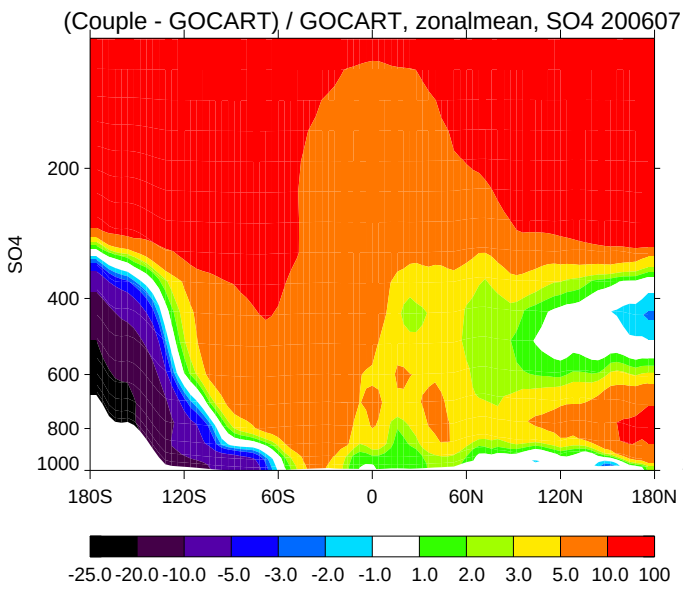
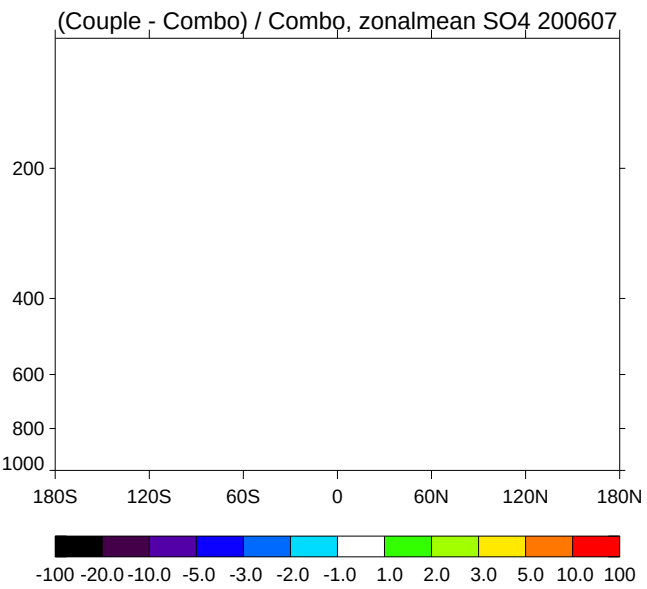

(Couple - GOCART) / GOCART, zonalmean, SO4 200607
SO4
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-25.0 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


(Couple - Combo) / Combo, zonalmean SO4 200607
200
400
600
800
1000
180S
120S
60S
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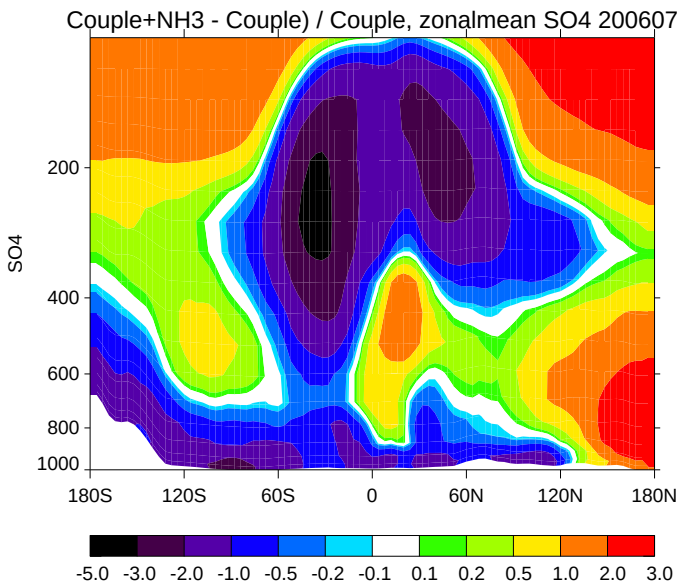
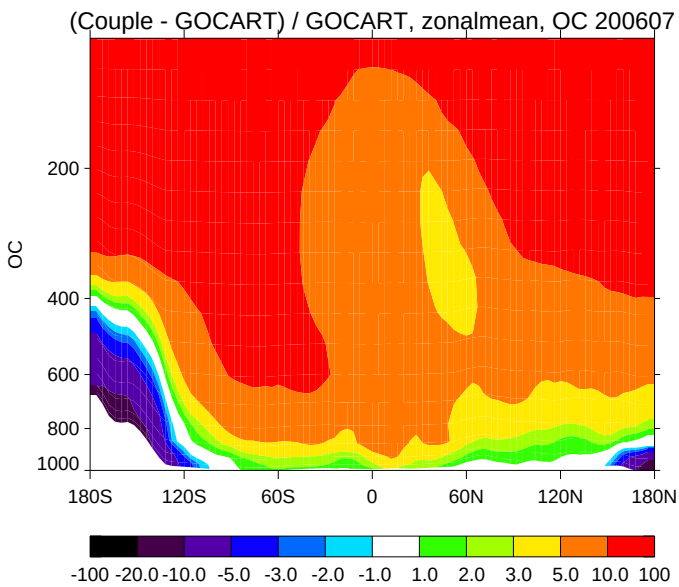
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


Couple+NH3 - Couple) / Couple, zonalmean SO4 200607
SO4
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-5.0 -3.0 -2.0 -1.0 -0.5 -0.2 -0.1 0.1 0.2 0.5 1.0 2.0 3.0


(Couple - GOCART) / GOCART, zonalmean, OC 200607
OC
200
400
600
800
1000
180S
120S
60S
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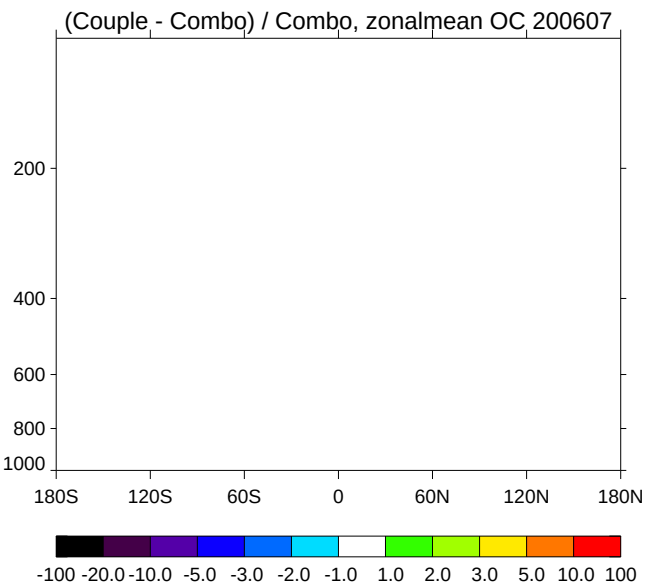
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


