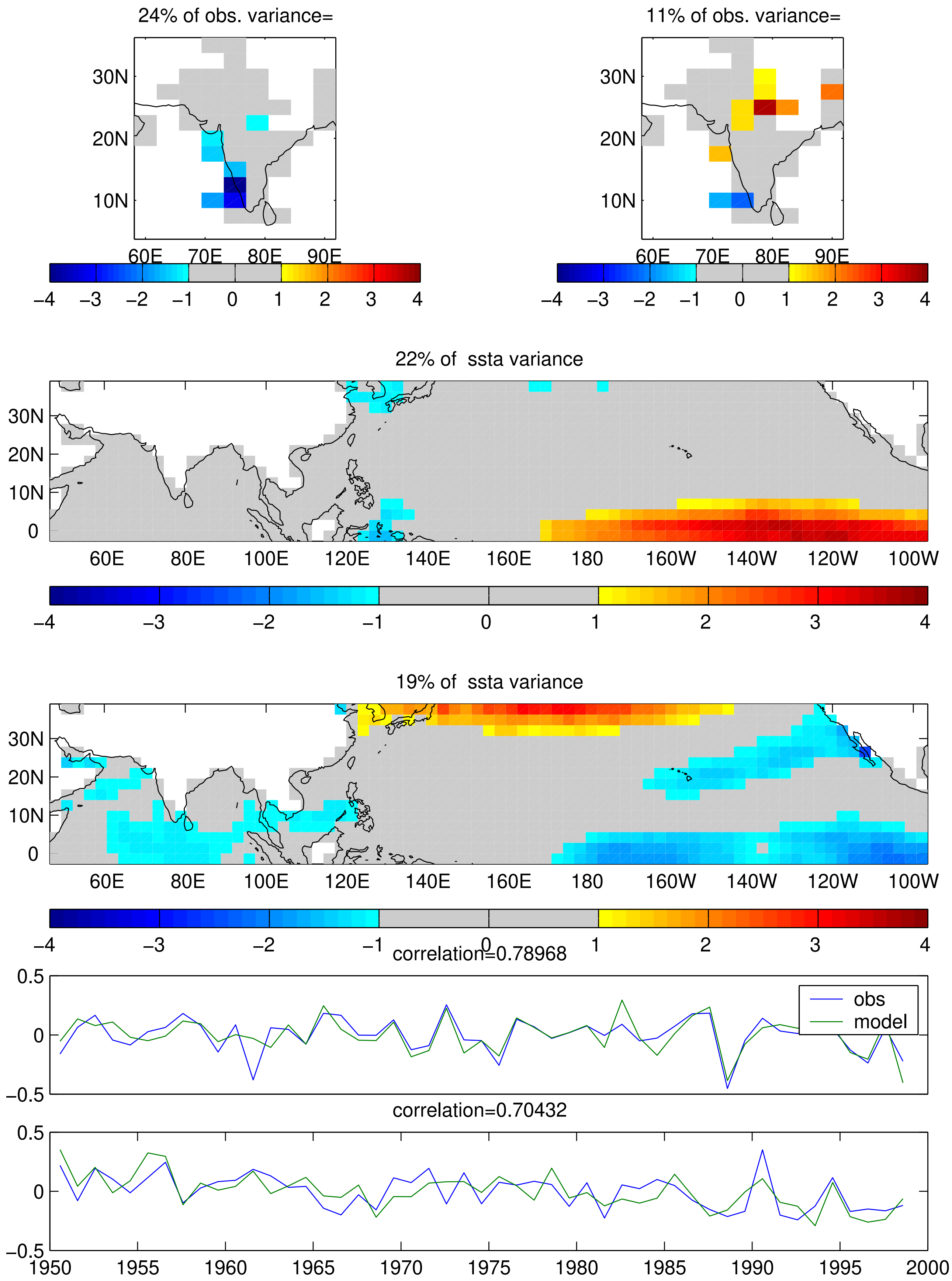
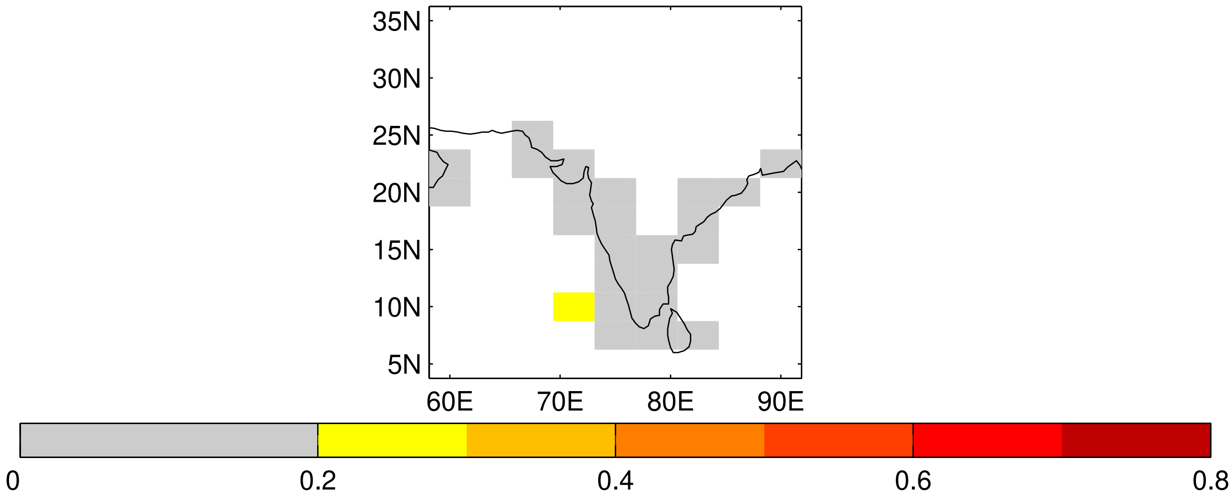
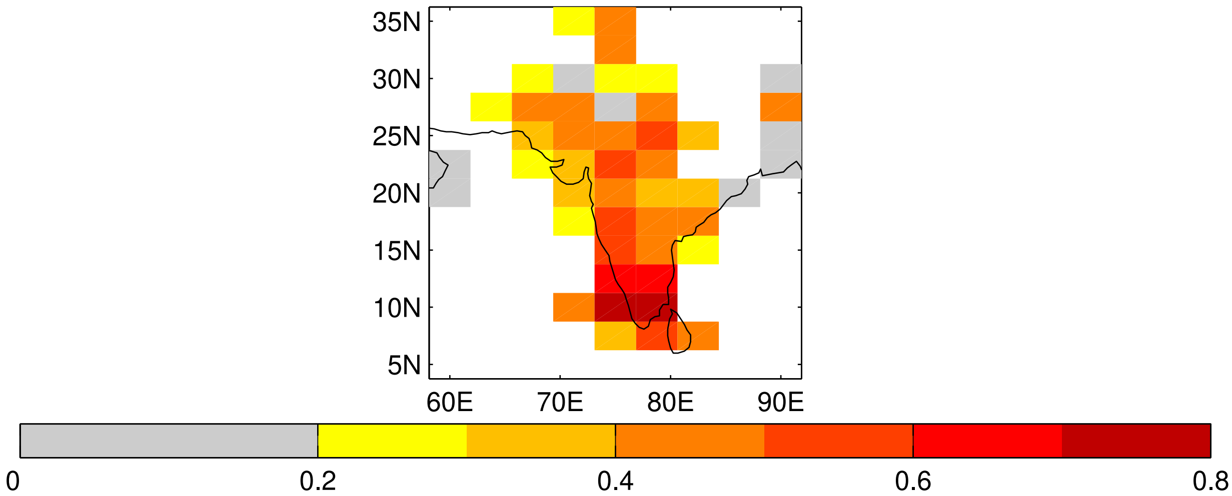


24% of obs. variance=
11% of obs. variance=
30N
20N
10N
60E
70E
80E
90E
−4
−3
−2
−1
0
1
2
3
4
22% of ssta variance
19% of ssta variance
0
60E
80E
100E
120E
140E
160E
180
160W
140W
120W
100W
correlation=0.78968
correlation=0.70432
obs
model
0.5
−0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

