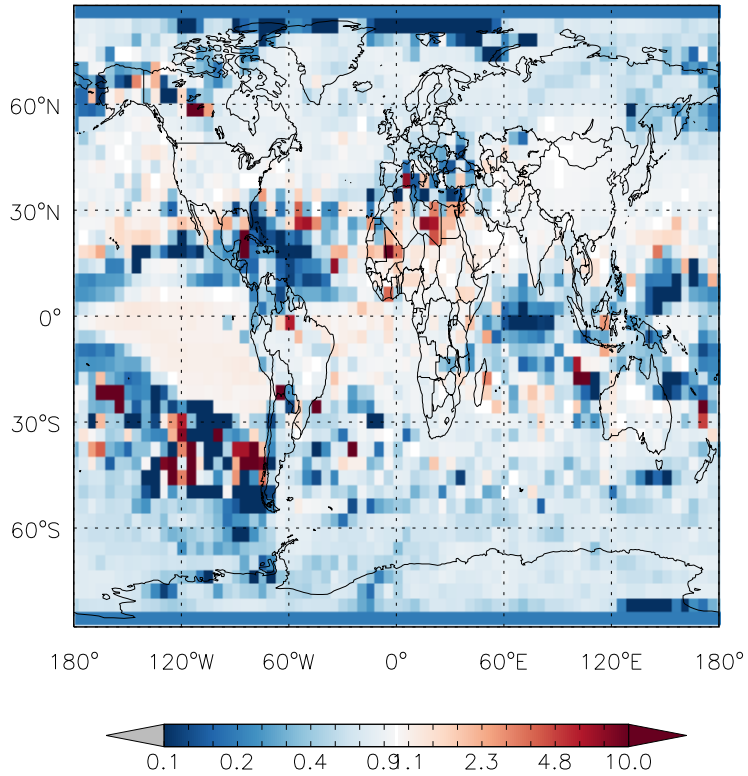
v11-01g-Run0 / v11-01d-Run1

NIT / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

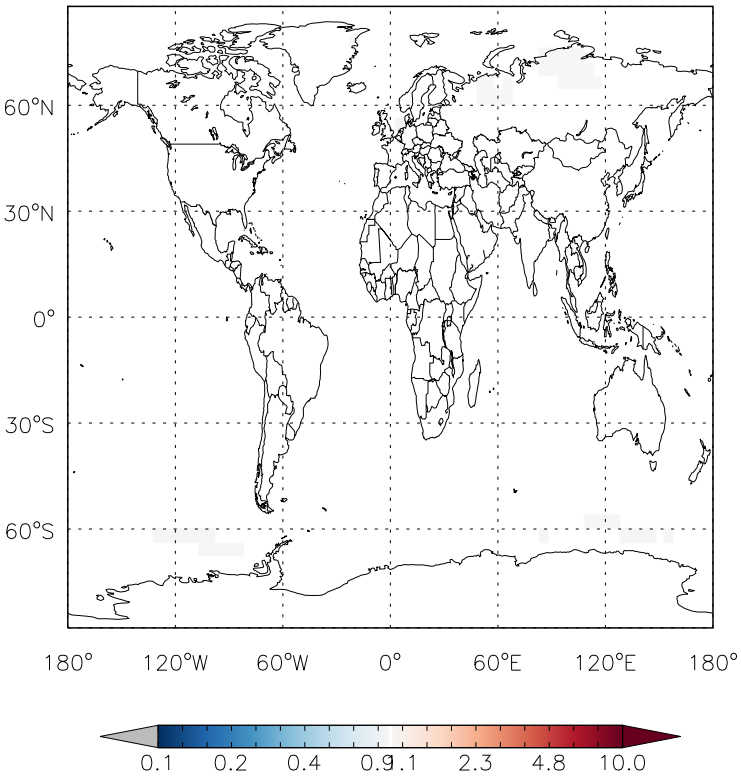
NIT/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

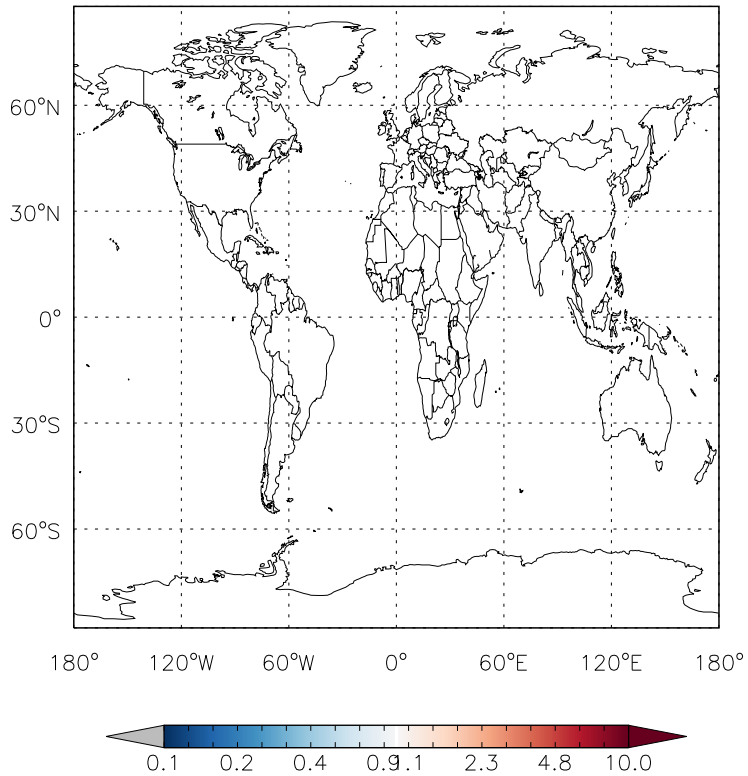
v11-01g-Run0 / v11-01f-geosfp-Run0

NITs / Ratio @ Surface for Oct



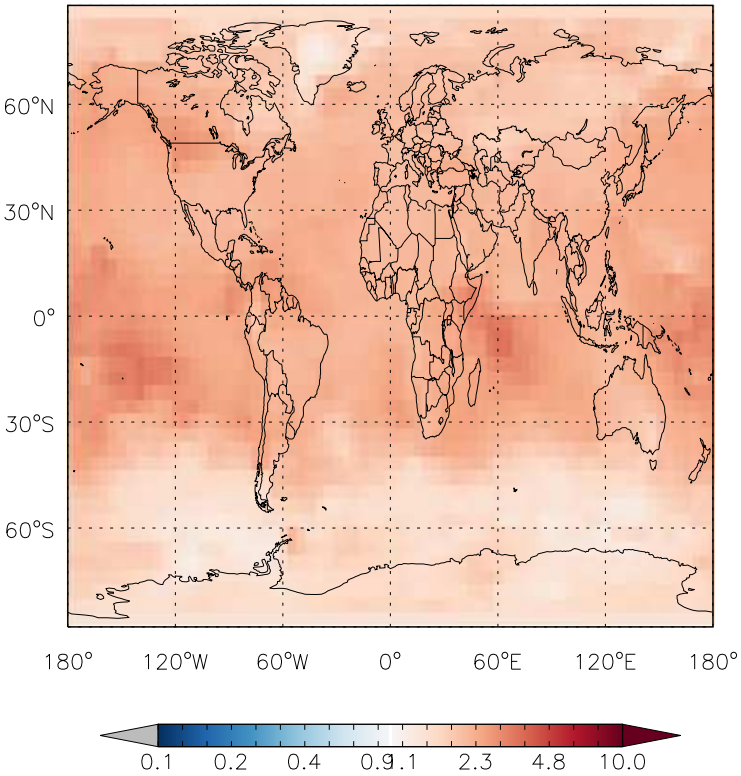
v11-01g-Run0 / v11-01f-geosfp-Run0

NITs/ Ratio @ 500 hPa for Oct



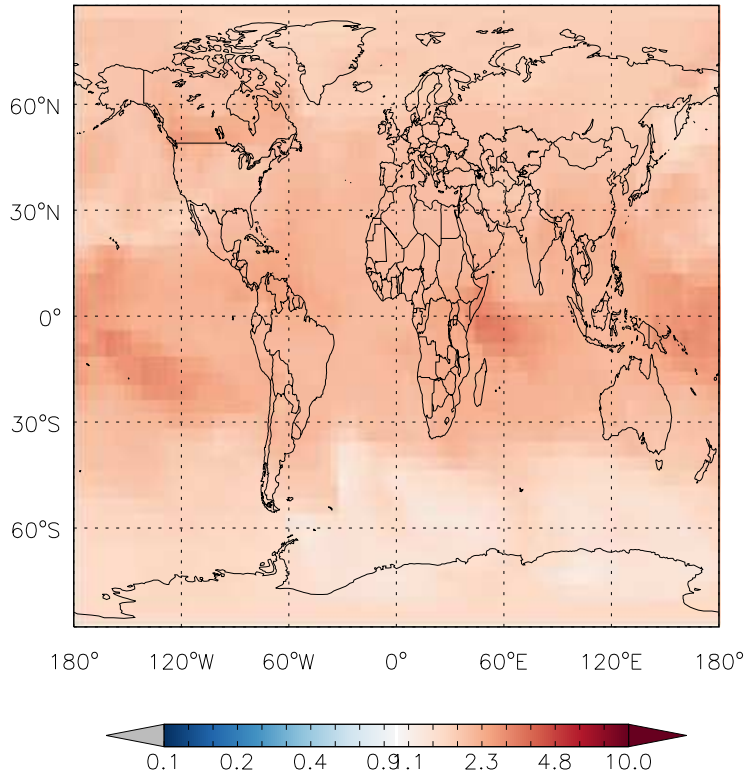
v11-01g-Run0 / v11-01d-Run1

NITs / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

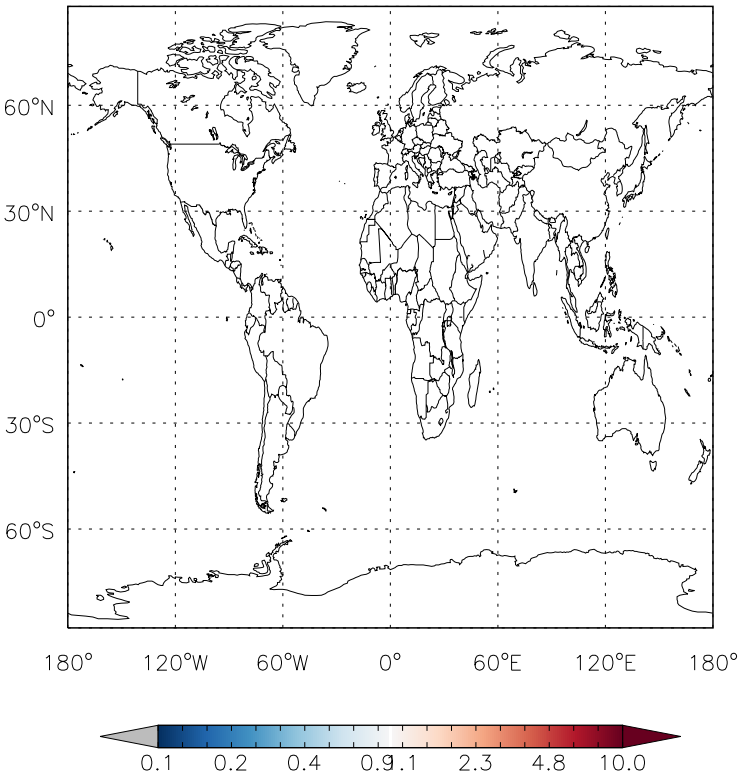
NITs/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

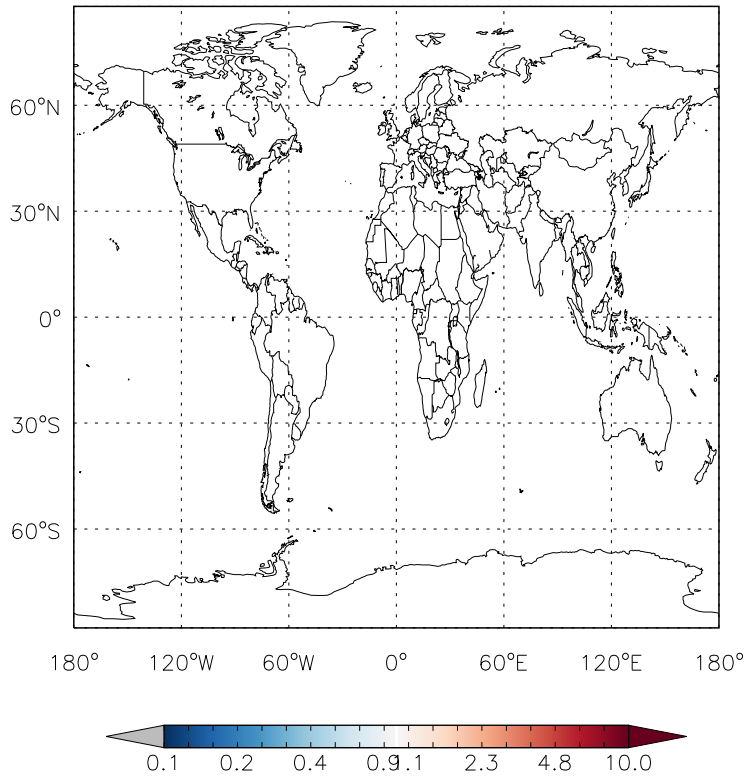
v11-01g-Run0 / v11-01f-geosfp-Run0

BCPI / Ratio @ Surface for Oct



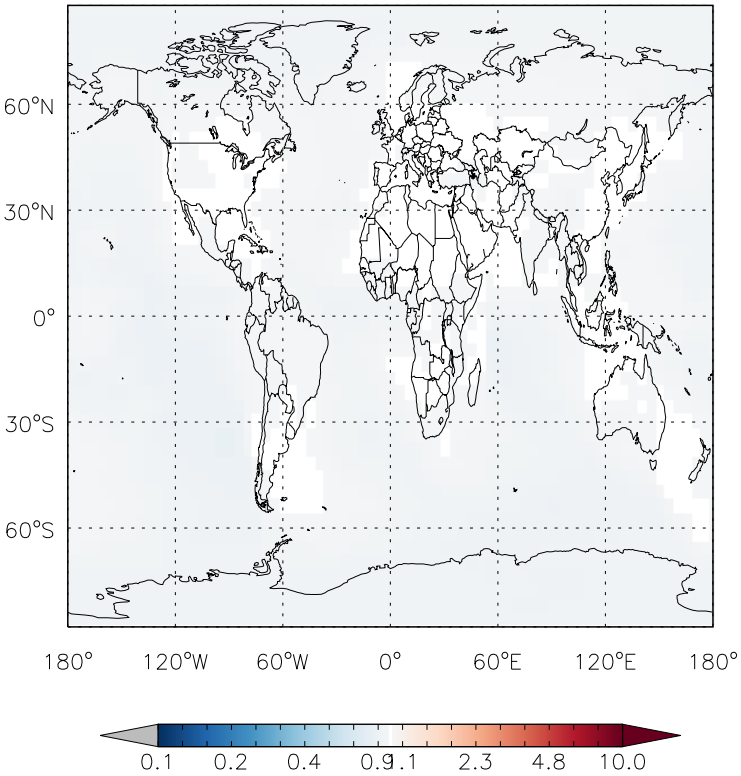
v11-01g-Run0 / v11-01f-geosfp-Run0

BCPI/ Ratio @ 500 hPa for Oct



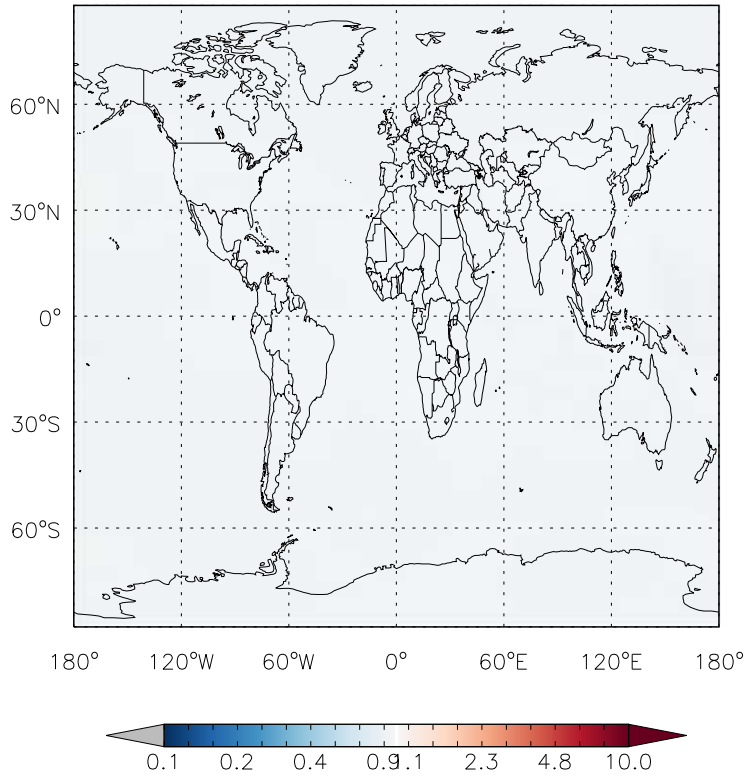
v11-01g-Run0 / v11-01d-Run1

BCPI / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

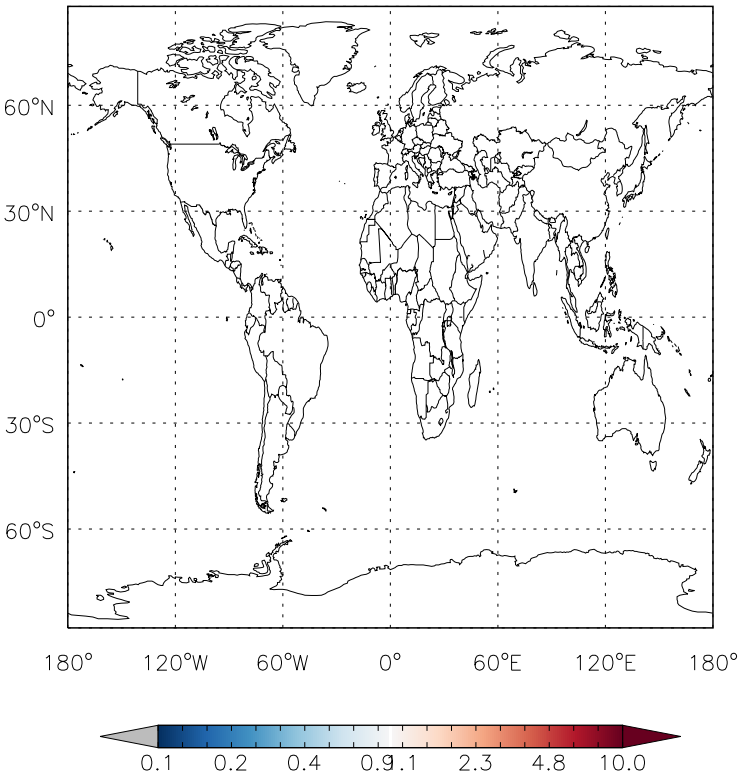
BCPI/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

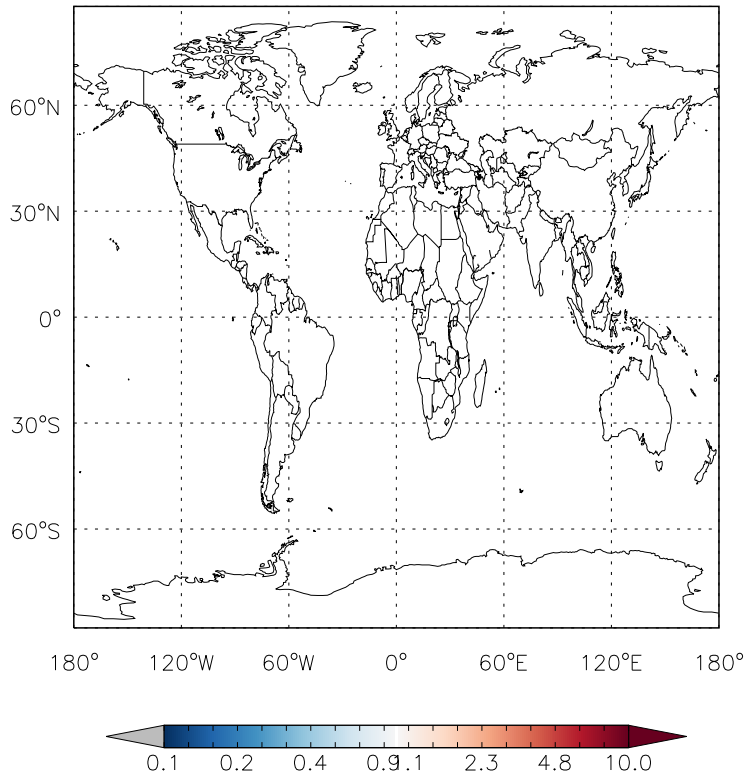
v11-01g-Run0 / v11-01f-geosfp-Run0

OCPI / Ratio @ Surface for Oct



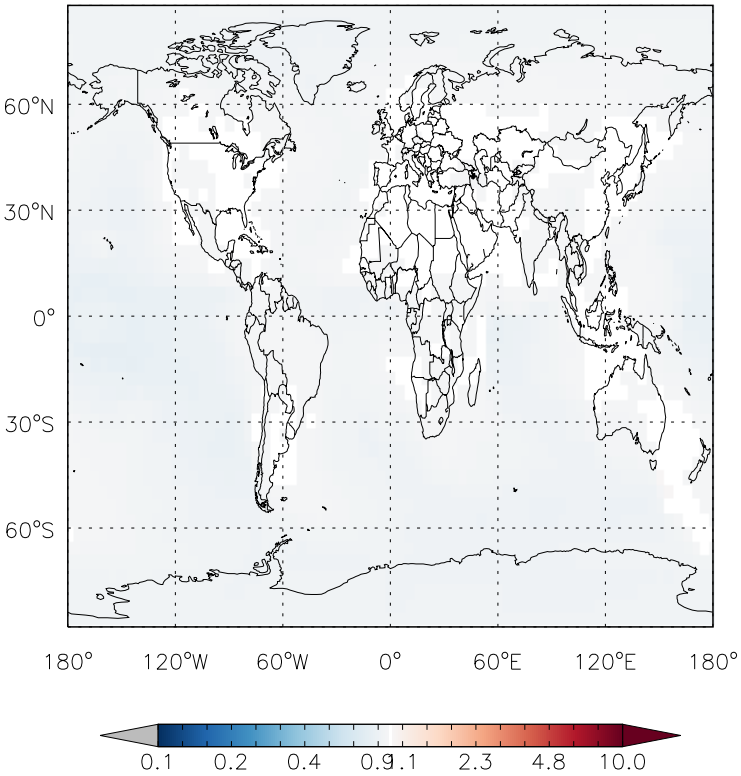
v11-01g-Run0 / v11-01f-geosfp-Run0

OCPI/ Ratio @ 500 hPa for Oct



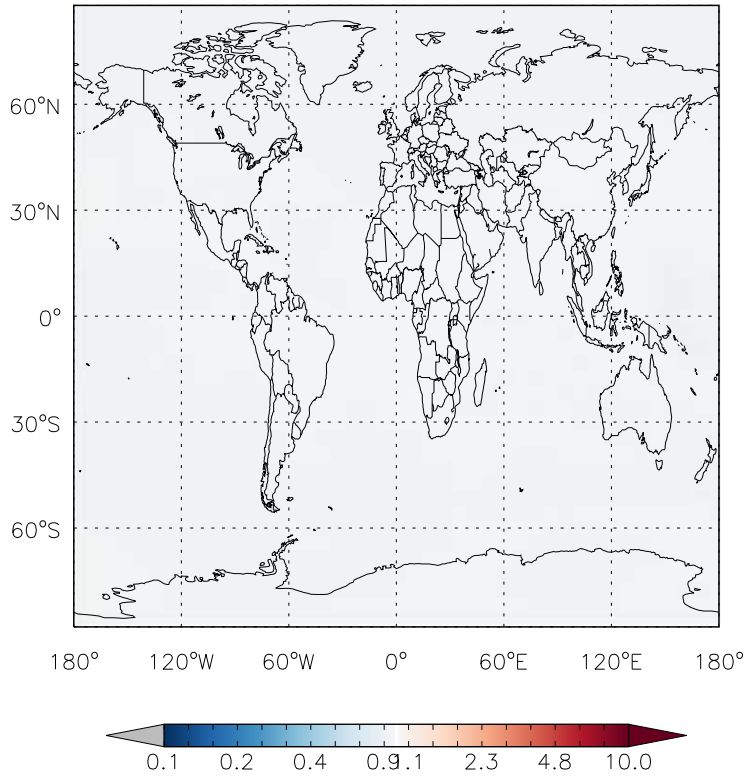
v11-01g-Run0 / v11-01d-Run1

OCPI / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

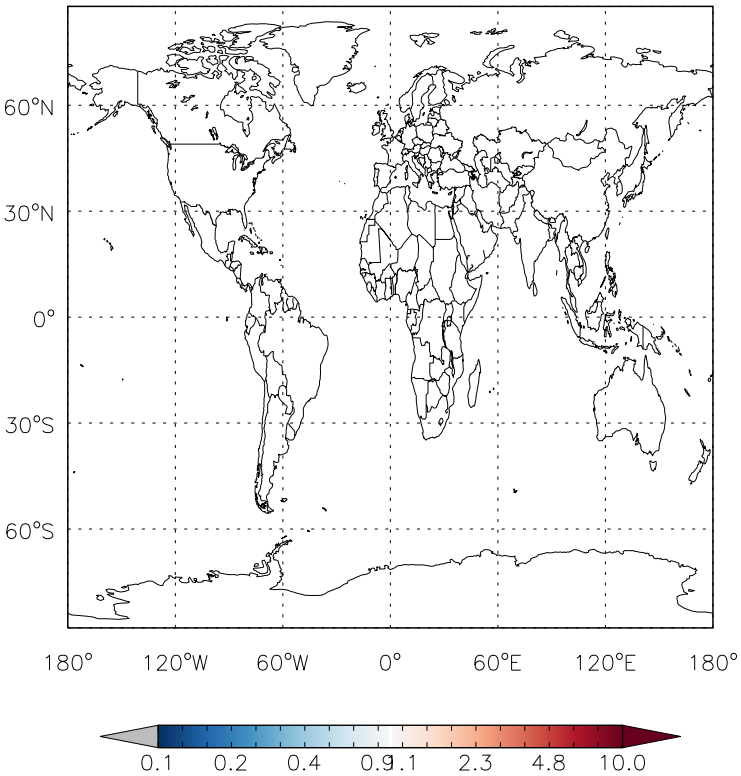
OCPI/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

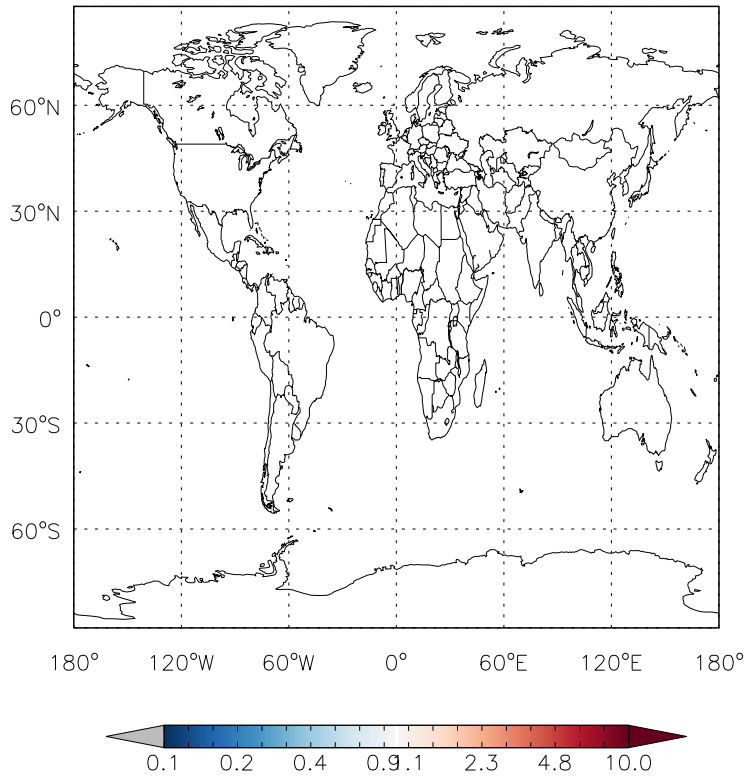
v11−01g−Run0 / v11−01f−geosfp−Run0

BCPO / Ratio @ Surface for Oct



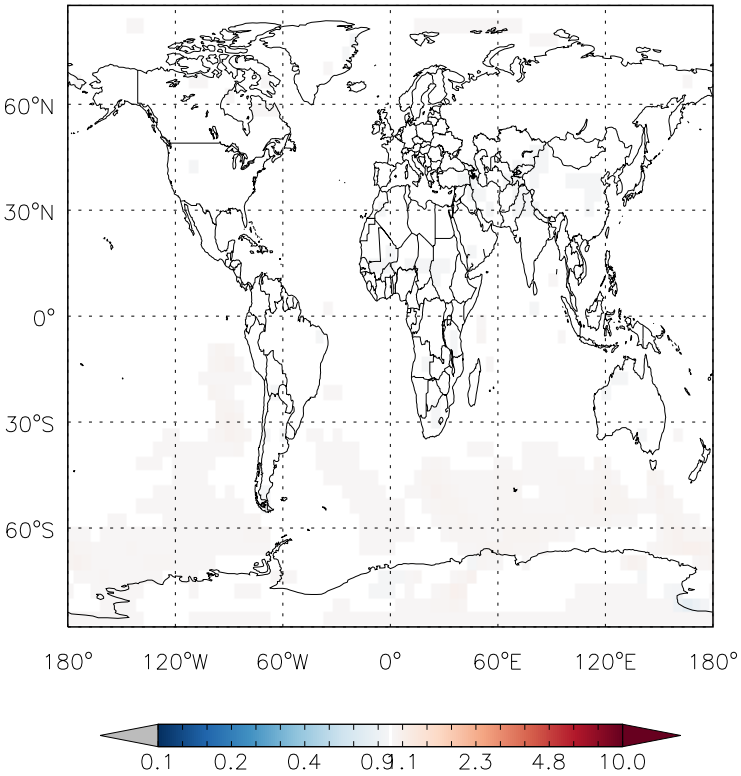
v11−01g−Run0 / v11−01f−geosfp−Run0

BCPO/ Ratio @ 500 hPa for Oct



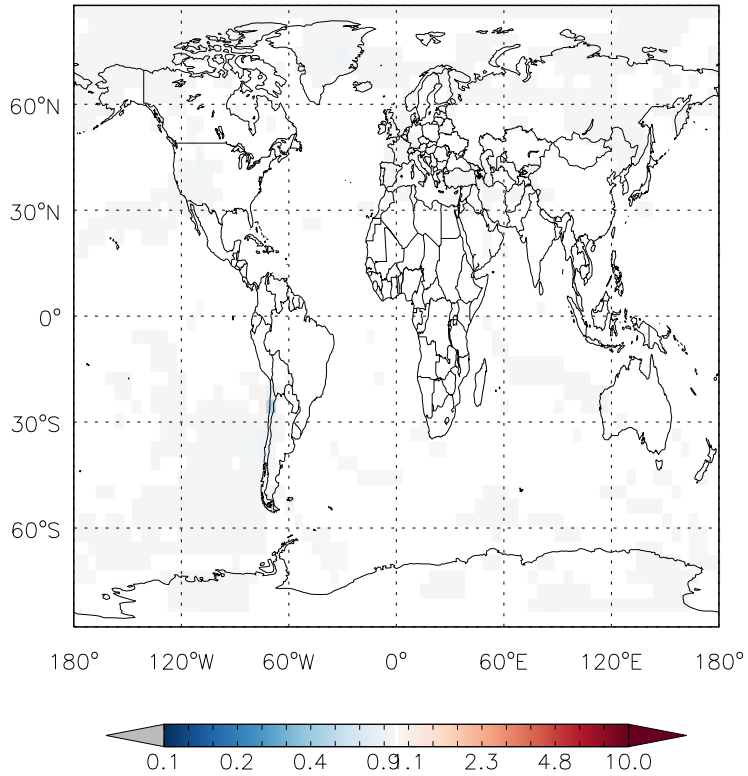
v11−01g−Run0 / v11−01d−Run1

BCPO / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

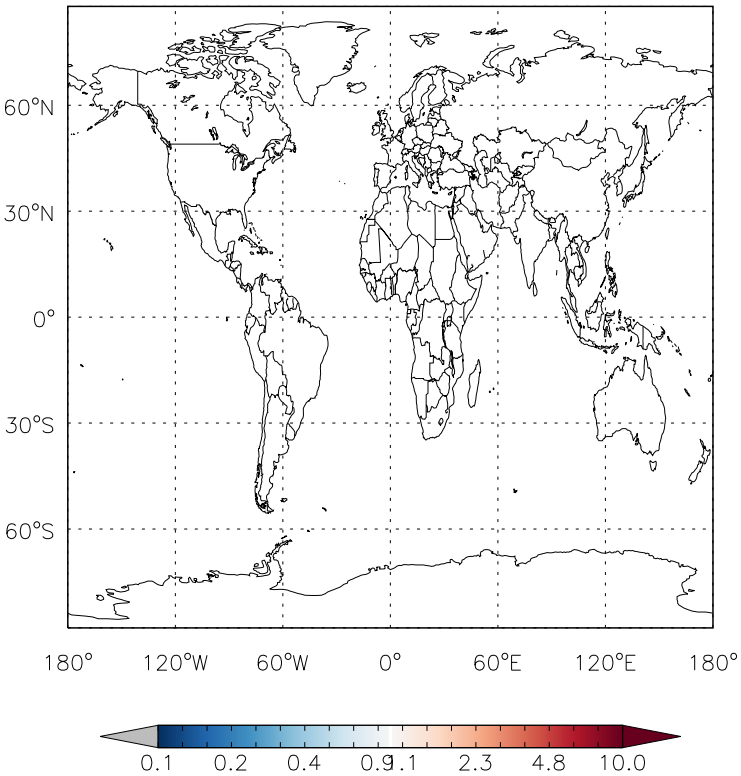
BCPO/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

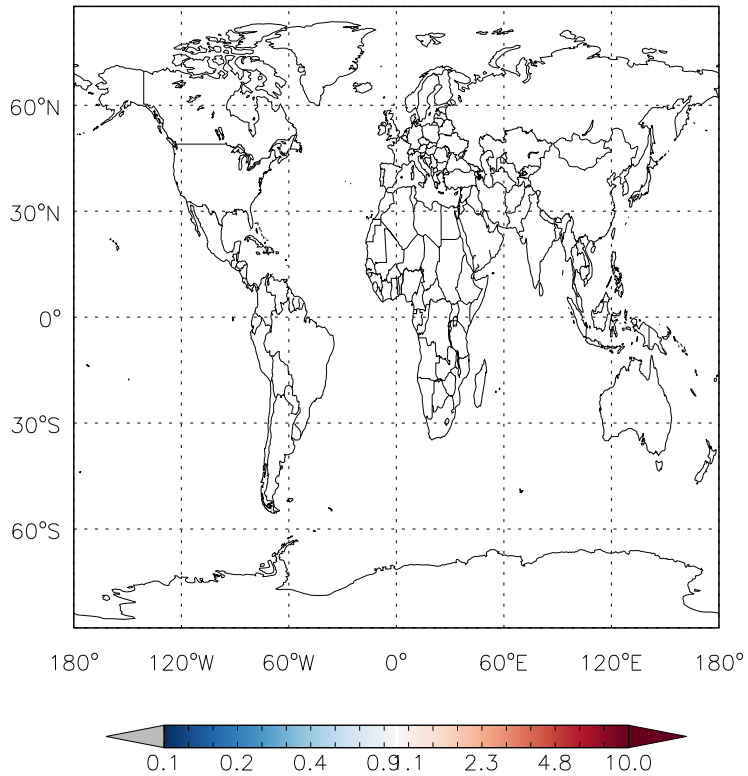
v11-01g-Run0 / v11-01f-geosfp-Run0

OCPO / Ratio @ Surface for Oct



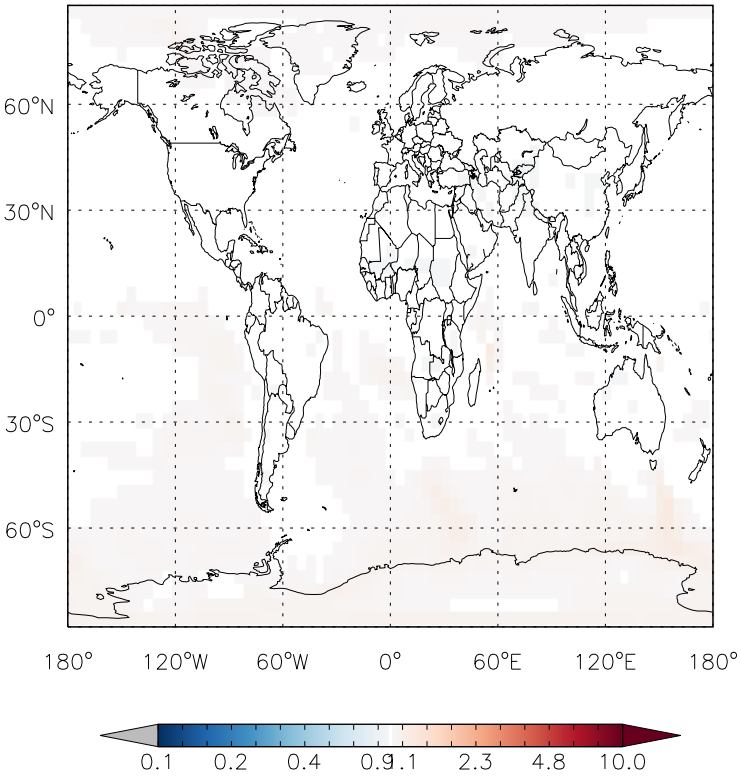
v11-01g-Run0 / v11-01f-geosfp-Run0

OCPO/ Ratio @ 500 hPa for Oct



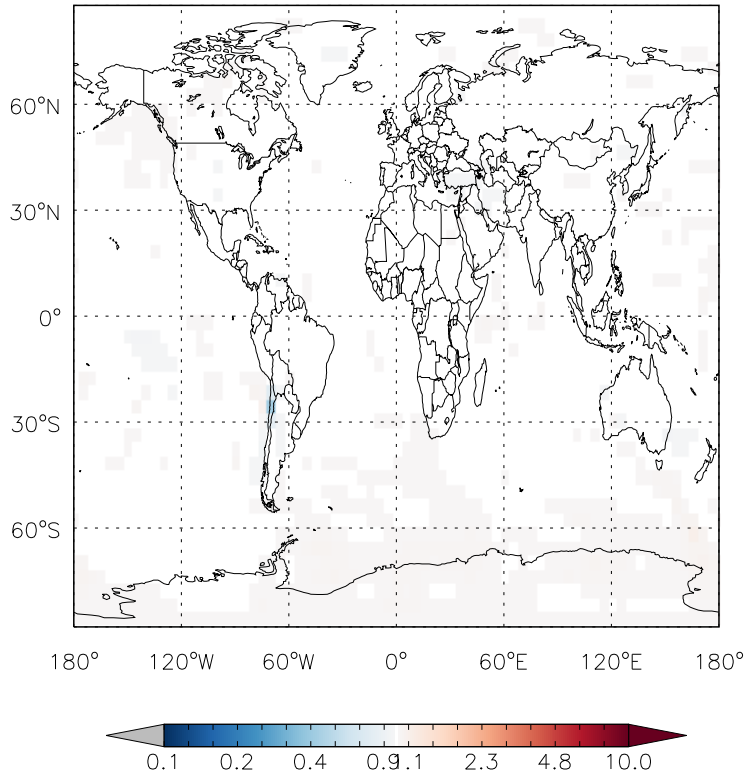
v11-01g-Run0 / v11-01d-Run1

OCPO / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

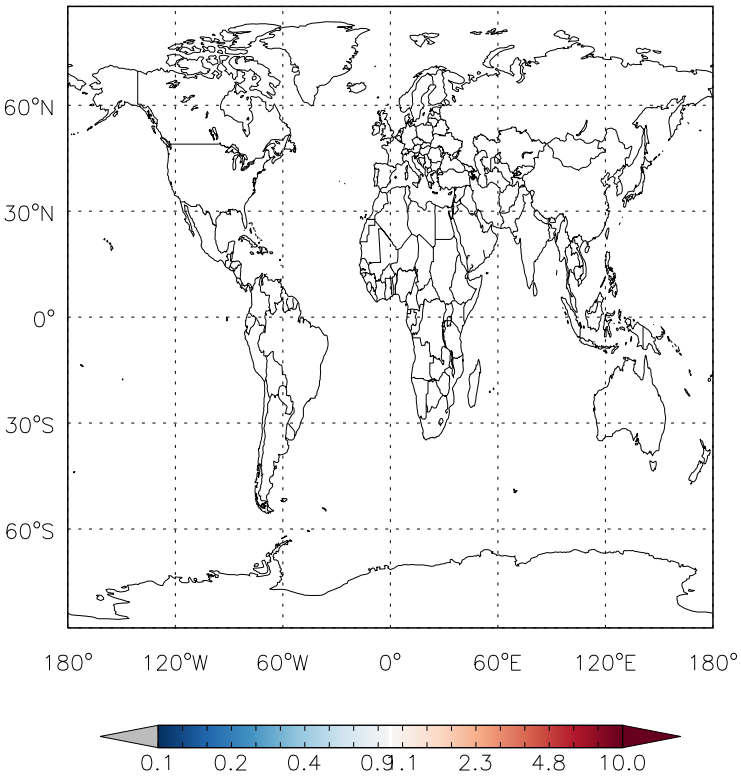
OCPO/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

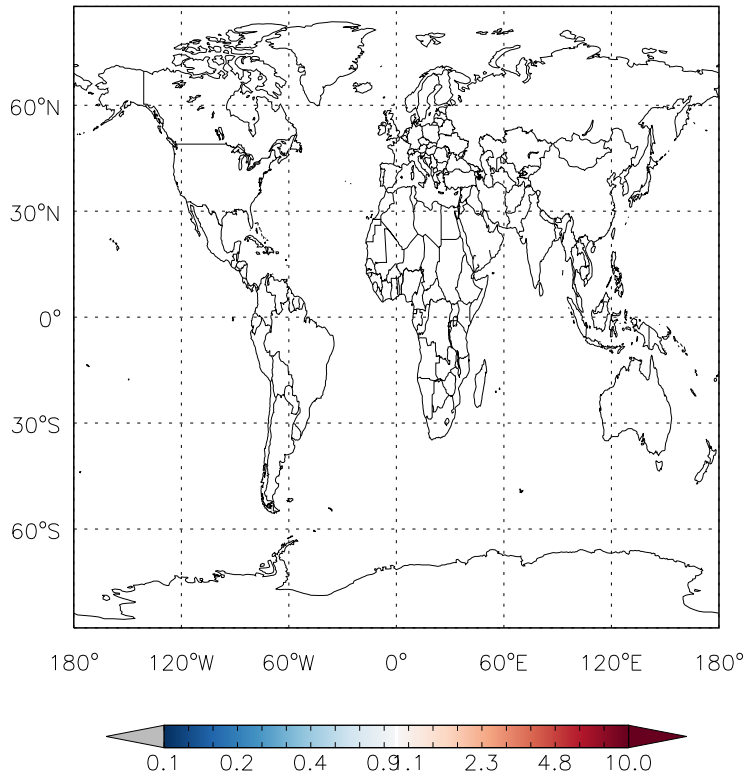
v11-01g-Run0 / v11-01f-geosfp-Run0

DST1 / Ratio @ Surface for Oct



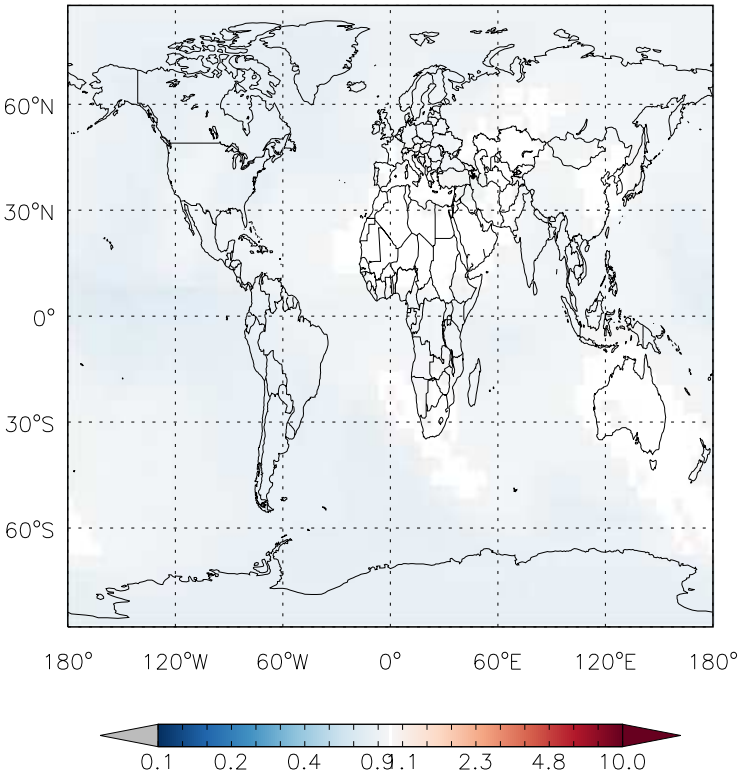
v11-01g-Run0 / v11-01f-geosfp-Run0

DST1/ Ratio @ 500 hPa for Oct



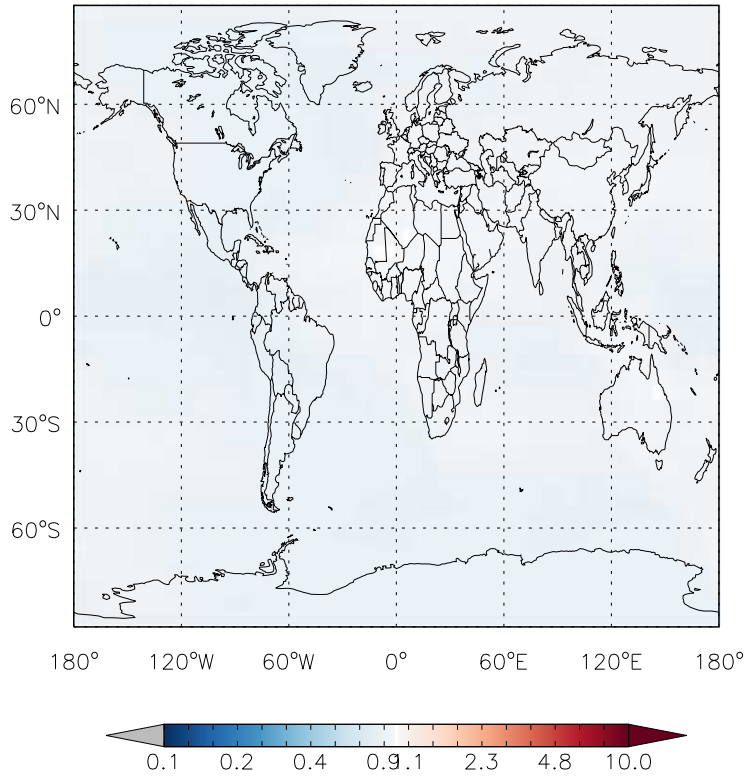
v11-01g-Run0 / v11-01d-Run1

DST1 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

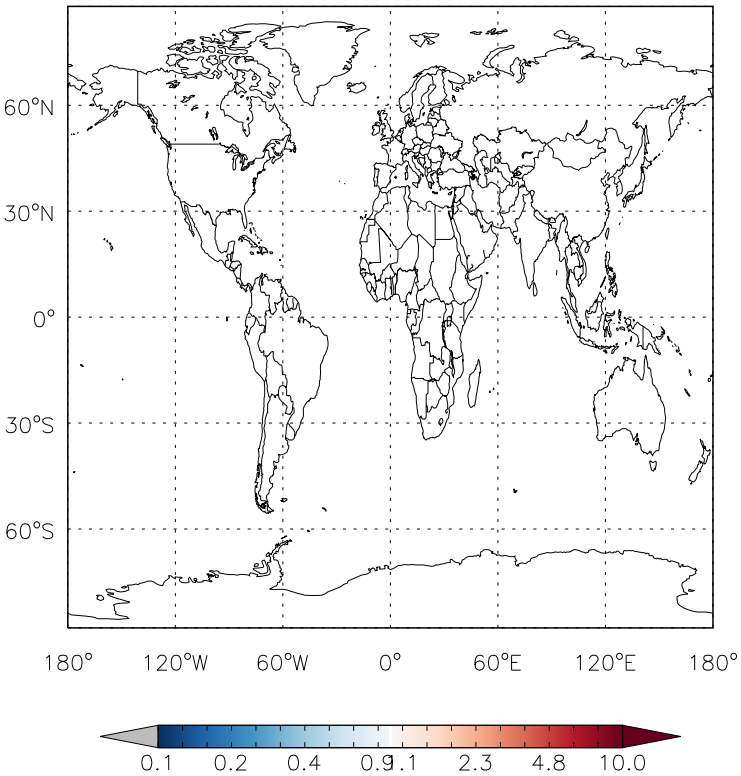
DST1/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

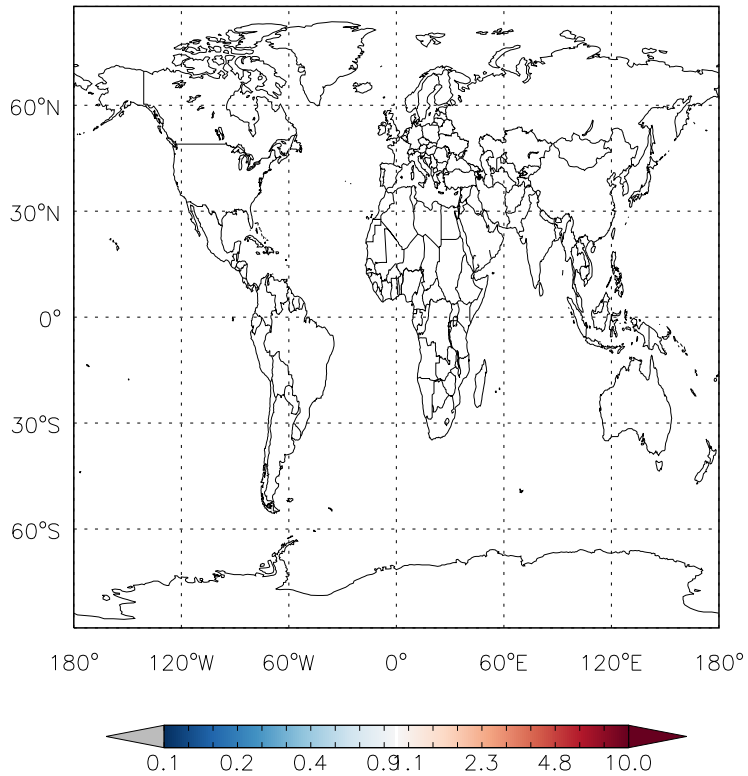
v11-01g-Run0 / v11-01f-geosfp-Run0

DST2 / Ratio @ Surface for Oct



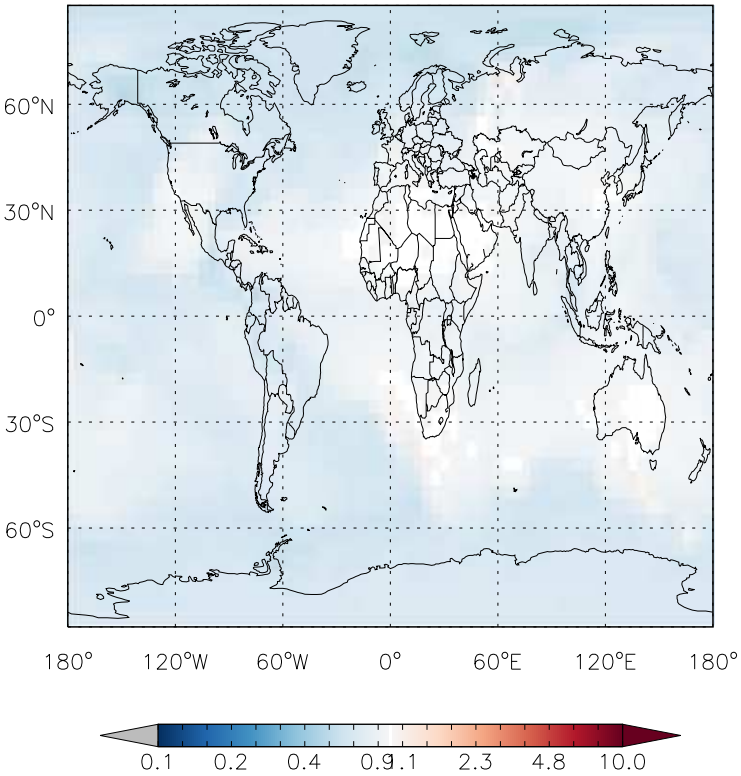
v11-01g-Run0 / v11-01f-geosfp-Run0

DST2/ Ratio @ 500 hPa for Oct



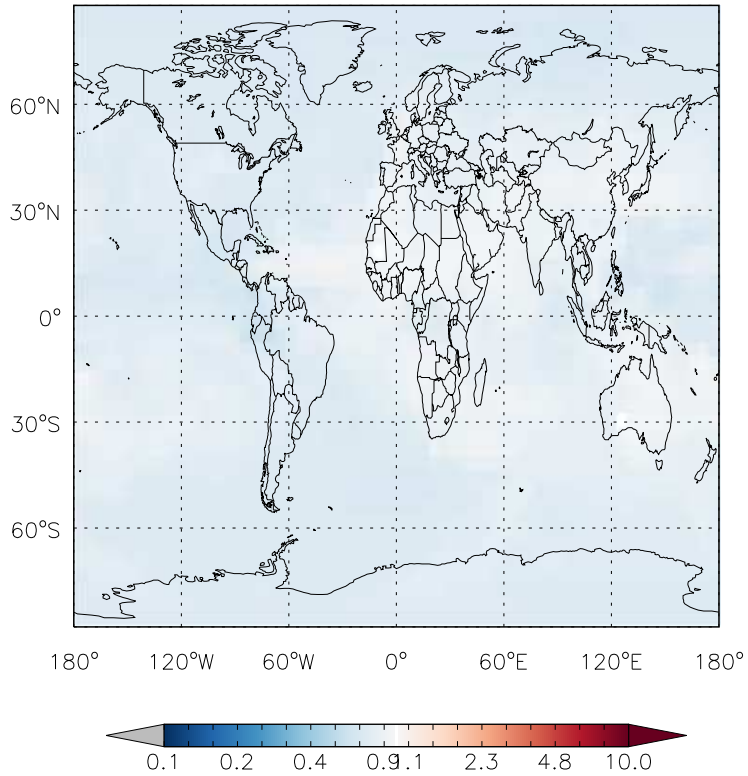
v11-01g-Run0 / v11-01d-Run1

DST2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

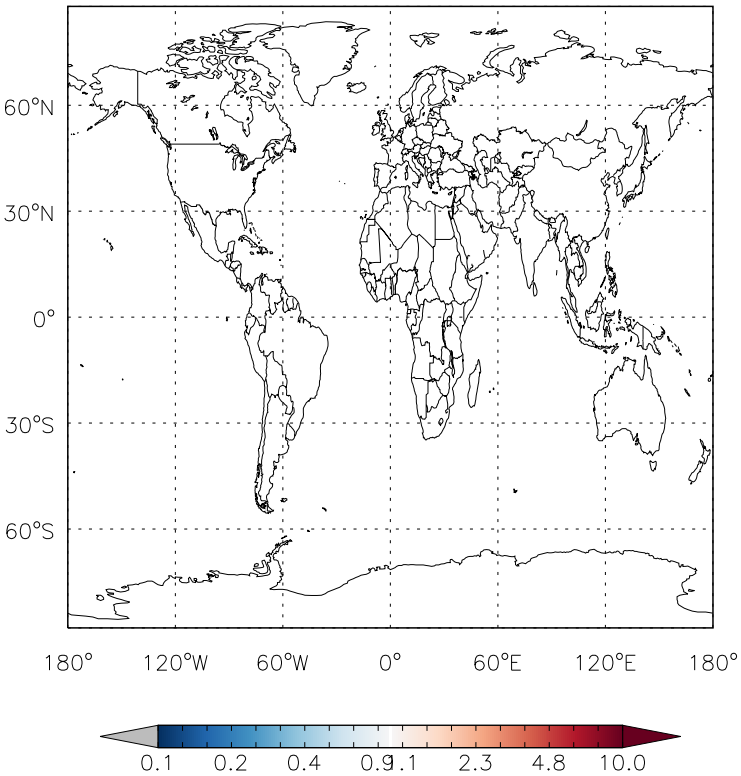
DST2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

