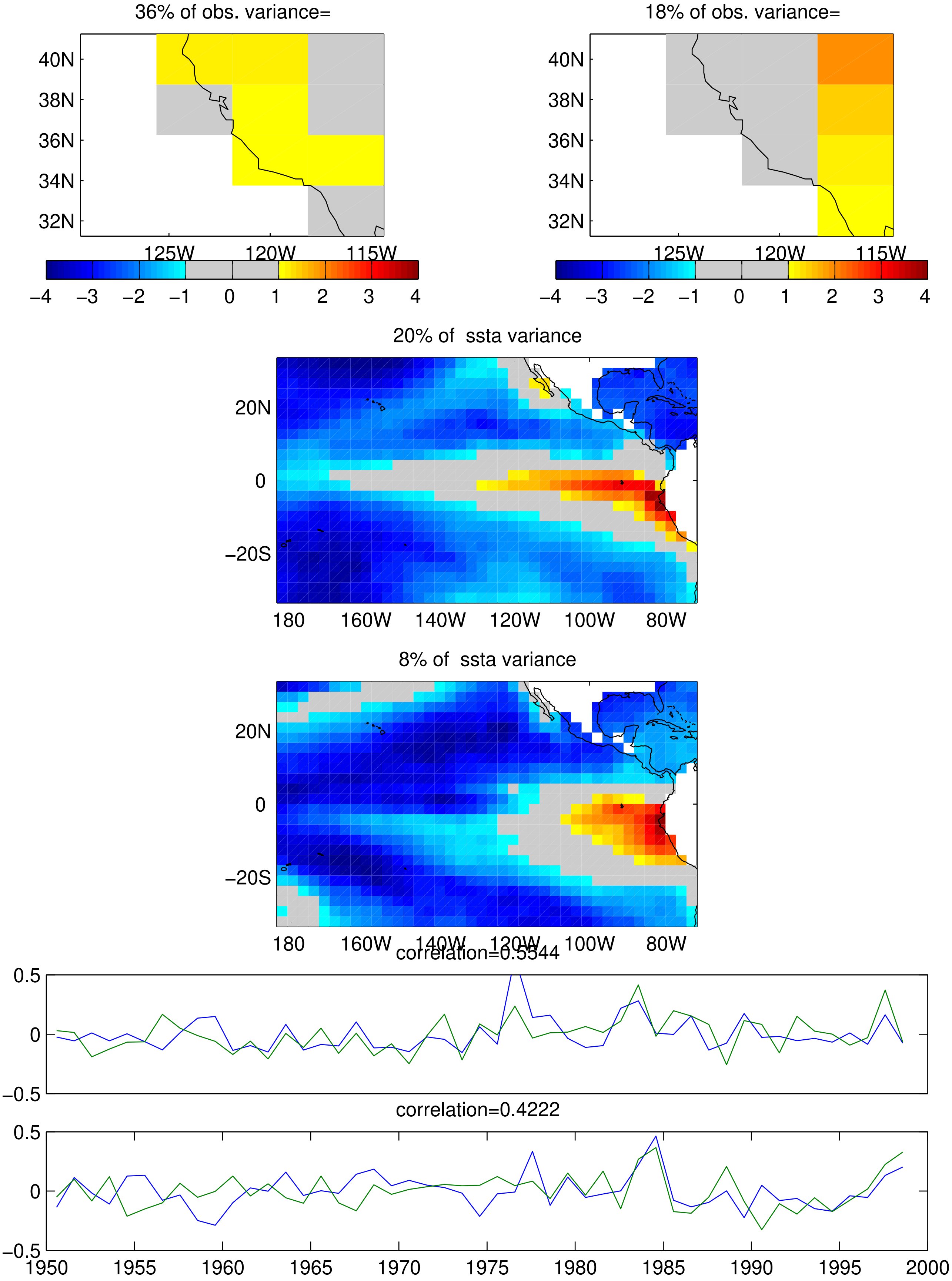
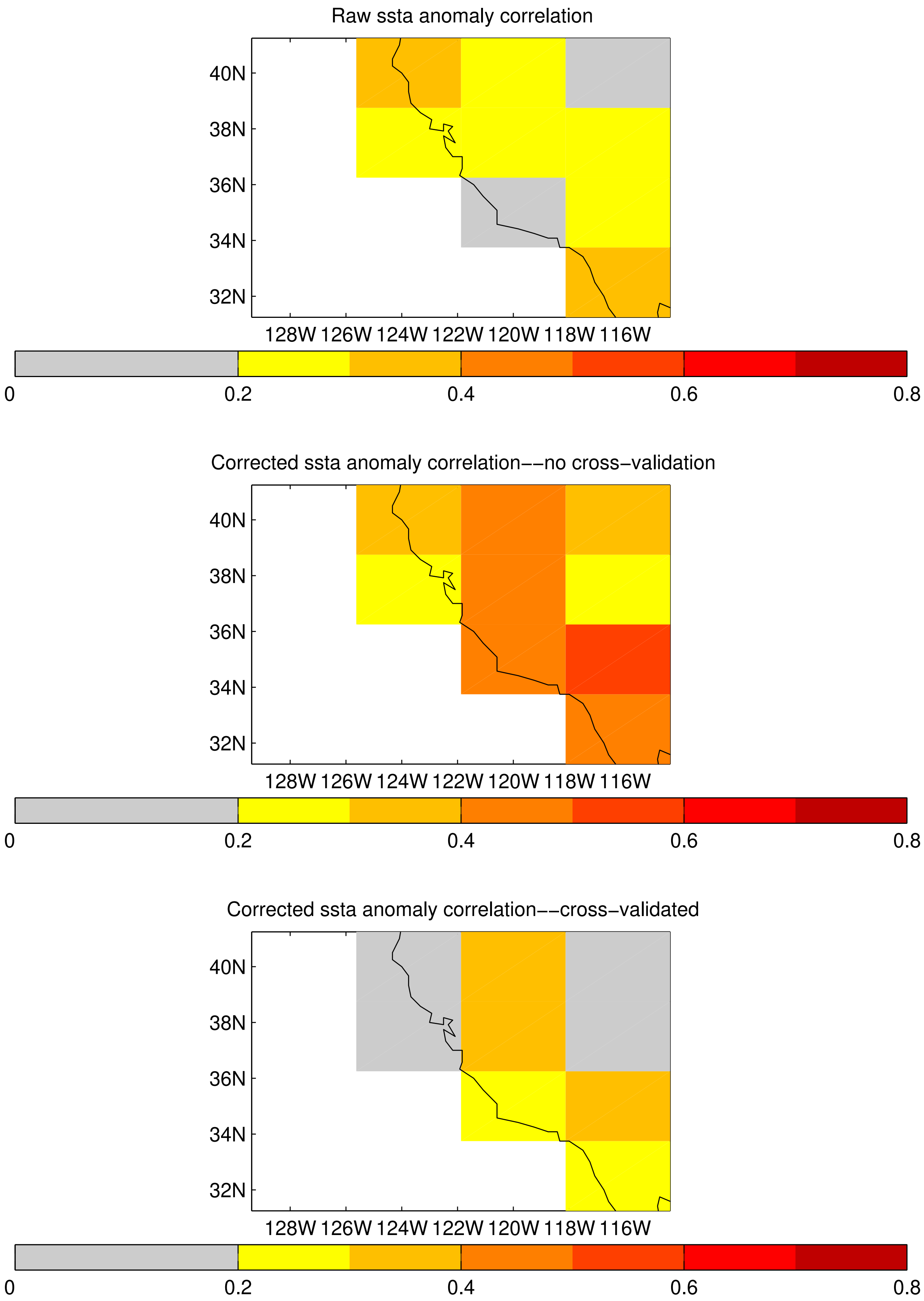
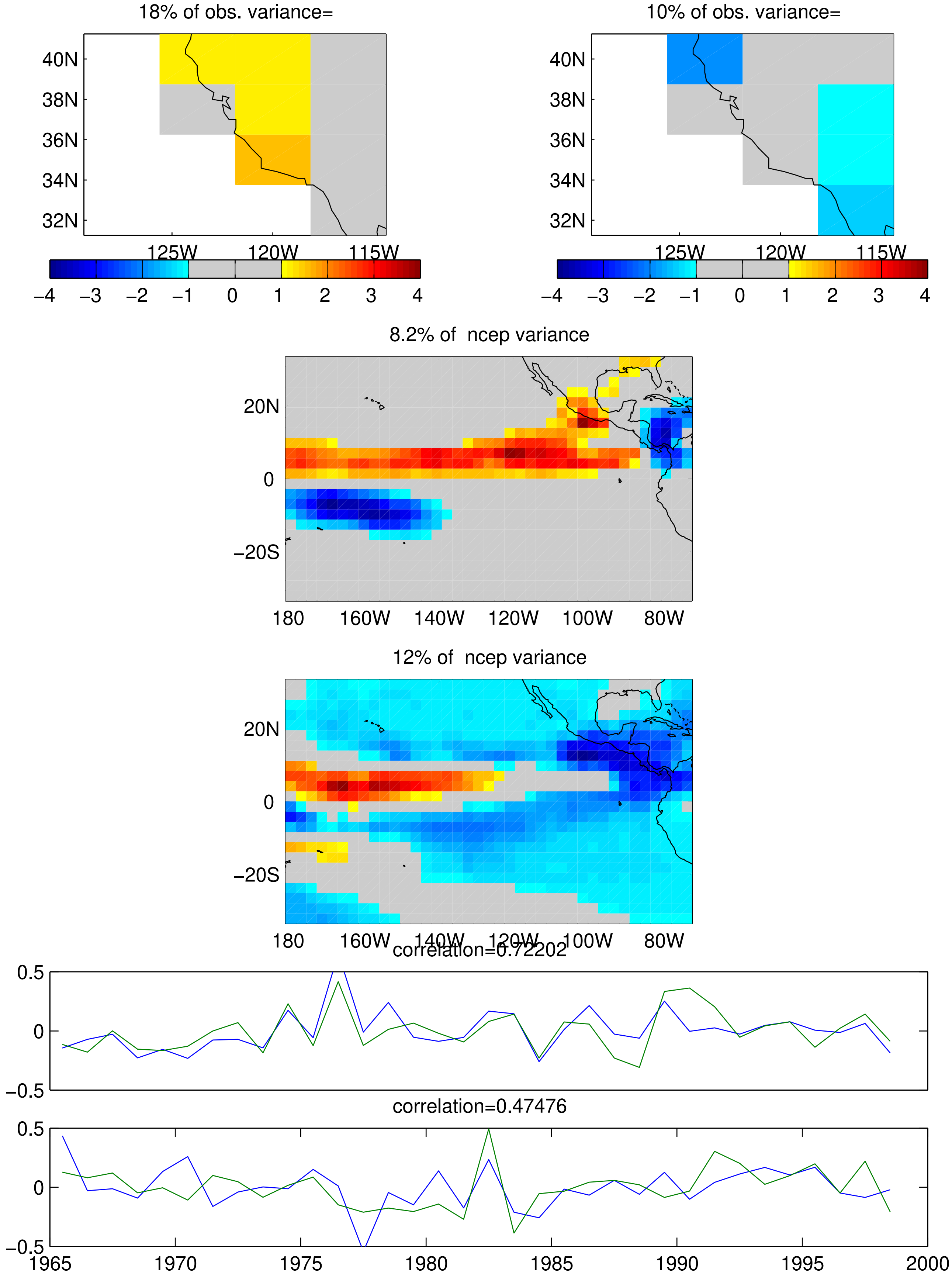
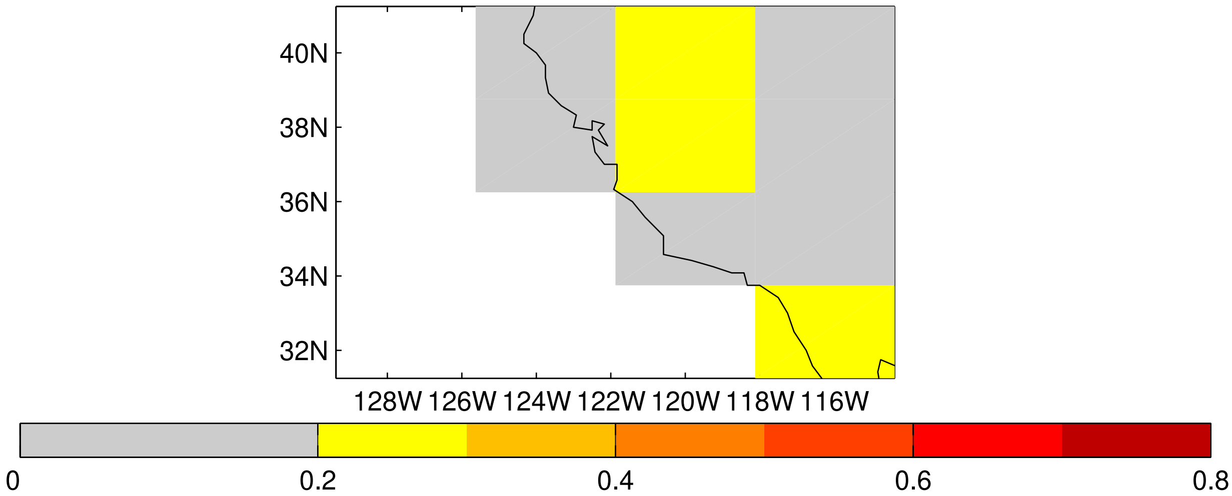