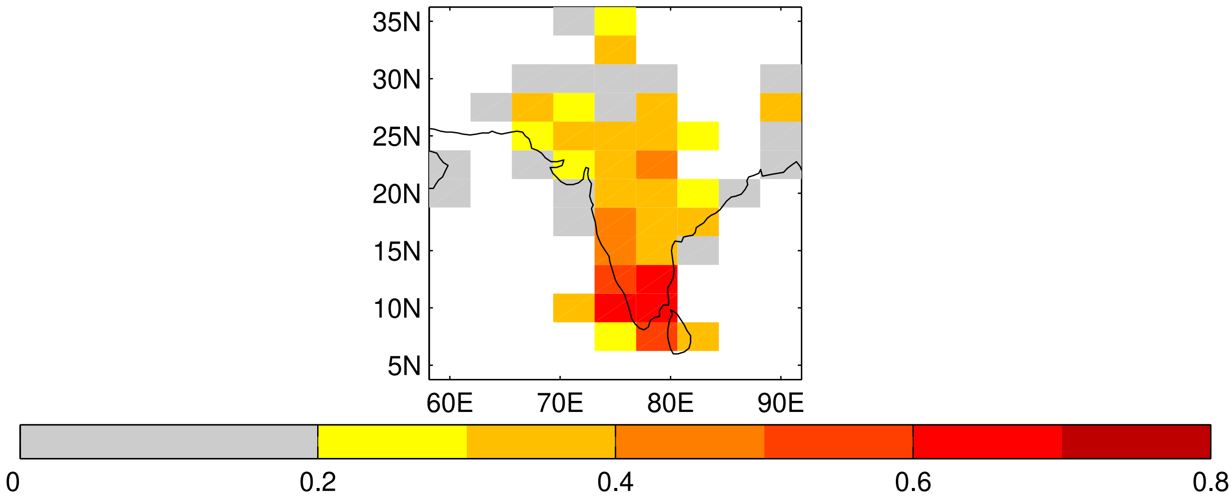
Raw ssta anomaly correlation

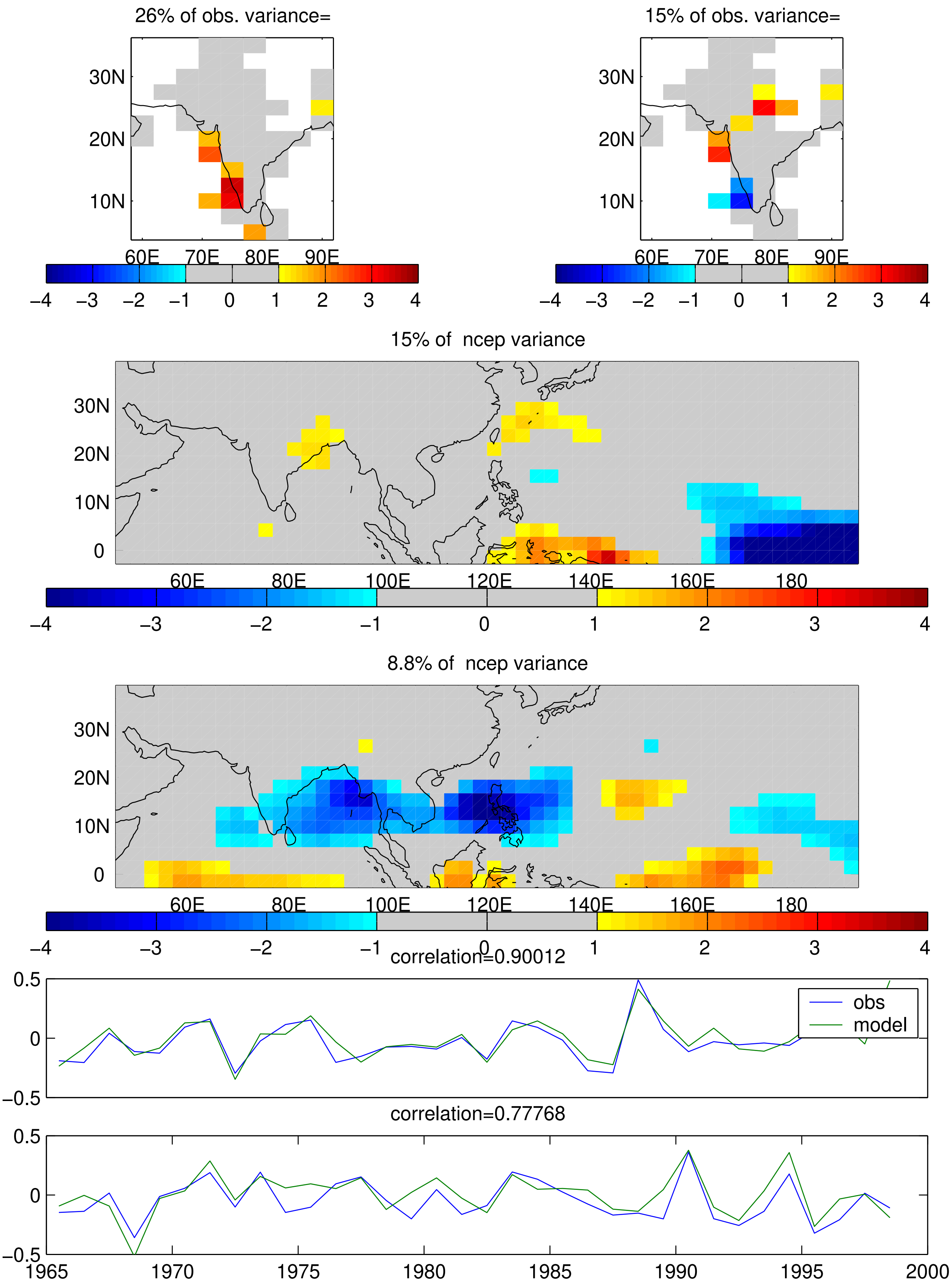


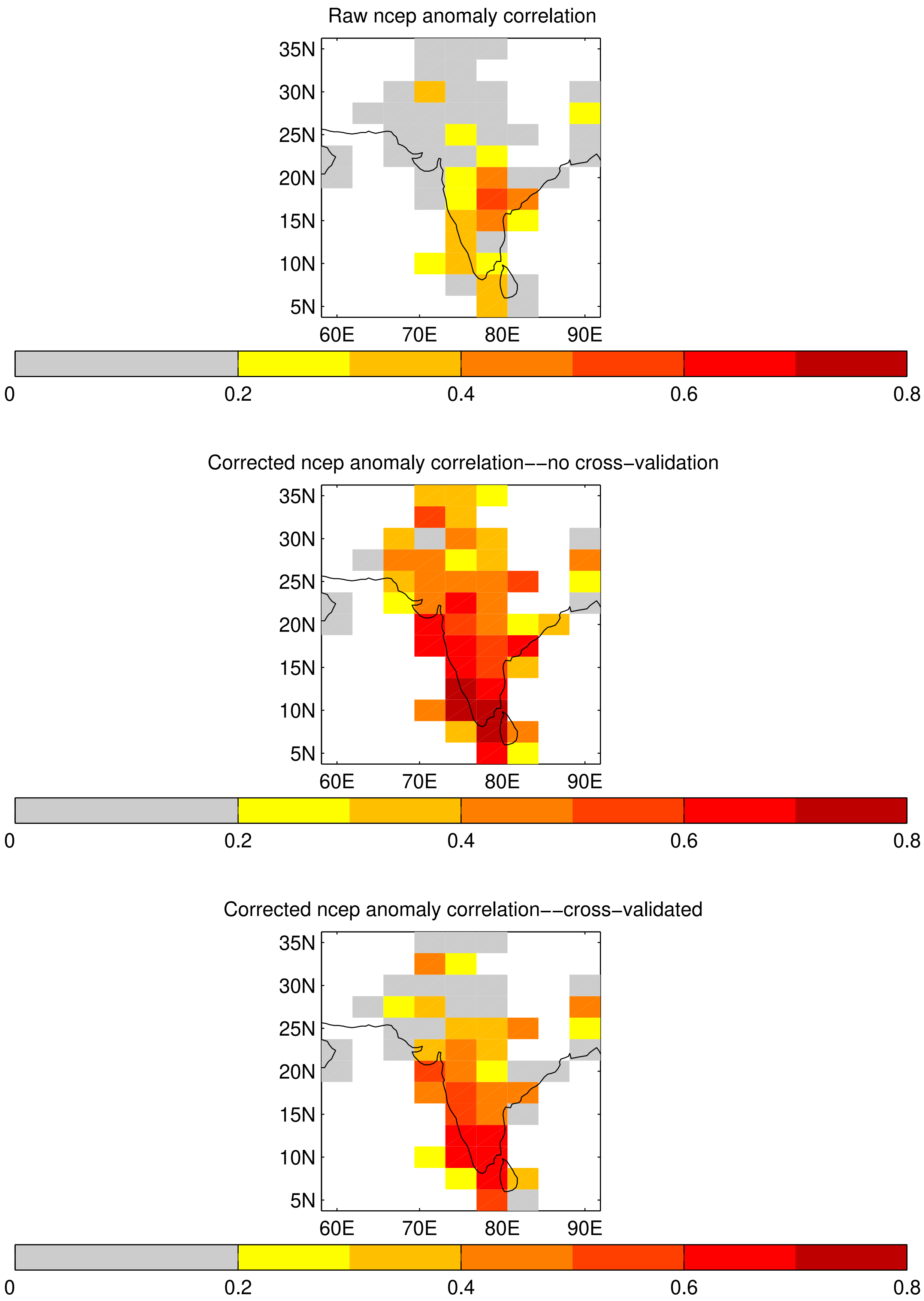
Corrected ssta anomaly correlation−−no cross−validation