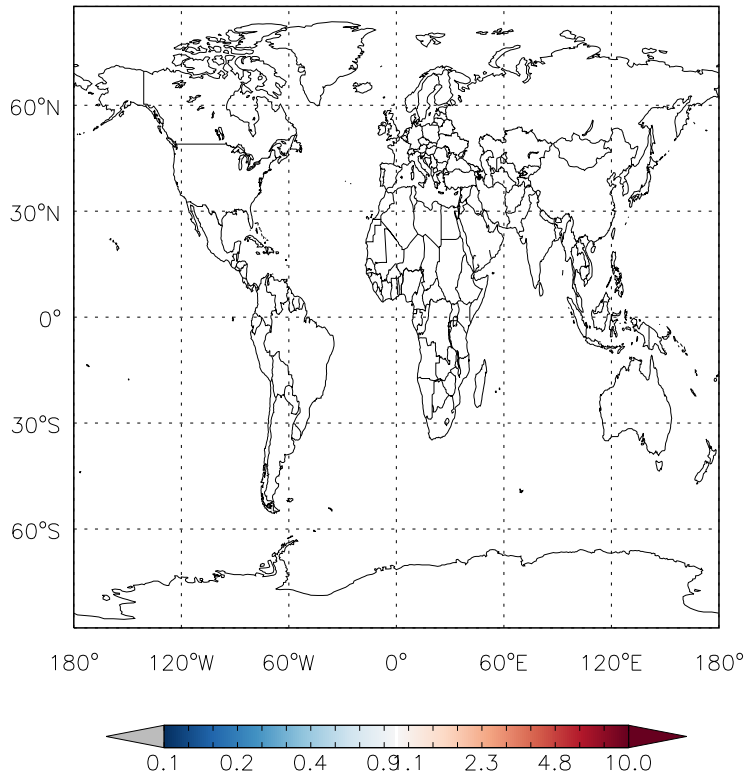
v11-01g-Run0 / v11-01f-geosfp-Run0

DST3 / Ratio @ Surface for Oct



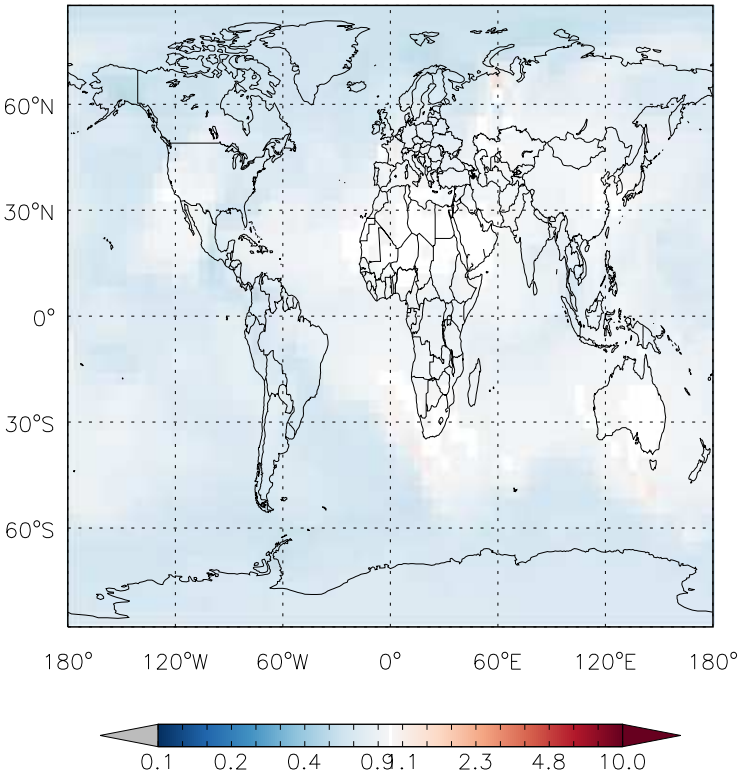
v11-01g-Run0 / v11-01f-geosfp-Run0

DST3/ Ratio @ 500 hPa for Oct



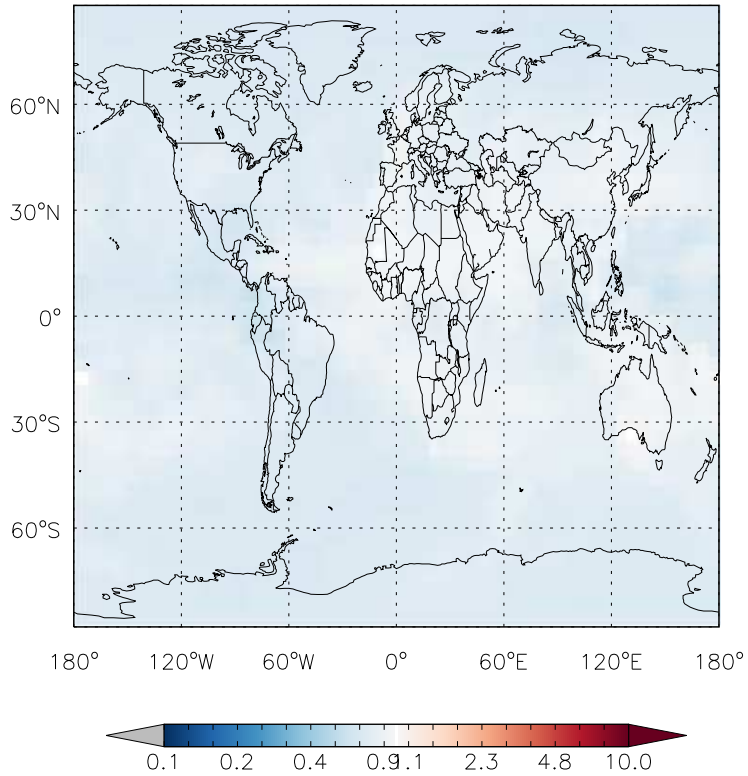
v11-01g-Run0 / v11-01d-Run1

DST3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

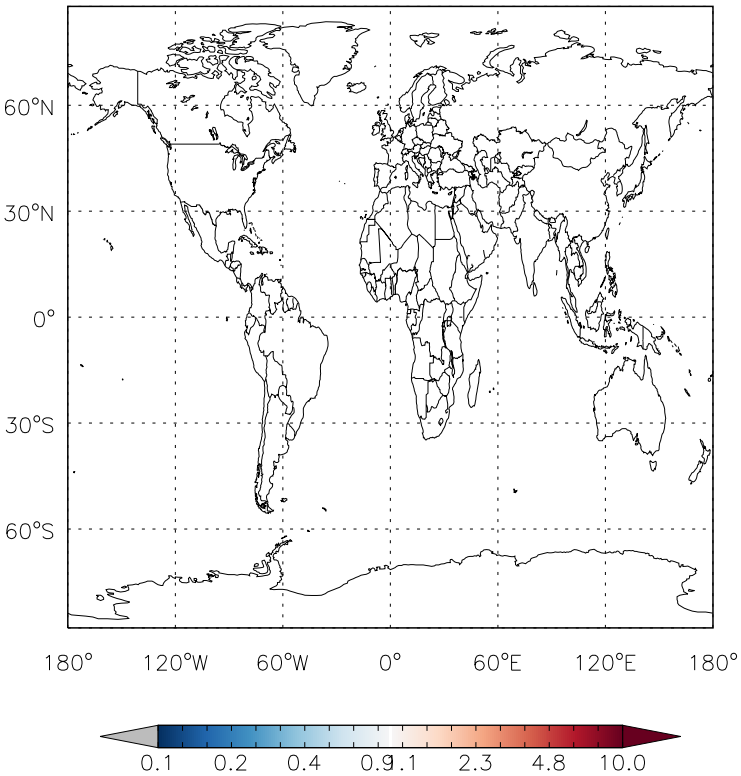
DST3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

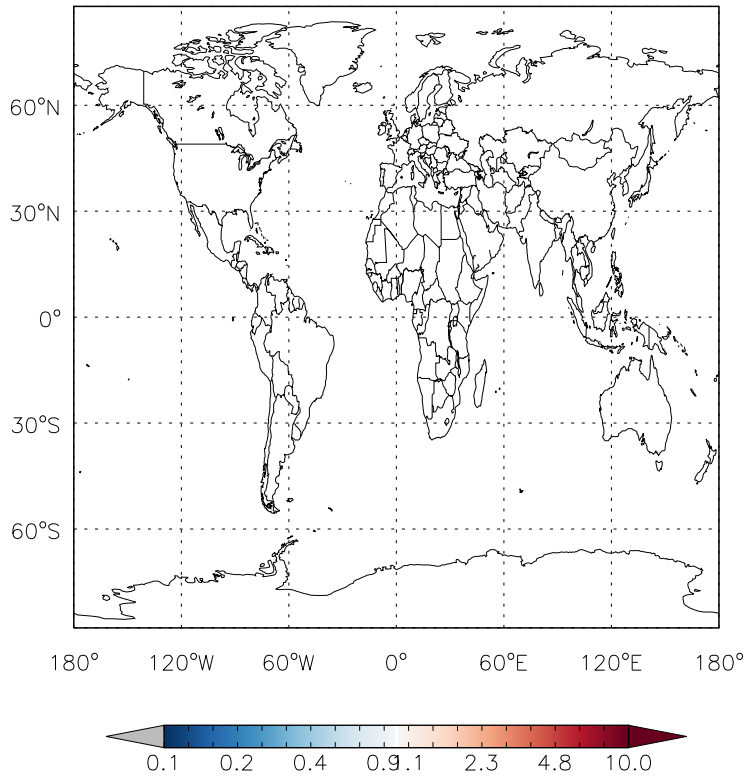
v11-01g-Run0 / v11-01f-geosfp-Run0

DST4 / Ratio @ Surface for Oct



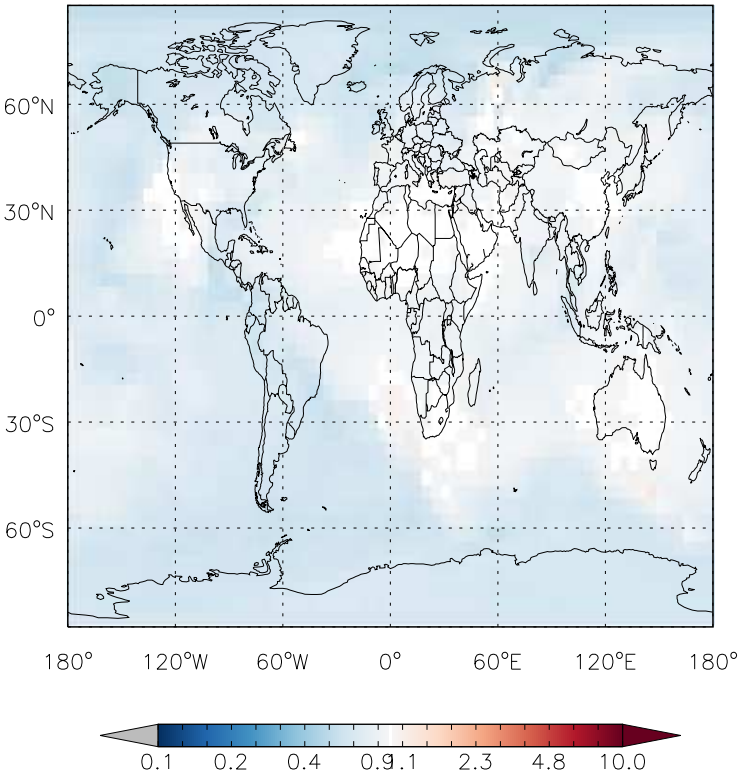
v11-01g-Run0 / v11-01f-geosfp-Run0

DST4/ Ratio @ 500 hPa for Oct



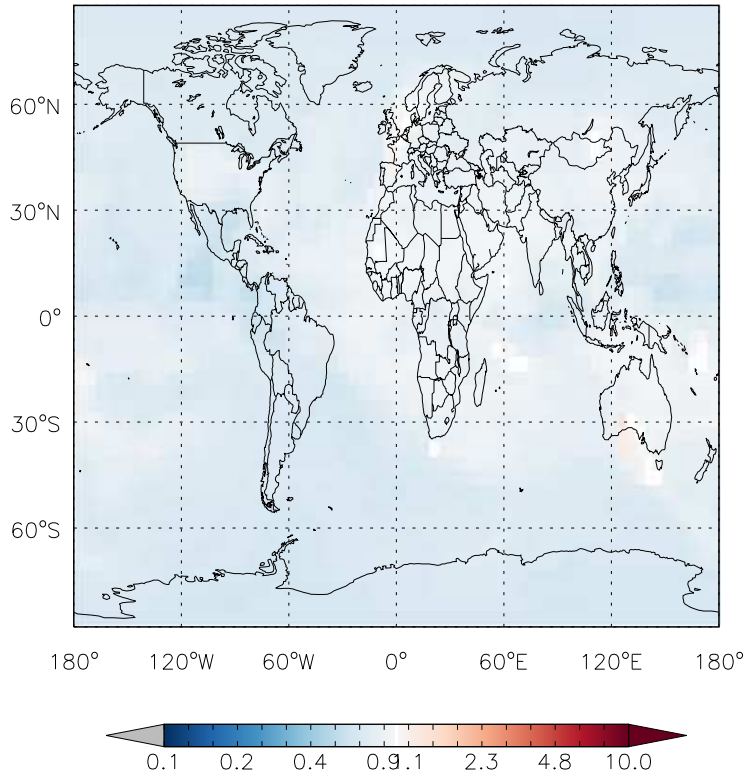
v11-01g-Run0 / v11-01d-Run1

DST4 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

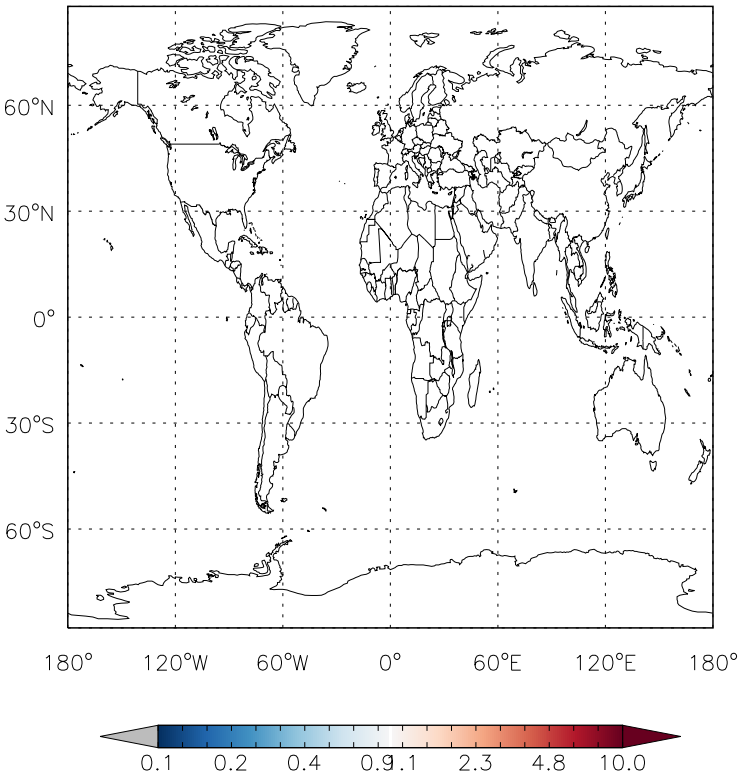
DST4/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

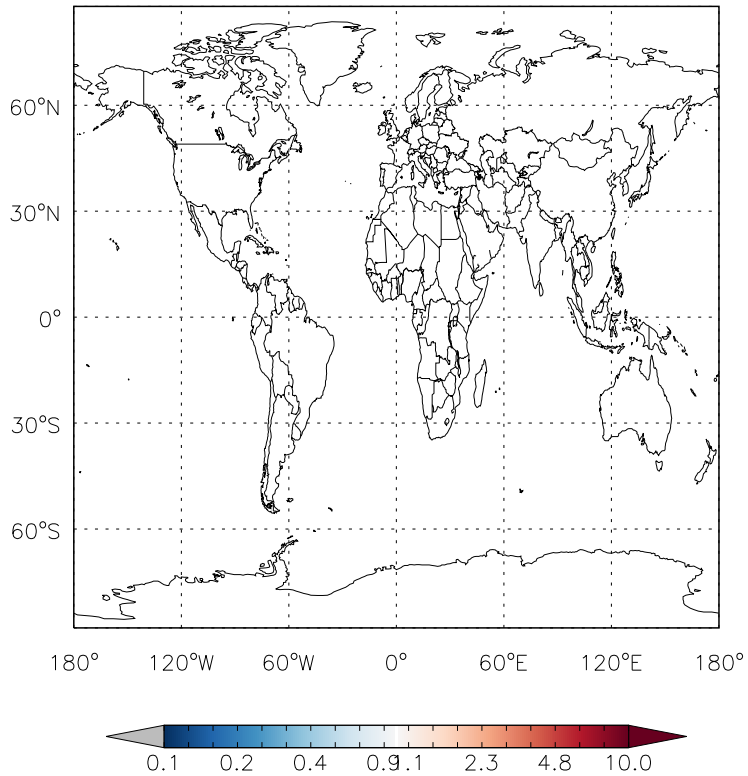
v11-01g-Run0 / v11-01f-geosfp-Run0

SALA / Ratio @ Surface for Oct



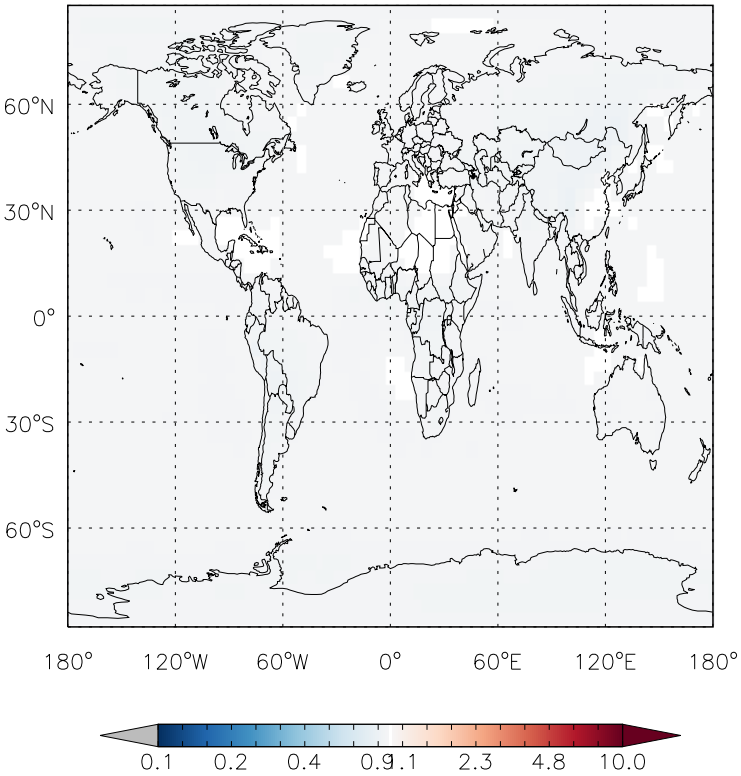
v11-01g-Run0 / v11-01f-geosfp-Run0

SALA/ Ratio @ 500 hPa for Oct



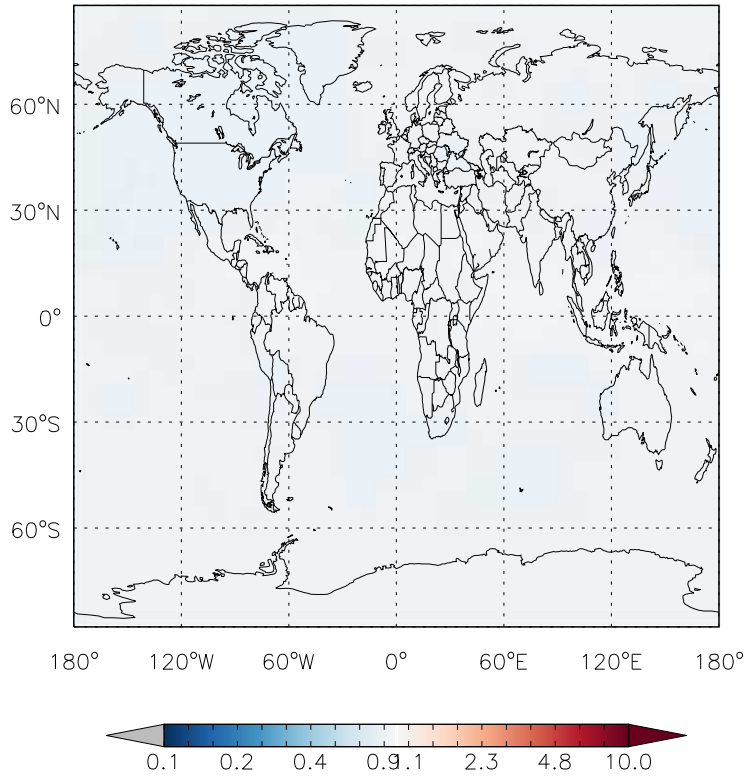
v11-01g-Run0 / v11-01d-Run1

SALA / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

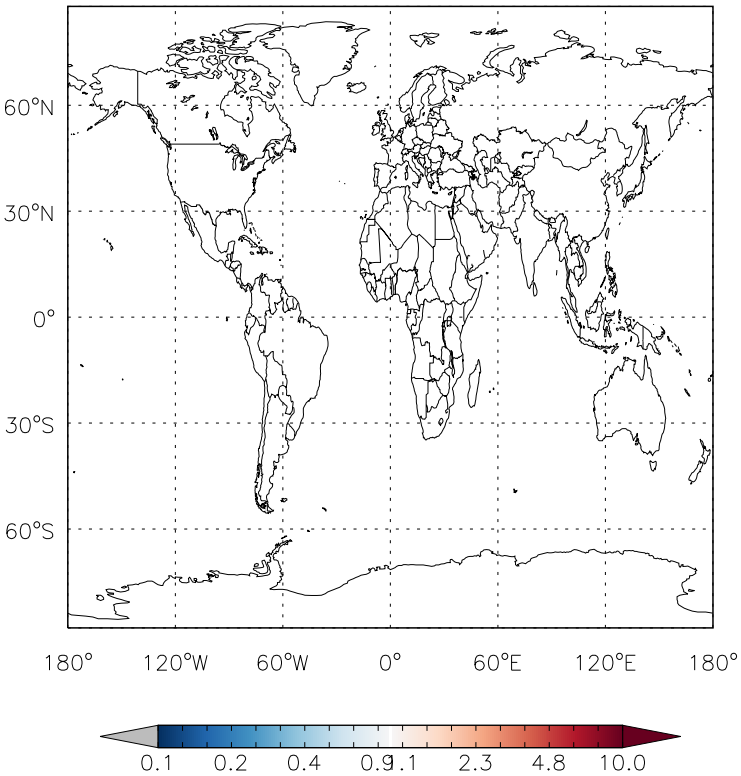
SALA/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

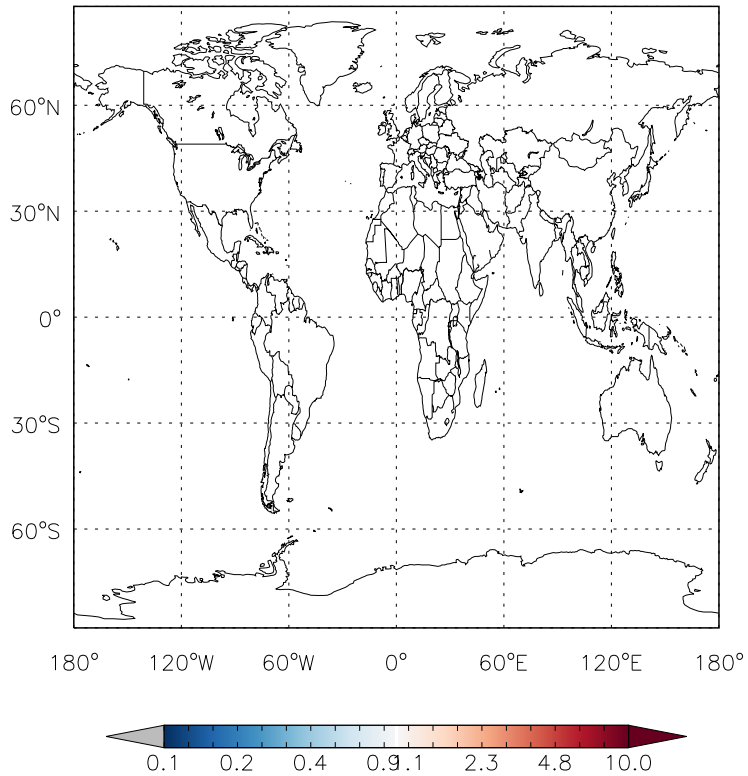
v11-01g-Run0 / v11-01f-geosfp-Run0

SALC / Ratio @ Surface for Oct



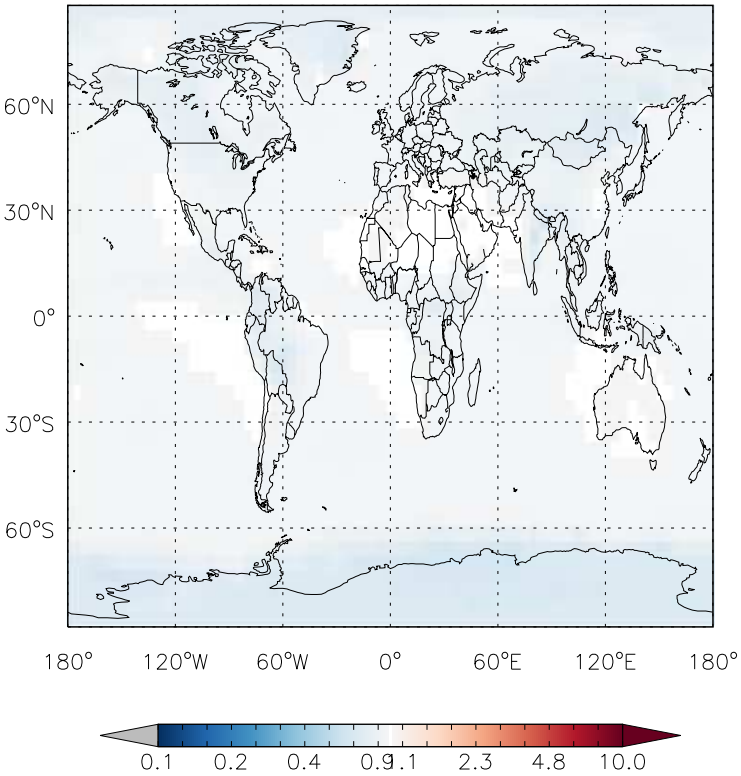
v11-01g-Run0 / v11-01f-geosfp-Run0

SALC/ Ratio @ 500 hPa for Oct



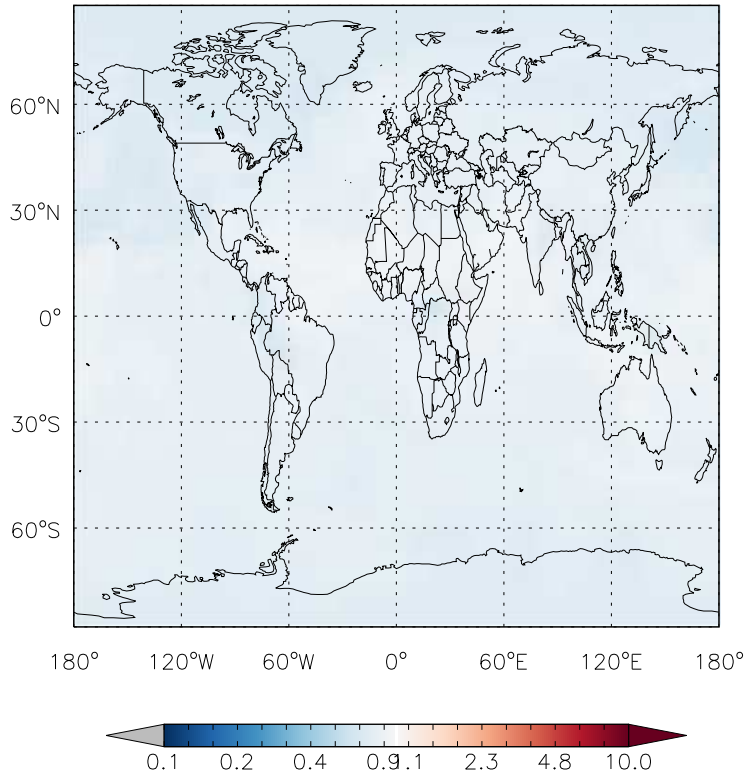
v11-01g-Run0 / v11-01d-Run1

SALC / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

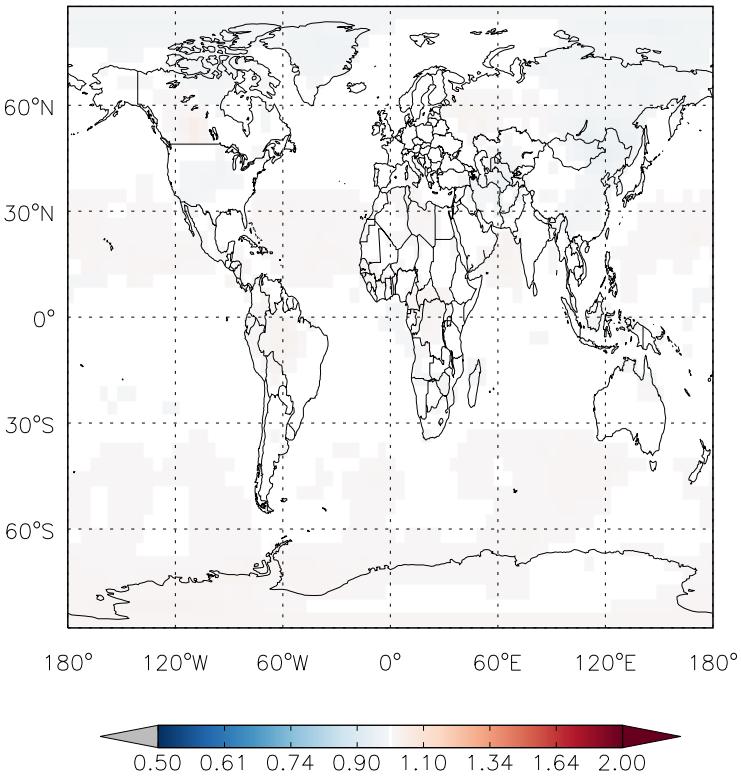
SALC/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

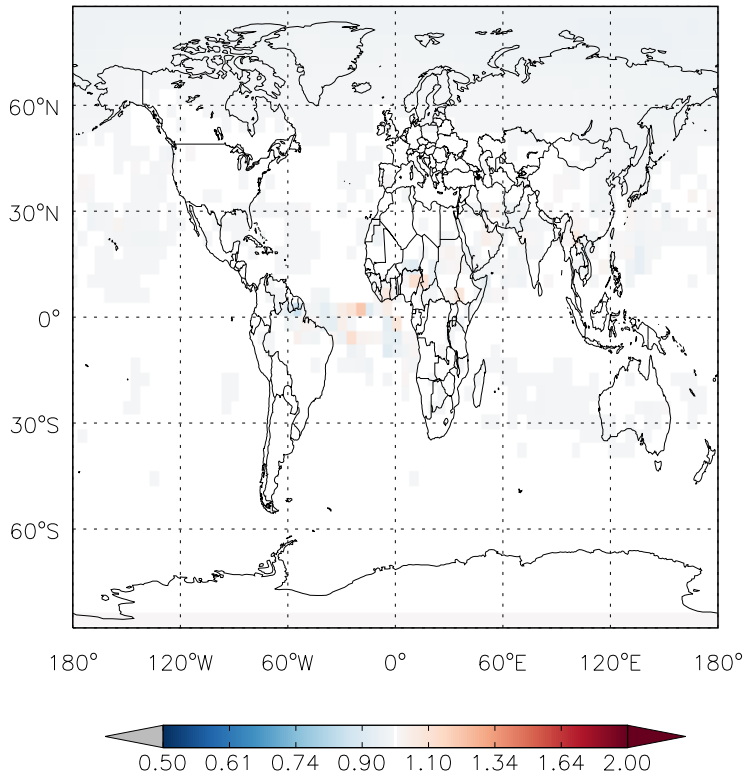
v11-01g-Run0 / v11-01f-geosfp-Run0

Br2 / Ratio @ Surface for Oct



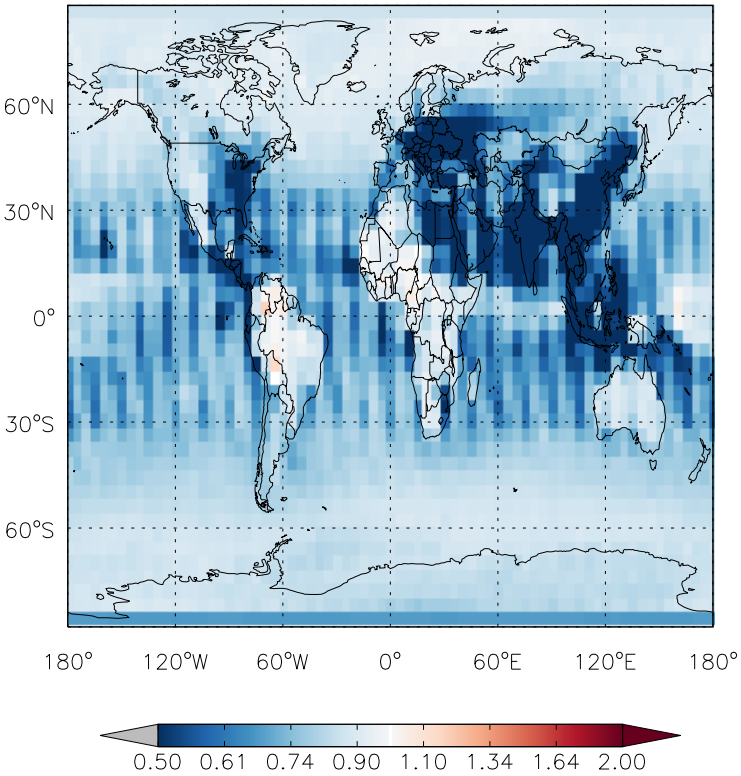
v11-01g-Run0 / v11-01f-geosfp-Run0

Br2/ Ratio @ 500 hPa for Oct



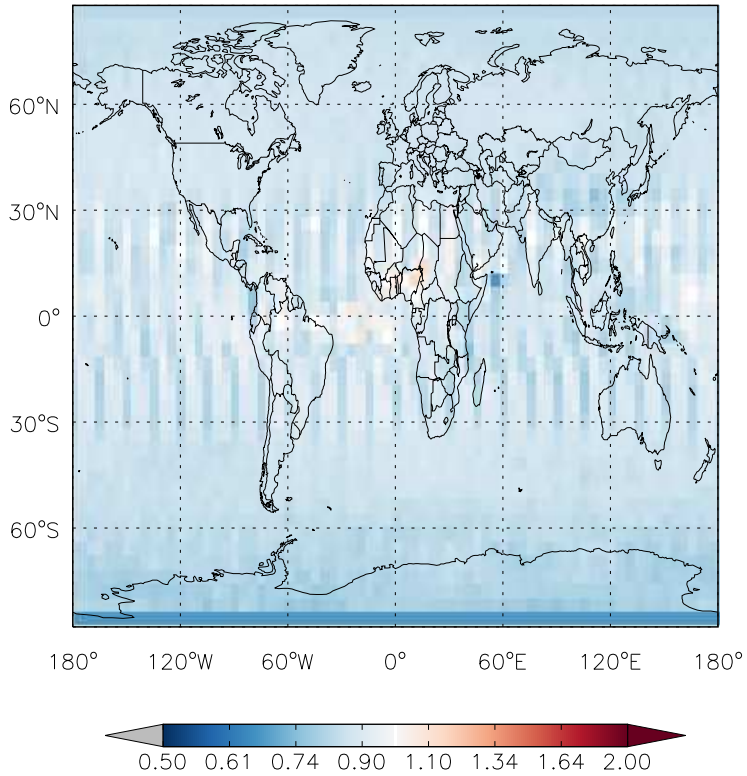
v11-01g-Run0 / v11-01d-Run1

Br2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

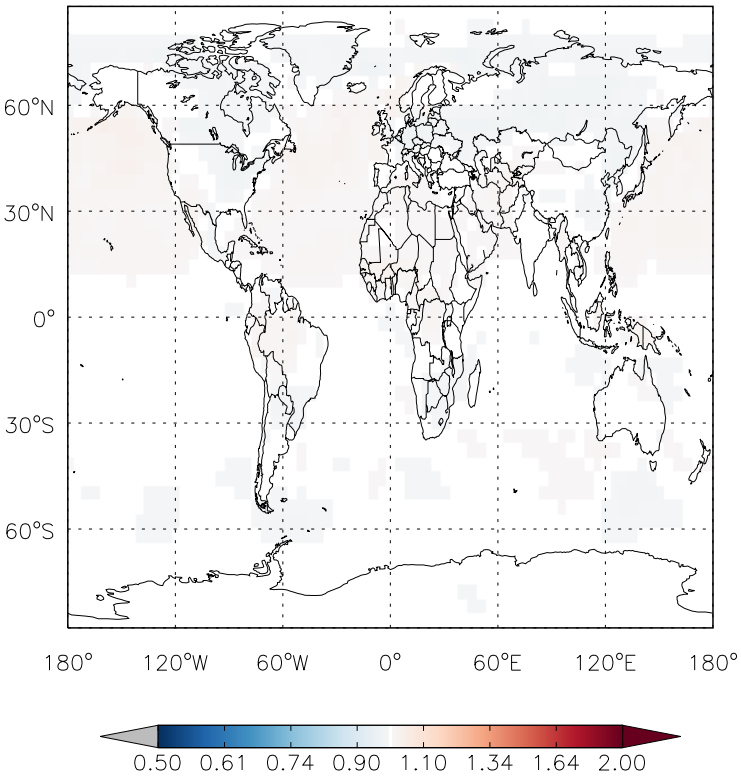
Br2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

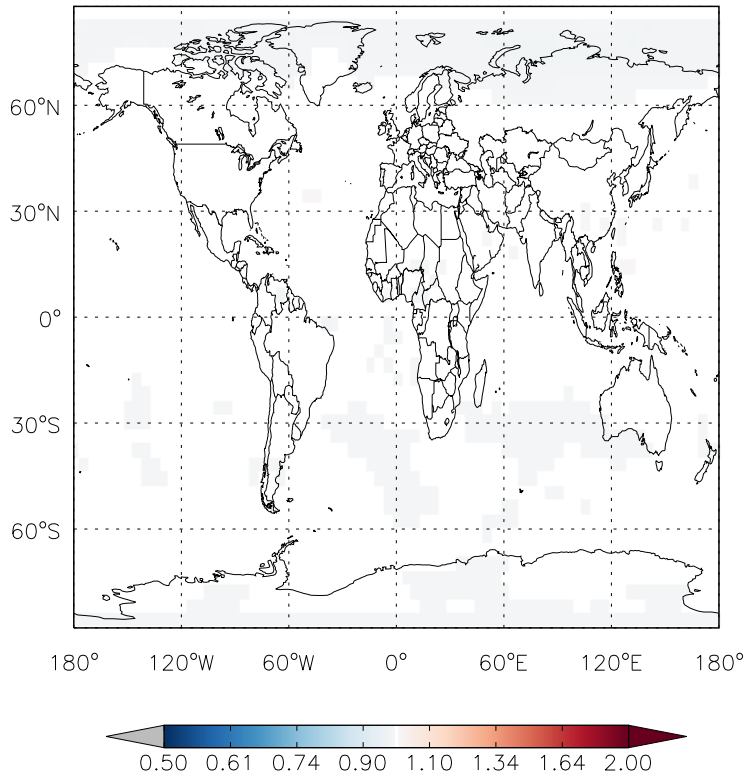
v11-01g-Run0 / v11-01f-geosfp-Run0

Br / Ratio @ Surface for Oct



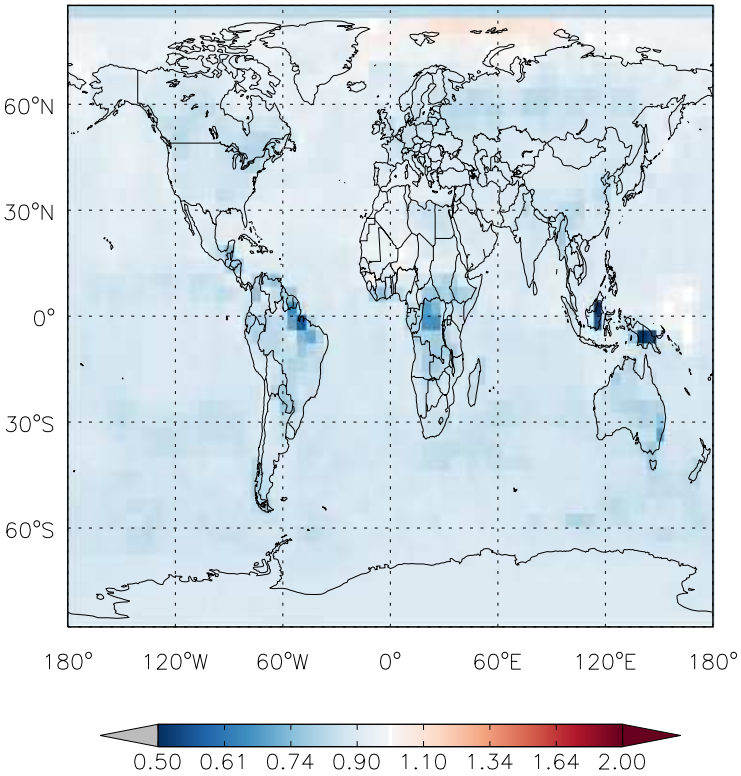
v11-01g-Run0 / v11-01f-geosfp-Run0

Br/ Ratio @ 500 hPa for Oct



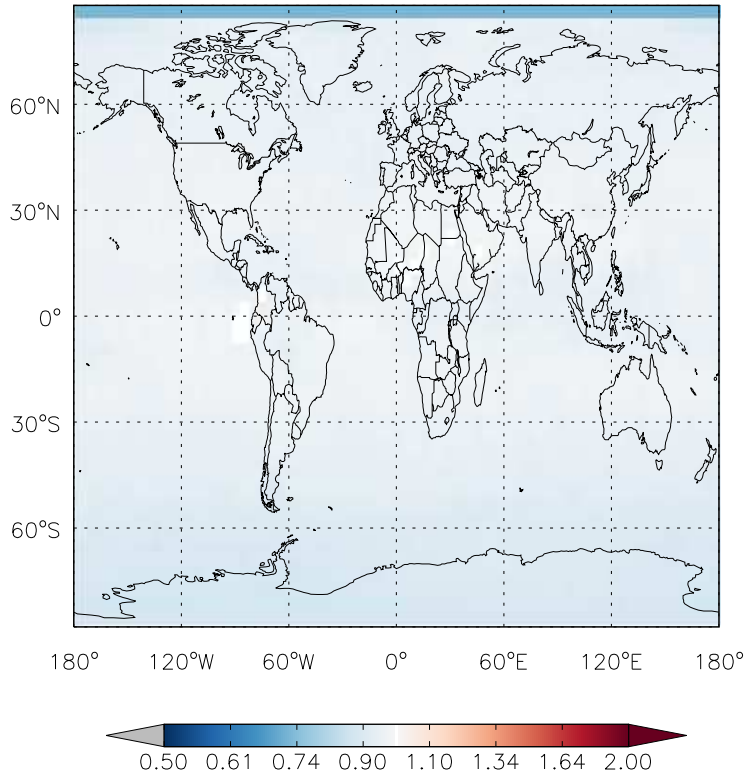
v11-01g-Run0 / v11-01d-Run1

Br / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

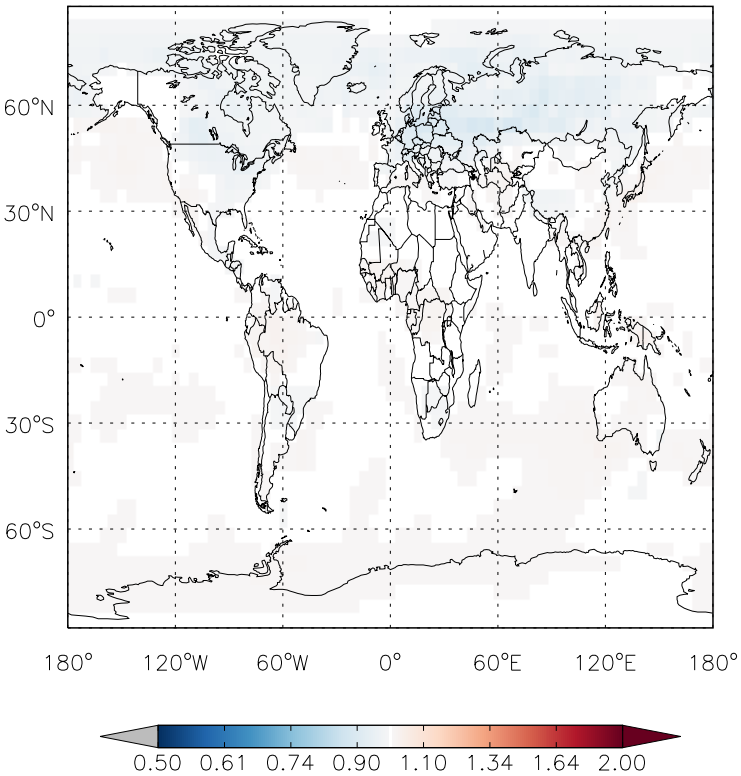
Br/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

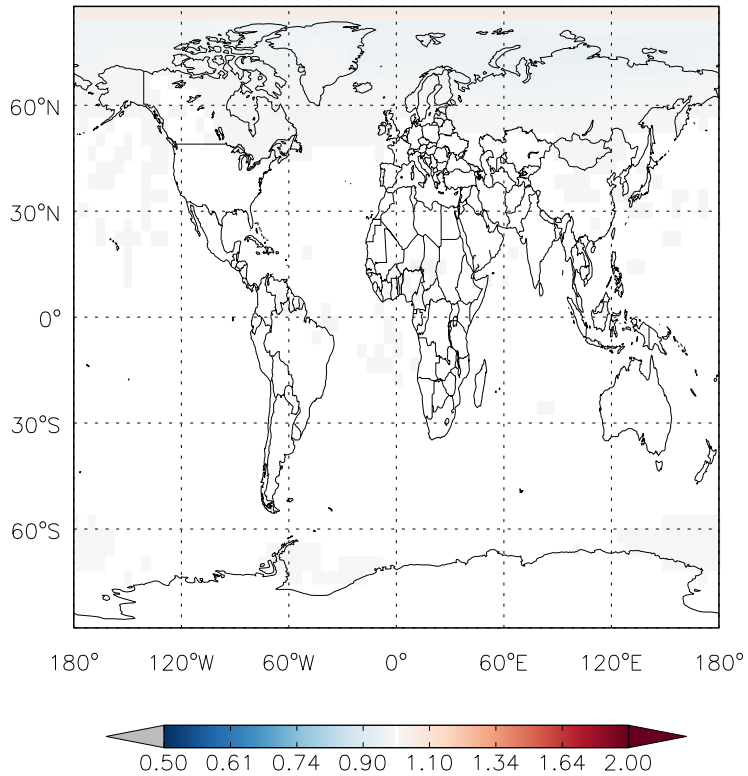
v11-01g-Run0 / v11-01f-geosfp-Run0

BrO / Ratio @ Surface for Oct



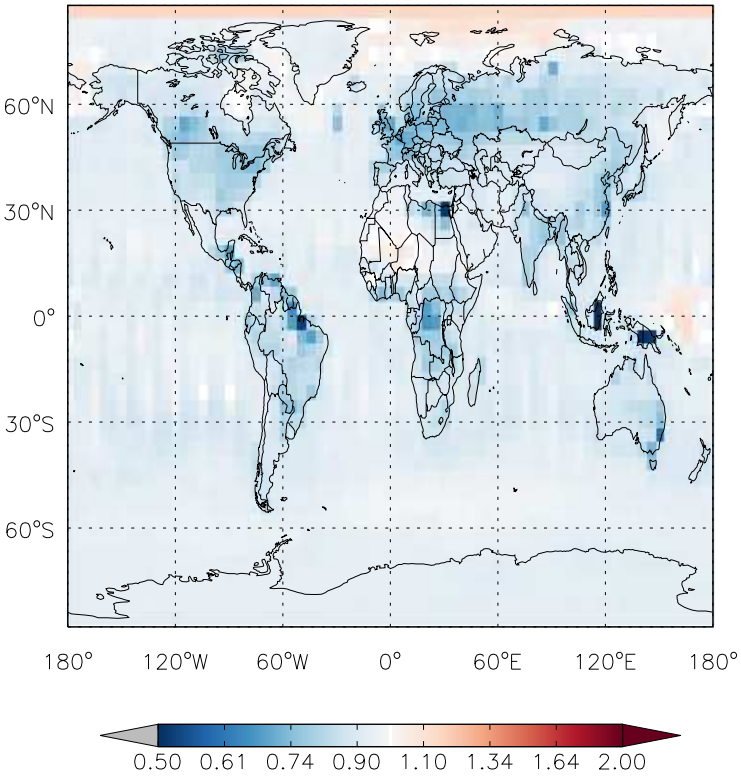
v11-01g-Run0 / v11-01f-geosfp-Run0

BrO/ Ratio @ 500 hPa for Oct



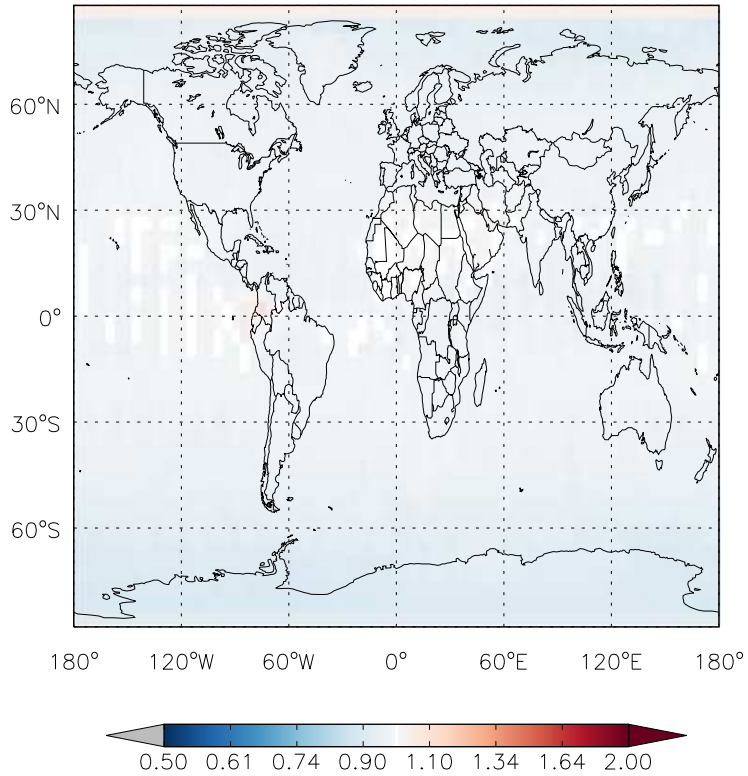
v11-01g-Run0 / v11-01d-Run1

BrO / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

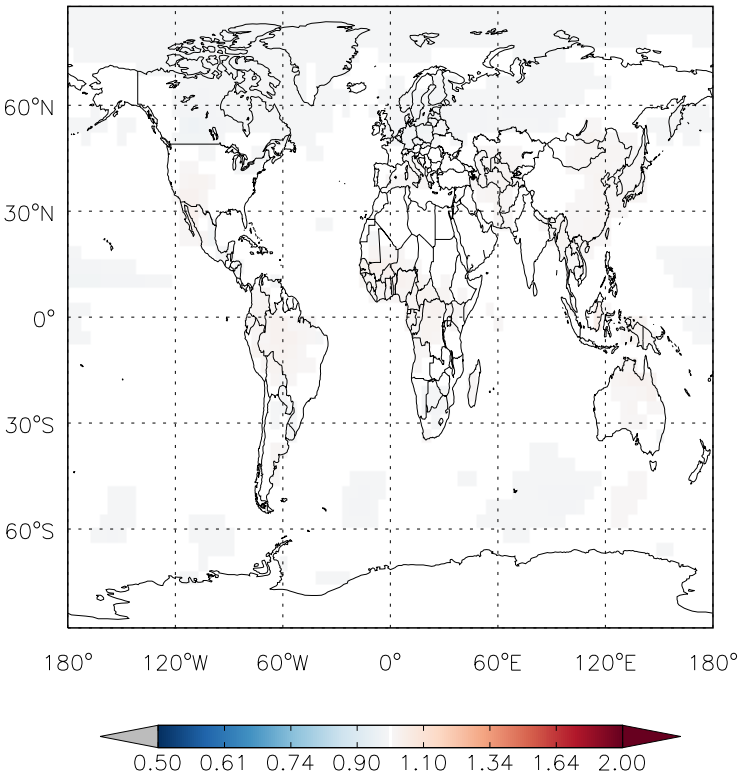
BrO/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

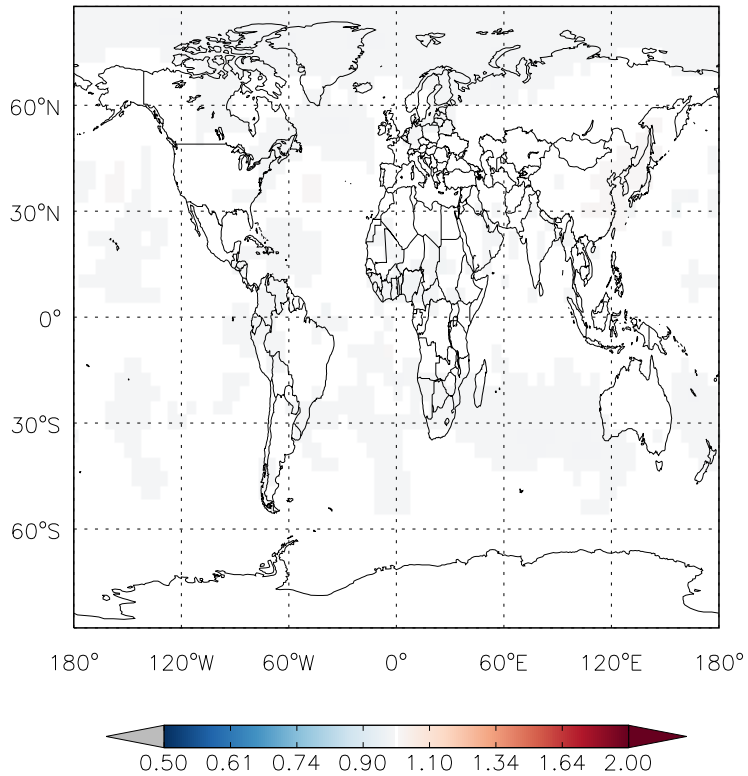
v11-01g-Run0 / v11-01f-geosfp-Run0

HOBr / Ratio @ Surface for Oct



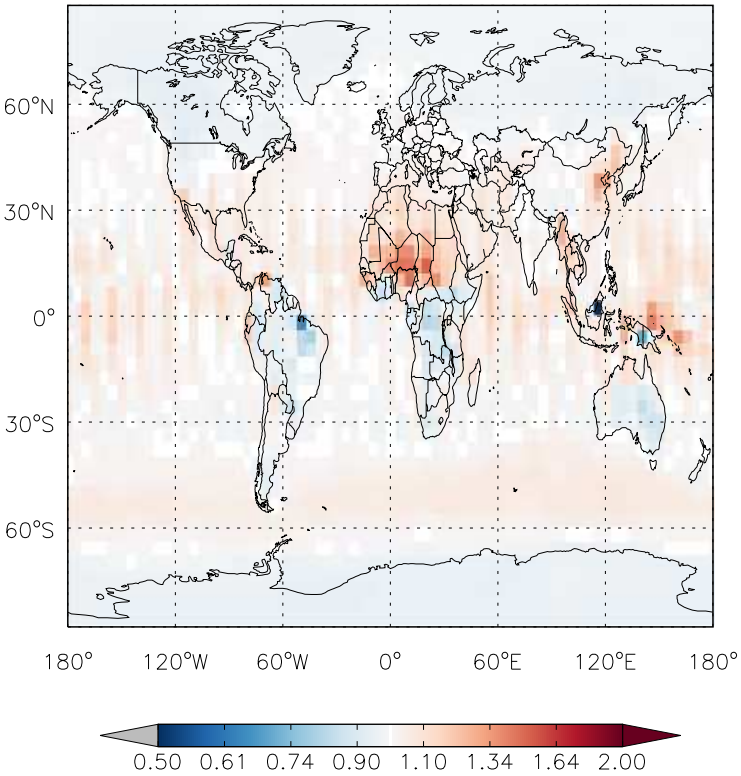
v11-01g-Run0 / v11-01f-geosfp-Run0

HOBr/ Ratio @ 500 hPa for Oct



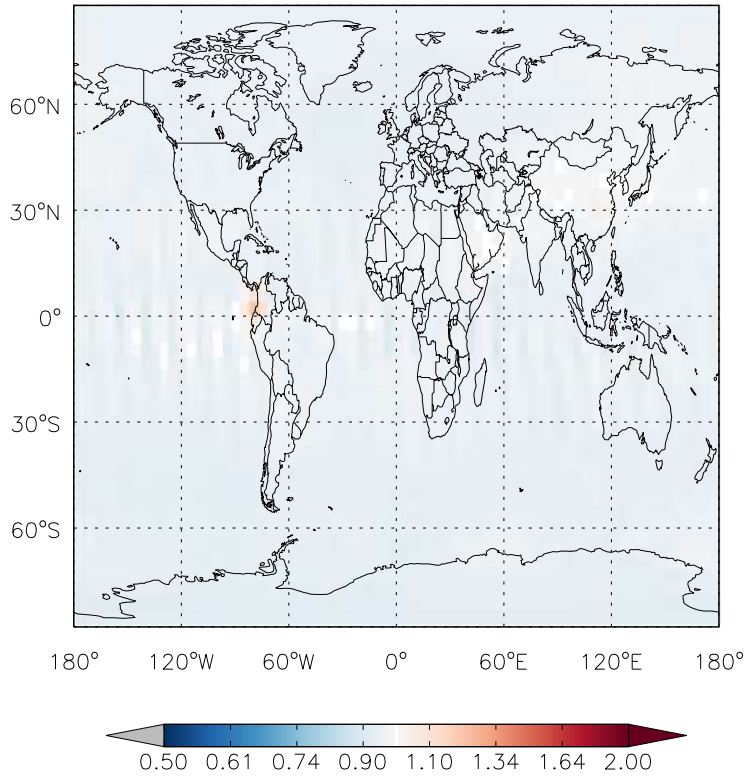
v11-01g-Run0 / v11-01d-Run1

HOBr / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

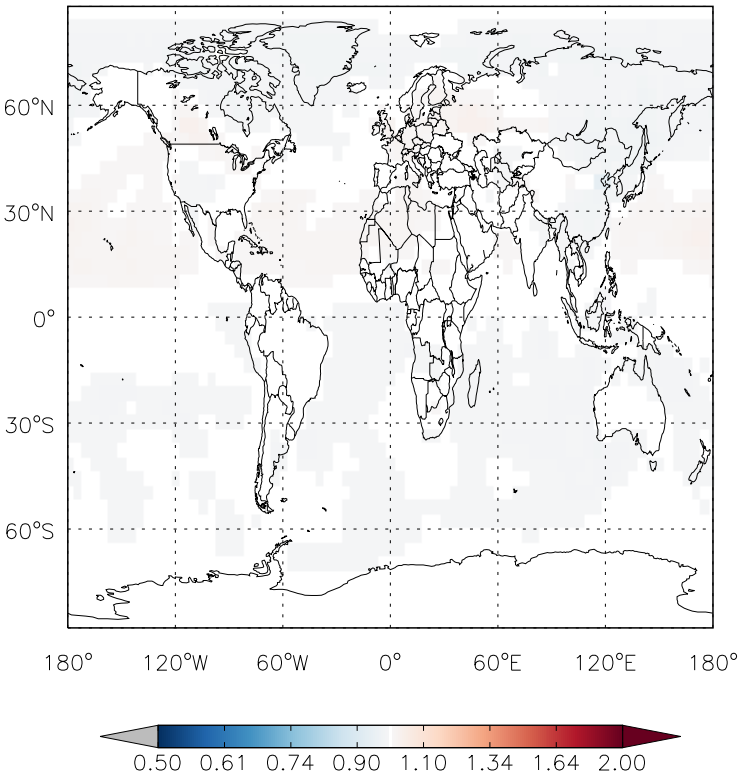
HOBr/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

