12/18/20 - plots

- Difference (FHIST_Contrail - FHIST) plots
- ordered by area, variable, level
- level ranges from 16 to 18
- Four areas
  - Hawaii to LA
  - Eastern US
  - Western Europe
  - East Asia
- Colorbars adjusted to plotted values

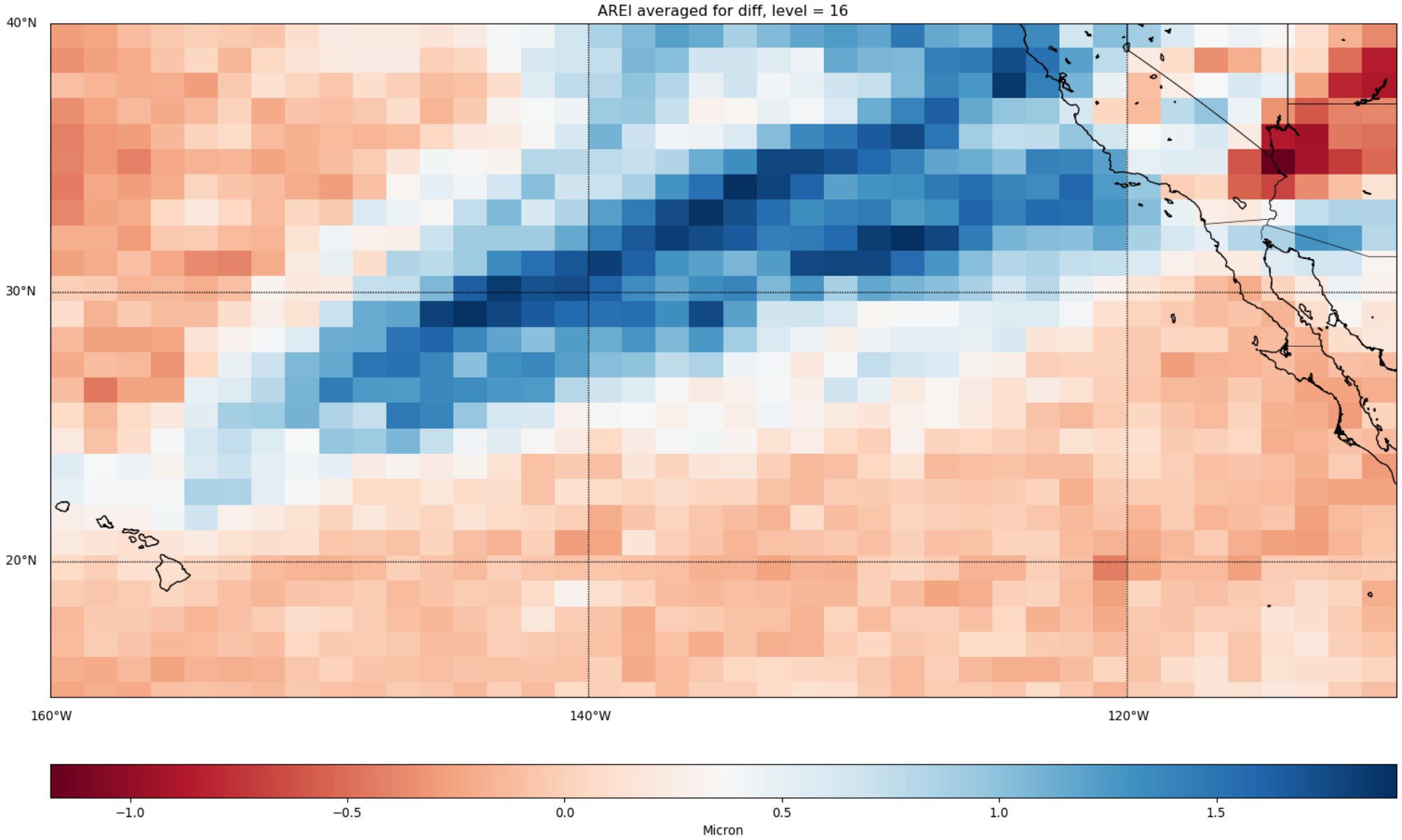
Abbreviations and units

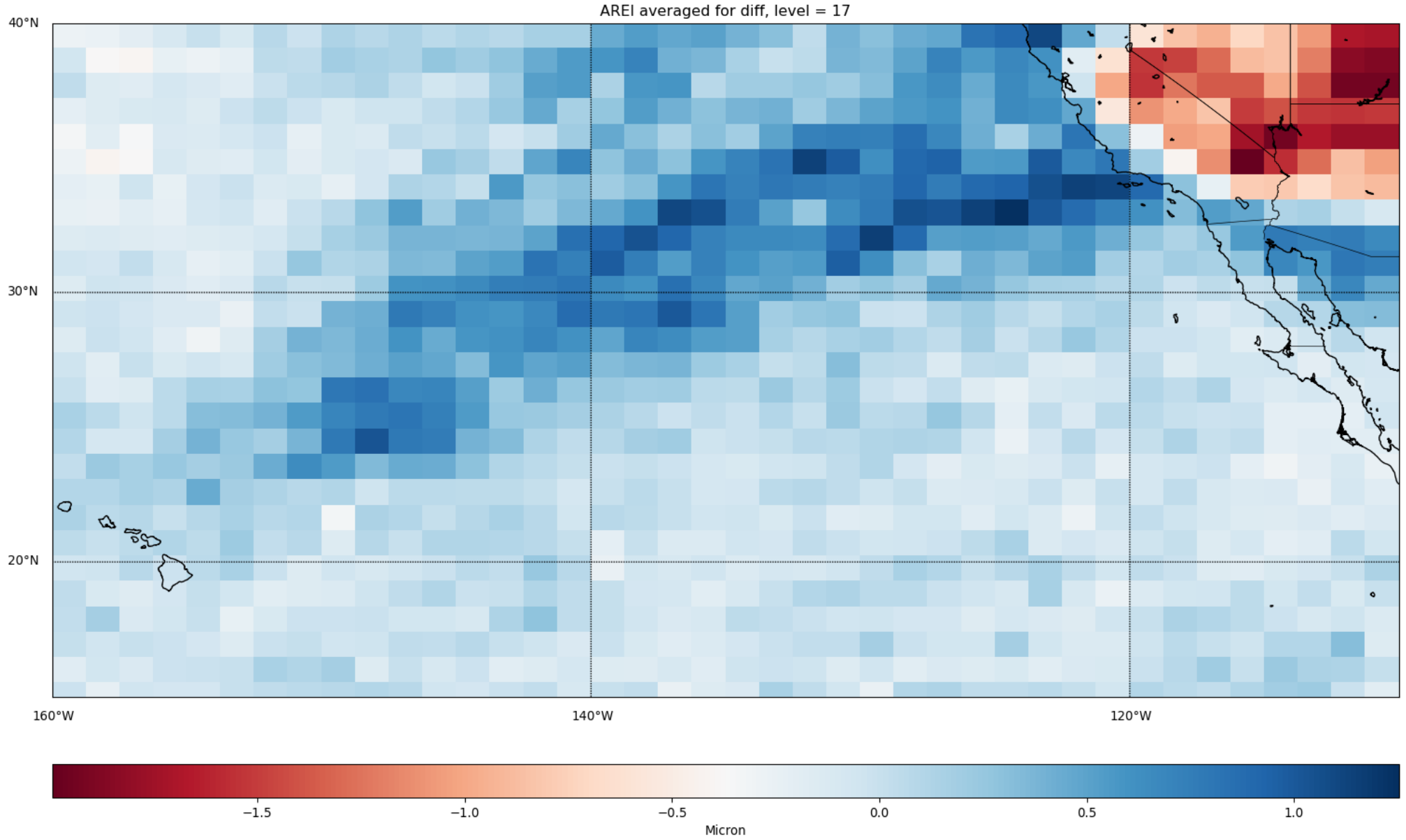
Abbreviation	Measurement	Units
AREI	Average ice effective radius	micron
CLOUD	Cloud fraction	N/A
IWC	Grid box average ice water content	kg/m^3
T	Temperature	K

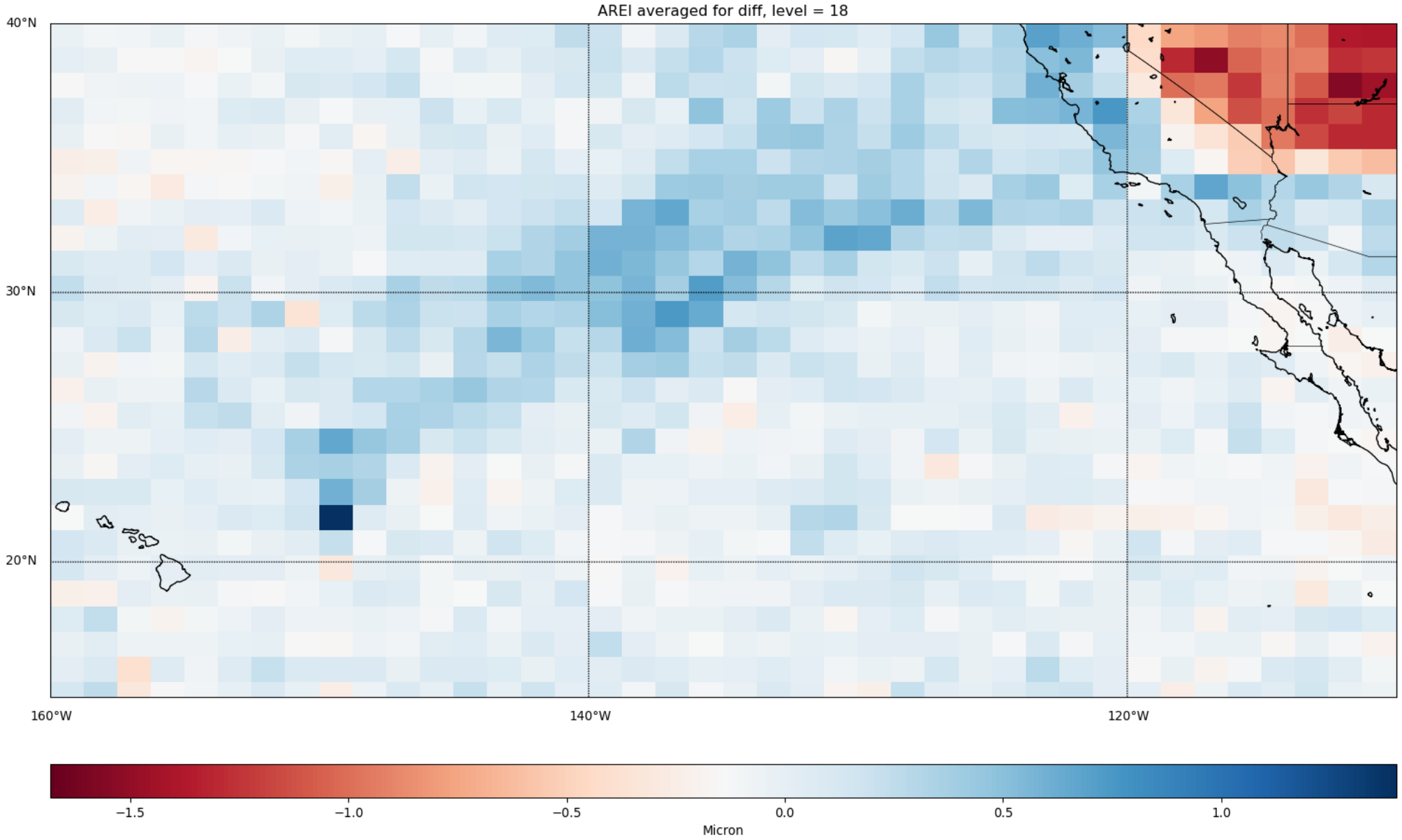
Levels and pressures

Level	Pressure (hPa)	Level	Pressure (hPa)
0	3.64346569404006	16	273.9108167588711
1	7.594819646328688	17	322.2419023513794
2	14.356632251292467	18	379.10090386867523
3	24.612220004200935	19	445.992574095726
4	35.92325001955032	20	524.6871747076511
5	43.1937500834465	21	609.7786948084831
6	51.67749896645546	22	691.3894303143024
7	61.52049824595451	23	763.404481112957
8	73.75095784664154	24	820.8583686500788
9	87.82123029232025	25	859.5347665250301
10	103.31712663173676	26	887.0202489197254
11	121.54724076390266	27	912.644546944648
12	142.99403876066208	28	936.1983984708786
13	168.22507977485657	29	957.485479535535
14	197.9080867022276	30	976.325407391414
15	232.82861895859241	31	992.556095123291