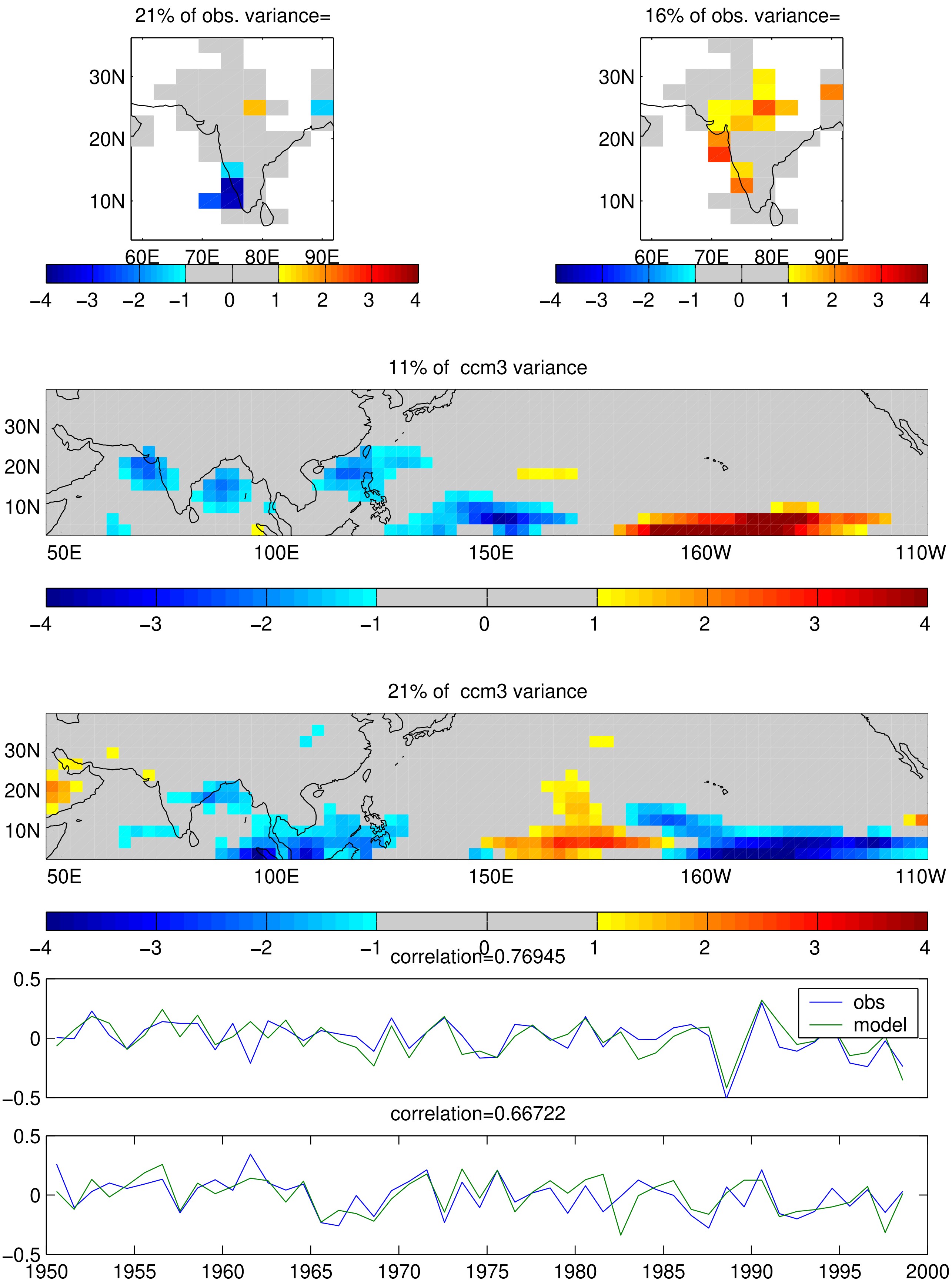


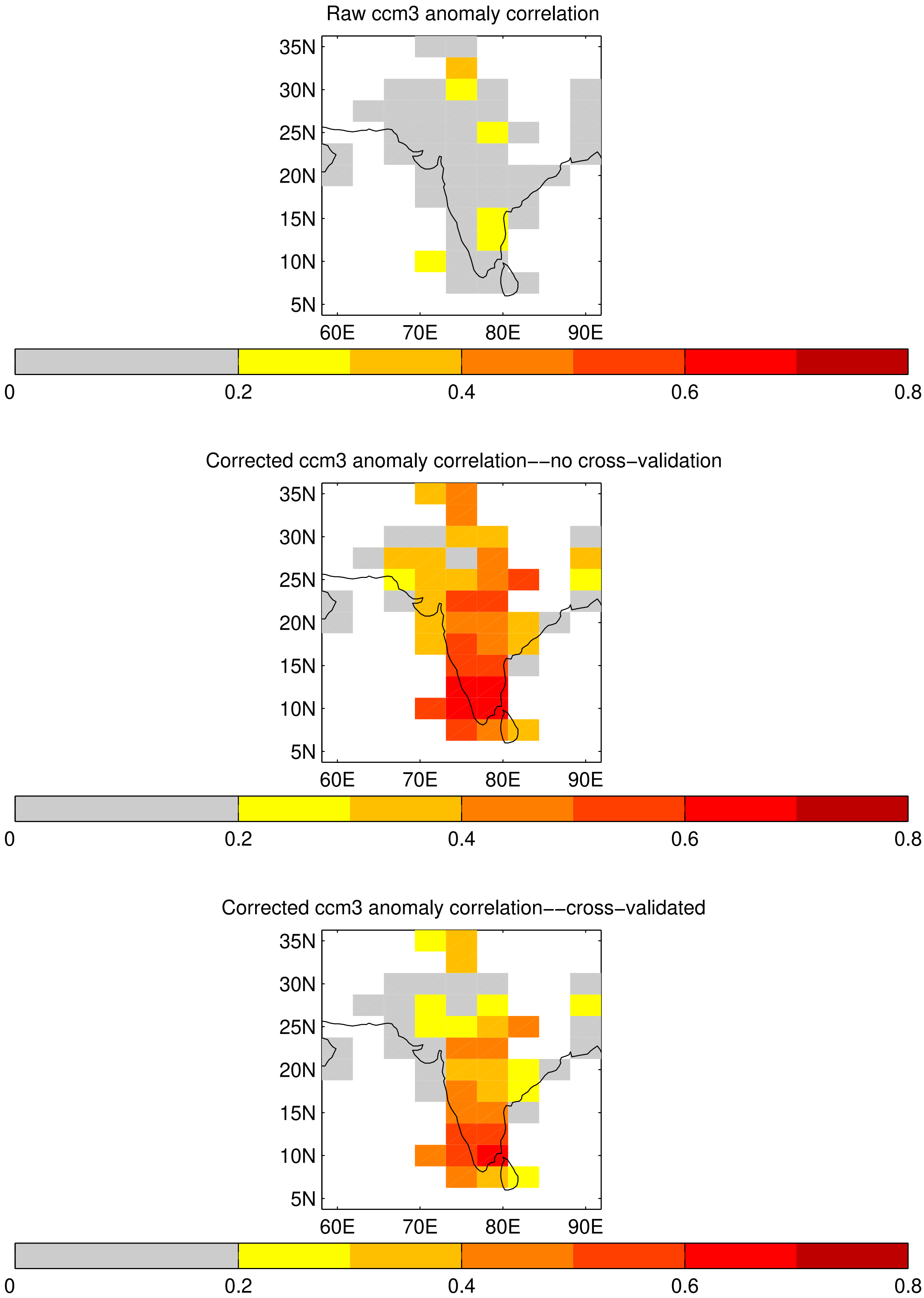
Corrected ssta anomaly correlation−−cross−validated