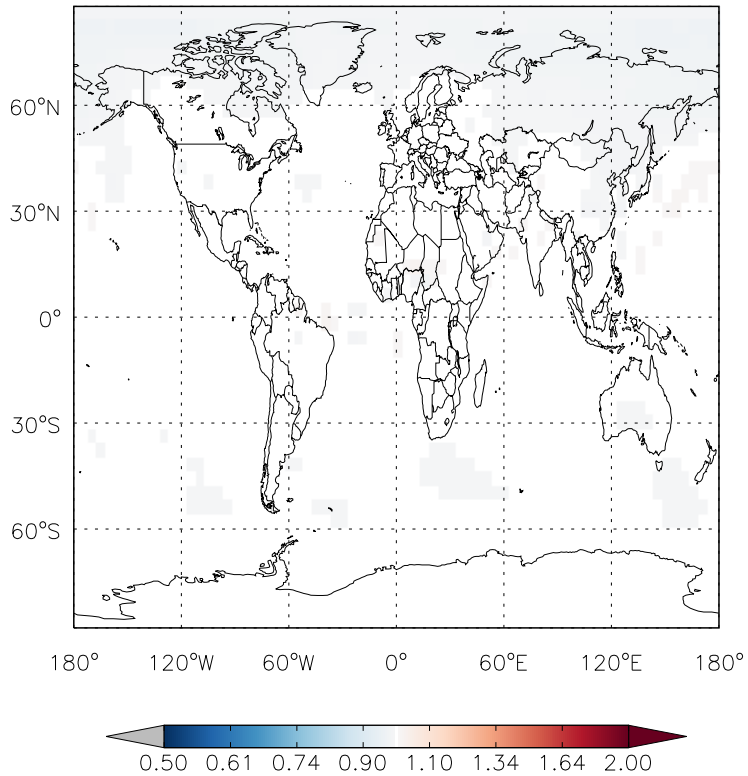
v11-01g-Run0 / v11-01f-geosfp-Run0

HBr / Ratio @ Surface for Oct



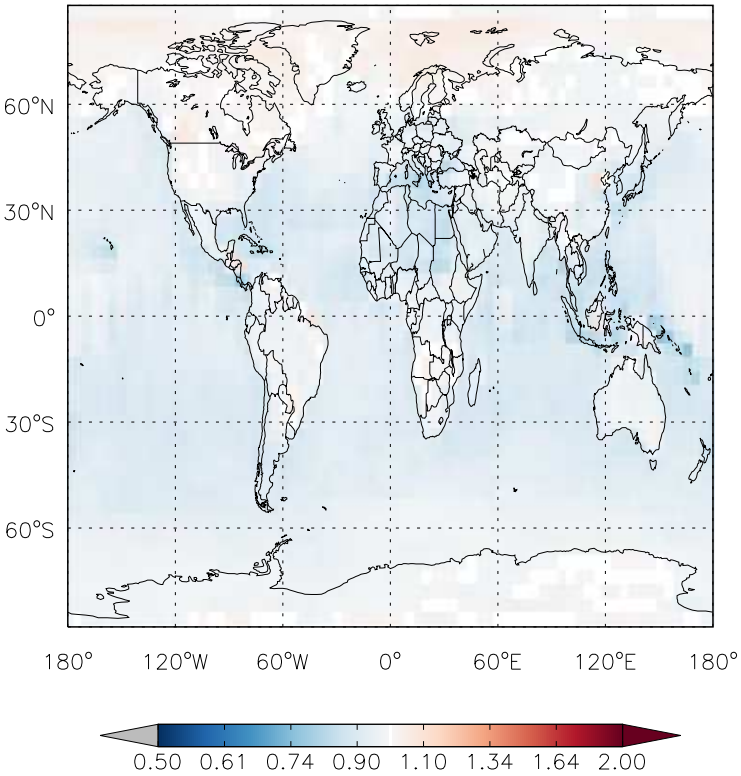
v11-01g-Run0 / v11-01f-geosfp-Run0

HBr/ Ratio @ 500 hPa for Oct



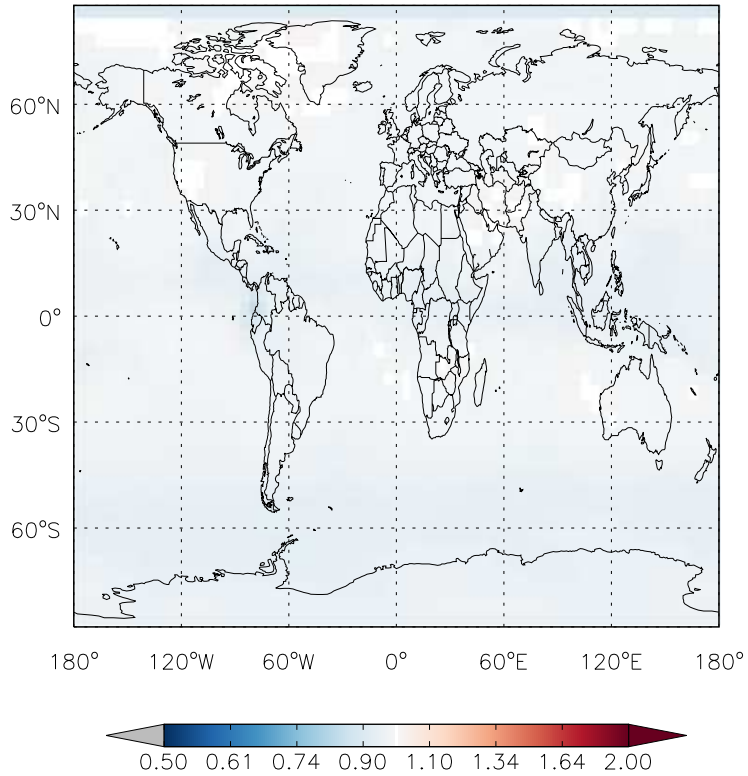
v11-01g-Run0 / v11-01d-Run1

HBr / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

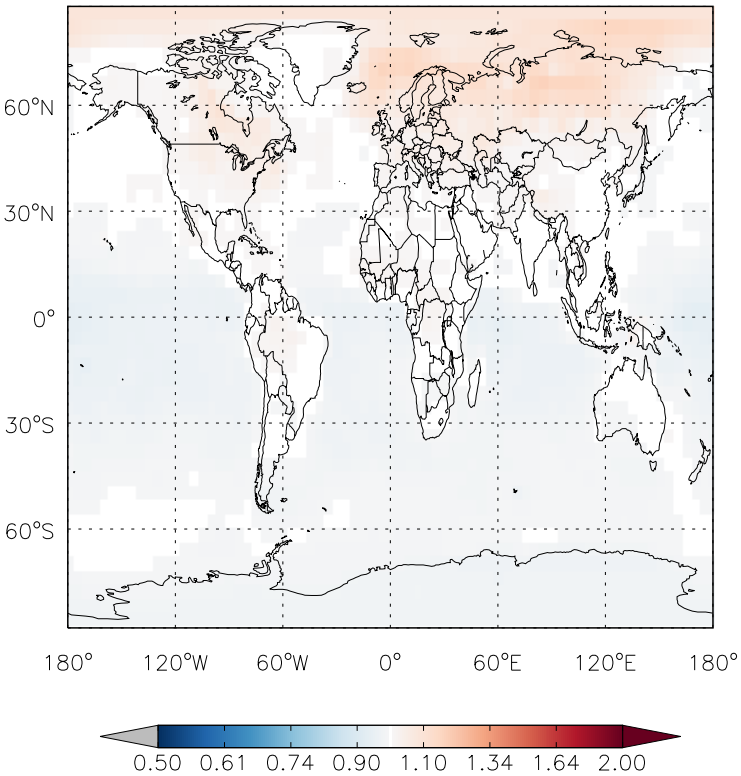
HBr/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

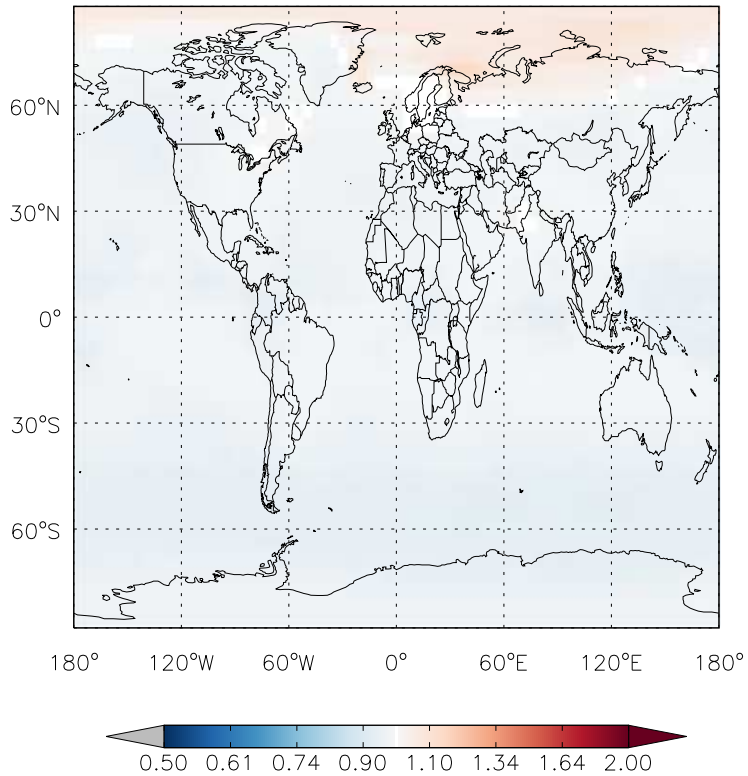
v11-01g-Run0 / v11-01f-geosfp-Run0

BrNO2 / Ratio @ Surface for Oct



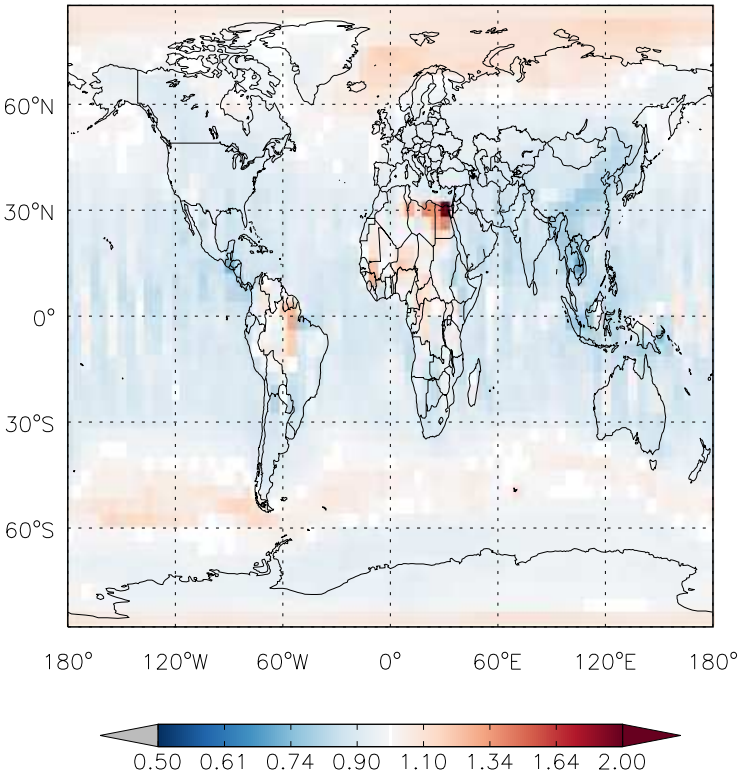
v11-01g-Run0 / v11-01f-geosfp-Run0

BrNO2/ Ratio @ 500 hPa for Oct



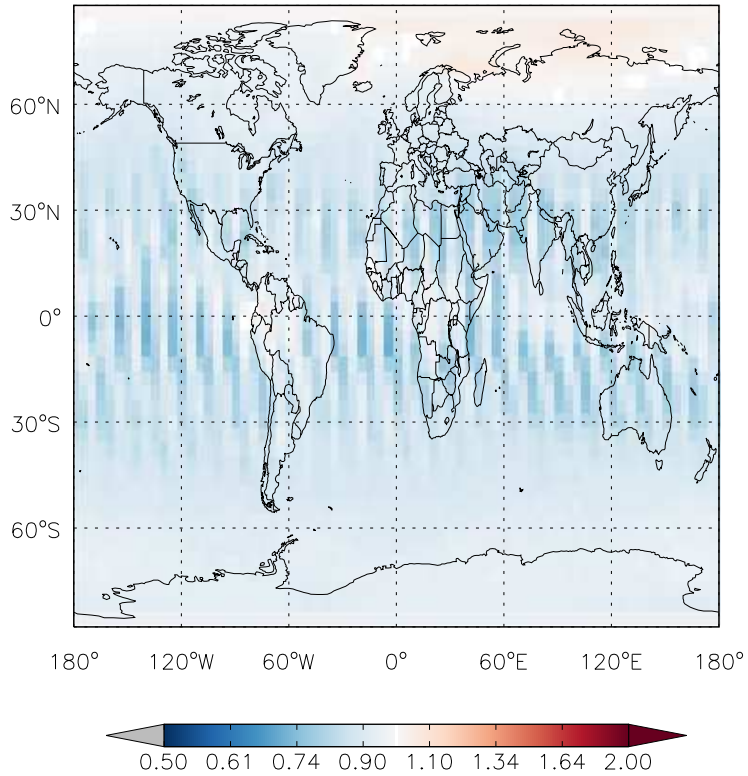
v11-01g-Run0 / v11-01d-Run1

BrNO2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

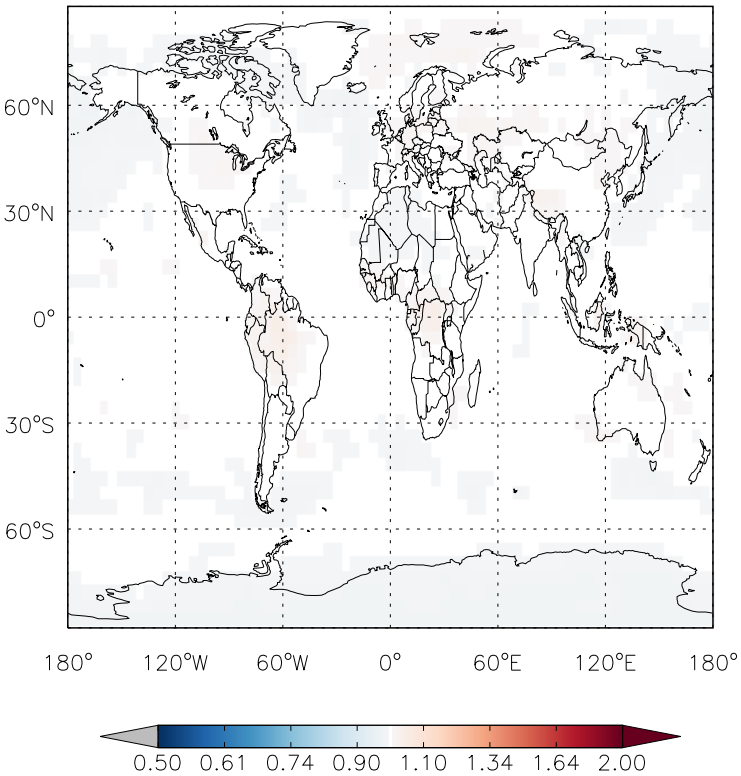
BrNO2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

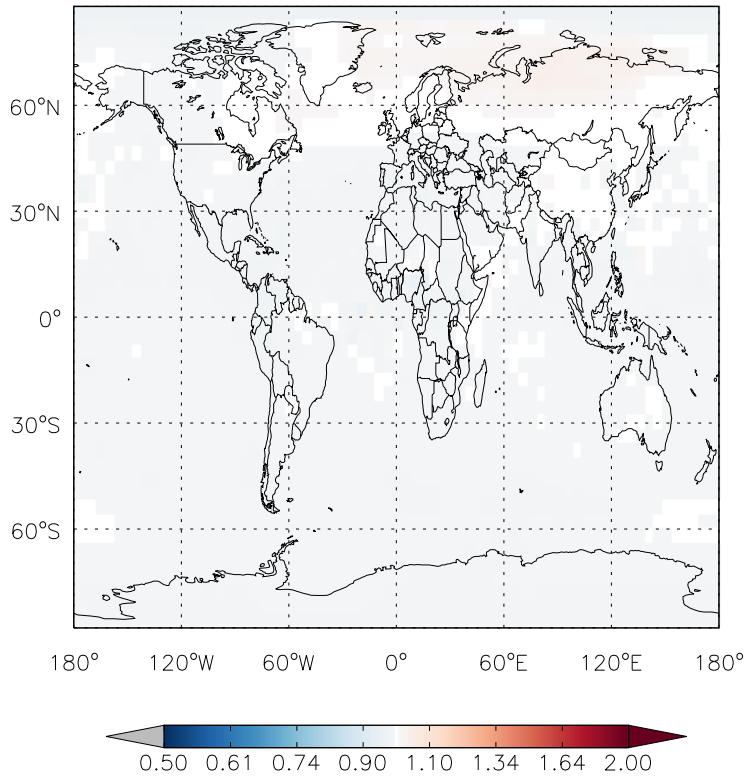
v11-01g-Run0 / v11-01f-geosfp-Run0

BrNO3 / Ratio @ Surface for Oct



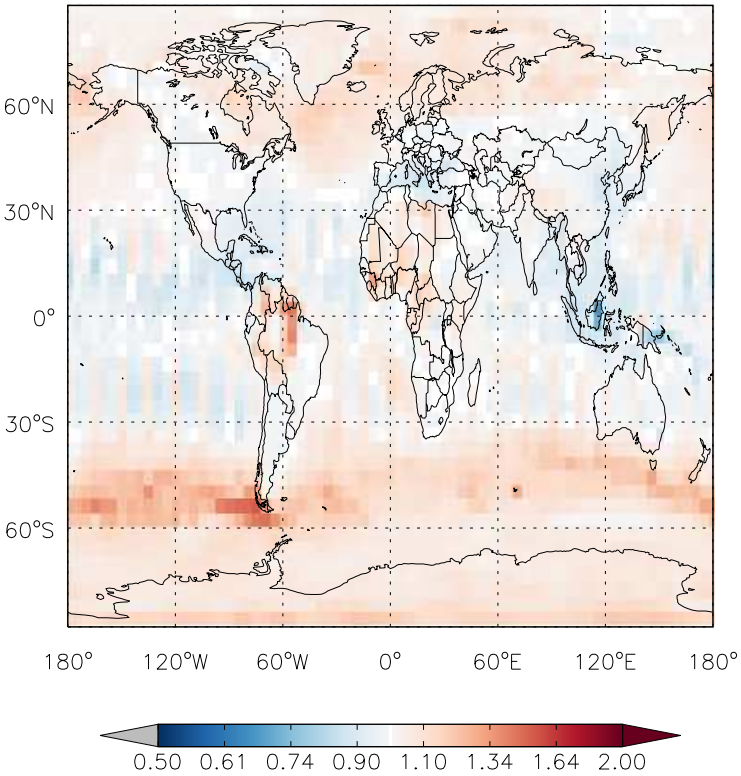
v11-01g-Run0 / v11-01f-geosfp-Run0

BrNO3/ Ratio @ 500 hPa for Oct



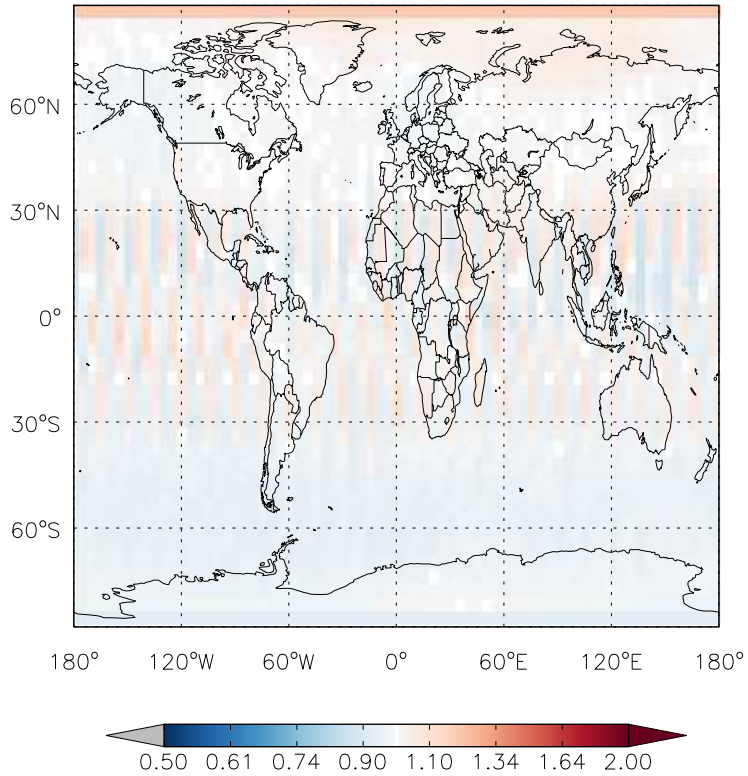
v11-01g-Run0 / v11-01d-Run1

BrNO3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

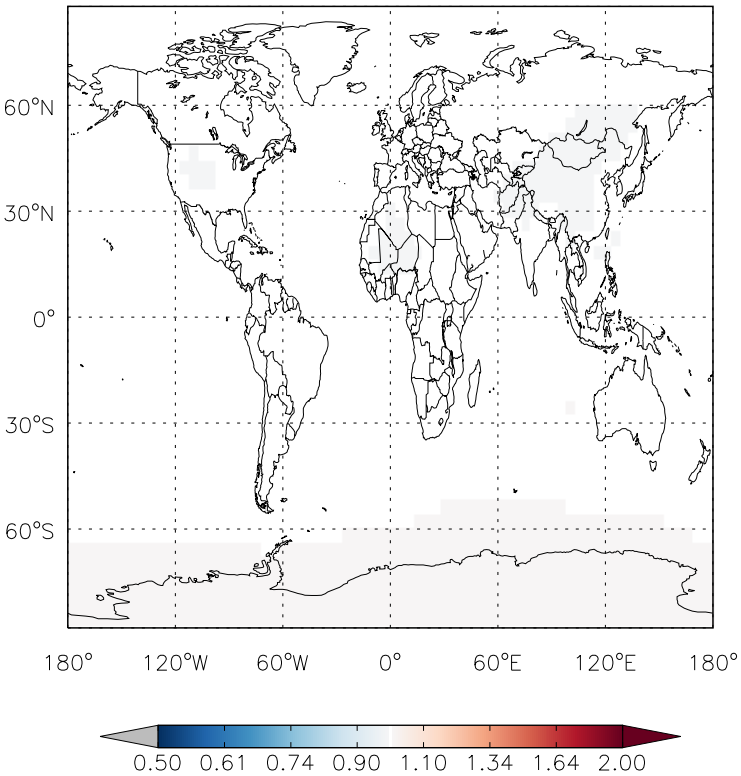
BrNO3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

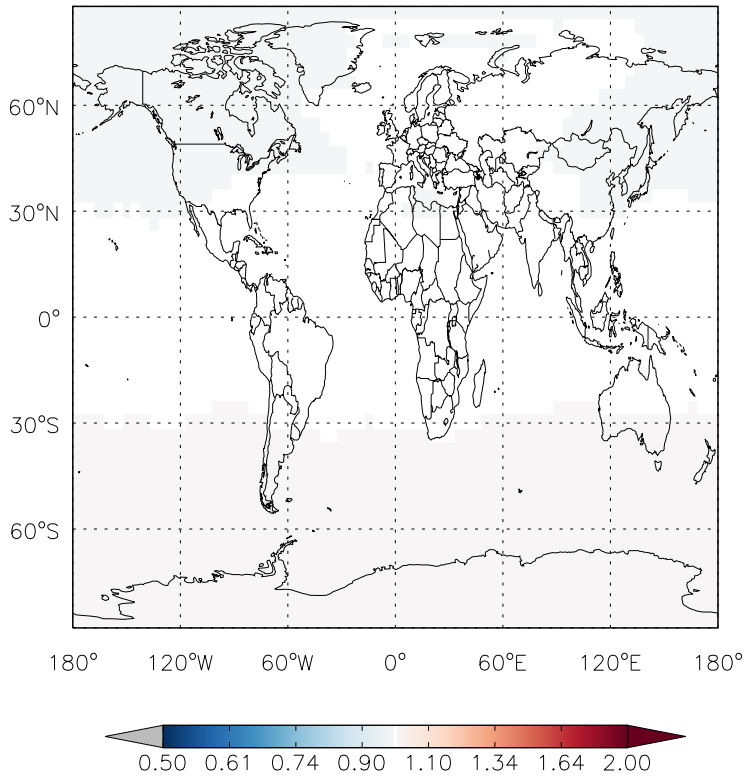
v11-01g-Run0 / v11-01f-geosfp-Run0

CHBr3 / Ratio @ Surface for Oct



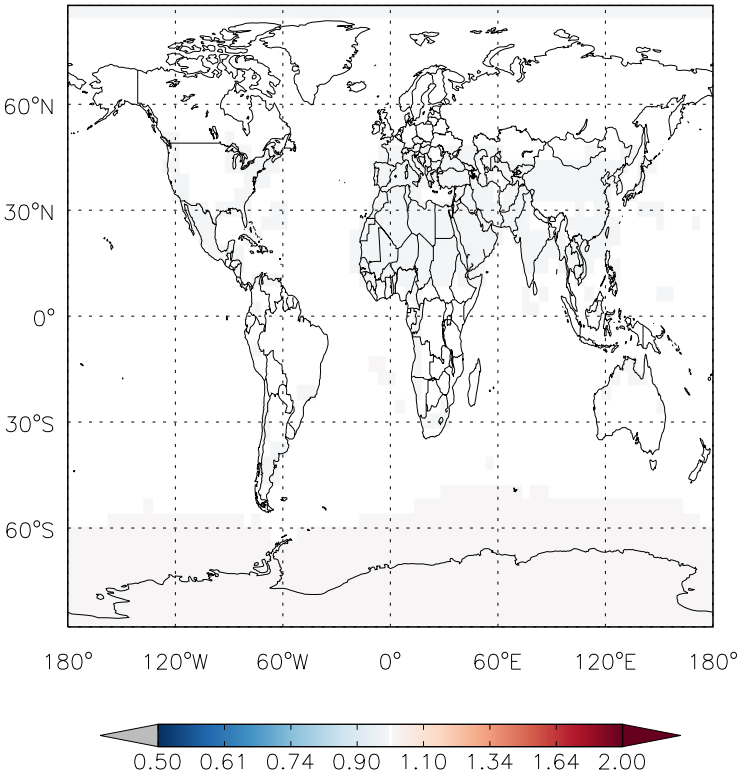
v11-01g-Run0 / v11-01f-geosfp-Run0

CHBr3/ Ratio @ 500 hPa for Oct



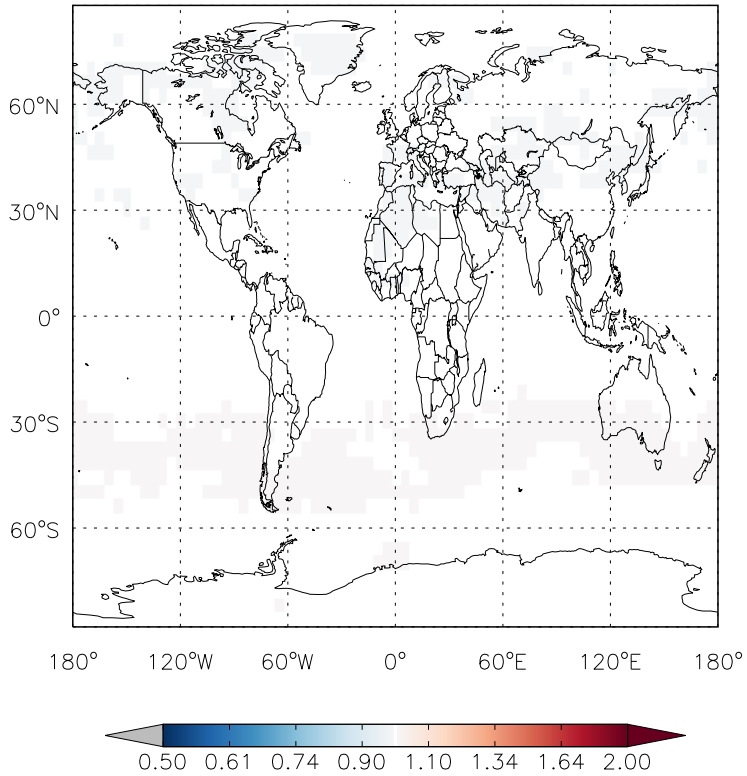
v11-01g-Run0 / v11-01d-Run1

CHBr3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

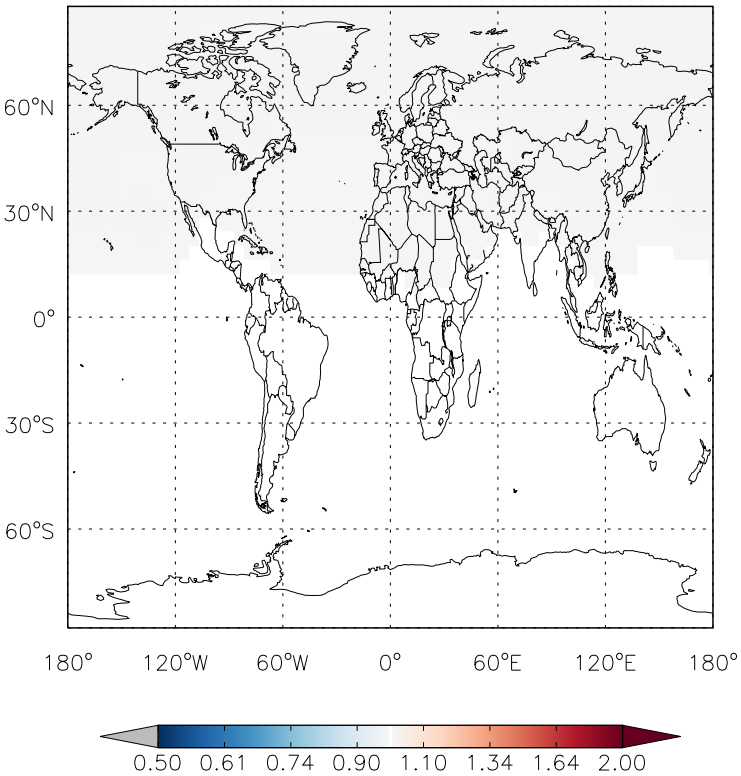
CHBr3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

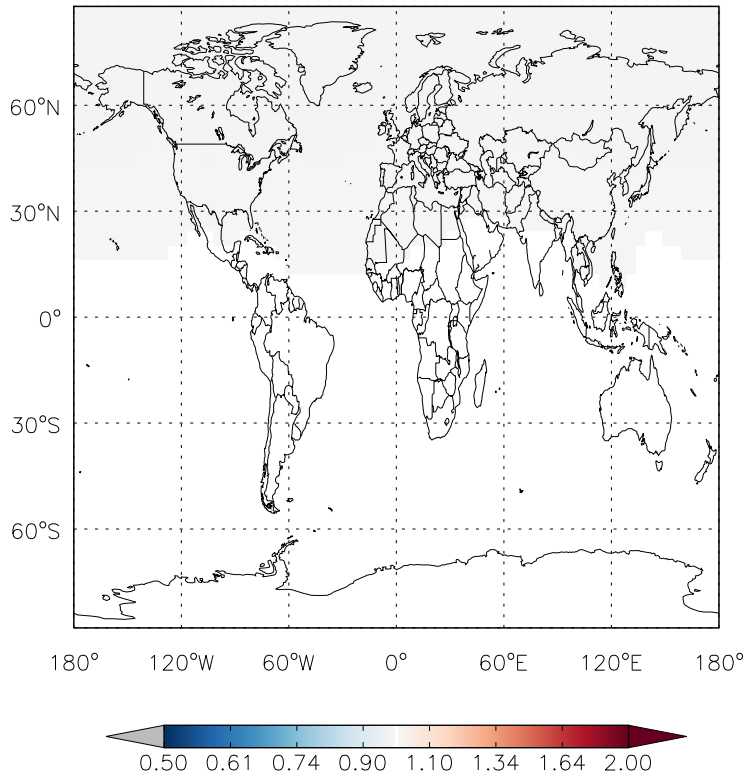
v11-01g-Run0 / v11-01f-geosfp-Run0

CH2Br2 / Ratio @ Surface for Oct



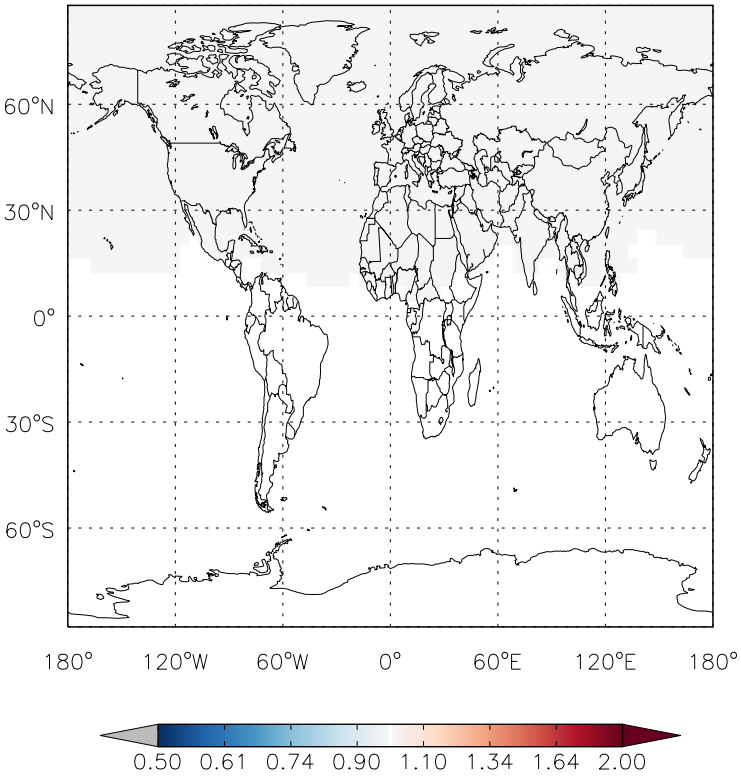
v11-01g-Run0 / v11-01f-geosfp-Run0

CH2Br2/ Ratio @ 500 hPa for Oct



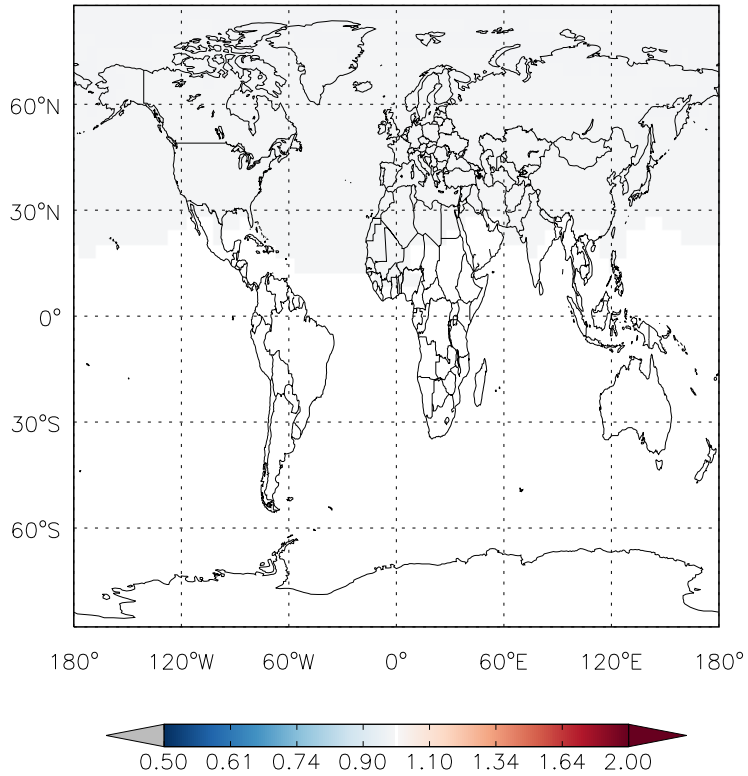
v11-01g-Run0 / v11-01d-Run1

CH2Br2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

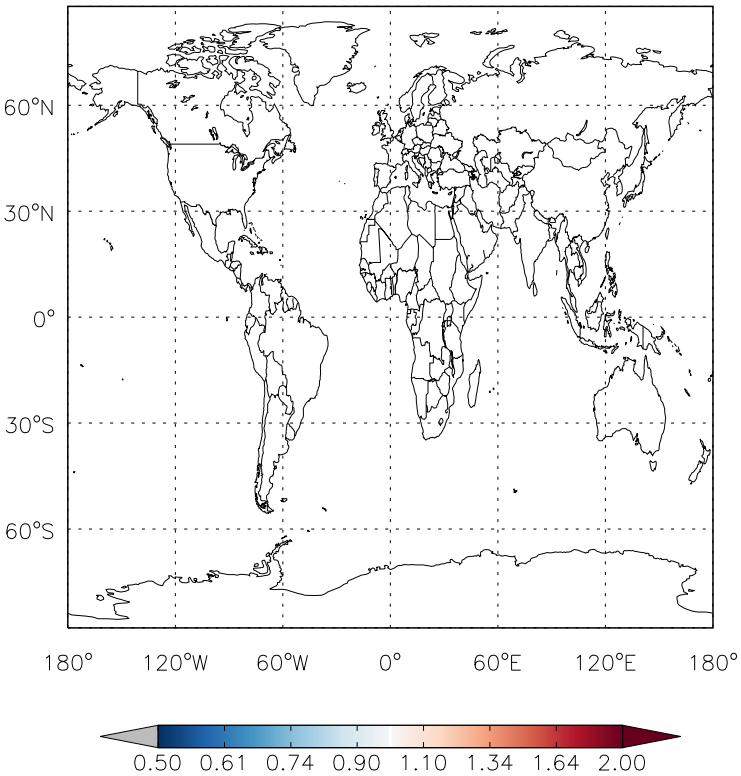
CH2Br2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

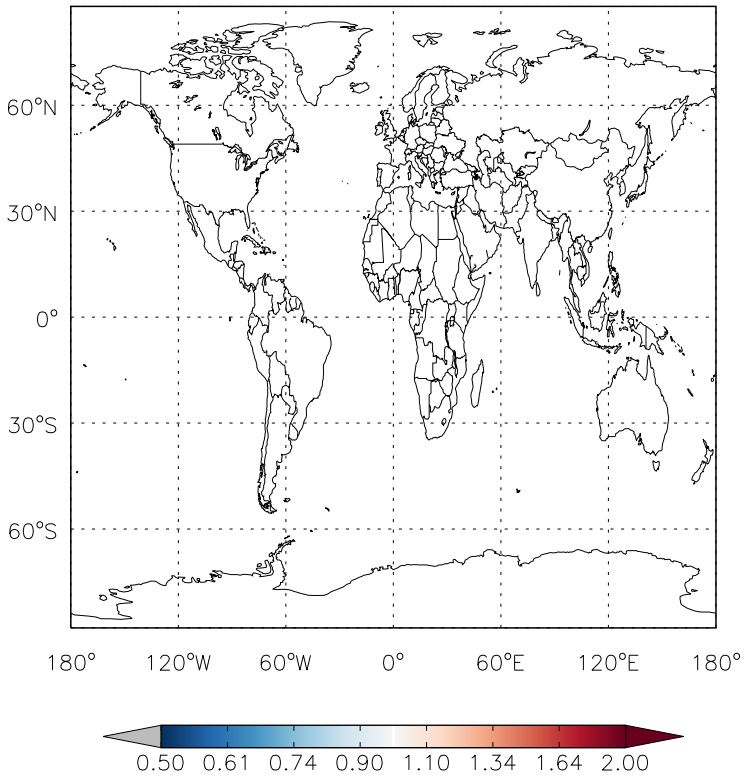
v11-01g-Run0 / v11-01f-geosfp-Run0

CH3Br / Ratio @ Surface for Oct



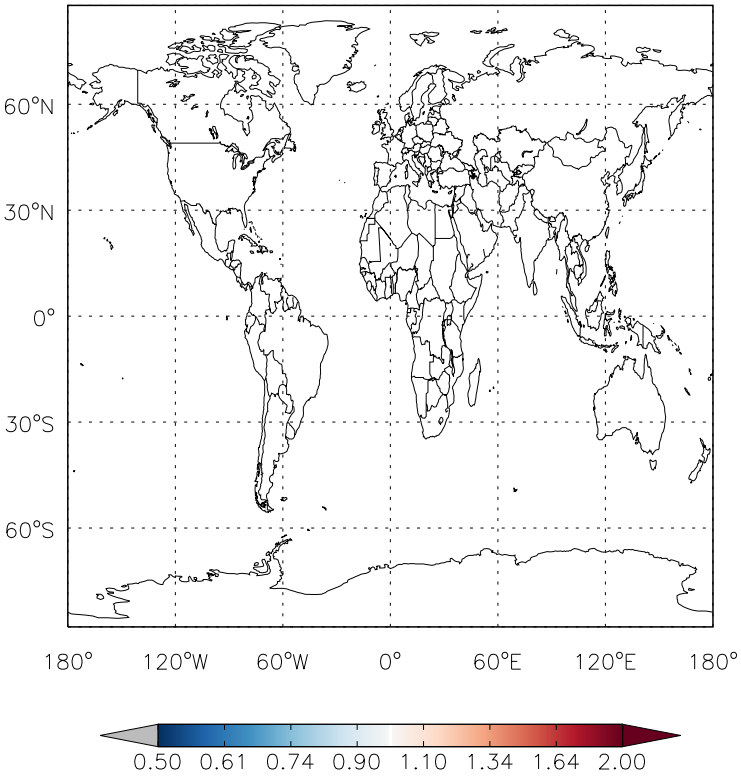
v11-01g-Run0 / v11-01f-geosfp-Run0

CH3Br/ Ratio @ 500 hPa for Oct



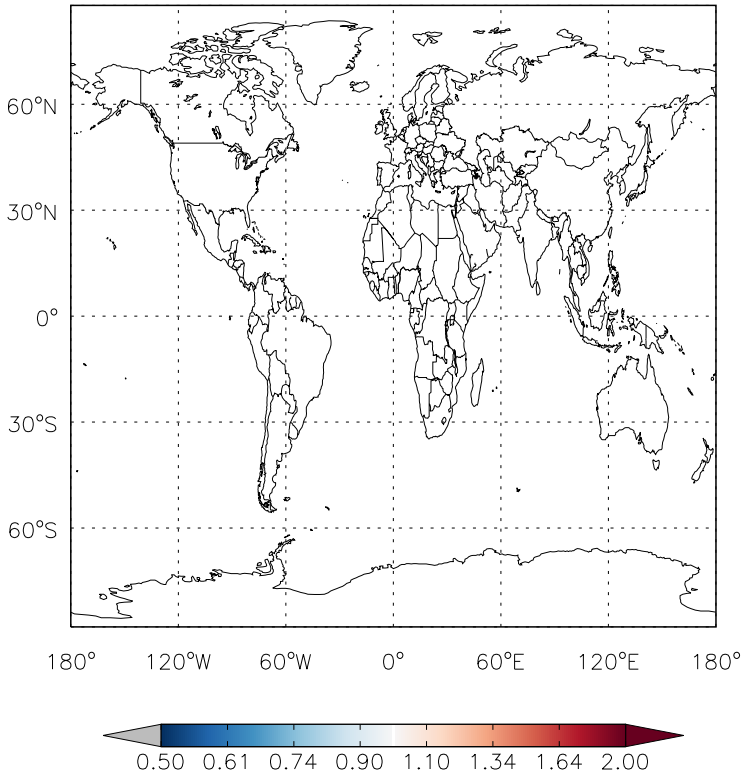
v11-01g-Run0 / v11-01d-Run1

CH3Br / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

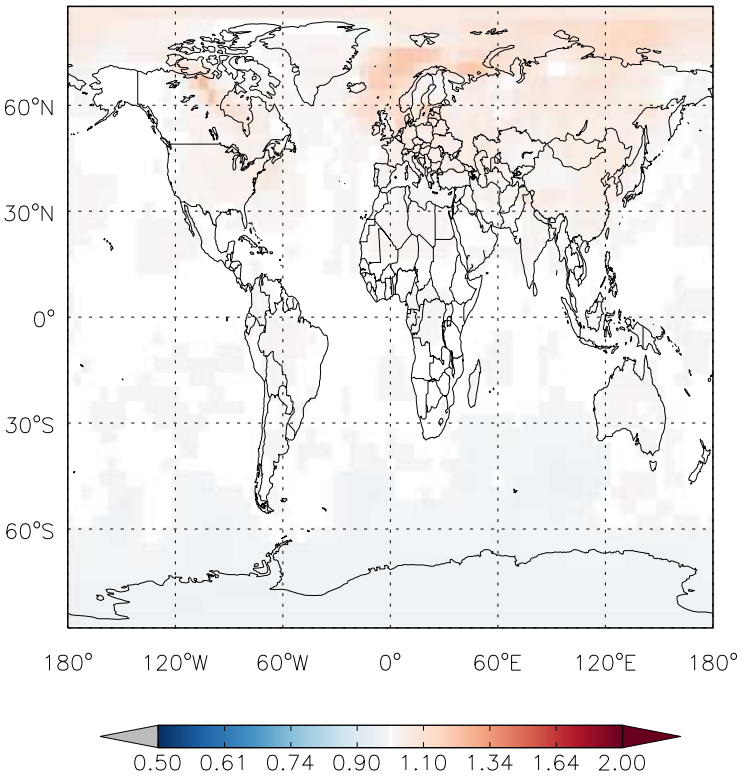
CH3Br/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

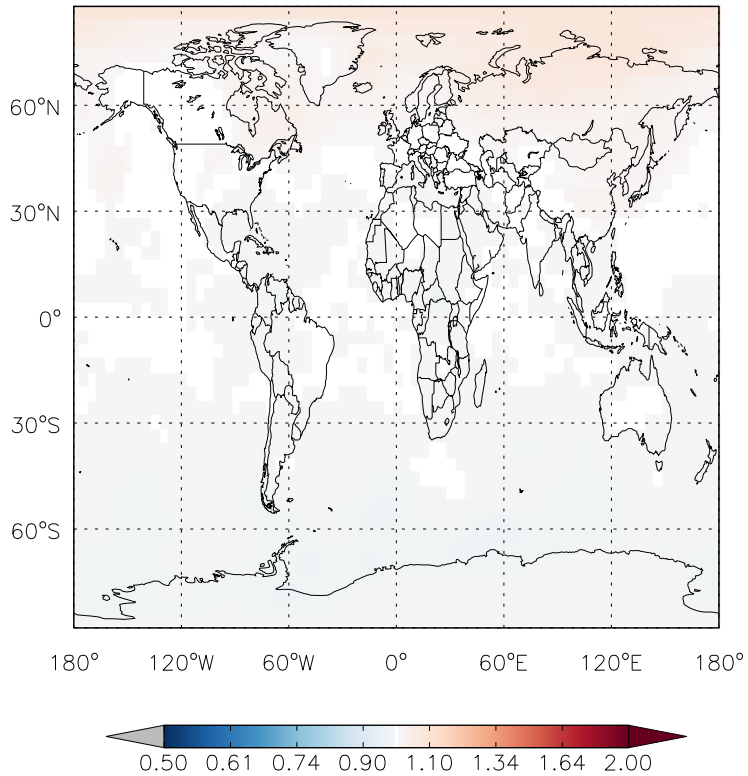
v11-01g-Run0 / v11-01f-geosfp-Run0

MPN / Ratio @ Surface for Oct



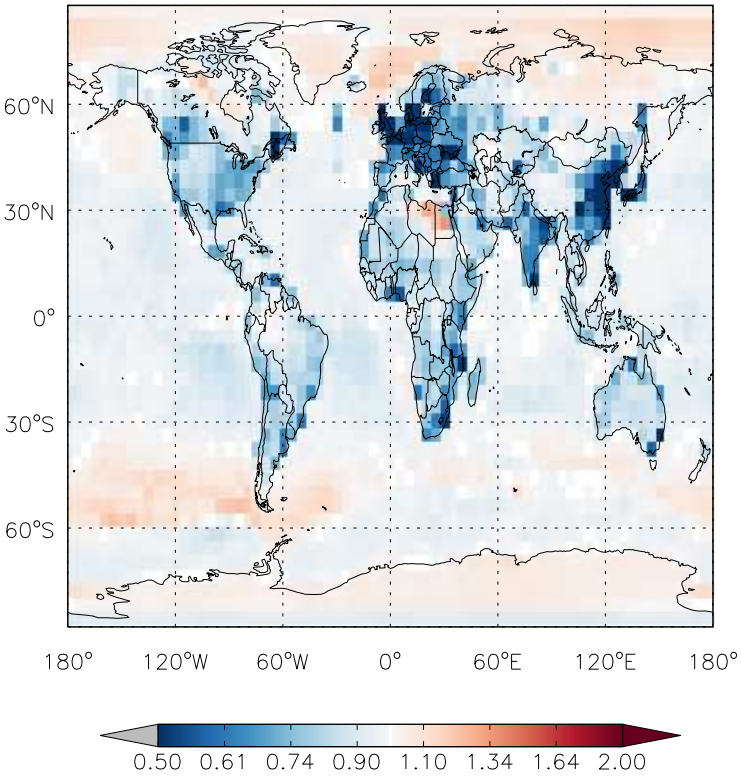
v11-01g-Run0 / v11-01f-geosfp-Run0

MPN/ Ratio @ 500 hPa for Oct



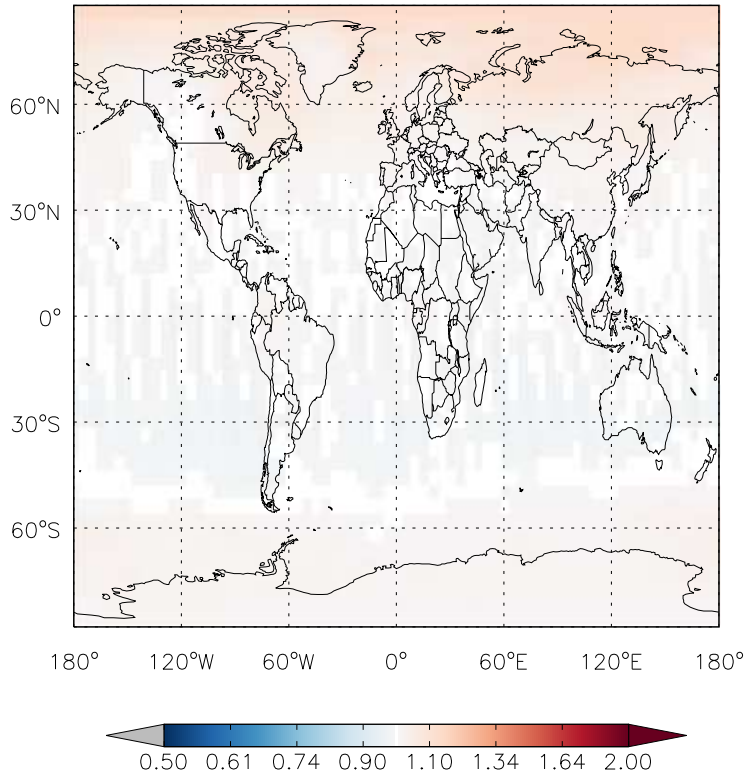
v11-01g-Run0 / v11-01d-Run1

MPN / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

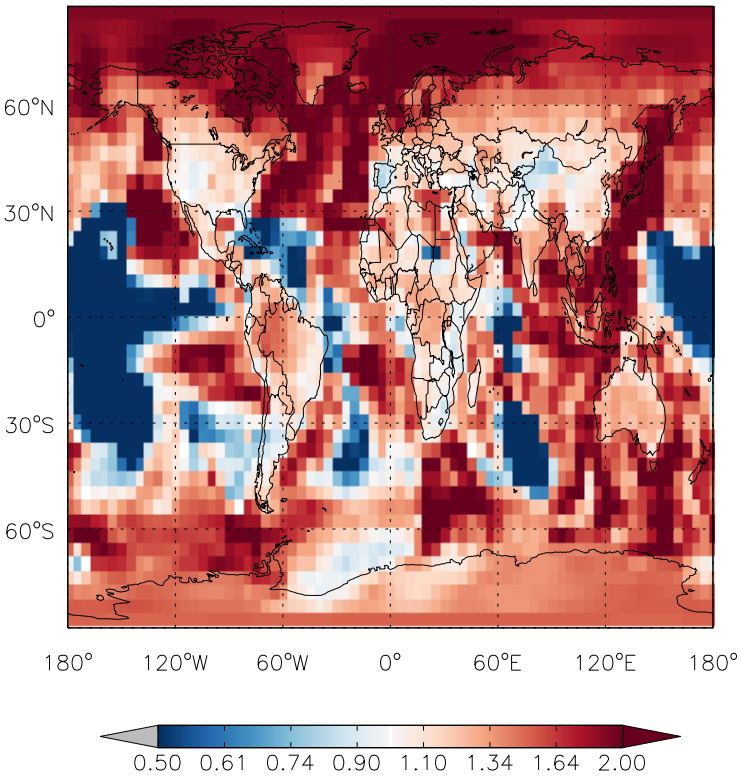
MPN/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

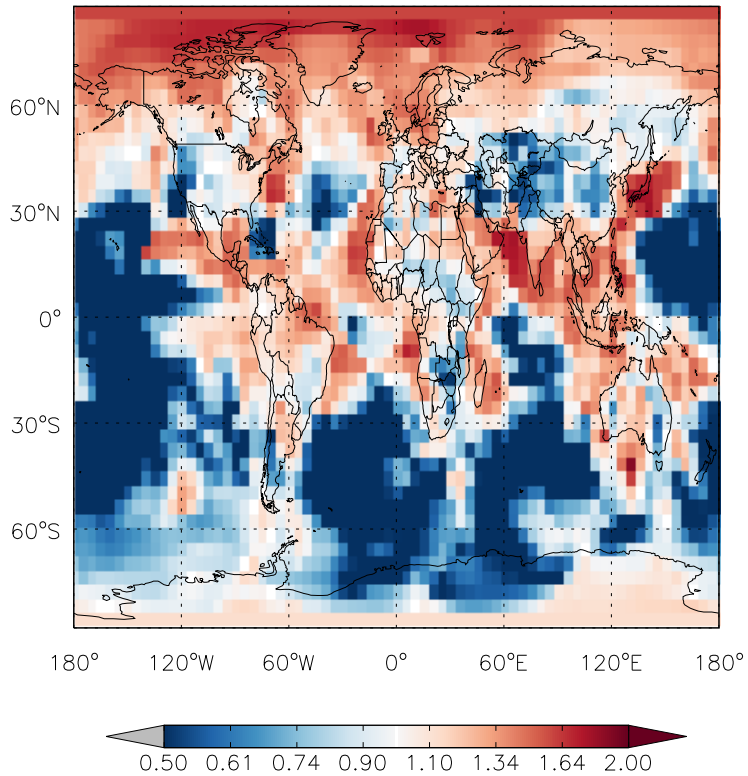
v11−01g−Run0 / v11−01f−geosfp−Run0

ISOPND / Ratio @ Surface for Oct



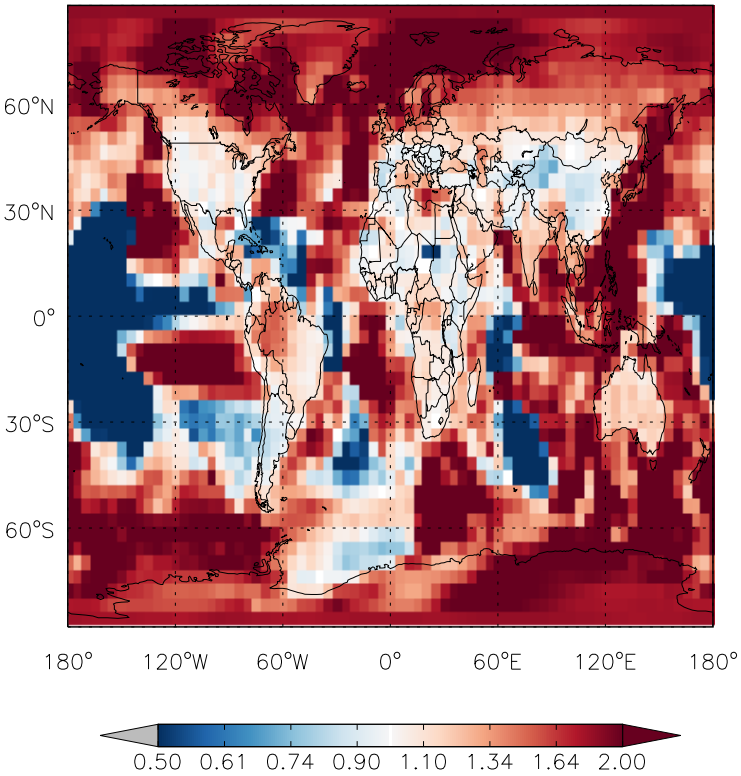
v11−01g−Run0 / v11−01f−geosfp−Run0

ISOPND/ Ratio @ 500 hPa for Oct



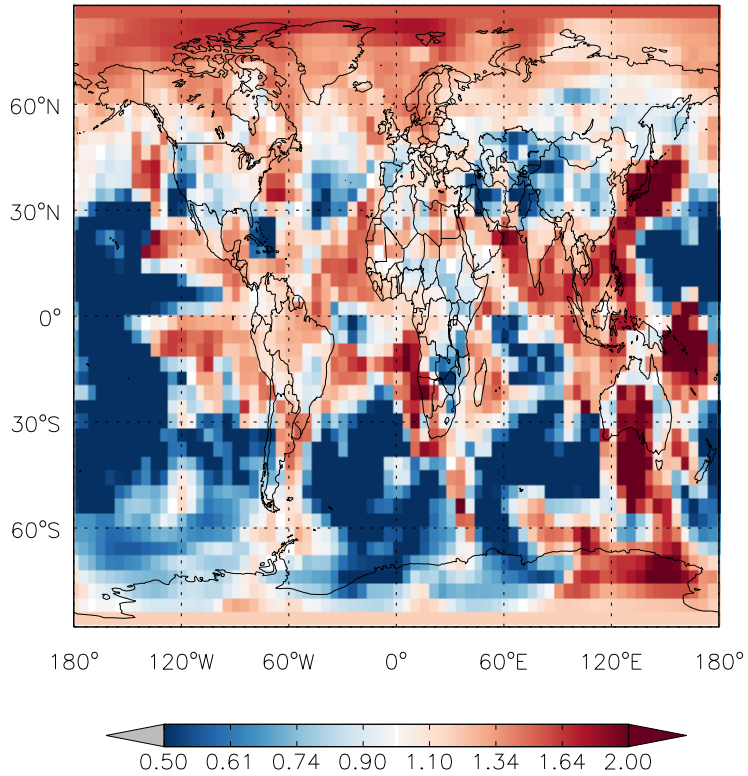
v11−01g−Run0 / v11−01d−Run1

ISOPND / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

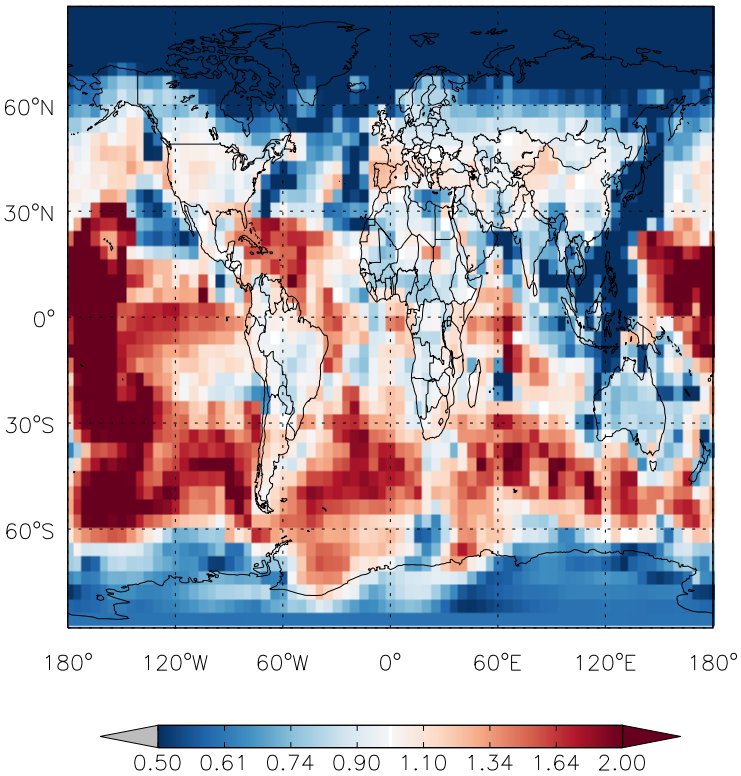
ISOPND/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