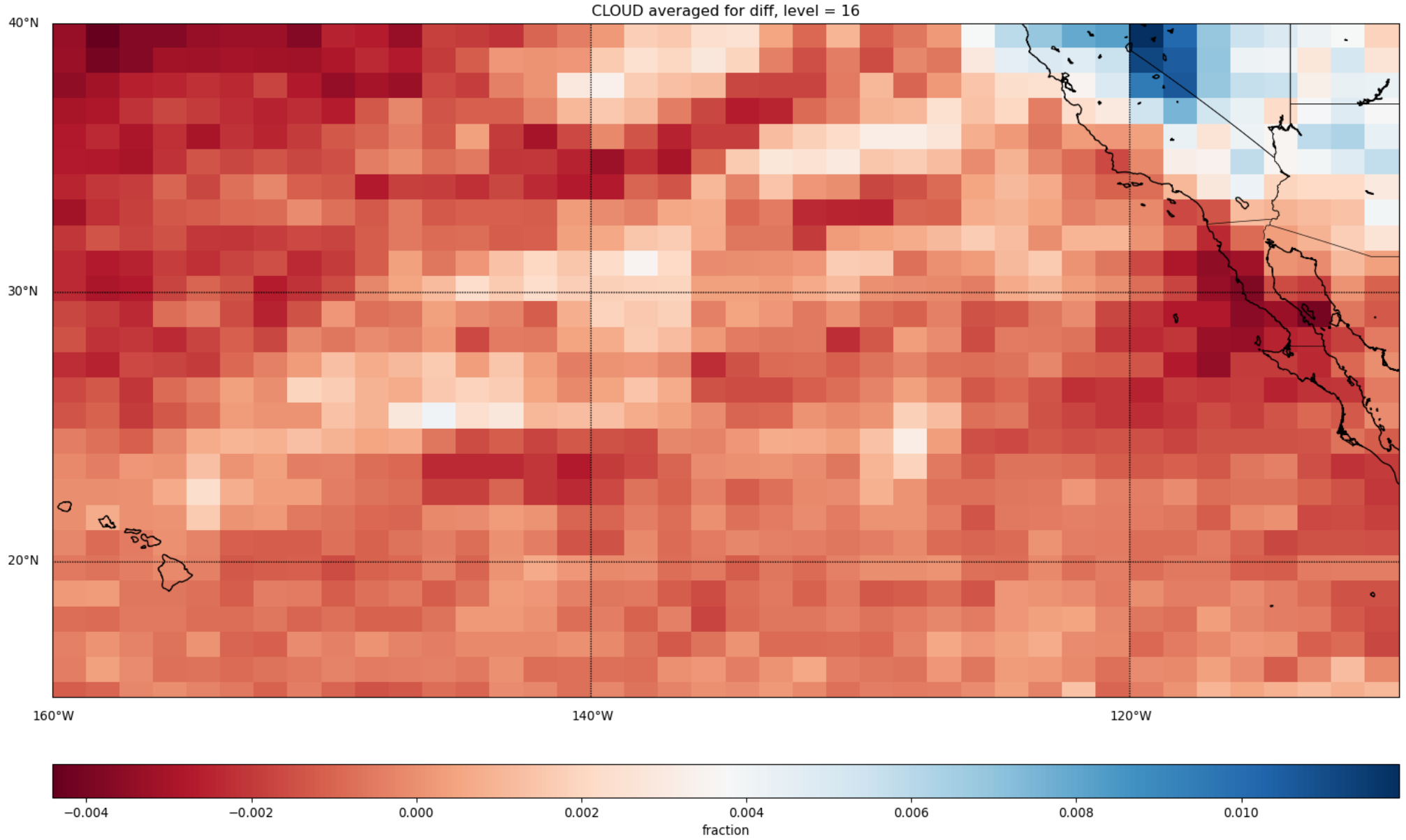
AREI: Hawaii to LA

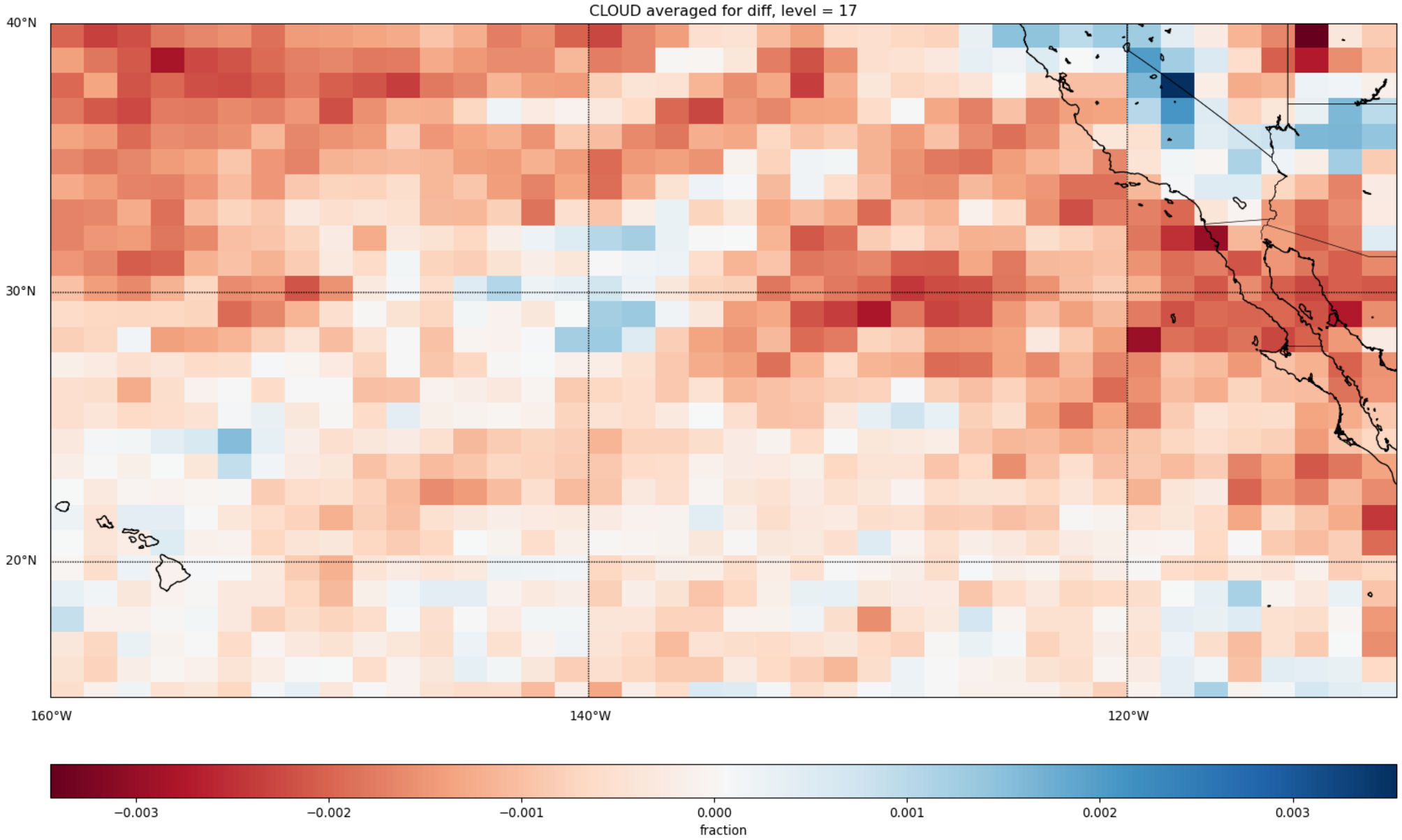

AREI averaged for diff, level = 16
40°N
30°N
20°N
160°W
140°W
120°W
−1.0
−0.5
0.0
0.5
1.0
1.5
Micron

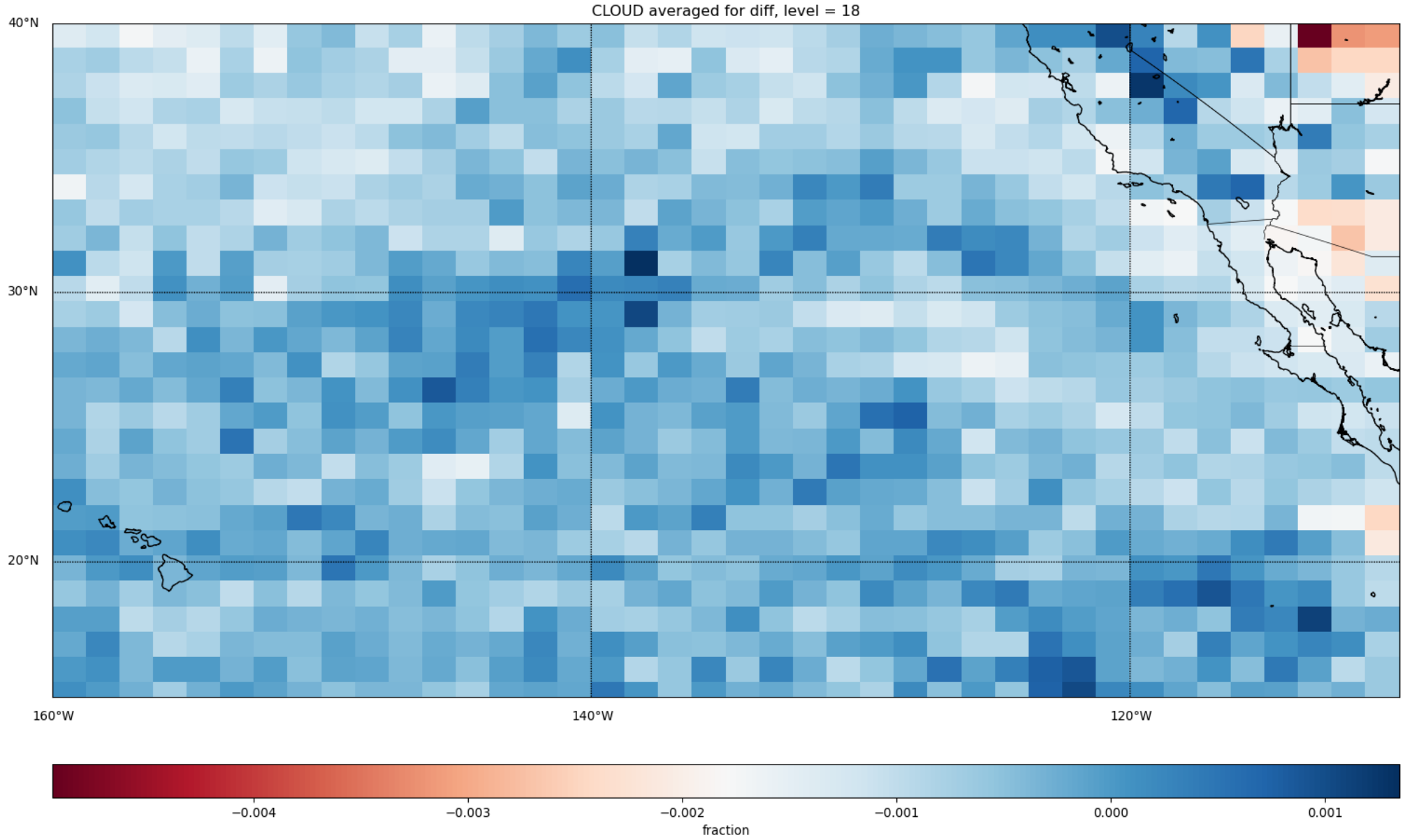

AREI averaged for diff, level = 17
40°N
30°N
20°N
160°W
140°W
120°W
−1.5
−1.0
−0.5
0.0
0.5
1.0
Micron


AREI averaged for diff, level = 18
40°N
30°N
20°N
160°W
140°W
120°W
−1.5
−1.0
−0.5
0.0
0.5
1.0
Micron

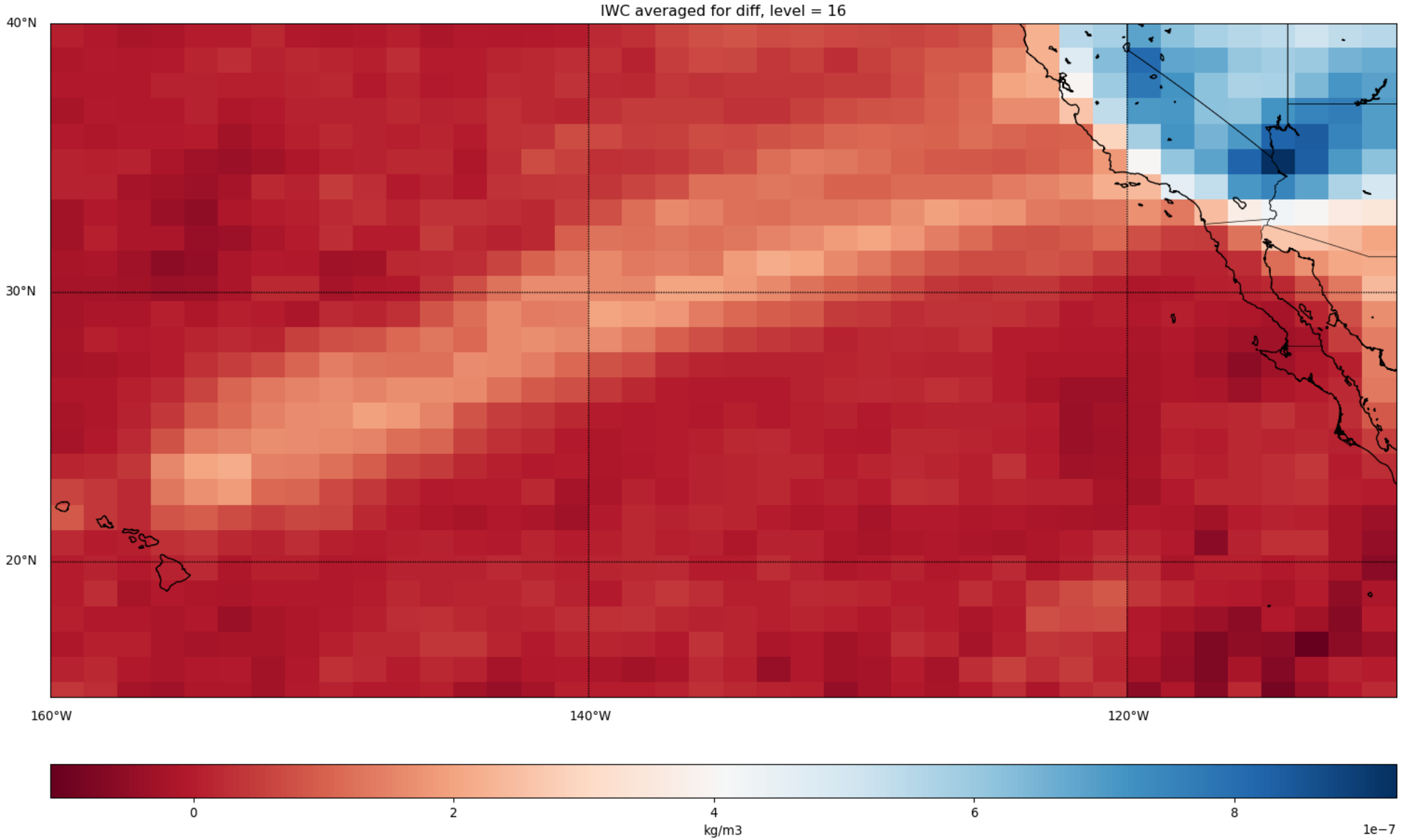
CLOUD: Hawaii to LA

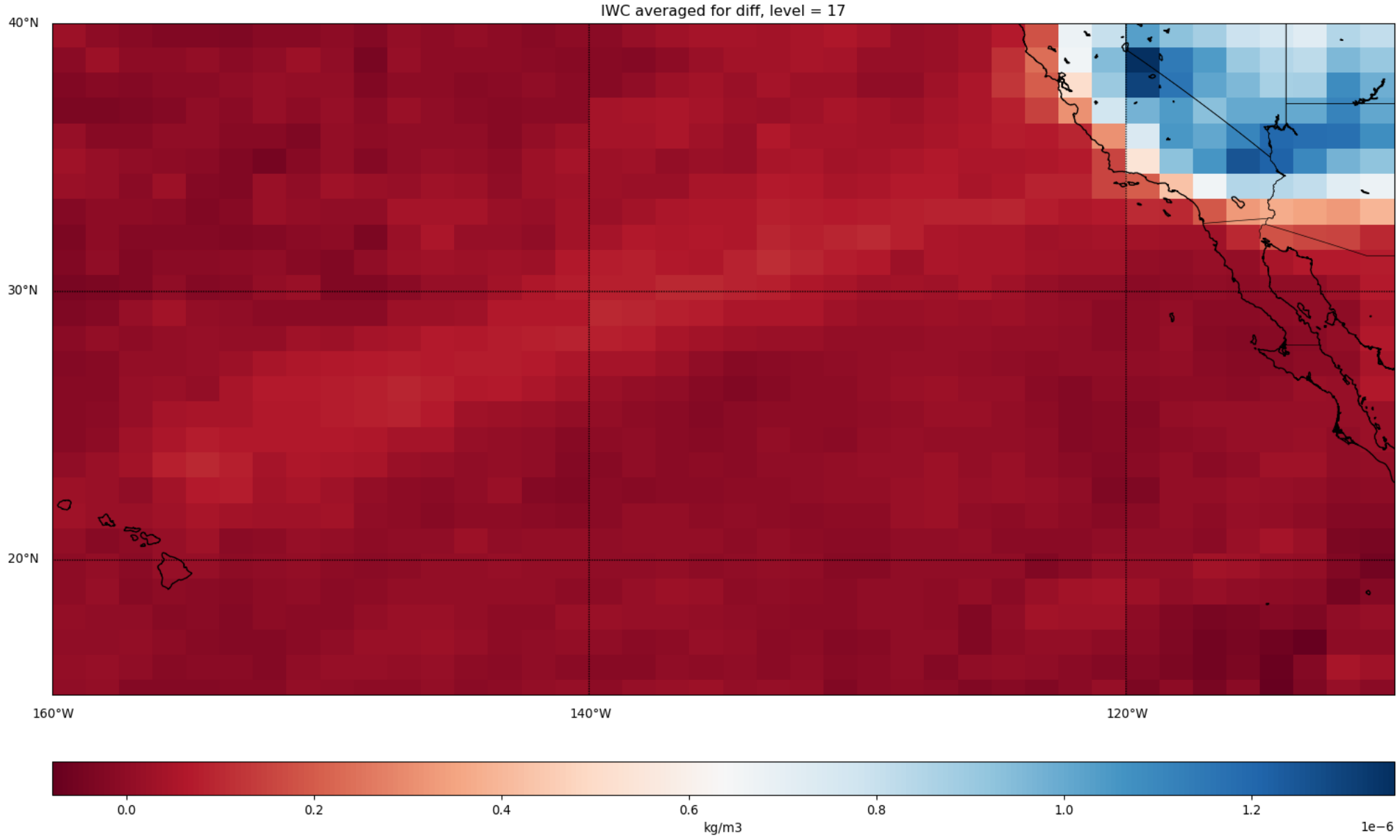

CLOUD averaged for diff, level = 16
40°N
30°N
20°N
160°W
140°W
120°W
−0.004
−0.002
0.000
0.002
0.004
0.006
0.008
0.010
fraction

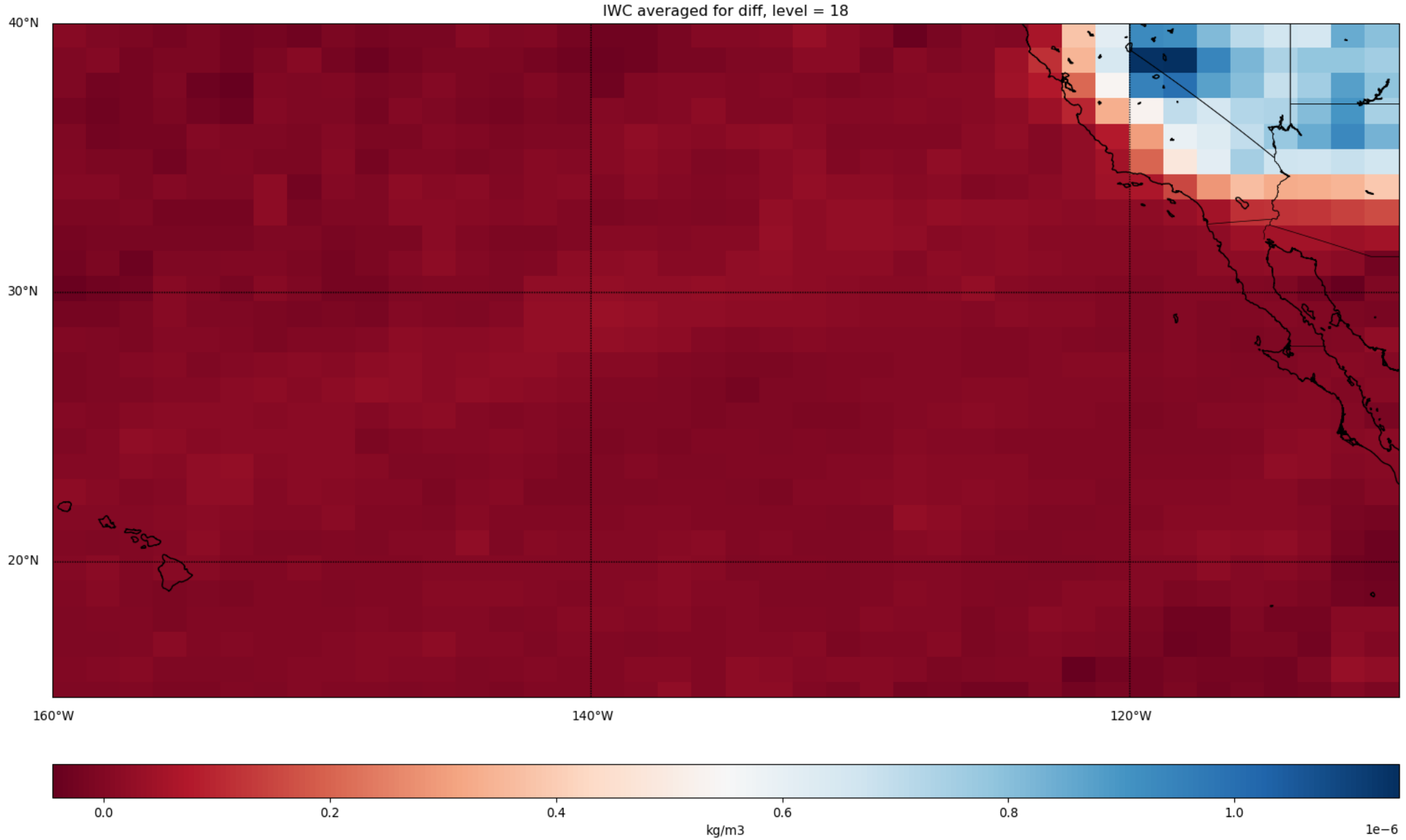

CLOUD averaged for diff, level = 17
40°N
30°N
20°N
160°W
140°W
120°W
−0.003
−0.002
−0.001
0.000
0.001
0.002
0.003
fraction