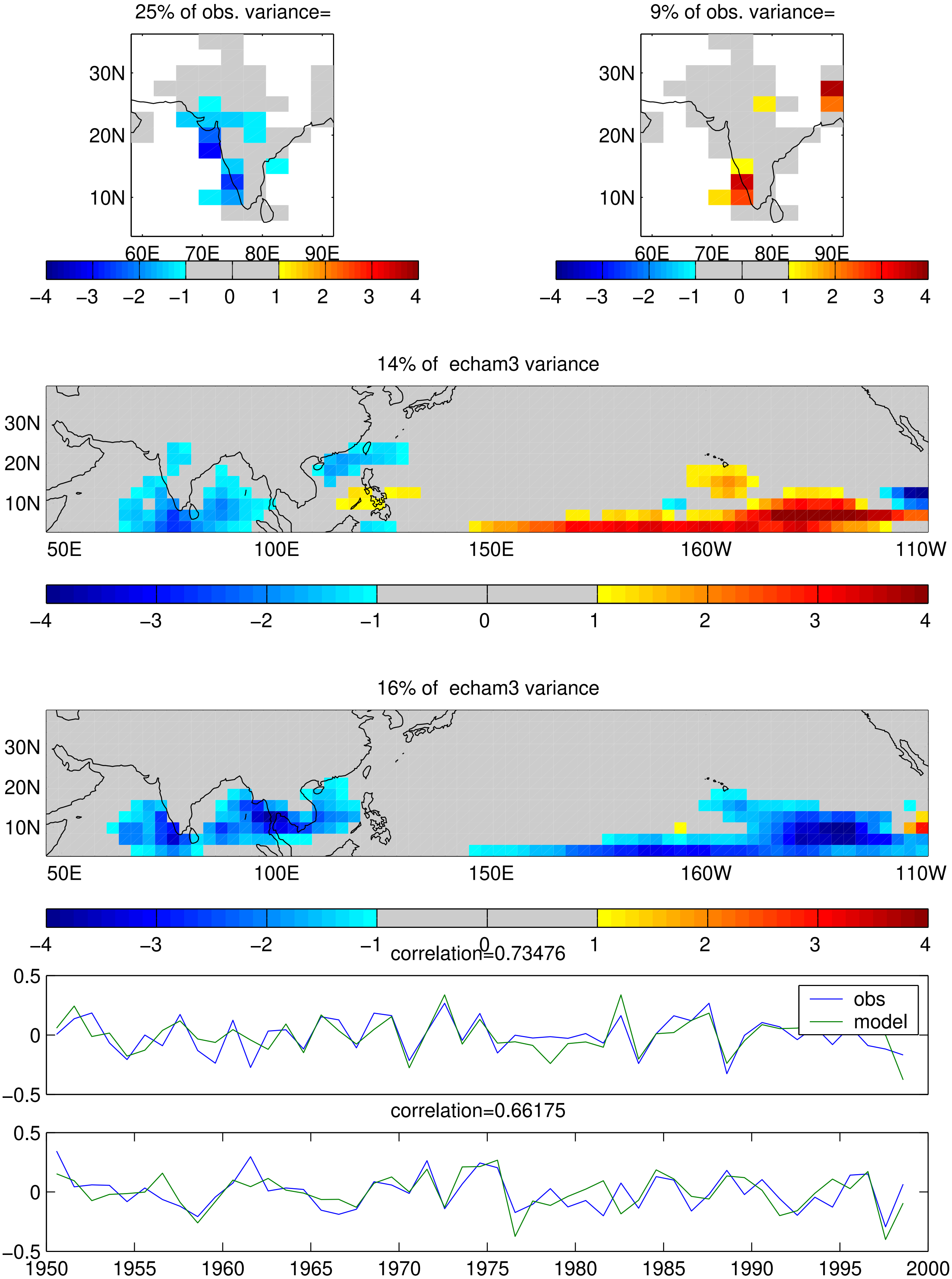


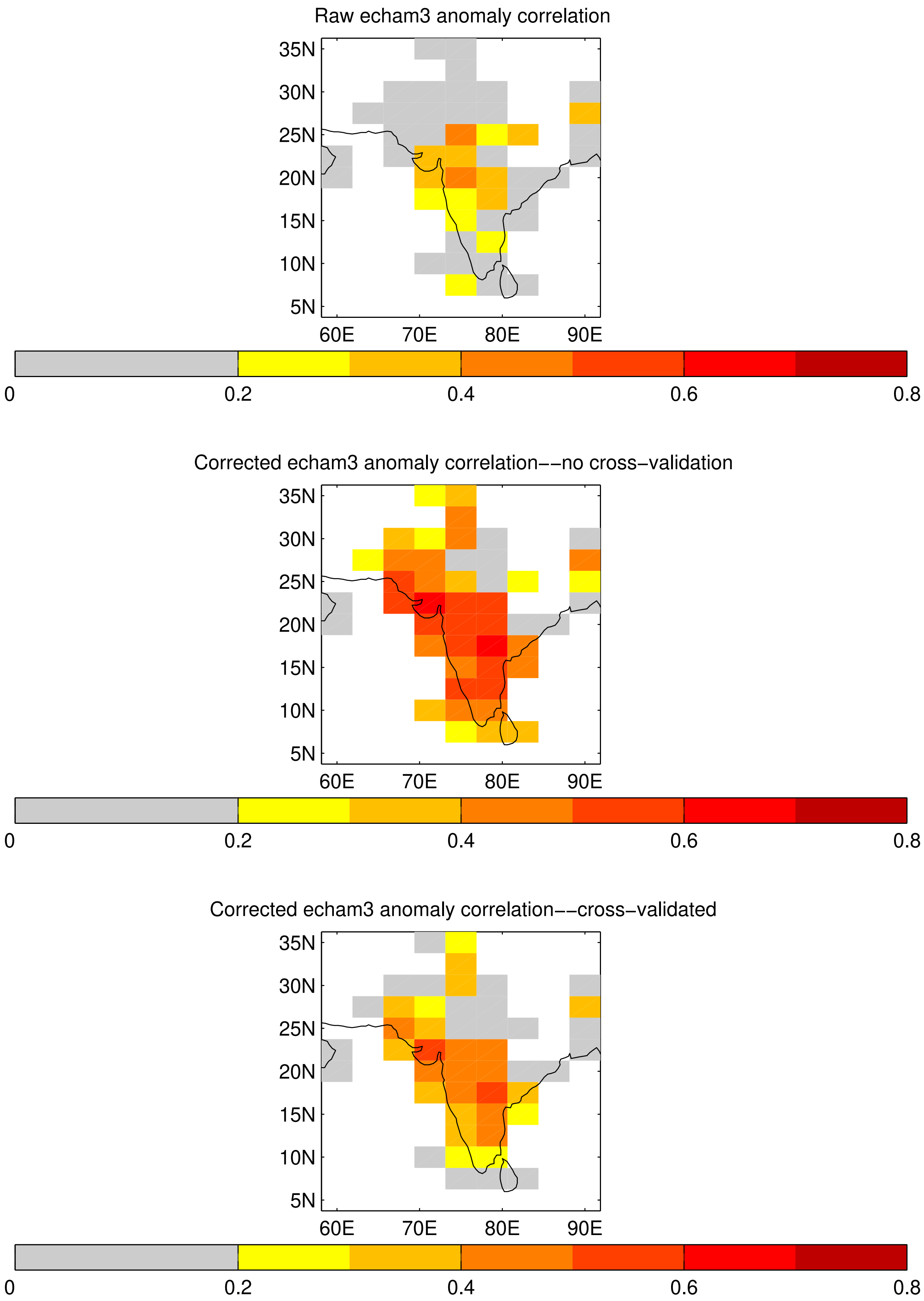

26% of obs. variance=
15% of obs. variance=
30N
20N
10N
60E
70E
80E
90E
−4
−3
−2
−1
0
1
2
3
4
15% of ncep variance
0
100E
120E
140E
160E
180
8.8% of ncep variance
correlation=0.90012
obs
model
0.5
−0.5
correlation=0.77768
1965
1970
1975
1980
1985
1990
1995
2000

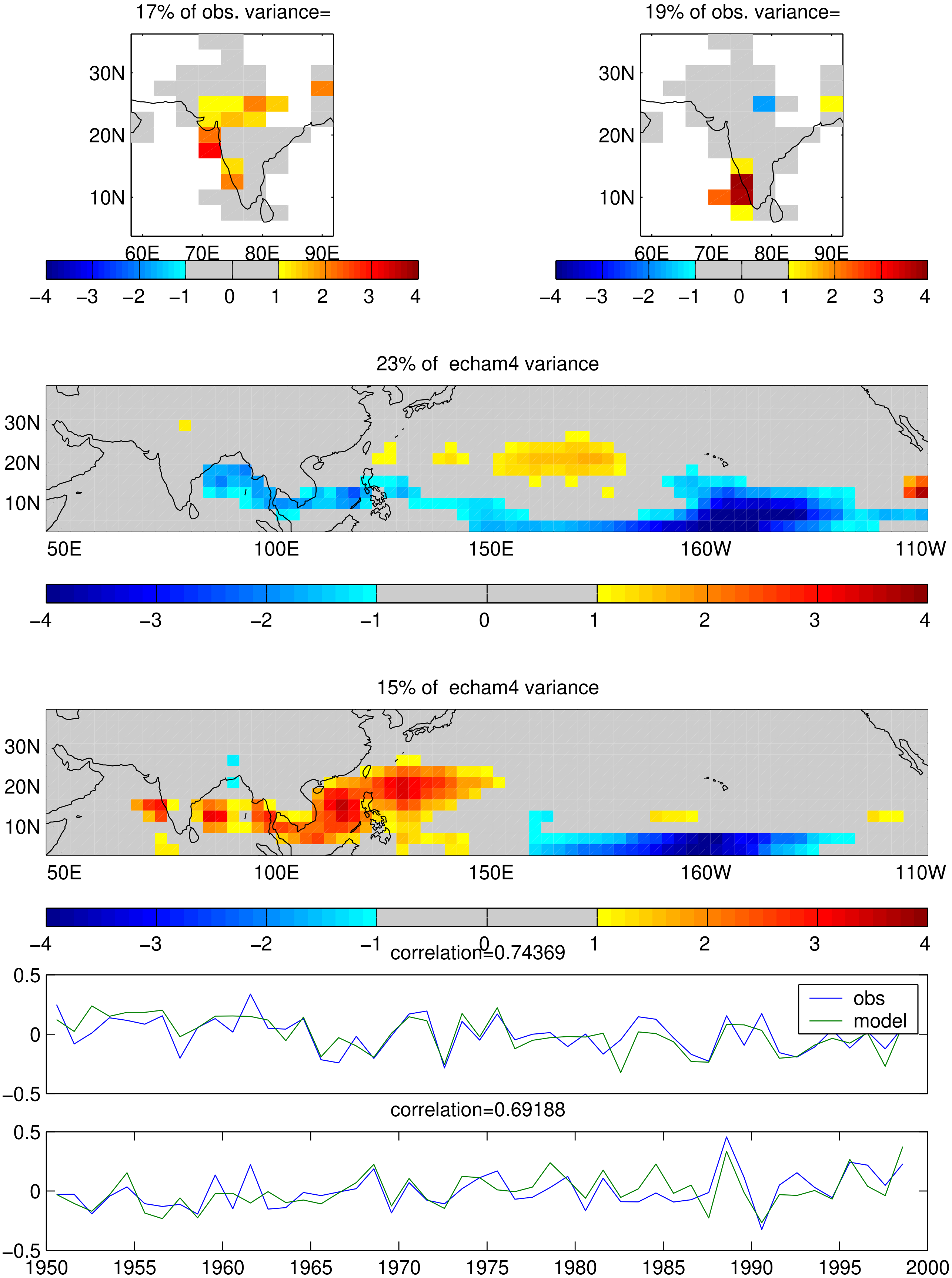

Raw ncep anomaly correlation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected ncep anomaly correlation−−no cross−validation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected ncep anomaly correlation−−cross−validated
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8


21% of obs. variance=
30N
20N
10N
60E
70E
80E
90E
−4
−3
−2
−1
0
1
2
3
4
16% of obs. variance=
30N
20N
10N
60E
70E
80E
90E
−4
−3
−2
−1
0
1
2
3
4
11% of ccm3 variance
30N
20N
10N
50E
100E
150E
160W
110W
−4
−3
−2
−1
0
1
2
3
4
21% of ccm3 variance
30N
20N
10N
50E
100E
150E
160W
110W
−4
−3
−2
−1
0
1
2
3
4
correlation=0.76945
0.5
0
−0.5
obs
model
correlation=0.66722
0.5
0
−0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