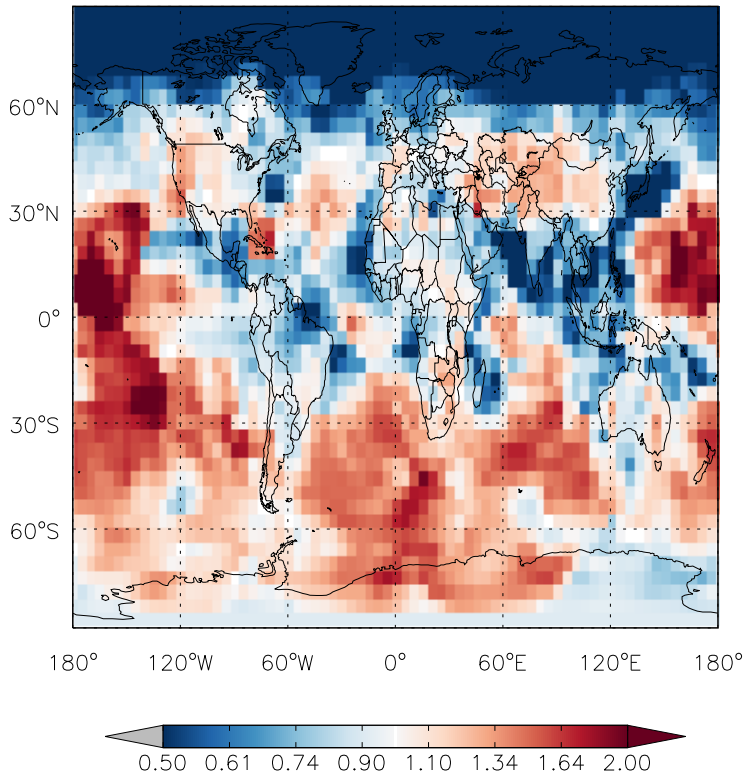
v11-01g-Run0 / v11-01f-geosfp-Run0

ISOPNB / Ratio @ Surface for Oct



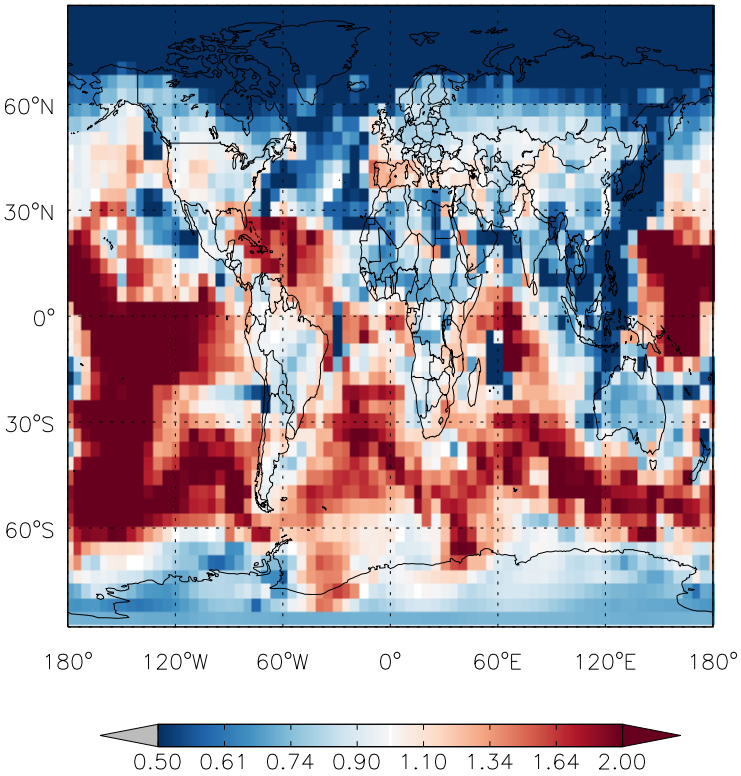
v11-01g-Run0 / v11-01f-geosfp-Run0

ISOPNB/ Ratio @ 500 hPa for Oct



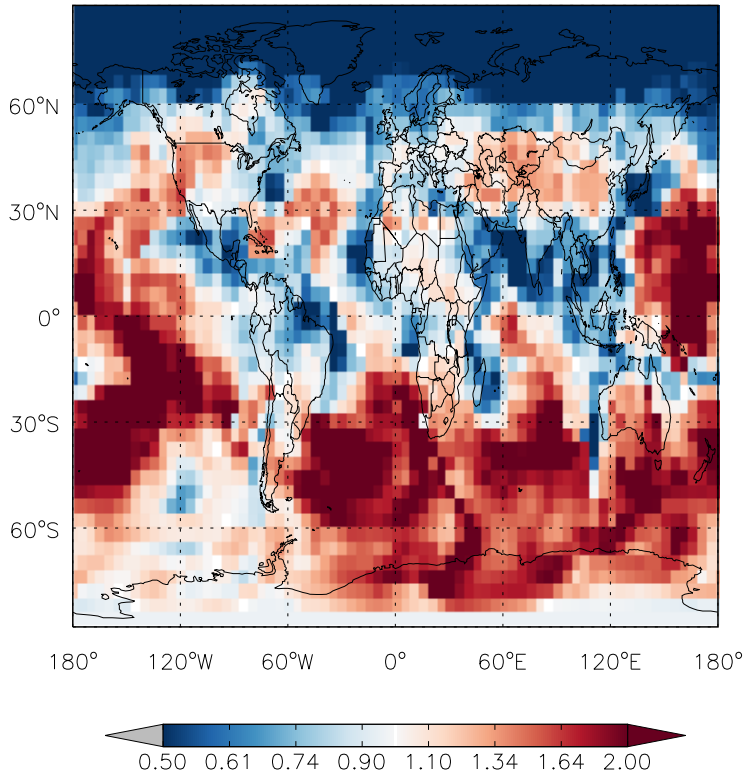
v11-01g-Run0 / v11-01d-Run1

ISOPNB / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

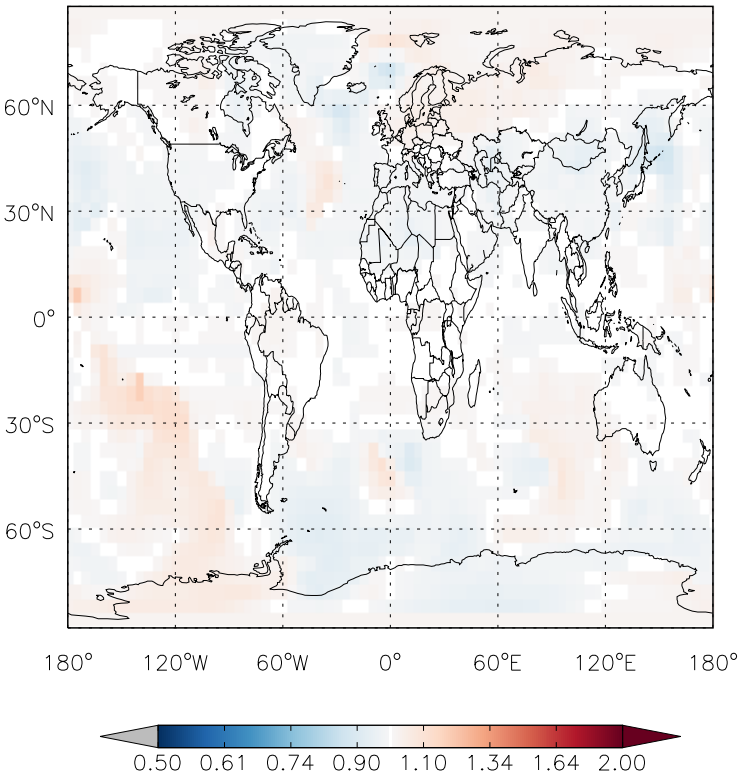
ISOPNB/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

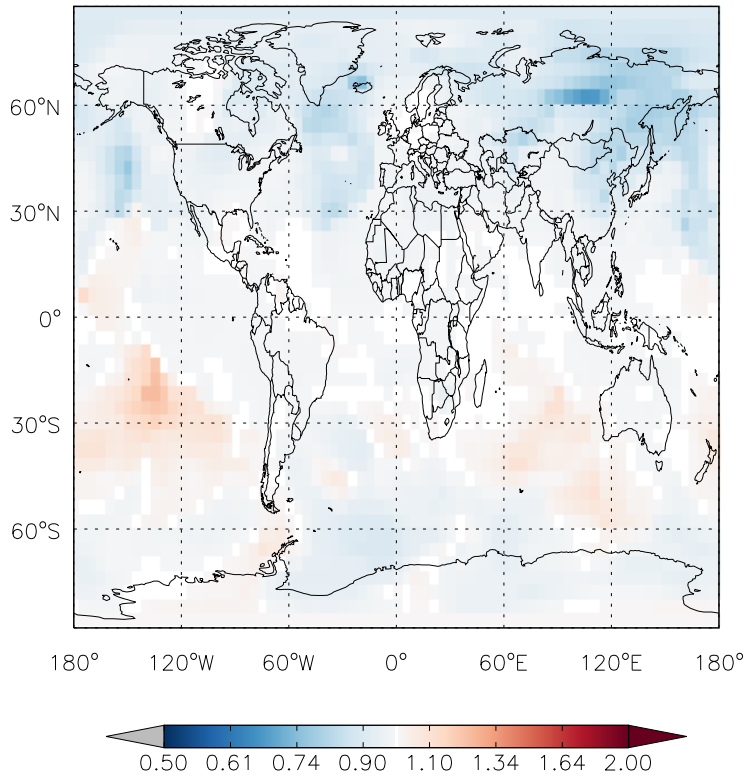
v11−01g−Run0 / v11−01f−geosfp−Run0

MOBA / Ratio @ Surface for Oct



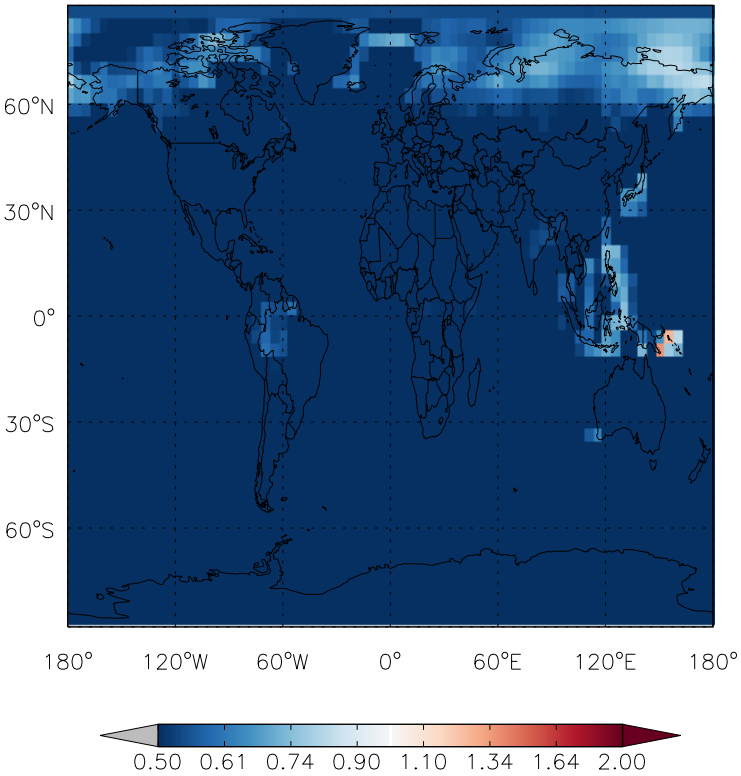
v11−01g−Run0 / v11−01f−geosfp−Run0

MOBA/ Ratio @ 500 hPa for Oct



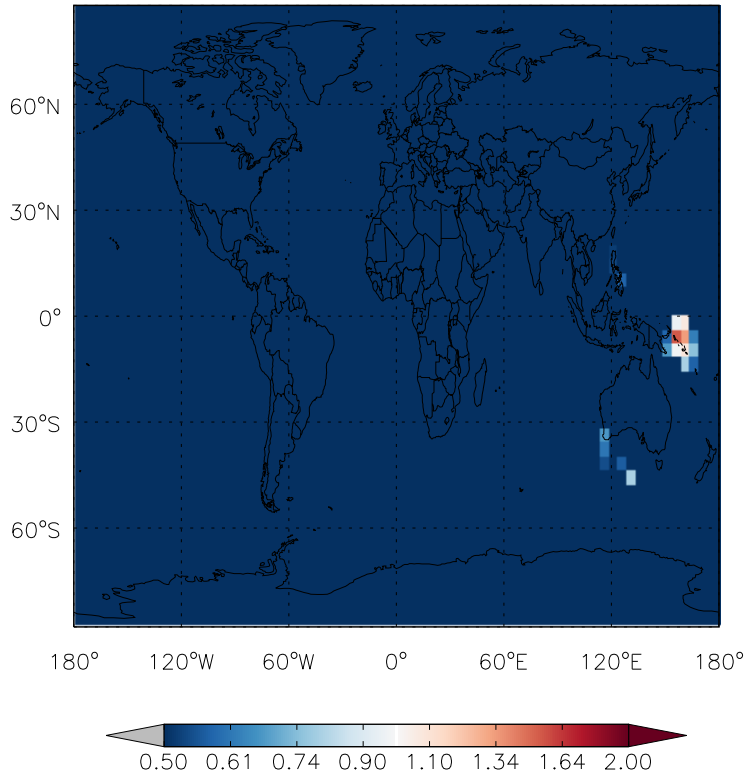
v11−01g−Run0 / v11−01d−Run1

MOBA / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

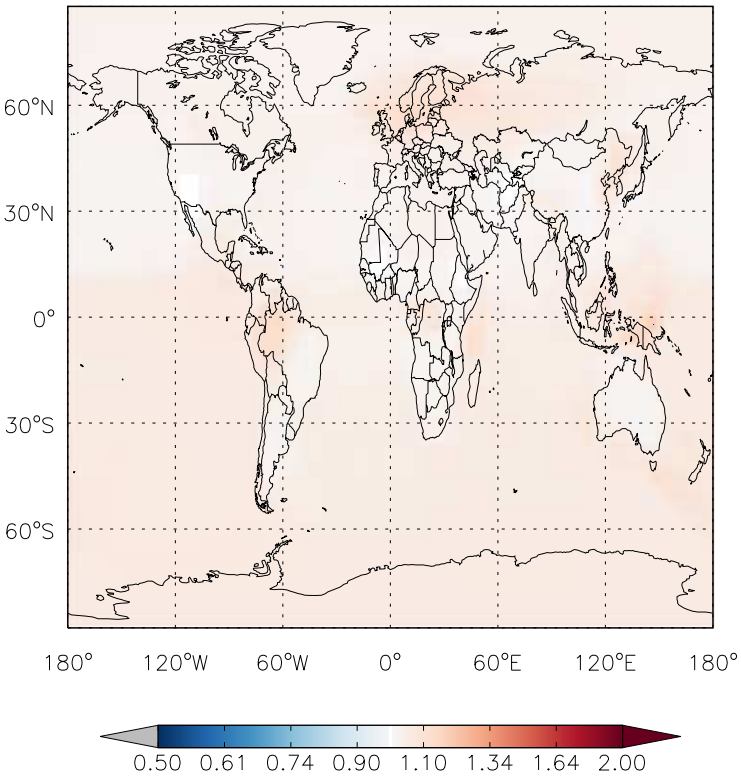
MOBA/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

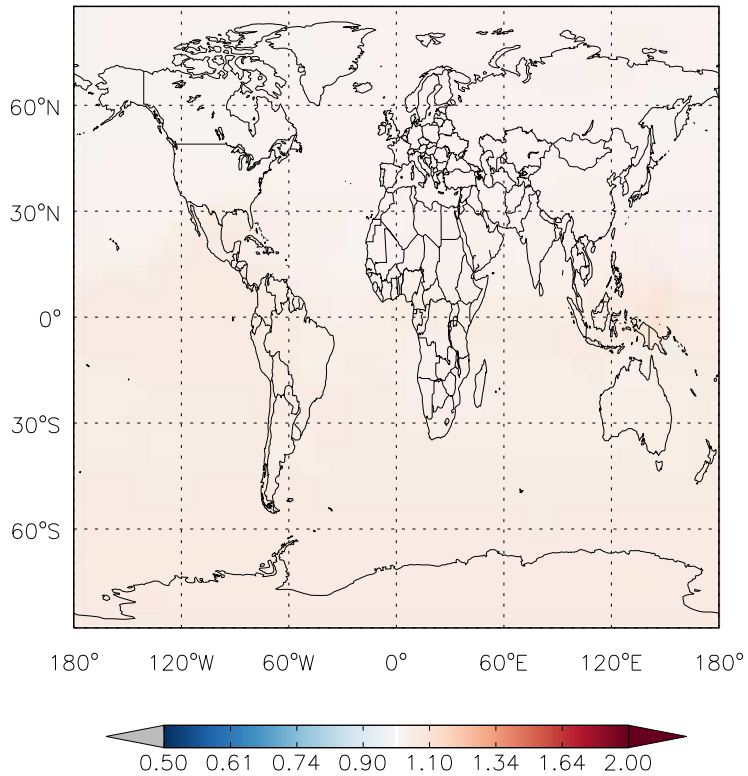
v11-01g-Run0 / v11-01f-geosfp-Run0

PROPNN / Ratio @ Surface for Oct



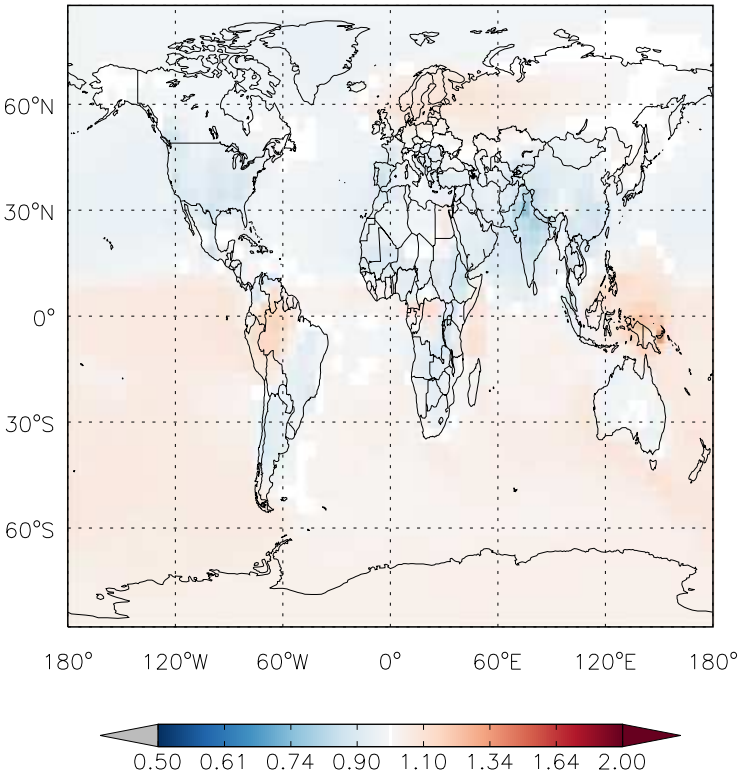
v11-01g-Run0 / v11-01f-geosfp-Run0

PROPNN/ Ratio @ 500 hPa for Oct



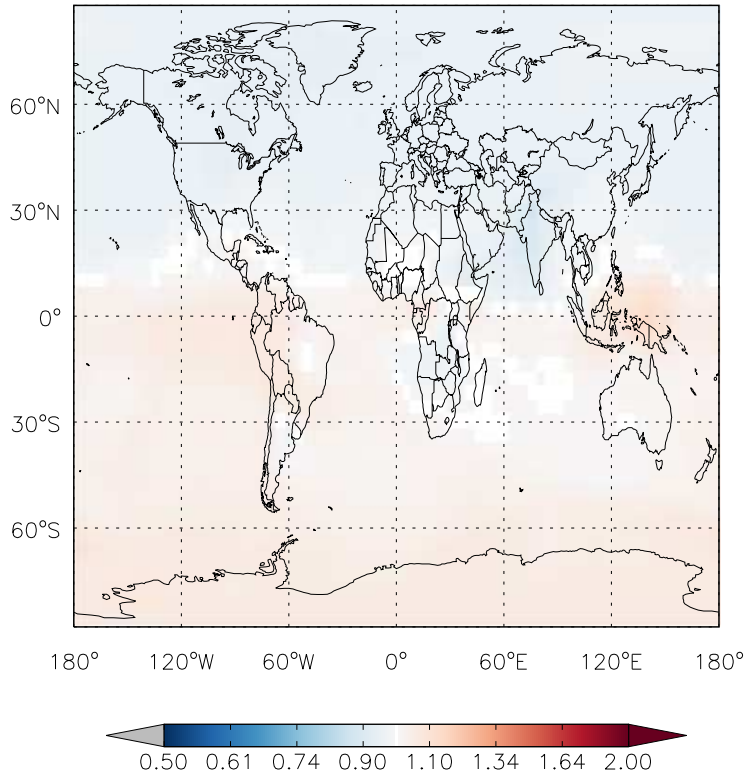
v11-01g-Run0 / v11-01d-Run1

PROPNN / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

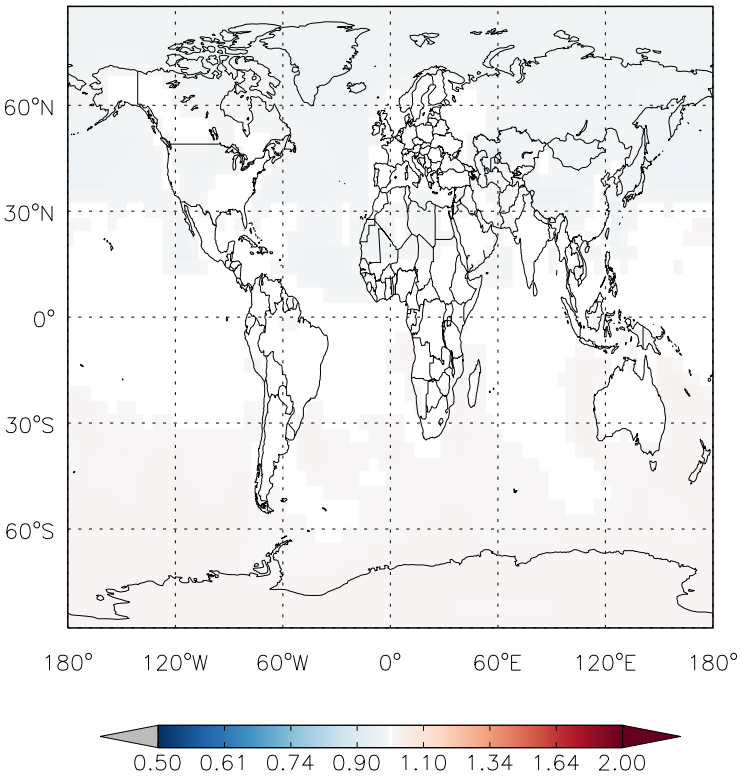
PROPNN/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

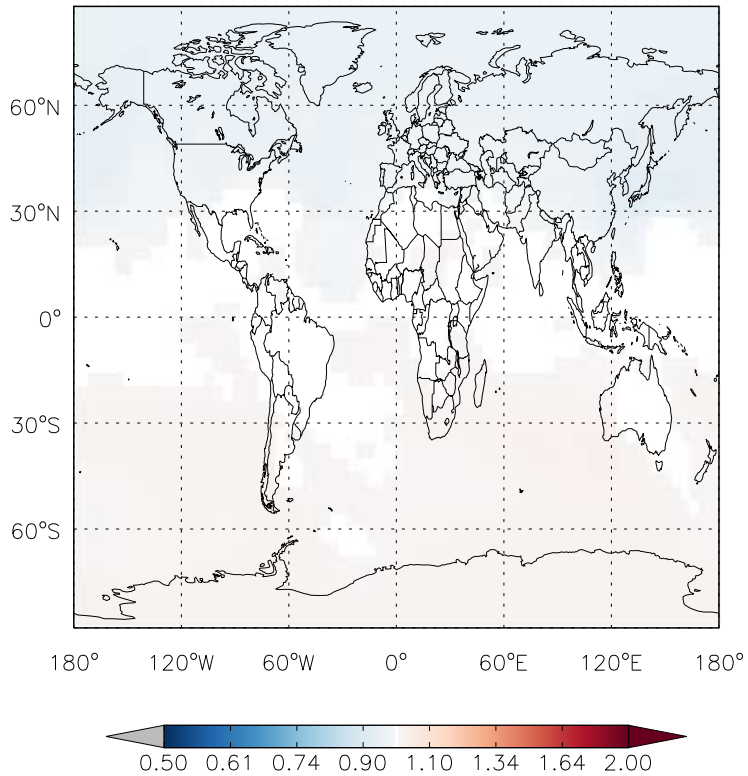
v11-01g-Run0 / v11-01f-geosfp-Run0

HAC / Ratio @ Surface for Oct



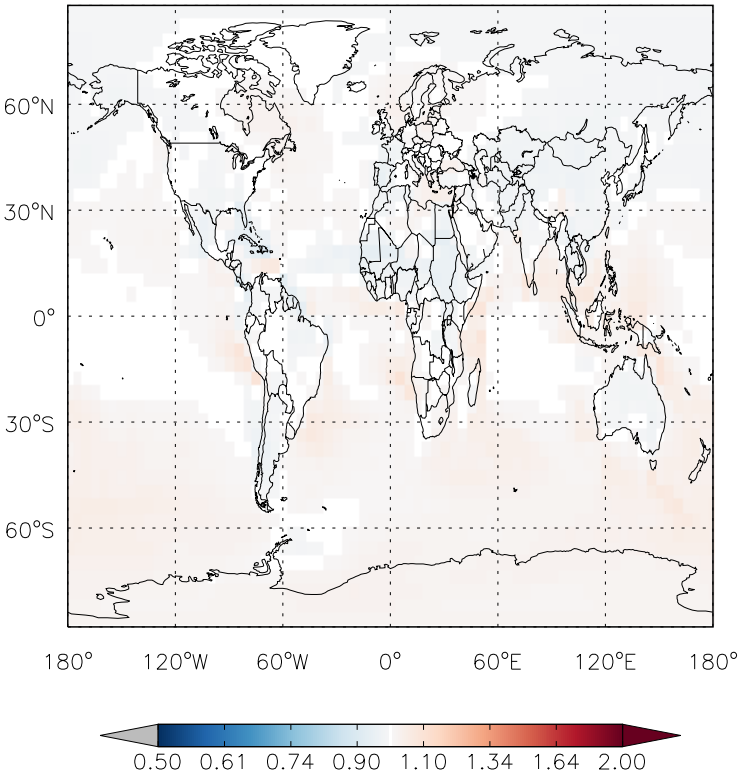
v11-01g-Run0 / v11-01f-geosfp-Run0

HAC/ Ratio @ 500 hPa for Oct



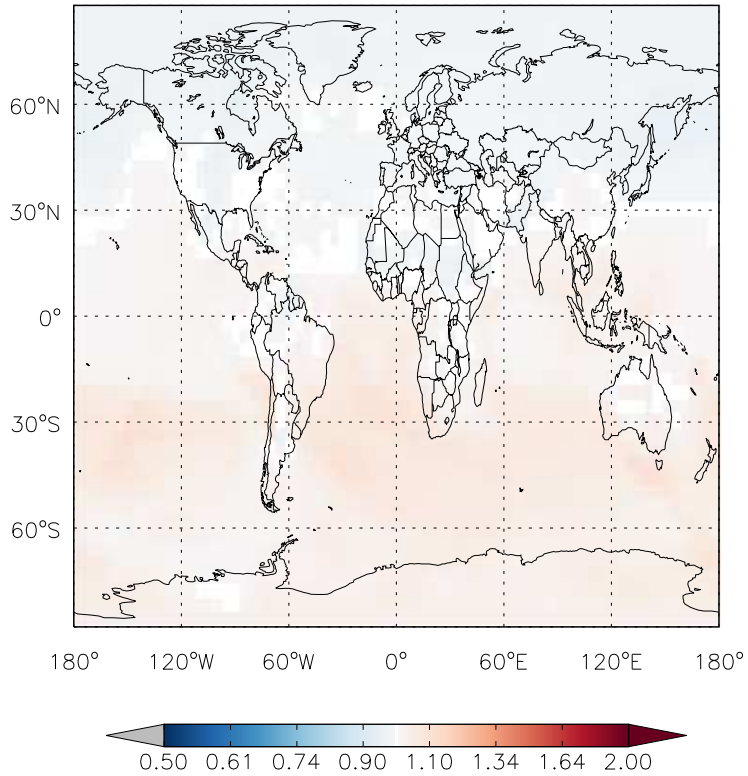
v11-01g-Run0 / v11-01d-Run1

HAC / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

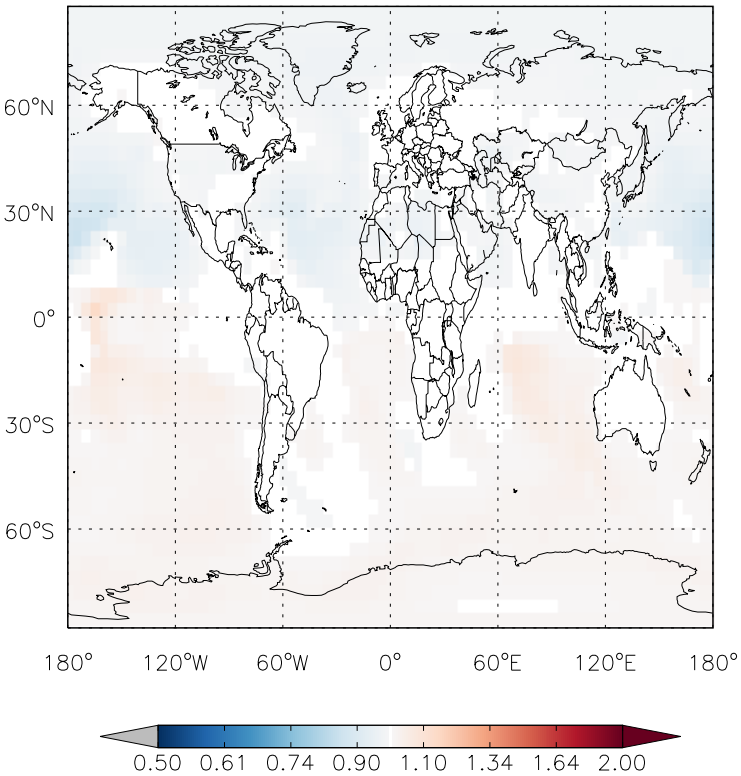
HAC/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

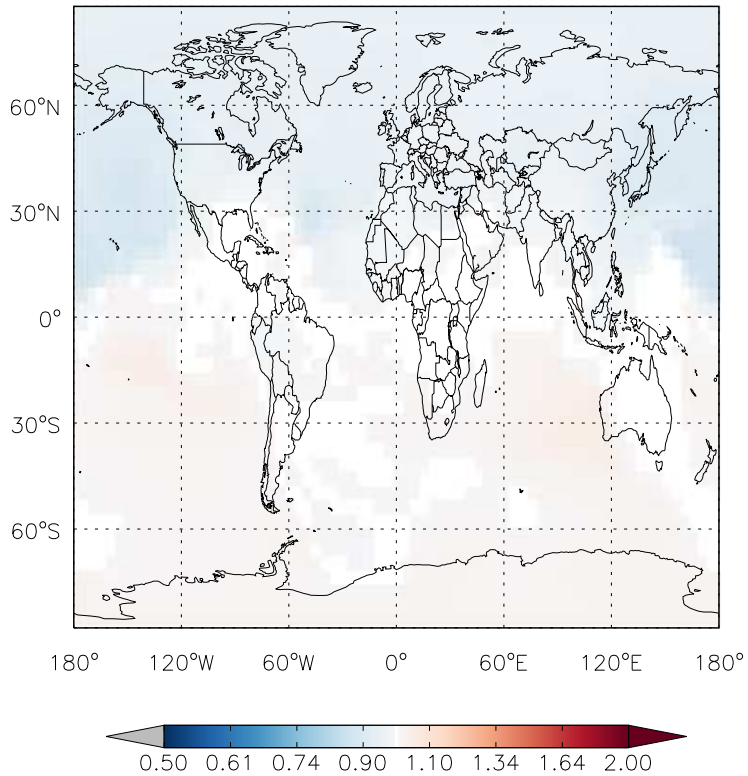
v11-01g-Run0 / v11-01f-geosfp-Run0

GLYC / Ratio @ Surface for Oct



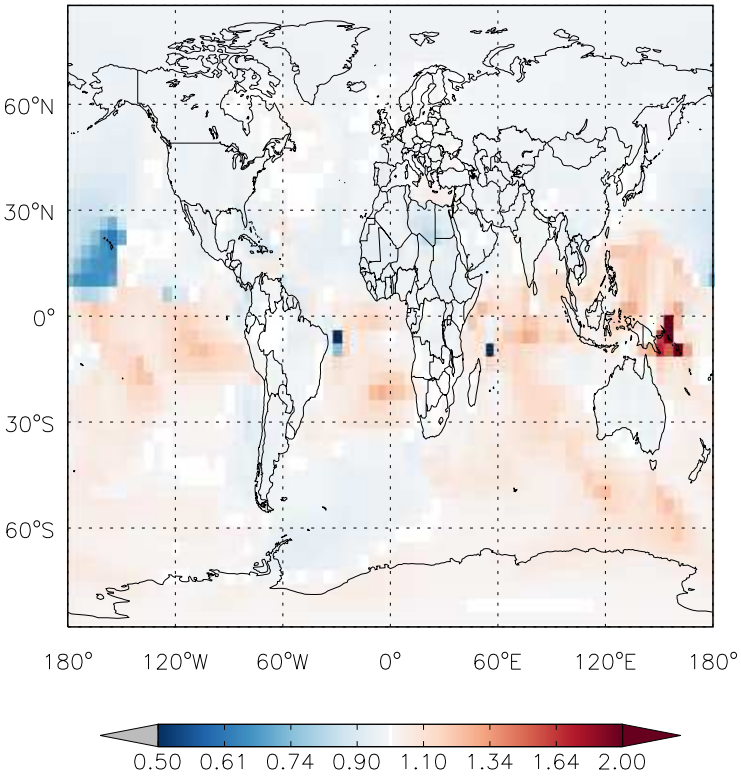
v11-01g-Run0 / v11-01f-geosfp-Run0

GLYC/ Ratio @ 500 hPa for Oct



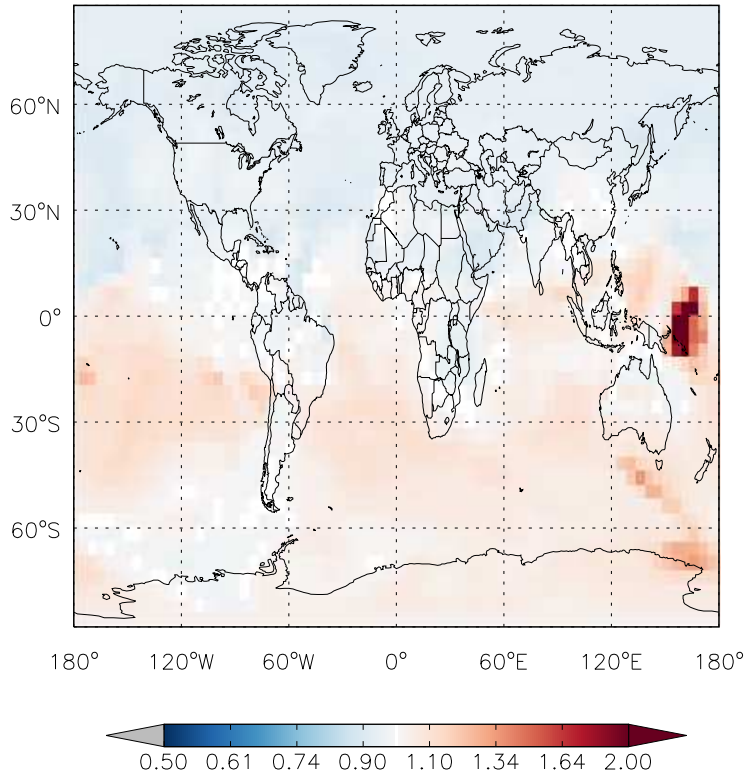
v11-01g-Run0 / v11-01d-Run1

GLYC / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

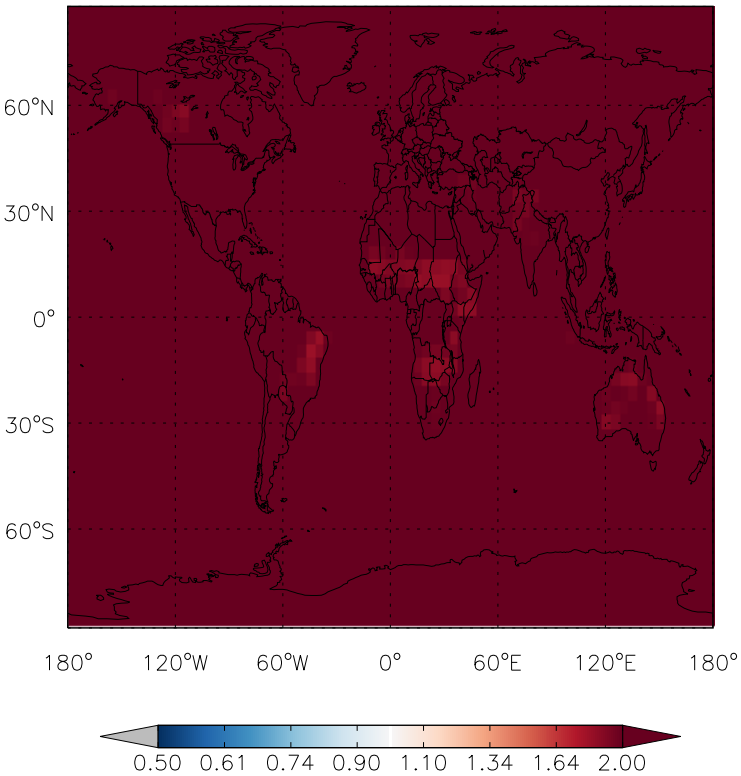
GLYC/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

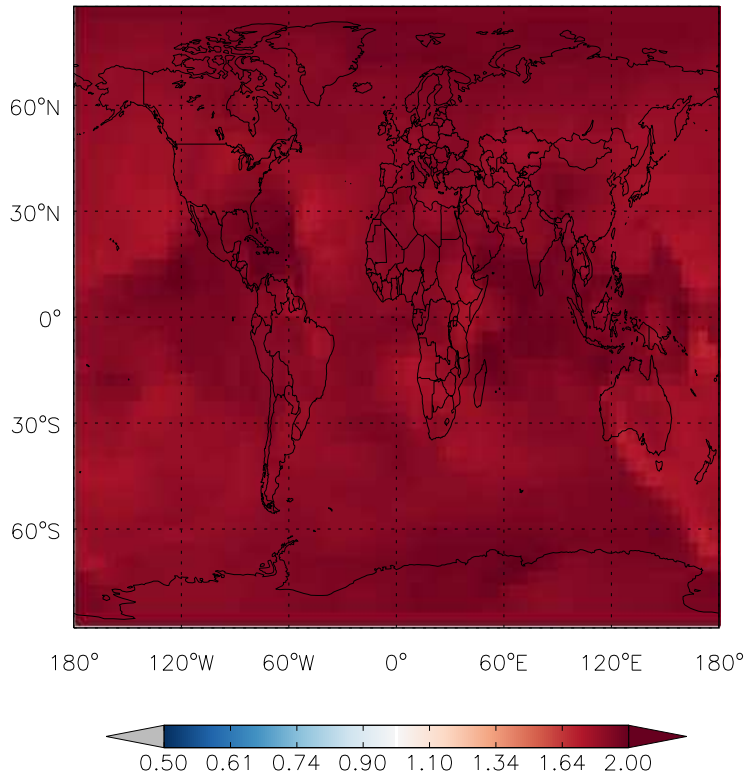
v11-01g-Run0 / v11-01f-geosfp-Run0

MVKN / Ratio @ Surface for Oct



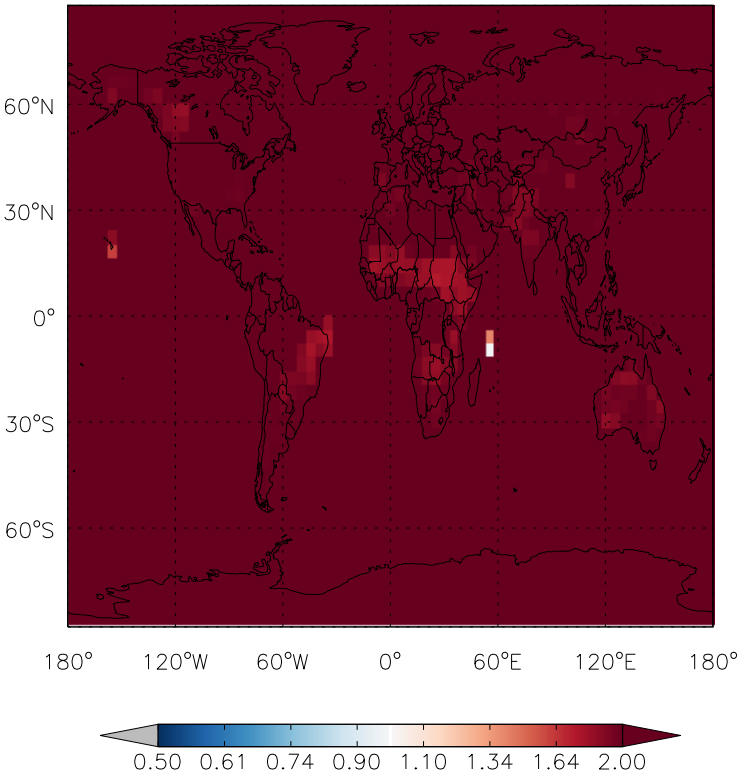
v11-01g-Run0 / v11-01f-geosfp-Run0

MVKN/ Ratio @ 500 hPa for Oct



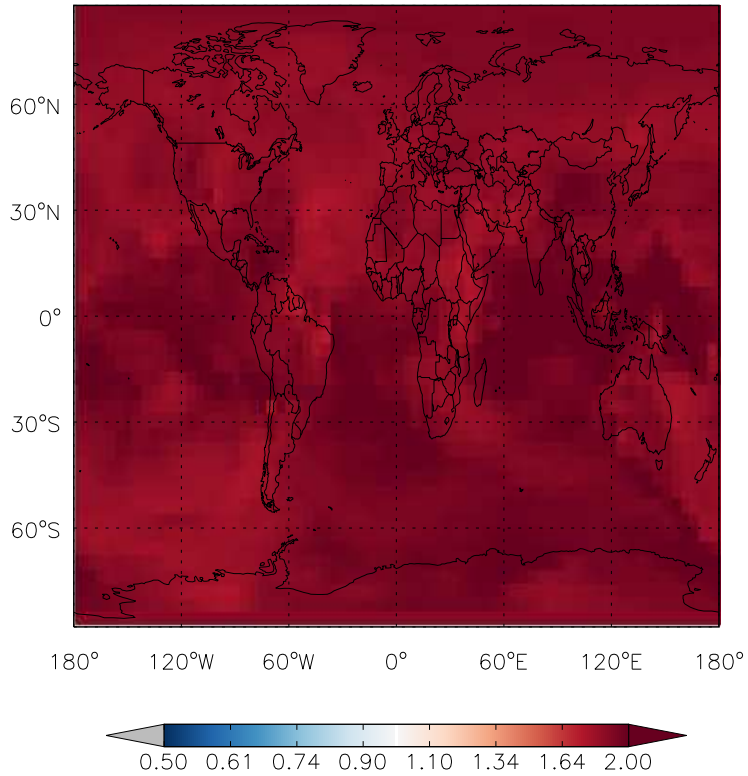
v11-01g-Run0 / v11-01d-Run1

MVKN / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

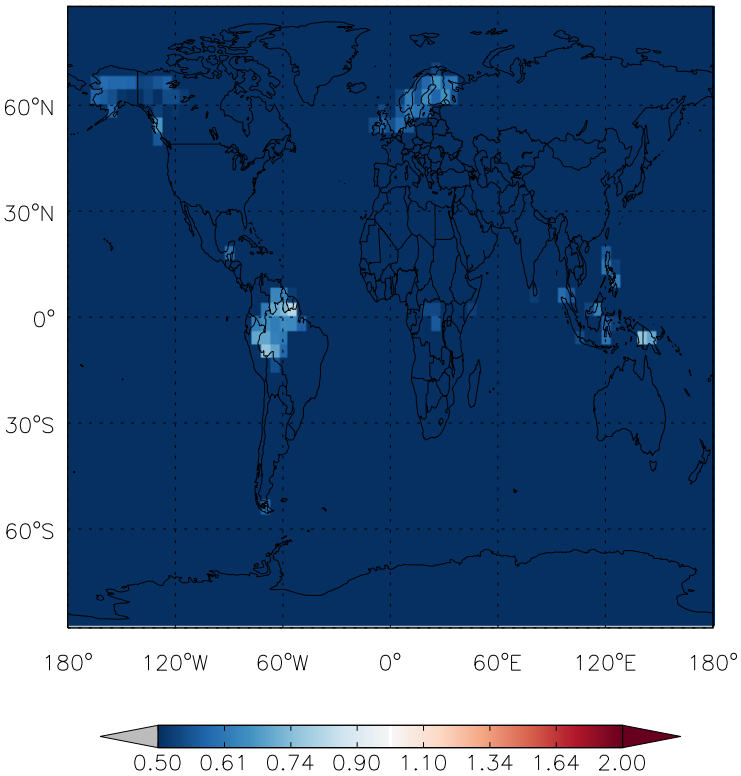
MVKN/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

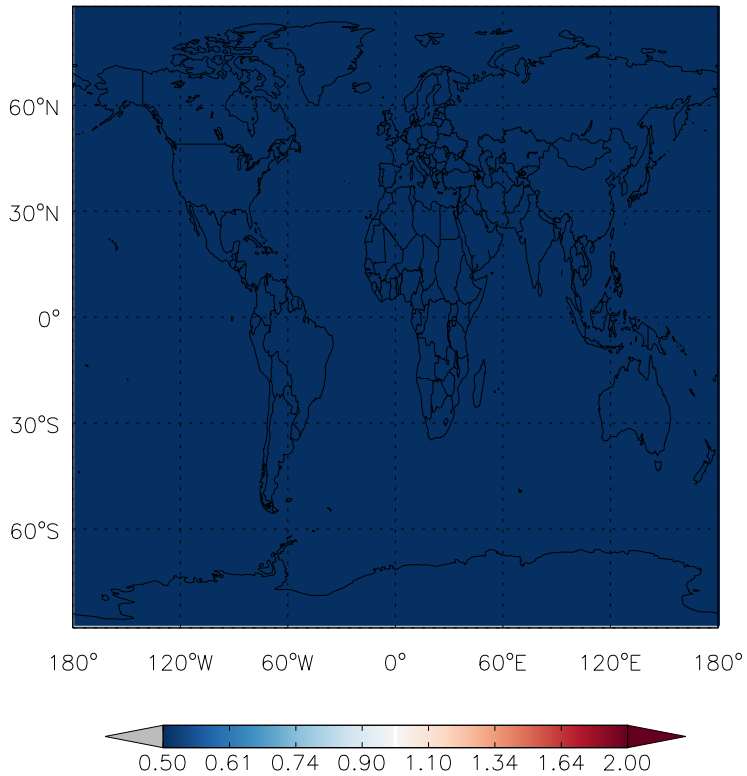
v11-01g-Run0 / v11-01f-geosfp-Run0

MACRN / Ratio @ Surface for Oct



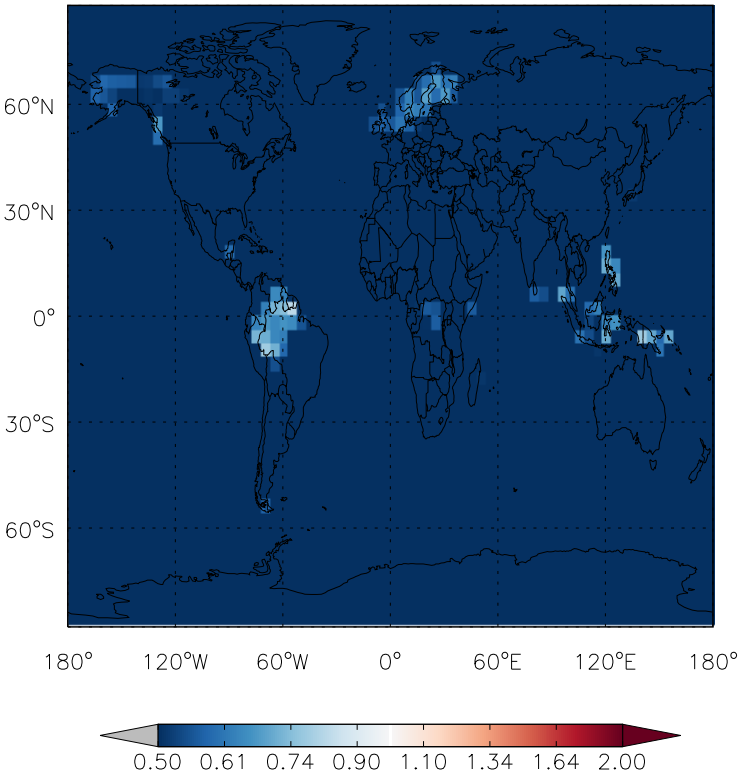
v11-01g-Run0 / v11-01f-geosfp-Run0

MACRN/ Ratio @ 500 hPa for Oct



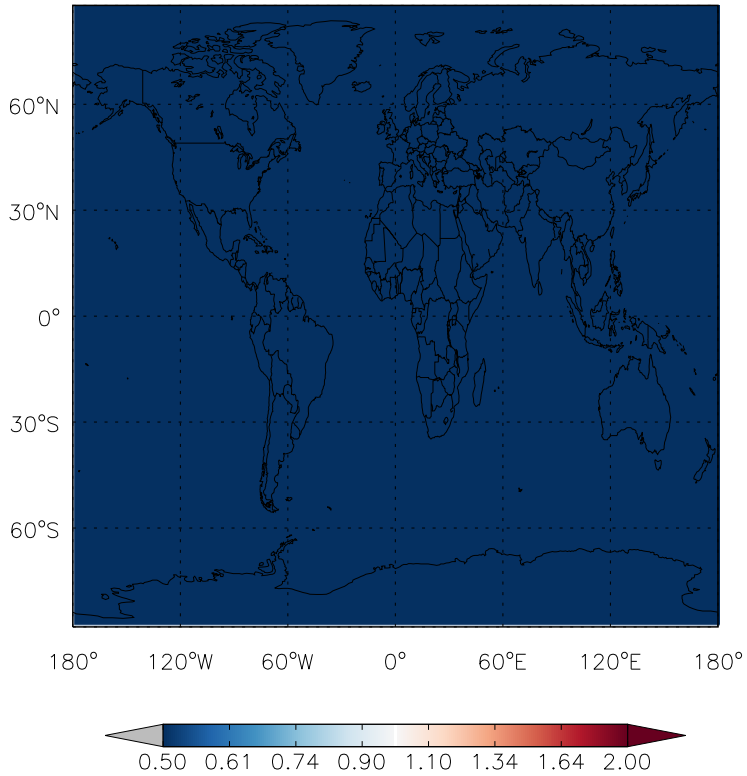
v11-01g-Run0 / v11-01d-Run1

MACRN / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

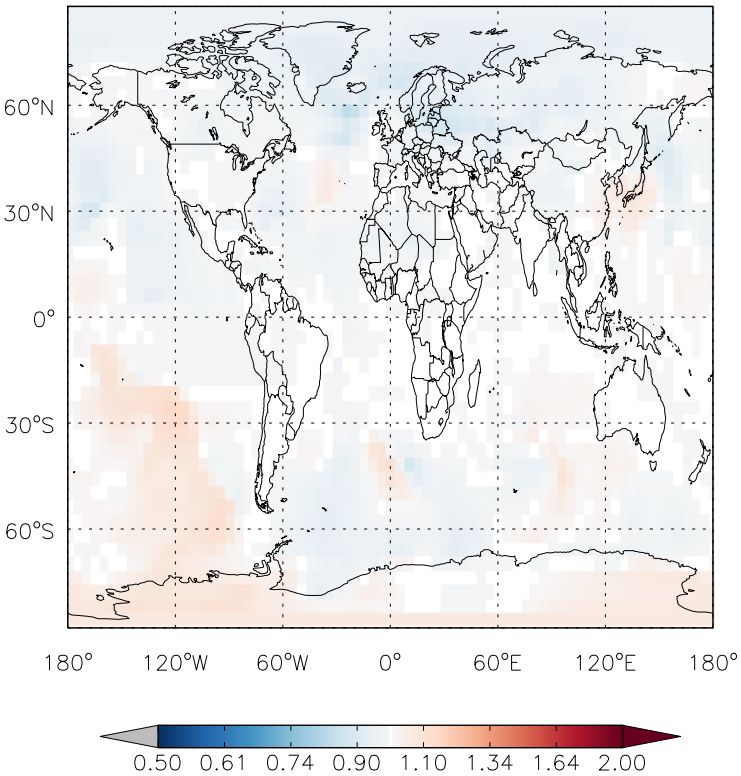
MACRN/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

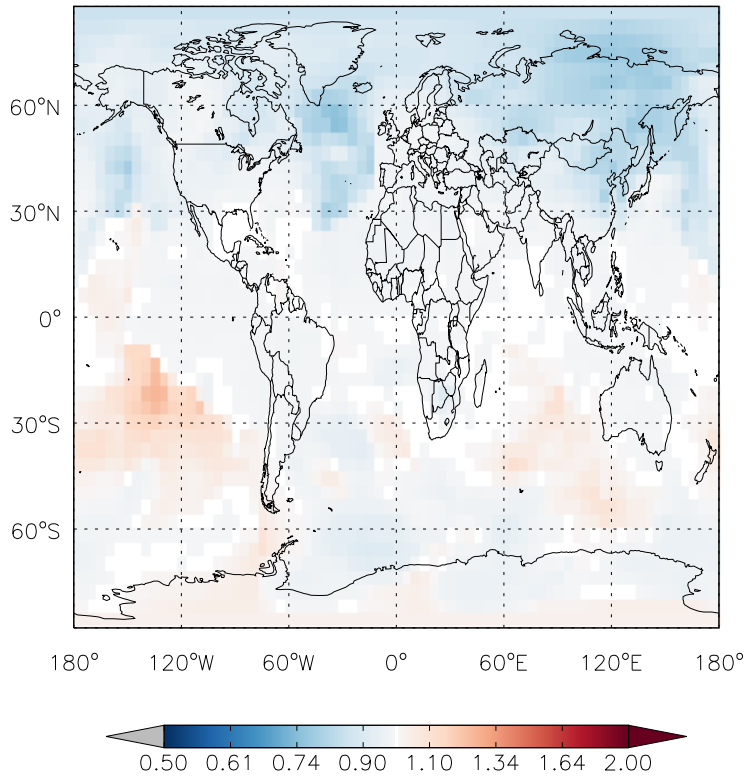
v11−01g−Run0 / v11−01f−geosfp−Run0

RIP / Ratio @ Surface for Oct



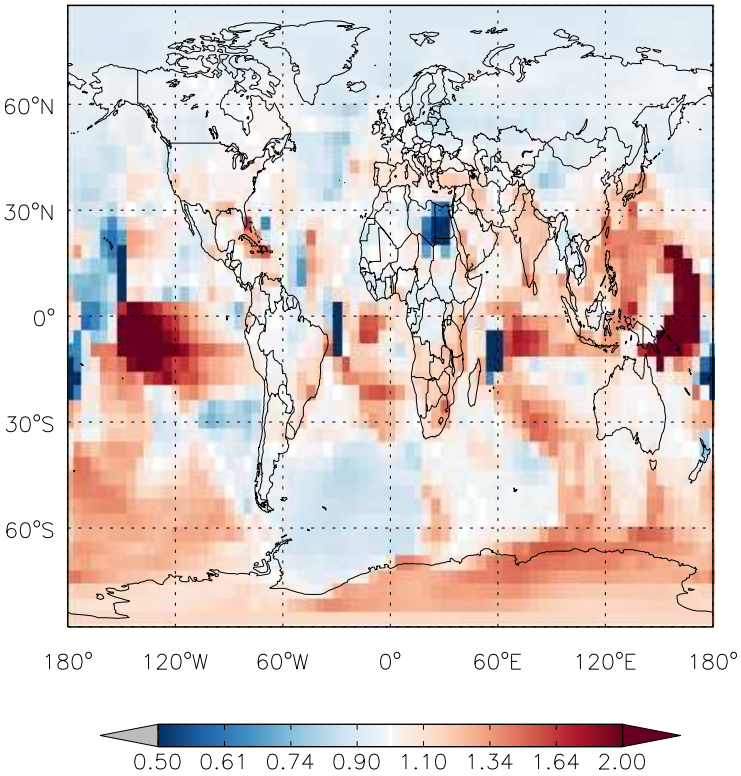
v11−01g−Run0 / v11−01f−geosfp−Run0

RIP/ Ratio @ 500 hPa for Oct



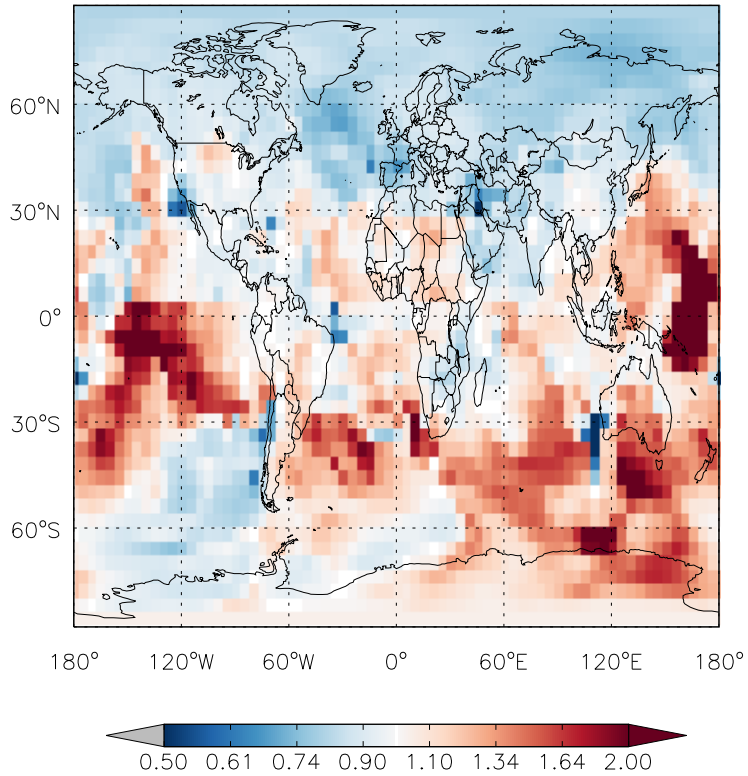
v11−01g−Run0 / v11−01d−Run1

RIP / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

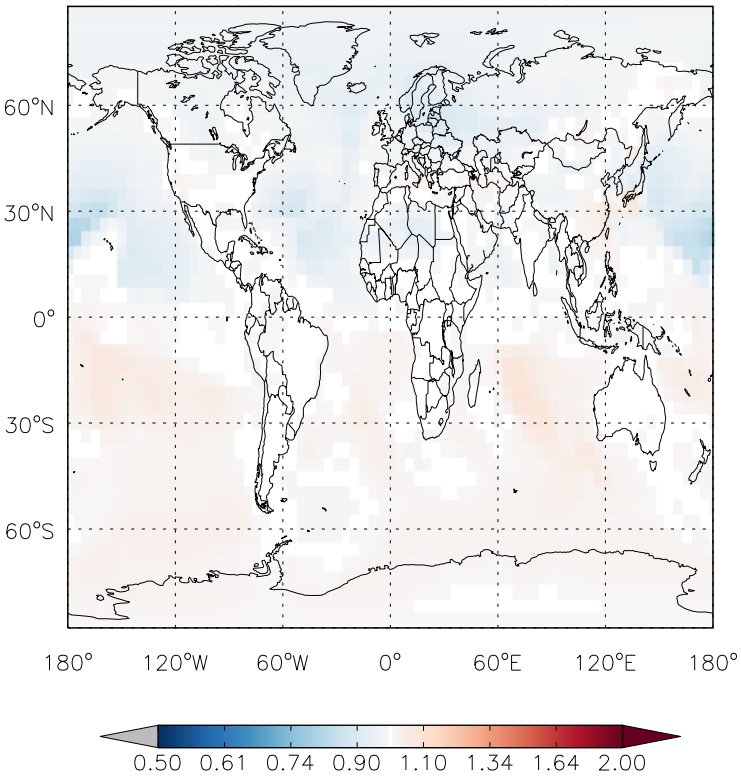
RIP/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