36% of obs. variance=
18% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4
−3
−2
−1
0
1
2
3
4
20% of ssta variance
8% of ssta variance
20N
0
−20S
180
160W
140W
120W
100W
80W
correlation=0.5544
correlation=0.4222
0.5
0
−0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

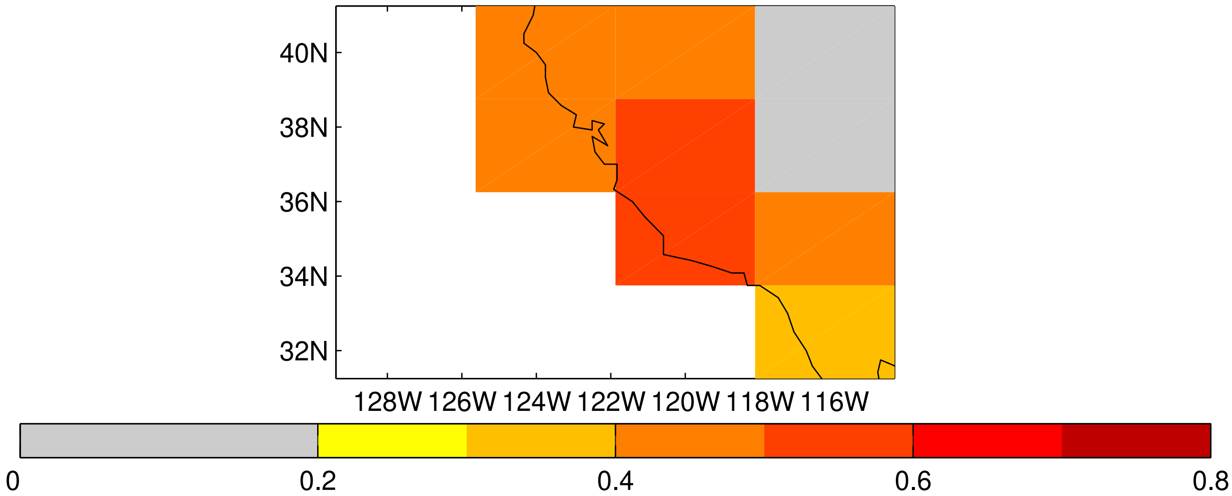

Raw ssta anomaly correlation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected ssta anomaly correlation−−no cross−validation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected ssta anomaly correlation−−cross−validated
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8


18% of obs. variance=
10% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4
−3
−2
−1
0
1
2
3
4
8.2% of ncep variance
12% of ncep variance
20N
0
−20S
180
160W
140W
120W
100W
80W
correlation=0.72202
correlation=0.47476
0.5
0
−0.5
1965
1970
1975
1980
1985
1990
1995
2000