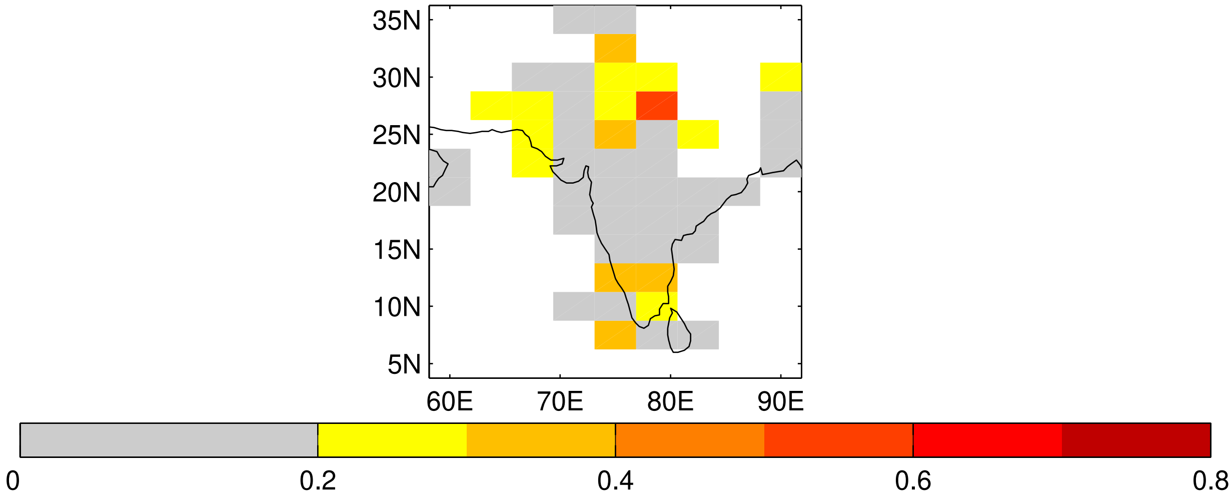

Raw ccm3 anomaly correlation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected ccm3 anomaly correlation−−no cross−validation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected ccm3 anomaly correlation−−cross−validated
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8


25% of obs. variance=
9% of obs. variance=
30N
20N
10N
60E 70E 80E 90E
–4 –3 –2 –1 0 1 2 3 4
14% of echam3 variance
16% of echam3 variance
50E 100E 150E 160W 110W
correlation=0.73476
correlation=0.66175
obs
model
0.5
0
–0.5
1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000

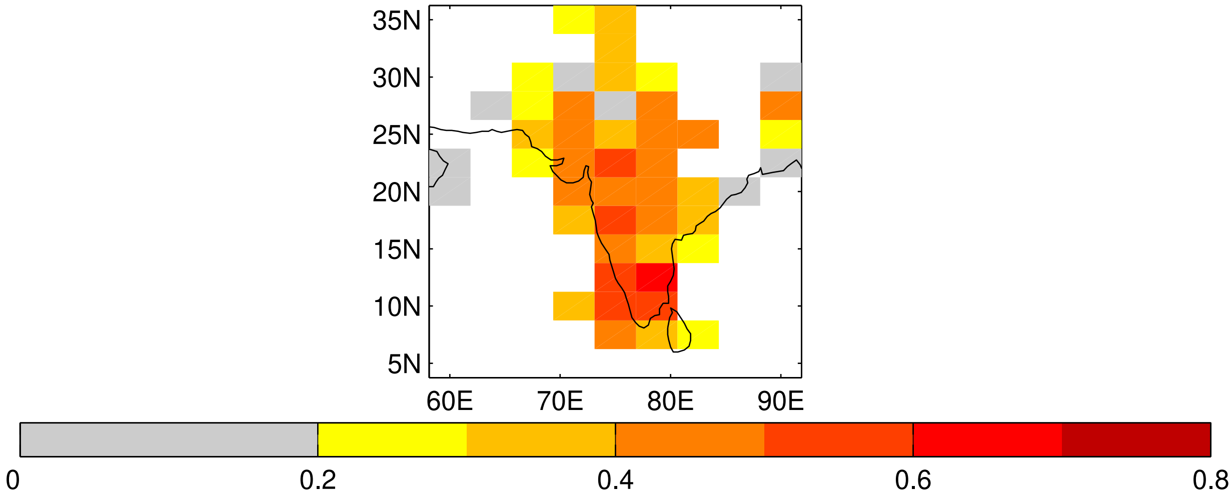

Raw echam3 anomaly correlation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected echam3 anomaly correlation−−no cross−validation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected echam3 anomaly correlation−−cross−validated
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8


17% of obs. variance=
19% of obs. variance=
30N
20N
10N
60E
70E
80E
90E
–4
–3
–2
–1
0
1
2
3
4
23% of echam4 variance
15% of echam4 variance
50E
100E
150E
160W
110W
correlation=0.74369
correlation=0.69188
obs
model
0.5
–0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