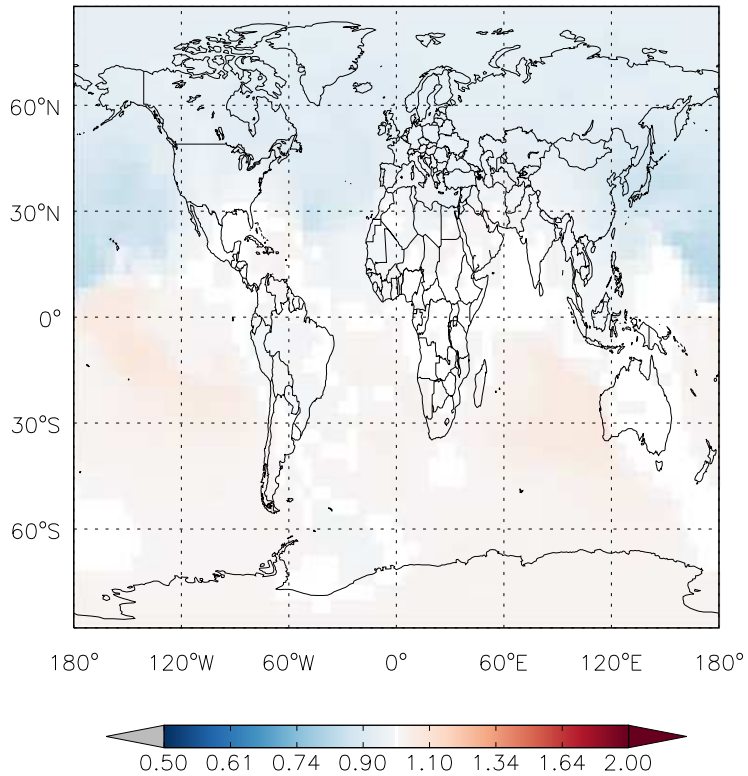
v11-01g-Run0 / v11-01f-geosfp-Run0

IEPOX / Ratio @ Surface for Oct



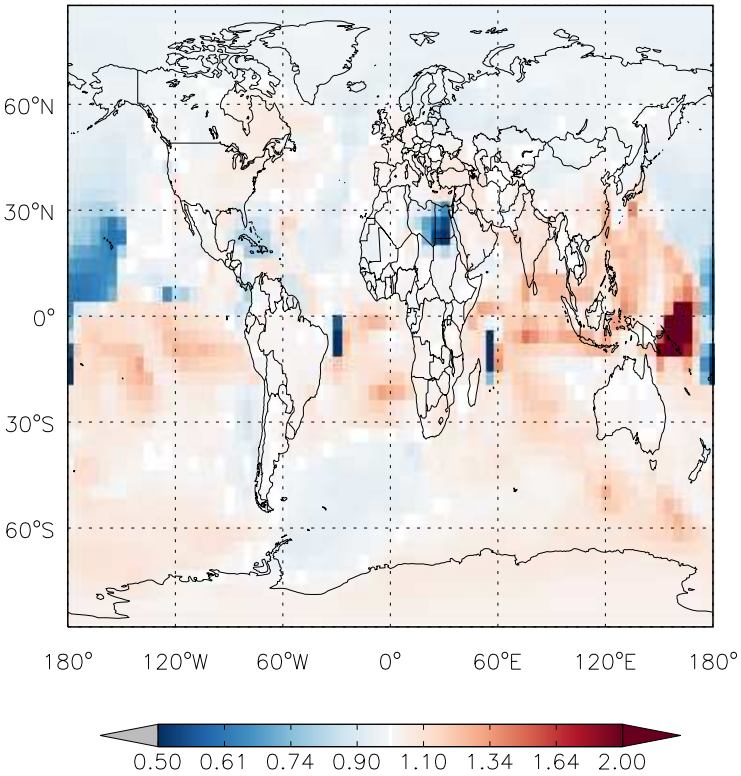
v11-01g-Run0 / v11-01f-geosfp-Run0

IEPOX/ Ratio @ 500 hPa for Oct



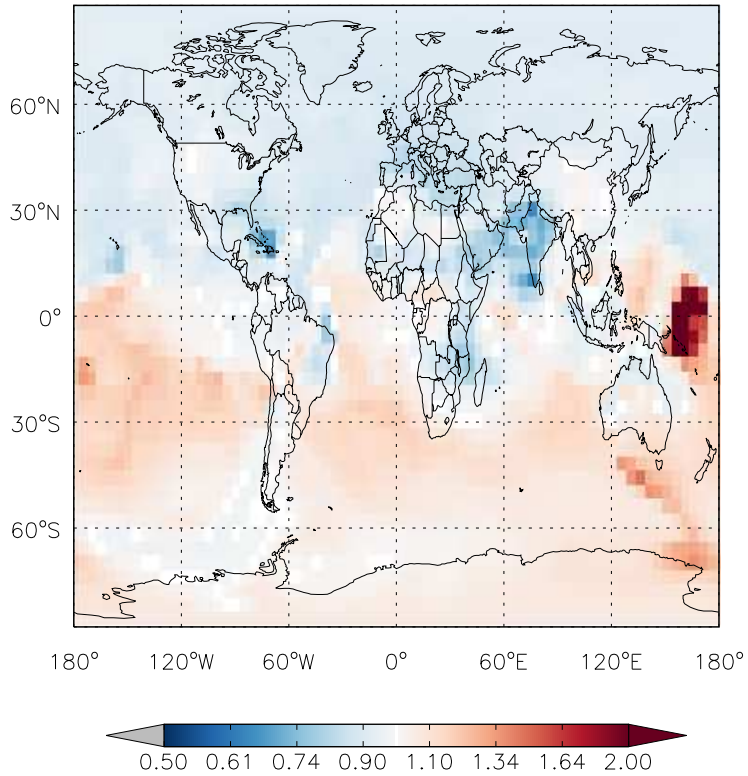
v11-01g-Run0 / v11-01d-Run1

IEPOX / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

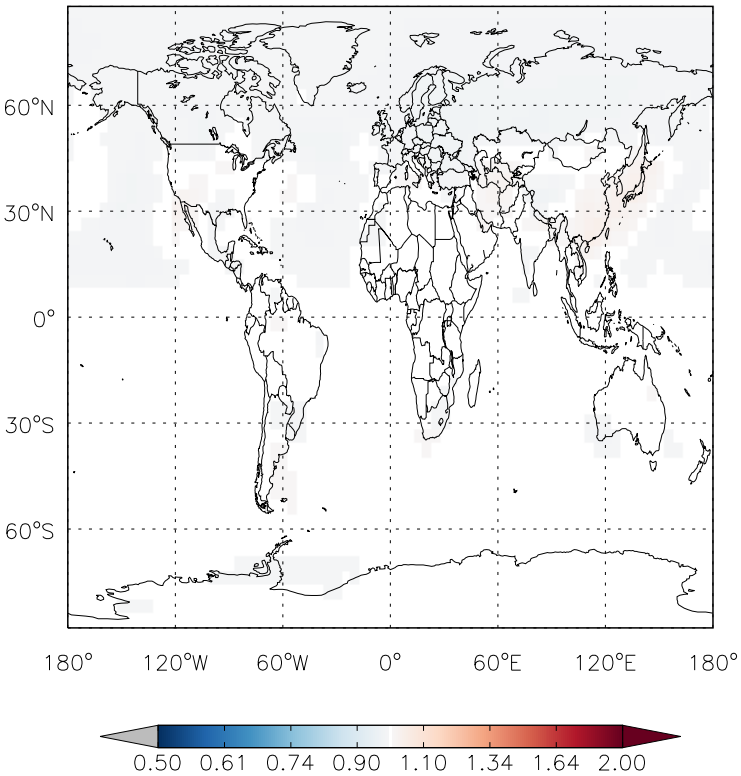
IEPOX/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

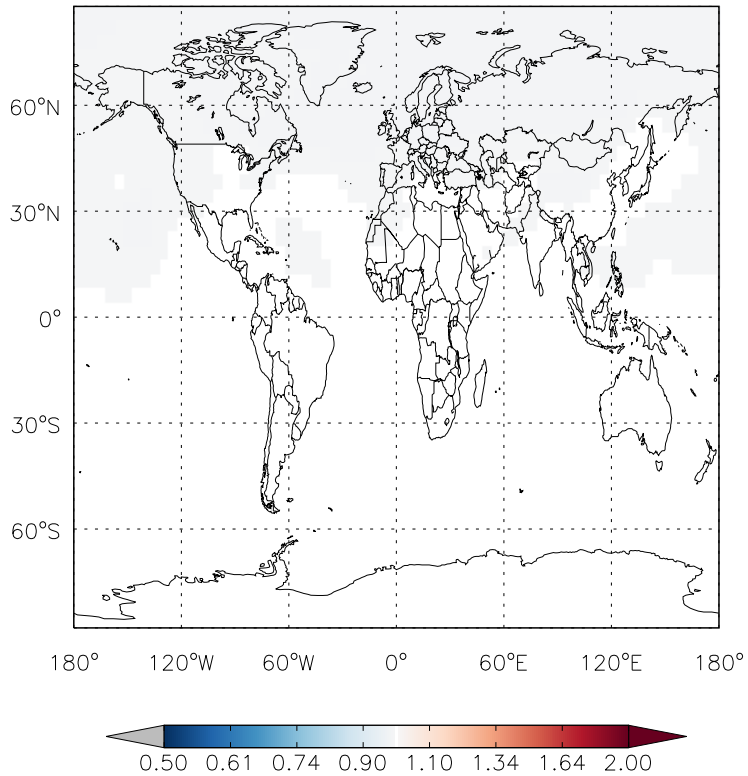
v11-01g-Run0 / v11-01f-geosfp-Run0

MAP / Ratio @ Surface for Oct



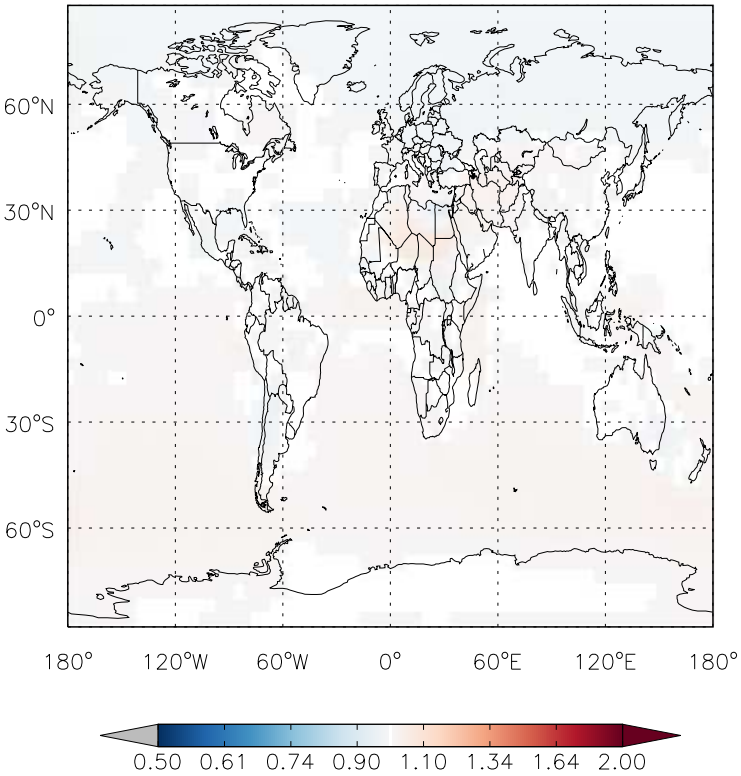
v11-01g-Run0 / v11-01f-geosfp-Run0

MAP/ Ratio @ 500 hPa for Oct



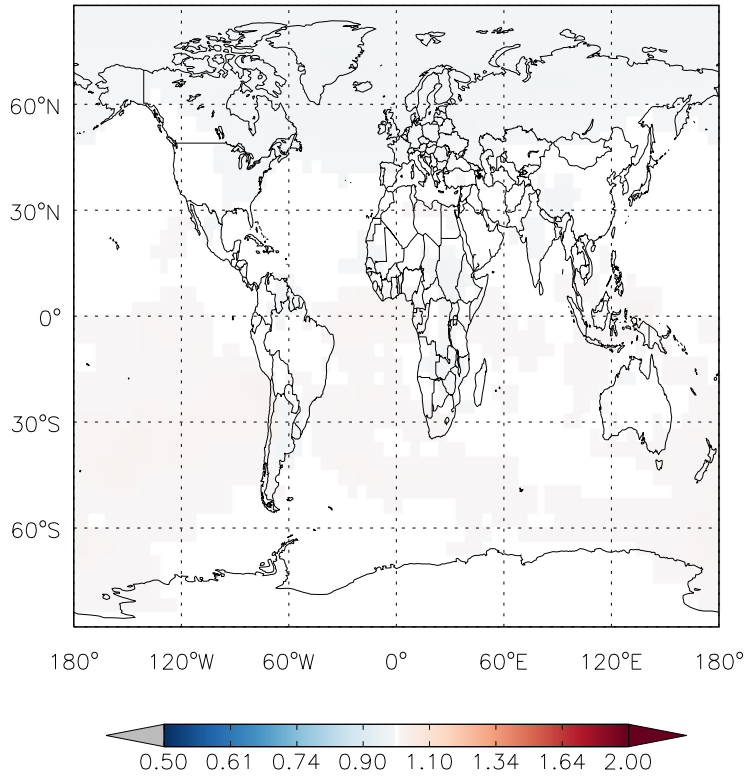
v11-01g-Run0 / v11-01d-Run1

MAP / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

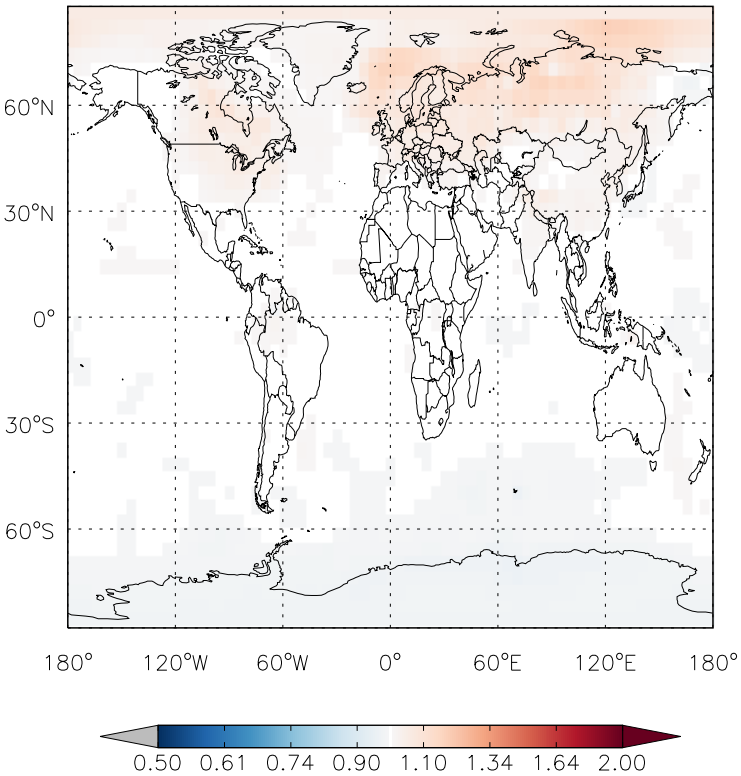
MAP/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

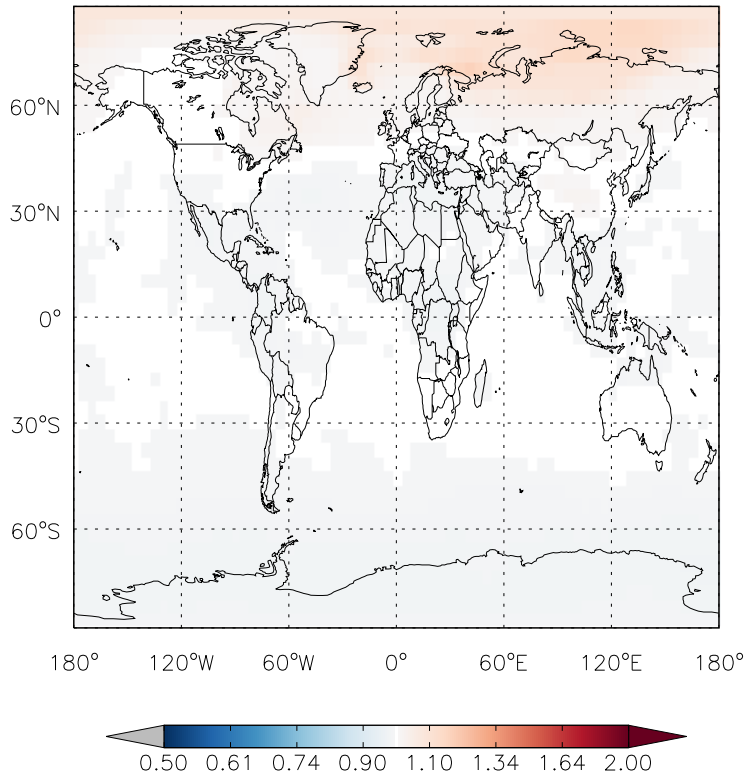
v11-01g-Run0 / v11-01f-geosfp-Run0

NO2 / Ratio @ Surface for Oct



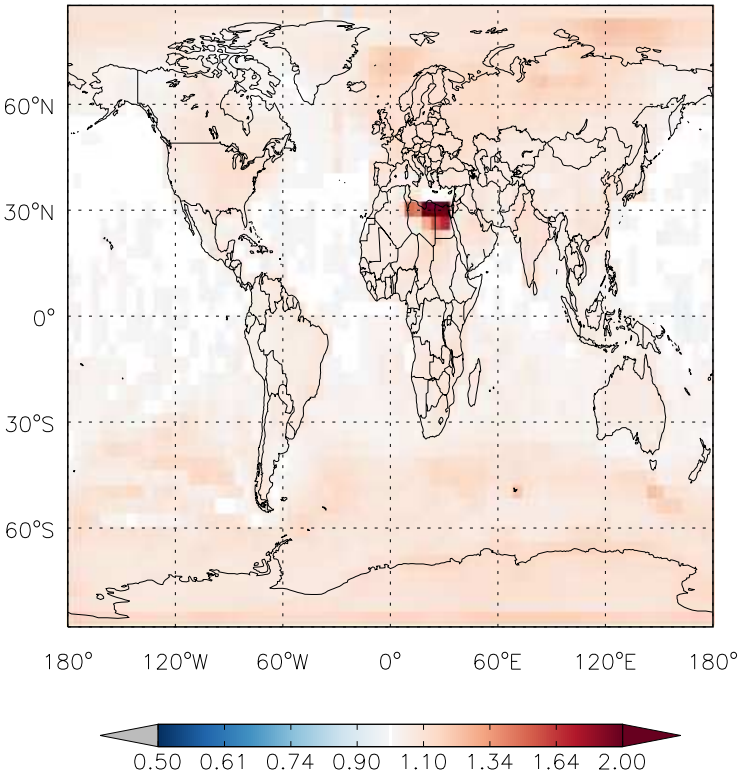
v11-01g-Run0 / v11-01f-geosfp-Run0

NO2/ Ratio @ 500 hPa for Oct



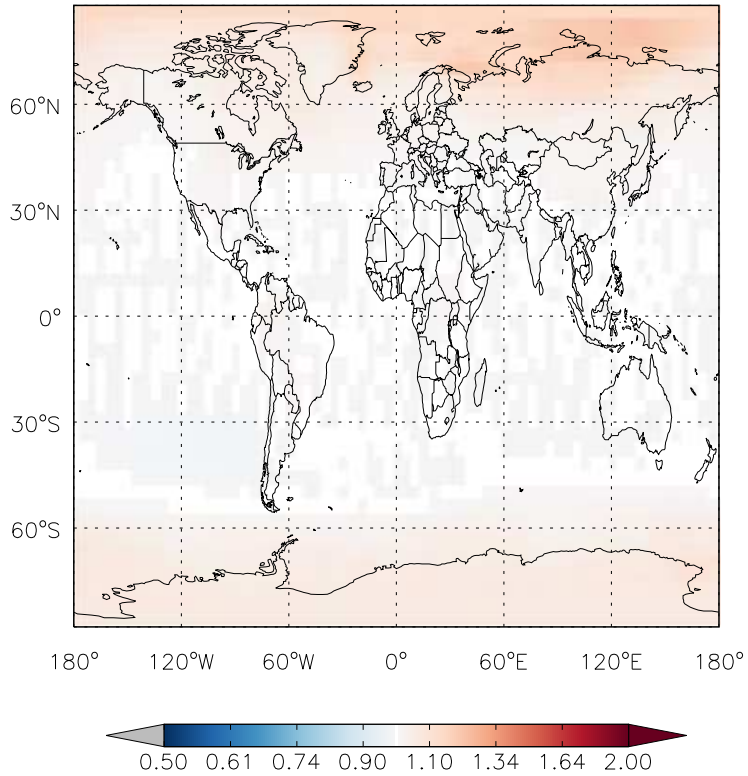
v11-01g-Run0 / v11-01d-Run1

NO2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

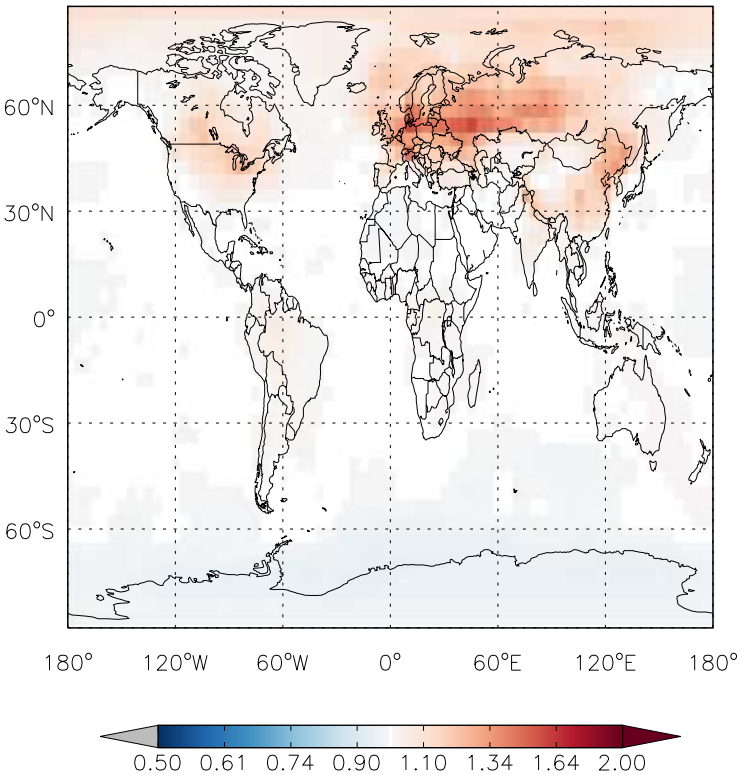
NO2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

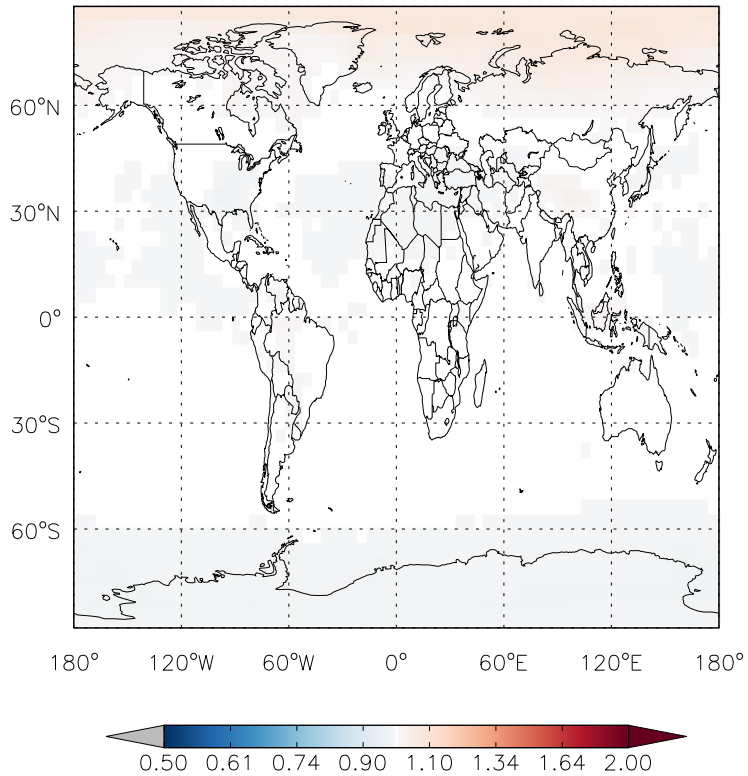
v11-01g-Run0 / v11-01f-geosfp-Run0

NO3 / Ratio @ Surface for Oct



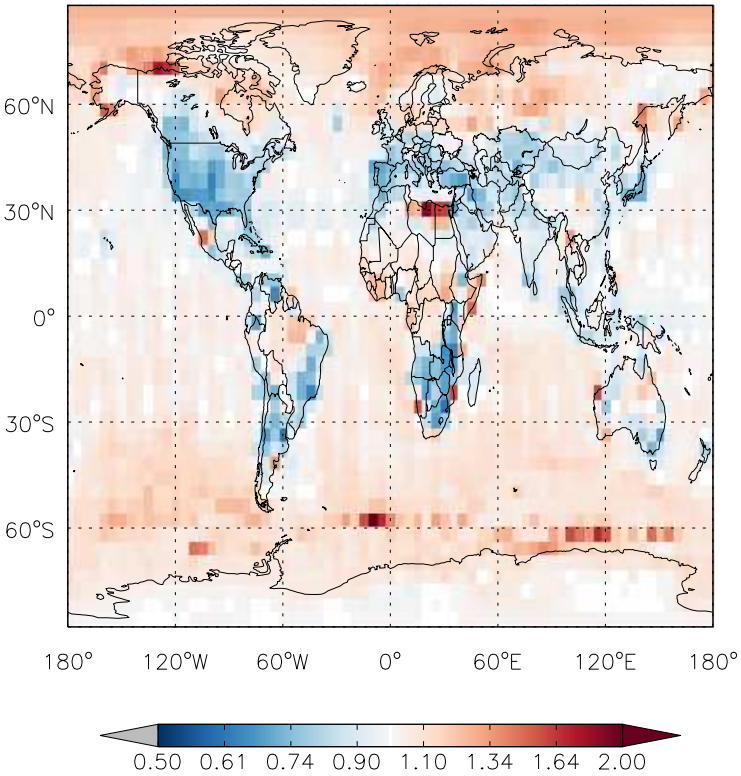
v11-01g-Run0 / v11-01f-geosfp-Run0

NO3/ Ratio @ 500 hPa for Oct



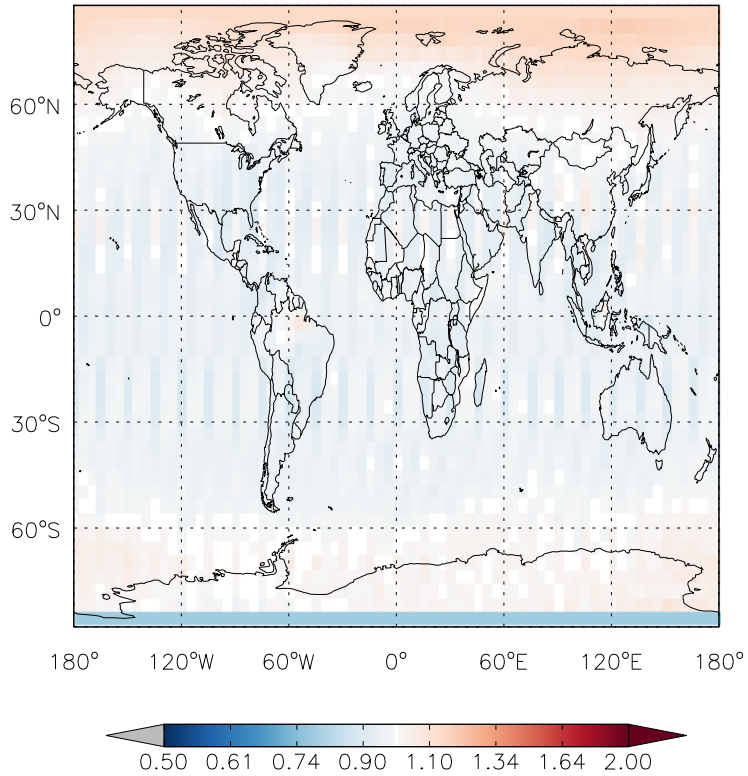
v11-01g-Run0 / v11-01d-Run1

NO3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

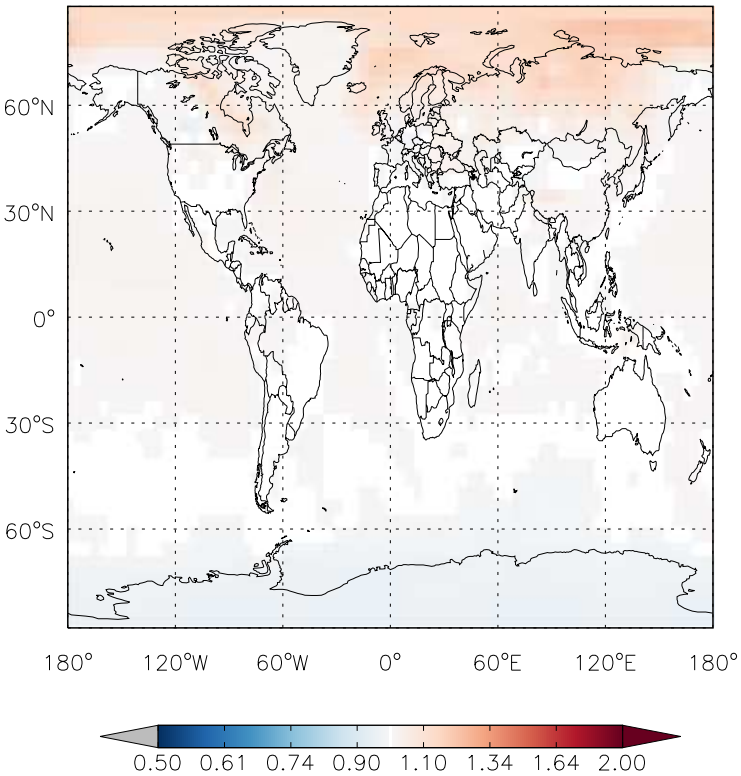
NO3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

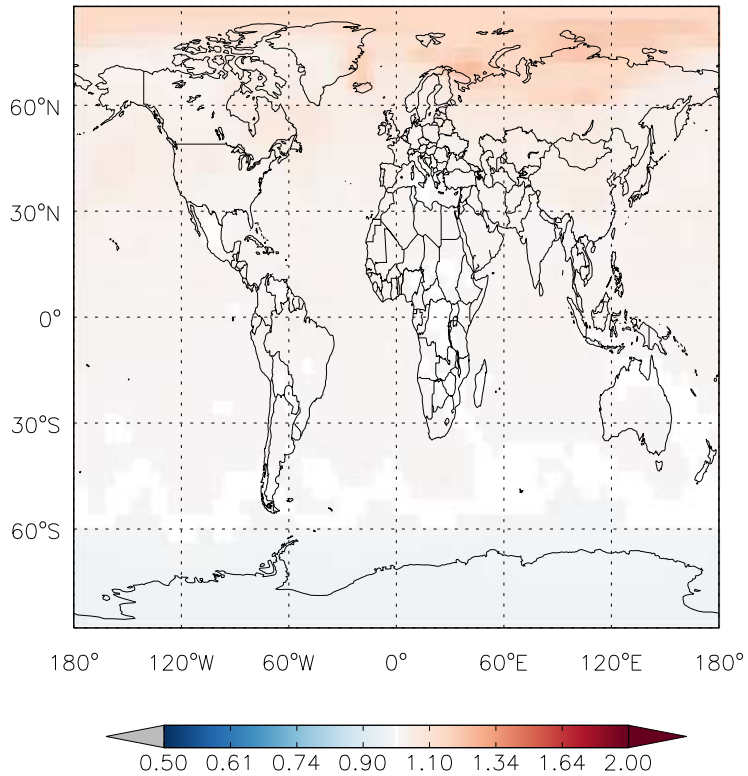
v11-01g-Run0 / v11-01f-geosfp-Run0

HNO2 / Ratio @ Surface for Oct



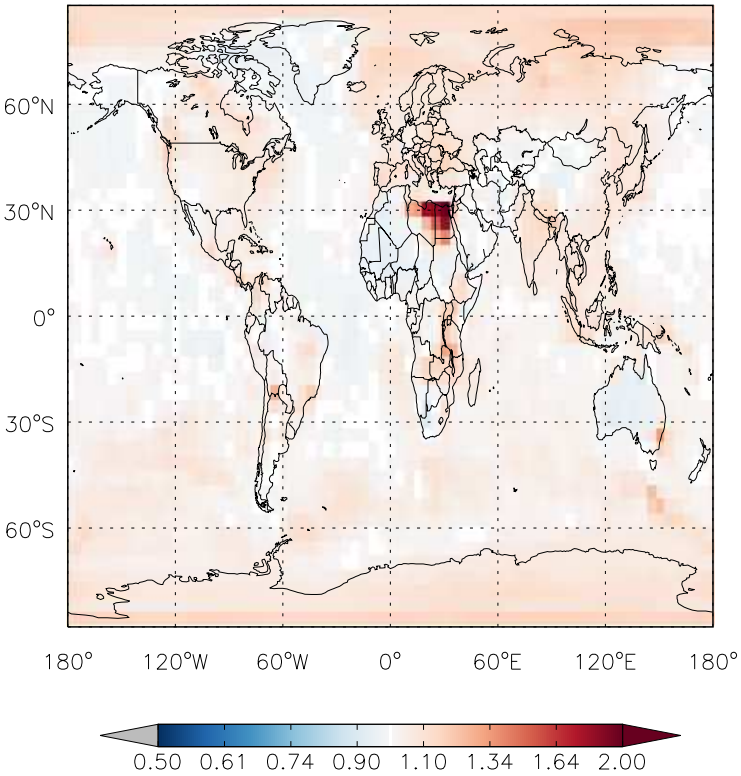
v11-01g-Run0 / v11-01f-geosfp-Run0

HNO2/ Ratio @ 500 hPa for Oct



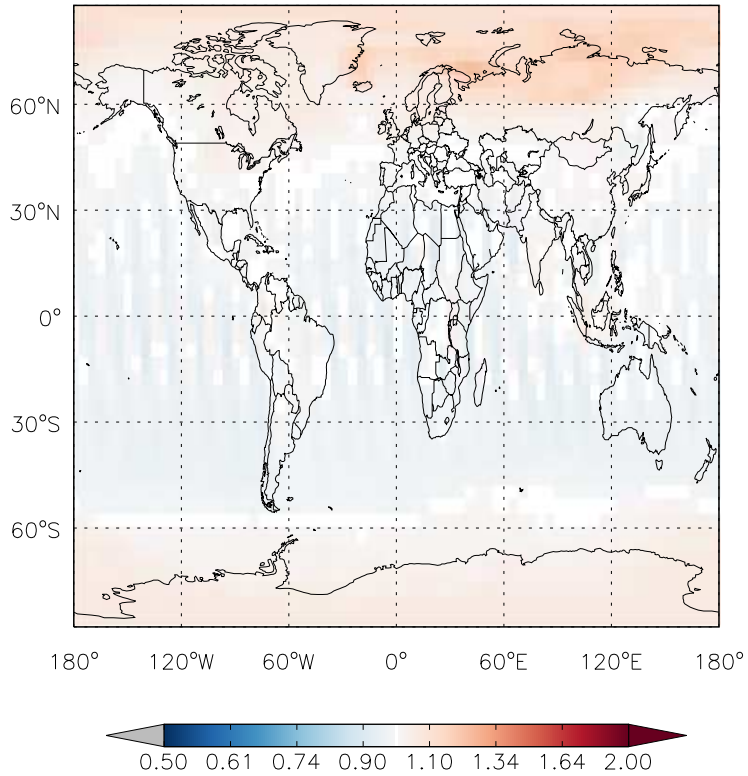
v11-01g-Run0 / v11-01d-Run1

HNO2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

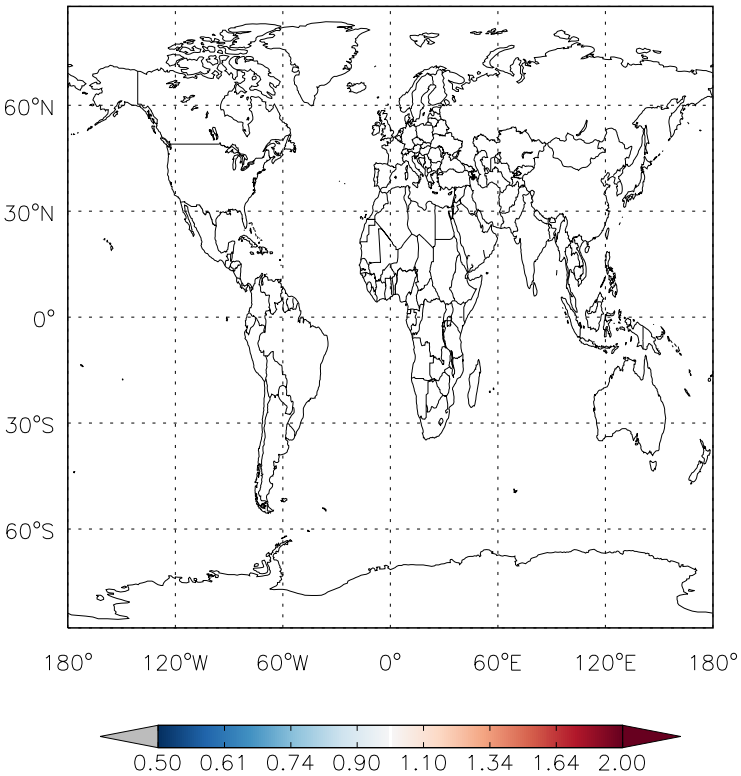
HNO2/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

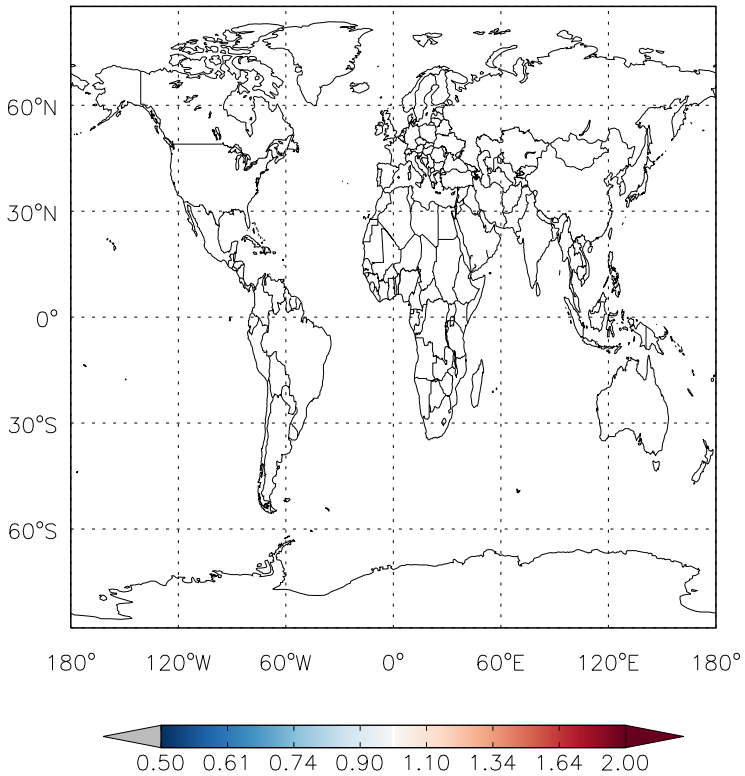
v11-01g-Run0 / v11-01f-geosfp-Run0

N2O / Ratio @ Surface for Oct



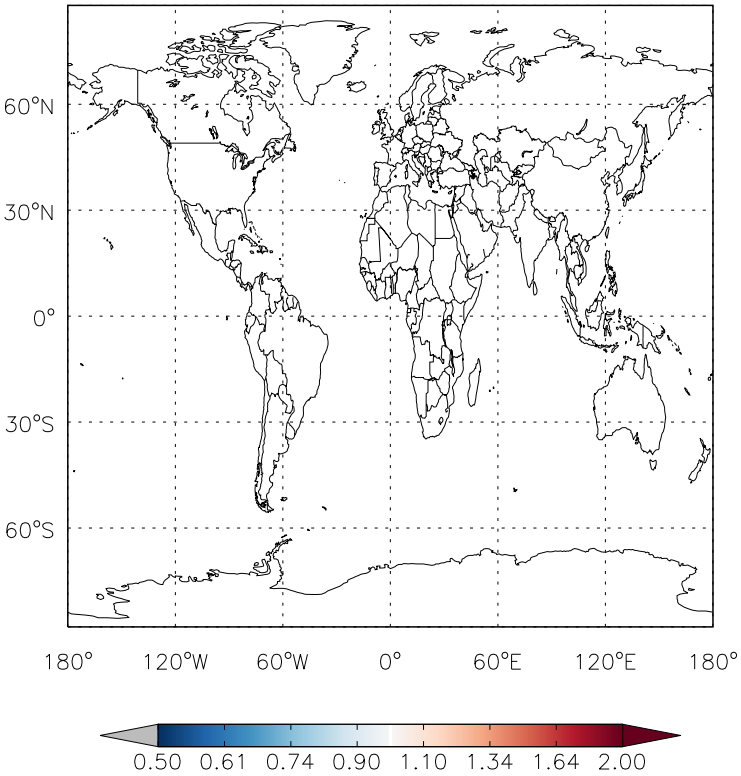
v11-01g-Run0 / v11-01f-geosfp-Run0

N2O/ Ratio @ 500 hPa for Oct



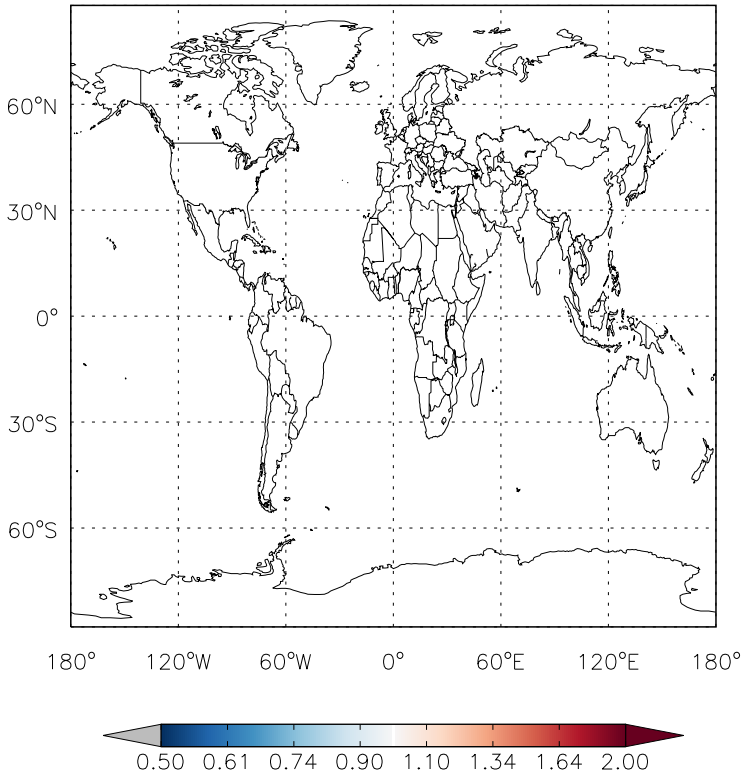
v11-01g-Run0 / v11-01d-Run1

N2O / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

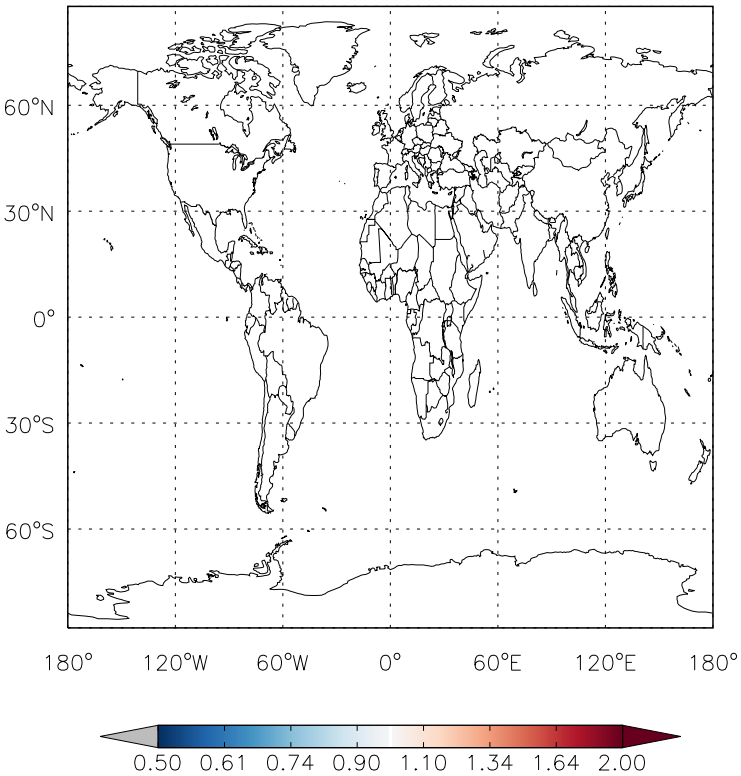
N2O/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

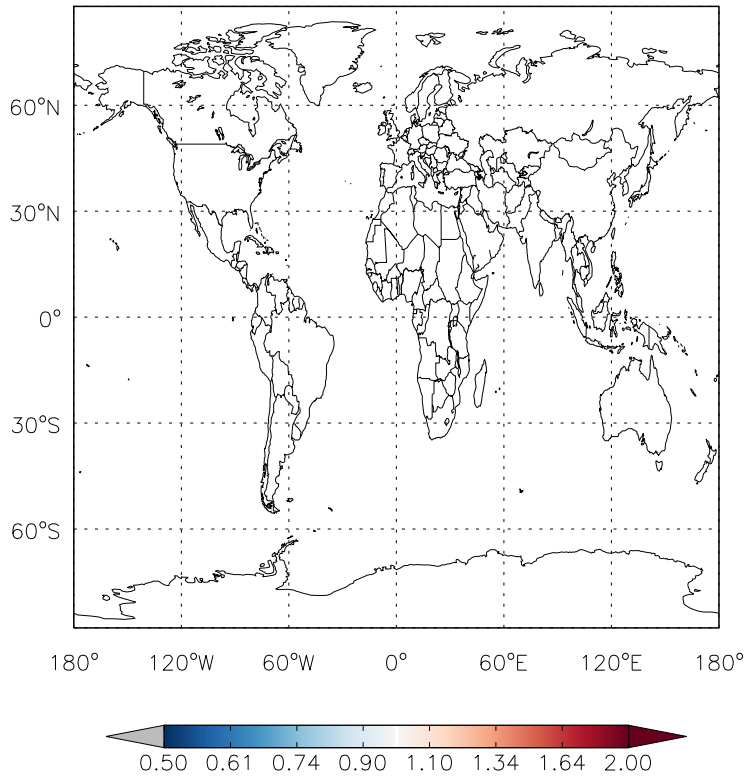
v11−01g−Run0 / v11−01f−geosfp−Run0

OCS / Ratio @ Surface for Oct



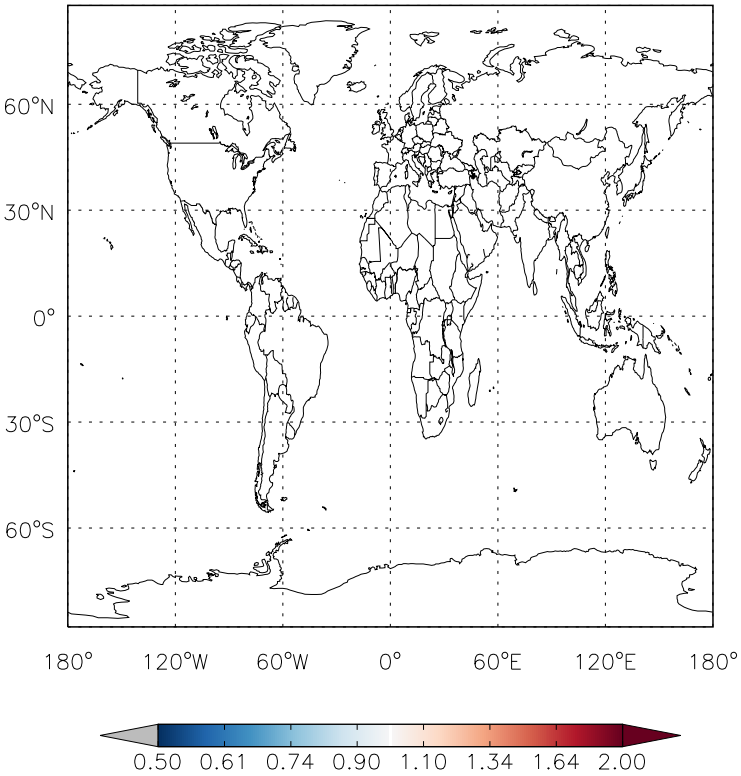
v11−01g−Run0 / v11−01f−geosfp−Run0

OCS/ Ratio @ 500 hPa for Oct



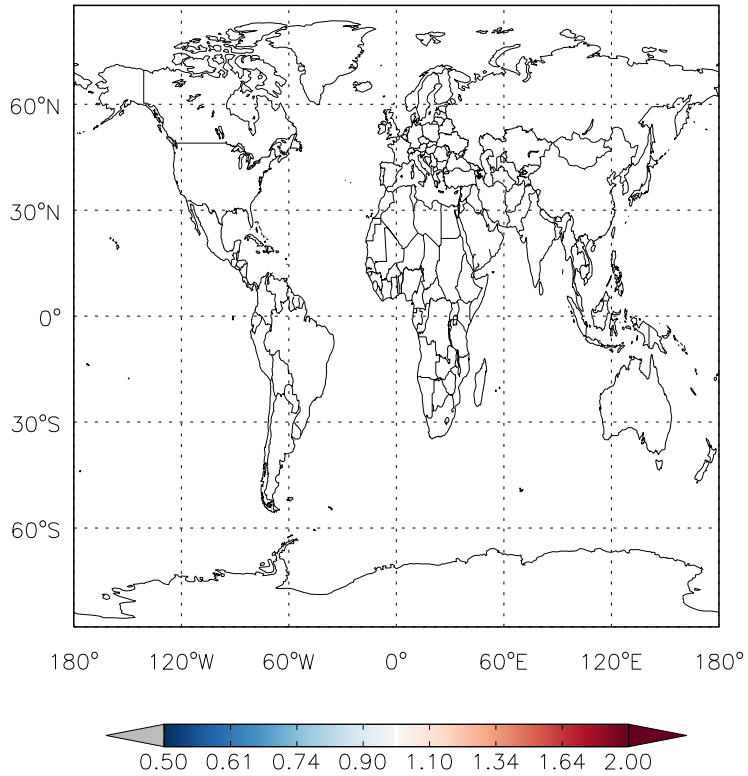
v11−01g−Run0 / v11−01d−Run1

OCS / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

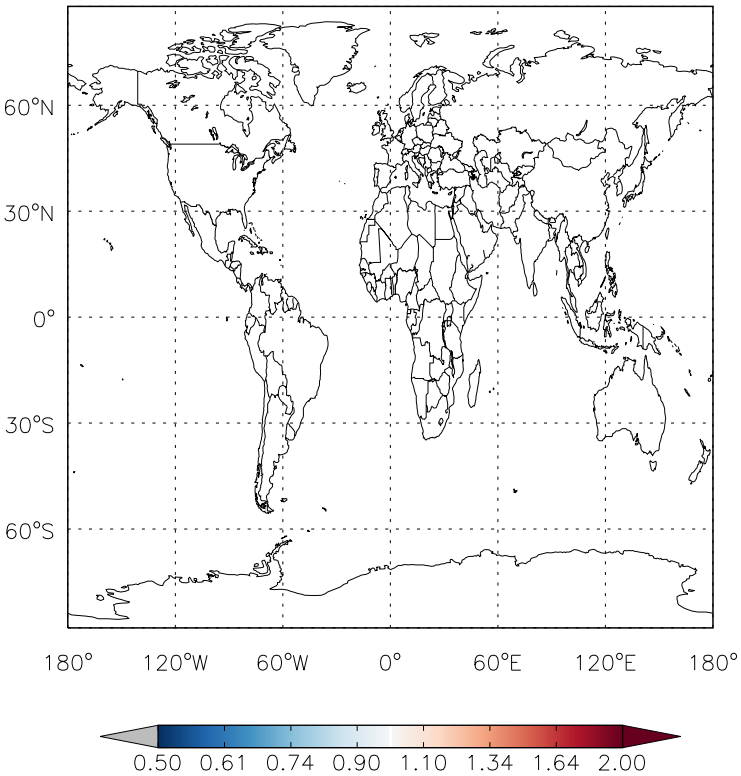
OCS/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