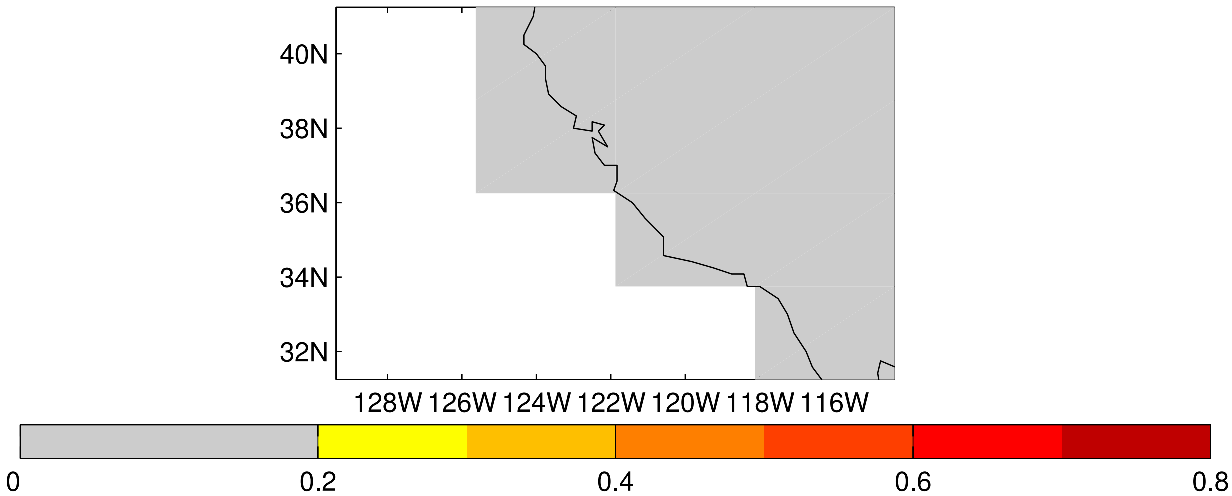
Raw ncep anomaly correlation

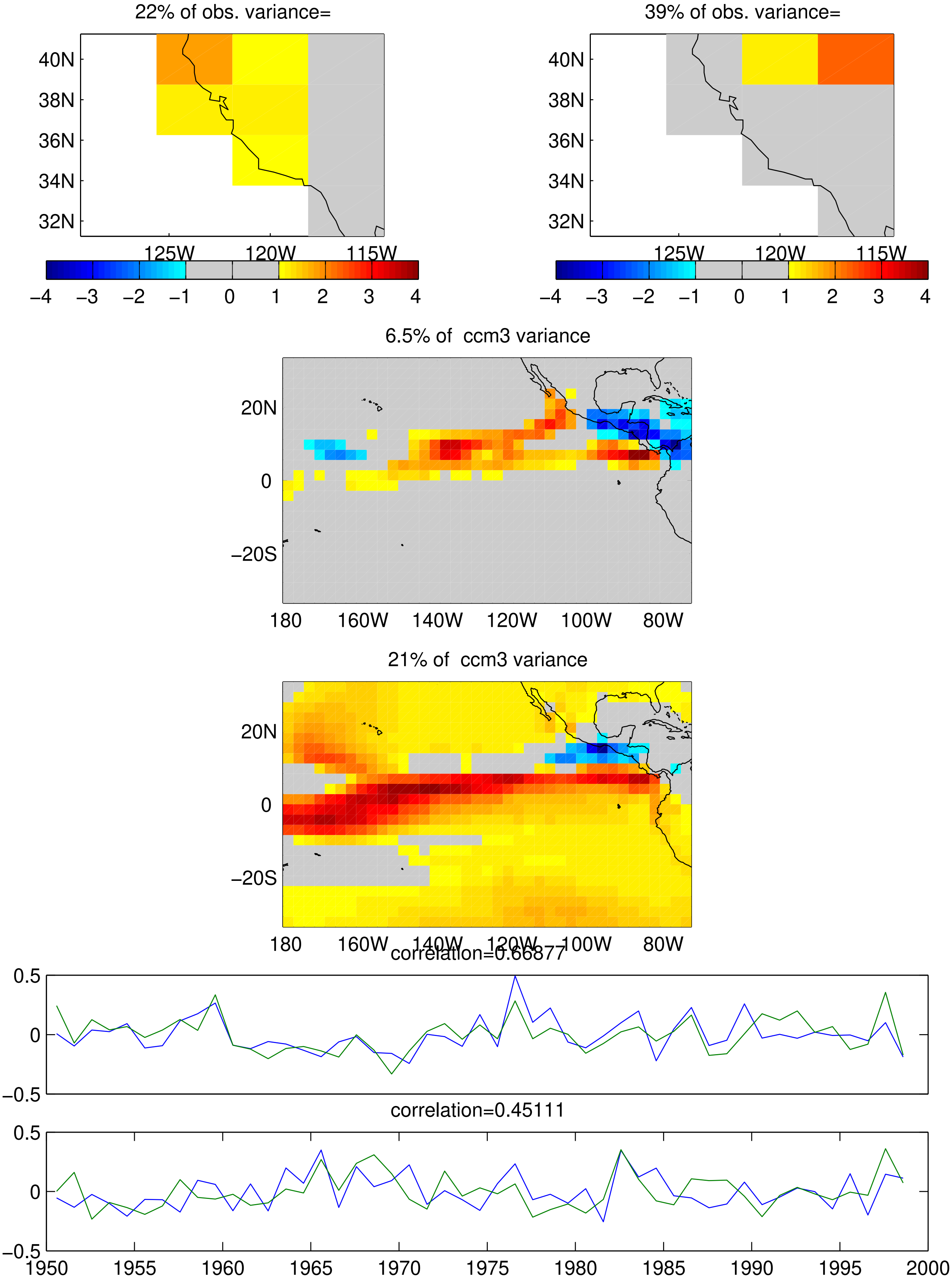


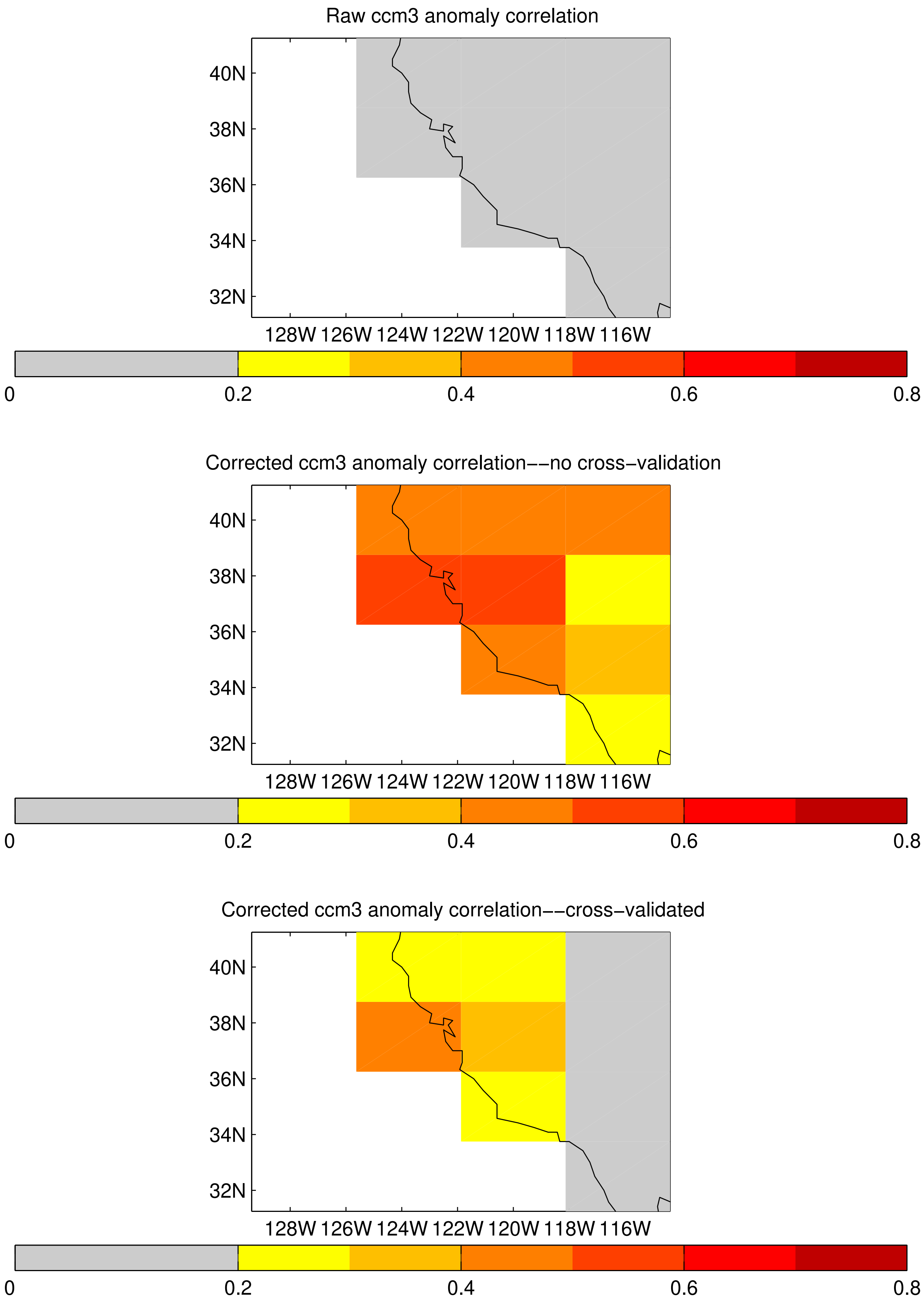
Corrected ncep anomaly correlation−−no cross−validation