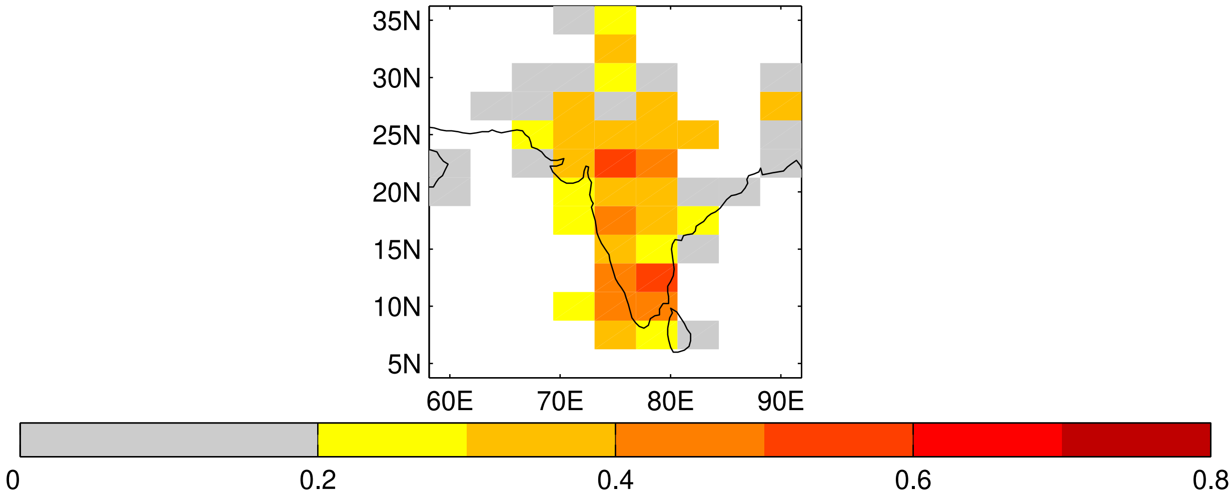
Raw echam4 anomaly correlation

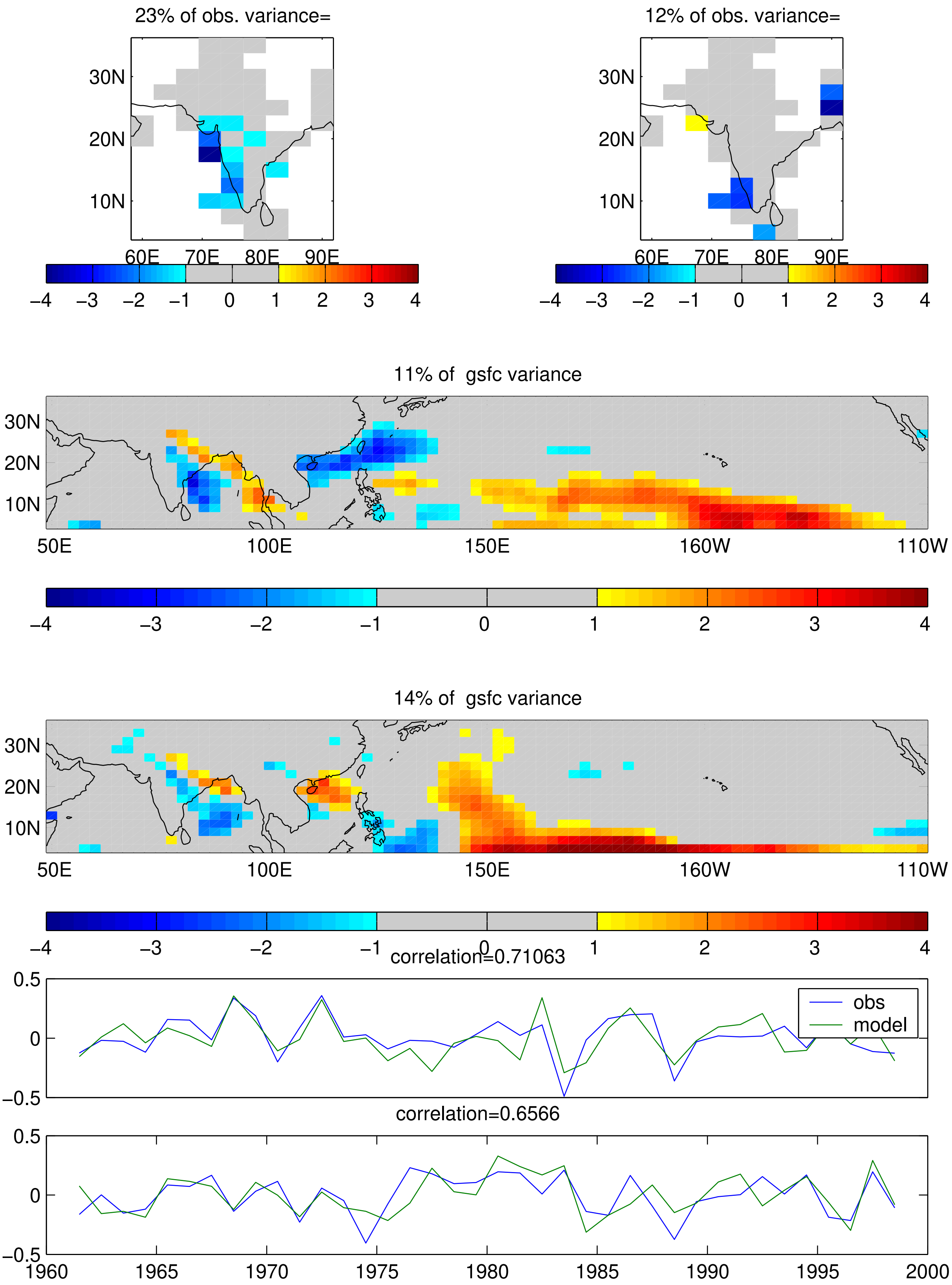


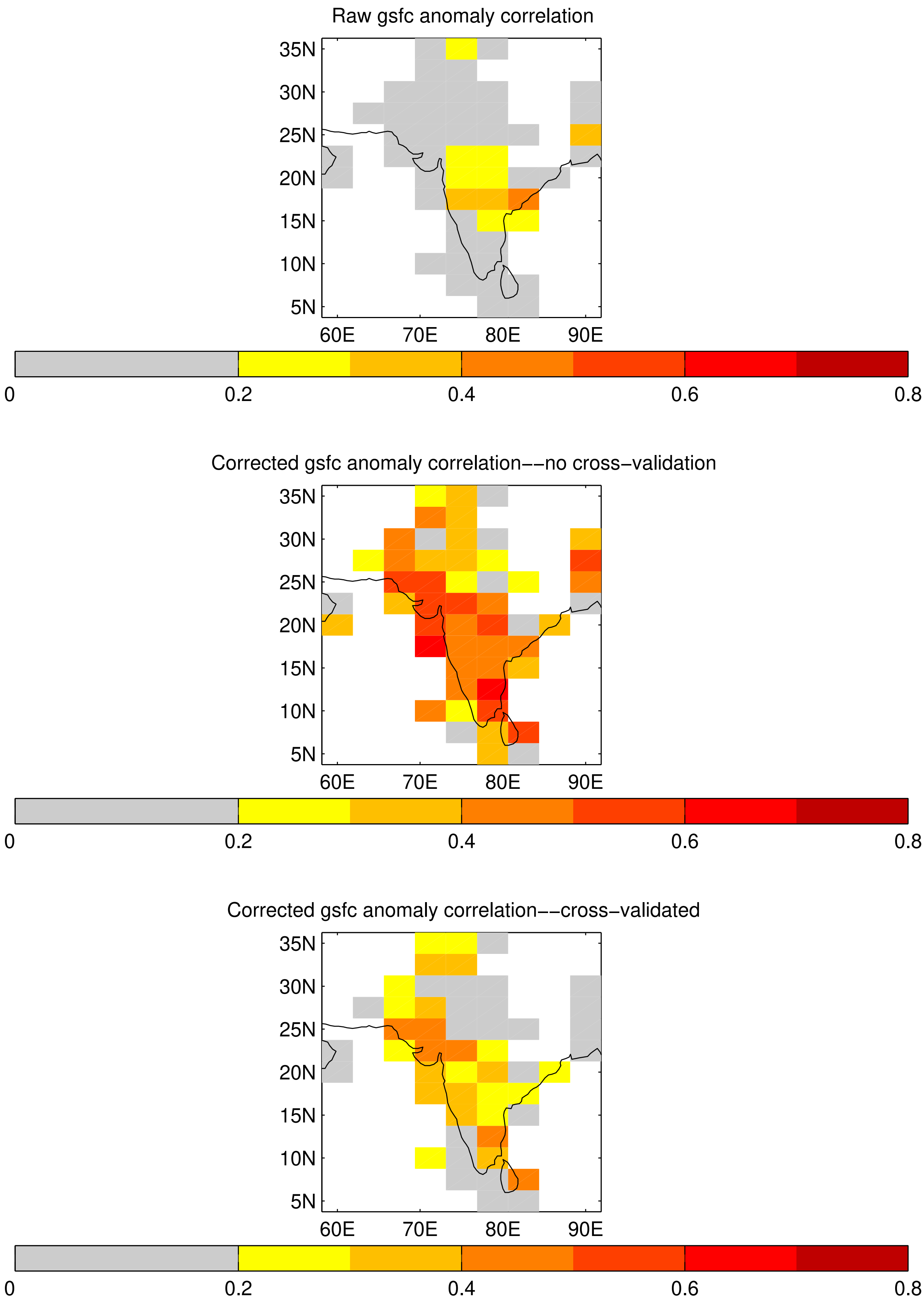
Corrected echam4 anomaly correlation−−no cross−validation

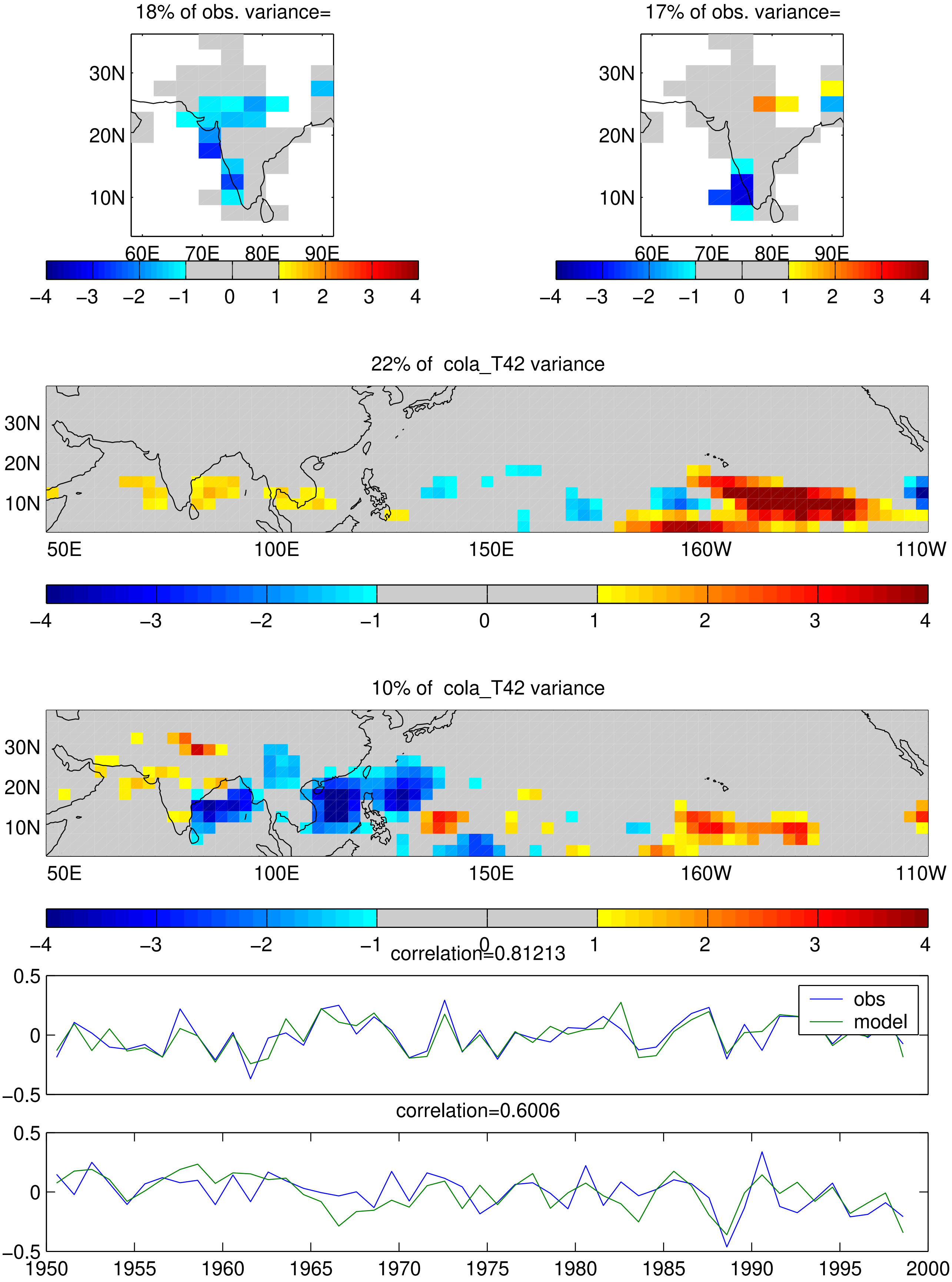


Corrected echam4 anomaly correlation−−cross−validated



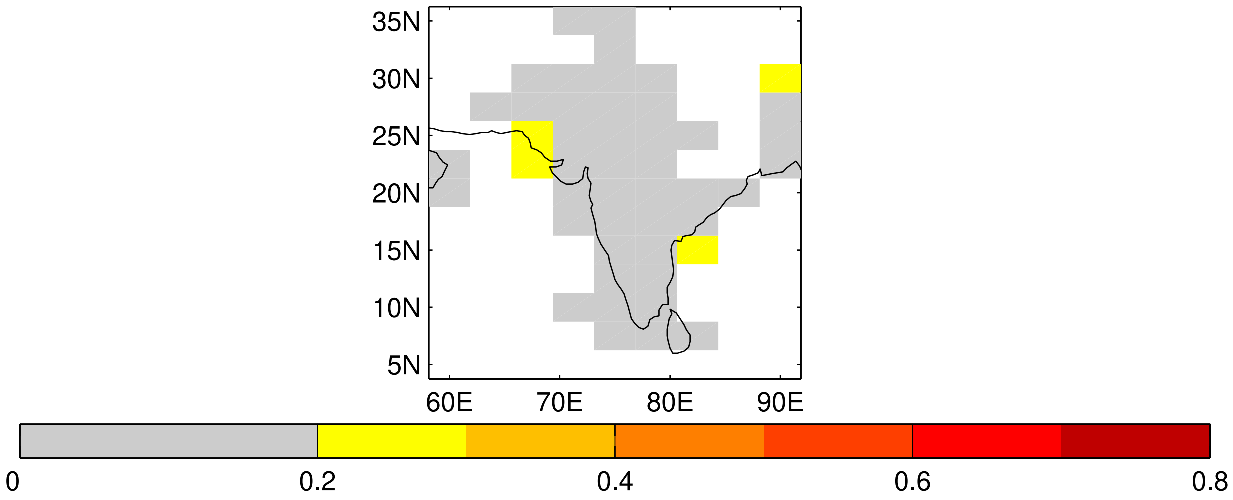

23% of obs. variance=
12% of obs. variance=
30N
20N
10N
60E 70E 80E 90E
−4 −3 −2 −1 0 1 2 3 4
11% of gsfc variance
14% of gsfc variance
50E 100E 150E 160W 110W
correlation=0.71063
correlation=0.6566
obs
model
0.5
0
−0.5
1960 1965 1970 1975 1980 1985 1990 1995 2000