CLOUD averaged for diff, level = 18
40°N
30°N
20°N
160°W
140°W
120°W
−0.004
−0.003
−0.002
−0.001
0.000
0.001
fraction

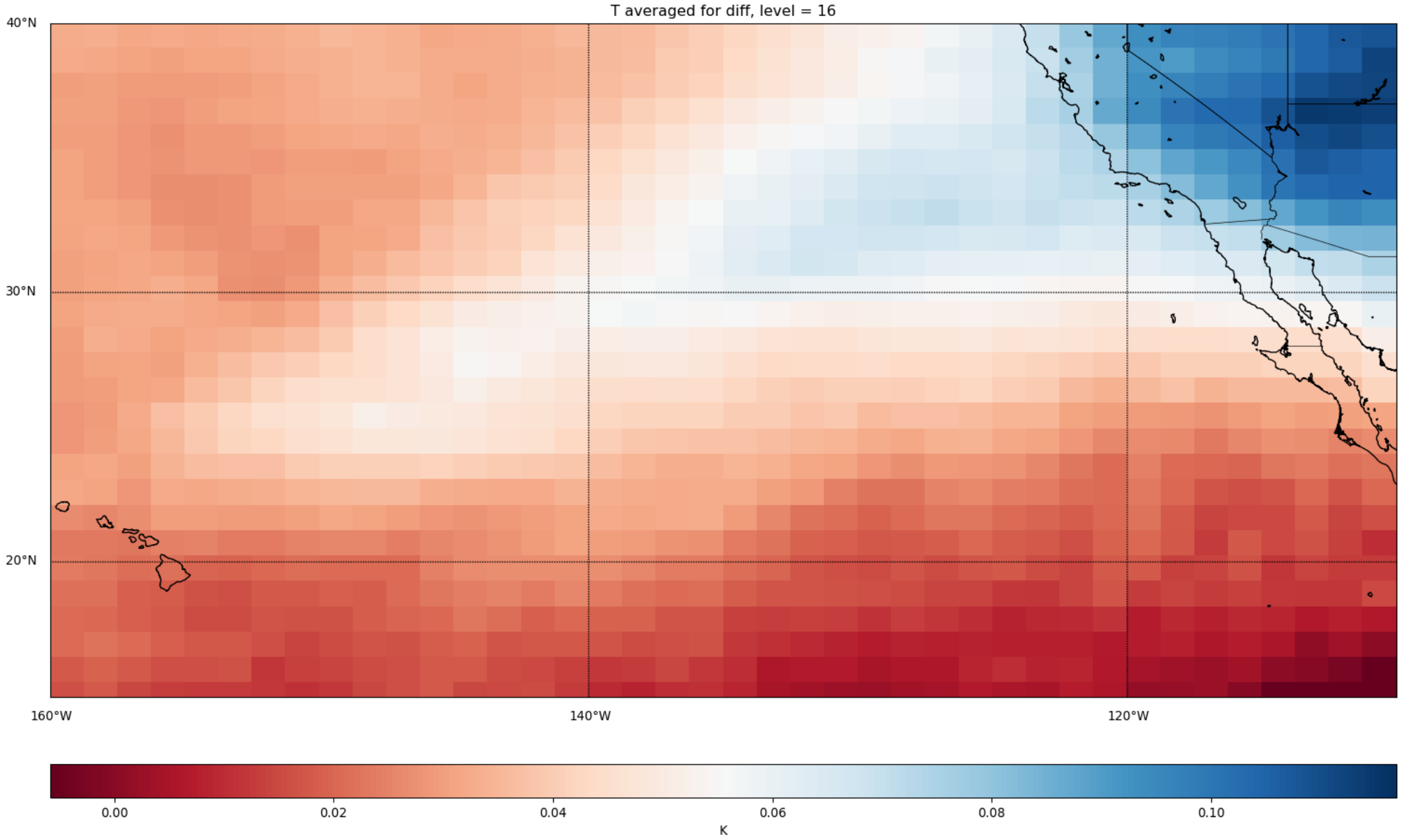
IWC: Hawaii to LA

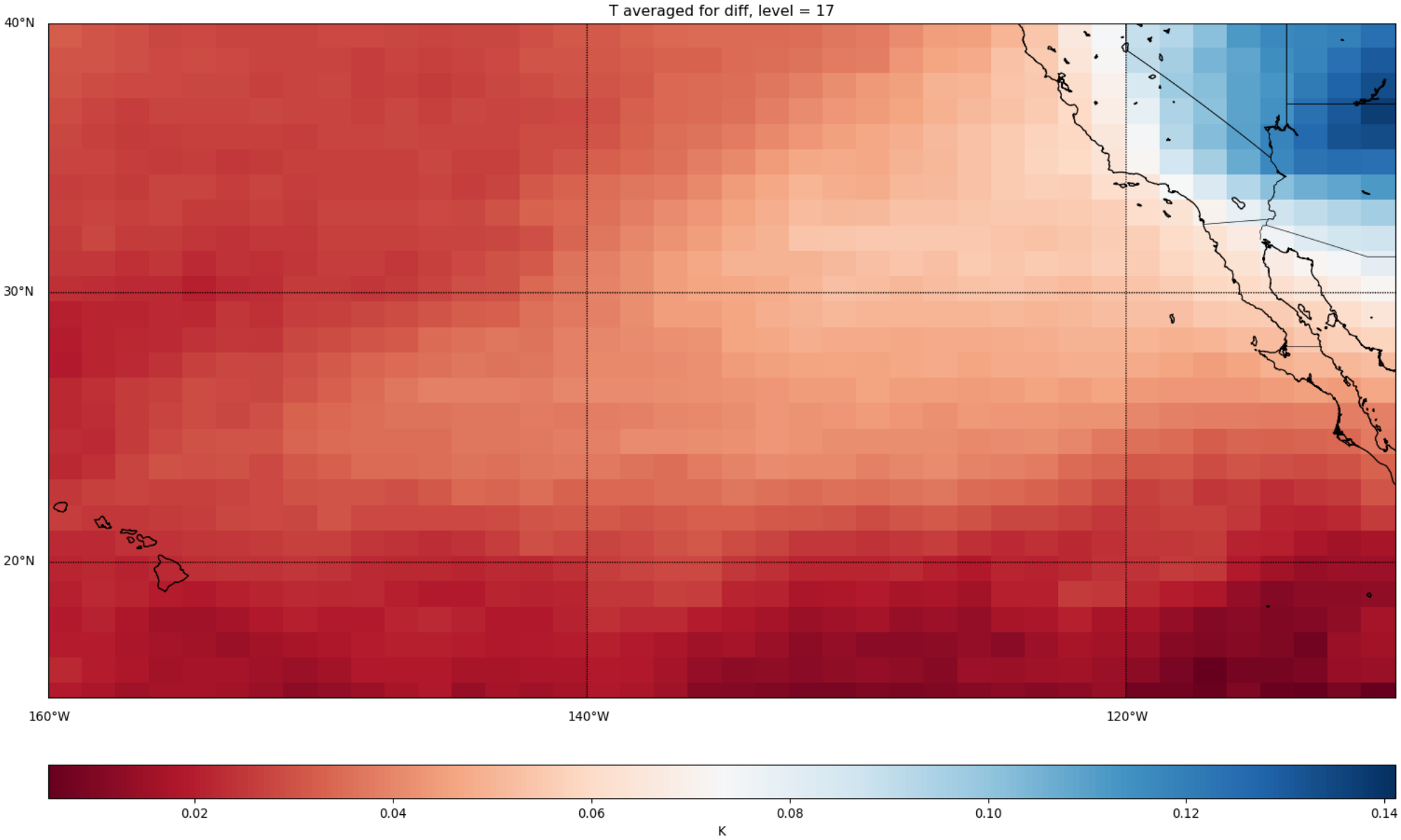

IWC averaged for diff, level = 16
40°N
30°N
20°N
160°W
140°W
120°W
0
2
4
6
8
kg/m3
1e−7

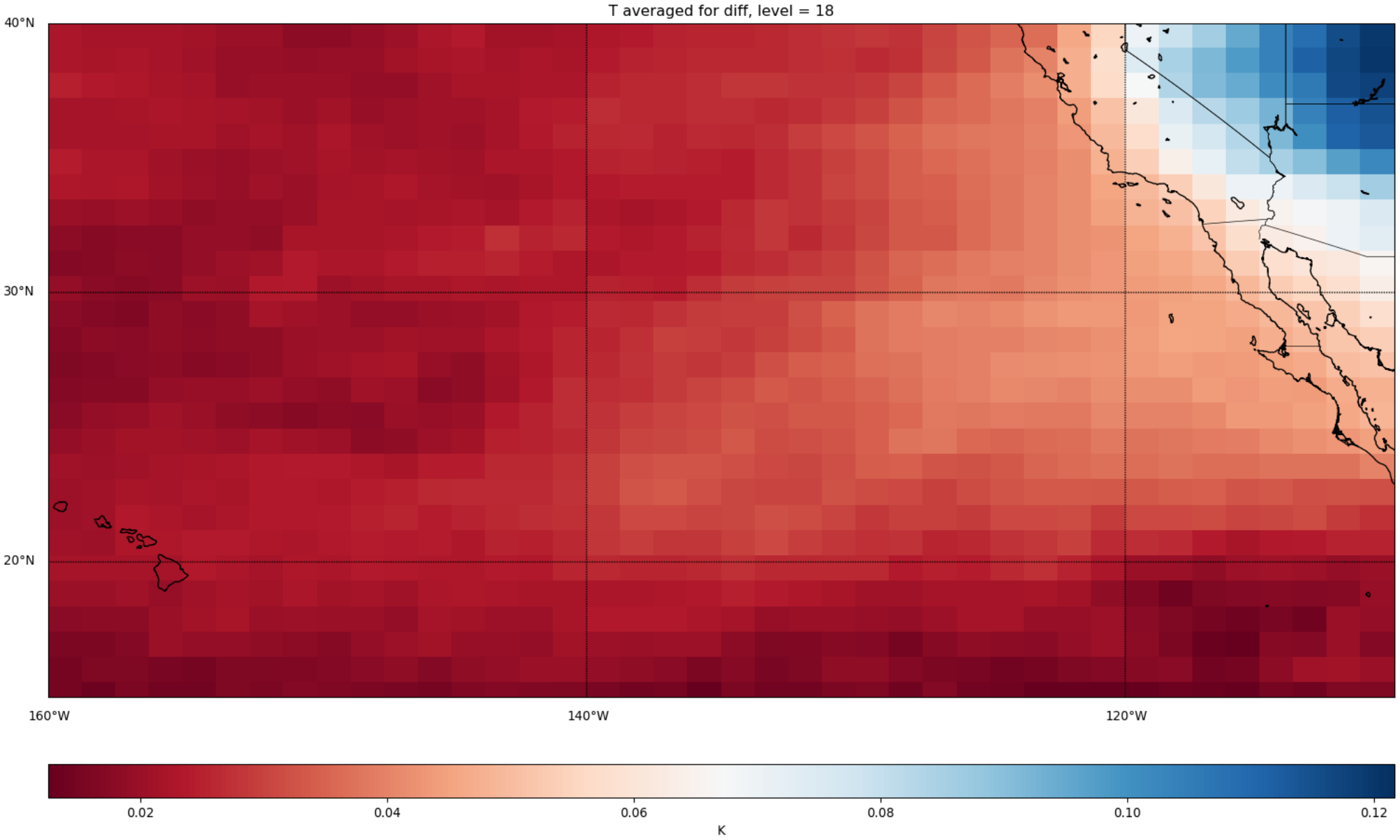

IWC averaged for diff, level = 17
40°N
30°N
20°N
160°W
140°W
120°W
0.0
0.2
0.4
0.6
0.8
1.0
1.2
kg/m3
1e−6


IWC averaged for diff, level = 18
40°N
30°N
20°N
160°W
140°W
120°W
0.0
0.2
0.4
0.6
0.8
1.0
kg/m3
1e−6

