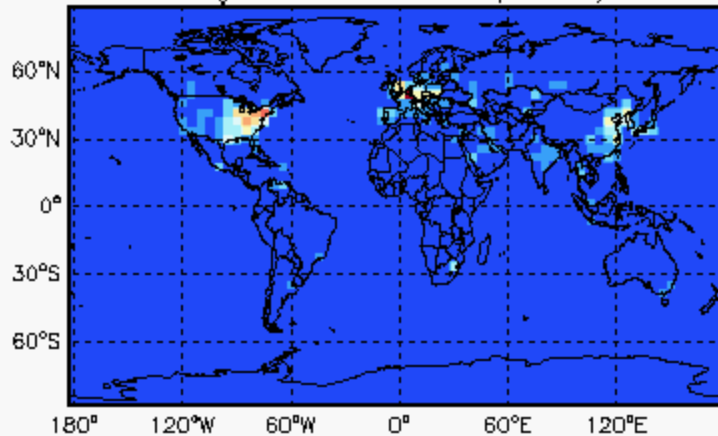


Comparison of anthro NO_x & CO emissions for the following runs (March 2001):

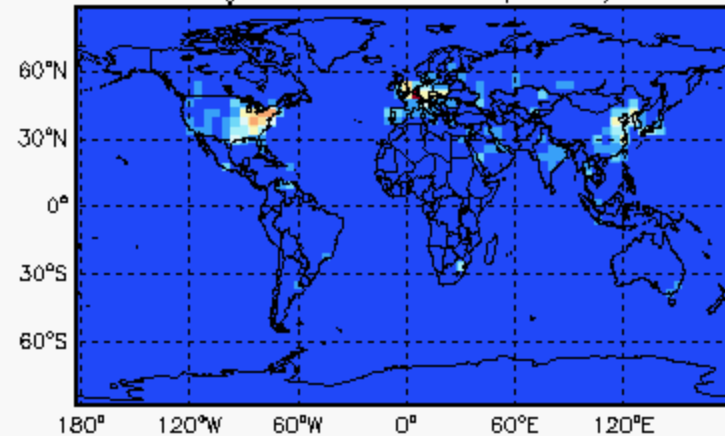
1. GEOS–Chem v7-02-03 **without MEGAN**
(fossil fuel scale year 1995)
2. GEOS–Chem v7-04-02 **without MEGAN**
(fossil fuel scale year 1995)
3. GEOS–Chem v7-04-02 **without MEGAN**
(fossil fuel scale year 1998)
4. GEOS–Chem v7-04-02 **with MEGAN**
(fossil fuel scale year 1998)

v7-02-03 Mar 2001 NOx



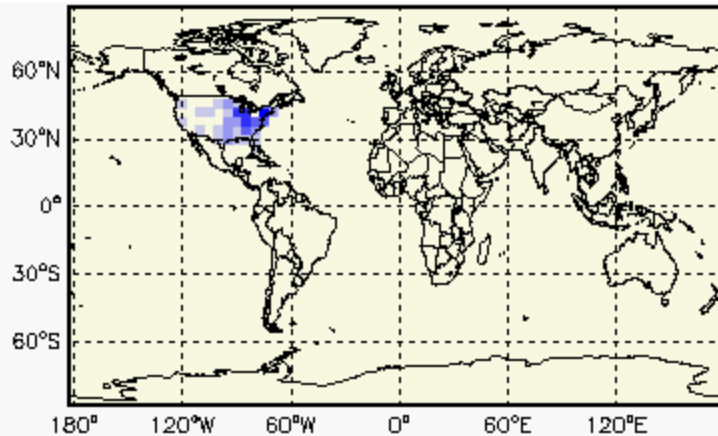
0.00e+00 2.13e+11 4.25e+11 [molec/cm²/s]

v7-04-02-nomegan-1995ffy Mar 2001 NOx



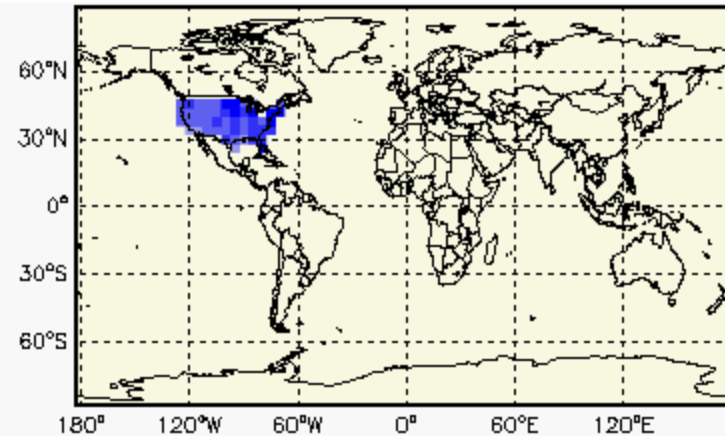
0.00e+00 2.13e+11 4.25e+11 [molec/cm

v7-04-02 – v7-02-03 abs diff



-1.28e+10 0.00e+00 1.28e+10 [molec/cm²/s]