(Couple - Combo) / Combo, zonalmean OC 200607
200
400
600
800
1000
180S
120S
60S
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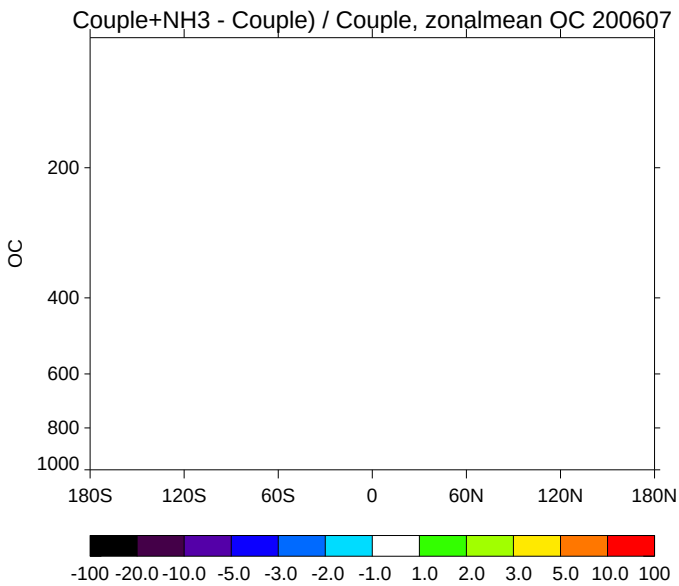
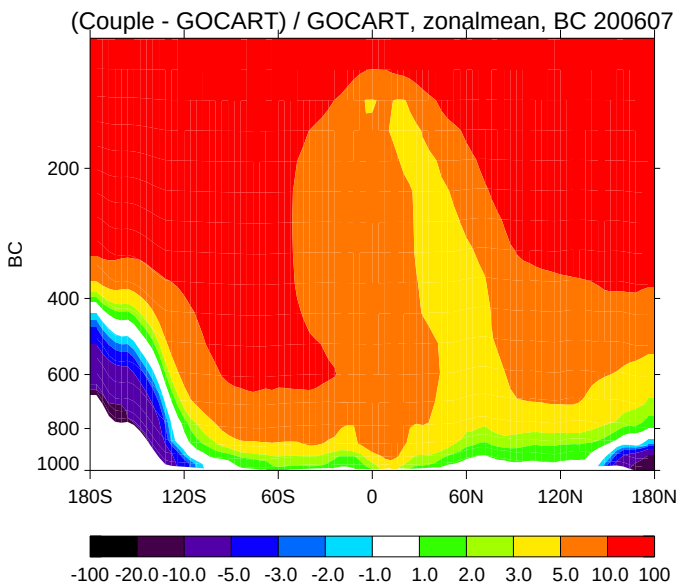
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


Couple+NH3 - Couple) / Couple, zonalmean OC 200607
OC
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


(Couple - GOCART) / GOCART, zonalmean, BC 200607
BC
200
400
600
800
1000
180S
120S
60S
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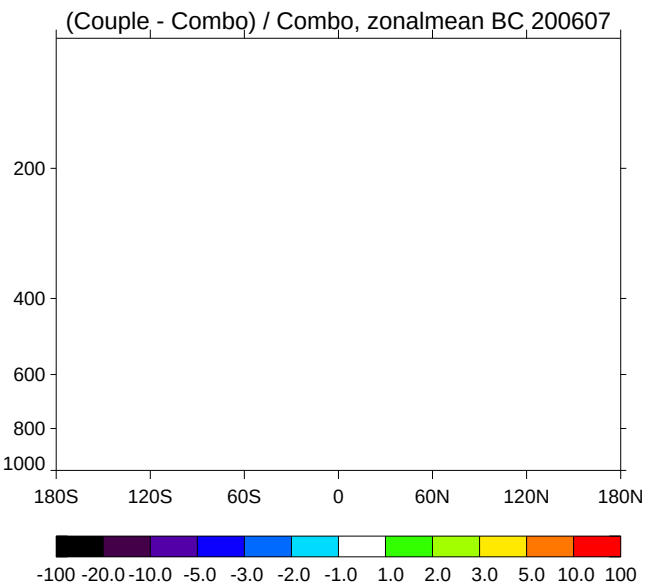
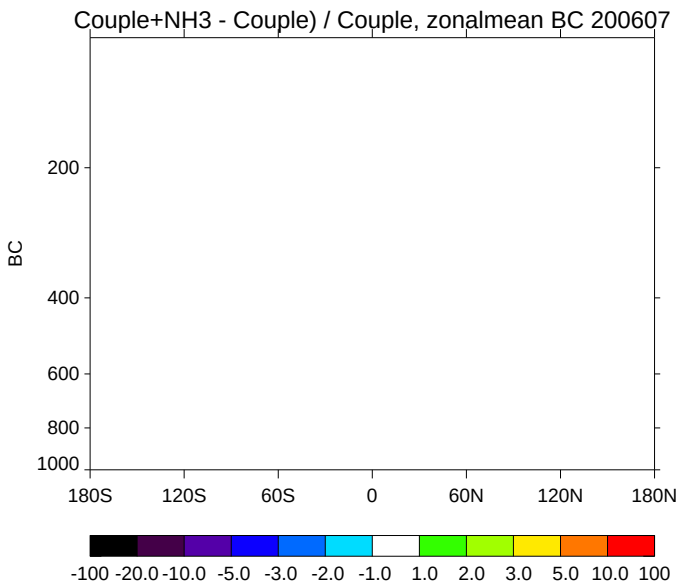
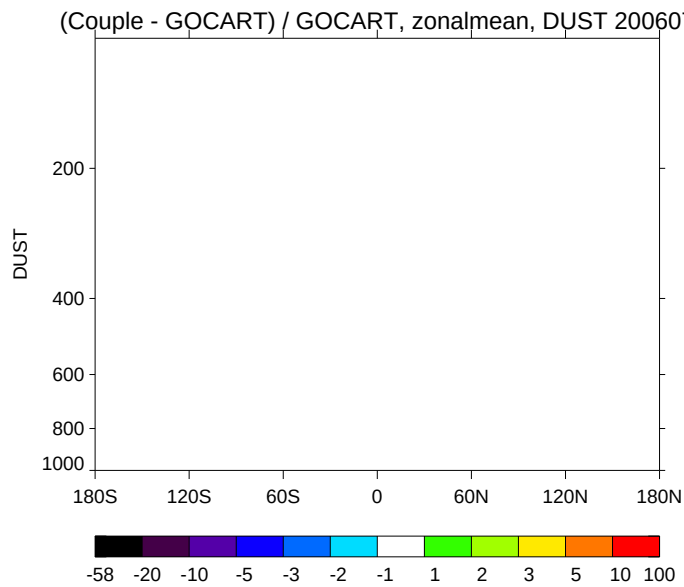
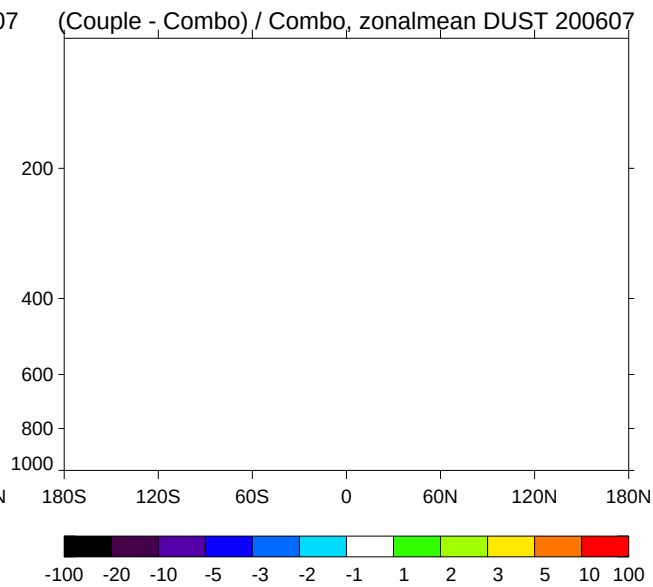
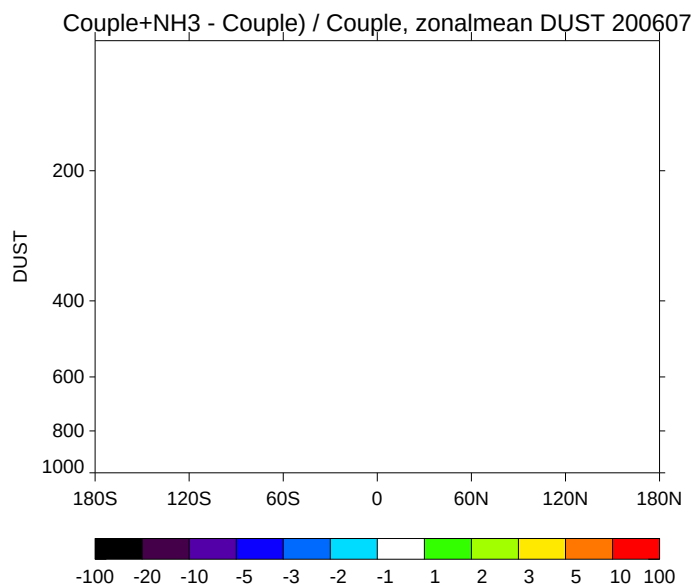
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100