Raw gsfc anomaly correlation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected gsfc anomaly correlation−−no cross−validation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected gsfc anomaly correlation−−cross−validated
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8

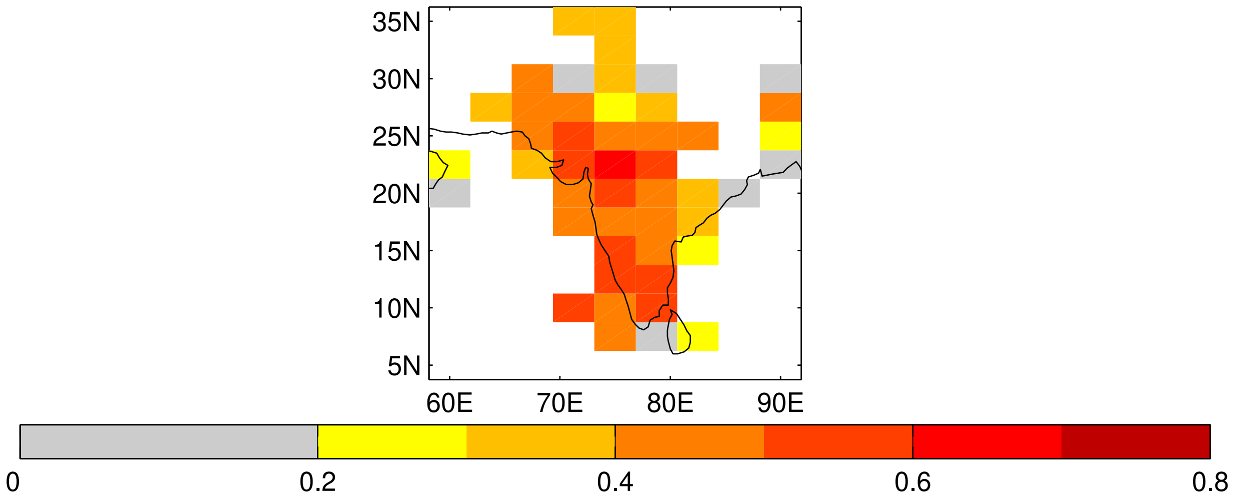


18% of obs. variance=
17% of obs. variance=
30N
20N
10N
60E
70E
80E
90E
−4
−3
−2
−1
0
1
2
3
4
22% of cola_T42 variance
50E
100E
150E
160W
110W
10% of cola_T42 variance
correlation=0.81213
obs
model
0.5
0
−0.5
correlation=0.6006
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000