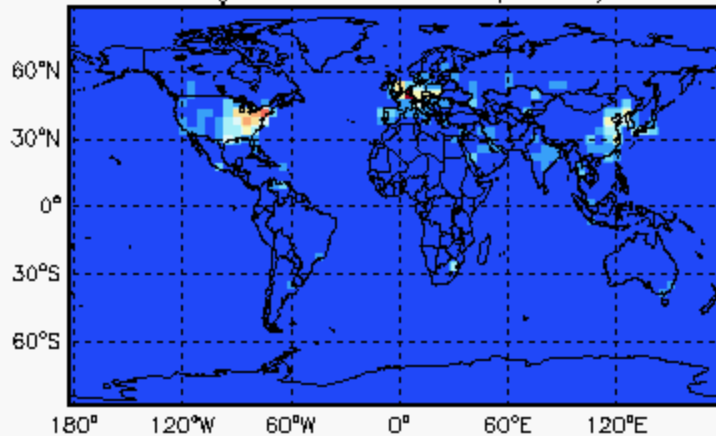
v7-04-02 – v7-02-03 % diff



-4.73 0.00 4.73 [%]

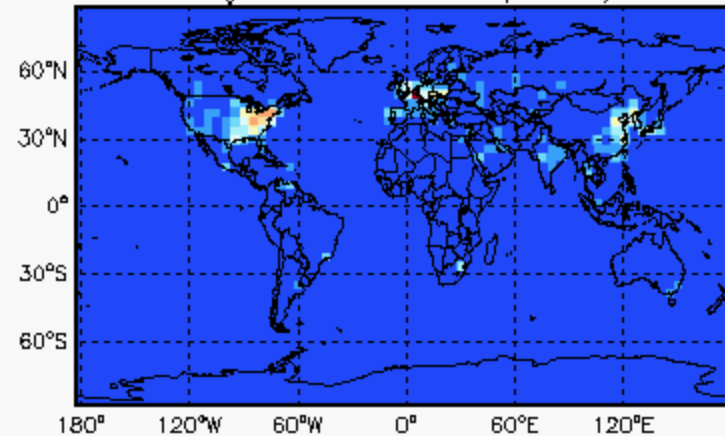
NOTE: The differences shown on this page reflect a bug fix that was made in between v7-02-03 and v7-04-02. In v7-02-03 the EPA/NEI99 emissions module incorrectly diagnosed weekdays & weekends. This was fixed in v7-04-02. **ALSO NOTE:** The NOx fossil fuel scale factors are based on total CO2 fuel use.

v7-02-03 Mar 2001 NOx



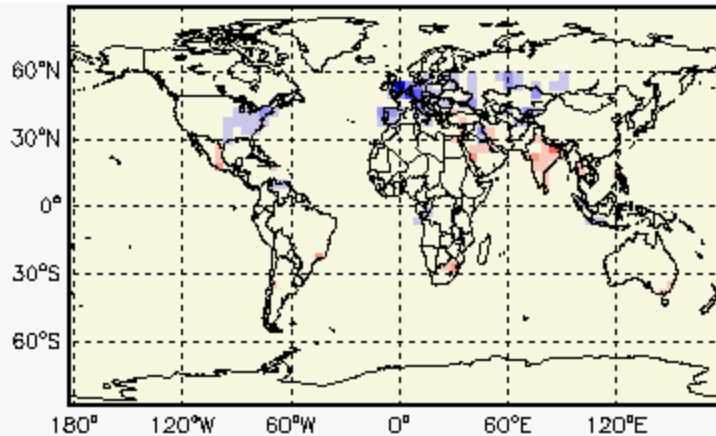
0.00e+00 2.13e+11 4.25e+11 [molec/cm²/s]

v7-04-02-nomegan-1998ffy Mar 2001 NOx



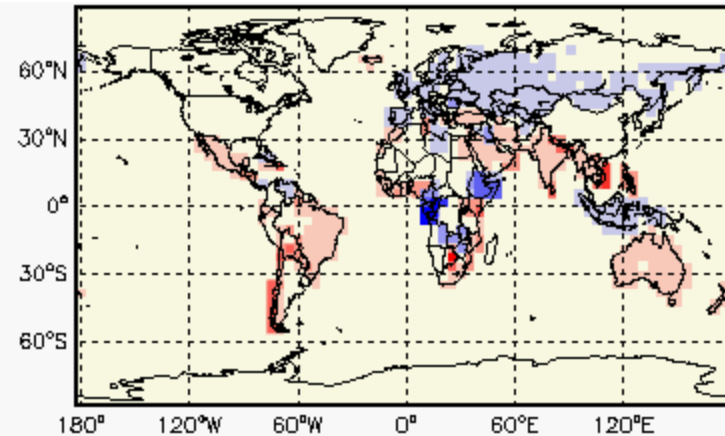
0.00e+00 2.13e+11 4.25e+11 [molec/cm

v7-04-02 – v7-02-03 abs diff



-4.15e+10 0.00e+00 4.15e+10 [molec/cm²/s]