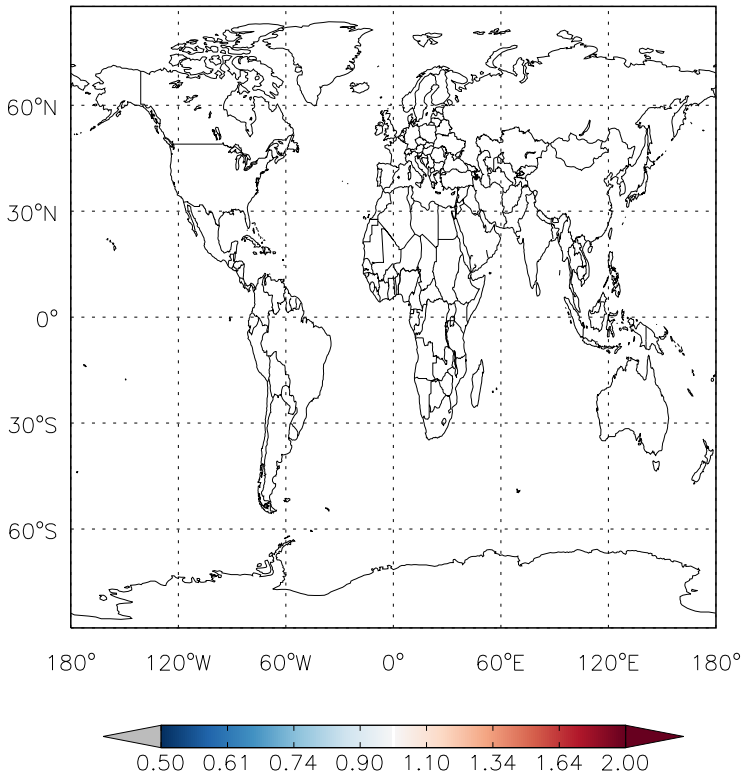
v11-01g-Run0 / v11-01f-geosfp-Run0

CH4 / Ratio @ Surface for Oct



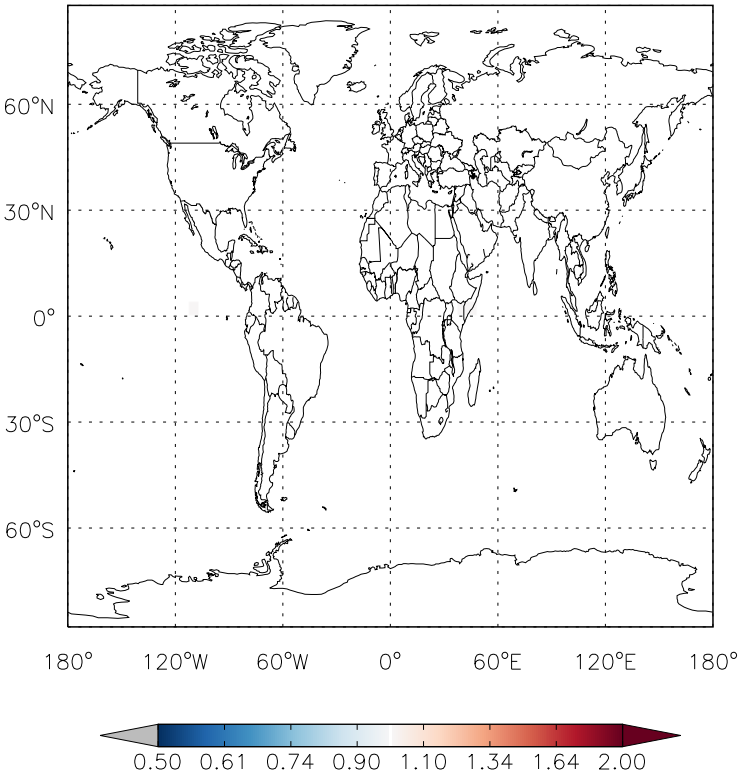
v11-01g-Run0 / v11-01f-geosfp-Run0

CH4/ Ratio @ 500 hPa for Oct



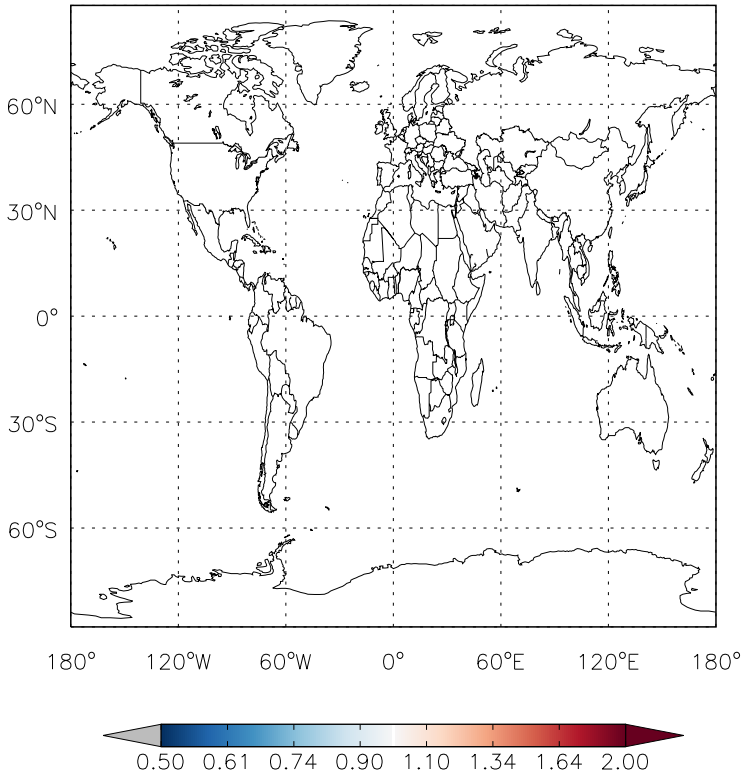
v11-01g-Run0 / v11-01d-Run1

CH4 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

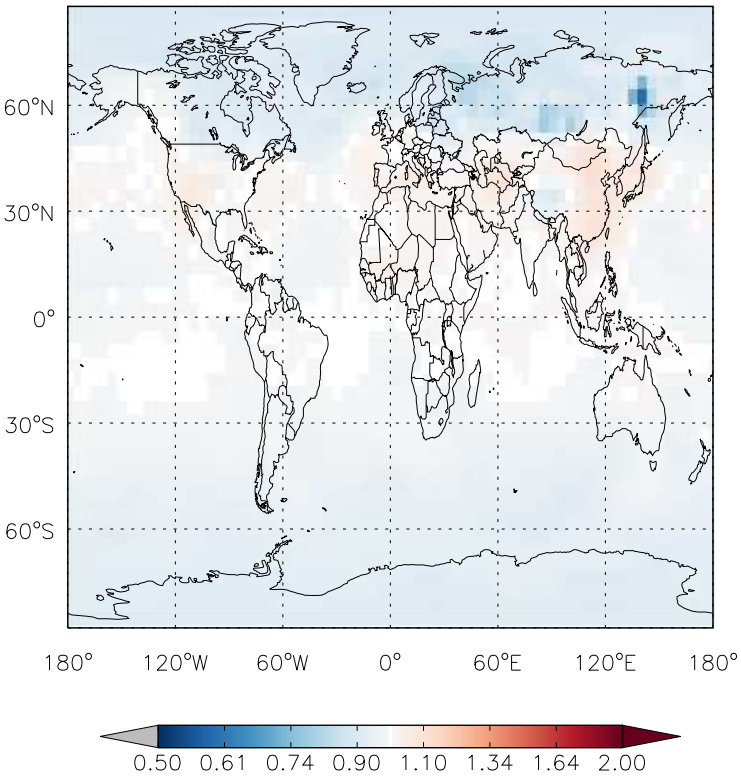
CH4/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

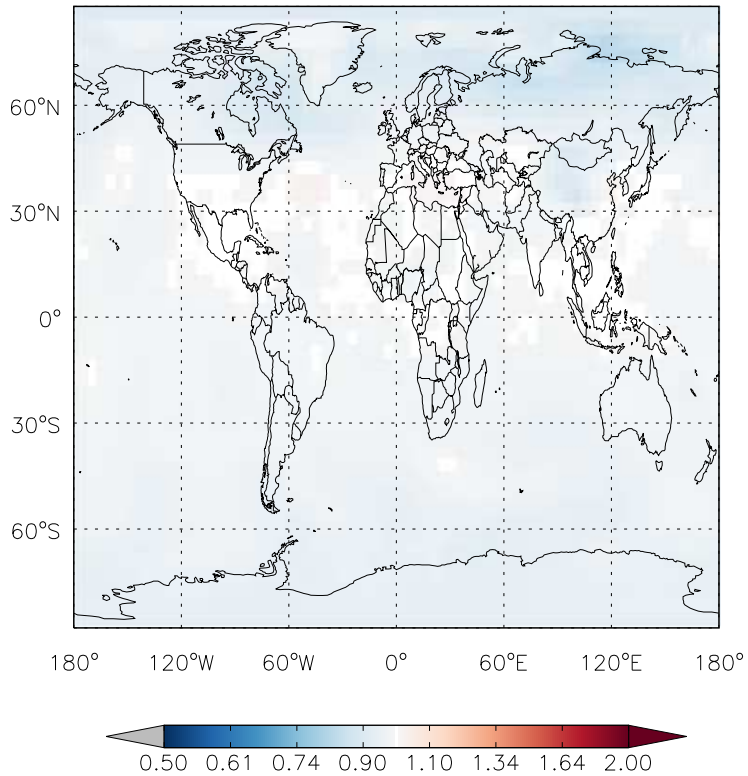
v11-01g-Run0 / v11-01f-geosfp-Run0

BrCl / Ratio @ Surface for Oct



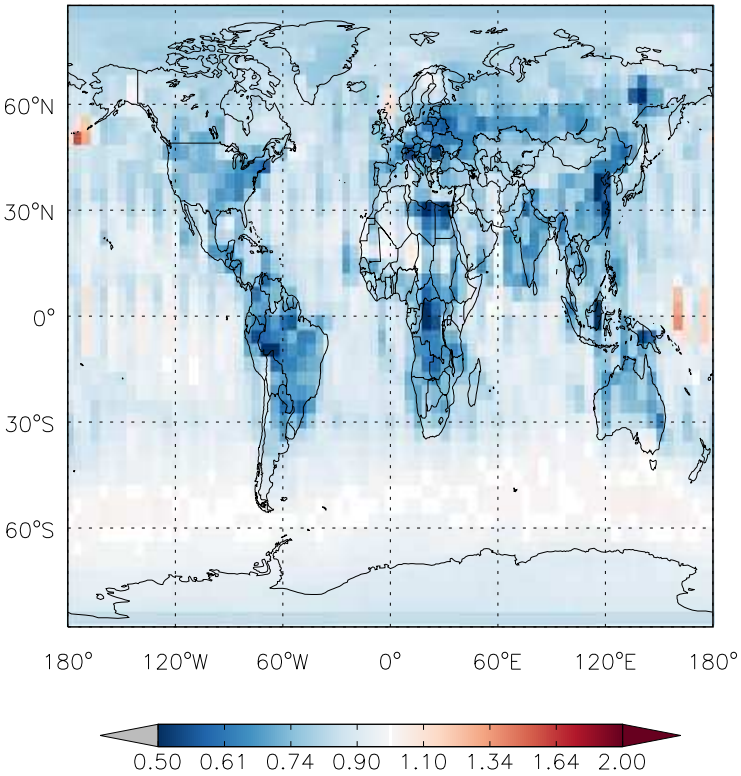
v11-01g-Run0 / v11-01f-geosfp-Run0

BrCl/ Ratio @ 500 hPa for Oct



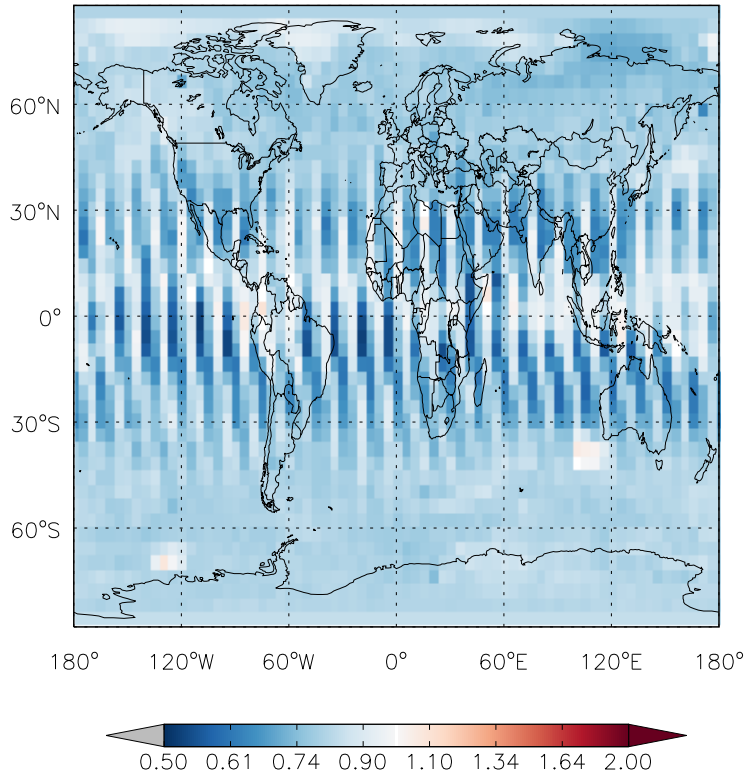
v11-01g-Run0 / v11-01d-Run1

BrCl / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

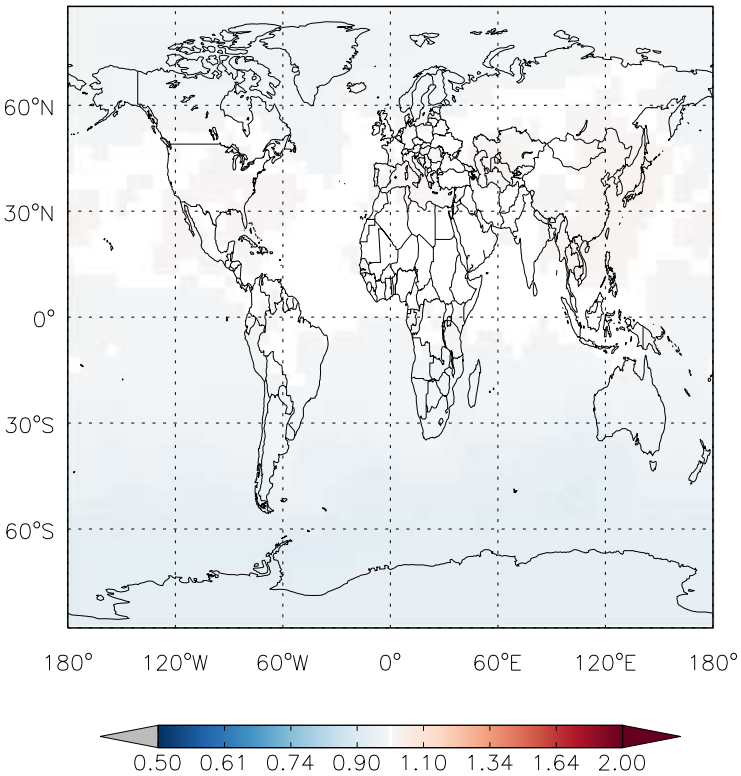
BrCl/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

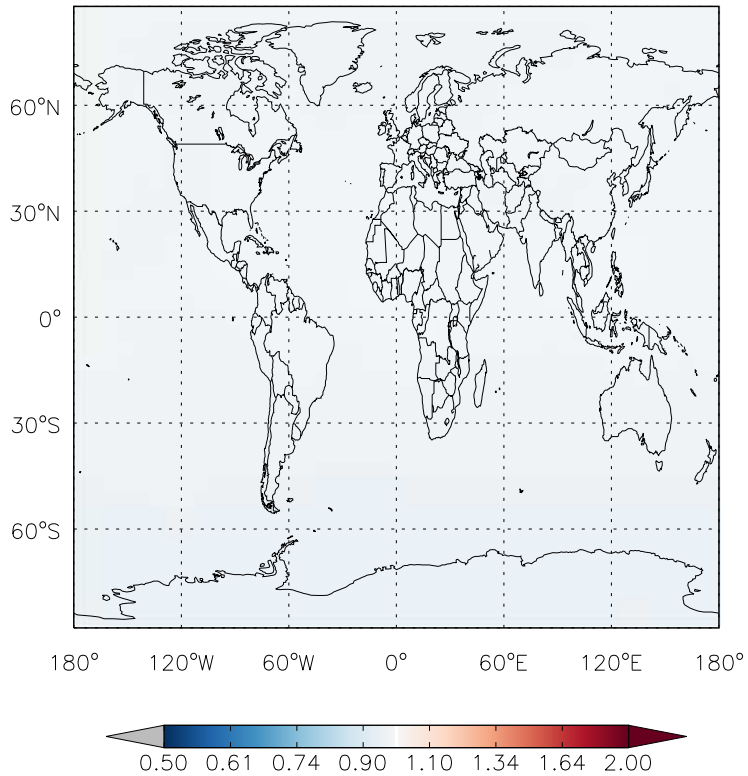
v11-01g-Run0 / v11-01f-geosfp-Run0

HCl / Ratio @ Surface for Oct



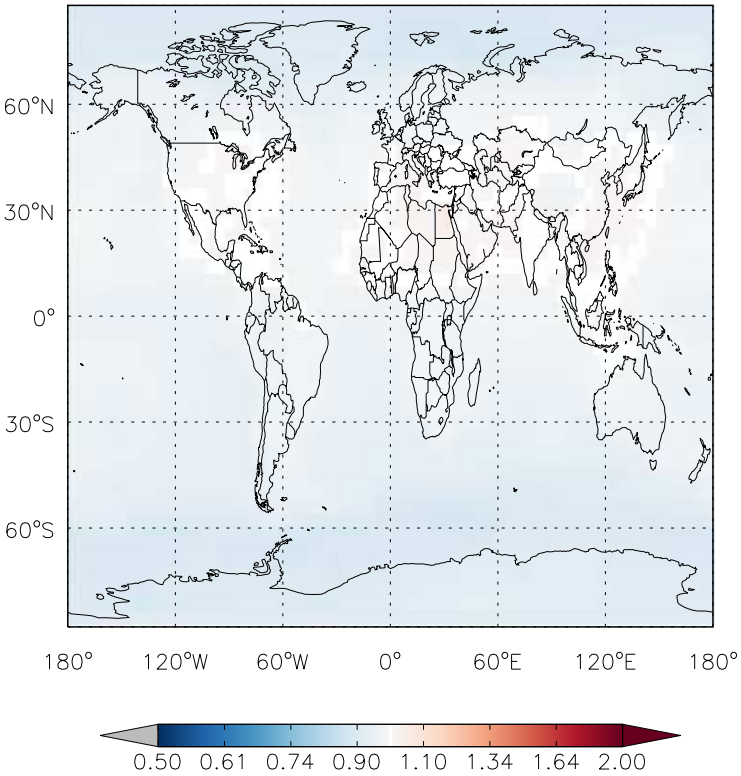
v11-01g-Run0 / v11-01f-geosfp-Run0

HCl/ Ratio @ 500 hPa for Oct



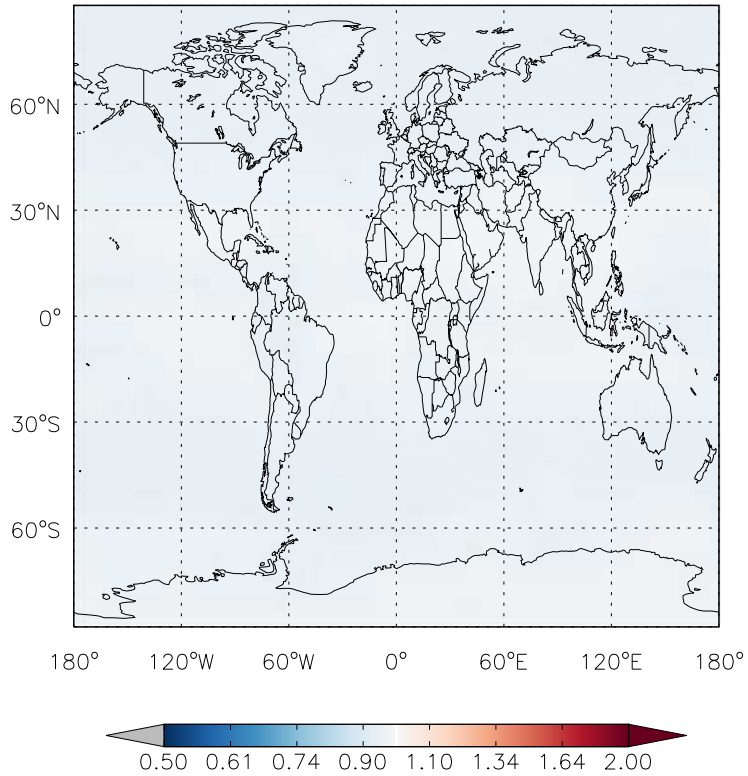
v11-01g-Run0 / v11-01d-Run1

HCl / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

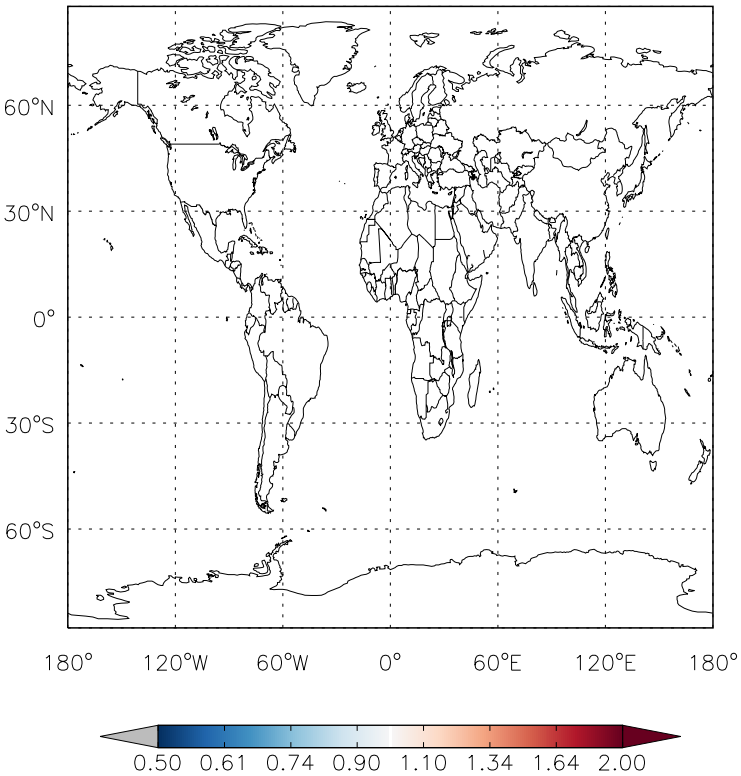
HCl/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

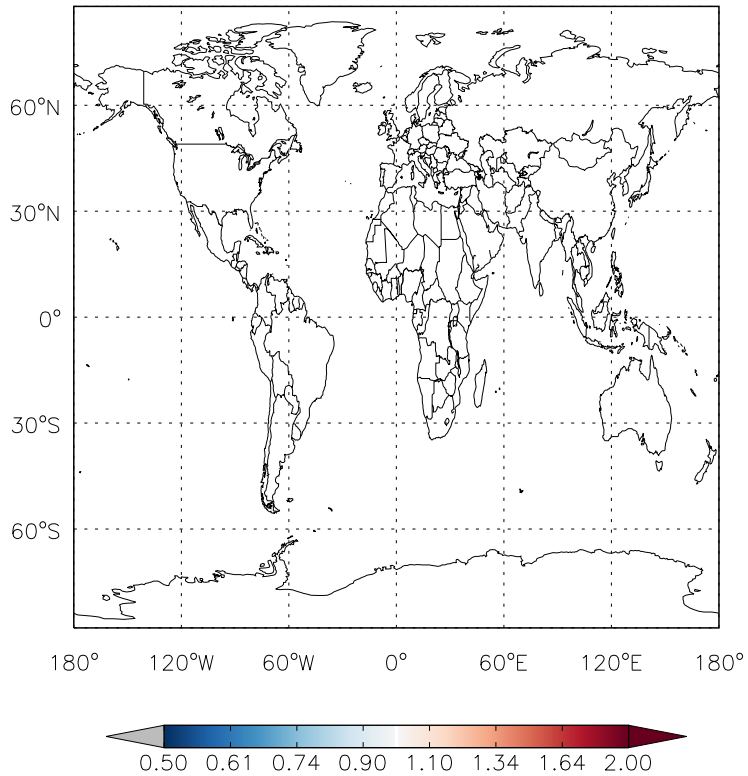
v11-01g-Run0 / v11-01f-geosfp-Run0

CCl4 / Ratio @ Surface for Oct



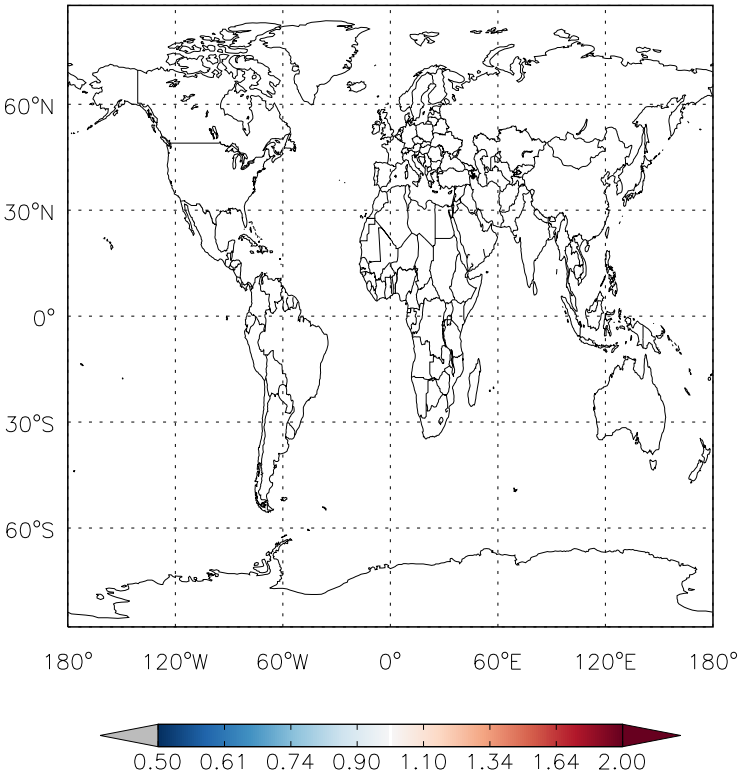
v11-01g-Run0 / v11-01f-geosfp-Run0

CCl4/ Ratio @ 500 hPa for Oct



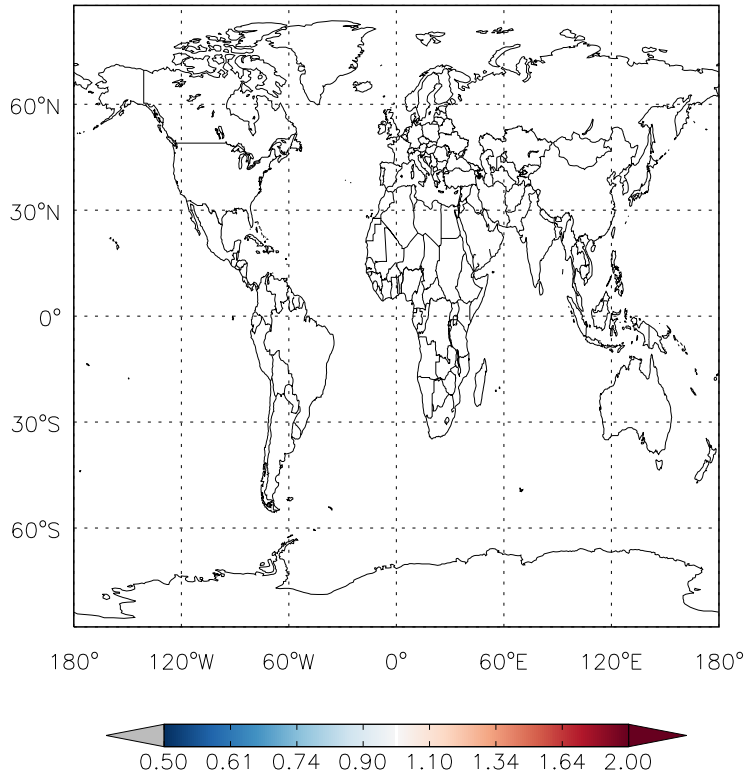
v11-01g-Run0 / v11-01d-Run1

CCl4 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

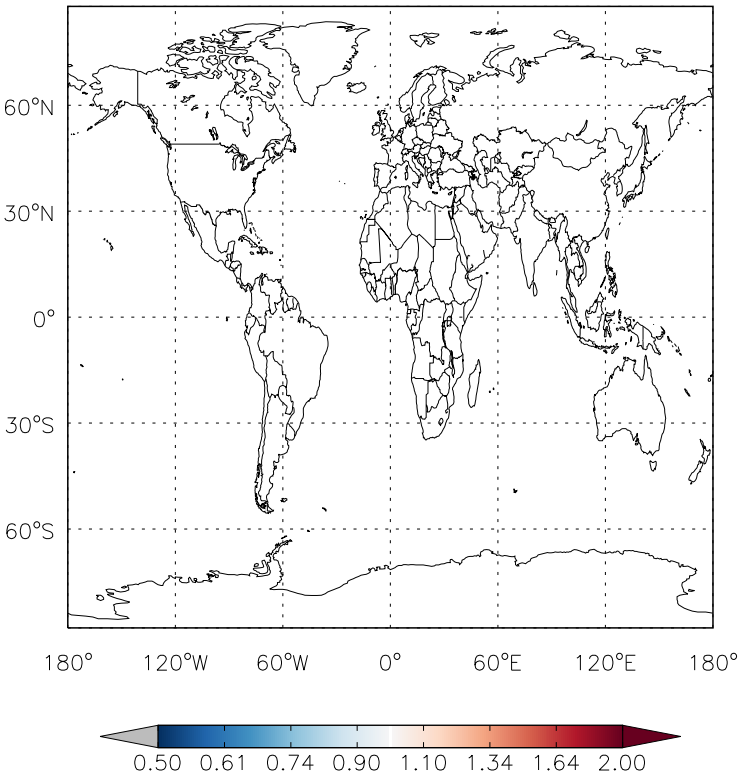
CCl4/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

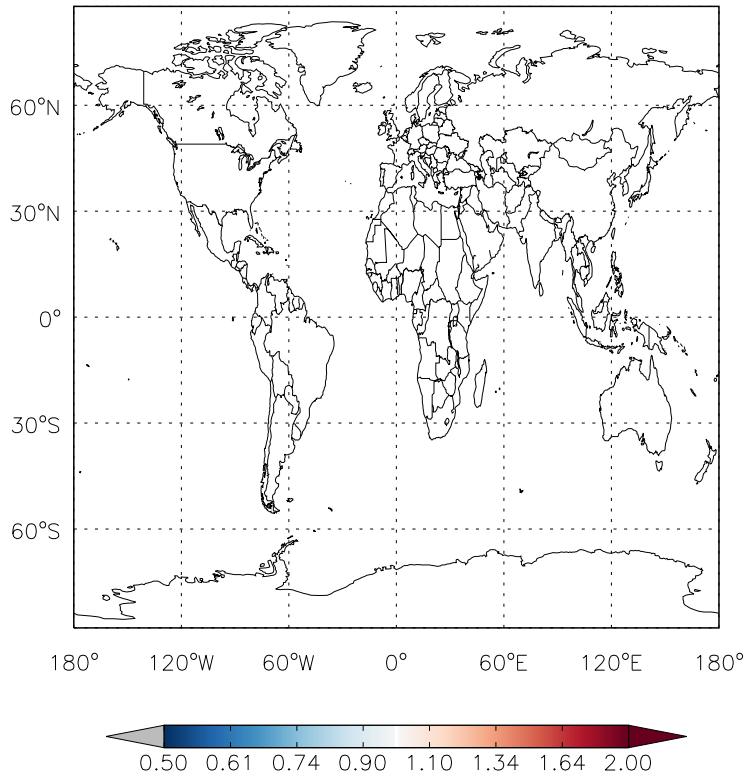
v11−01g−Run0 / v11−01f−geosfp−Run0

CH3Cl / Ratio @ Surface for Oct



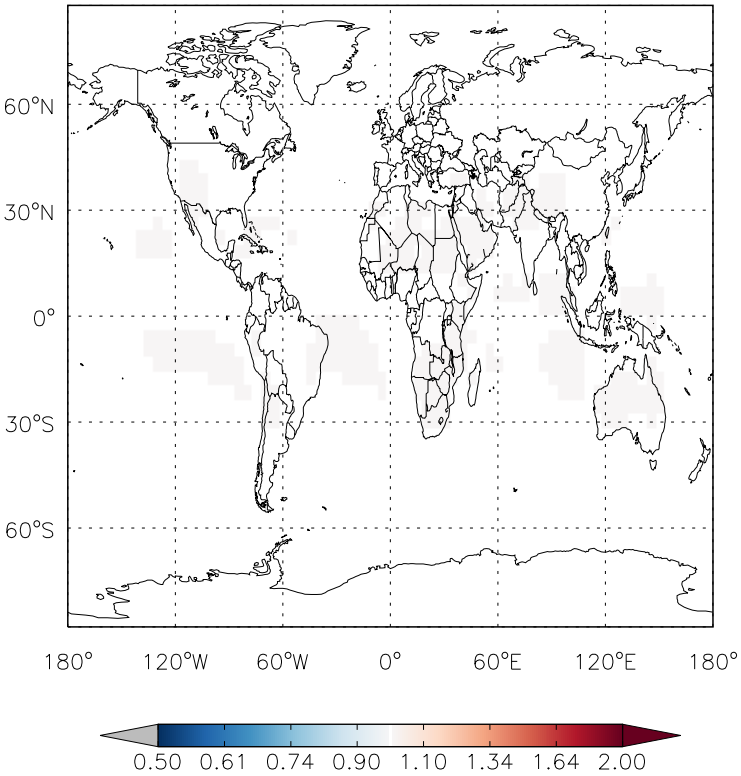
v11−01g−Run0 / v11−01f−geosfp−Run0

CH3Cl/ Ratio @ 500 hPa for Oct



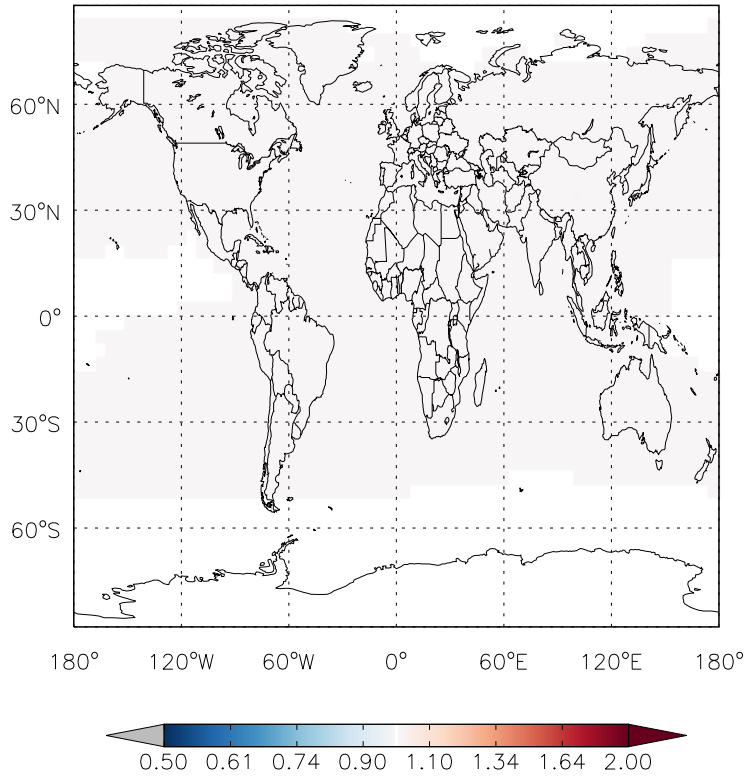
v11−01g−Run0 / v11−01d−Run1

CH3Cl / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

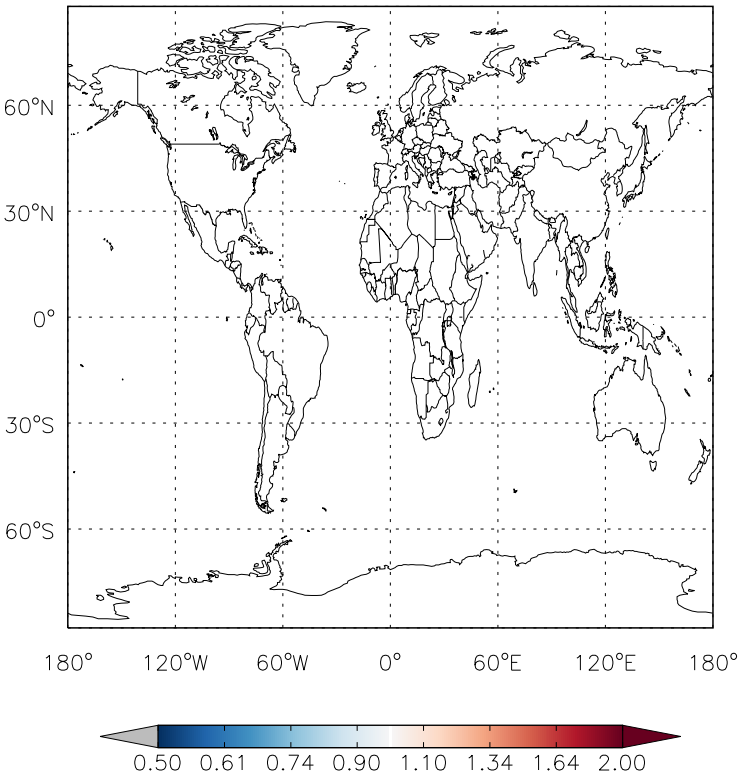
CH3Cl/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

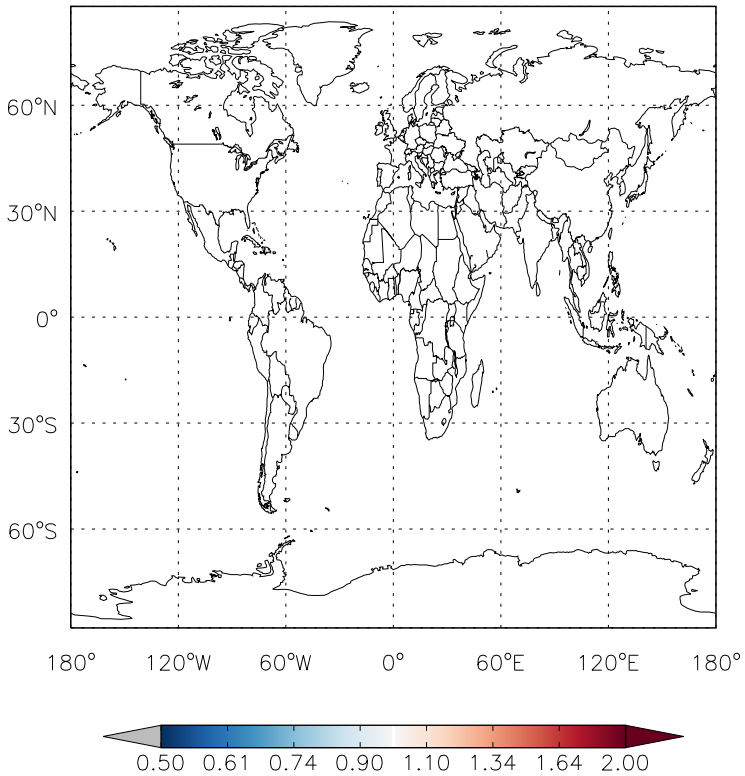
v11-01g-Run0 / v11-01f-geosfp-Run0

CH3CCl3 / Ratio @ Surface for Oct



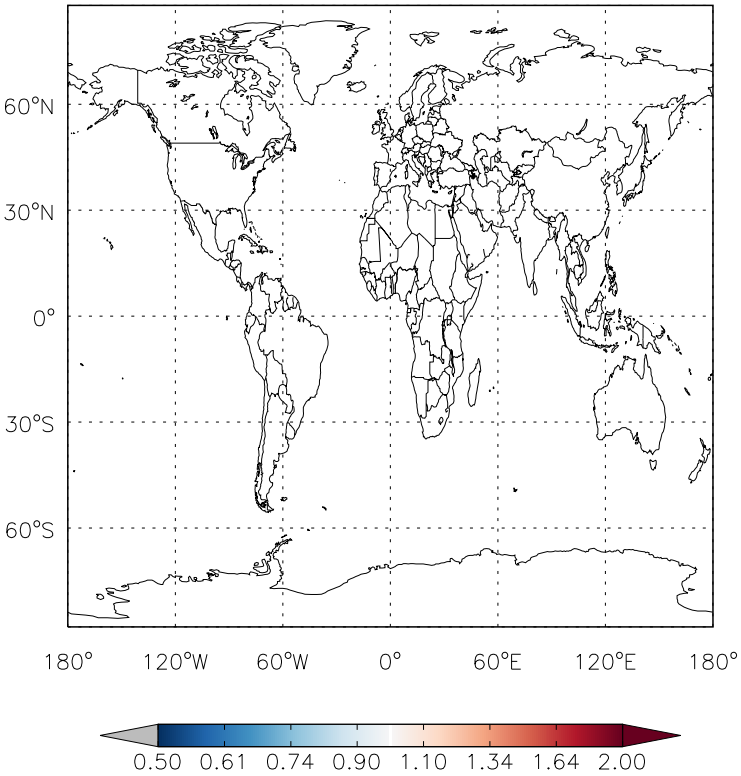
v11-01g-Run0 / v11-01f-geosfp-Run0

CH3CCl3/ Ratio @ 500 hPa for Oct



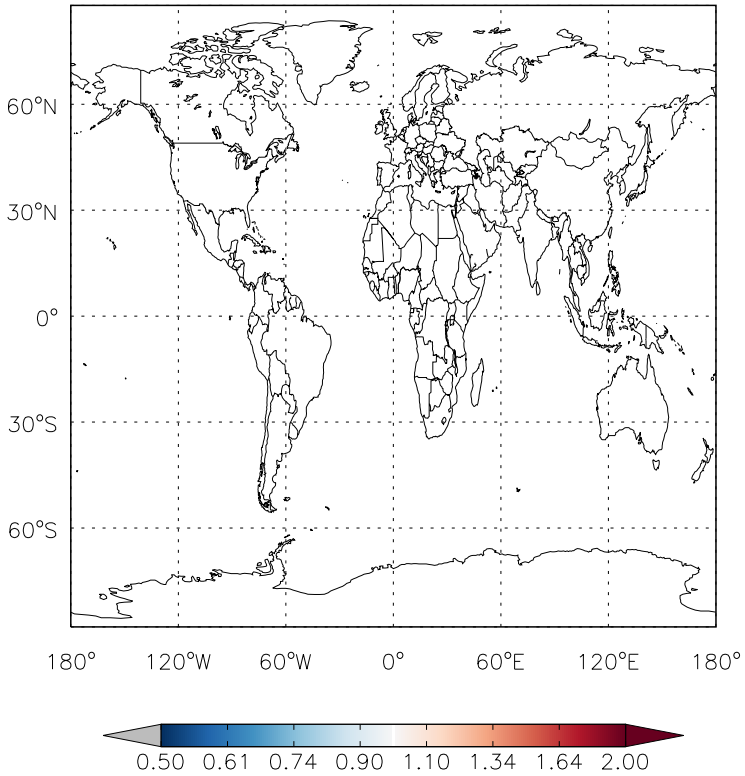
v11-01g-Run0 / v11-01d-Run1

CH3CCl3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

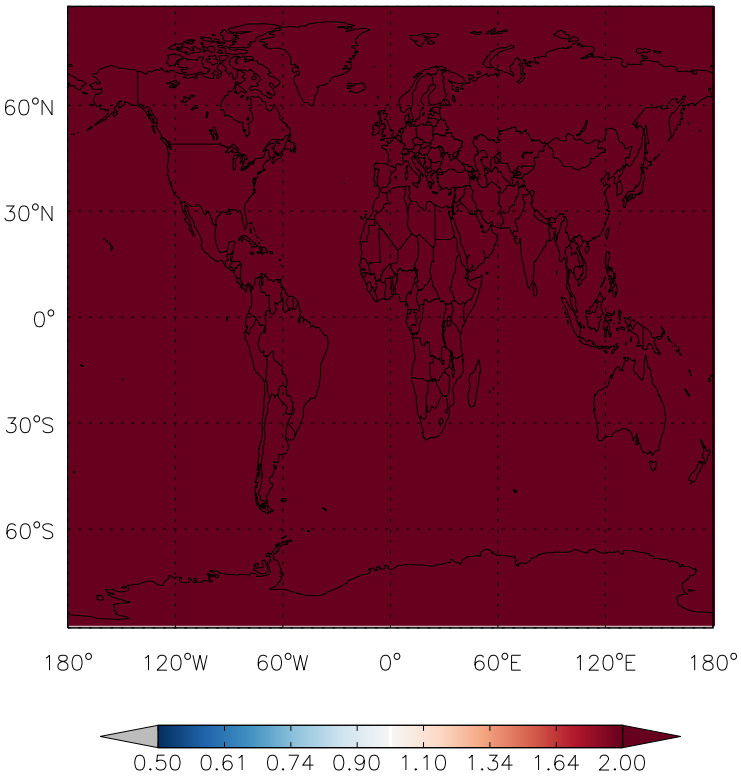
CH3CCl3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

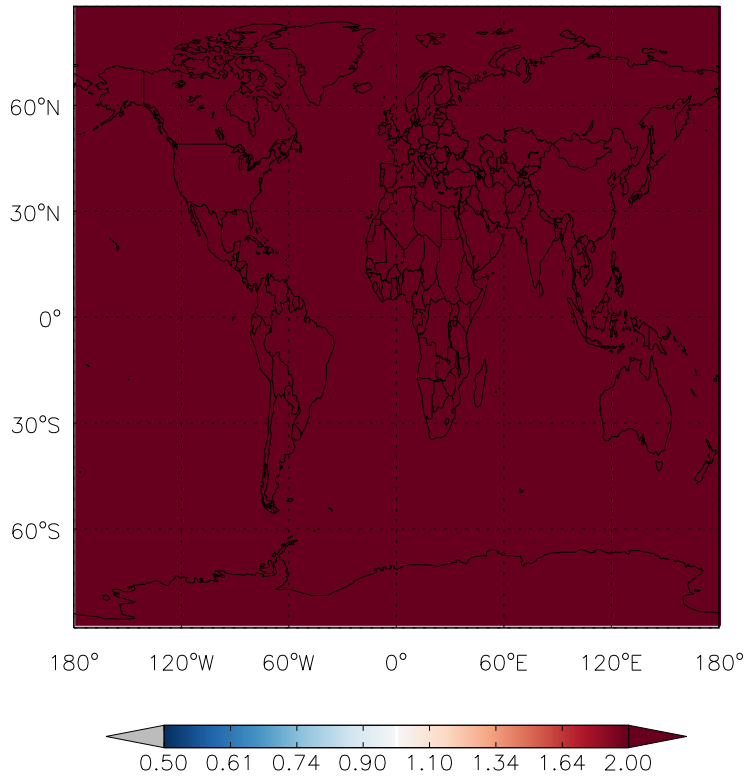
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC113 / Ratio @ Surface for Oct



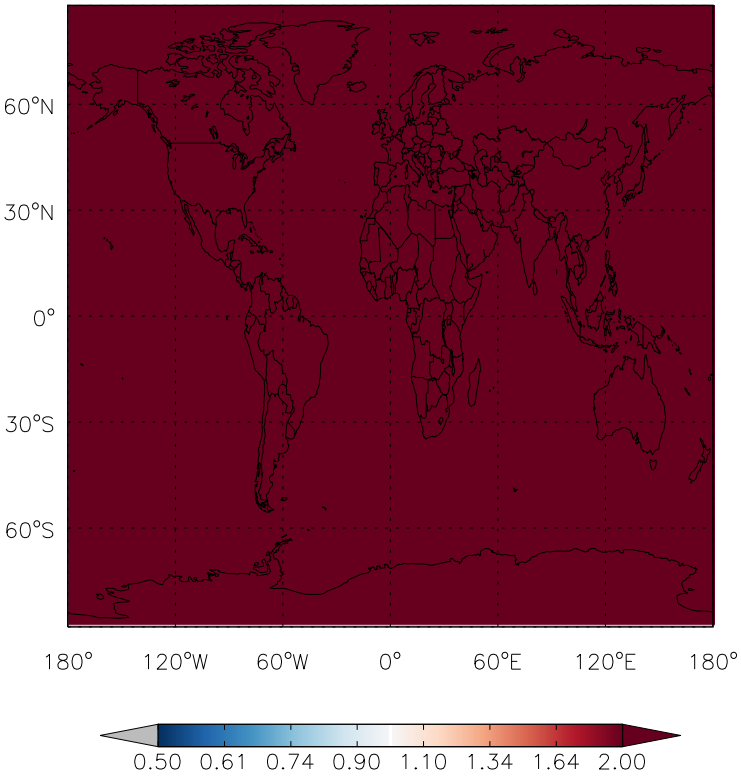
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC113/ Ratio @ 500 hPa for Oct



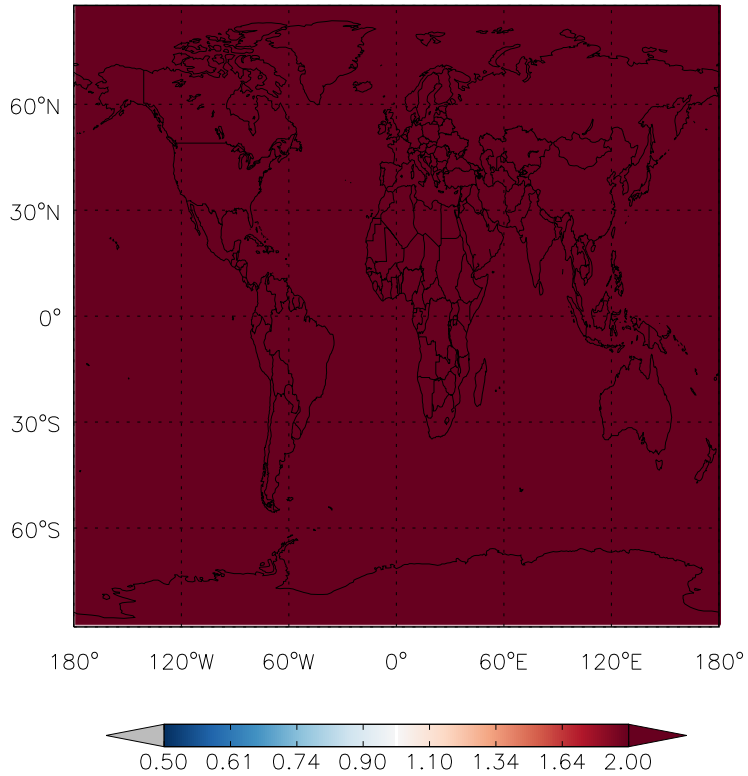
v11-01g-Run0 / v11-01d-Run1

CFC113 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

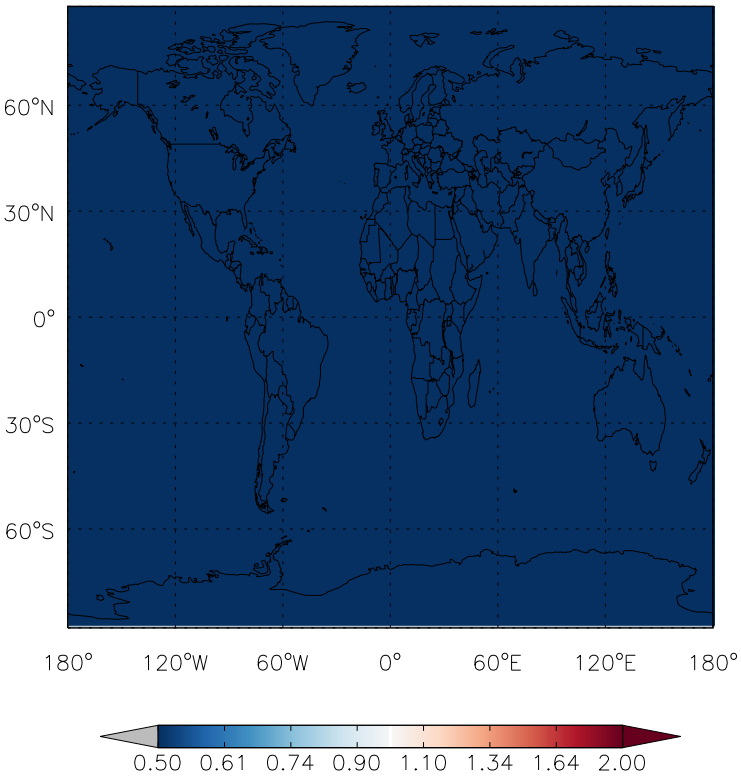
CFC113/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

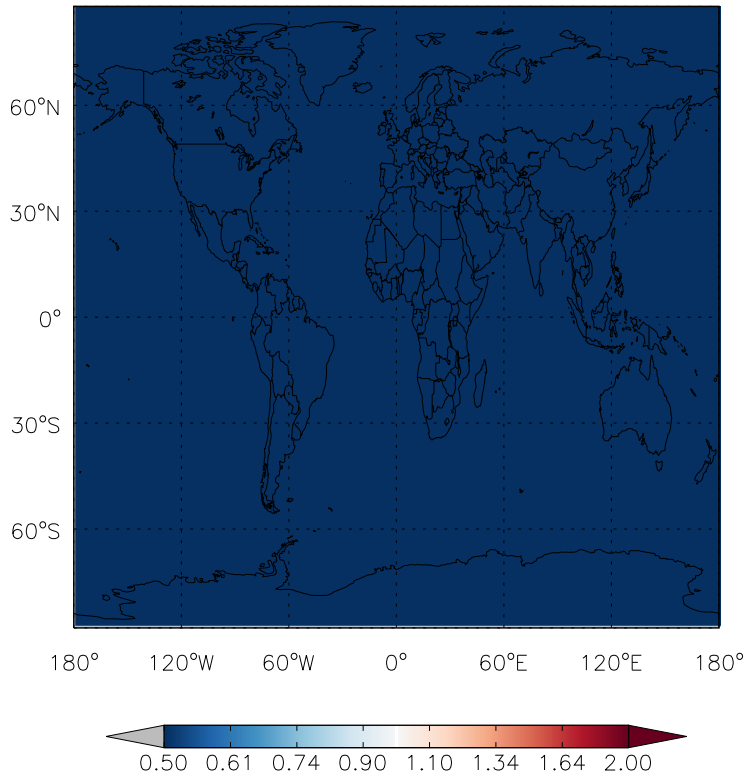
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC114 / Ratio @ Surface for Oct



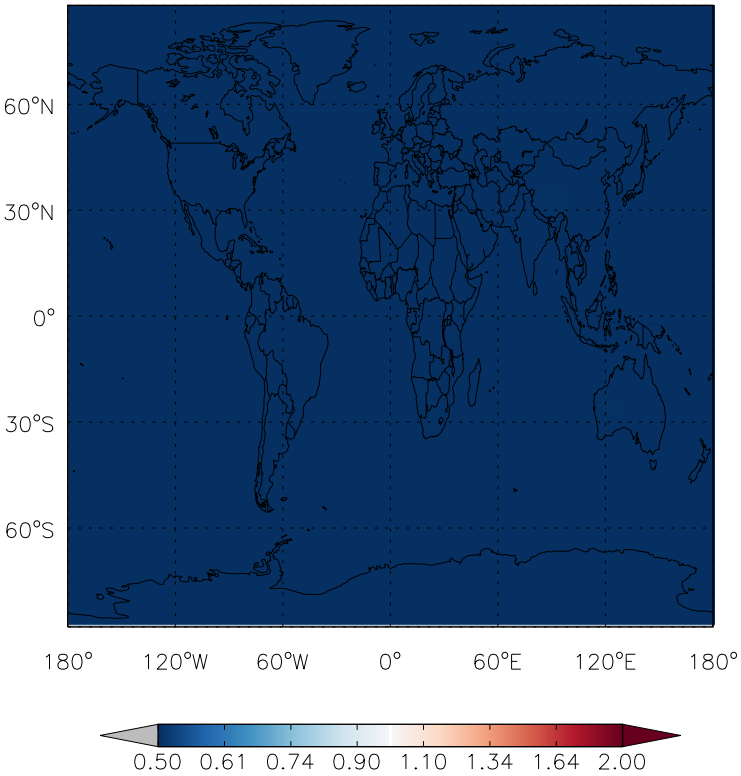
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC114/ Ratio @ 500 hPa for Oct



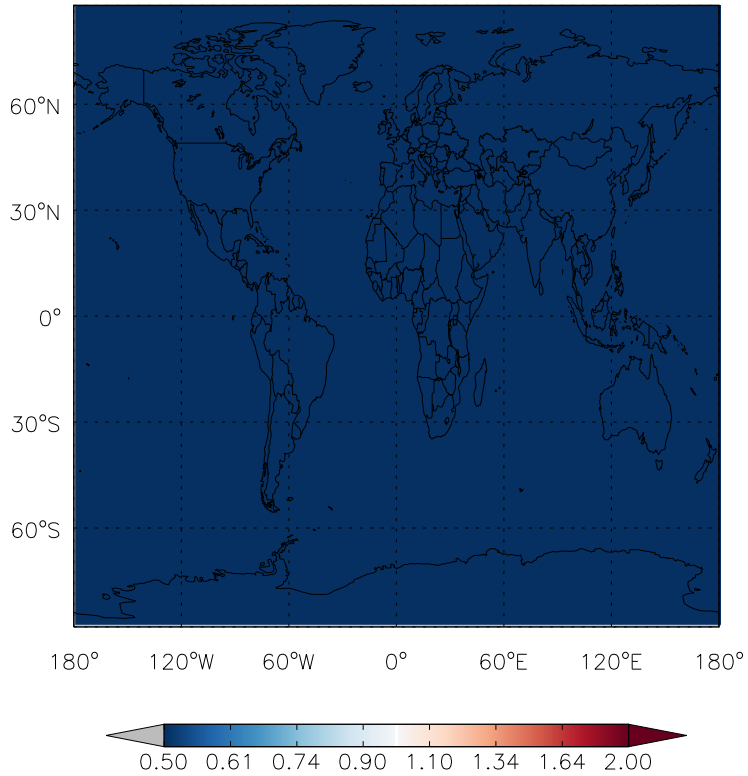
v11-01g-Run0 / v11-01d-Run1

CFC114 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

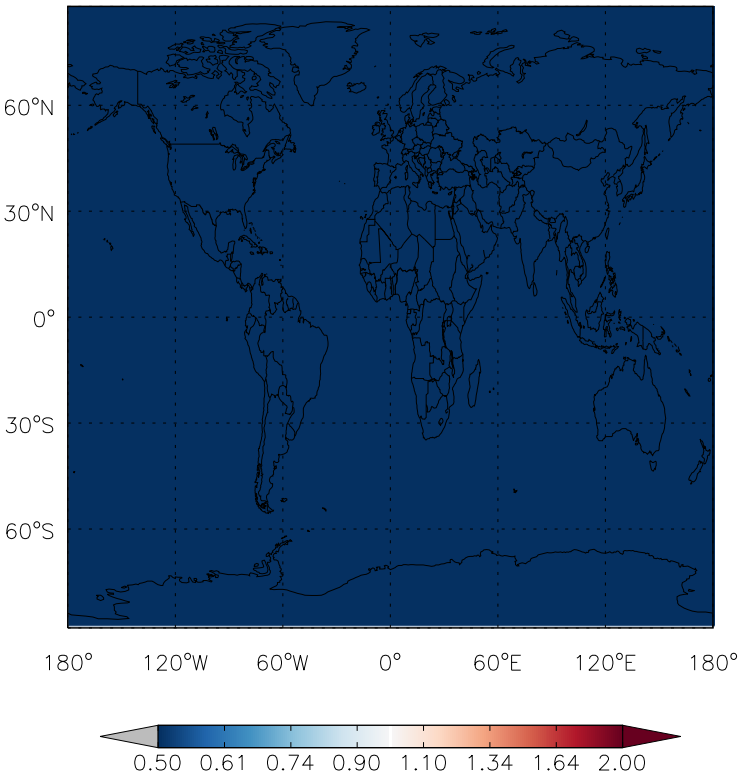
CFC114/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

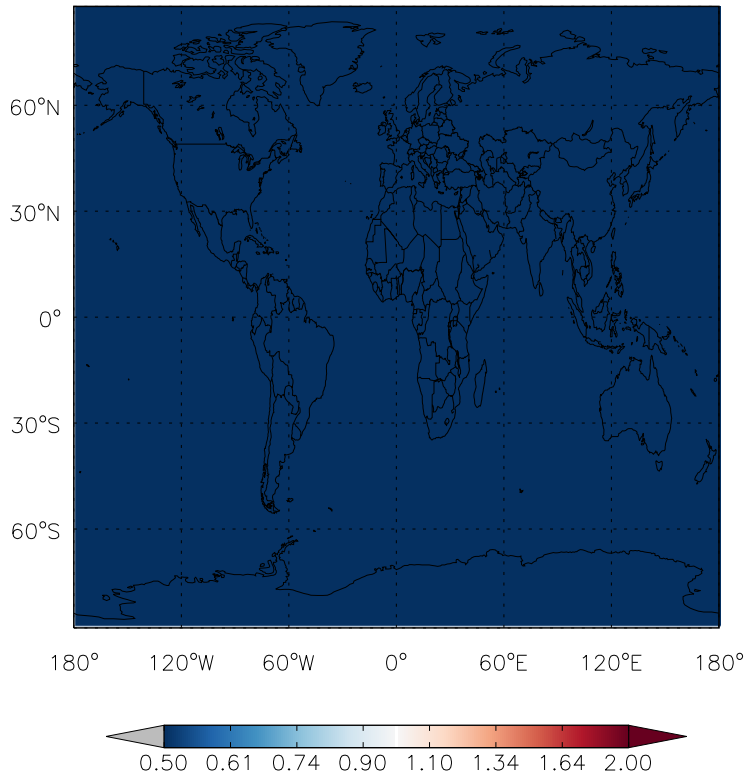
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC115 / Ratio @ Surface for Oct