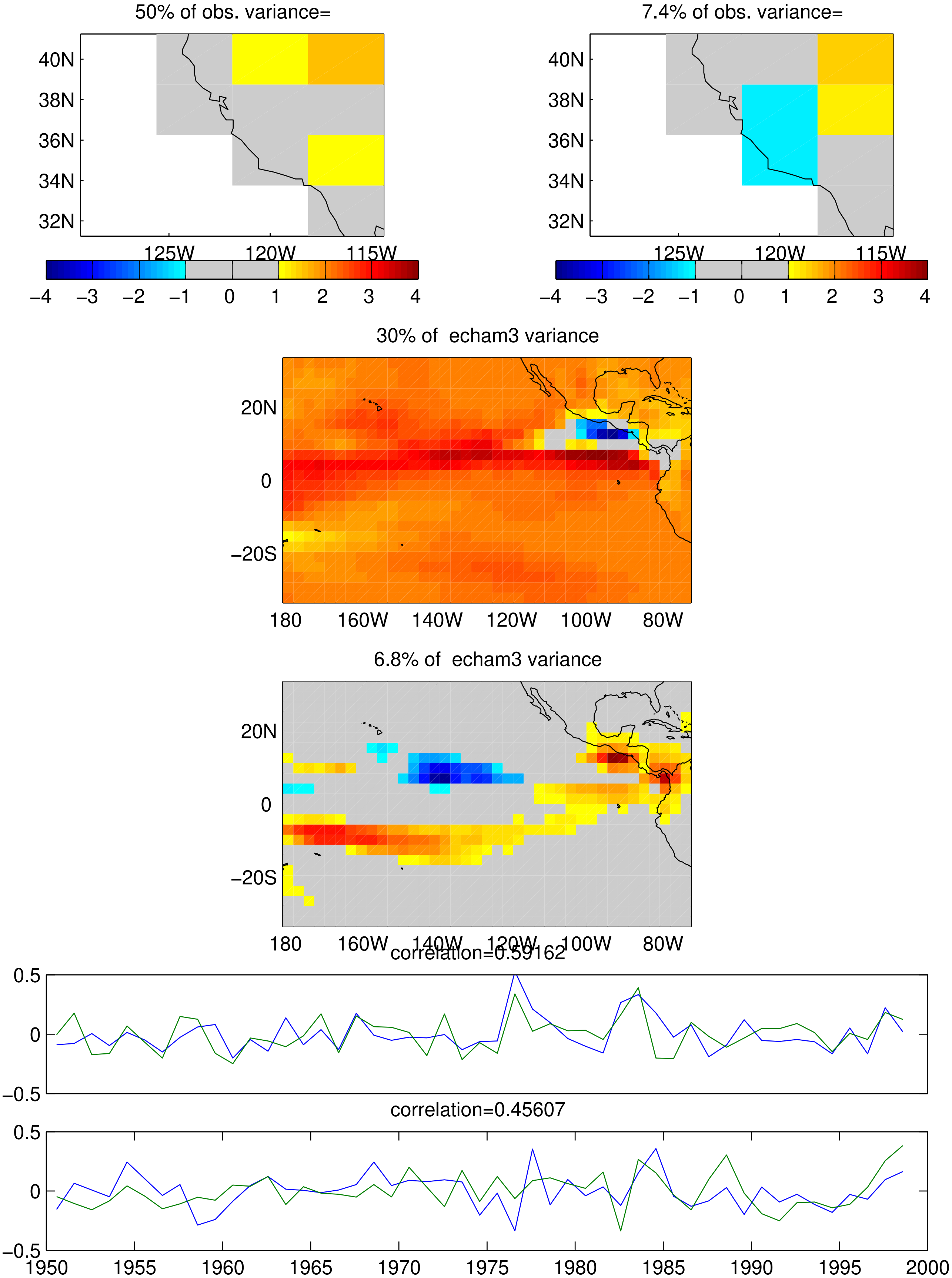


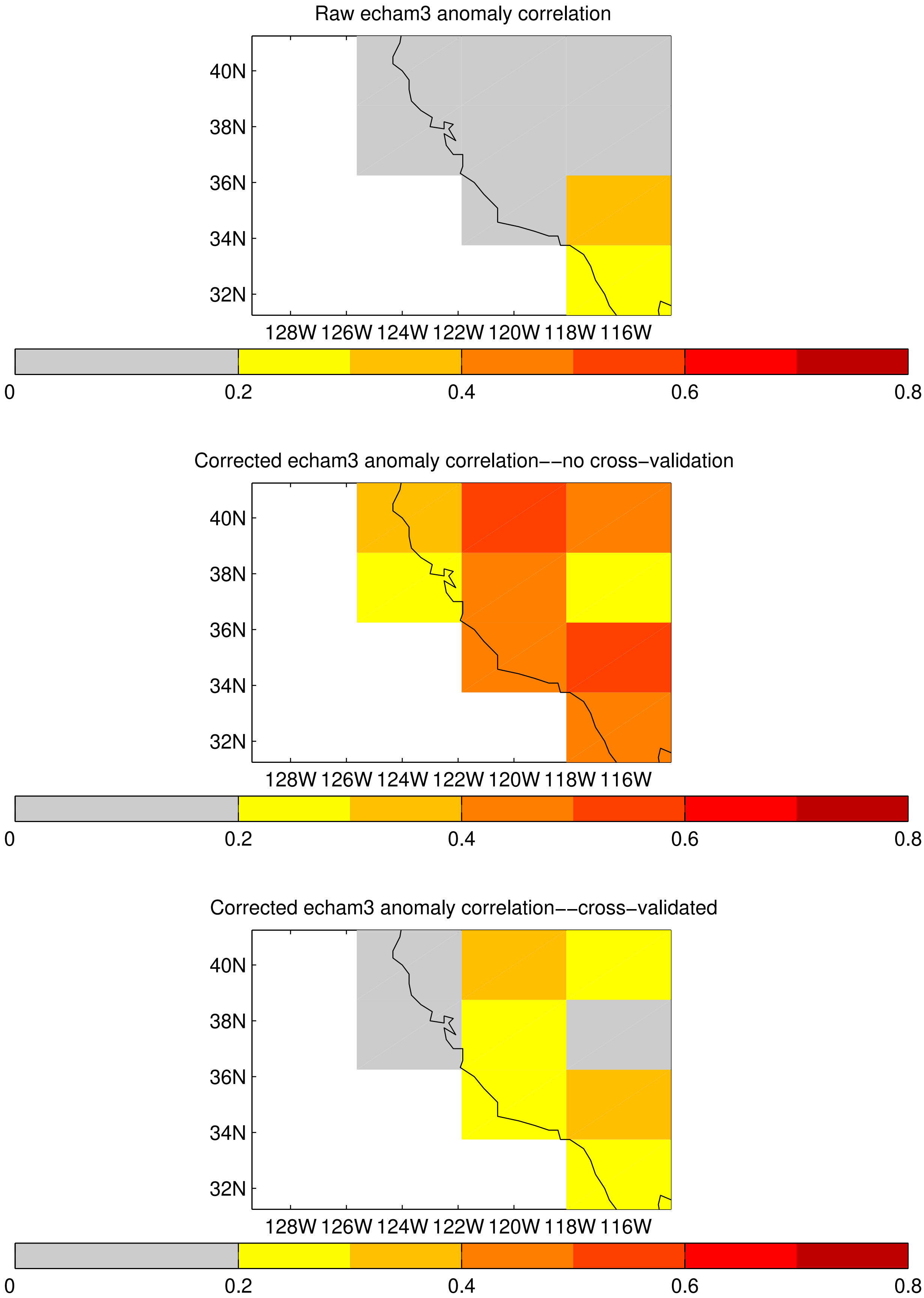
Corrected ncep anomaly correlation−−cross−validated



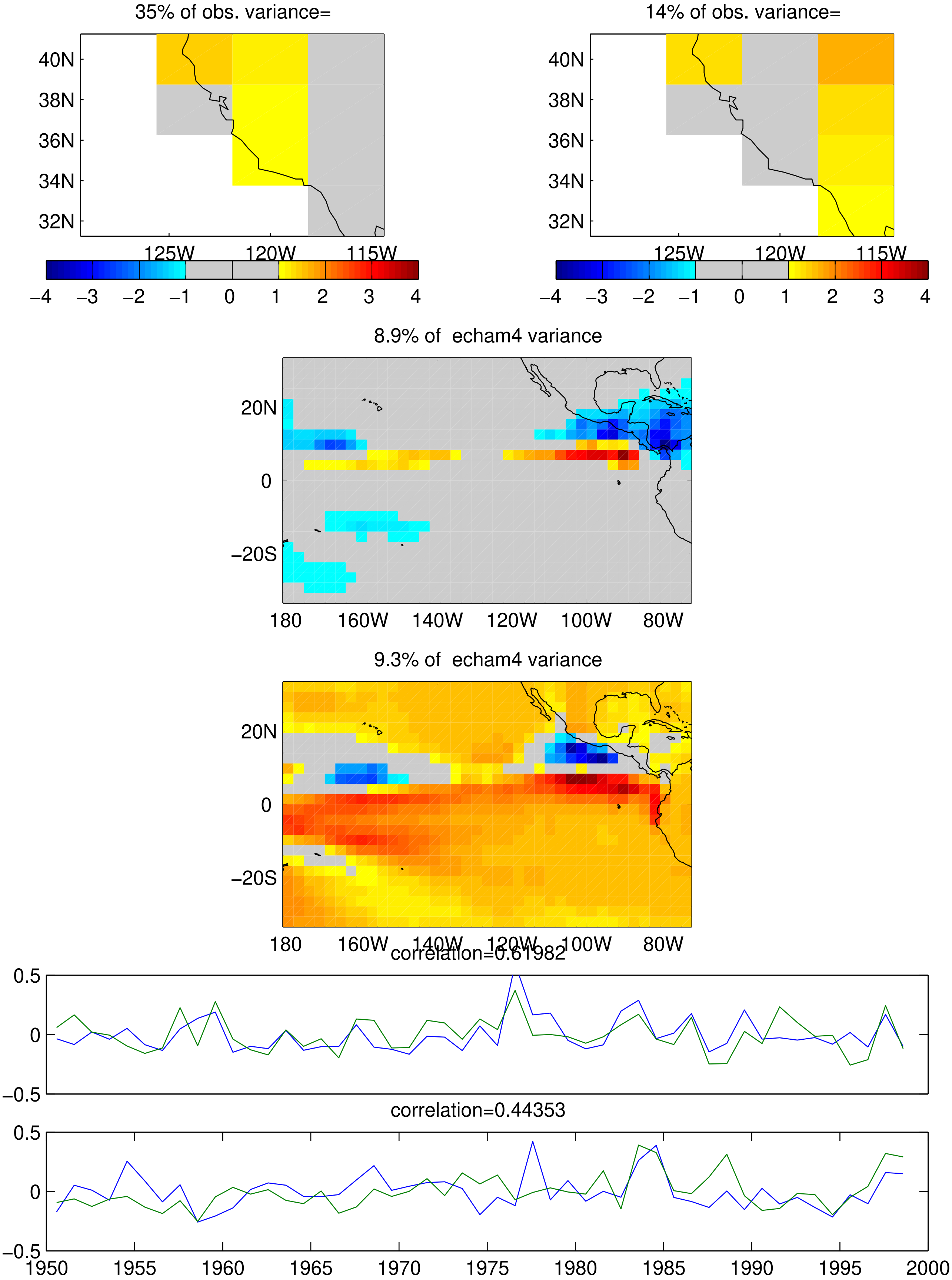

22% of obs. variance=
39% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4
−3
−2
−1
0
1
2
3
4
6.5% of ccm3 variance
21% of ccm3 variance
20N
0
−20S
180
160W
140W
120W
100W
80W
correlation=0.66877
correlation=0.45111
0.5
0
−0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