v7-04-02 – v7-02-03 % diff

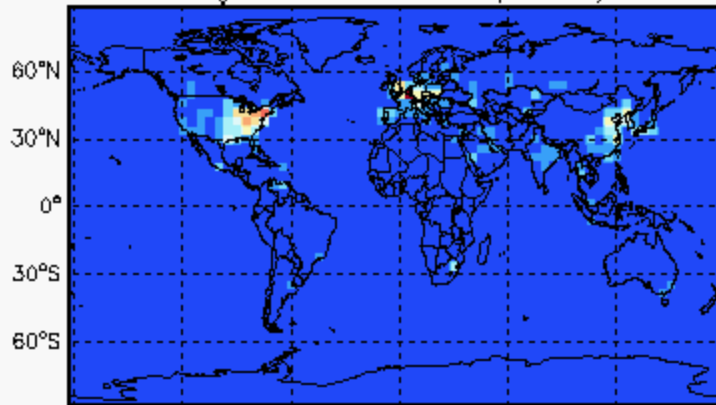


-78 0 78 [%]

NOTE: The differences shown on this page reflect 2 things: (1) the weekday-weekend bug fix in the EPA/NEI99 emissions code over the continental US and (2) the change of fossil fuel scale factors from 1995 to 1998.

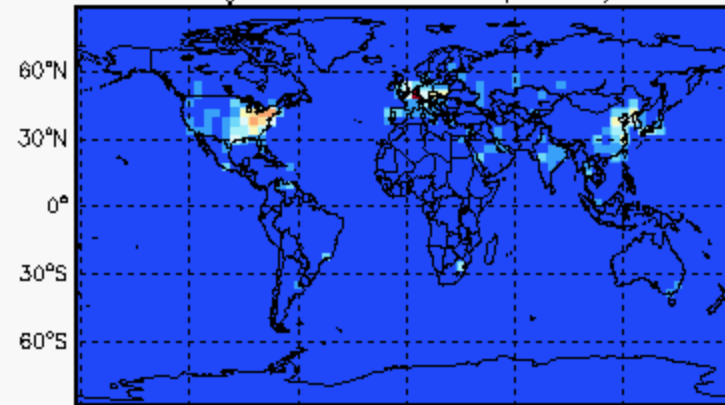
ALSO NOTE: The NOx fossil fuel scale factors are based on total CO2 fuel use.

v7-02-03 Mar 2001 NOx



0.00e+00 2.13e+11 4.25e+11 [molec/cm²/s]

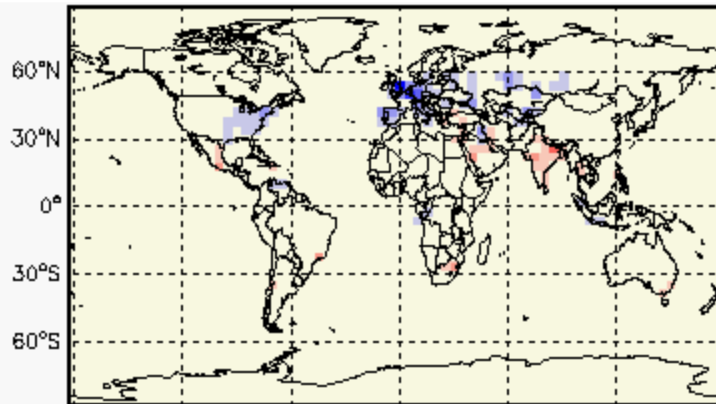
v7-04-02-megan-1998ffy Mar 2001 NOx



0.00e+00 2.13e+11 4.25e+11 [molec/cm

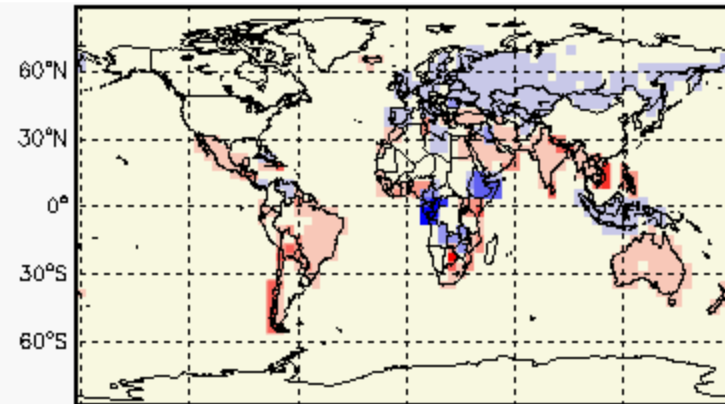
h.