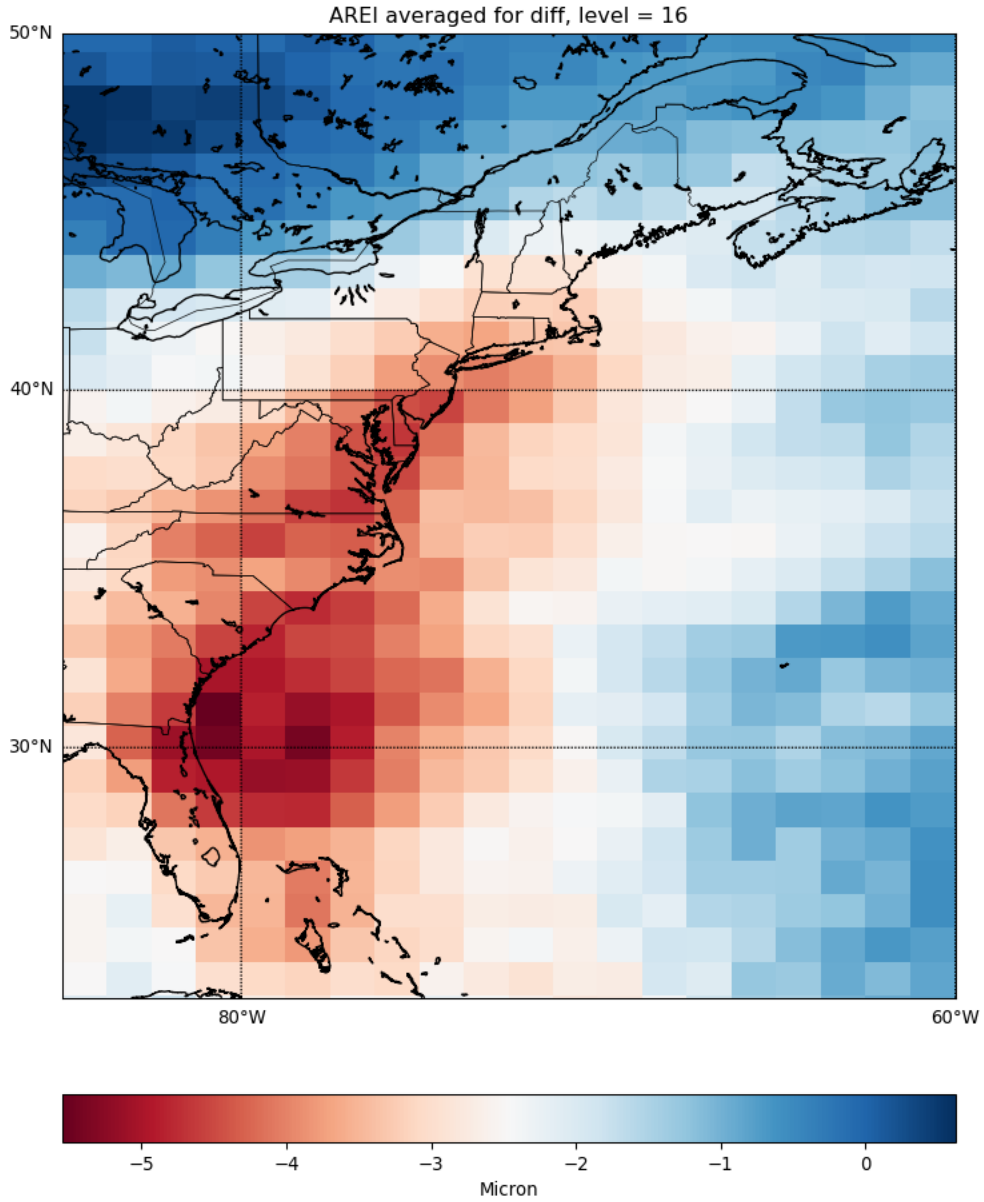
T: Hawaii to LA

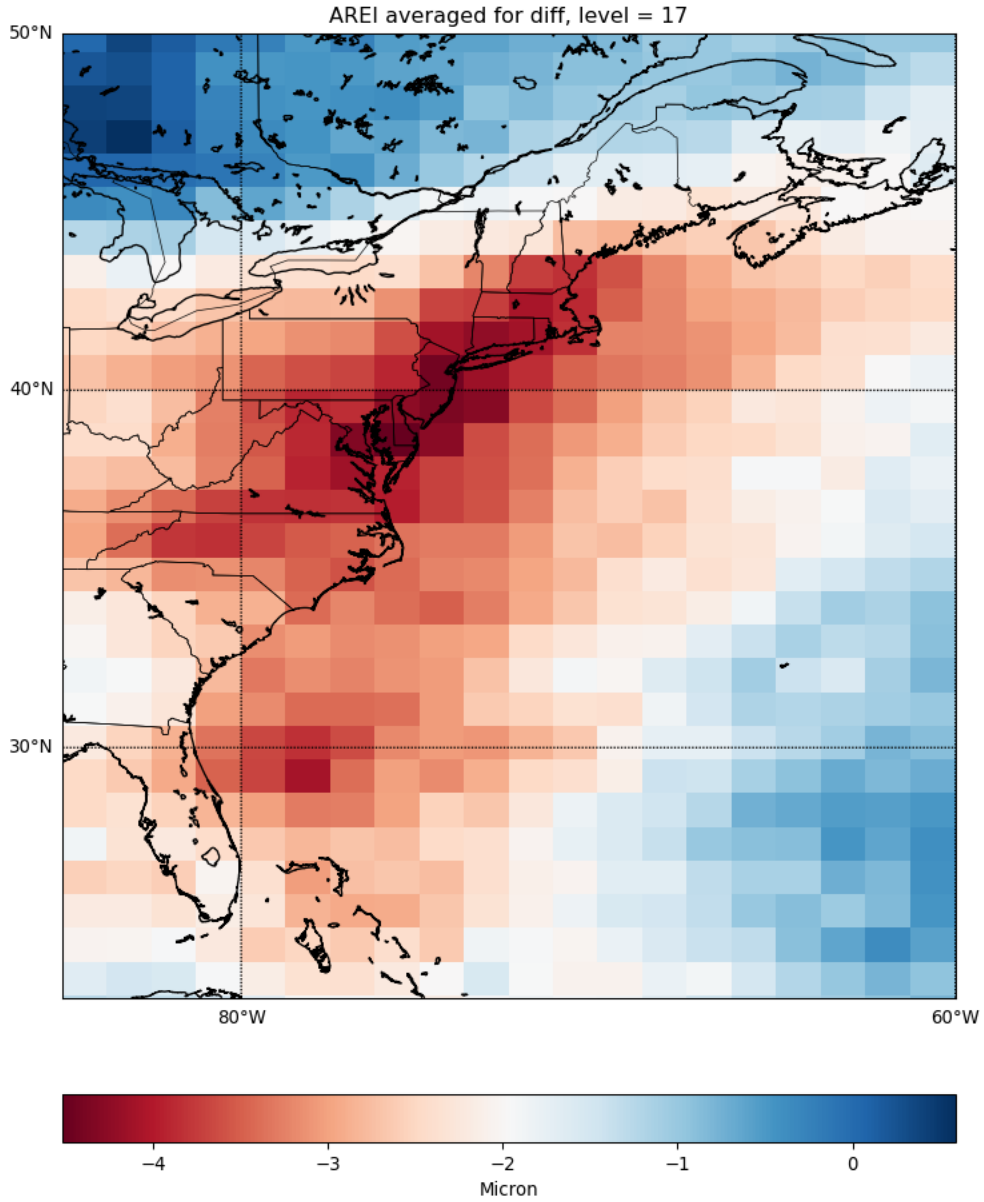

T averaged for diff, level = 16
40°N
30°N
20°N
160°W
140°W
120°W
0.00
0.02
0.04
0.06
0.08
0.10
K

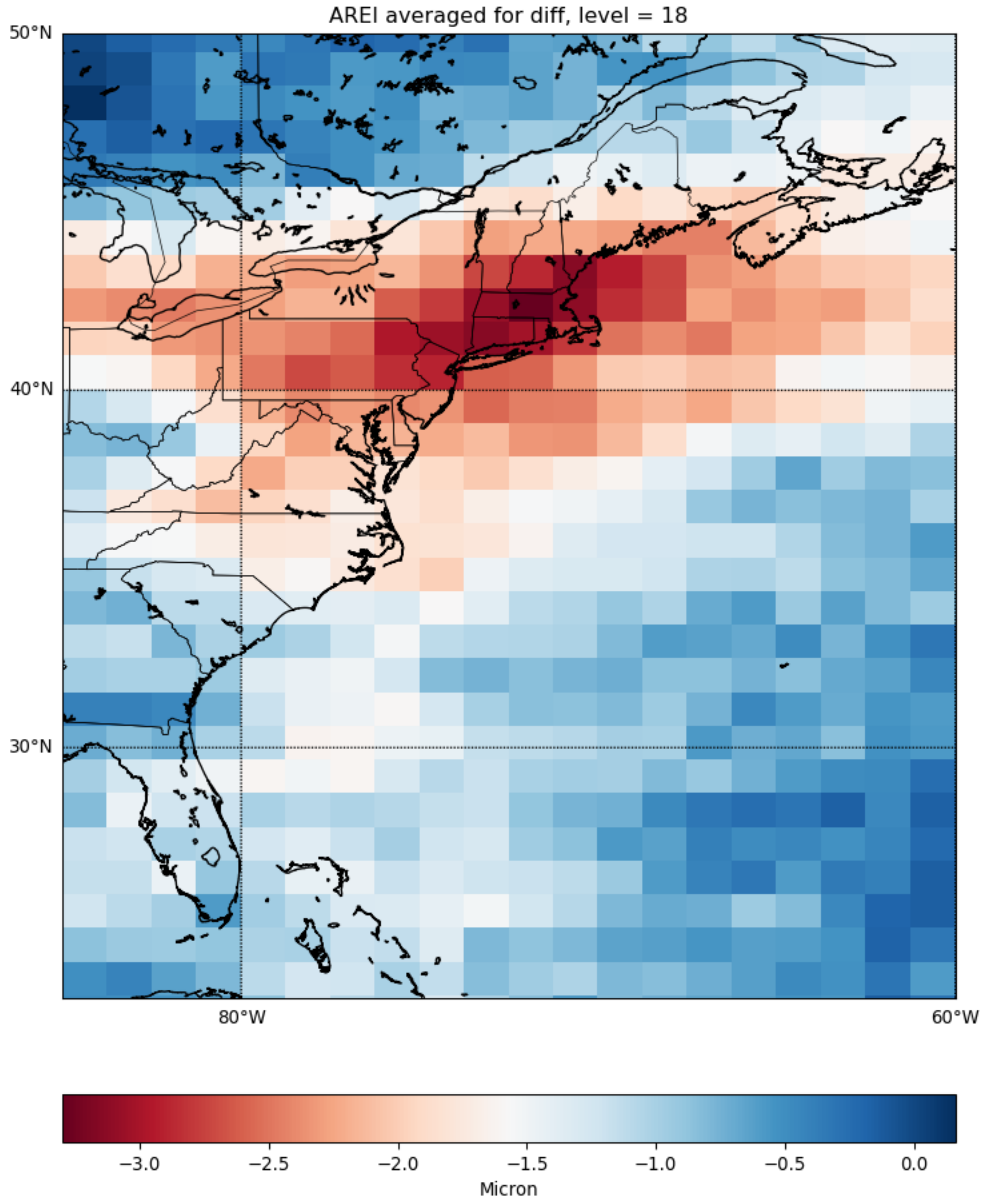

T averaged for diff, level = 17
40°N
30°N
20°N
160°W
140°W
120°W
0.02
0.04
0.06
0.08
0.10
0.12
0.14
K


T averaged for diff, level = 18
40°N
30°N
20°N
160°W
140°W
120°W
0.02
0.04
0.06
0.08
0.10
0.12
K

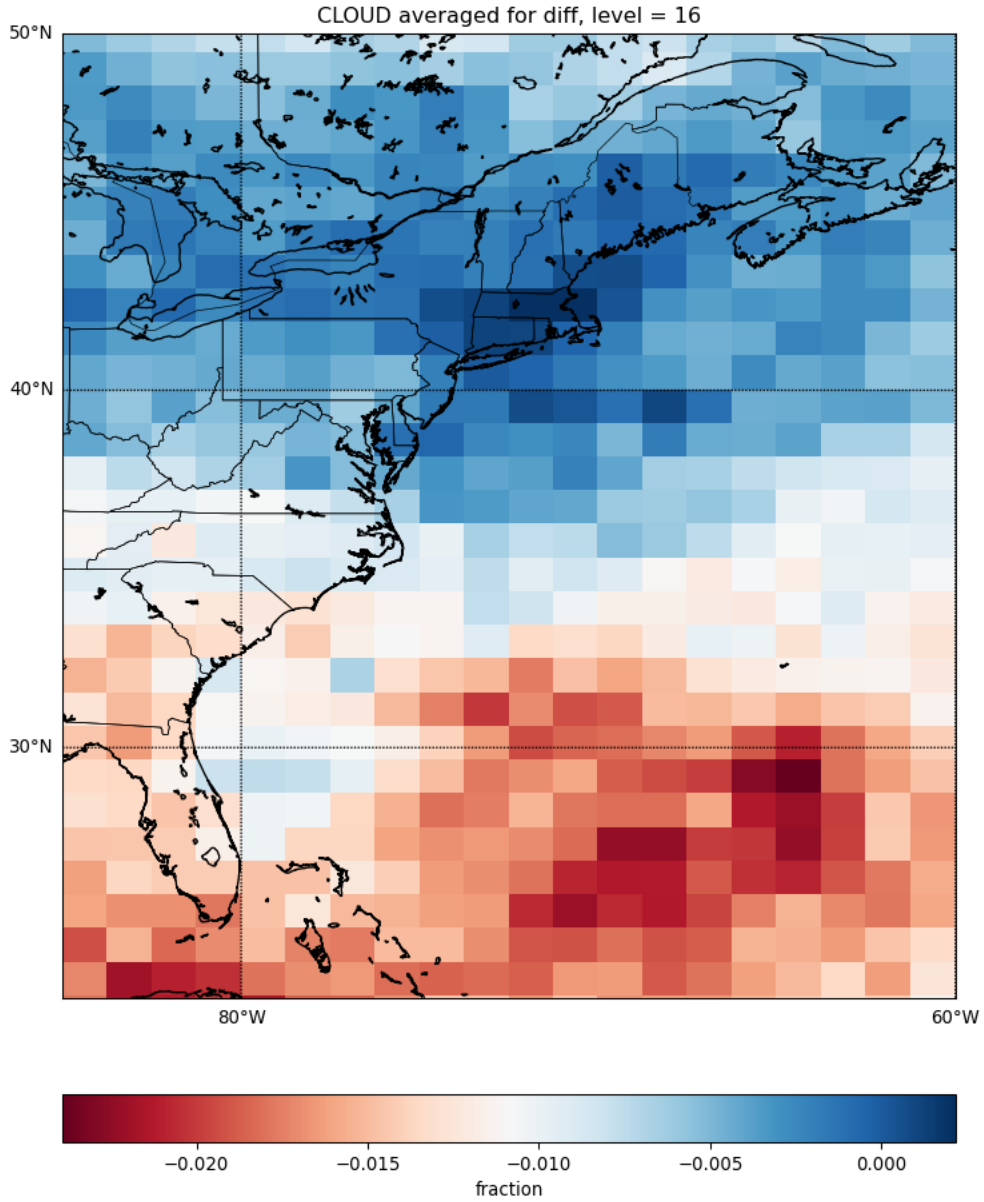
AREI: East US

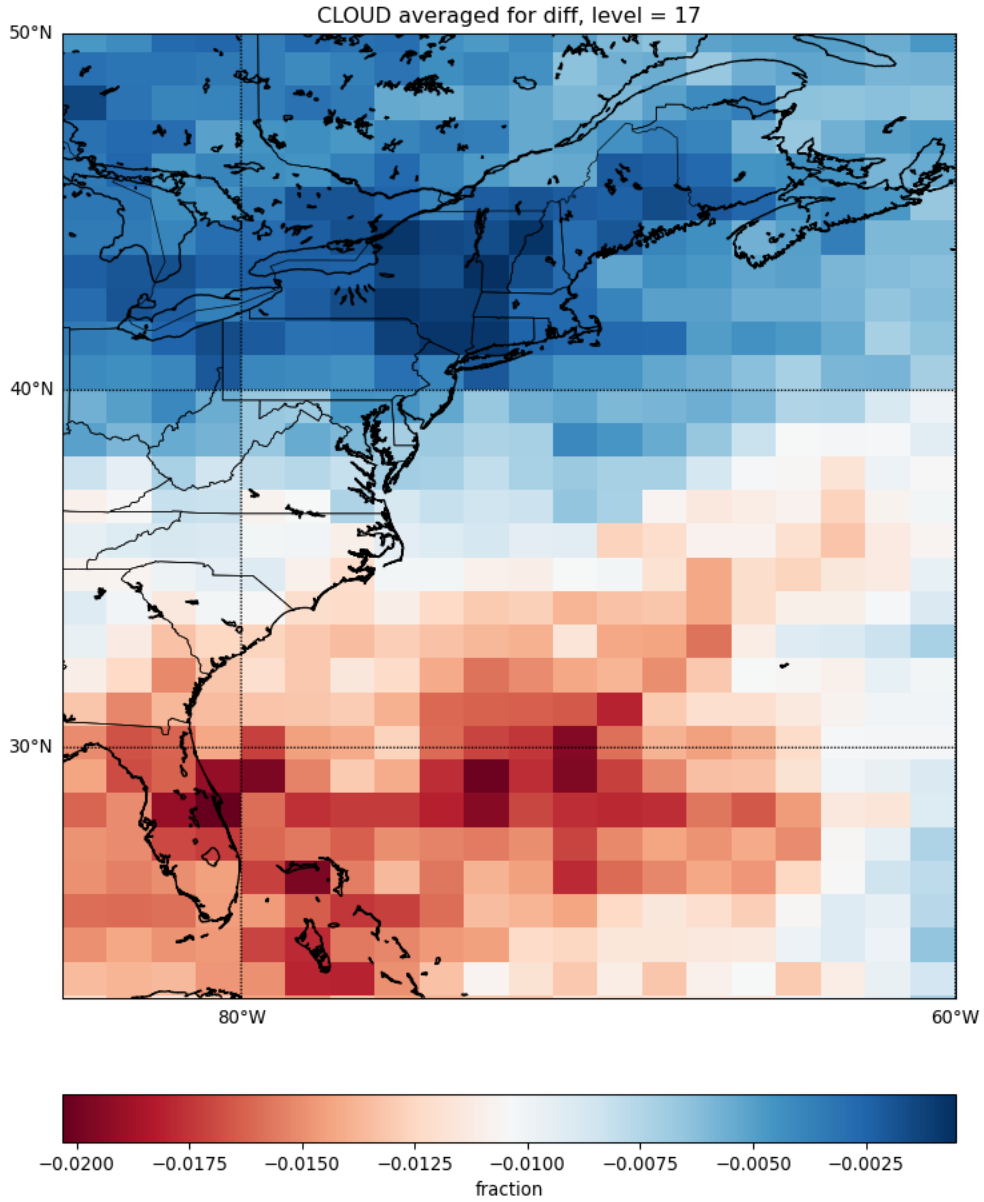

AREI averaged for diff, level = 16
50°N
40°N
30°N
80°W
60°W
−5
−4
−3
−2
−1
0
Micron