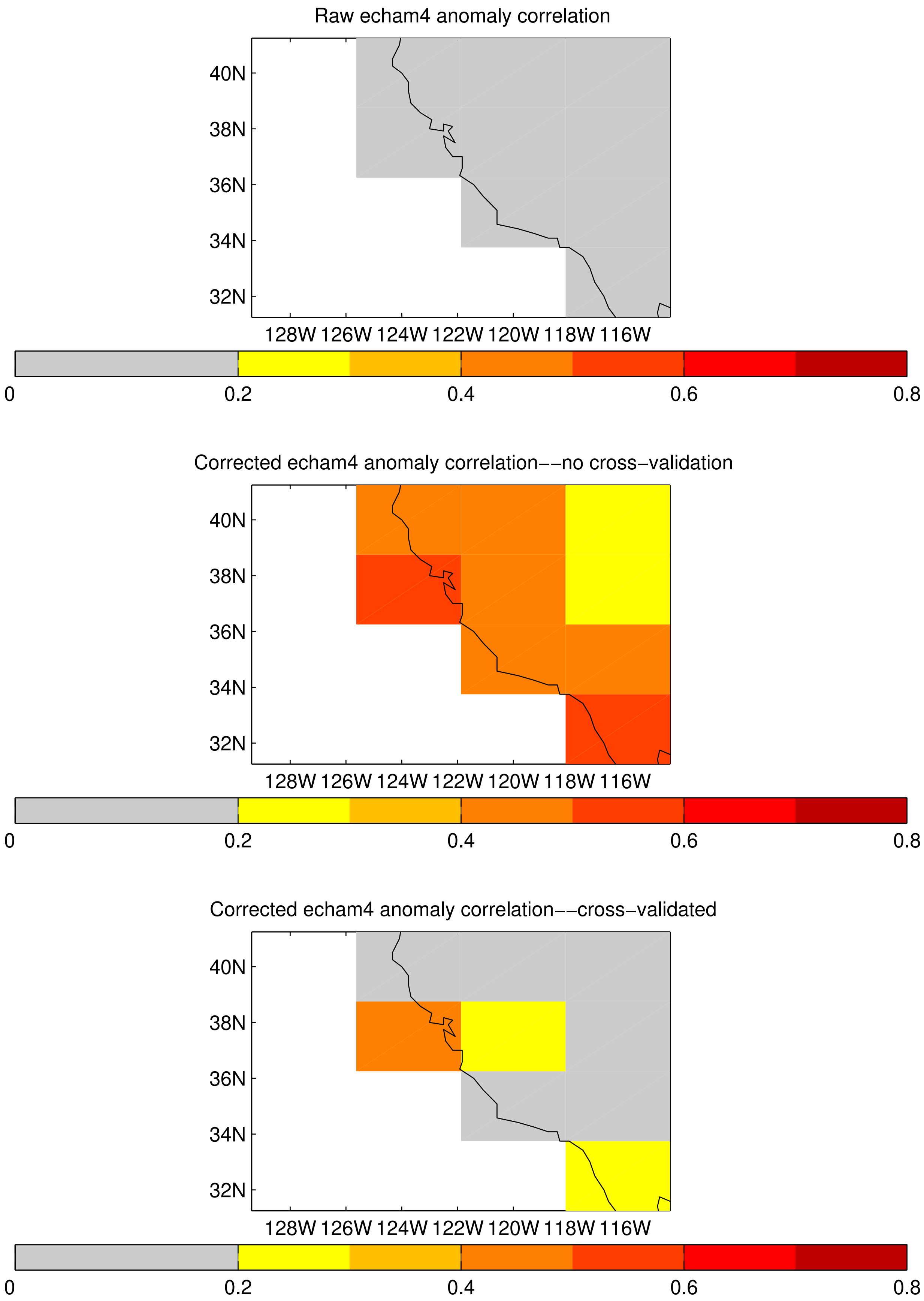

Raw ccm3 anomaly correlation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected ccm3 anomaly correlation−−no cross−validation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected ccm3 anomaly correlation−−cross−validated
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8


50% of obs. variance=
7.4% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4
−3
−2
−1
0
1
2
3
4
30% of echam3 variance
6.8% of echam3 variance
20N
0
−20S
180
160W
140W
120W
100W
80W
correlation=0.59162
correlation=0.45607
0.5
0
−0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

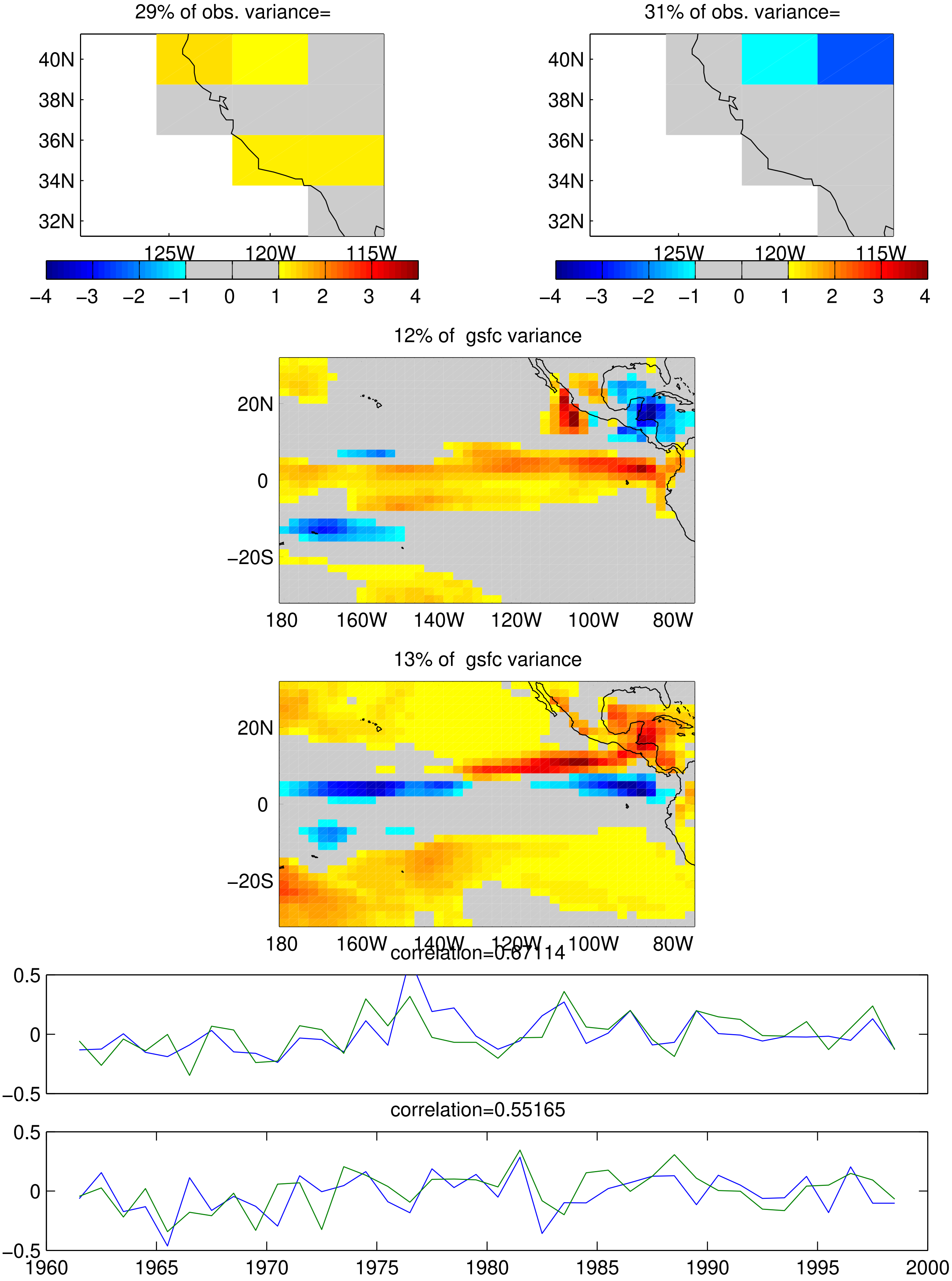


Raw echam3 anomaly correlation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected echam3 anomaly correlation−−no cross−validation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected echam3 anomaly correlation−−cross−validated
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8

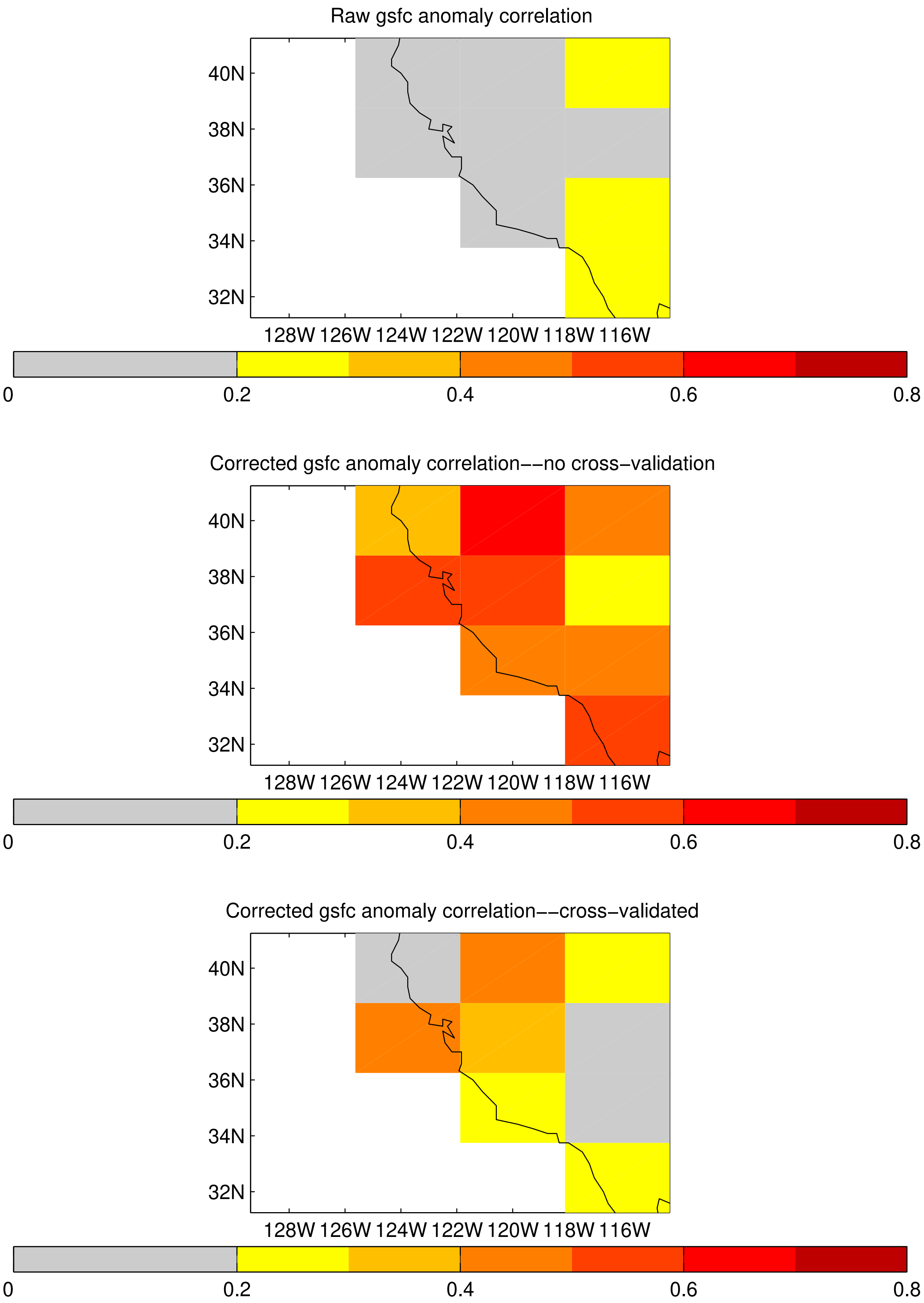

35% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4 −3 −2 −1 0 1 2 3 4
14% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4 −3 −2 −1 0 1 2 3 4
8.9% of echam4 variance
20N
0
−20S
180
160W
140W
120W
100W
80W
9.3% of echam4 variance
20N
0
−20S
180
160W
140W
120W
100W
80W
correlation=0.61982
0.5
0
−0.5
correlation=0.44353
0.5
0
−0.5
1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000