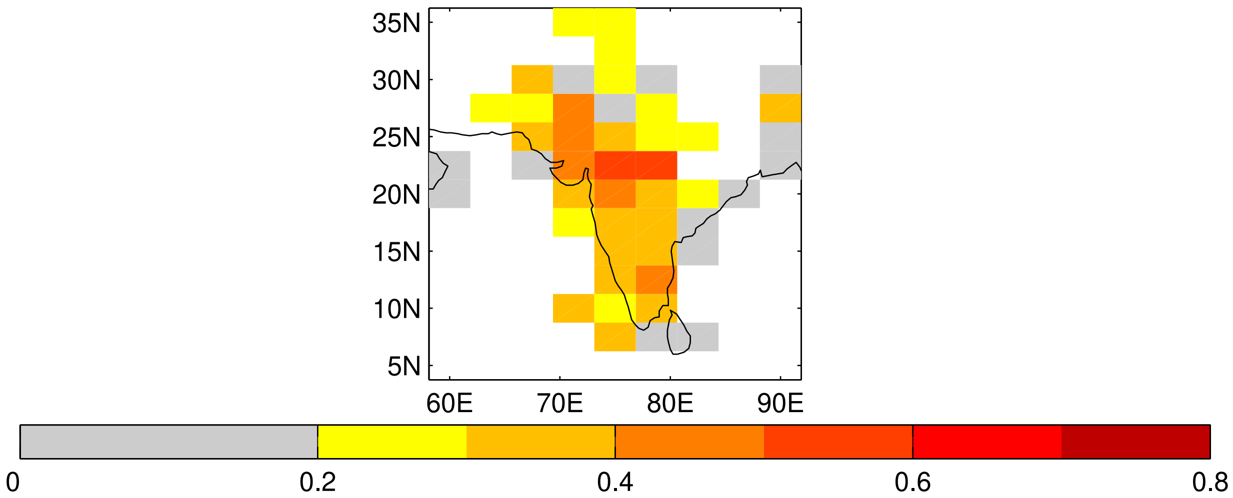
Raw cola_T42 anomaly correlation

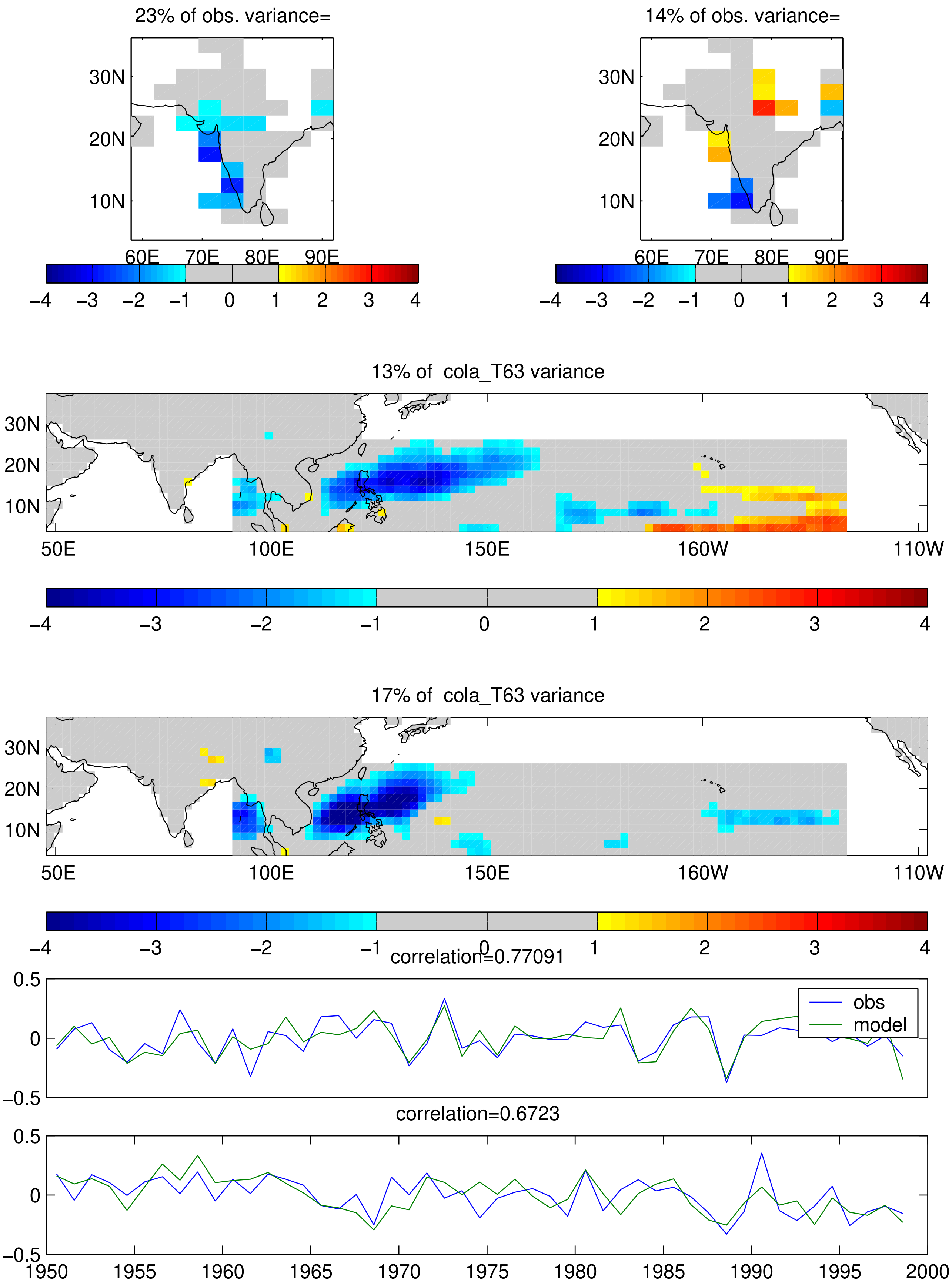


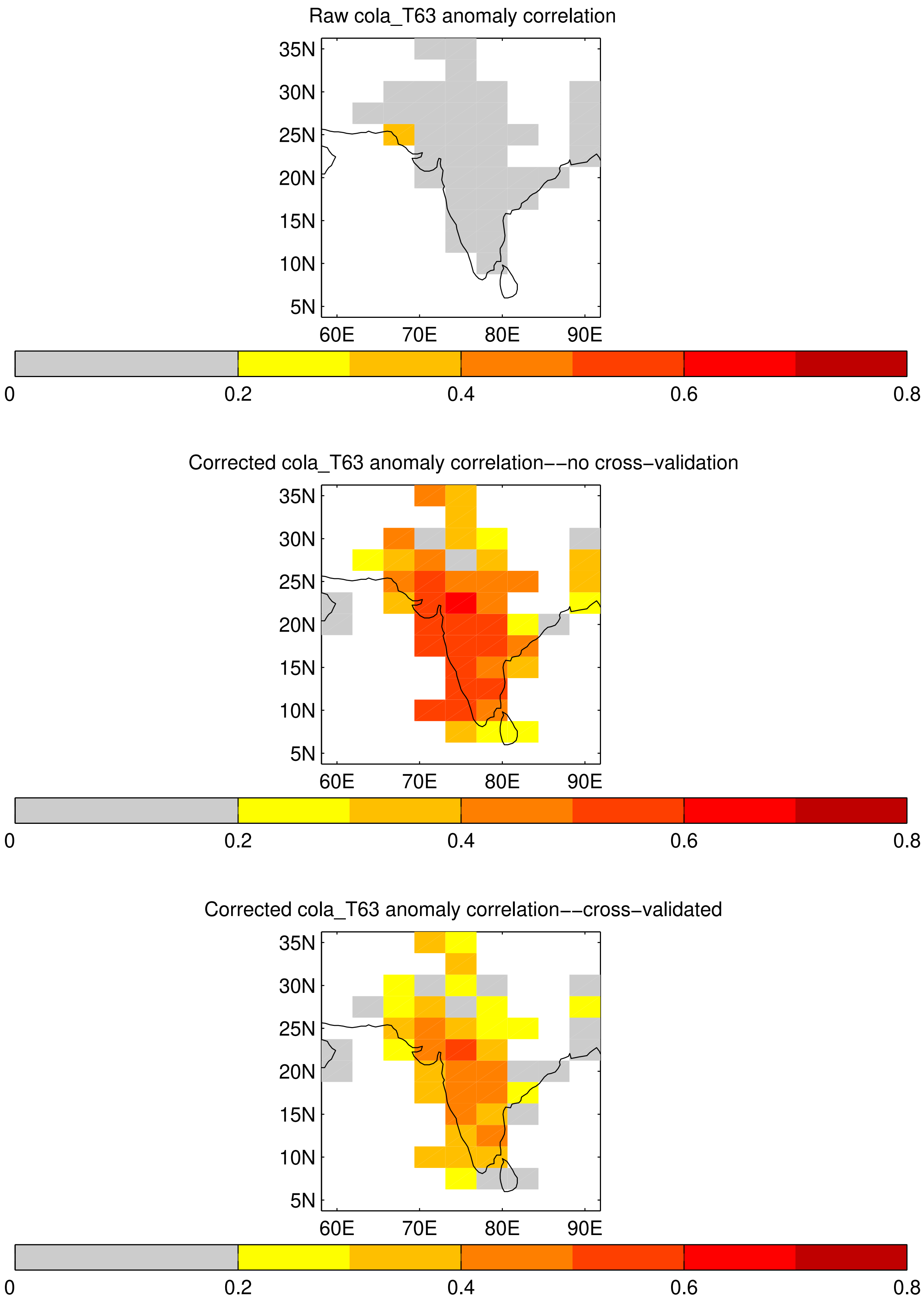
Corrected cola_T42 anomaly correlation−−no cross−validation

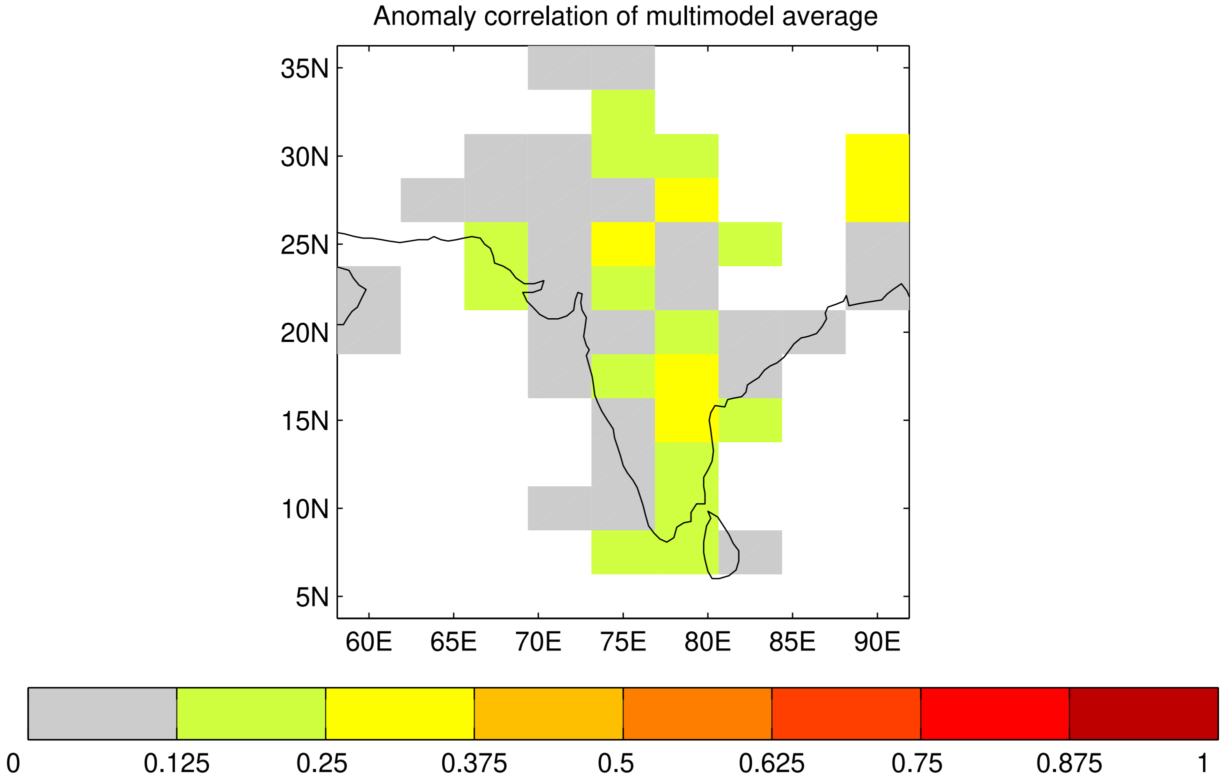


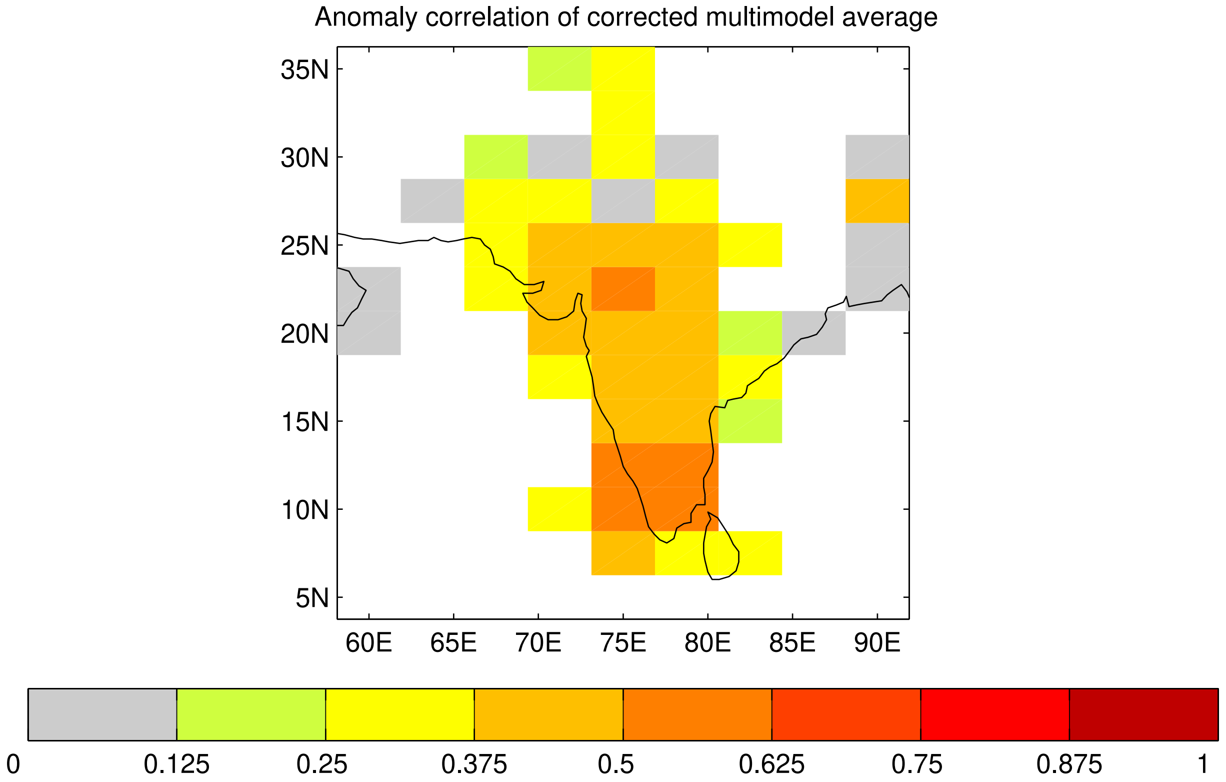
Corrected cola_T42 anomaly correlation−−cross−validated




23% of obs. variance=
14% of obs. variance=
30N
20N
10N
60E
70E
80E
90E
–4
–3
–2
–1
0
1
2
3
4
13% of cola_T63 variance
17% of cola_T63 variance
50E
100E
150E
160W
110W
correlation=0.77091
correlation=0.6723
obs
model
0.5
0
–0.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000


Raw cola_T63 anomaly correlation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected cola_T63 anomaly correlation−−no cross−validation
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8
Corrected cola_T63 anomaly correlation−−cross−validated
35N
30N
25N
20N
15N
10N
5N
60E
70E
80E
90E
0
0.2
0.4
0.6
0.8


Anomaly correlation of multimodel average
35N
30N
25N
20N
15N
10N
5N
60E
65E
70E
75E
80E
85E
90E
0
0.125
0.25
0.375
0.5
0.625
0.75
0.875
1


Anomaly correlation of corrected multimodel average
35N
30N
25N
20N
15N
10N
5N
60E
65E
70E
75E
80E
85E
90E
0
0.125
0.25
0.375
0.5
0.625
0.75
0.875
1