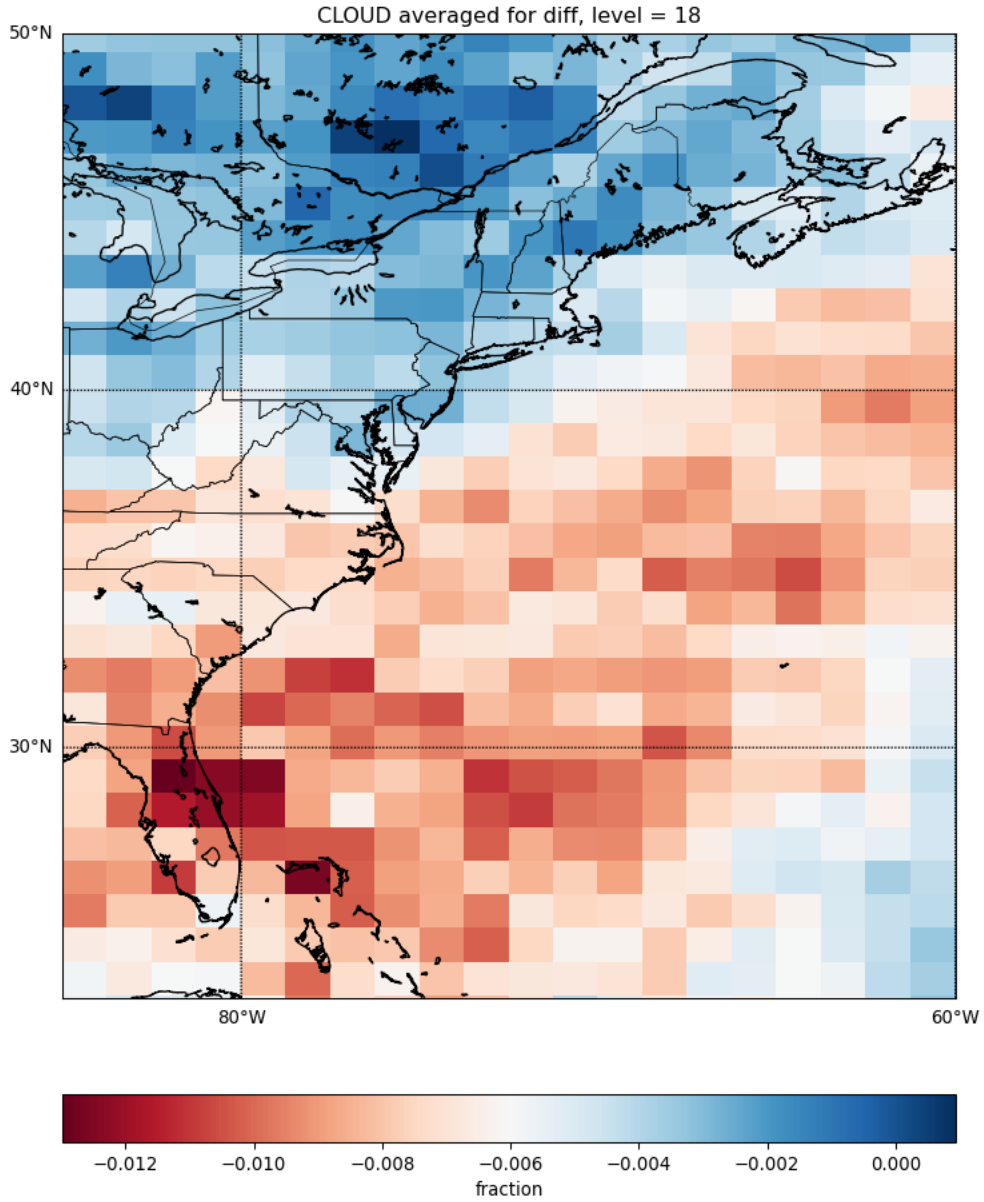

AREI averaged for diff, level = 17
50°N
40°N
30°N
80°W
60°W
−4
−3
−2
−1
0
Micron


AREI averaged for diff, level = 18
50°N
40°N
30°N
80°W
60°W
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
Micron

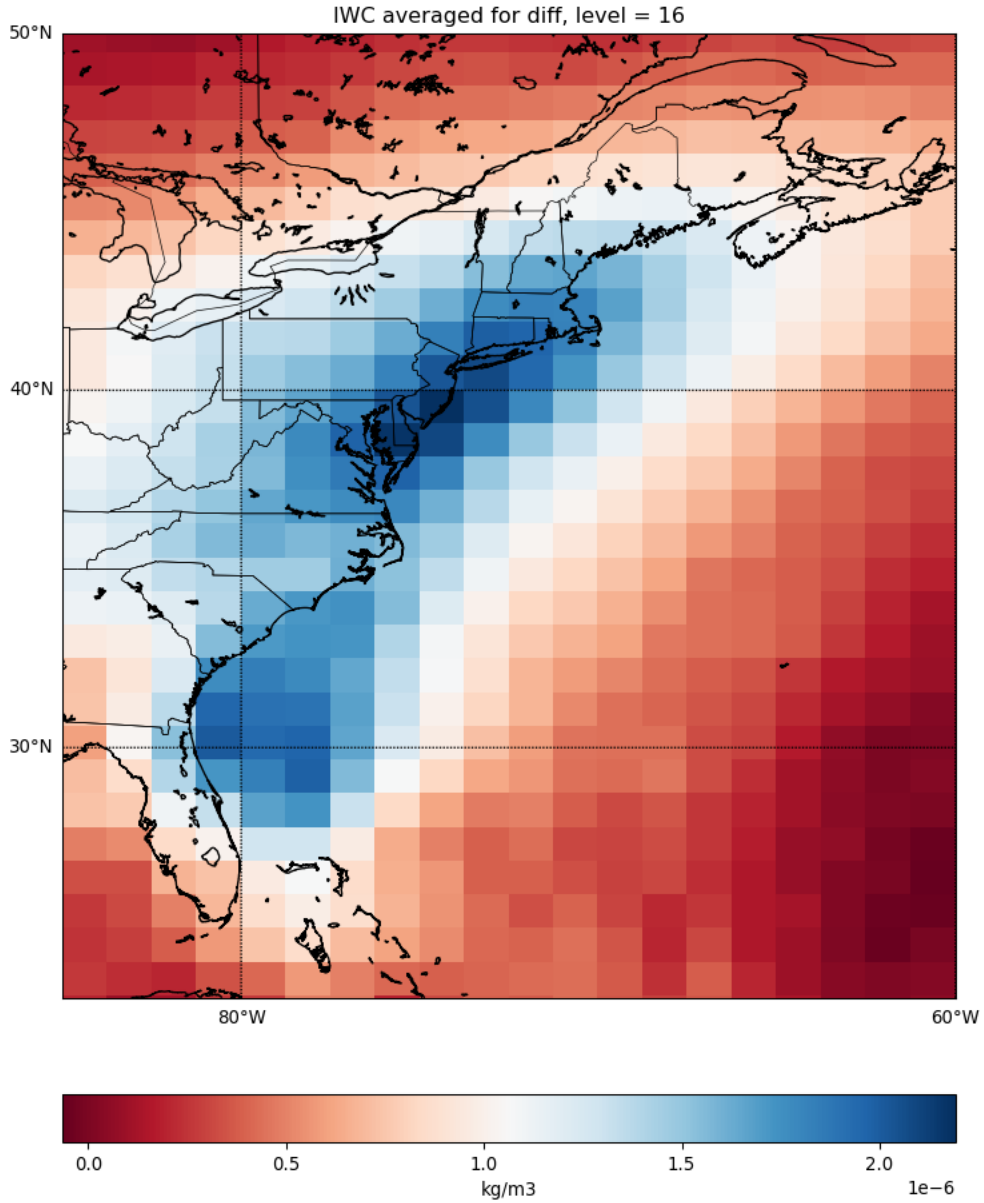
CLOUD: East US

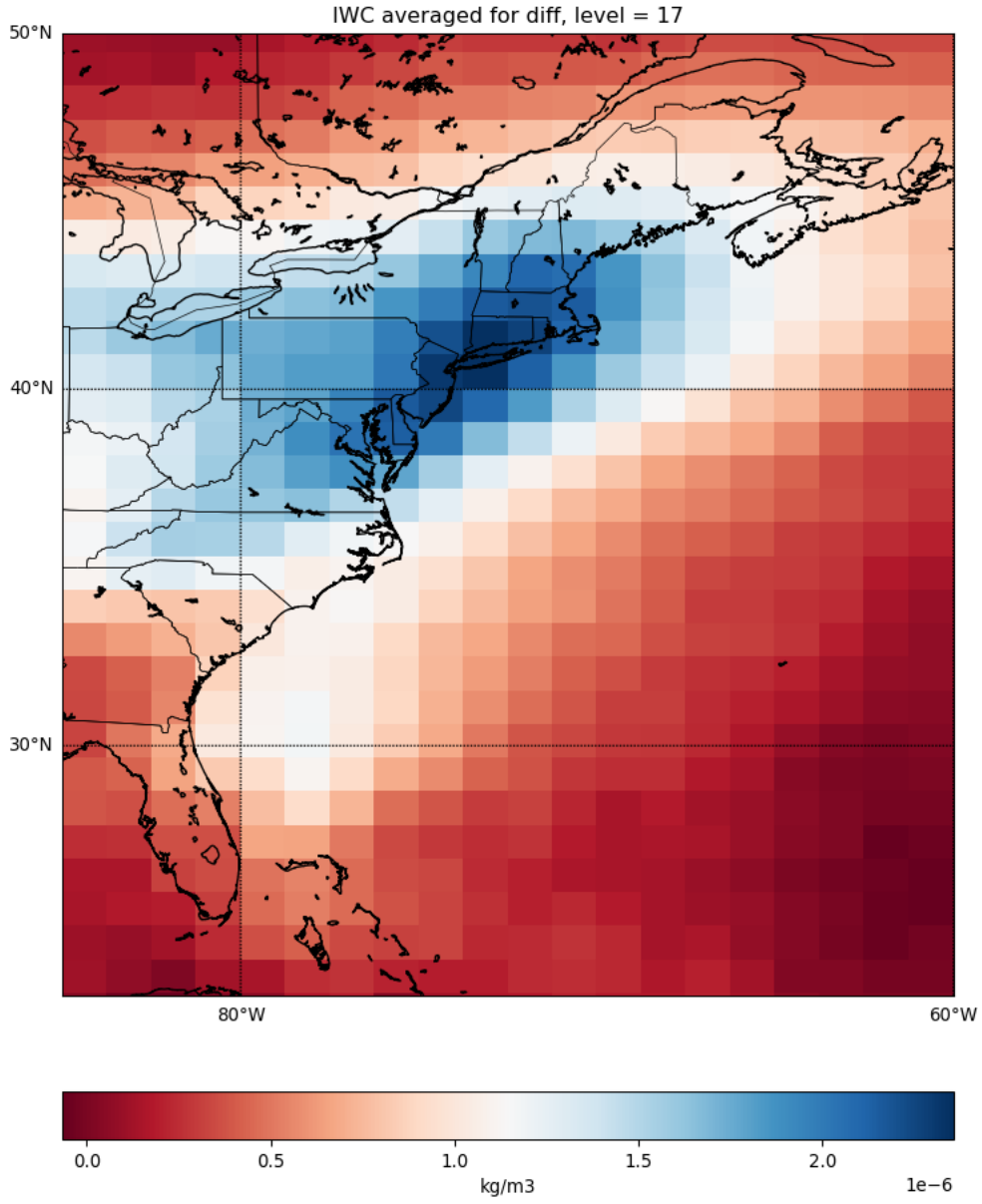

CLOUD averaged for diff, level = 16
50°N
40°N
30°N
80°W
60°W
−0.020
−0.015
−0.010
−0.005
0.000
fraction

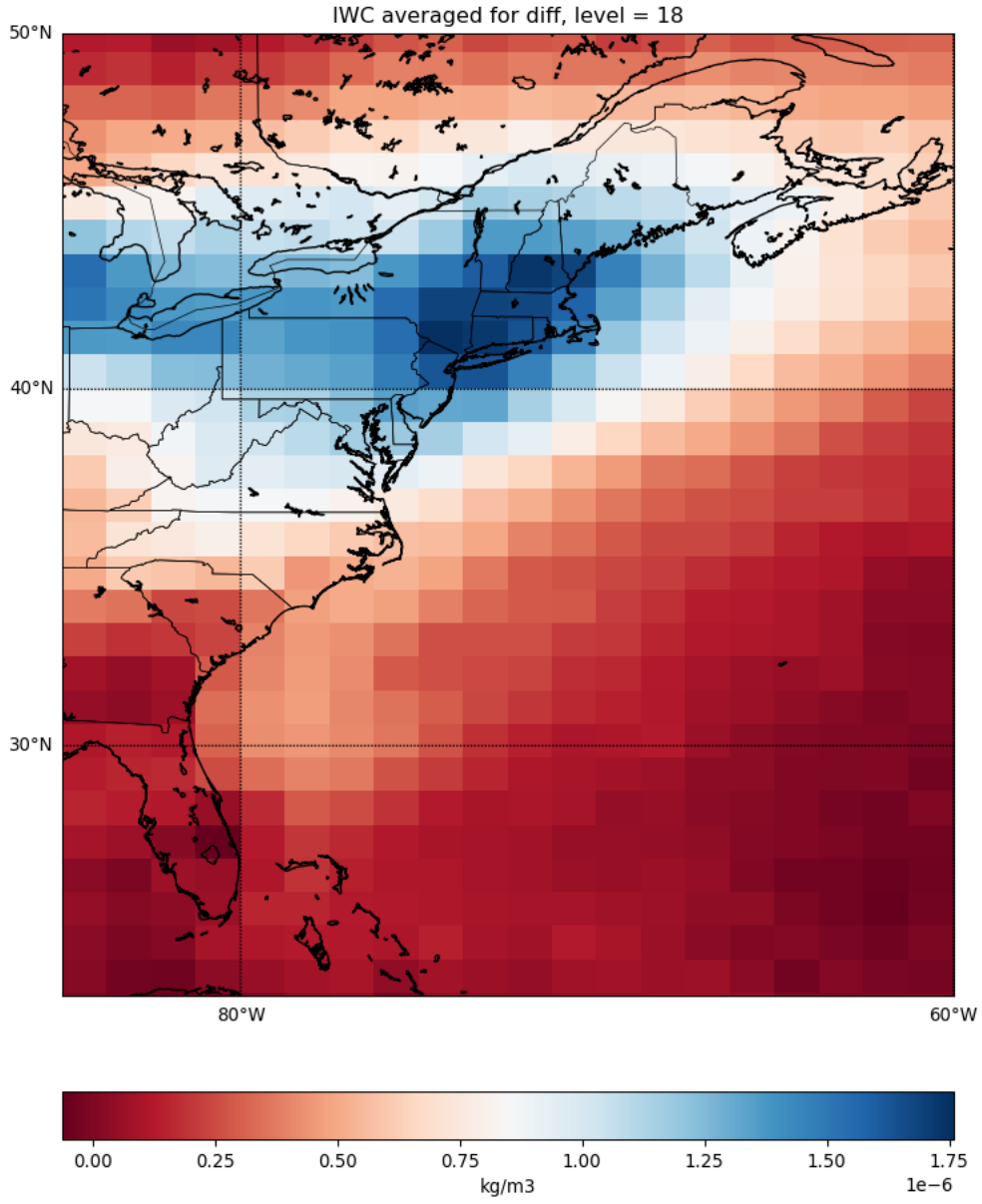

CLOUD averaged for diff, level = 17
50°N
40°N
30°N
80°W
60°W
−0.0200
−0.0175
−0.0150
−0.0125
−0.0100
−0.0075
−0.0050
−0.0025
fraction


CLOUD averaged for diff, level = 18
50°N
40°N
30°N
80°W
60°W
−0.012
−0.010
−0.008
−0.006
−0.004
−0.002
0.000
fraction