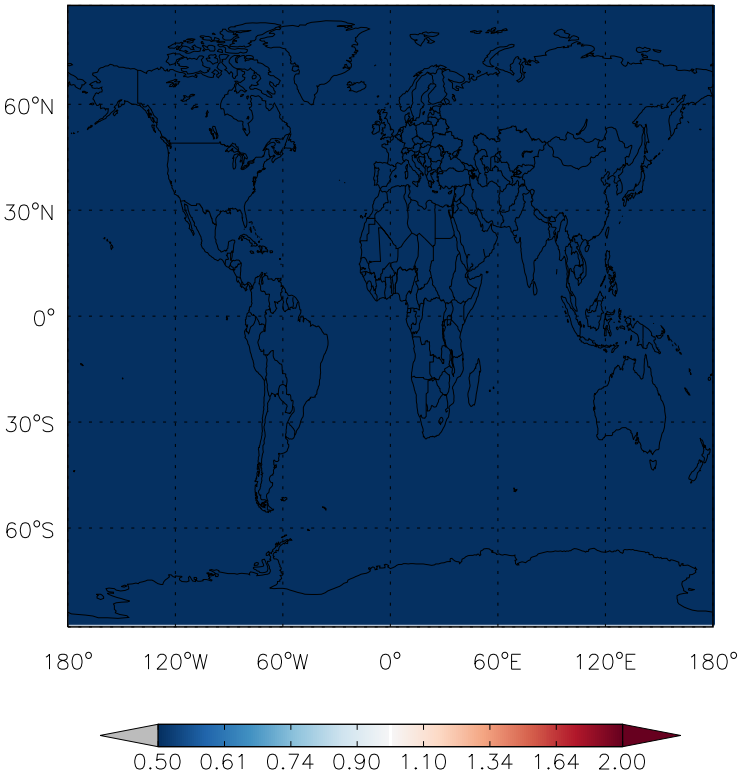
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC115/ Ratio @ 500 hPa for Oct



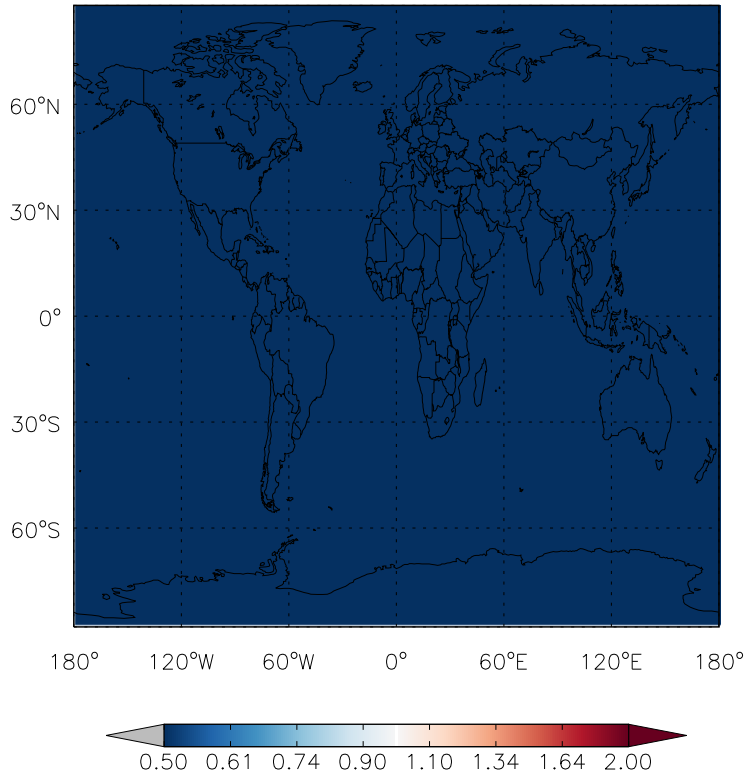
v11-01g-Run0 / v11-01d-Run1

CFC115 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

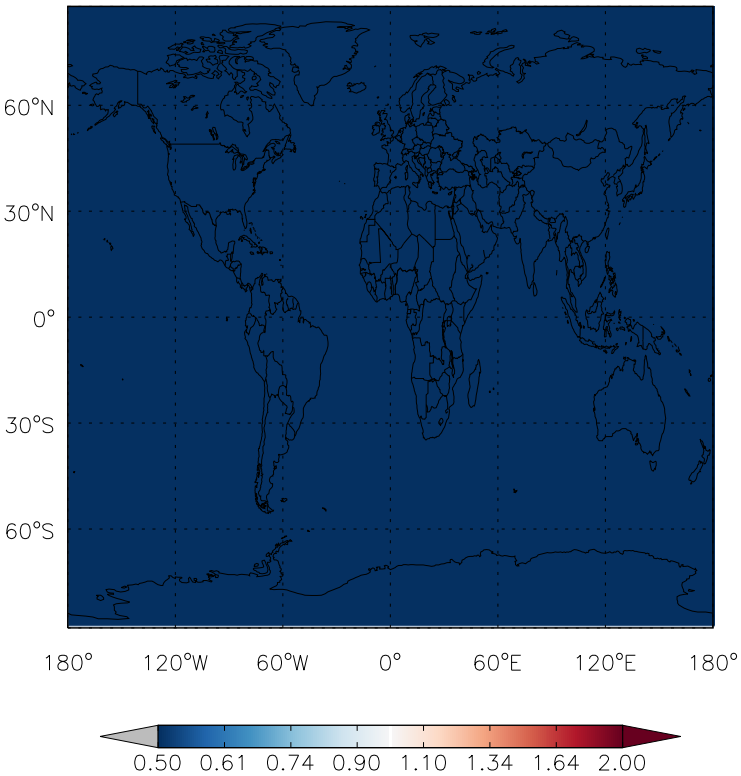
CFC115/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

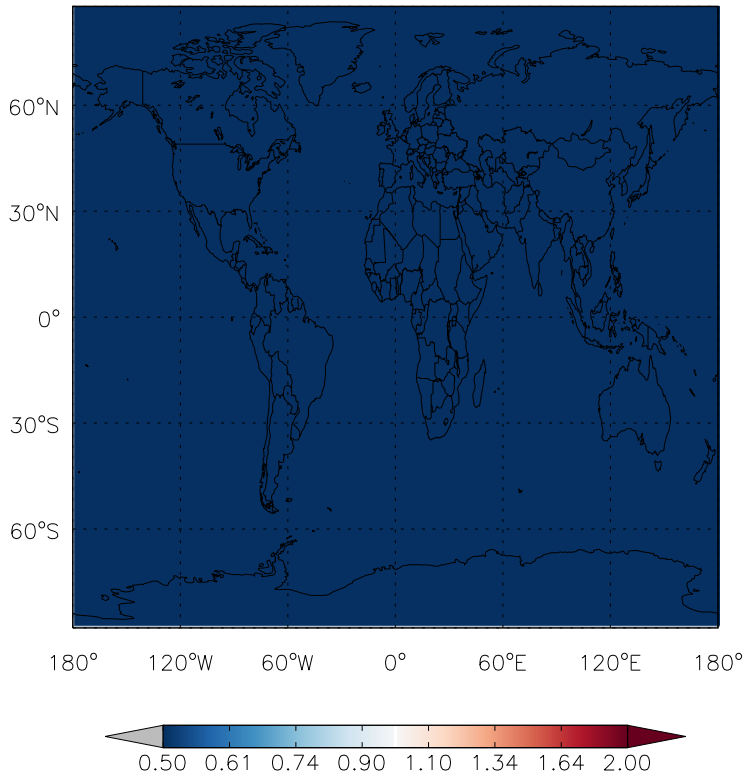
v11-01g-Run0 / v11-01f-geosfp-Run0

HCFC123 / Ratio @ Surface for Oct



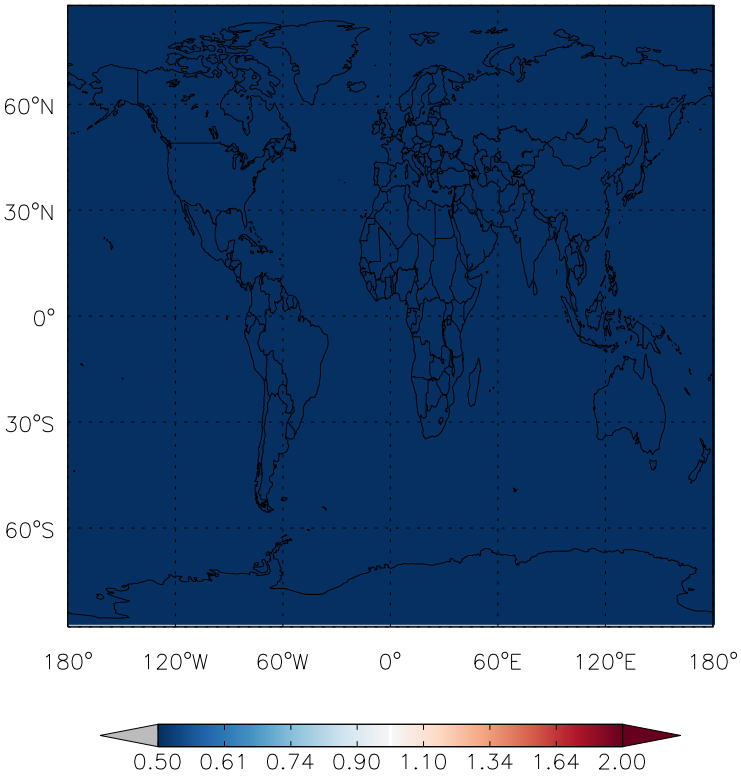
v11-01g-Run0 / v11-01f-geosfp-Run0

HCFC123/ Ratio @ 500 hPa for Oct



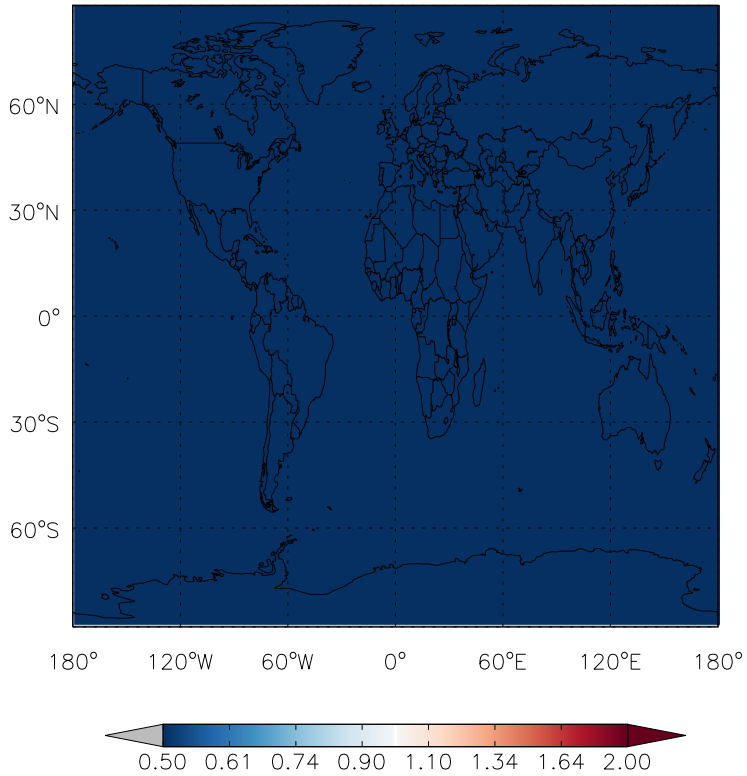
v11-01g-Run0 / v11-01d-Run1

HCFC123 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

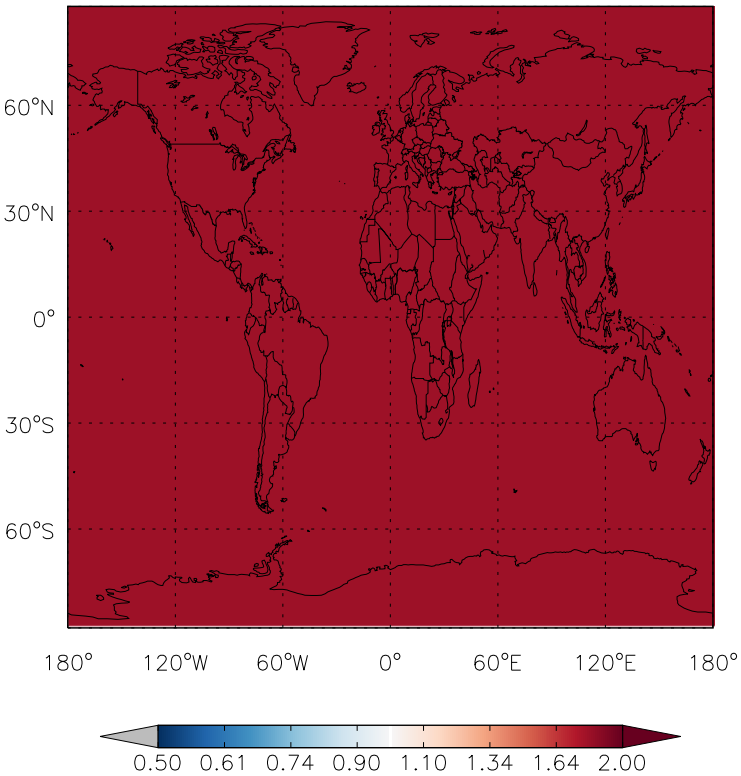
HCFC123/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

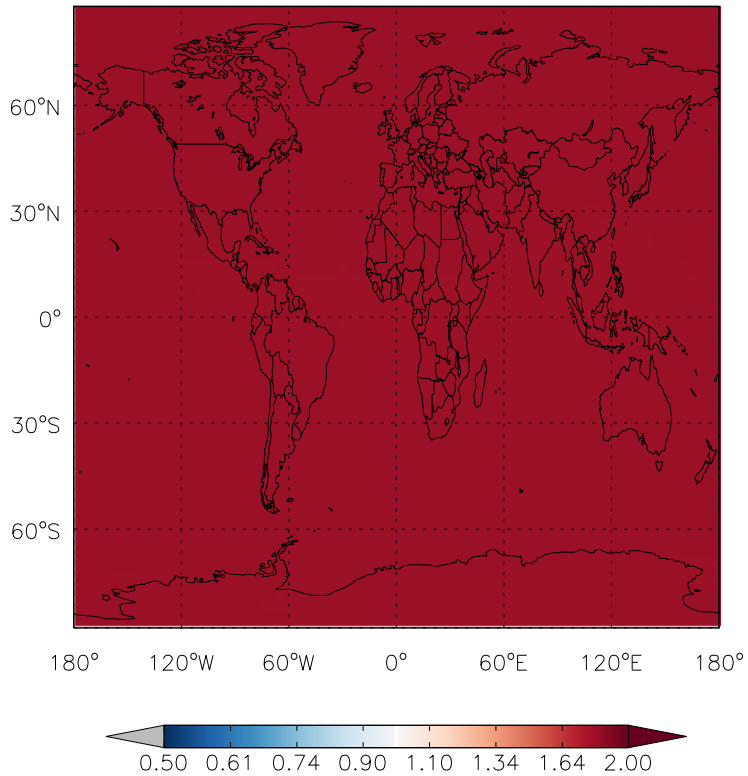
v11-01g-Run0 / v11-01f-geosfp-Run0

HCFC141b / Ratio @ Surface for Oct



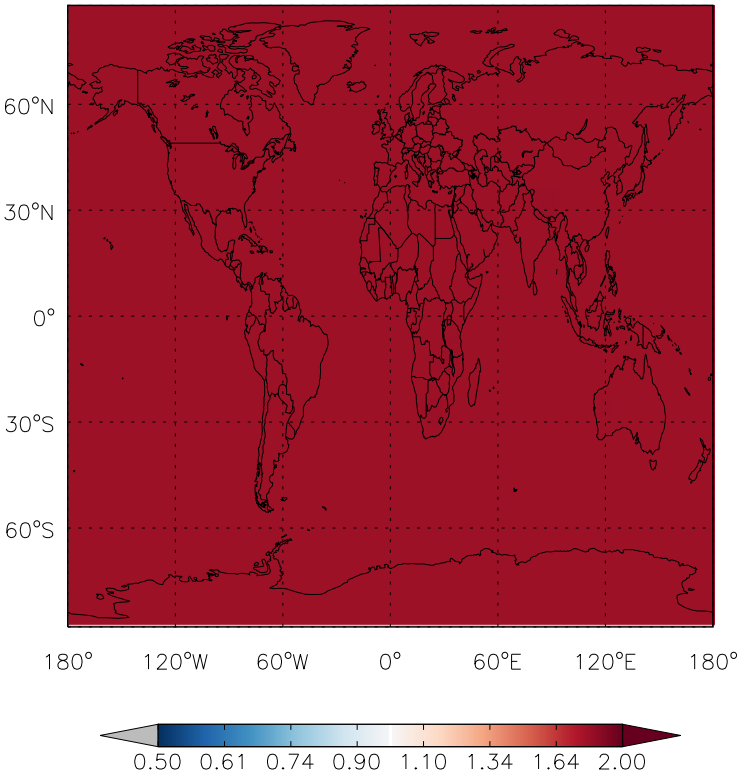
v11-01g-Run0 / v11-01f-geosfp-Run0

HCFC141b/ Ratio @ 500 hPa for Oct



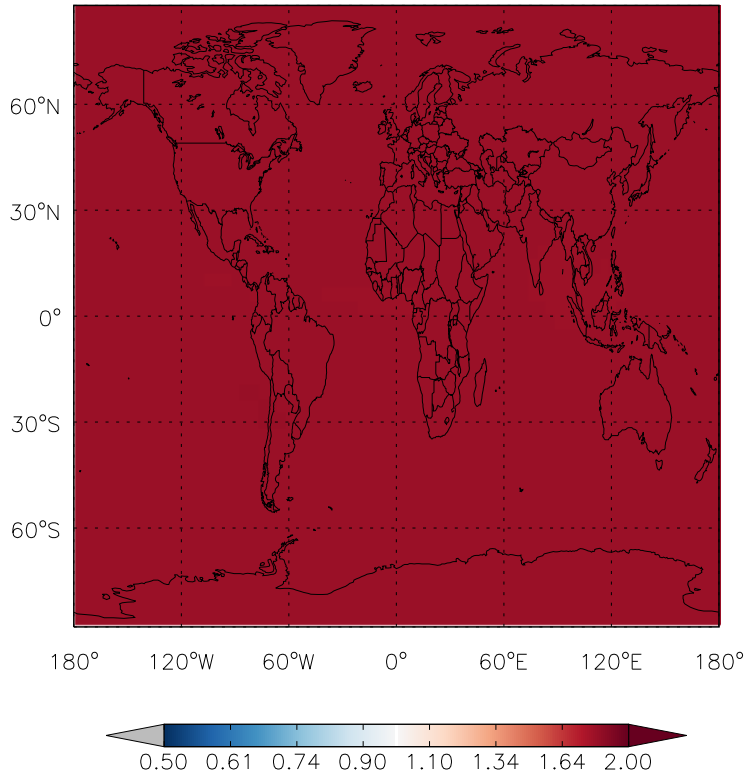
v11-01g-Run0 / v11-01d-Run1

HCFC141b / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

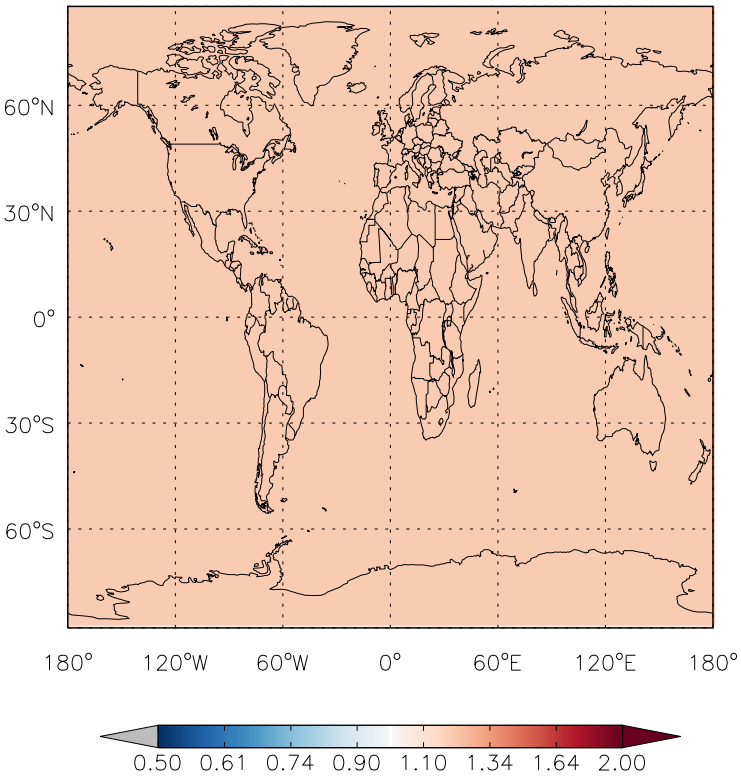
HCFC141b/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

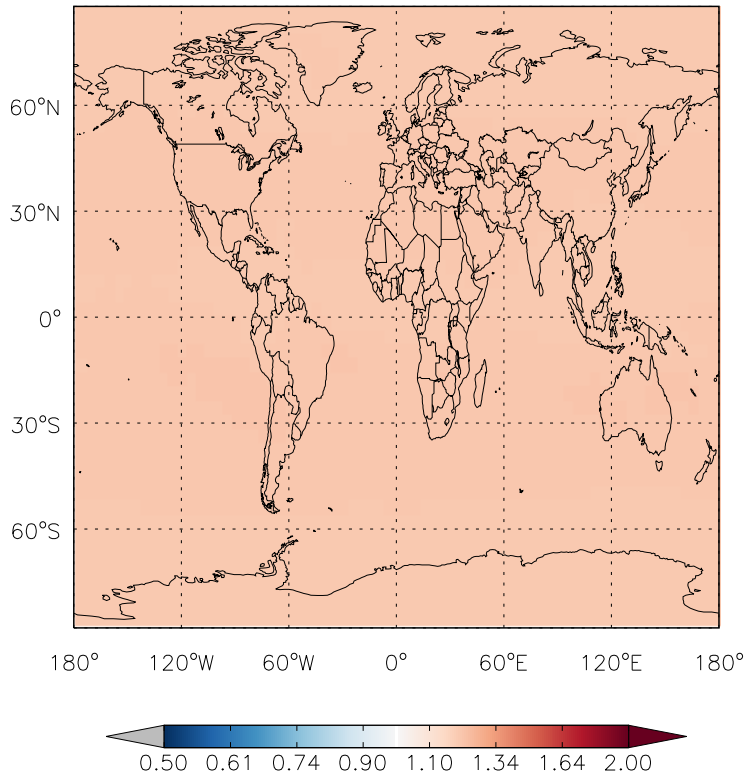
v11−01g−Run0 / v11−01f−geosfp−Run0

HCFC142b / Ratio @ Surface for Oct



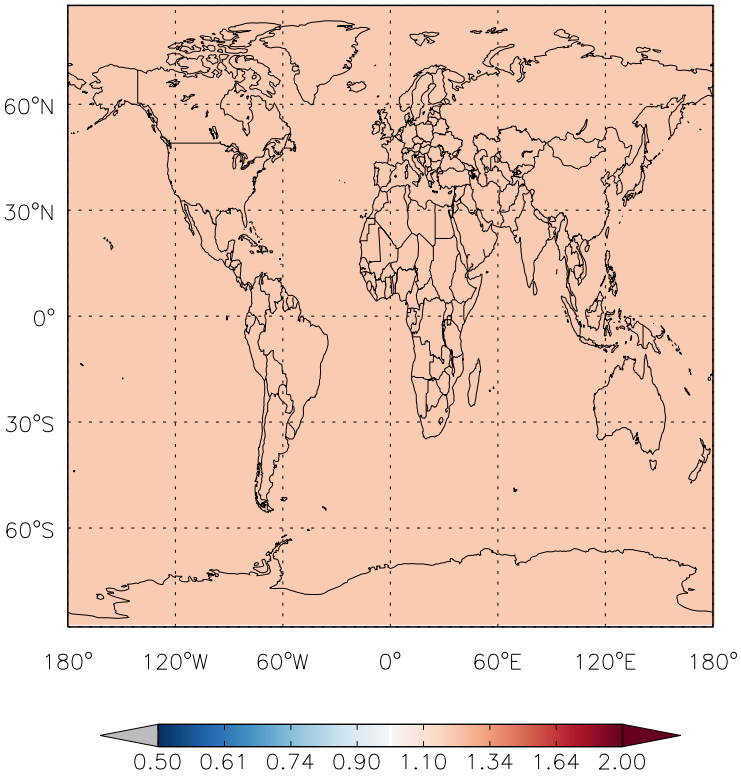
v11−01g−Run0 / v11−01f−geosfp−Run0

HCFC142b/ Ratio @ 500 hPa for Oct



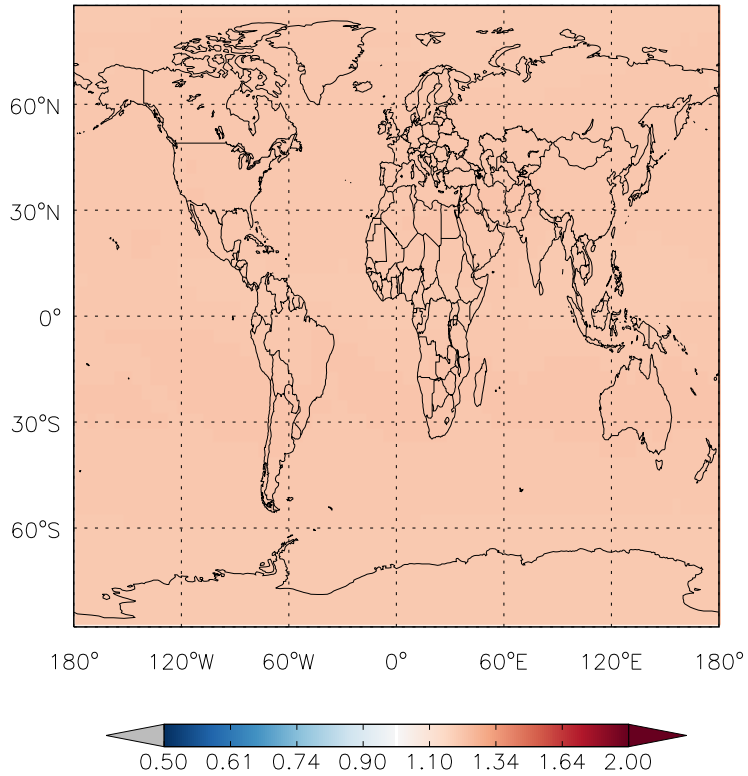
v11−01g−Run0 / v11−01d−Run1

HCFC142b / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

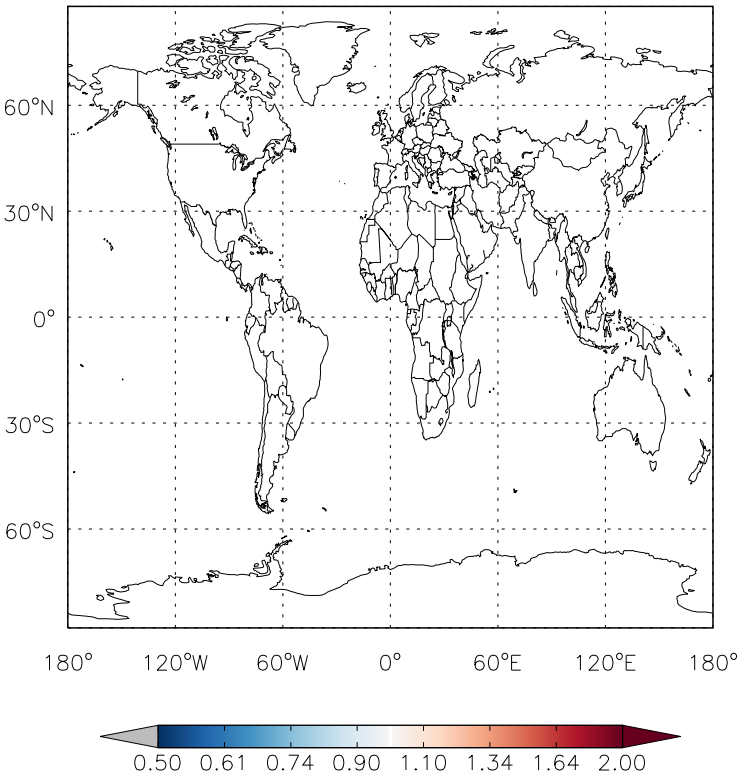
HCFC142b/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

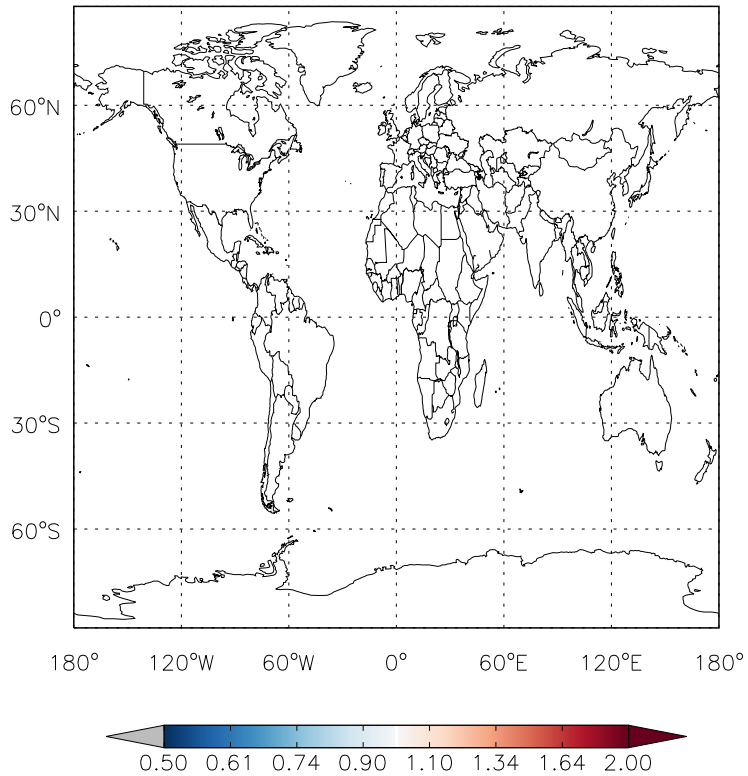
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC11 / Ratio @ Surface for Oct



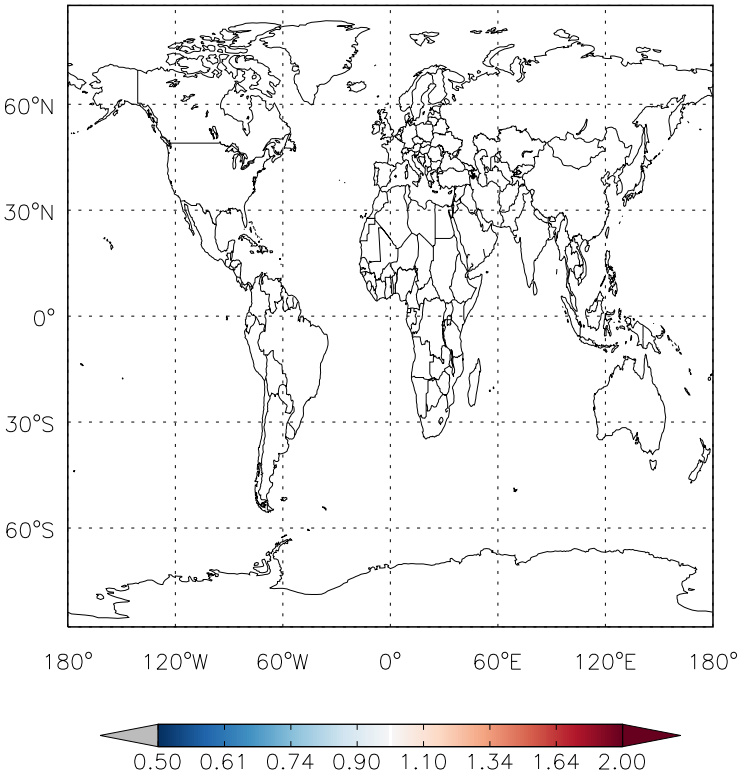
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC11/ Ratio @ 500 hPa for Oct



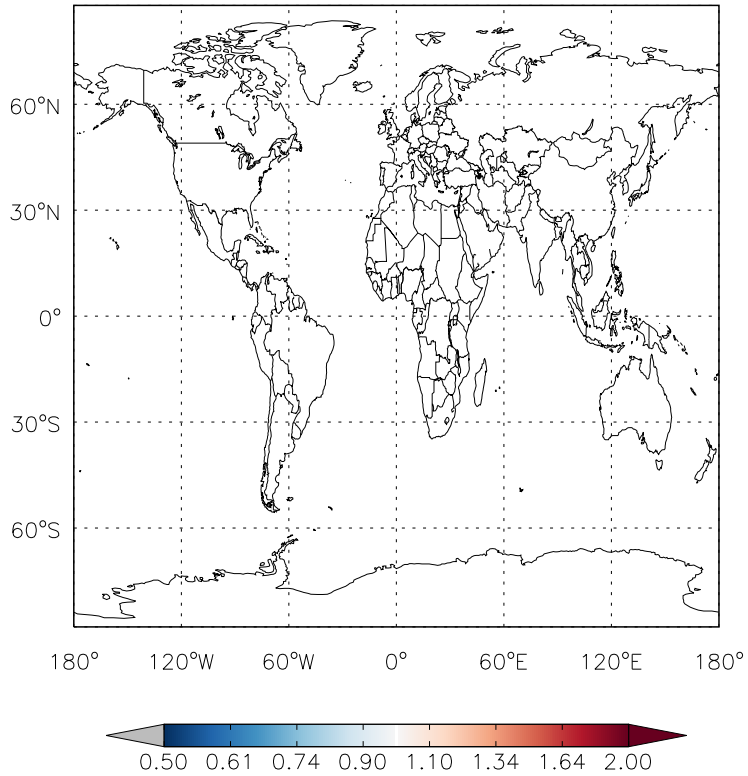
v11-01g-Run0 / v11-01d-Run1

CFC11 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

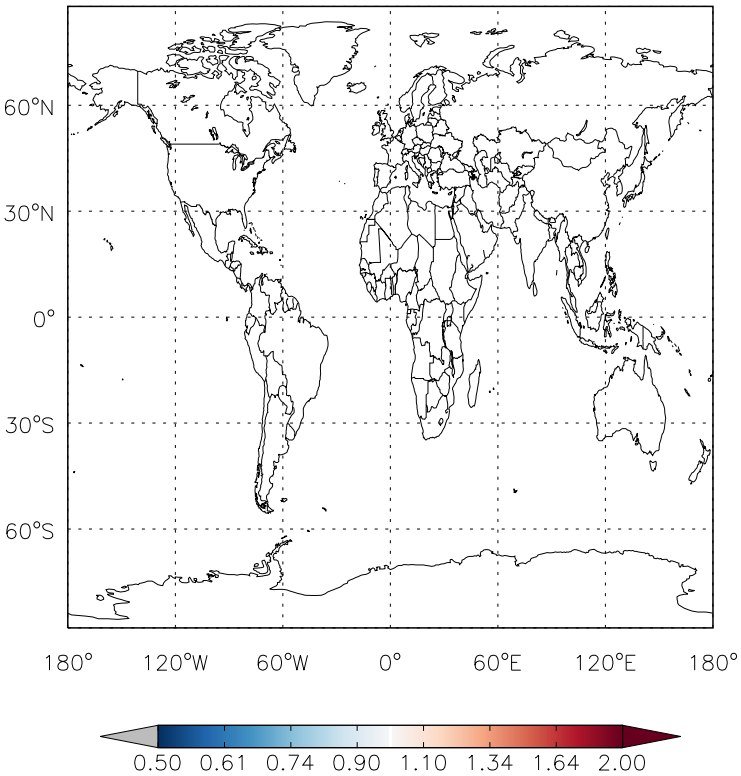
CFC11/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

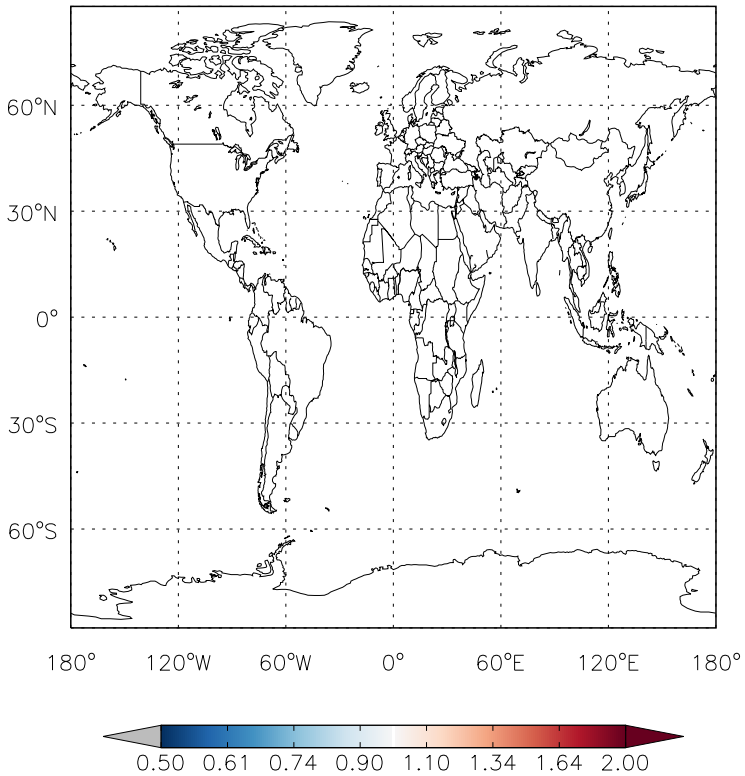
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC12 / Ratio @ Surface for Oct



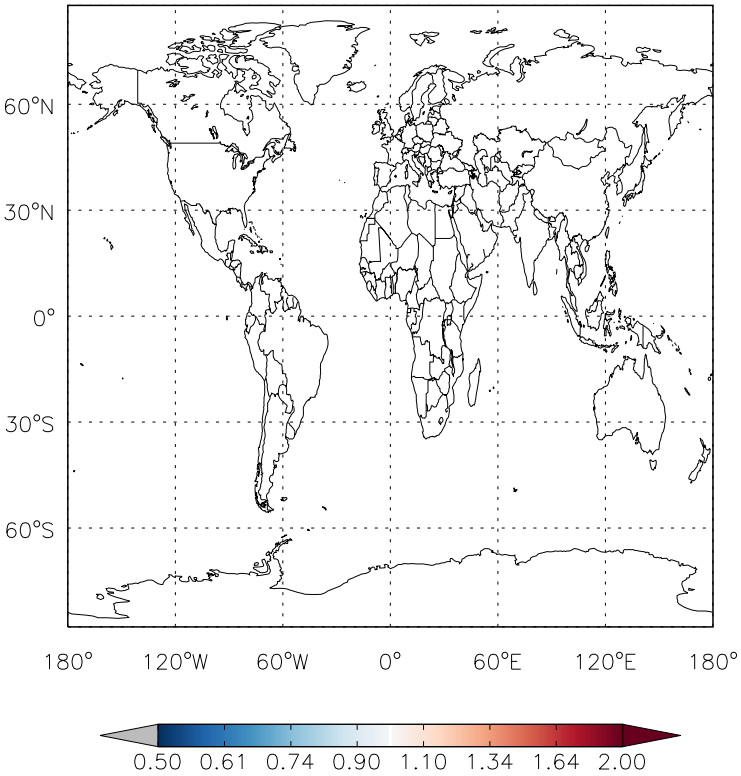
v11-01g-Run0 / v11-01f-geosfp-Run0

CFC12/ Ratio @ 500 hPa for Oct



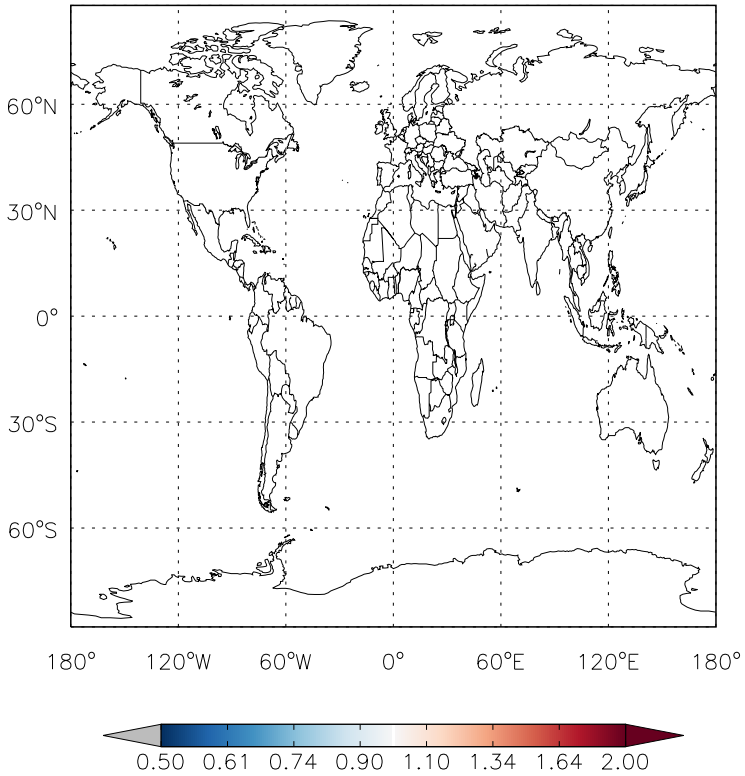
v11-01g-Run0 / v11-01d-Run1

CFC12 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

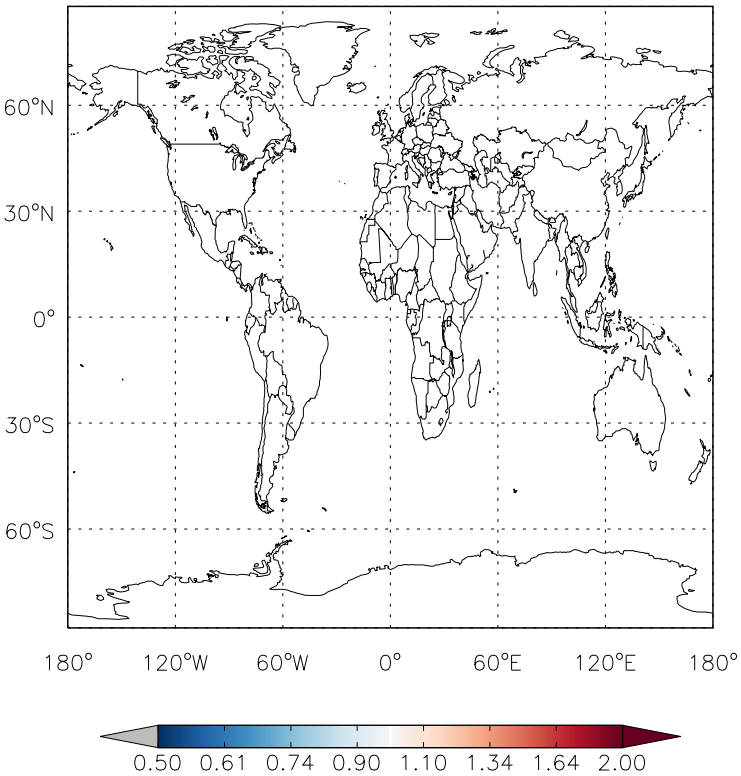
CFC12/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

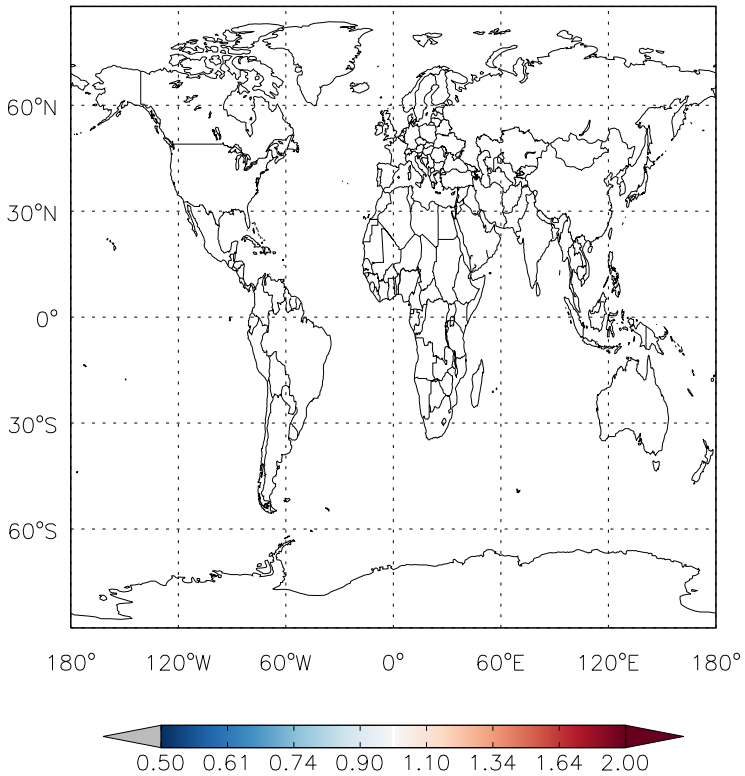
v11−01g−Run0 / v11−01f−geosfp−Run0

HCFC22 / Ratio @ Surface for Oct



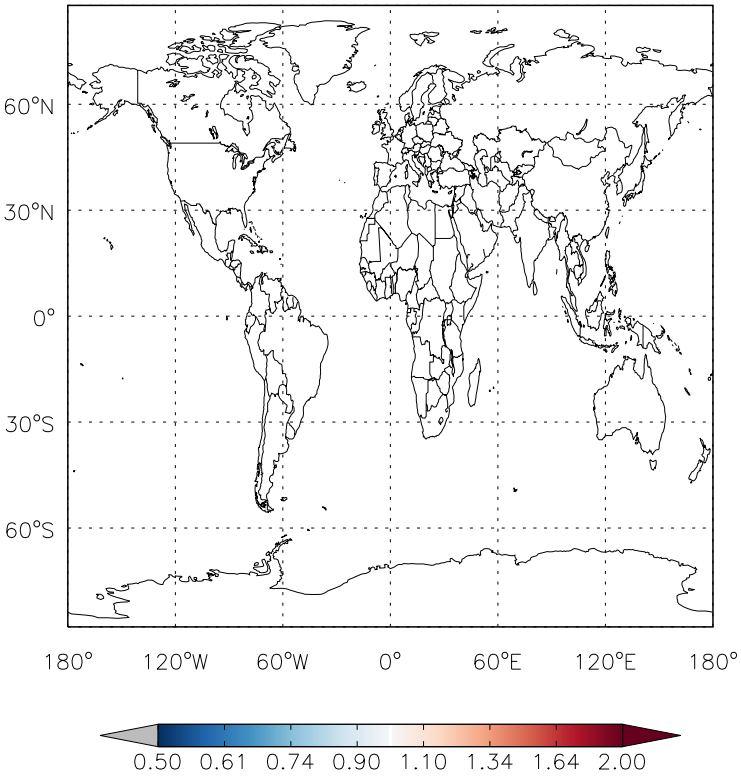
v11−01g−Run0 / v11−01f−geosfp−Run0

HCFC22/ Ratio @ 500 hPa for Oct



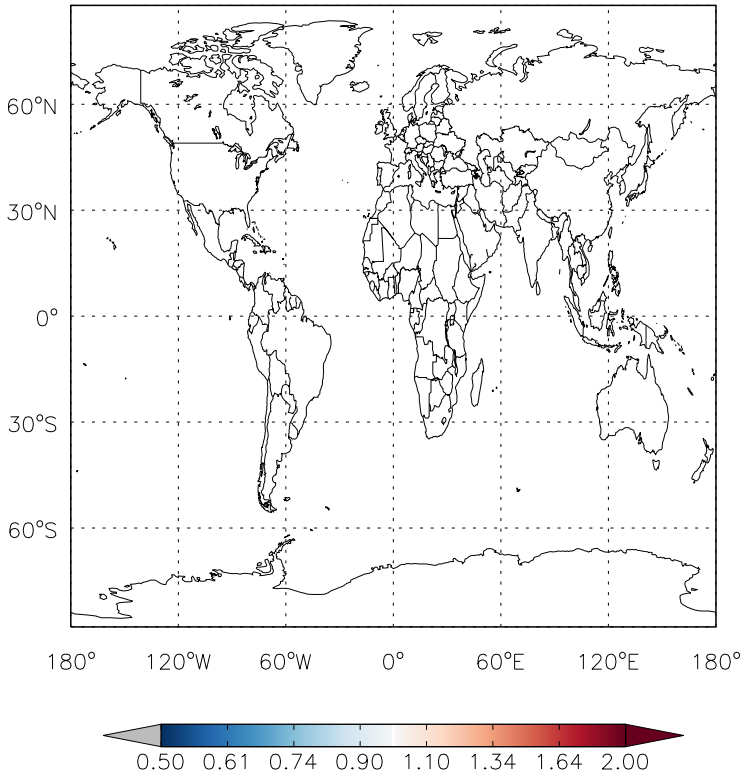
v11−01g−Run0 / v11−01d−Run1

HCFC22 / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

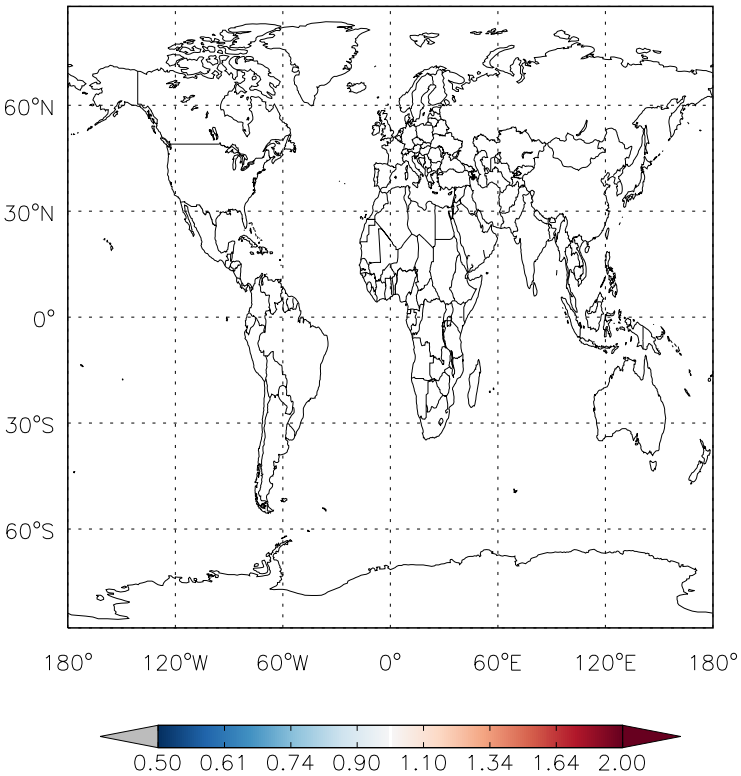
HCFC22/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

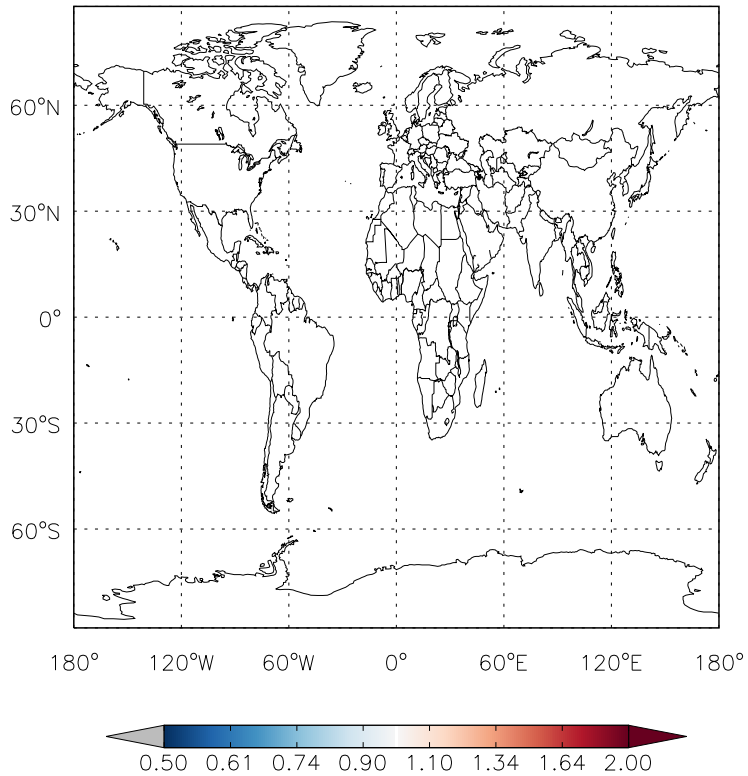
v11-01g-Run0 / v11-01f-geosfp-Run0

H1211 / Ratio @ Surface for Oct



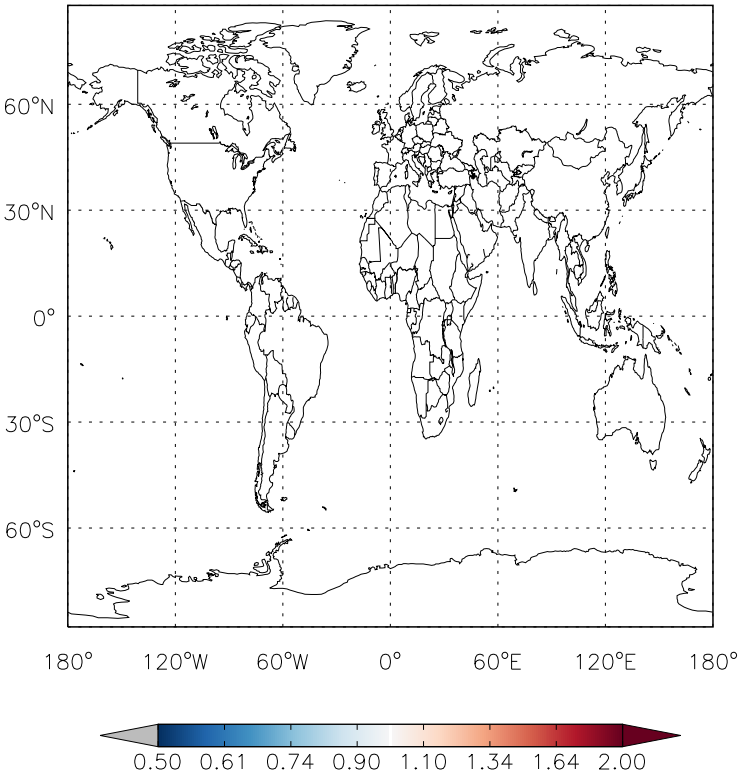
v11-01g-Run0 / v11-01f-geosfp-Run0

H1211/ Ratio @ 500 hPa for Oct



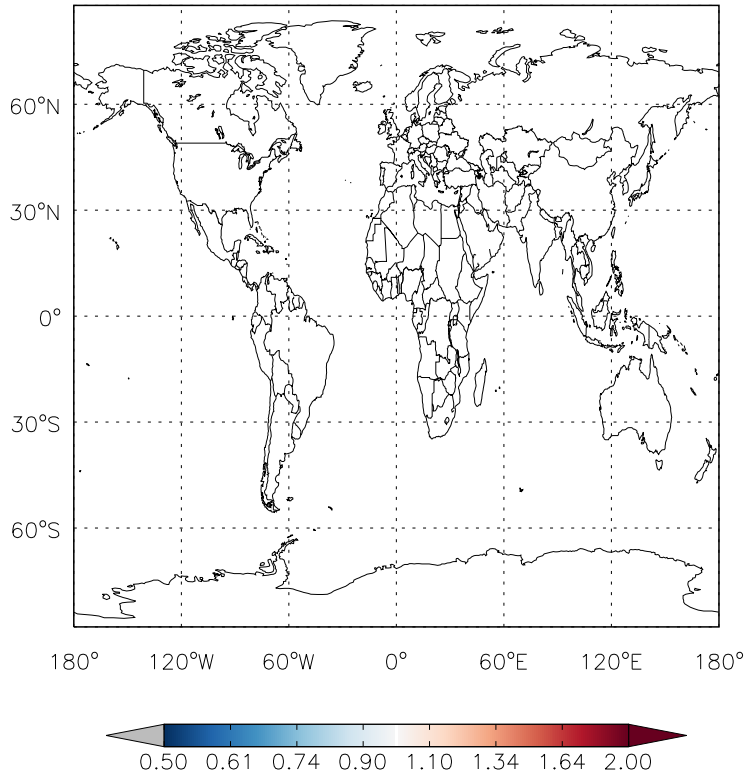
v11-01g-Run0 / v11-01d-Run1

H1211 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

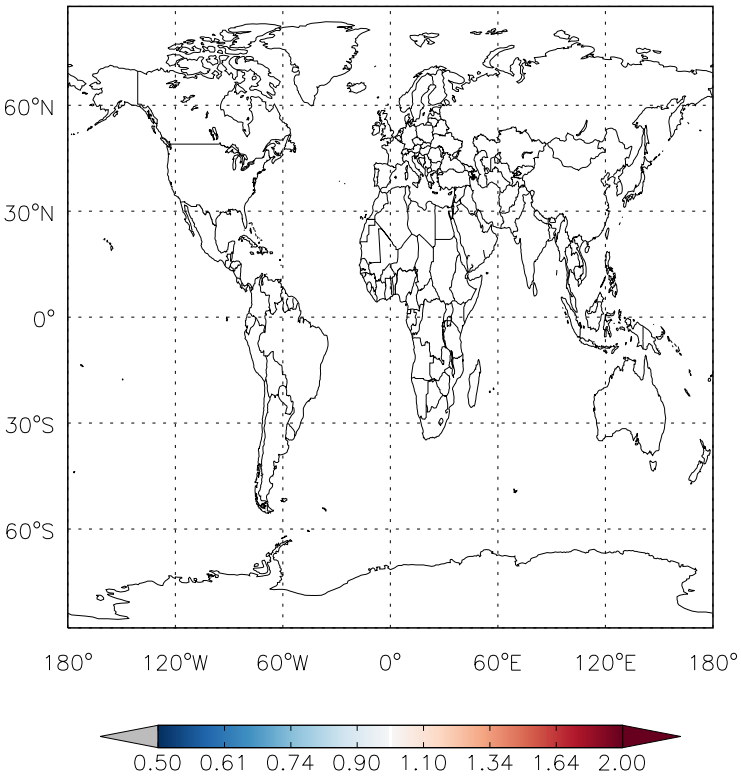
H1211/ Ratio @ 500 hPa for Oct



GEOS−Chem Ratio Maps at surface and 500 hPa

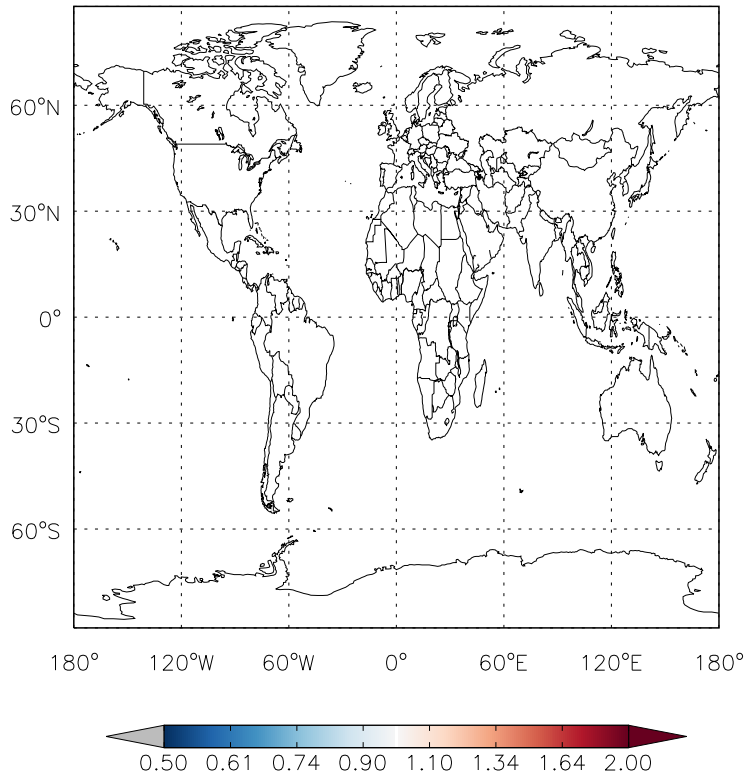
v11−01g−Run0 / v11−01f−geosfp−Run0

H1301 / Ratio @ Surface for Oct



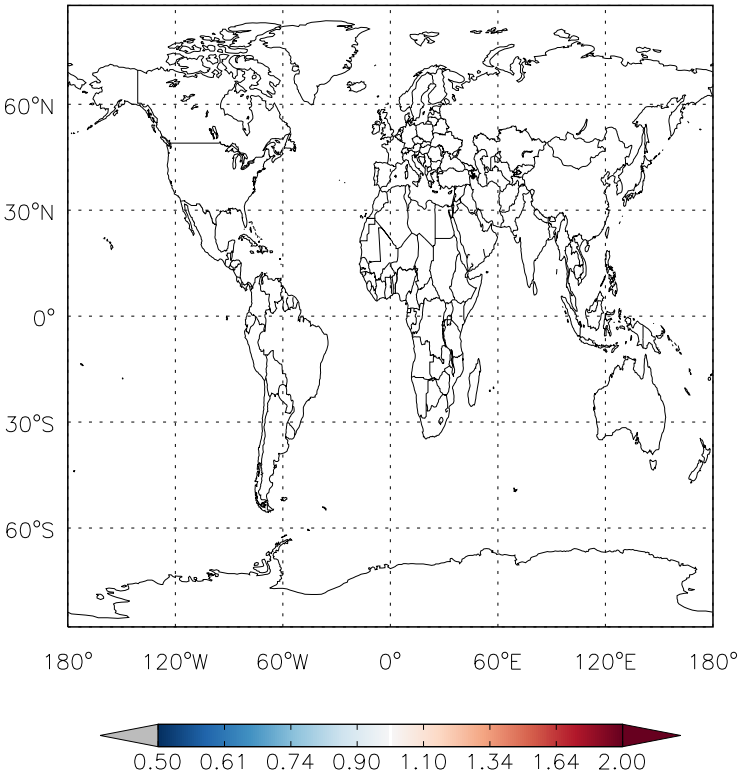
v11−01g−Run0 / v11−01f−geosfp−Run0

H1301/ Ratio @ 500 hPa for Oct



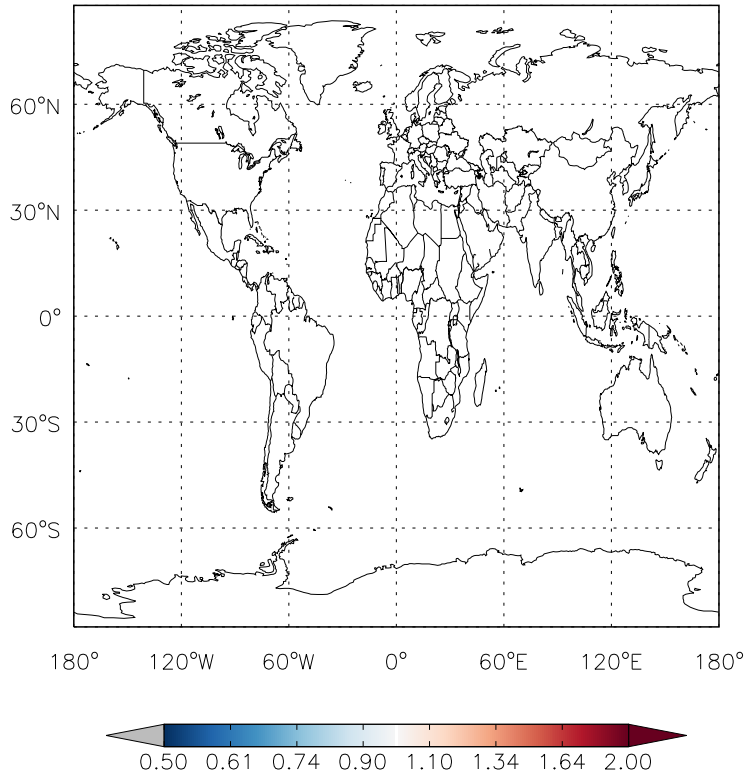
v11−01g−Run0 / v11−01d−Run1

H1301 / Ratio @ Surface for Oct



v11−01g−Run0 / v11−01d−Run1

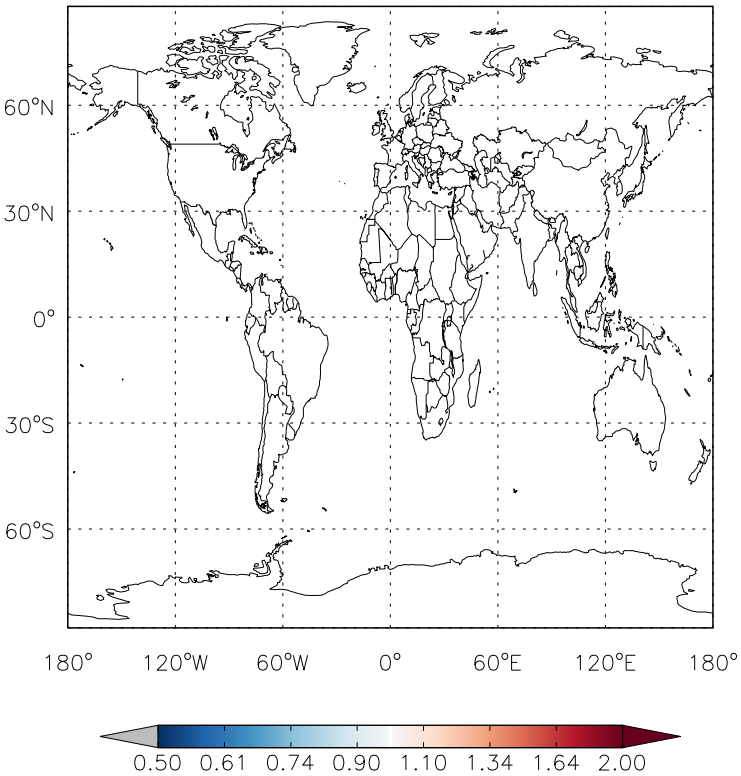
H1301/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