v7-04-02 – v7-02-03 abs diff



-4.15e+10 0.00e+00 4.15e+10 [molec/cm²/s]

v7-04-02 – v7-02-03 % diff

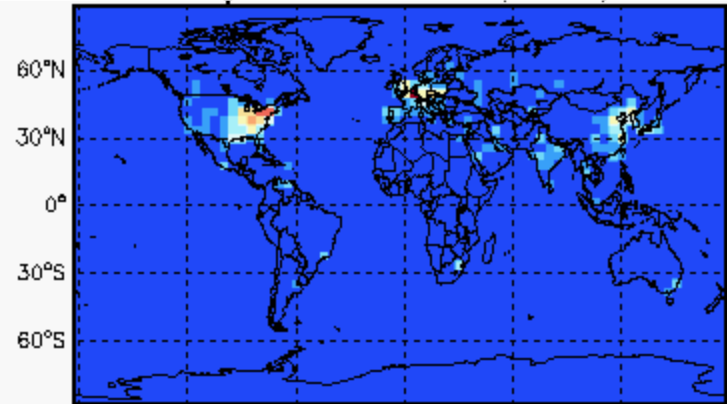
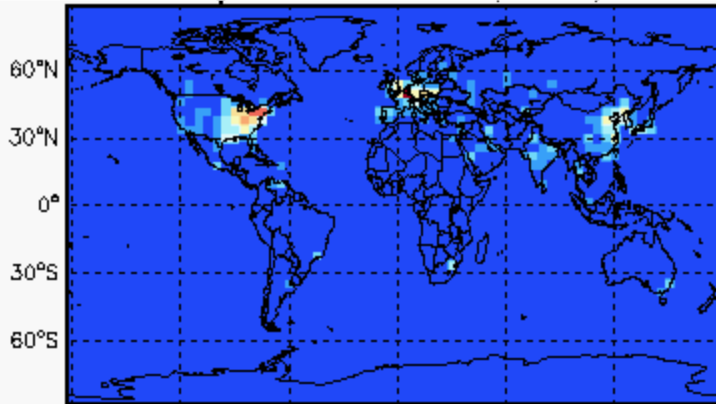


-78 0 78 [%]

NOTE: The differences shown on this page reflect 2 things: (1) the weekday-weekend bug fix in the EPA/NEI99 emissions code over the continental US and (2) the change of fossil fuel scale factors from 1995 to 1998. This plot should be identical to the one on the preceding page, as v7-04-02 runs with & without MEGAN use the same anthro emissions.

v7-04-02-nomegan-1998ffy Mar 2001 NOx

v7-04-02-megan-1998ffy Mar 2001 NOx



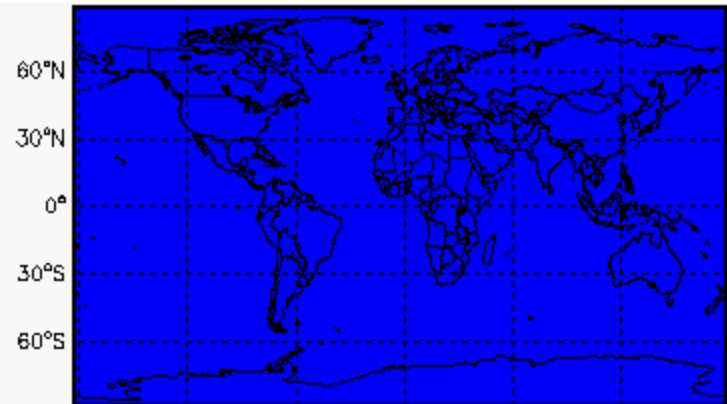
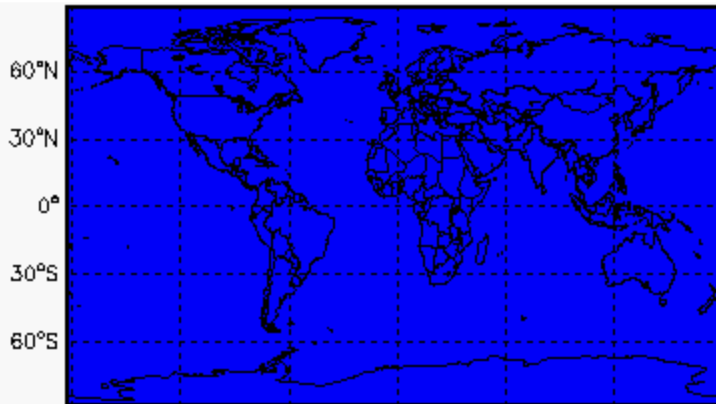
0.00e+00 1.98e+11 3.97e+11 [molec/cm²/s]

0.00e+00 1.98e+11 3.97e+11 [molec/cm²/s]