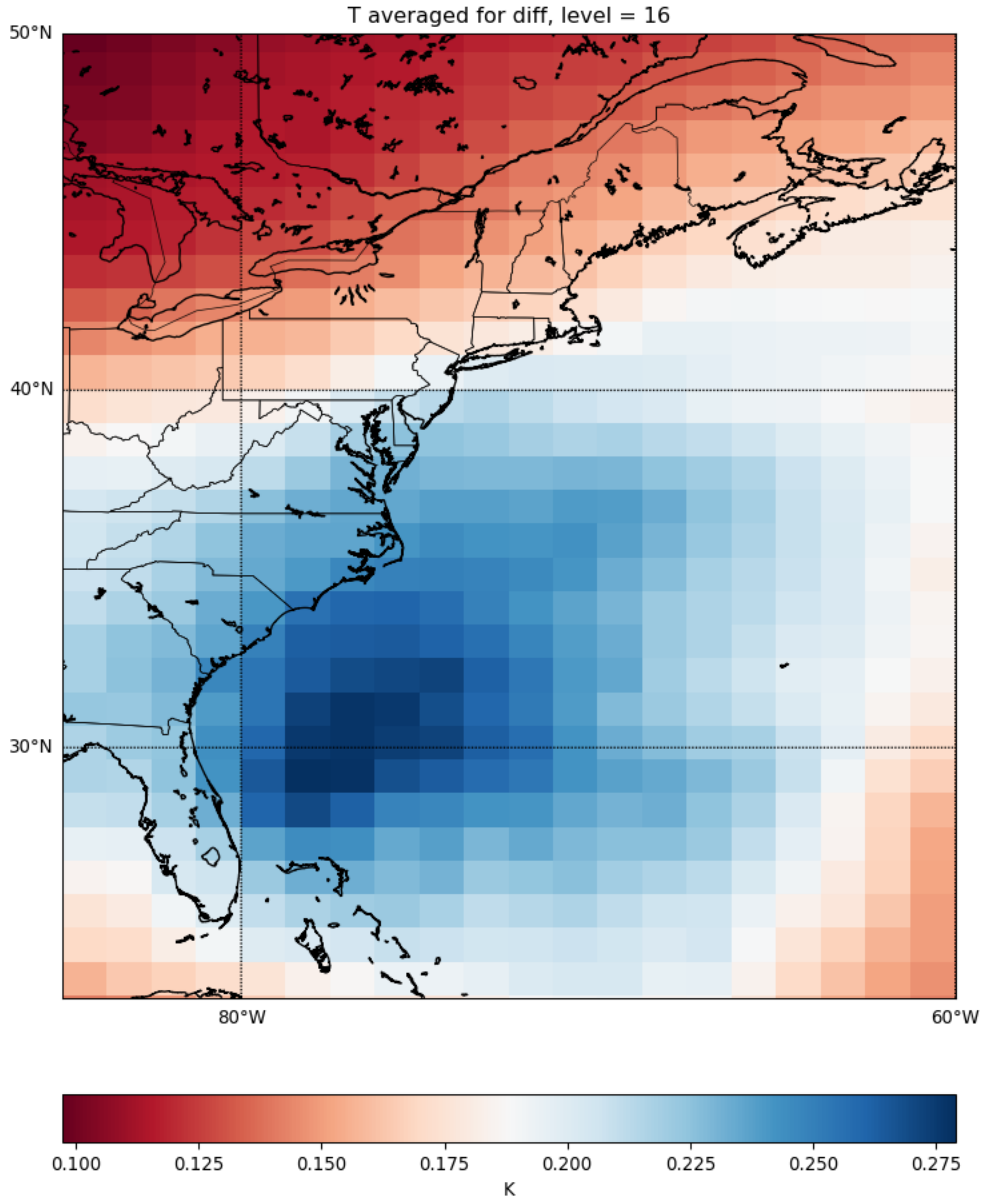
IWC: East US

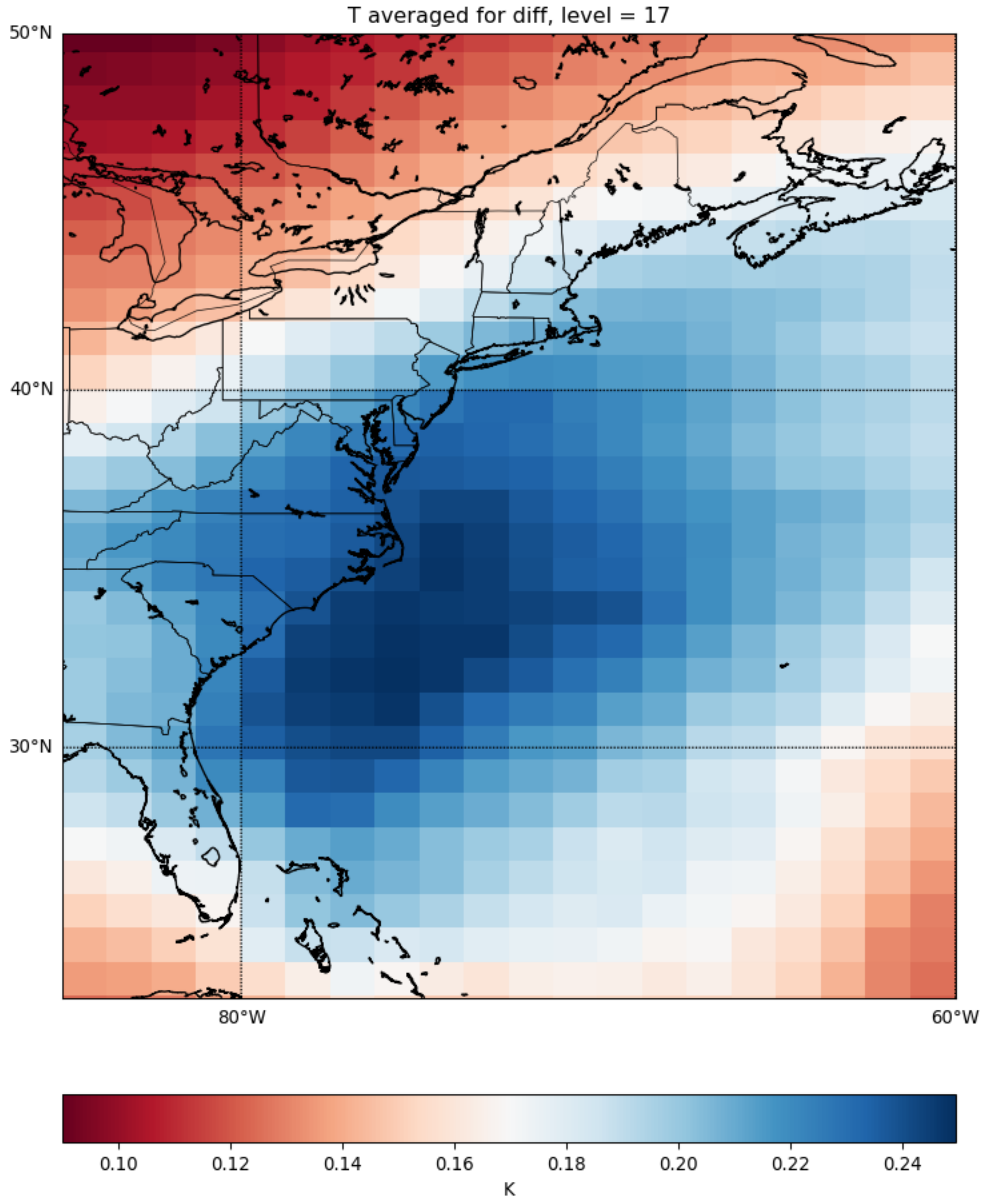

IWC averaged for diff, level = 16
50°N
40°N
30°N
80°W
60°W
0.0
0.5
1.0
1.5
2.0
kg/m3
1e−6

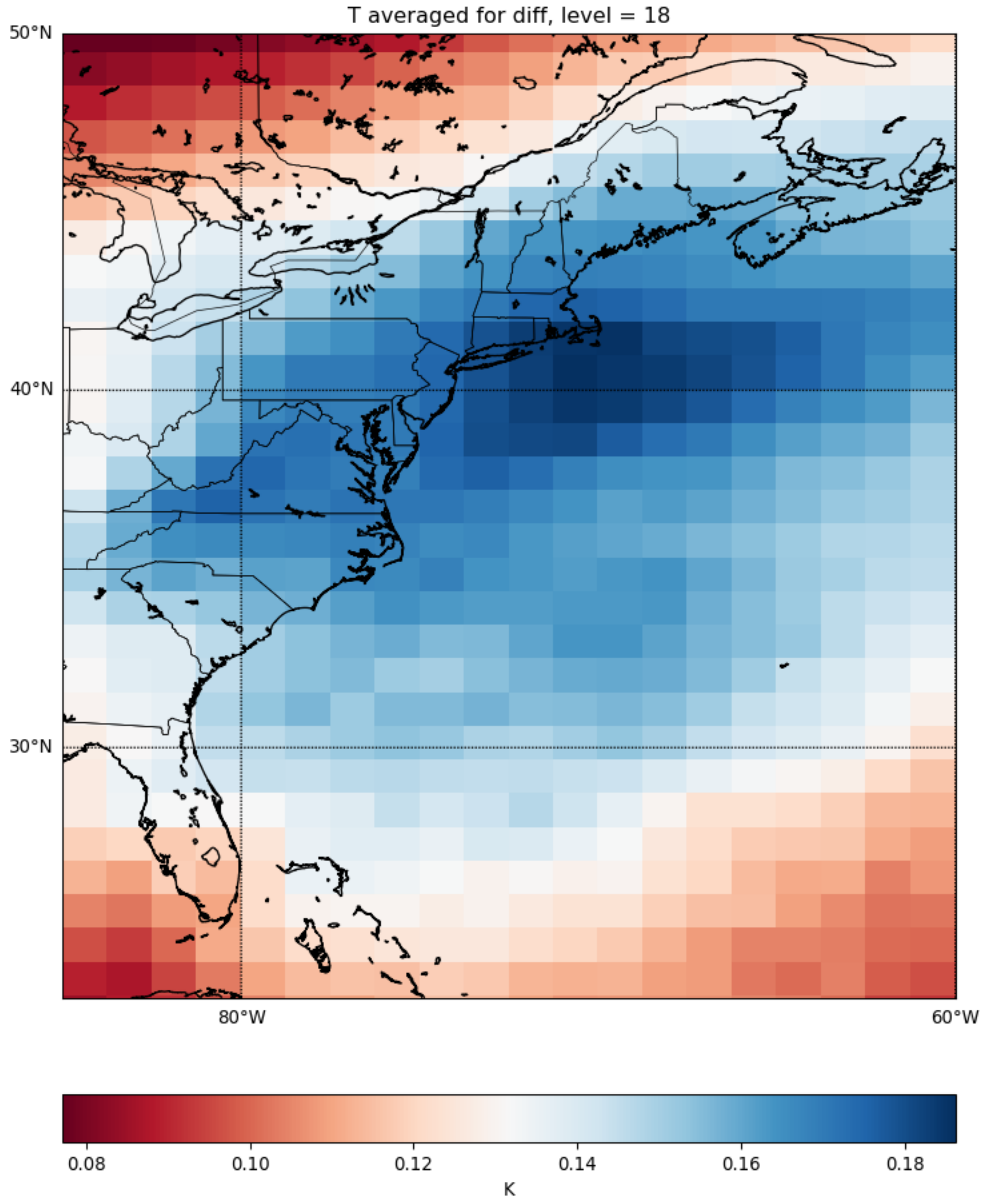

IWC averaged for diff, level = 17
50°N
40°N
30°N
80°W
60°W
0.0
0.5
1.0
1.5
2.0
kg/m3
1e−6


IWC averaged for diff, level = 18
50°N
40°N
30°N
80°W
60°W
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
kg/m3
1e−6

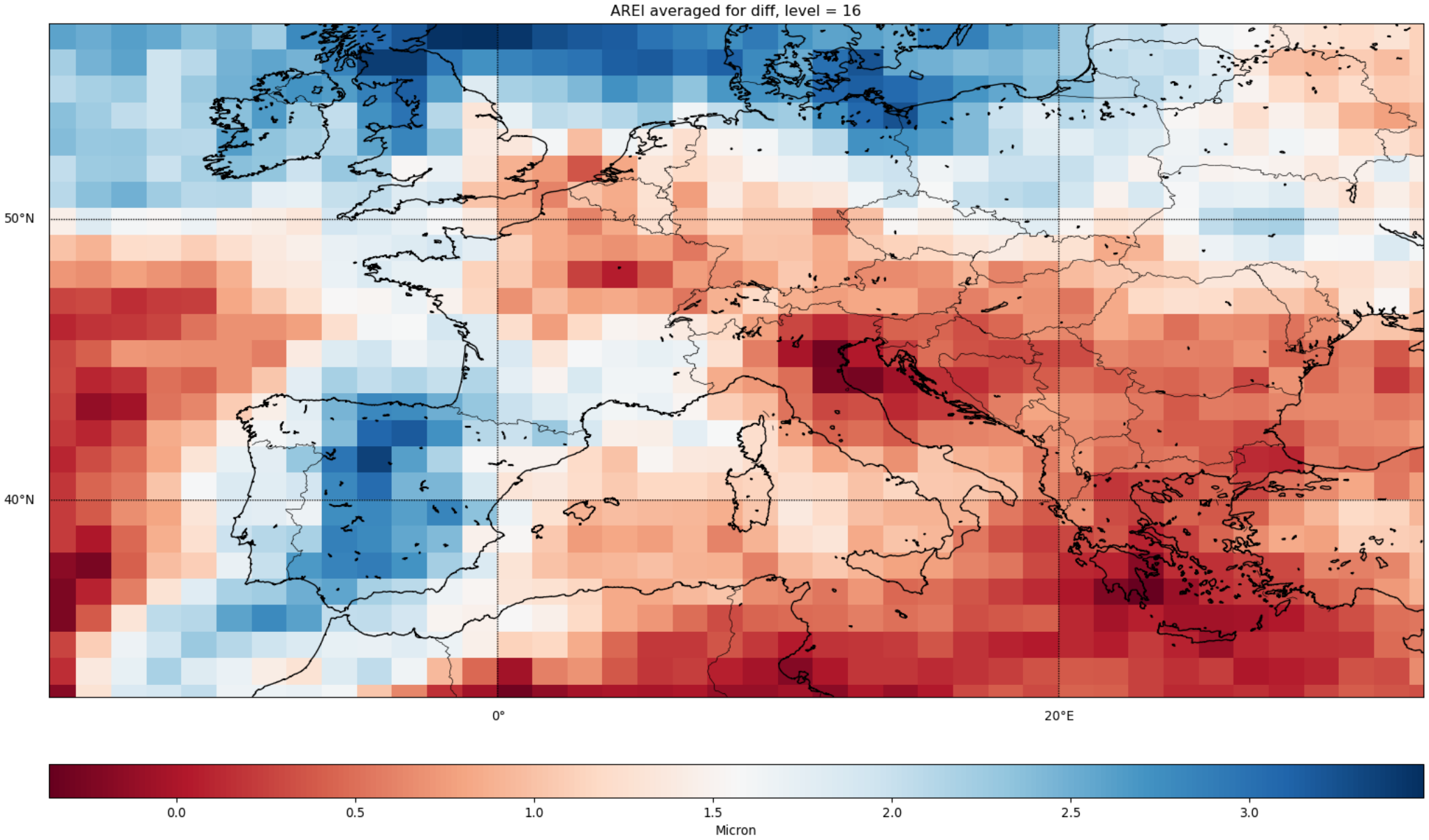
T: East US

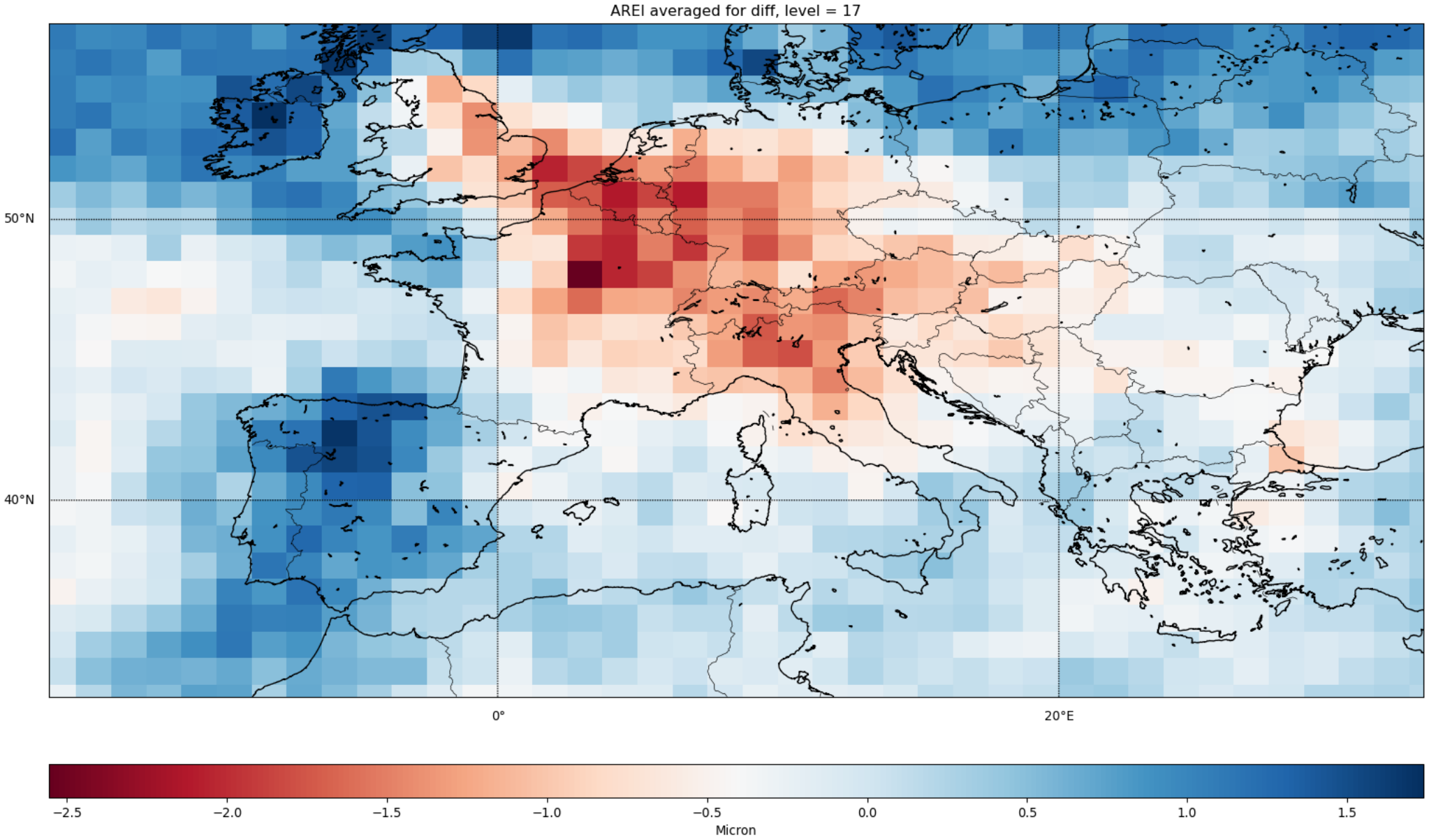

T averaged for diff, level = 16
50°N
40°N
30°N
80°W
60°W
0.100
0.125
0.150
0.175
0.200
0.225
0.250
0.275
K