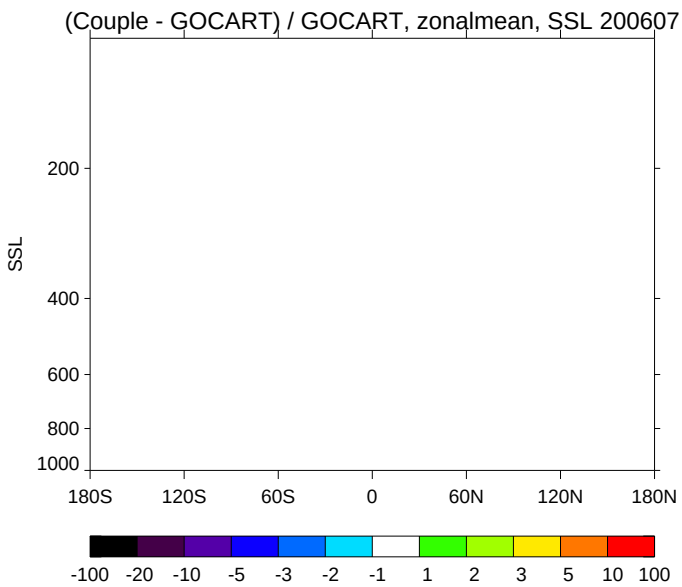

(Couple - Combo) / Combo, zonalmean BC 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100

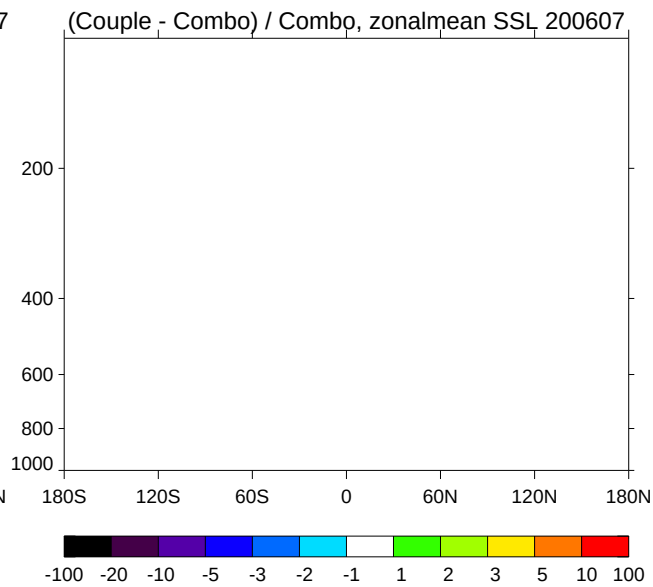

Couple+NH3 - Couple) / Couple, zonalmean BC 200607
BC
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100

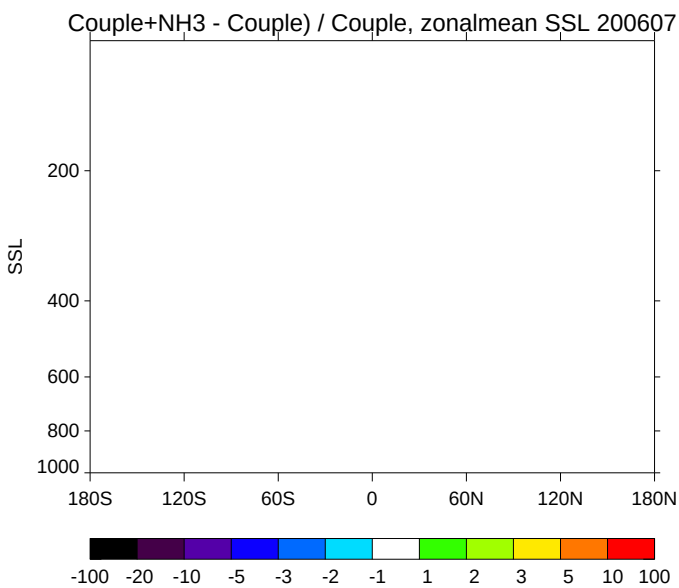

(Couple - GOCART) / GOCART, zonalmean, DUST 200607
DUST
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-58 -20 -10 -5 -3 -2 -1 1 2 3 5 10 100

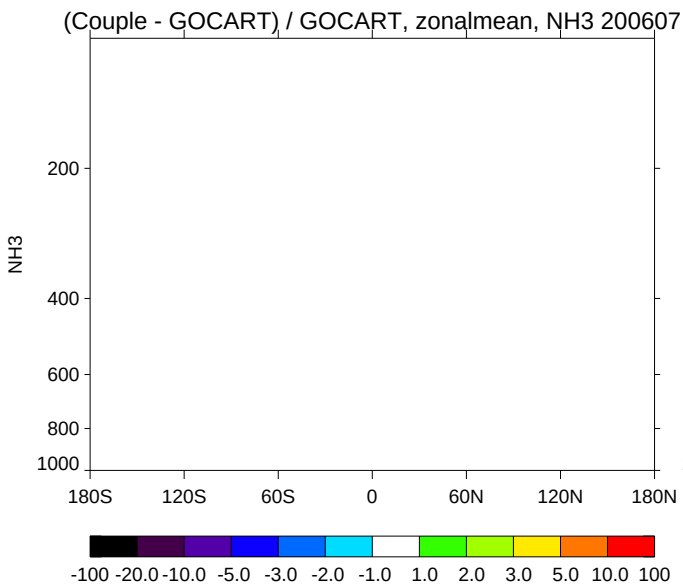

(Couple - Combo) / Combo, zonalmean DUST 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20 -10 -5 -3 -2 -1 1 2 3 5 10 100

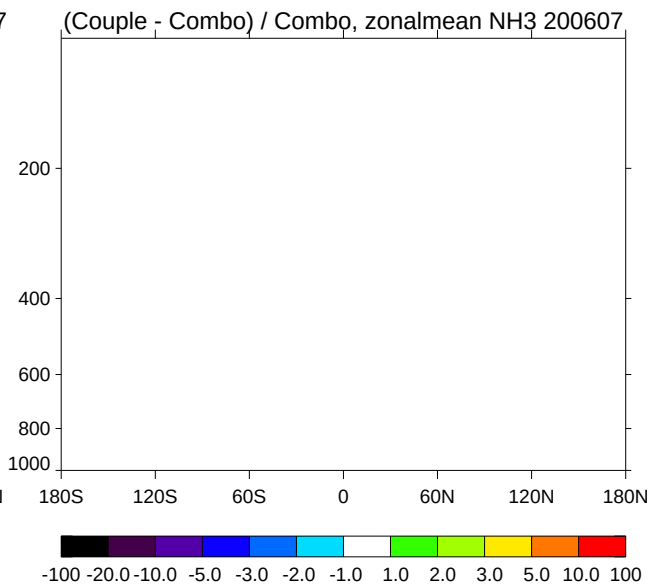

Couple+NH3 - Couple) / Couple, zonalmean DUST 200607
DUST
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20 -10 -5 -3 -2 -1 1 2 3 5 10 100

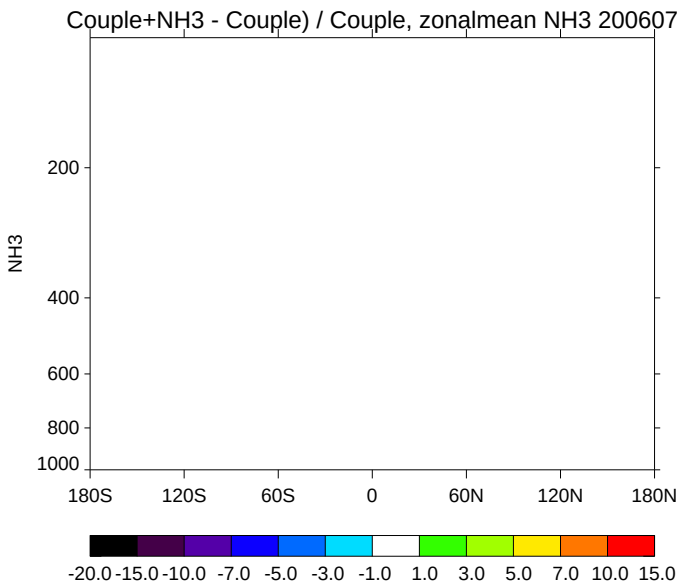

(Couple - GOCART) / GOCART, zonalmean, SSL 200607
SSL
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100
-20
-10
-5
-3
-2
-1
1
2
3
5
10
100