17

With – Without MEGAN abs diff

With – Without MEGAN % diff

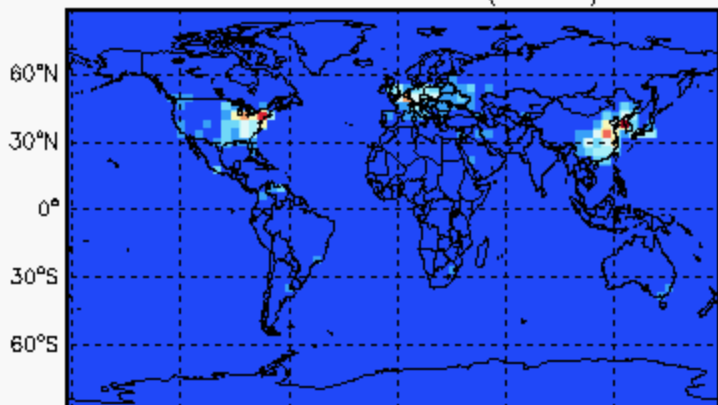


0.00e+00 [molec/cm²/s]

0.00e+00 [%]

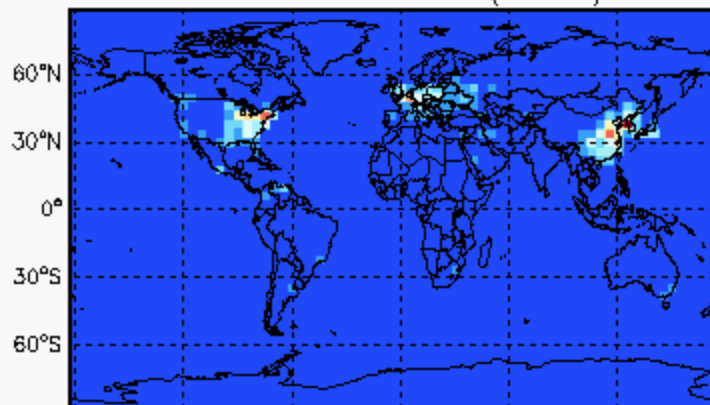
NOTE: The anthropogenic NOx emissions in the v7-04-02 run with MEGAN and v7-04-02 run without MEGAN are identical.

v7-02-03 Mar 2001 CO



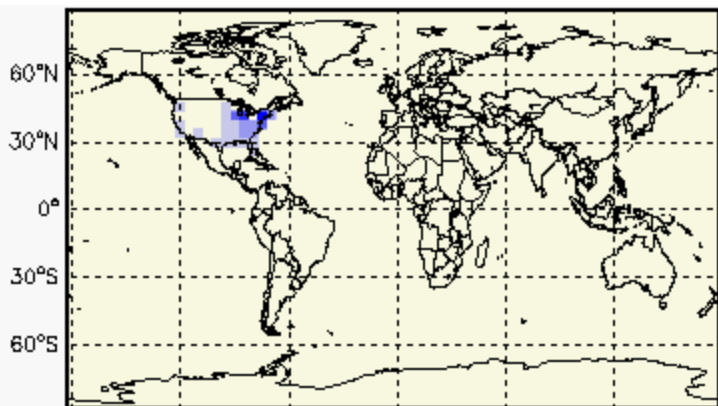
0.00e+00 2.00e+12 4.01e+12 [molec/cm²/s]

v7-04-02-nomegan-1995ffy Mar 2001 CO



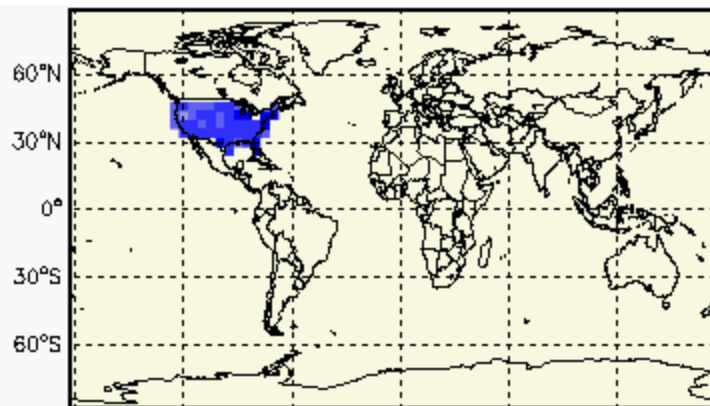
0.00e+00 2.00e+12 4.01e+12 [molec/cm

v7-04-02 – v7-02-03 abs diff



-2.41e+11 0.00e+00 2.41e+11 [molec/cm²/s]

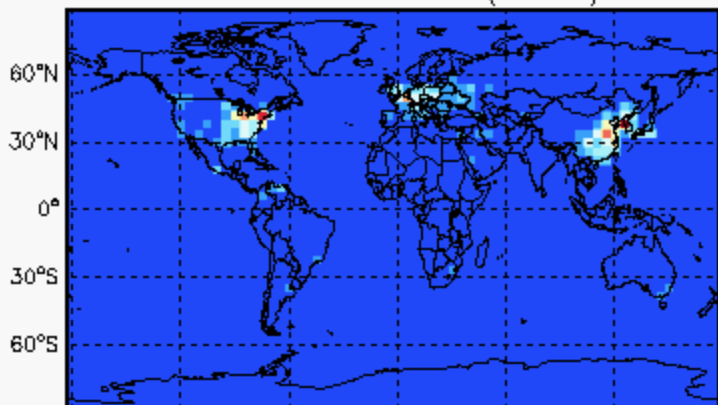
v7-04-02 – v7-02-03 % diff



-7 0 7 [%]