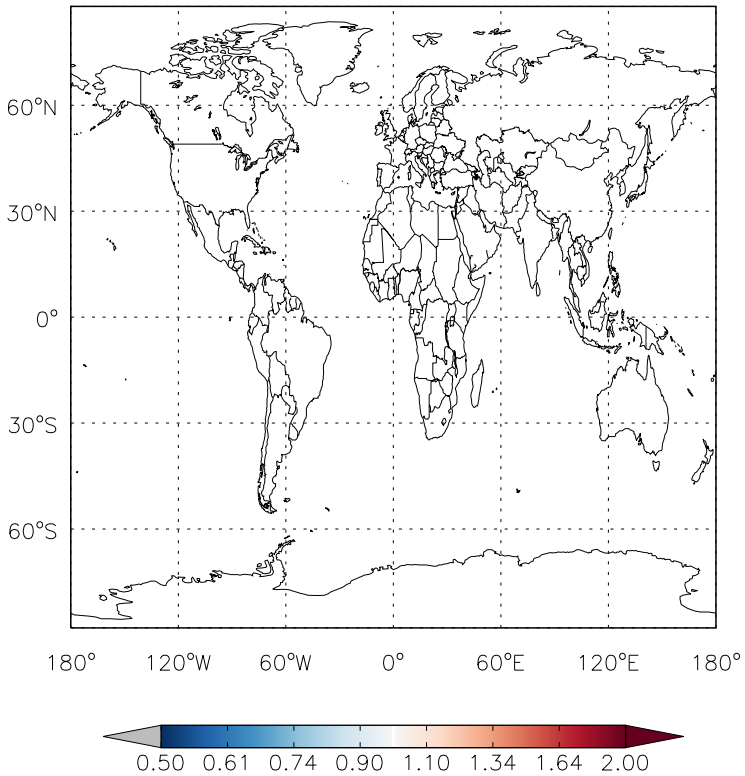
v11-01g-Run0 / v11-01f-geosfp-Run0

H2402 / Ratio @ Surface for Oct



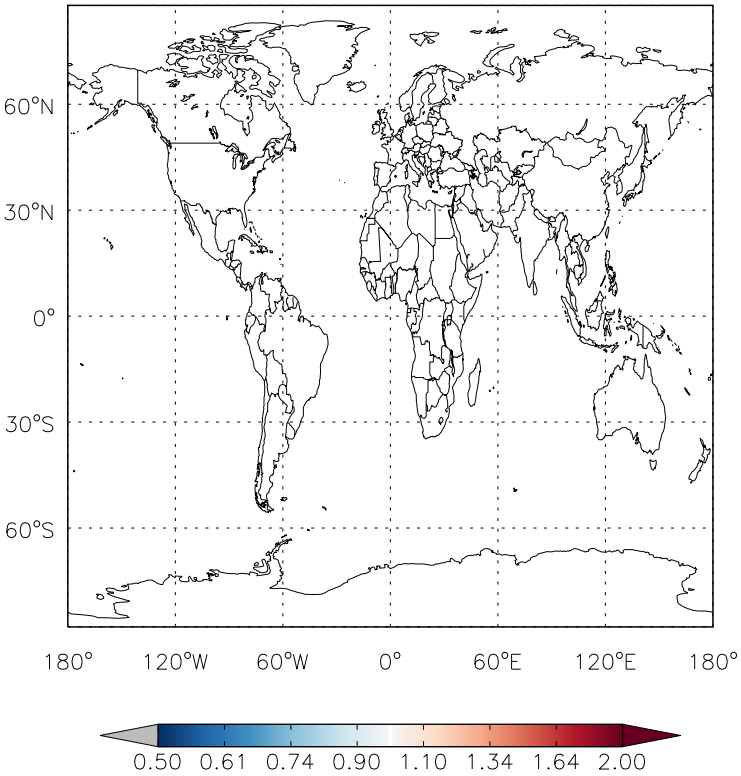
v11-01g-Run0 / v11-01f-geosfp-Run0

H2402/ Ratio @ 500 hPa for Oct



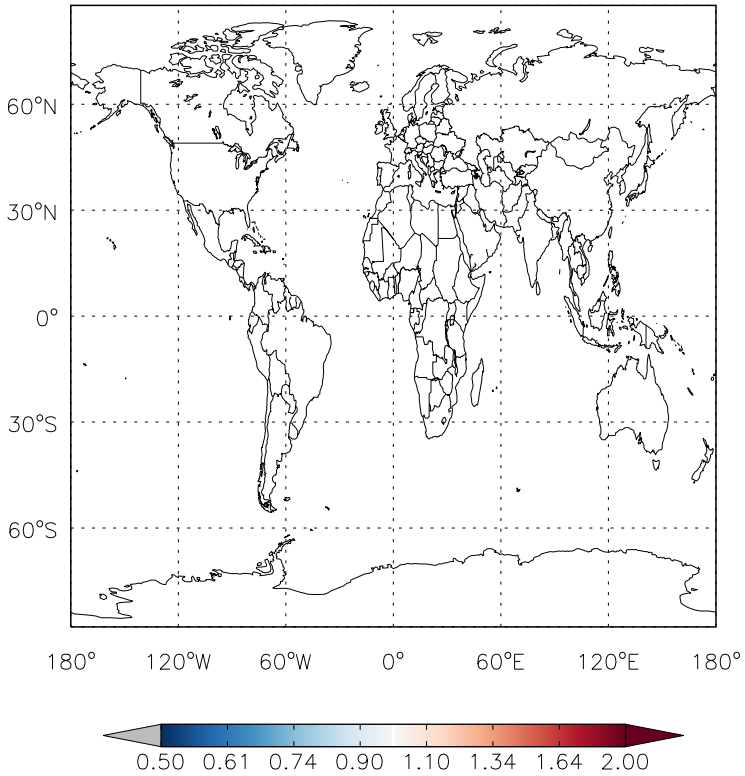
v11-01g-Run0 / v11-01d-Run1

H2402 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

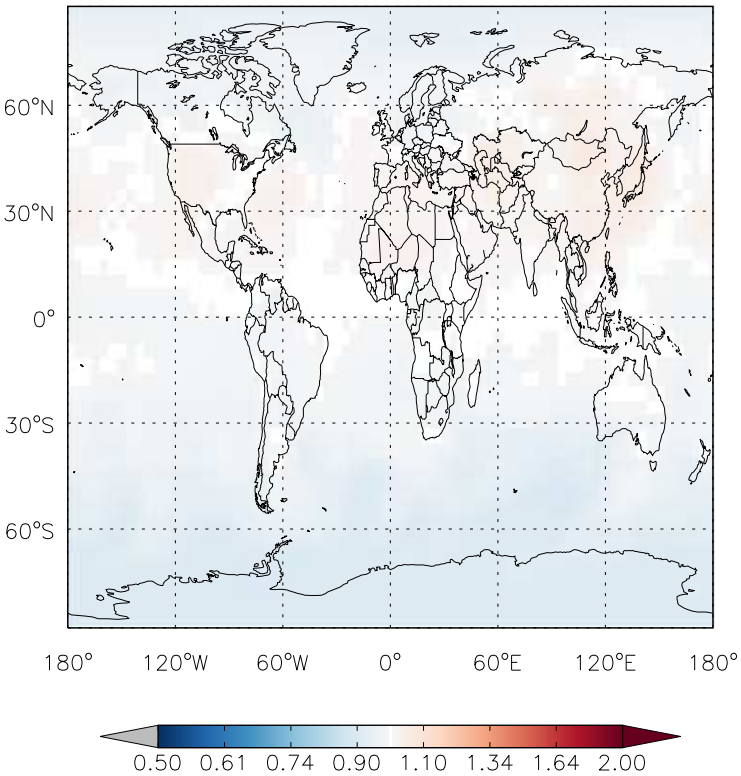
H2402/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

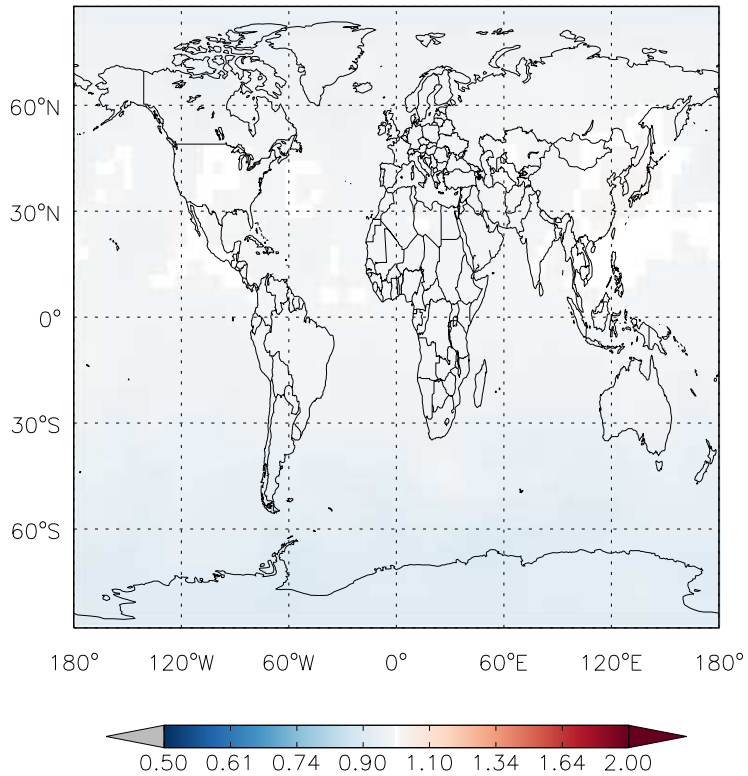
v11-01g-Run0 / v11-01f-geosfp-Run0

CI / Ratio @ Surface for Oct



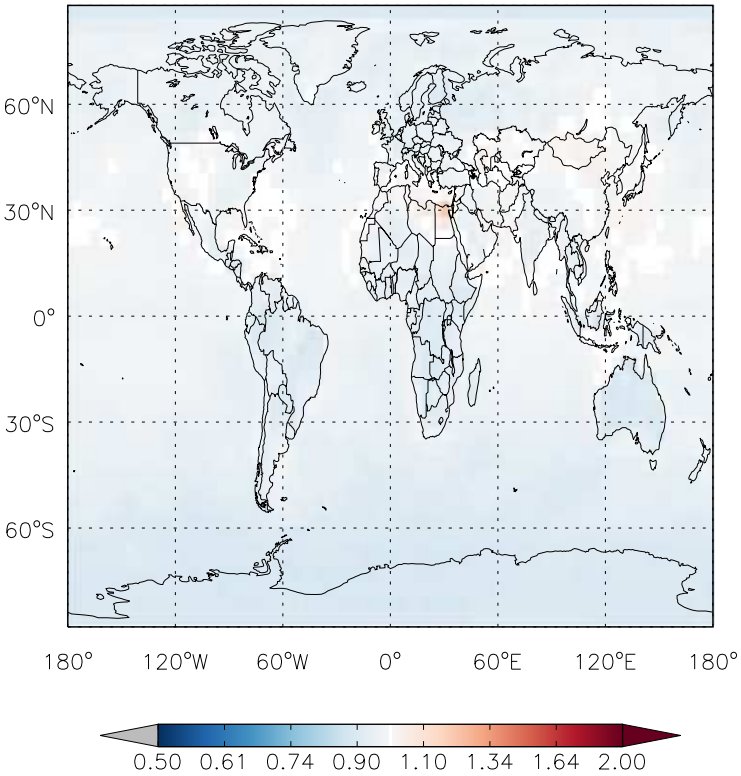
v11-01g-Run0 / v11-01f-geosfp-Run0

CI/ Ratio @ 500 hPa for Oct



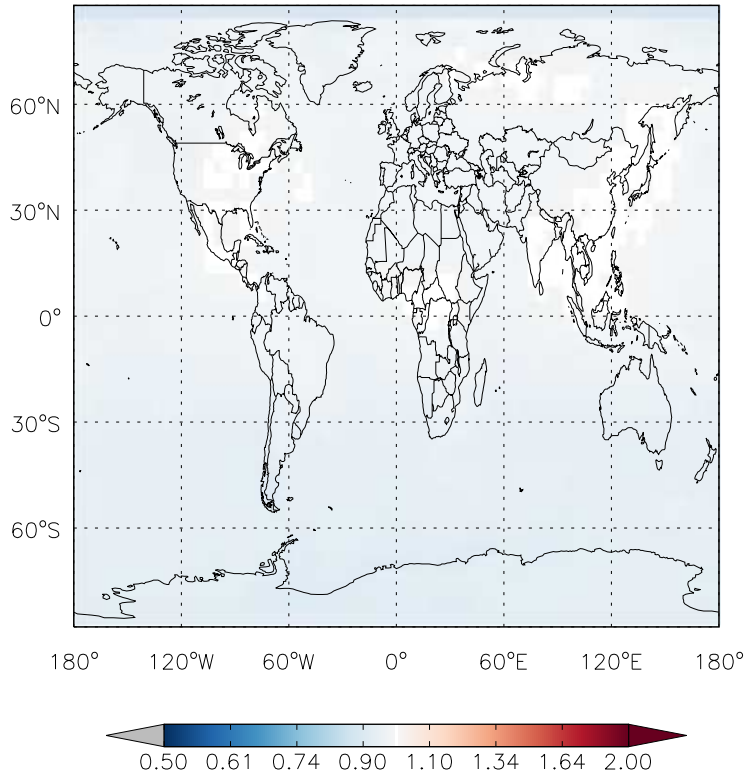
v11-01g-Run0 / v11-01d-Run1

CI / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

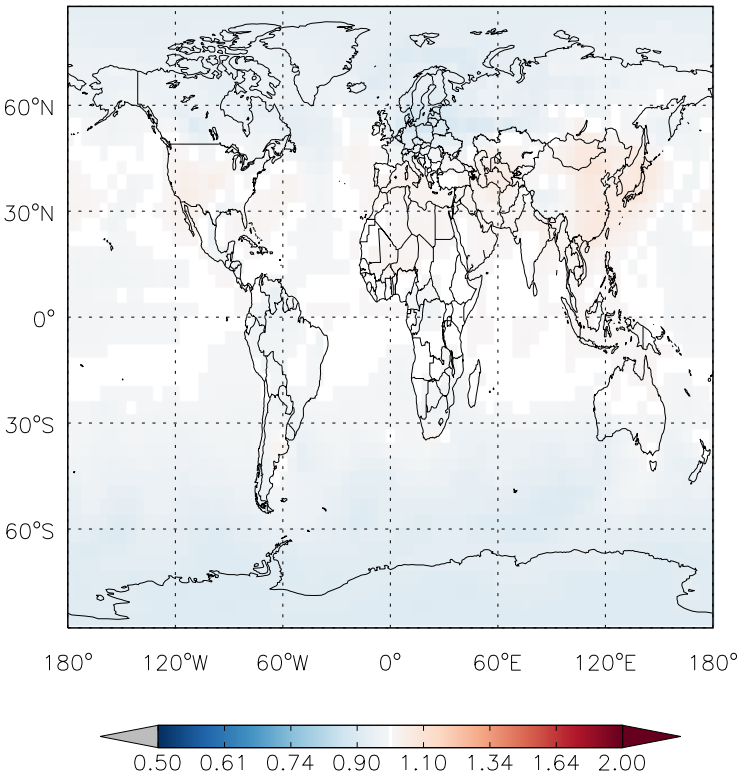
CI/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

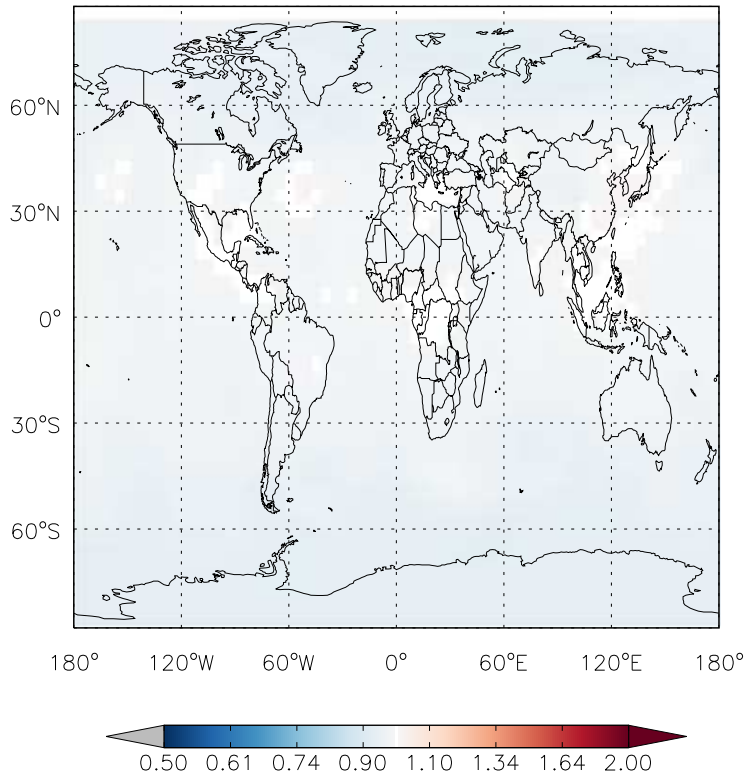
v11-01g-Run0 / v11-01f-geosfp-Run0

ClO / Ratio @ Surface for Oct



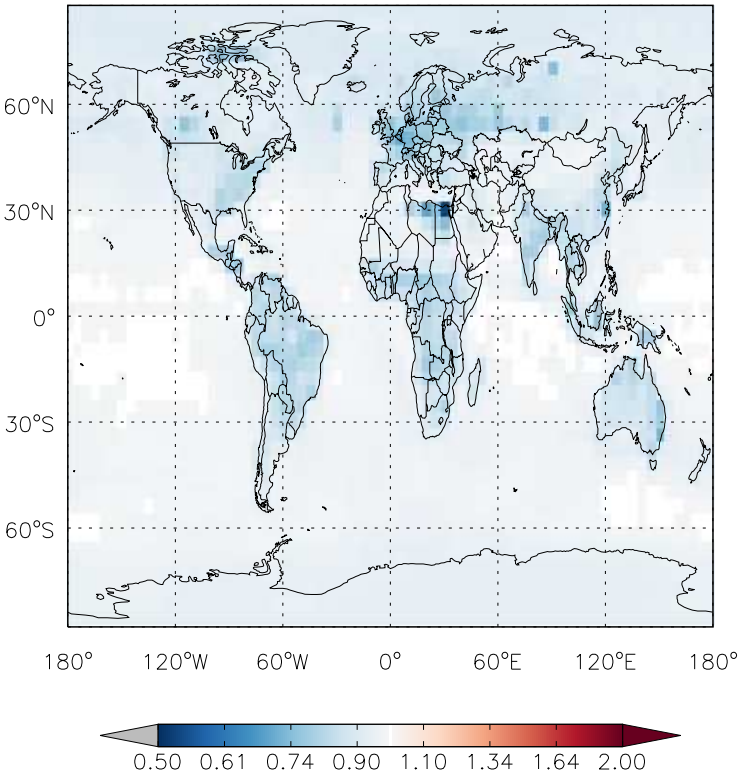
v11-01g-Run0 / v11-01f-geosfp-Run0

ClO/ Ratio @ 500 hPa for Oct



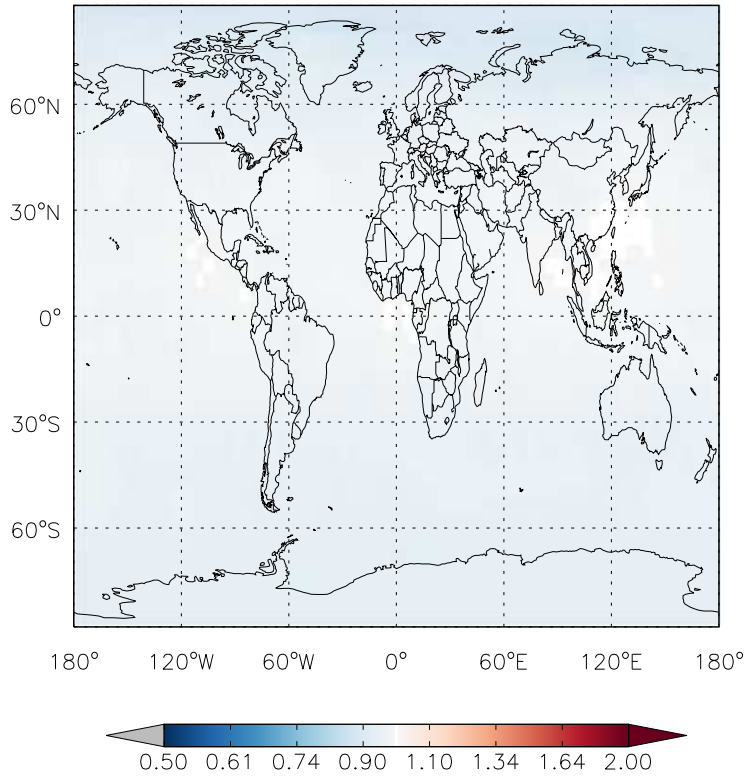
v11-01g-Run0 / v11-01d-Run1

ClO / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

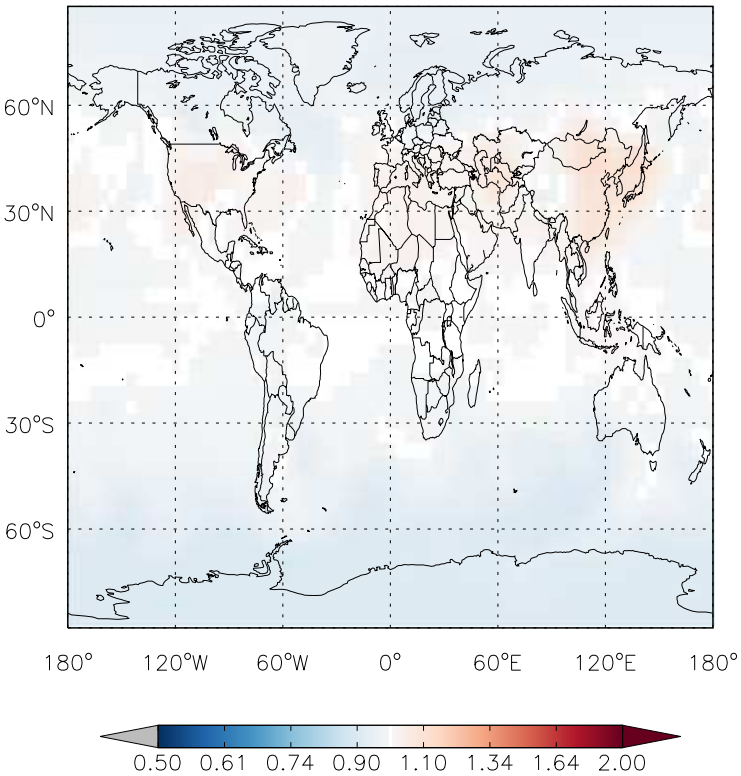
ClO/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

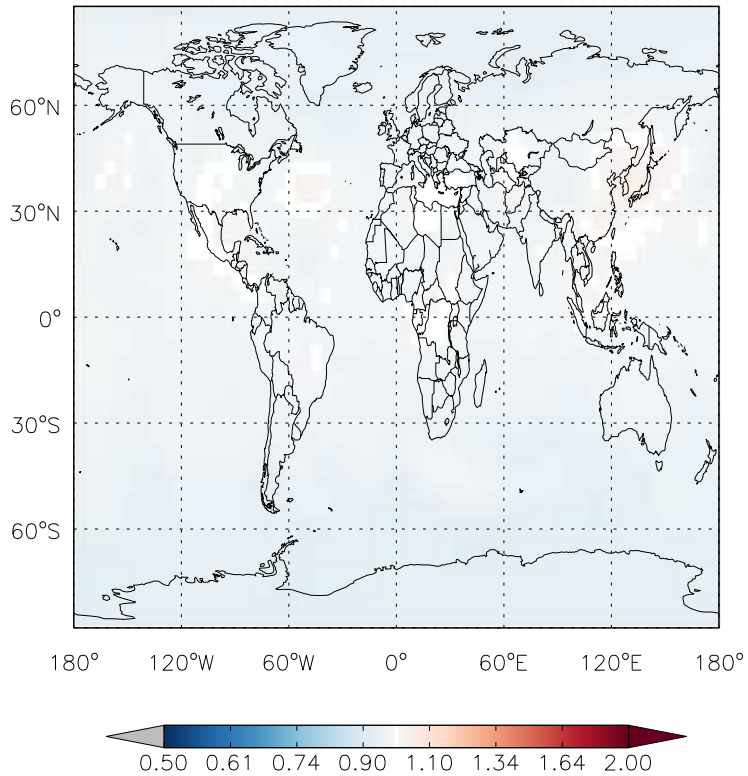
v11-01g-Run0 / v11-01f-geosfp-Run0

HOCl / Ratio @ Surface for Oct



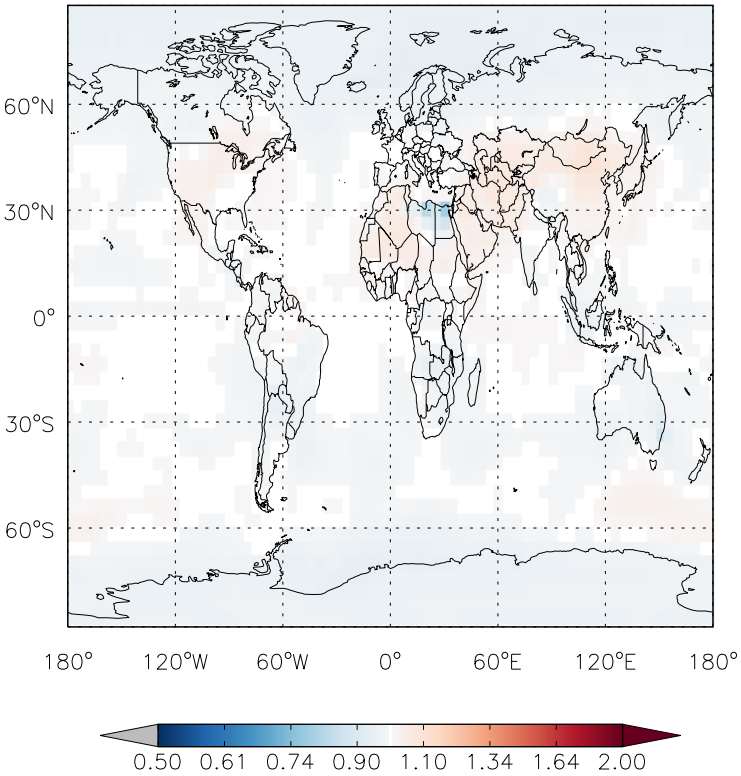
v11-01g-Run0 / v11-01f-geosfp-Run0

HOCl/ Ratio @ 500 hPa for Oct



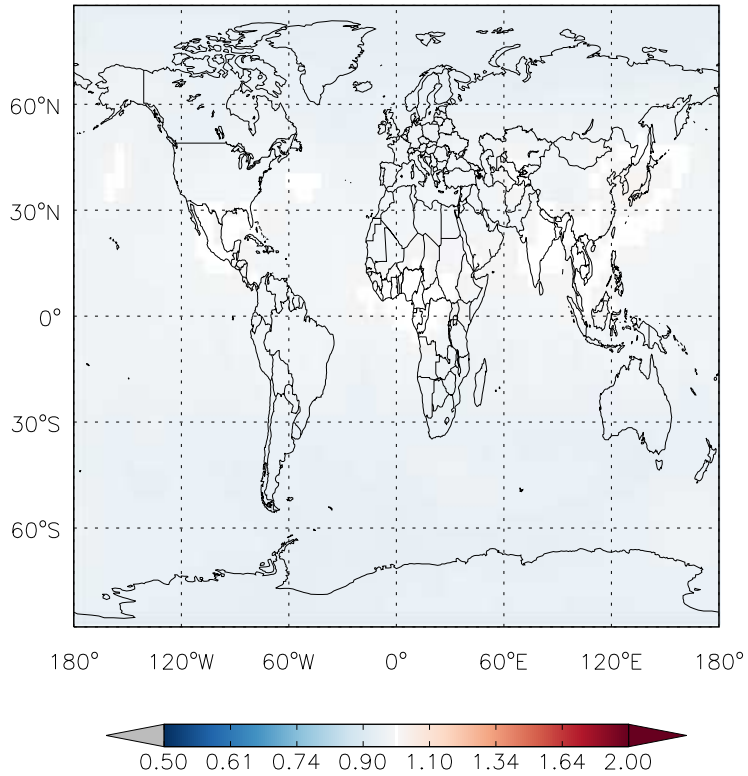
v11-01g-Run0 / v11-01d-Run1

HOCl / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

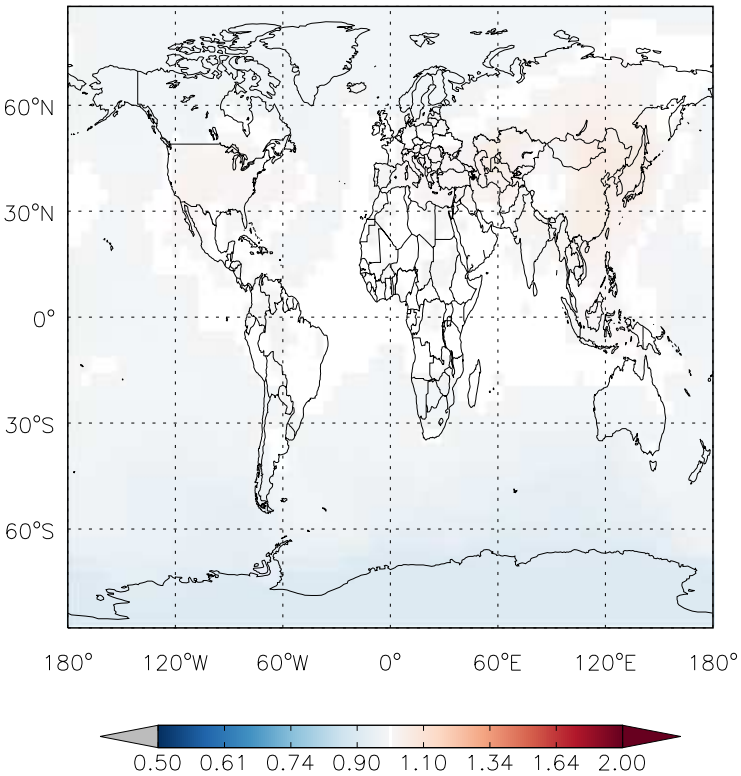
HOCl/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

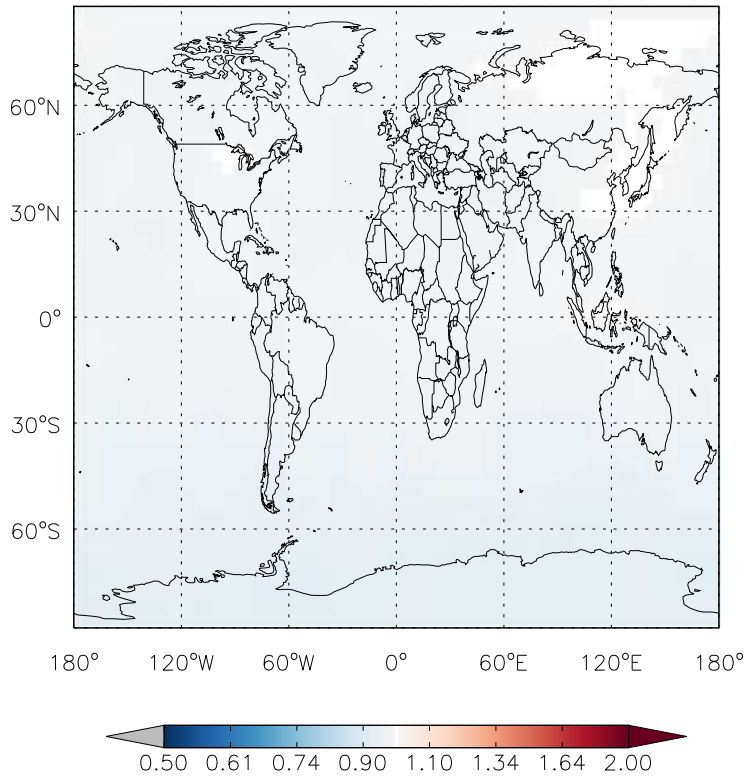
v11-01g-Run0 / v11-01f-geosfp-Run0

CINO3 / Ratio @ Surface for Oct



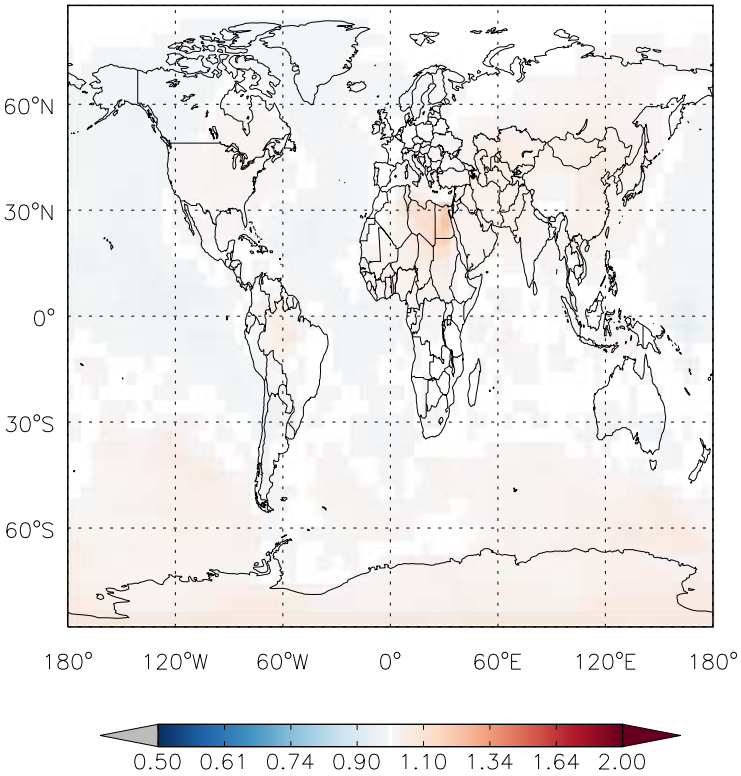
v11-01g-Run0 / v11-01f-geosfp-Run0

CINO3/ Ratio @ 500 hPa for Oct



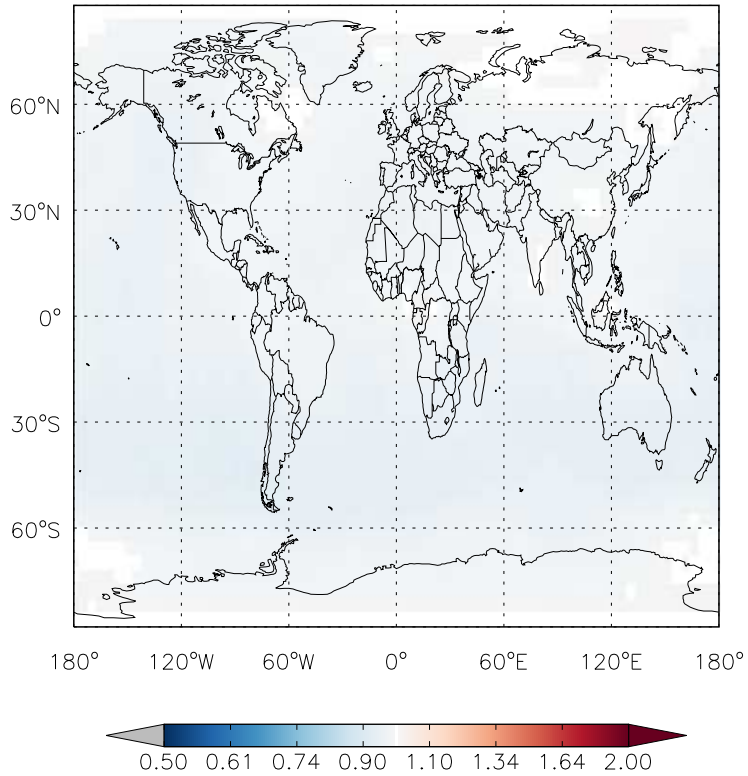
v11-01g-Run0 / v11-01d-Run1

CINO3 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

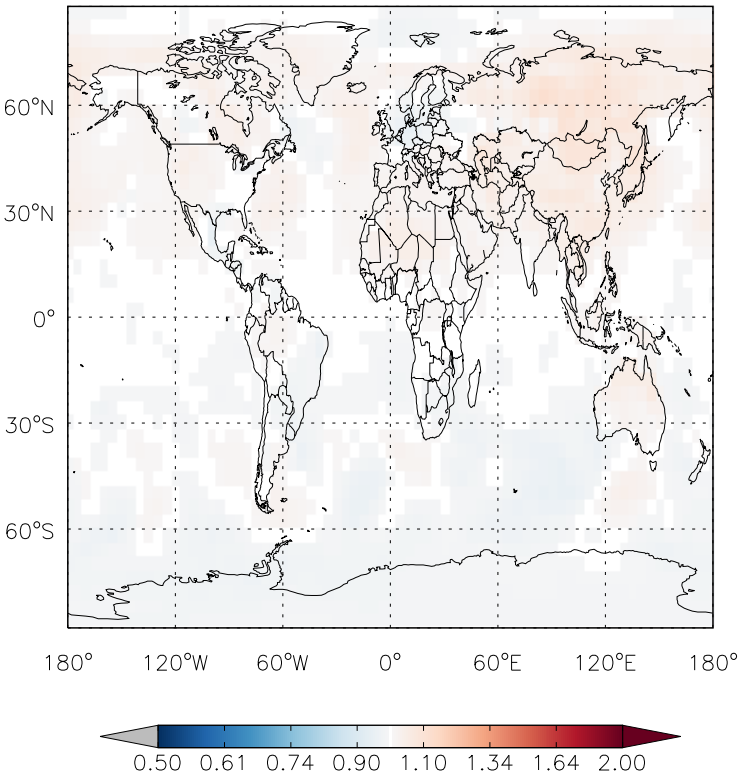
CINO3/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

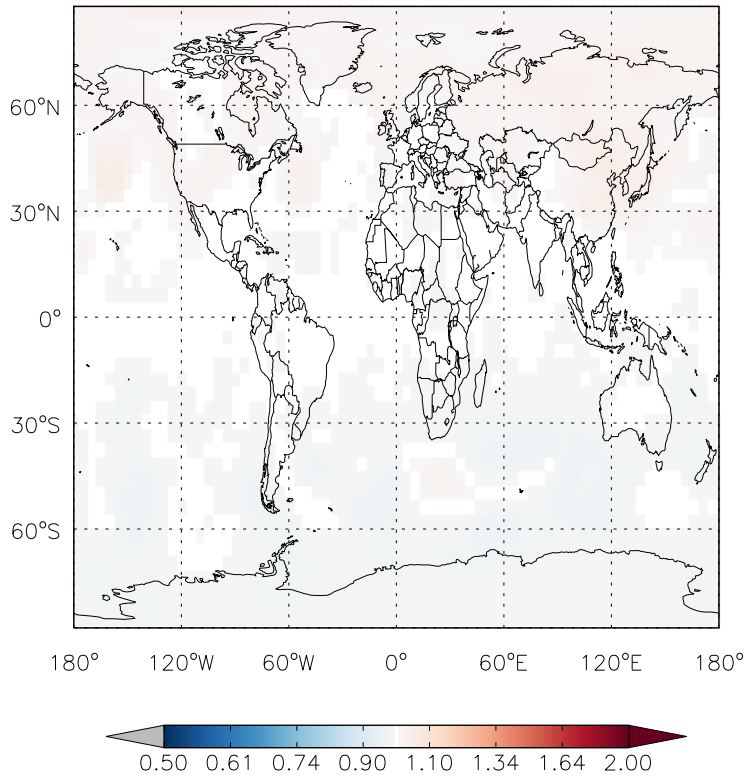
v11-01g-Run0 / v11-01f-geosfp-Run0

OH / Ratio @ Surface for Oct



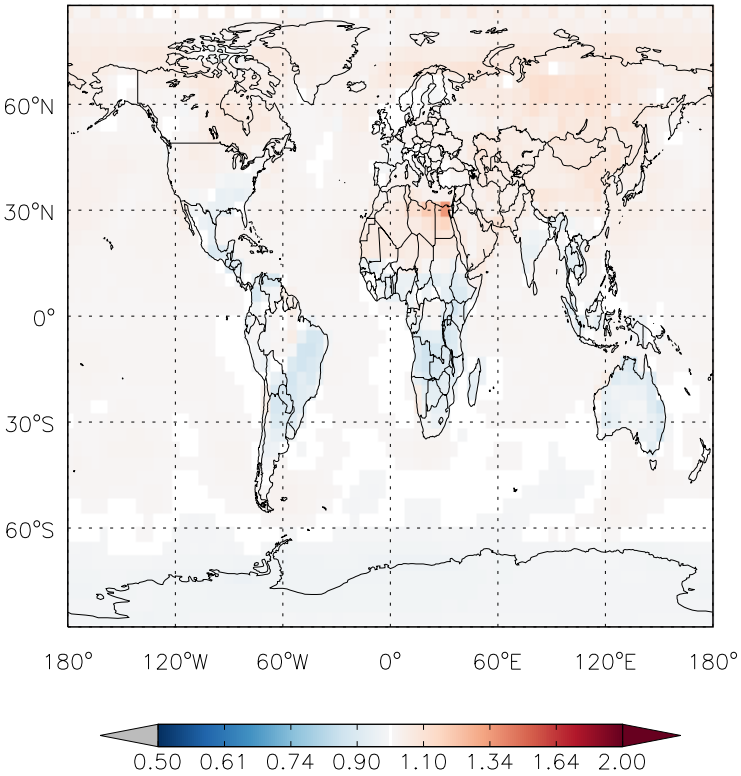
v11-01g-Run0 / v11-01f-geosfp-Run0

OH/ Ratio @ 500 hPa for Oct



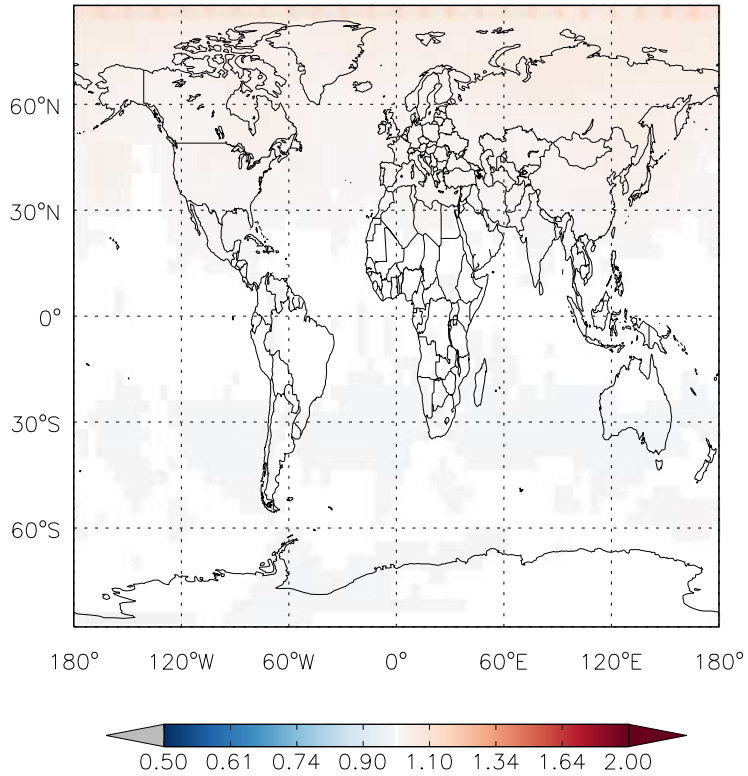
v11-01g-Run0 / v11-01d-Run1

OH / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

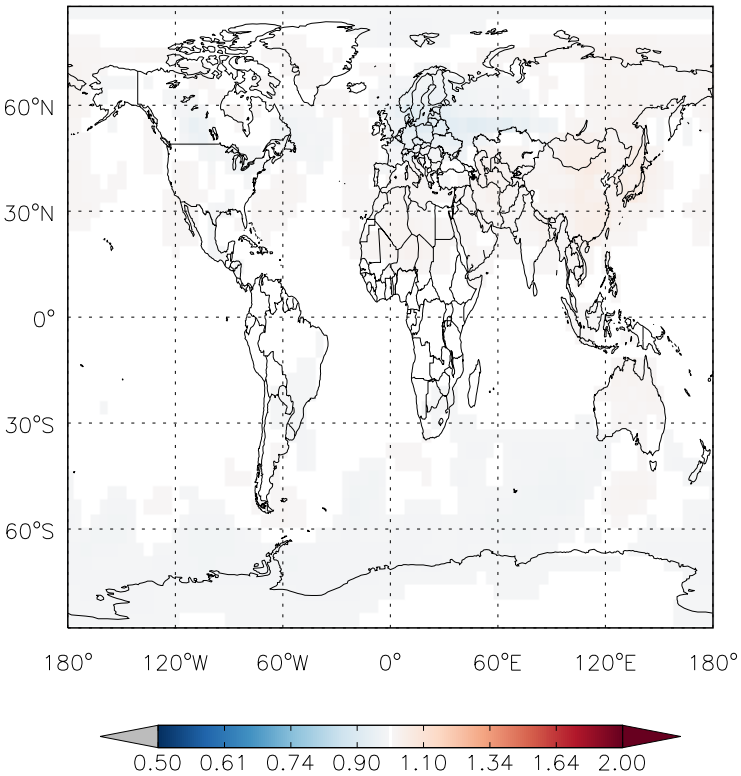
OH/ Ratio @ 500 hPa for Oct



GEOS-Chem Ratio Maps at surface and 500 hPa

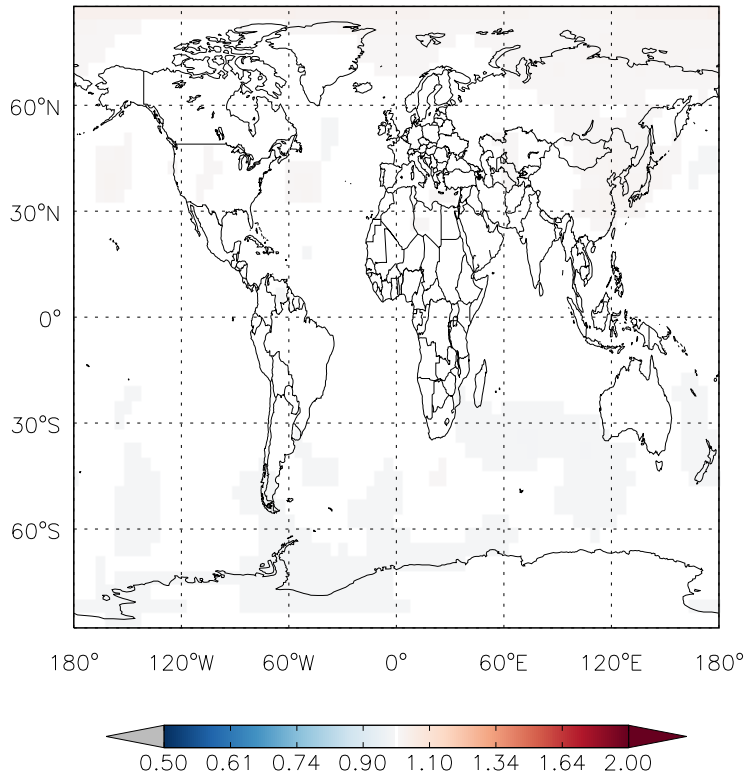
v11-01g-Run0 / v11-01f-geosfp-Run0

HO2 / Ratio @ Surface for Oct



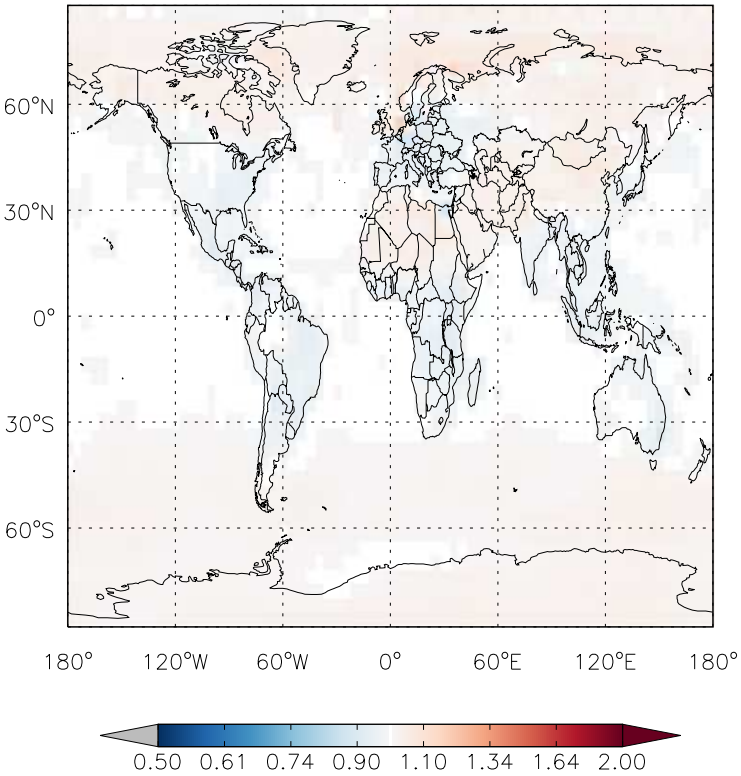
v11-01g-Run0 / v11-01f-geosfp-Run0

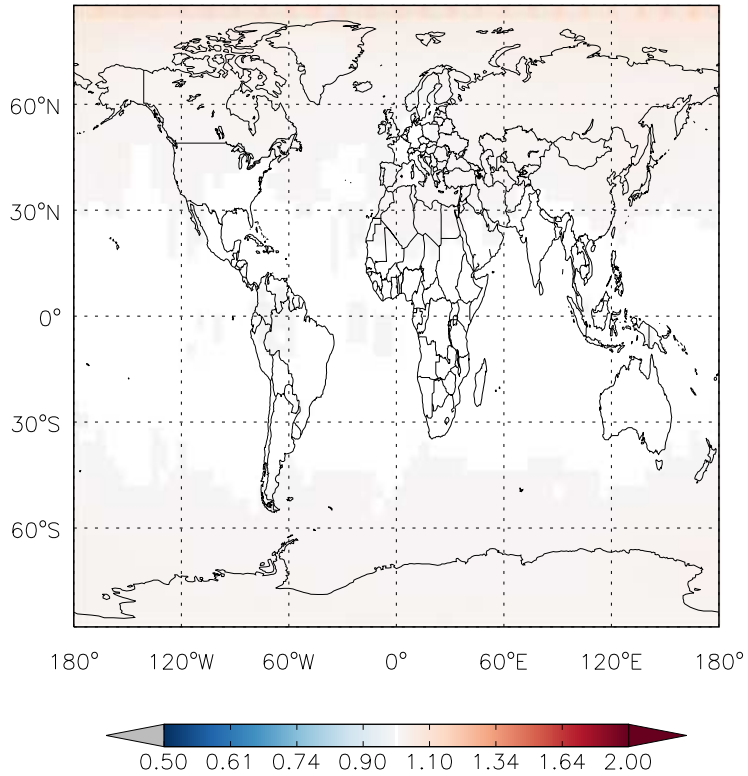
HO2/ Ratio @ 500 hPa for Oct



v11-01g-Run0 / v11-01d-Run1

HO2 / Ratio @ Surface for Oct



v11-01g-Run0 / v11-01d-Run1

HO2/ Ratio @ 500 hPa for Oct