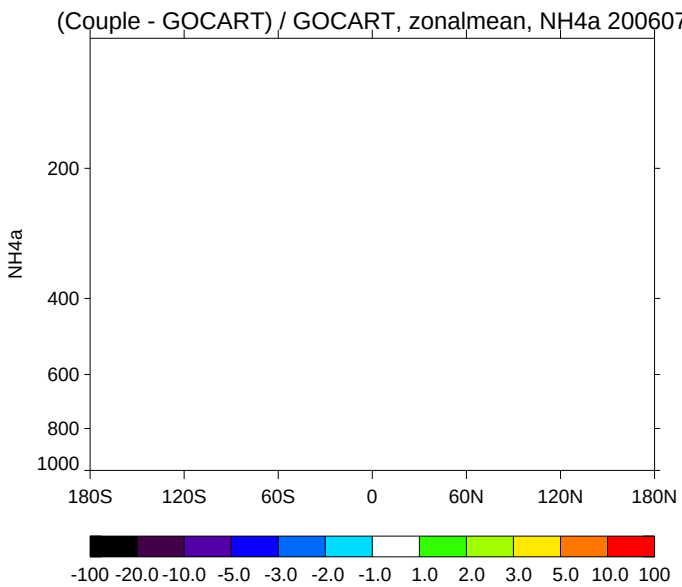

(Couple - Combo) / Combo, zonalmean SSL 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100
-20
-10
-5
-3
-2
-1
1
2
3
5
10
100

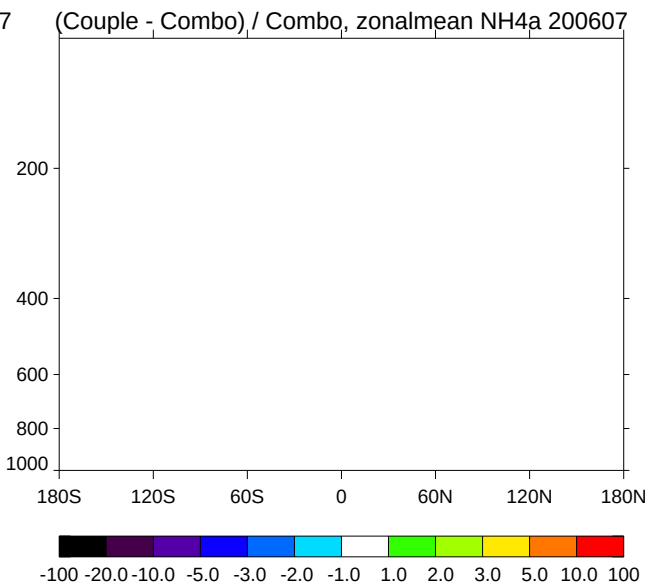

Couple+NH3 - Couple) / Couple, zonalmean SSL 200607
SSL
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100
-20
-10
-5
-3
-2
-1
1
2
3
5
10
100


(Couple - GOCART) / GOCART, zonalmean, NH3 200607
NH3
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


(Couple - Combo) / Combo, zonalmean NH3 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


Couple+NH3 - Couple) / Couple, zonalmean NH3 200607
NH3
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-20.0 -15.0 -10.0 -7.0 -5.0 -3.0 -1.0 1.0 3.0 5.0 7.0 10.0 15.0


(Couple - GOCART) / GOCART, zonalmean, NH4a 200607
NH4a
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


(Couple - Combo) / Combo, zonalmean NH4a 200607
200
400
600
800
1000
180S
120S
60S
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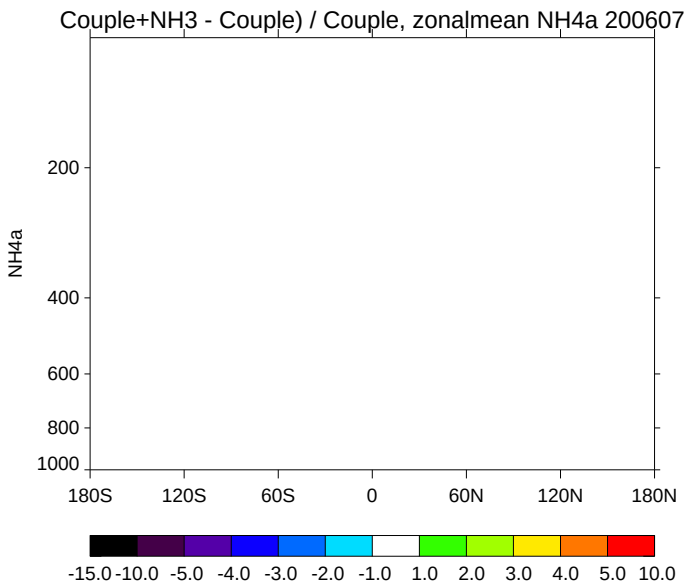
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