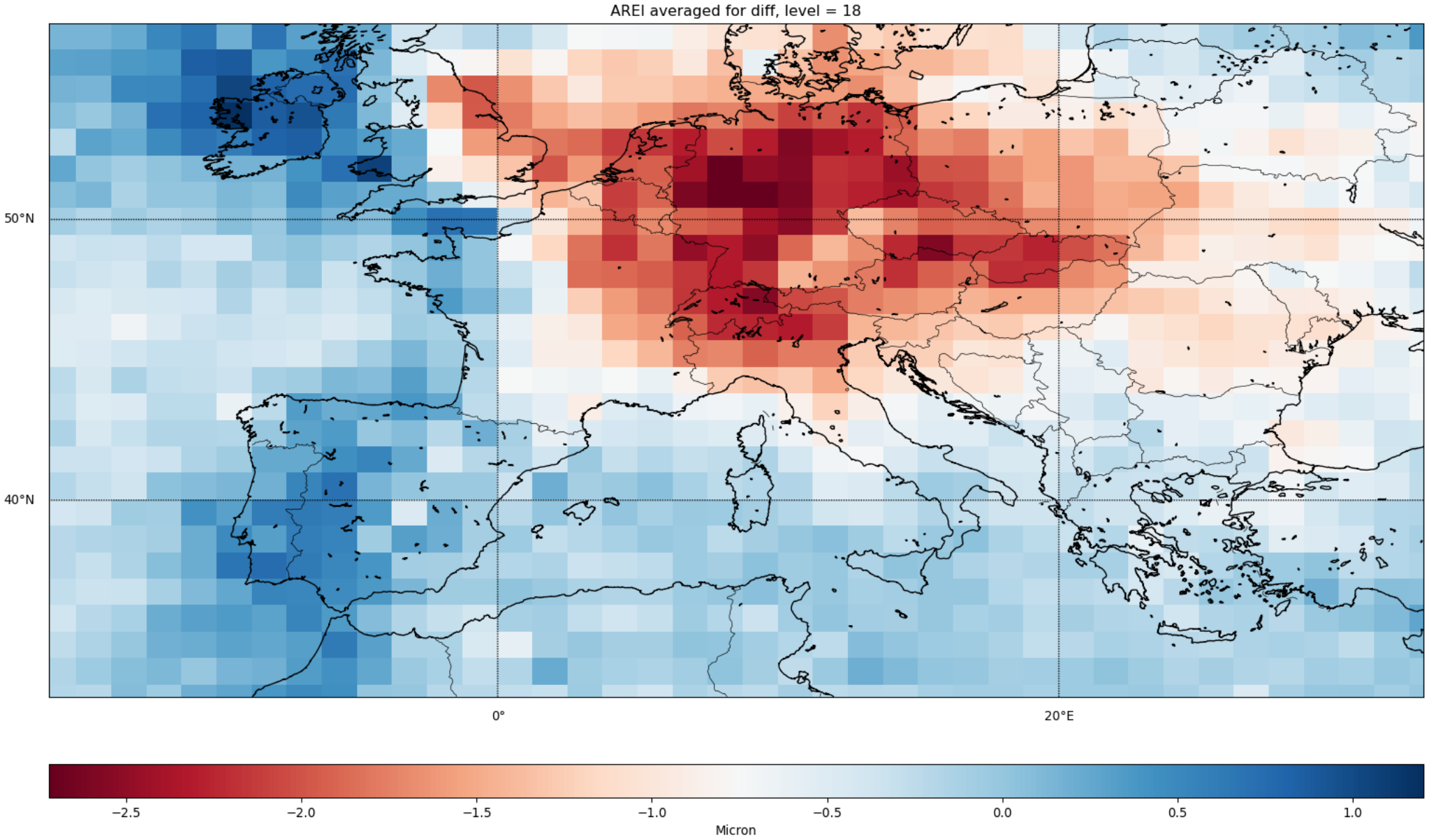

T averaged for diff, level = 17
50°N
40°N
30°N
80°W
60°W
0.10
0.12
0.14
0.16
0.18
0.20
0.22
0.24
K


T averaged for diff, level = 18
50°N
40°N
30°N
80°W
60°W
0.08
0.10
0.12
0.14
0.16
0.18
K

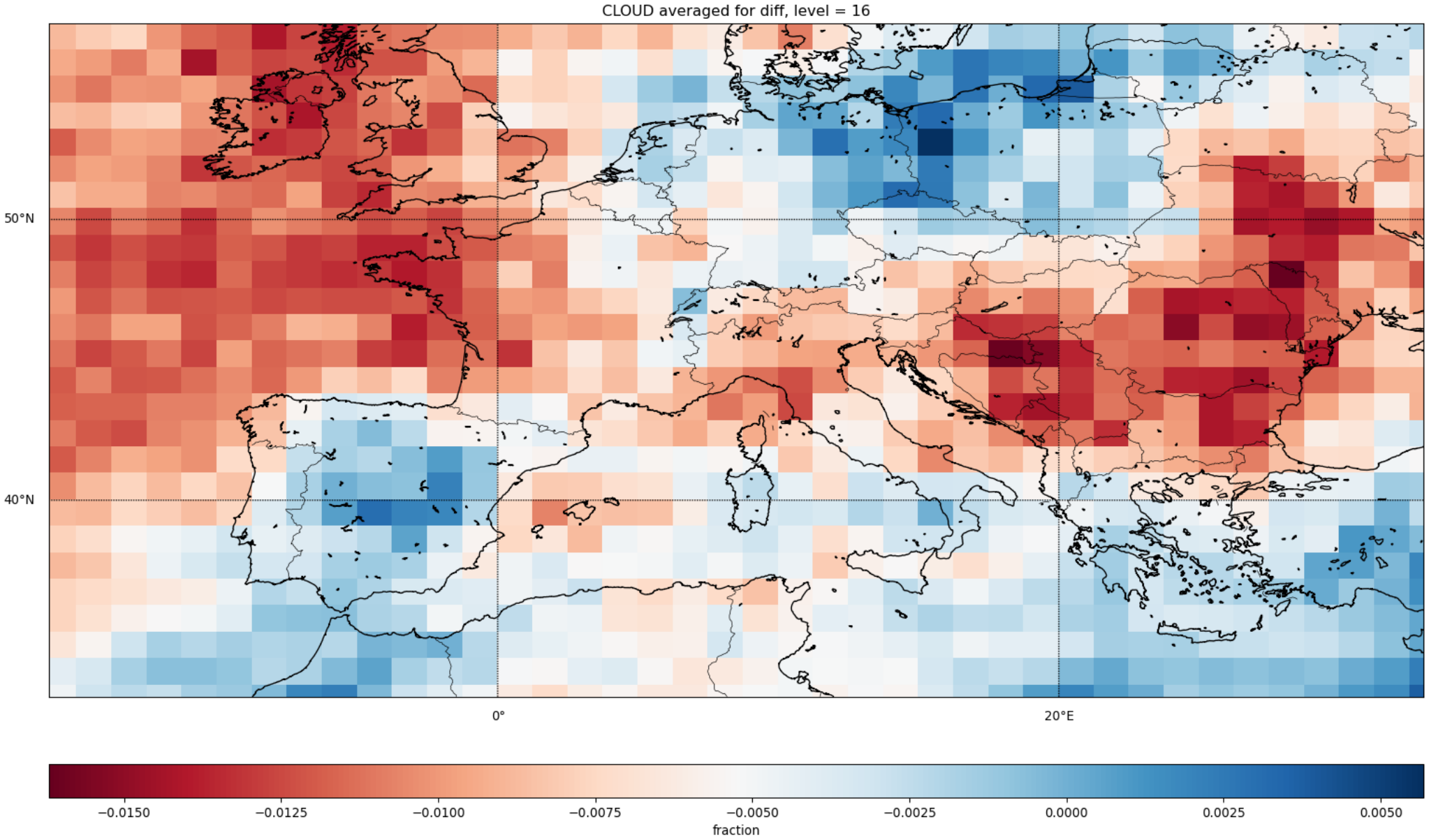
AREI: West Europe

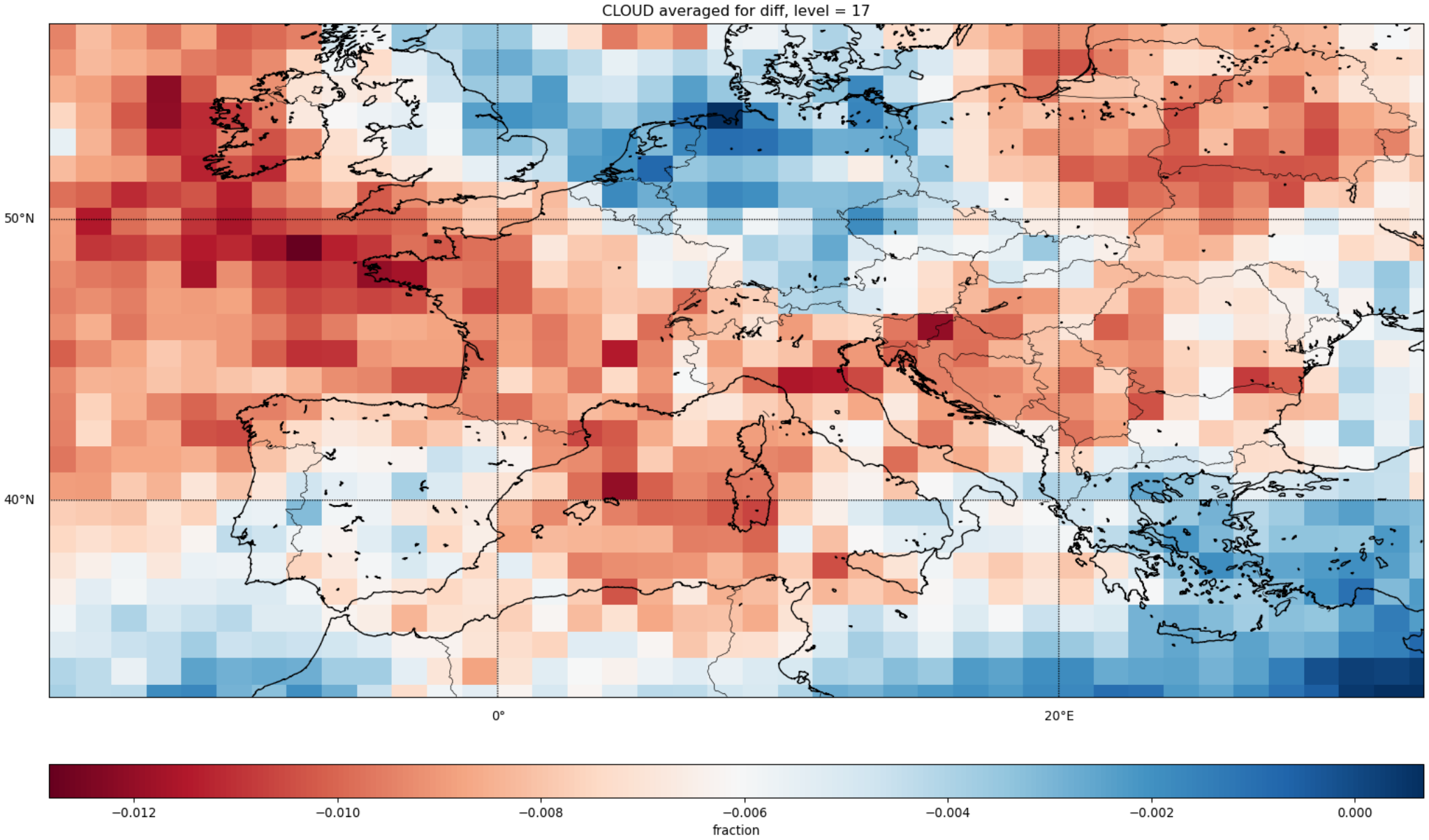

AREI averaged for diff, level = 16
50°N
40°N
0°
20°E
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Micron

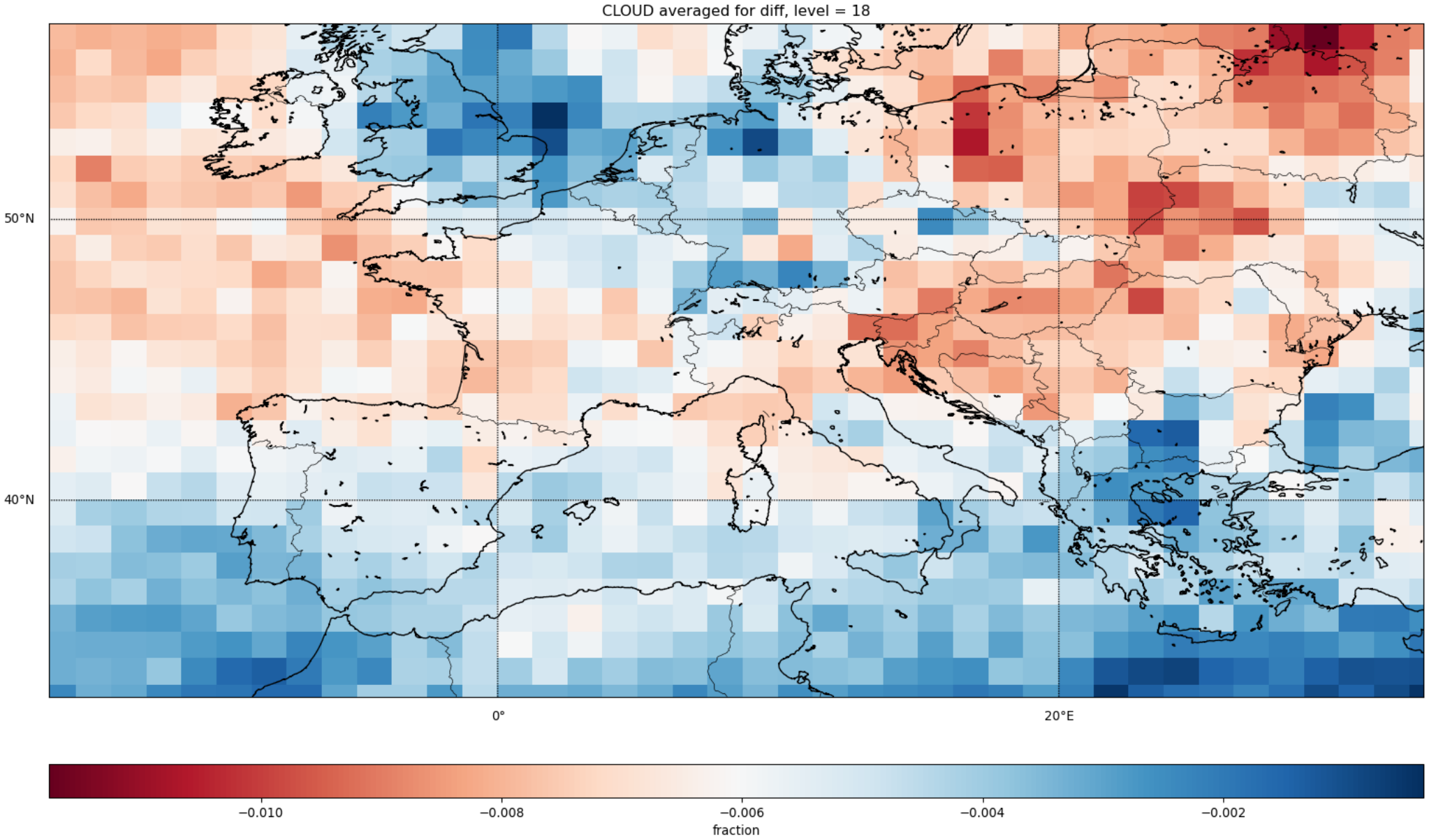

AREI averaged for diff, level = 17
50°N
40°N
0°
20°E
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
1.5
Micron


AREI averaged for diff, level = 18
50°N
40°N
0°
20°E
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
Micron