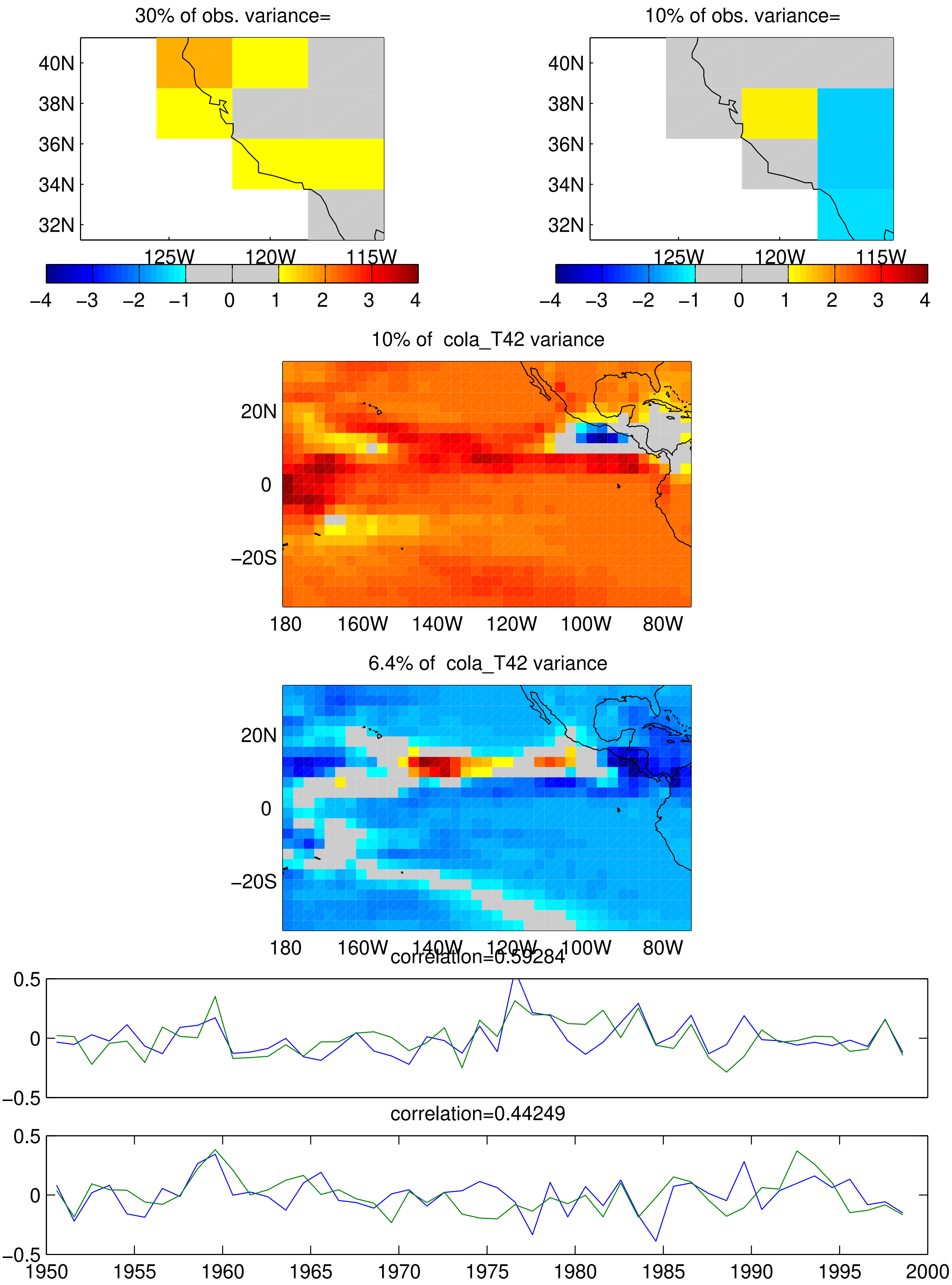
Raw echam4 anomaly correlation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected echam4 anomaly correlation−−no cross−validation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected echam4 anomaly correlation−−cross−validated
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8



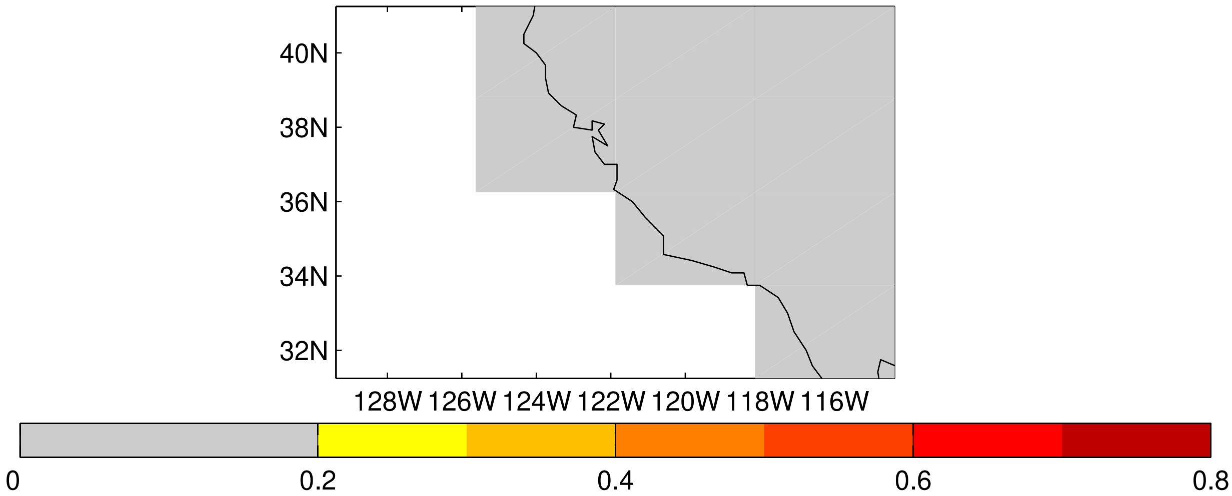
29% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4
−3
−2
−1
0
1
2
3
4
31% of obs. variance=
12% of gsfc variance
20N
0
−20S
180
160W
140W
120W
100W
80W
13% of gsfc variance
correlation=0.67114
0.5
0
−0.5
correlation=0.55165
1960
1965
1970
1975
1980
1985
1990
1995
2000



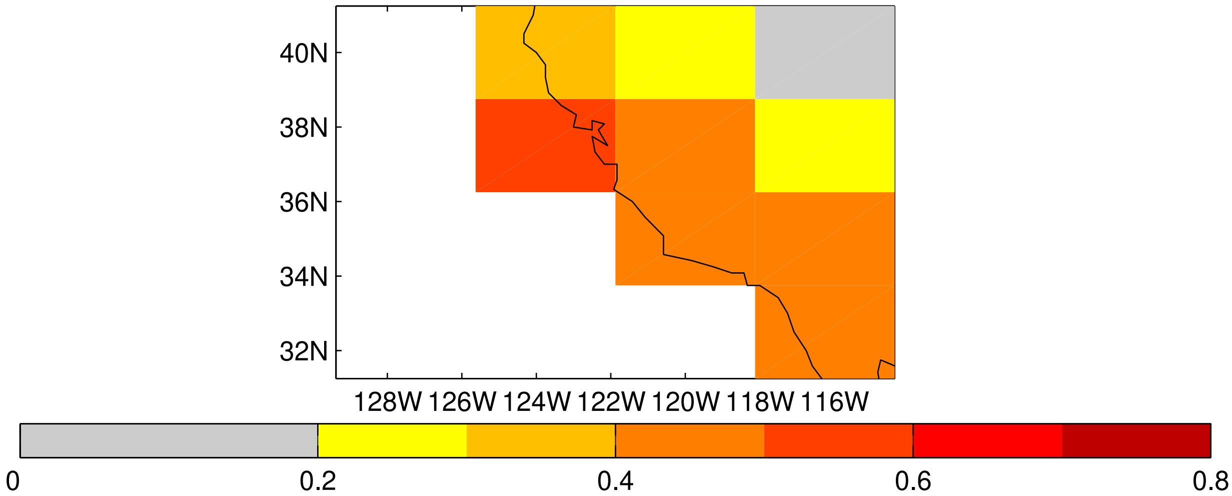
Raw gsfc anomaly correlation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected gsfc anomaly correlation−−no cross−validation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8
Corrected gsfc anomaly correlation−−cross−validated
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8


30% of obs. variance=
10% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4
−3
−2
−1
0
1
2
3
4
10% of cola_T42 variance
6.4% of cola_T42 variance
20N
0
−20S
180
160W
140W
120W
100W
80W
correlation=0.59284
correlation=0.44249
0.5
0
−0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