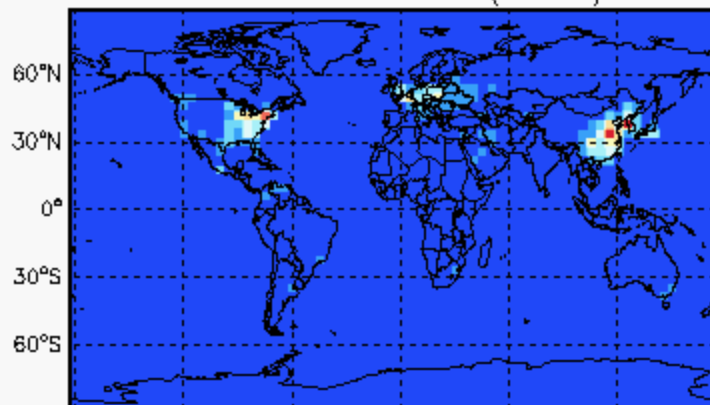
NOTE: The differences shown on this page reflect a bug fix that was made in between v7-02-03 and v7-04-02. In v7-02-03 the EPA/NEI99 emissions module incorrectly diagnosed weekdays & weekends. This was fixed in v7-04-02. **ALSO NOTE:** The CO (and Hydrocarbon) fossil fuel scale factors are based on liquid CO₂ fuel use.

v7-02-03 Mar 2001 CO



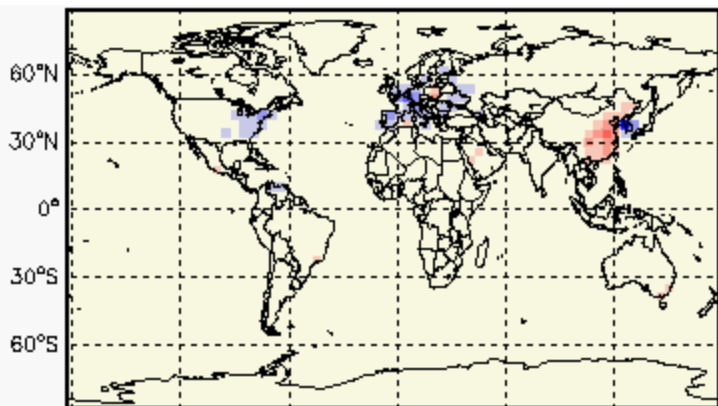
0.00e+00 2.00e+12 4.01e+12 [molec/cm²/s]

v7-04-02-nomegan-1998ffy Mar 2001 CO



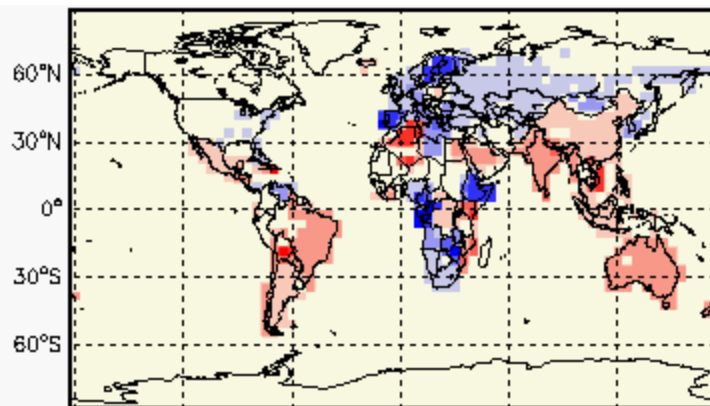
0.00e+00 2.00e+12 4.01e+12 [molec/cm

v7-04-02 – v7-02-03 abs diff



-6.68e+11 0.00e+00 6.68e+11 [molec/cm²/s]

v7-04-02 – v7-02-03 % diff

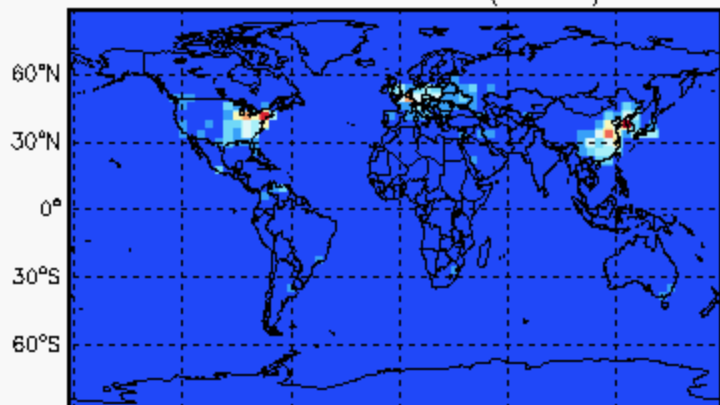


-66 0 66 [%]

NOTE: The differences shown on this page reflect 2 things: (1) the weekday-weekend bug fix in the EPA/NEI99 emissions code over the continental US and (2) the change of fossil fuel scale factors from 1995 to 1998.