Couple+NH3 - Couple) / Couple, zonalmean NH4a 200607
NH4a
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
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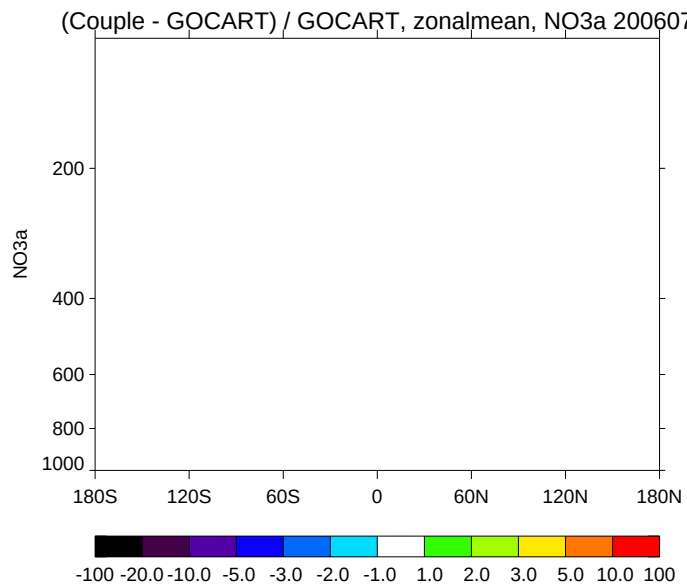
(Couple - GOCART) / GOCART, zonalmean, NO3a 200607
NO3a
200
400
600
800
1000
180S
120S
60S
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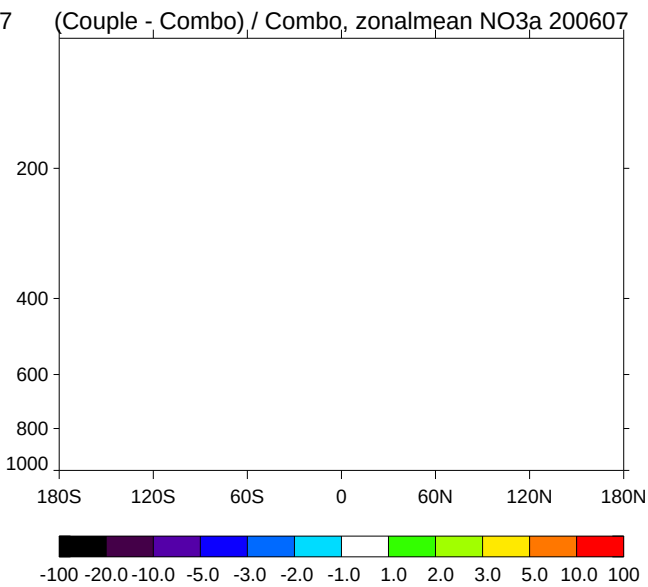
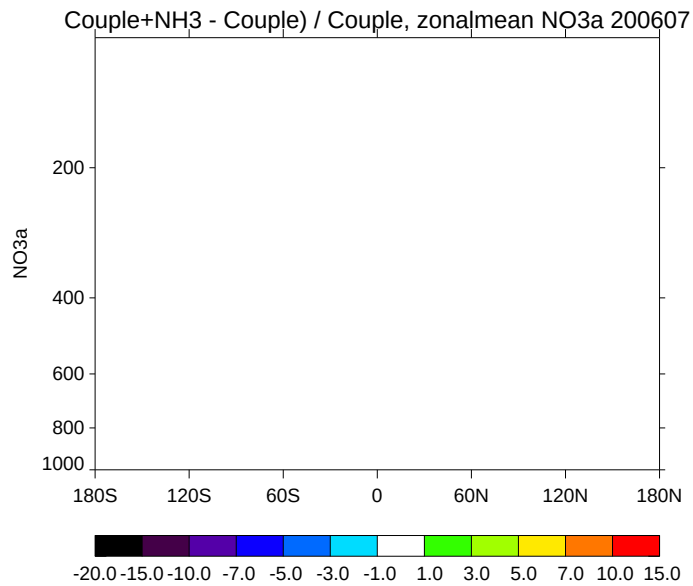
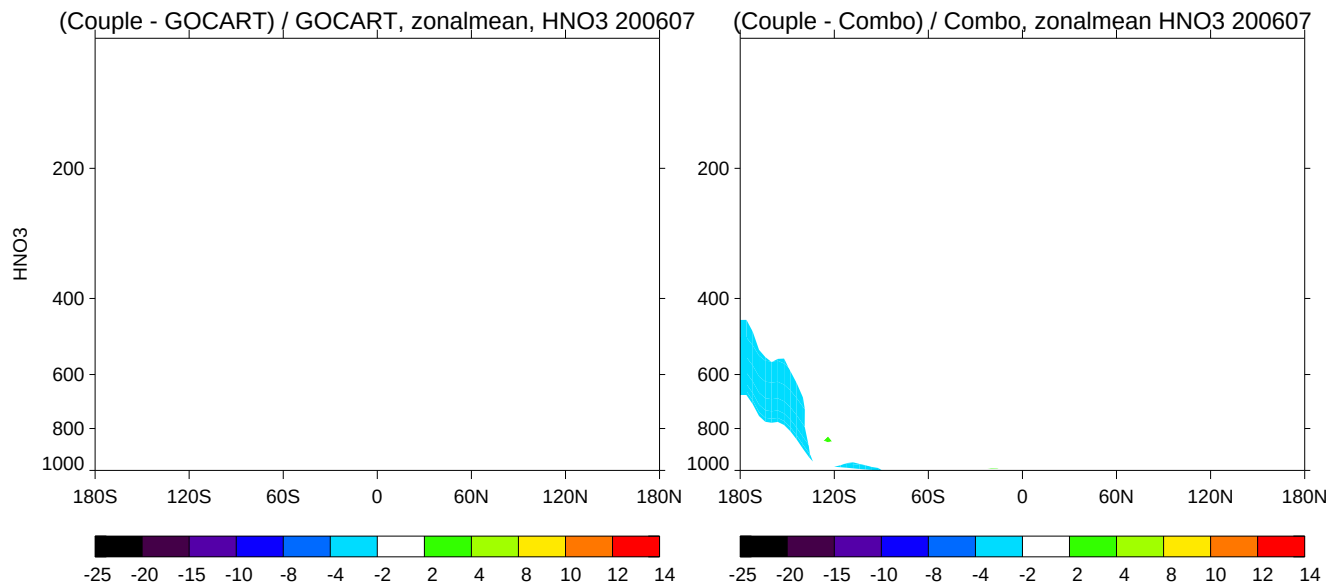
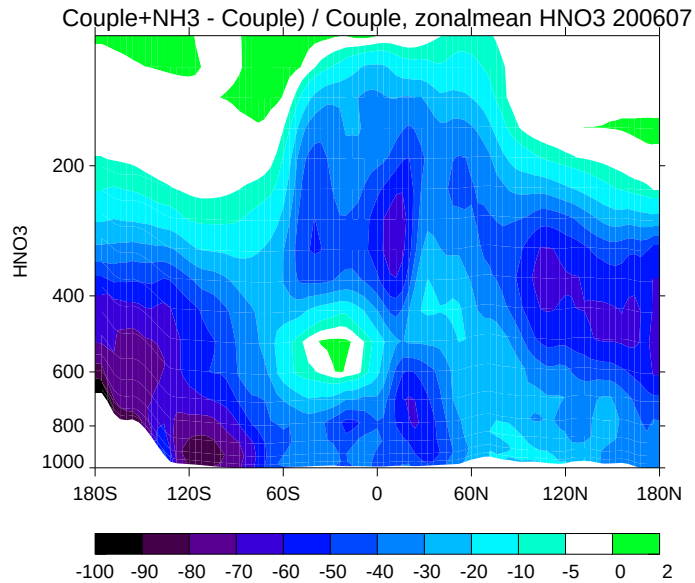
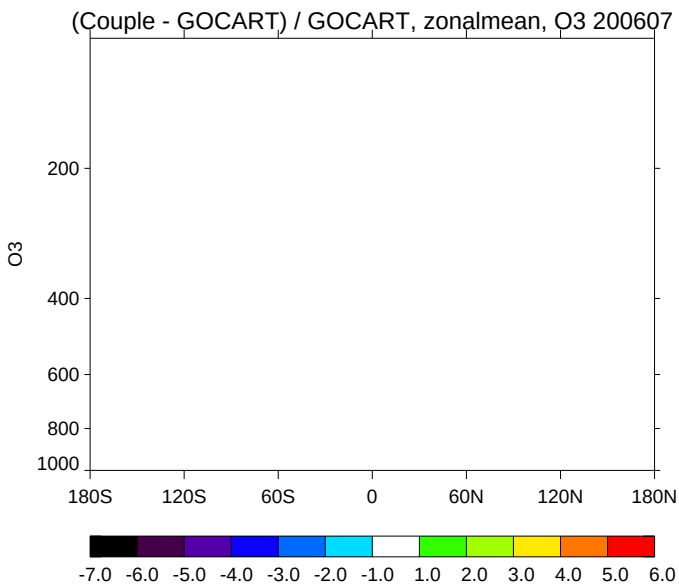
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100

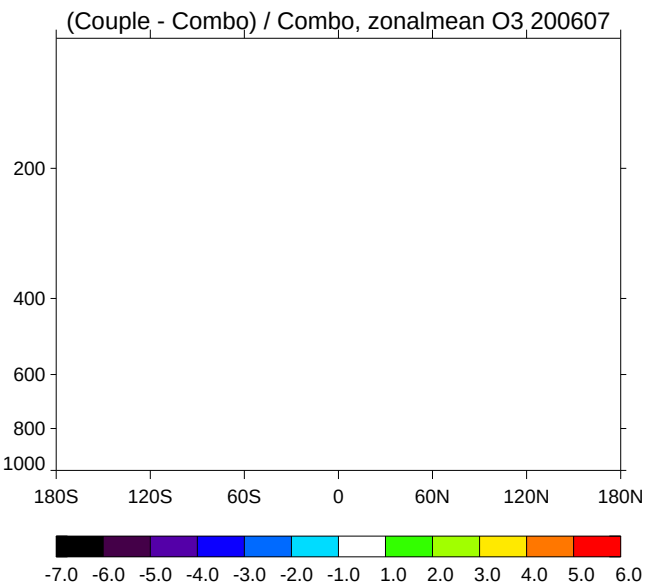

(Couple - Combo) / Combo, zonalmean NO3a 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100