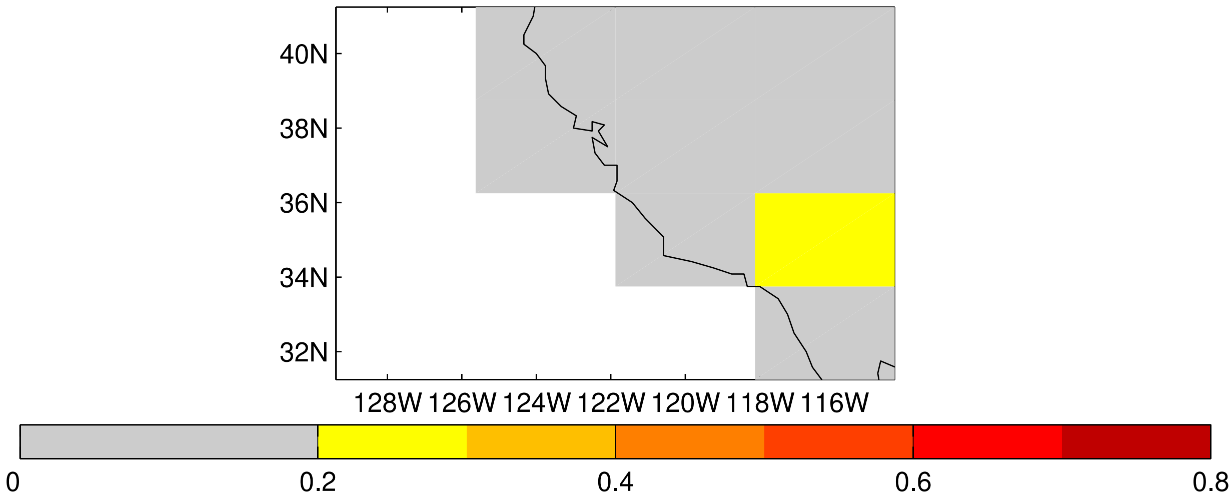
Raw cola_T42 anomaly correlation

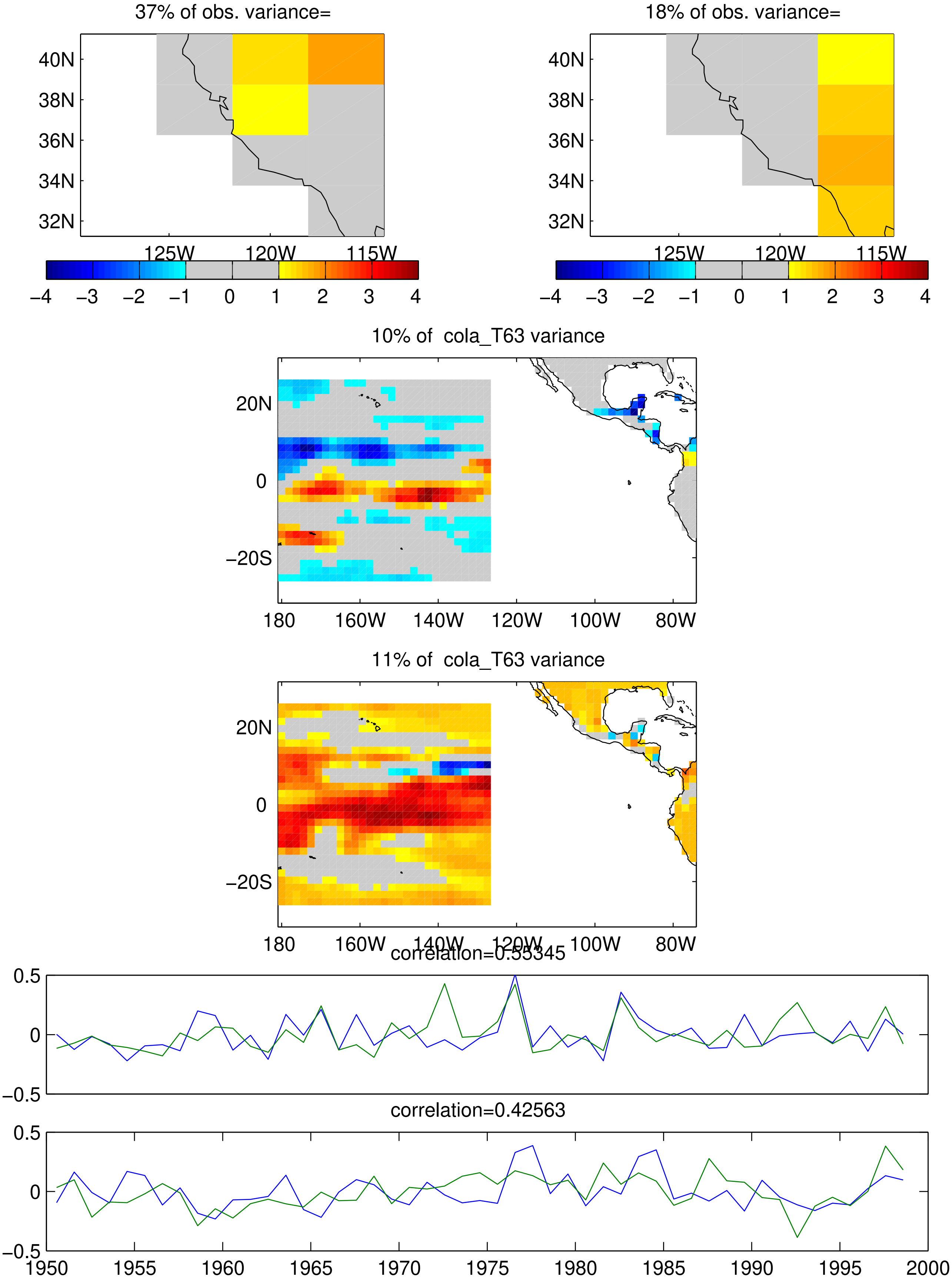


Corrected cola_T42 anomaly correlation−−no cross−validation

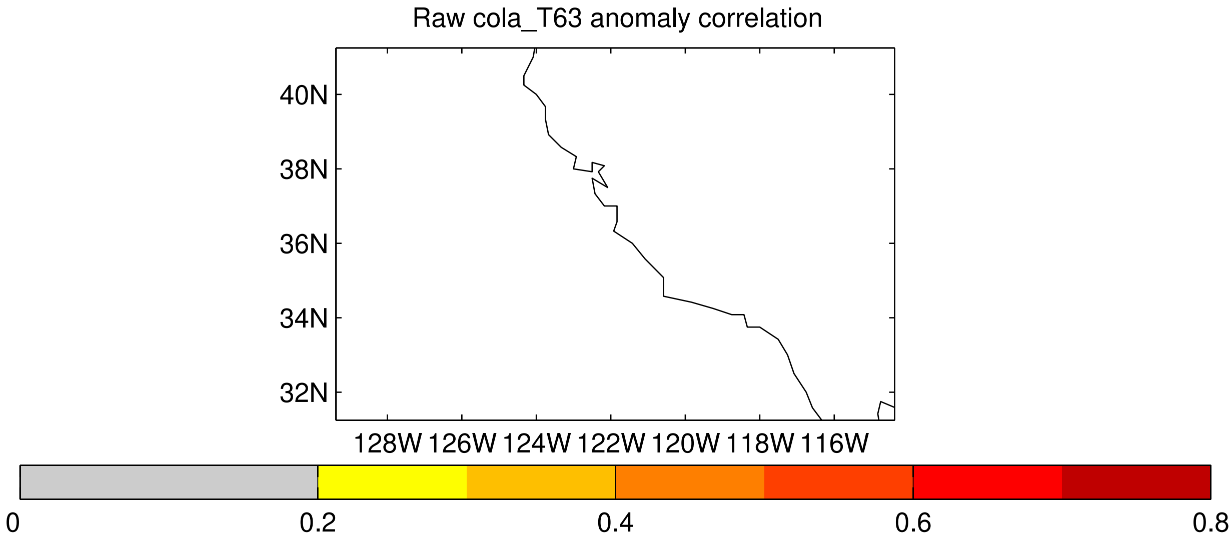


Corrected cola_T42 anomaly correlation−−cross−validated

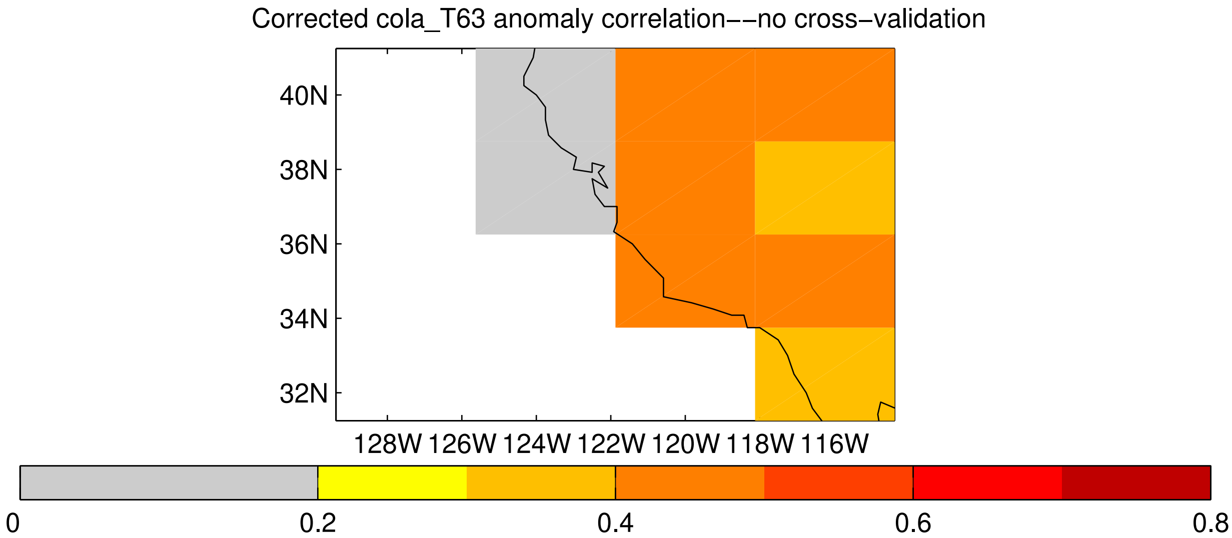




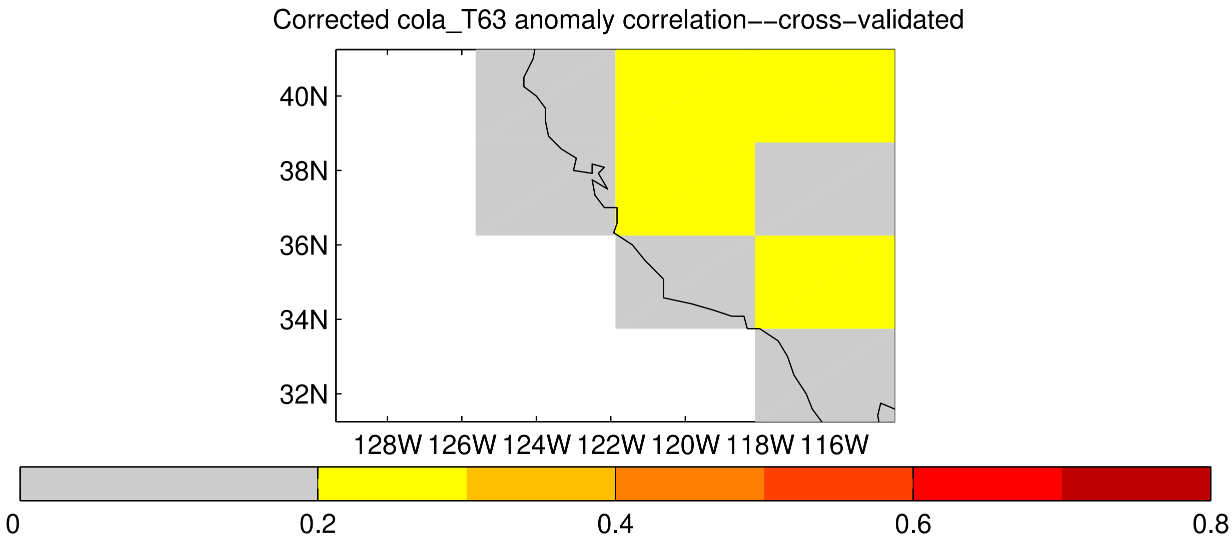
37% of obs. variance=
40N
38N
36N
34N
32N
125W
120W
115W
−4
−3
−2
−1
0
1
2
3
4
18% of obs. variance=
10% of cola_T63 variance
20N
0
−20S
180
160W
140W
120W
100W
80W
11% of cola_T63 variance
correlation=0.55345
0.5
0
−0.5
correlation=0.42563
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000



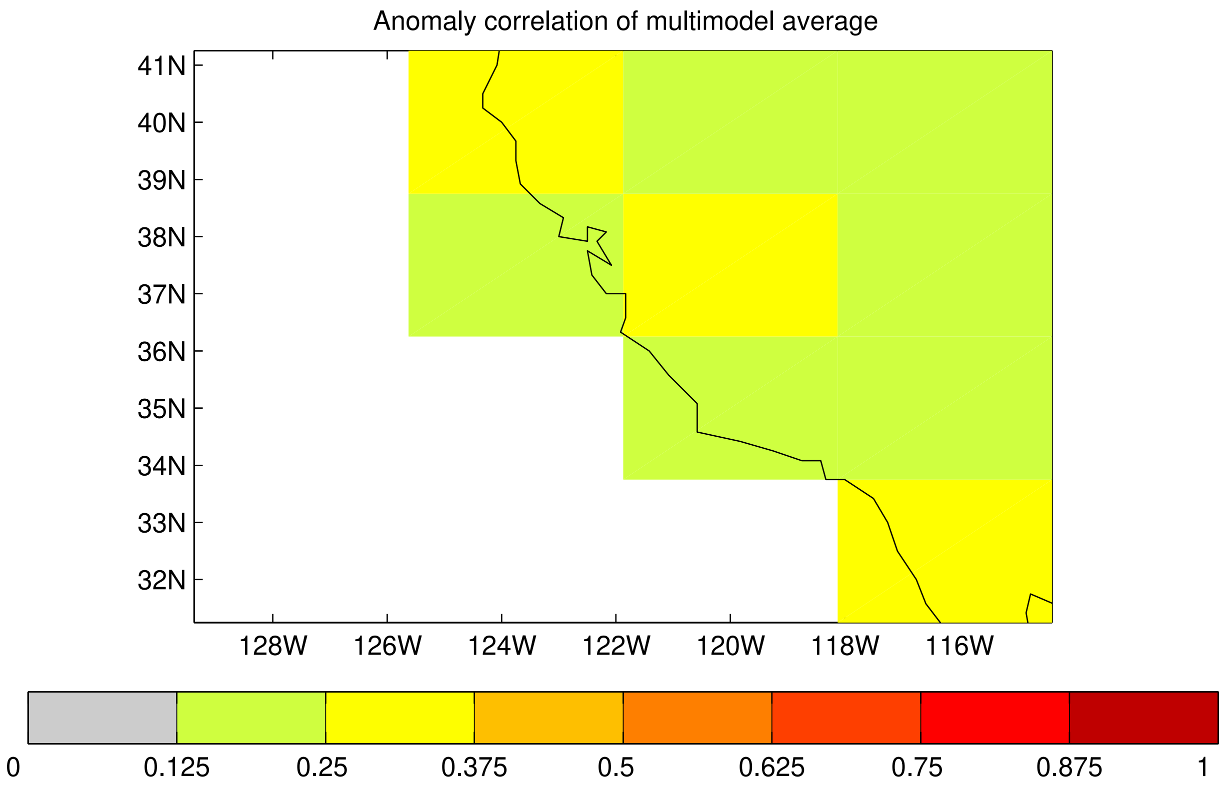