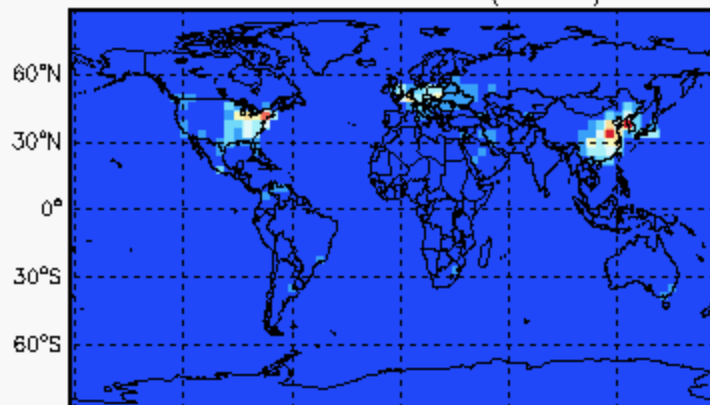
ALSO NOTE: The CO (and Hydrocarbon) fossil fuel scale factors are based on liquid CO₂ fuel use.

v7-02-03 Mar 2001 CO



0.00e+00 2.00e+12 4.01e+12 [molec/cm²/s]

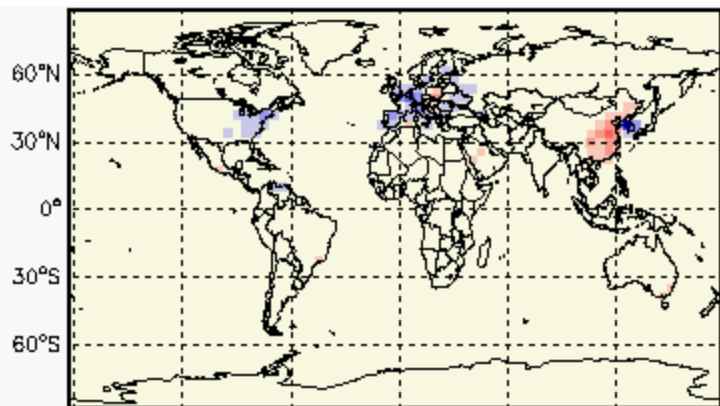
v7-04-02-megan-1998ffy Mar 2001 CO



0.00e+00 2.00e+12 4.01e+12 [molec/cm

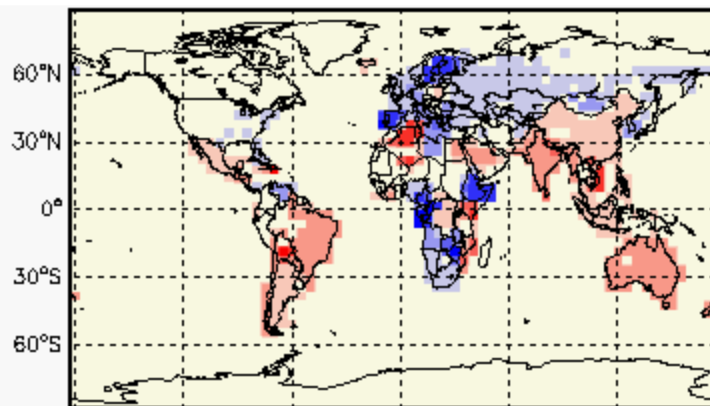
h.

v7-04-02 – v7-02-03 abs diff



-6.68e+11 0.00e+00 6.68e+11 [molec/cm²/s]