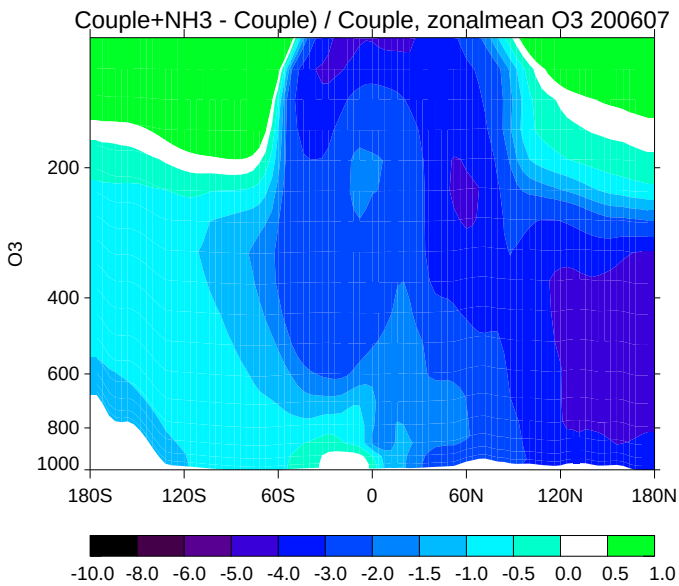

Couple+NH3 - Couple) / Couple, zonalmean NO3a 200607
NO3a
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-20.0 -15.0 -10.0 -7.0 -5.0 -3.0 -1.0 1.0 3.0 5.0 7.0 10.0 15.0

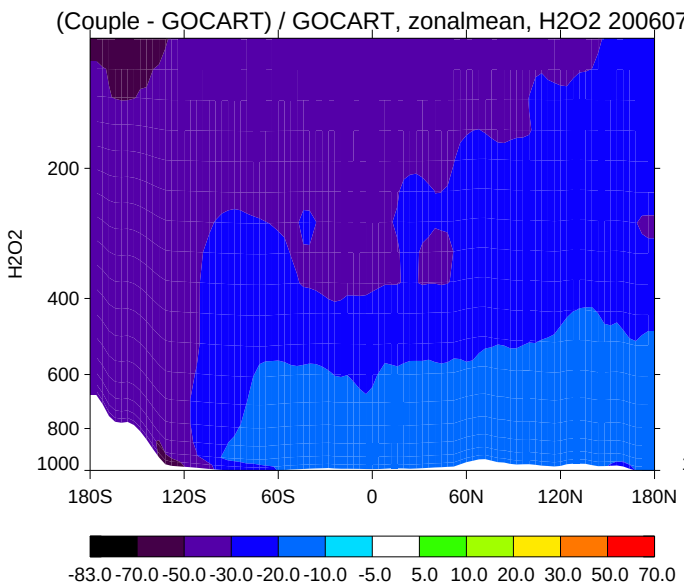

(Couple - GOCART) / GOCART, zonalmean, HNO3 200607
(Couple - Combo) / Combo, zonalmean HNO3 200607
HNO3
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-25 -20 -15 -10 -8 -4 -2 2 4 8 10 12 14

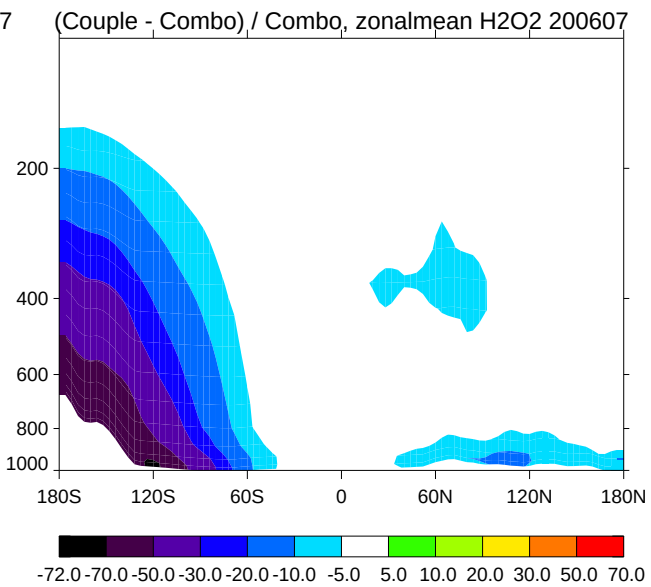

Couple+NH3 - Couple) / Couple, zonalmean HNO3 200607
HNO3
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -90 -80 -70 -60 -50 -40 -30 -20 -10 -5 0 2

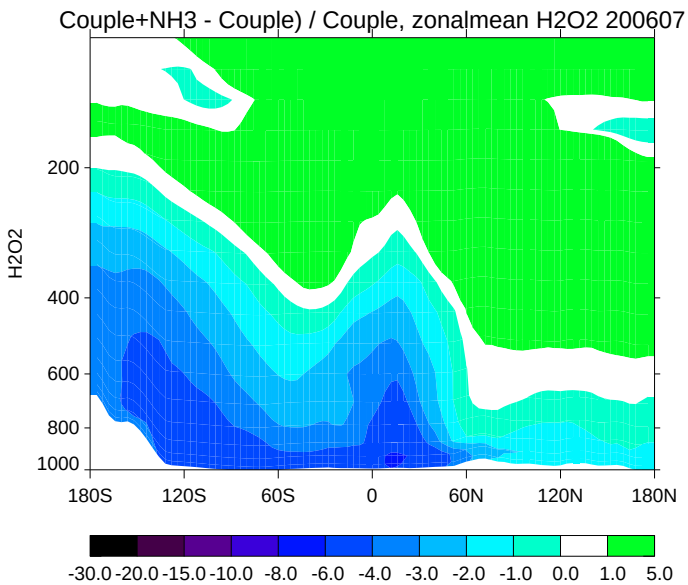

(Couple - GOCART) / GOCART, zonalmean, O3 200607
O3
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-7.0 -6.0 -5.0 -4.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 4.0 5.0 6.0

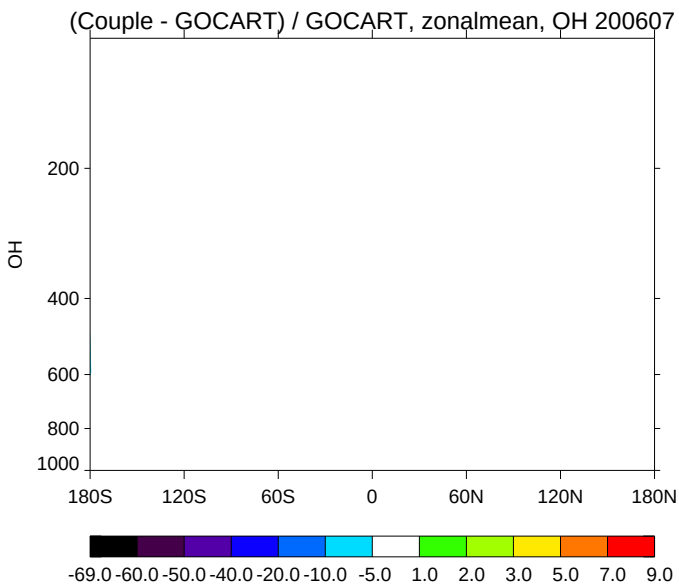

(Couple - Combo) / Combo, zonalmean O3 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-7.0 -6.0 -5.0 -4.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 4.0 5.0 6.0

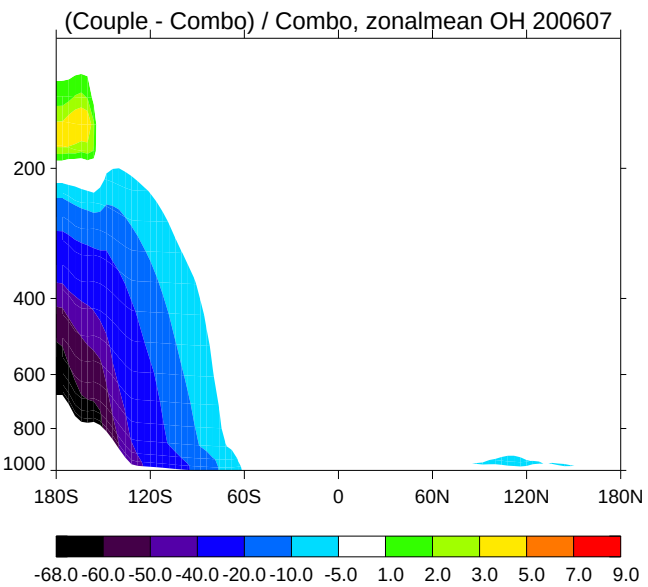

Couple+NH3 - Couple) / Couple, zonalmean O3 200607
O3
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-10.0 -8.0 -6.0 -5.0 -4.0 -3.0 -2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0