Raw cola_T63 anomaly correlation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8

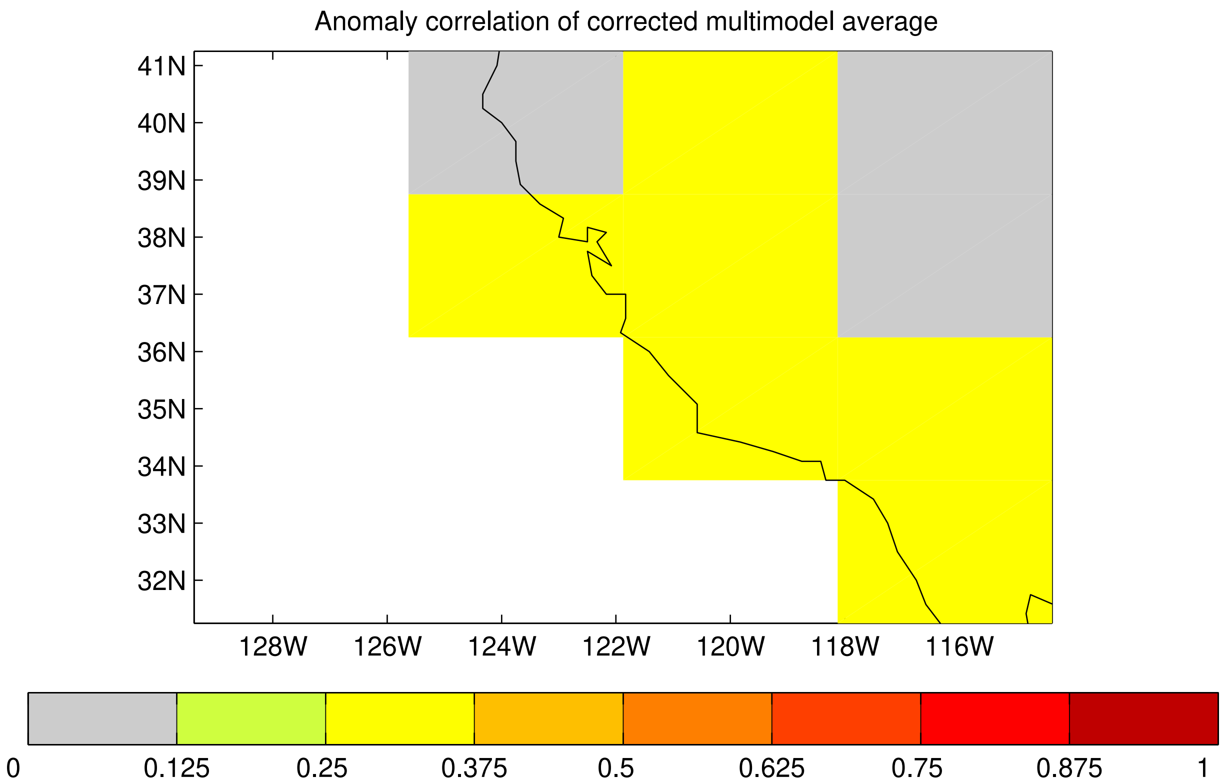


Corrected cola_T63 anomaly correlation−−no cross−validation
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8



Corrected cola_T63 anomaly correlation−−cross−validated
40N
38N
36N
34N
32N
128W 126W 124W 122W 120W 118W 116W
0
0.2
0.4
0.6
0.8


Anomaly correlation of multimodel average
41N
40N
39N
38N
37N
36N
35N
34N
33N
32N
128W
126W
124W
122W
120W
118W
116W
0
0.125
0.25
0.375
0.5
0.625
0.75
0.875
1


Anomaly correlation of corrected multimodel average
41N
40N
39N
38N
37N
36N
35N
34N
33N
32N
128W
126W
124W
122W
120W
118W
116W
0
0.125
0.25
0.375
0.5
0.625
0.75
0.875
1