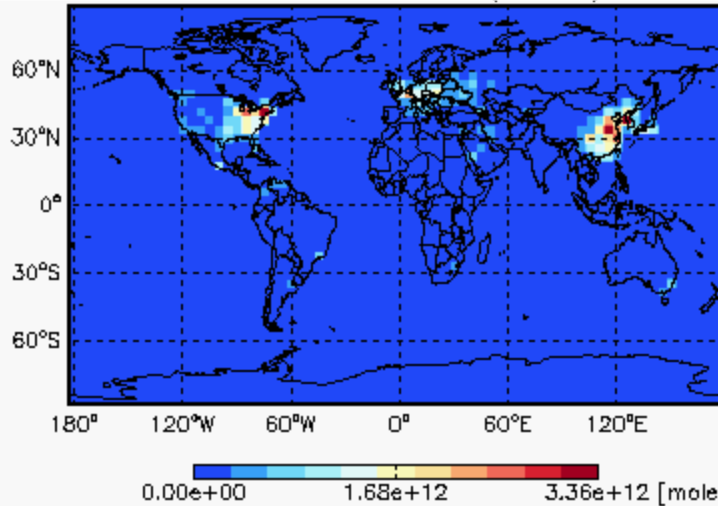
v7-04-02 – v7-02-03 % diff



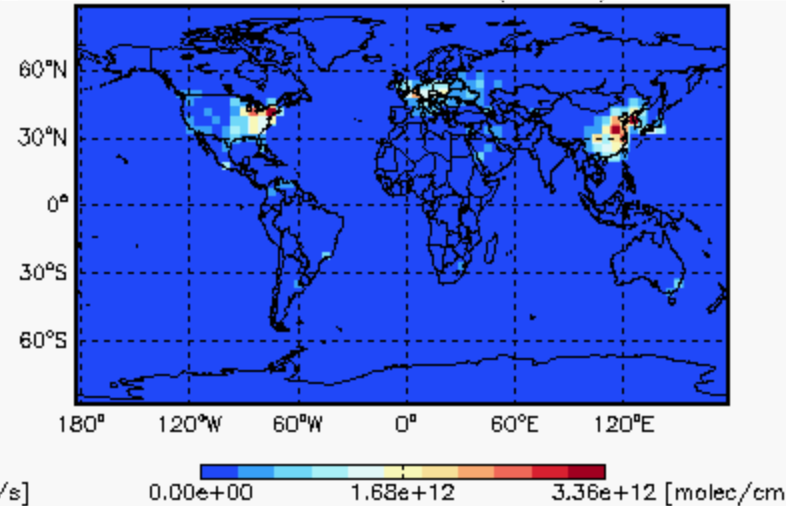
-66 0 66 [%]

NOTE: The differences shown on this page reflect 2 things: (1) the weekday-weekend bug fix in the EPA/NEI99 emissions code over the continental US and (2) the change of fossil fuel scale factors from 1995 to 1998. This plot should be identical to the one on the preceding page, as v7-04-02 runs with & without MEGAN use the same anthro emissions.

v7-04-02-nomegan-1998ffy Mar 2001 CO

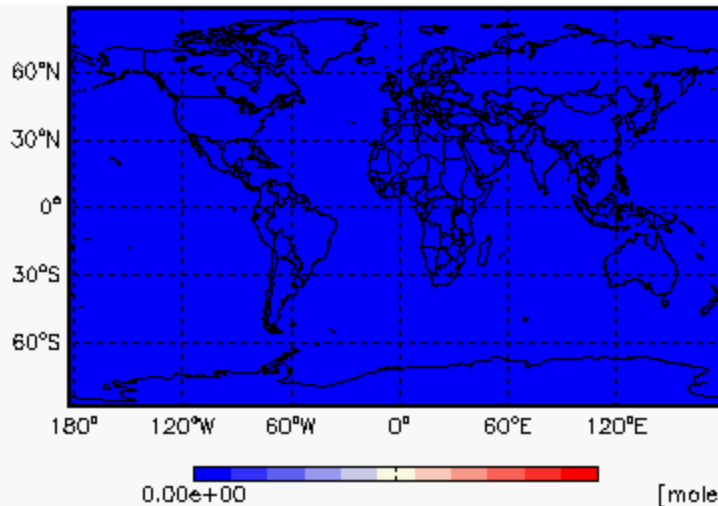


v7-04-02-megan-1998ffy Mar 2001 CO

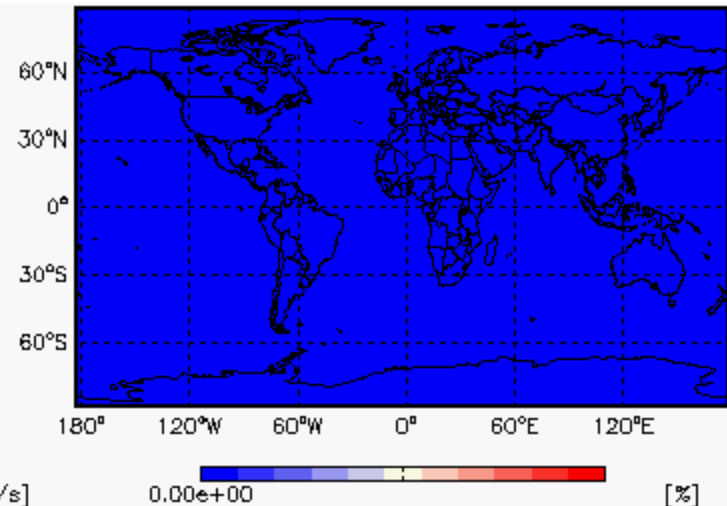


17

With – Without MEGAN abs diff



With – Without MEGAN % diff



NOTE: The anthropogenic CO emissions in the v7-04-02 run with MEGAN and v7-04-02 run without MEGAN are identical.
ALSO NOTE: This should be the same for the other anthropogenically-emitted hydrocarbons (not shown here).