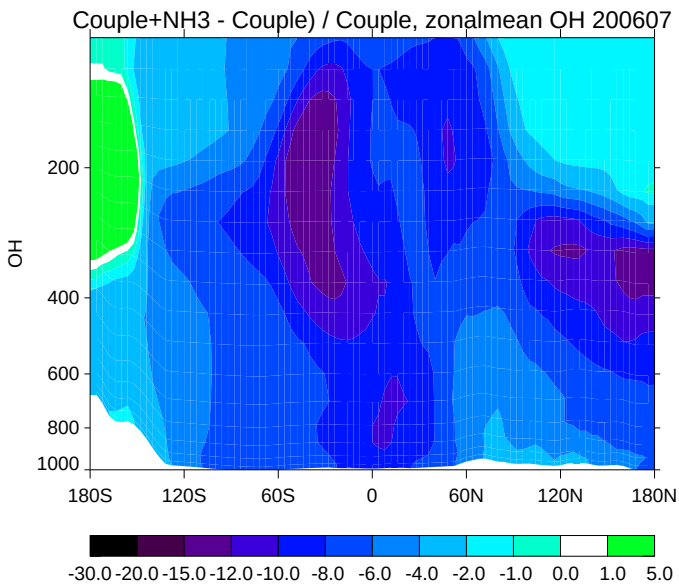

(Couple - GOCART) / GOCART, zonalmean, H2O2 200607
H2O2
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-83.0 -70.0 -50.0 -30.0 -20.0 -10.0 -5.0 5.0 10.0 20.0 30.0 50.0 70.0

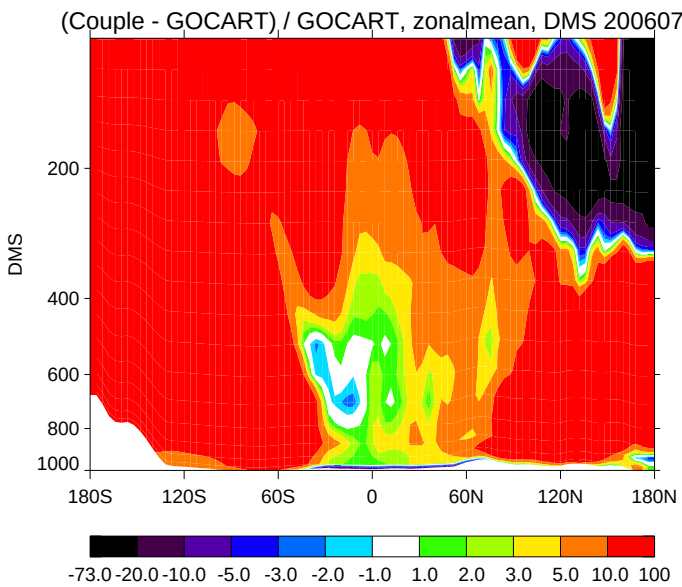

(Couple - Combo) / Combo, zonalmean H2O2 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-72.0 -70.0 -50.0 -30.0 -20.0 -10.0 -5.0 5.0 10.0 20.0 30.0 50.0 70.0

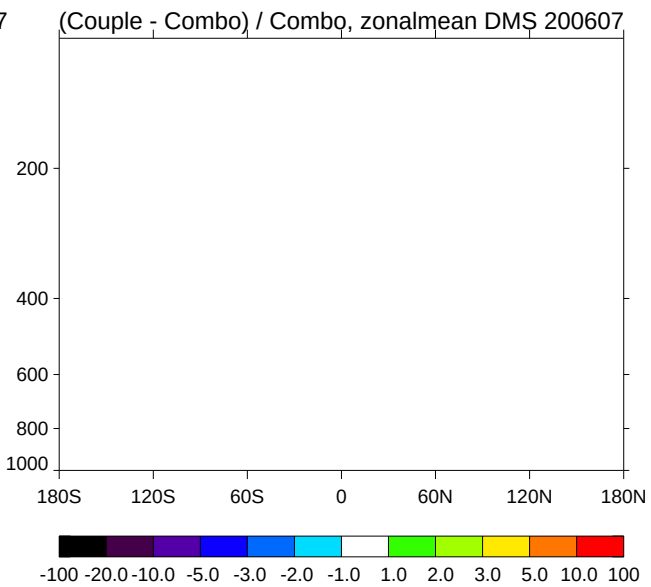

Couple+NH3 - Couple) / Couple, zonalmean H2O2 200607
H2O2
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-30.0 -20.0 -15.0 -10.0 -8.0 -6.0 -4.0 -3.0 -2.0 -1.0 0.0 1.0 5.0

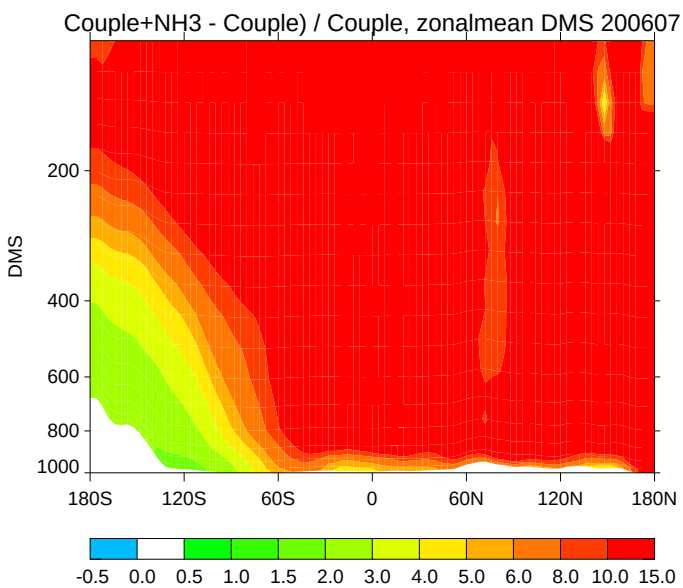

(Couple - GOCART) / GOCART, zonalmean, OH 200607
OH
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-69.0 -60.0 -50.0 -40.0 -20.0 -10.0 -5.0 1.0 2.0 3.0 5.0 7.0 9.0

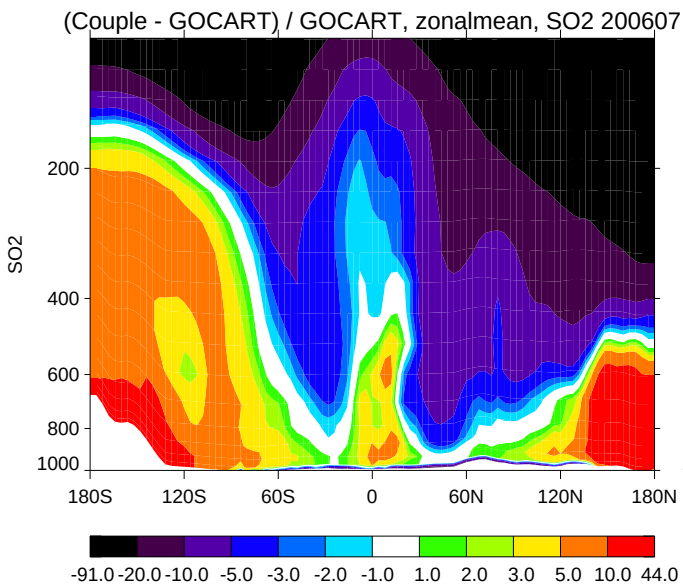

(Couple - Combo) / Combo, zonalmean OH 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-68.0 -60.0 -50.0 -40.0 -20.0 -10.0 -5.0 1.0 2.0 3.0 5.0 7.0 9.0

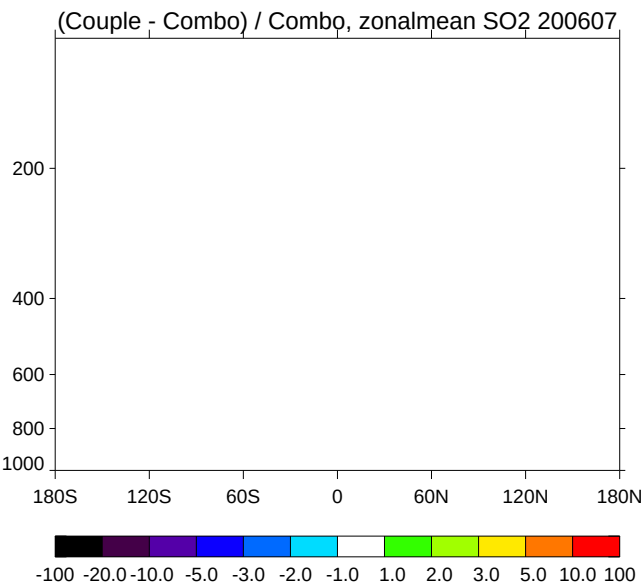

Couple+NH3 - Couple) / Couple, zonalmean OH 200607
OH
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-30.0 -20.0 -15.0 -12.0 -10.0 -8.0 -6.0 -4.0 -2.0 -1.0 0.0 1.0 5.0

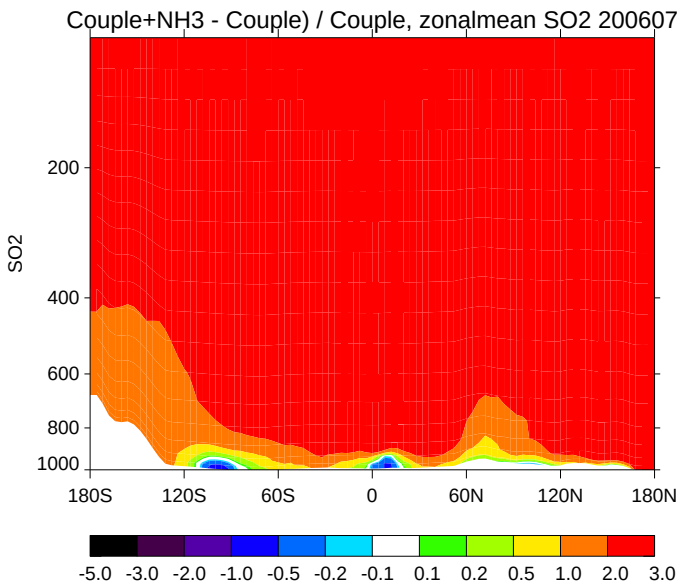

(Couple - GOCART) / GOCART, zonalmean, DMS 200607
DMS
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-73.0 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100

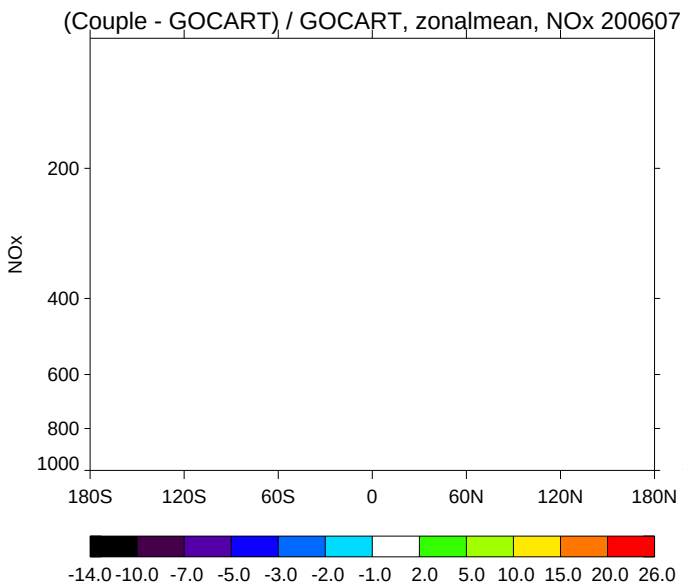

(Couple - Combo) / Combo, zonalmean DMS 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100

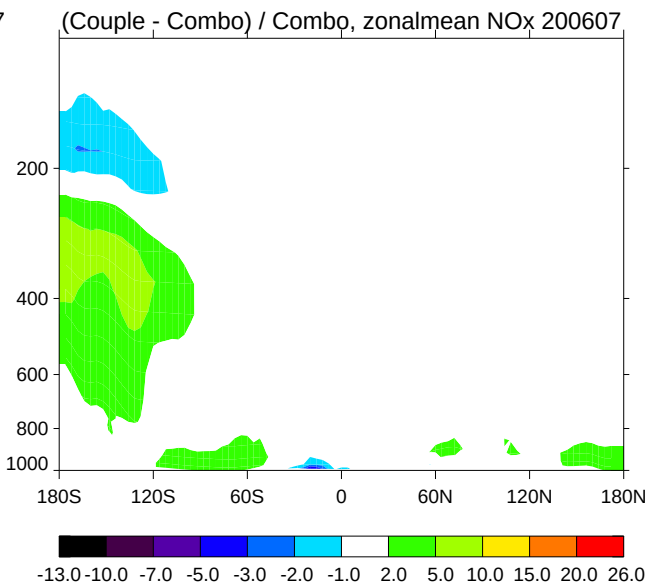

Couple+NH3 - Couple) / Couple, zonalmean DMS 200607
DMS
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-0.5 0.0 0.5 1.0 1.5 2.0 3.0 4.0 5.0 6.0 8.0 10.0 15.0

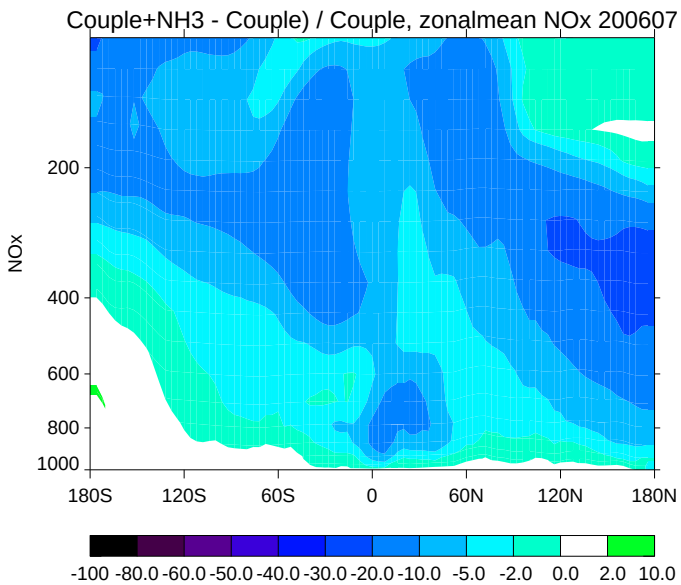

(Couple - GOCART) / GOCART, zonalmean, SO2 200607
SO2
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-91.0 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 44.0


(Couple - Combo) / Combo, zonalmean SO2 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -20.0 -10.0 -5.0 -3.0 -2.0 -1.0 1.0 2.0 3.0 5.0 10.0 100


Couple+NH3 - Couple) / Couple, zonalmean SO2 200607
SO2
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-5.0 -3.0 -2.0 -1.0 -0.5 -0.2 -0.1 0.1 0.2 0.5 1.0 2.0 3.0


(Couple - GOCART) / GOCART, zonalmean, NOx 200607
NOx
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-14.0 -10.0 -7.0 -5.0 -3.0 -2.0 -1.0 2.0 5.0 10.0 15.0 20.0 26.0


(Couple - Combo) / Combo, zonalmean NOx 200607
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-13.0 -10.0 -7.0 -5.0 -3.0 -2.0 -1.0 2.0 5.0 10.0 15.0 20.0 26.0


Couple+NH3 - Couple) / Couple, zonalmean NOx 200607
NOx
200
400
600
800
1000
180S
120S
60S
0
60N
120N
180N
-100 -80.0 -60.0 -50.0 -40.0 -30.0 -20.0 -10.0 -5.0 -2.0 0.0 2.0 10.0