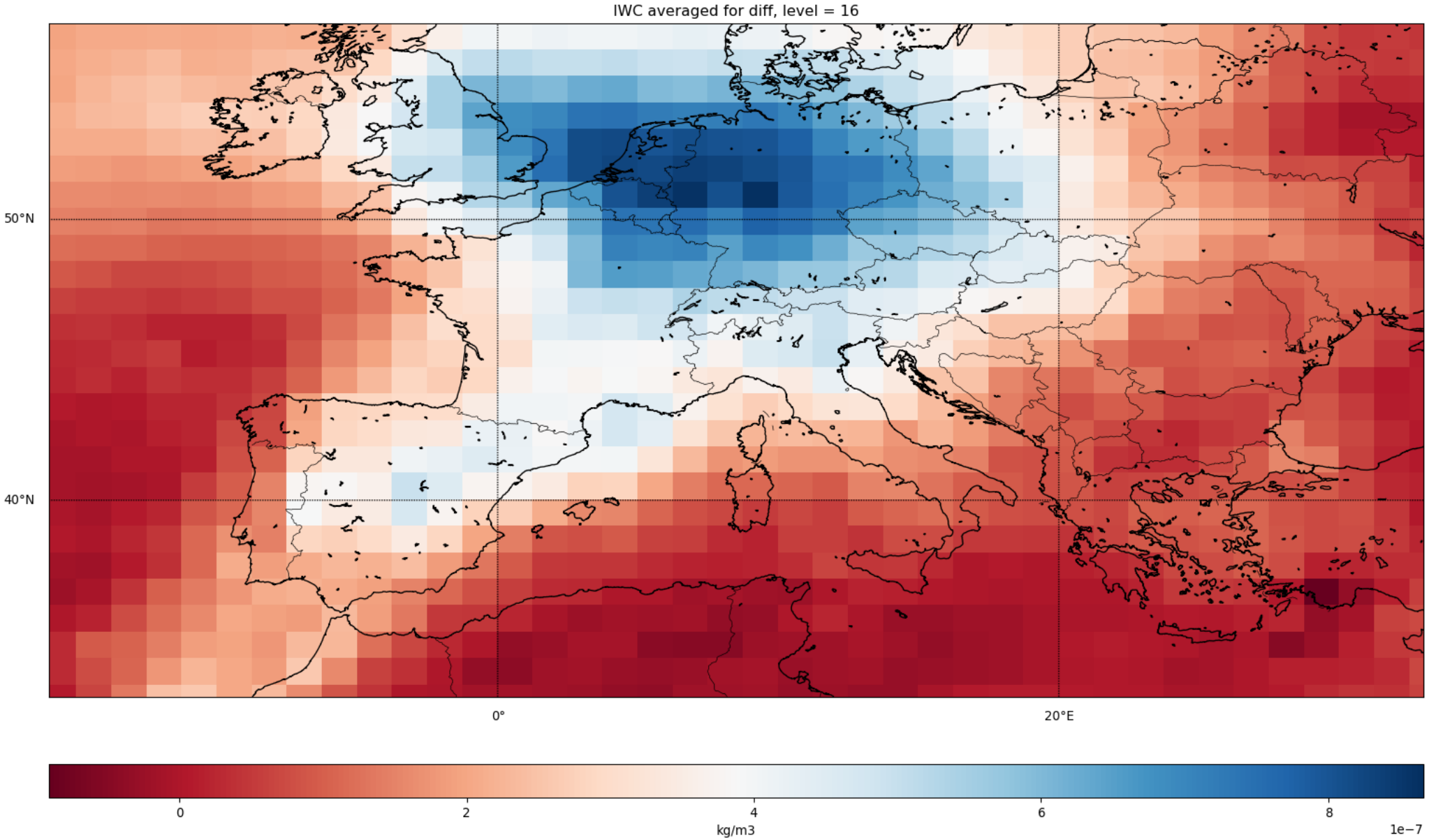
CLOUD: West Europe

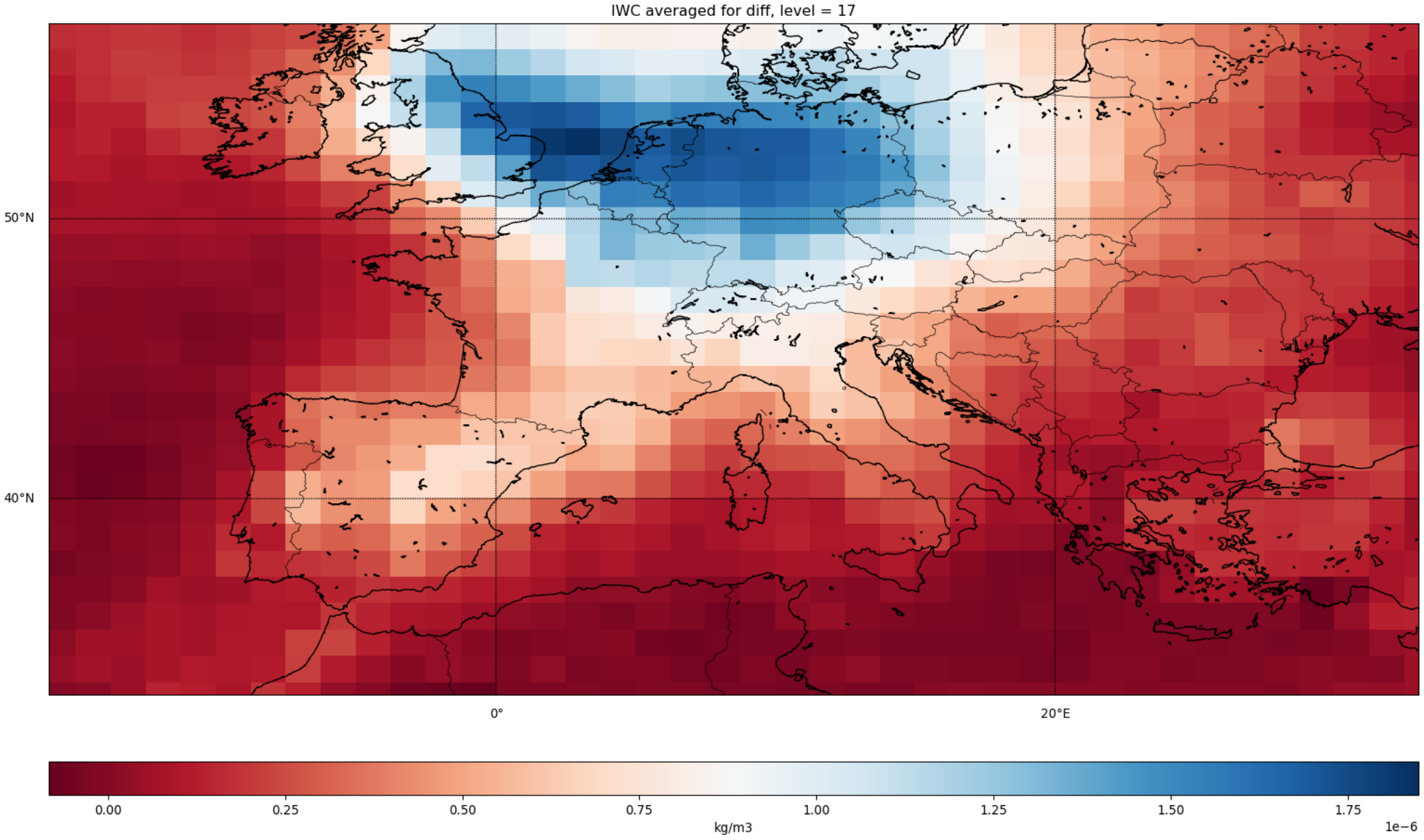

CLOUD averaged for diff, level = 16
50°N
40°N
0°
20°E
−0.0150
−0.0125
−0.0100
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
fraction

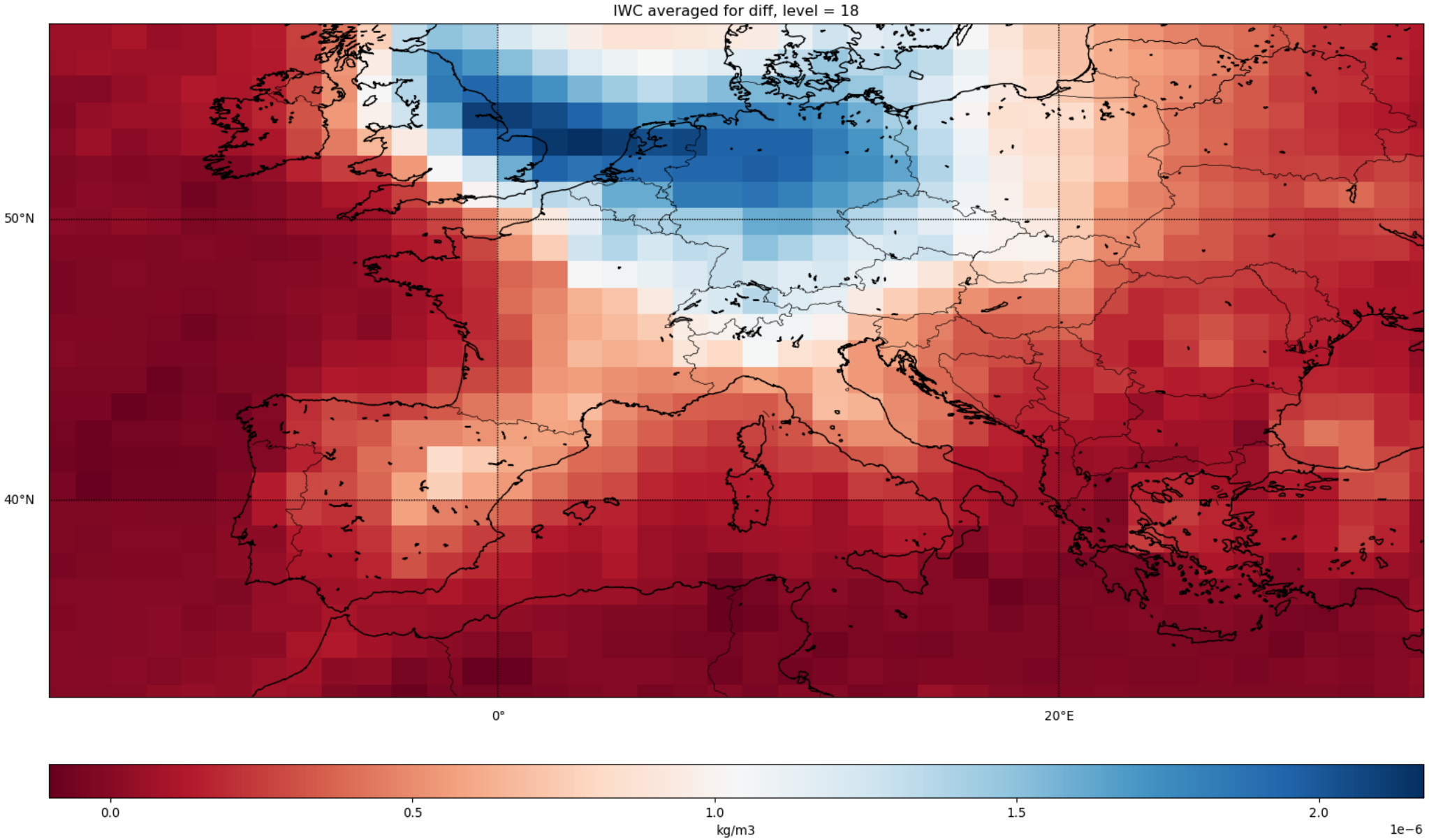

CLOUD averaged for diff, level = 17
50°N
40°N
0°
20°E
−0.012
−0.010
−0.008
−0.006
−0.004
−0.002
0.000
fraction


CLOUD averaged for diff, level = 18
50°N
40°N
0°
20°E
−0.010
−0.008
−0.006
−0.004
−0.002
fraction

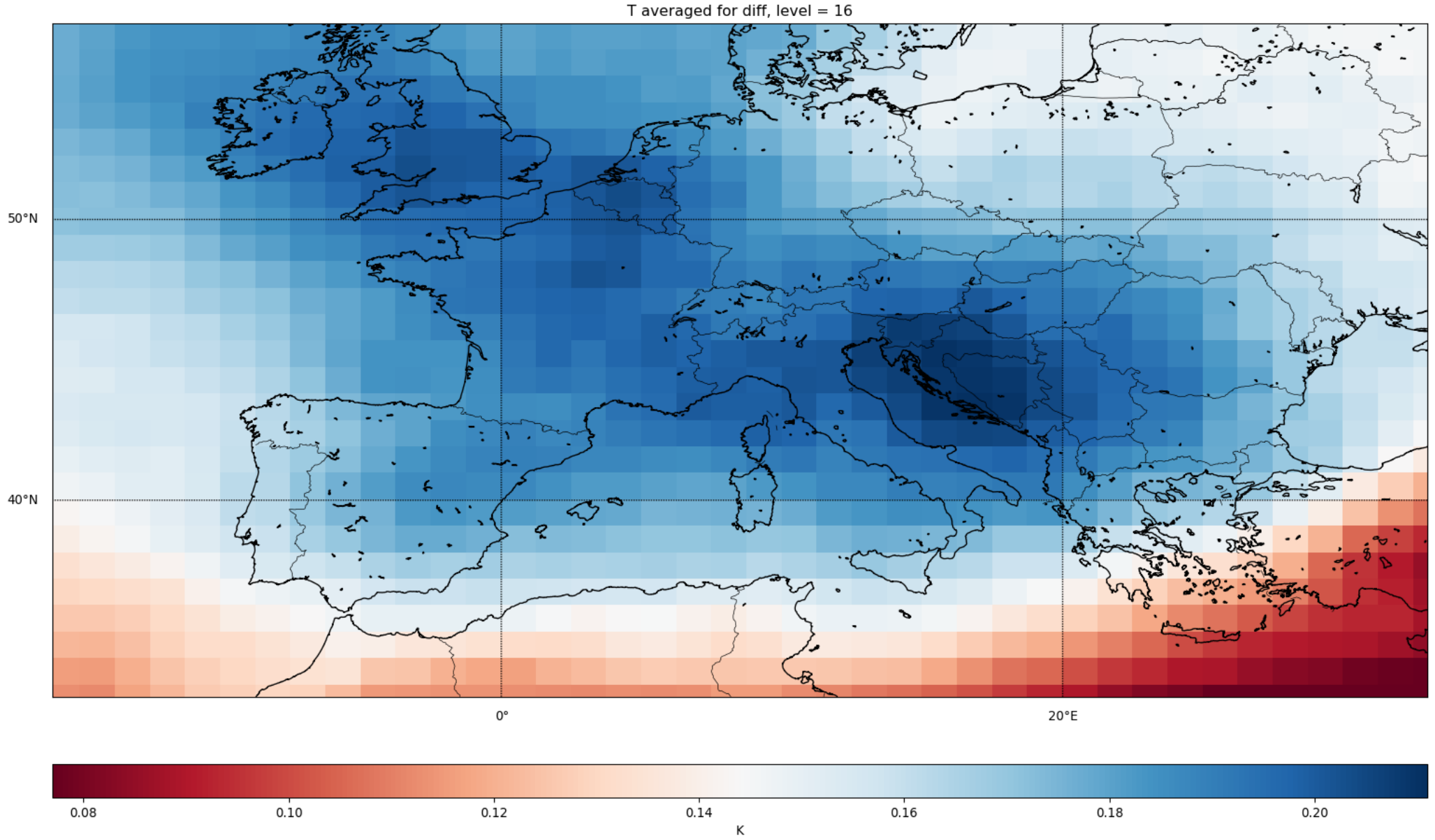
IWC: West Europe

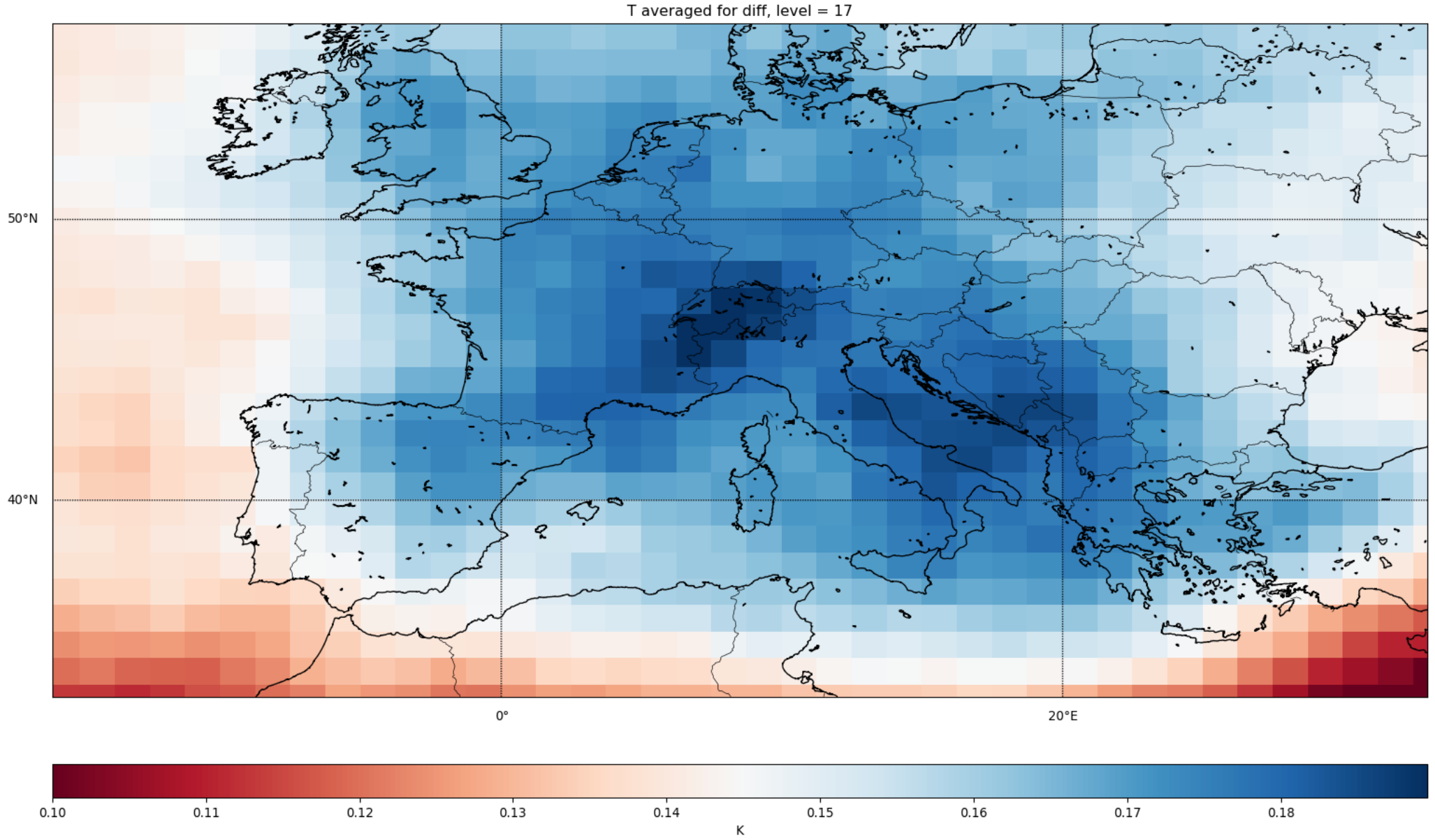

IWC averaged for diff, level = 16
50°N
40°N
0°
20°E
0
2
4
6
8
kg/m3
1e−7

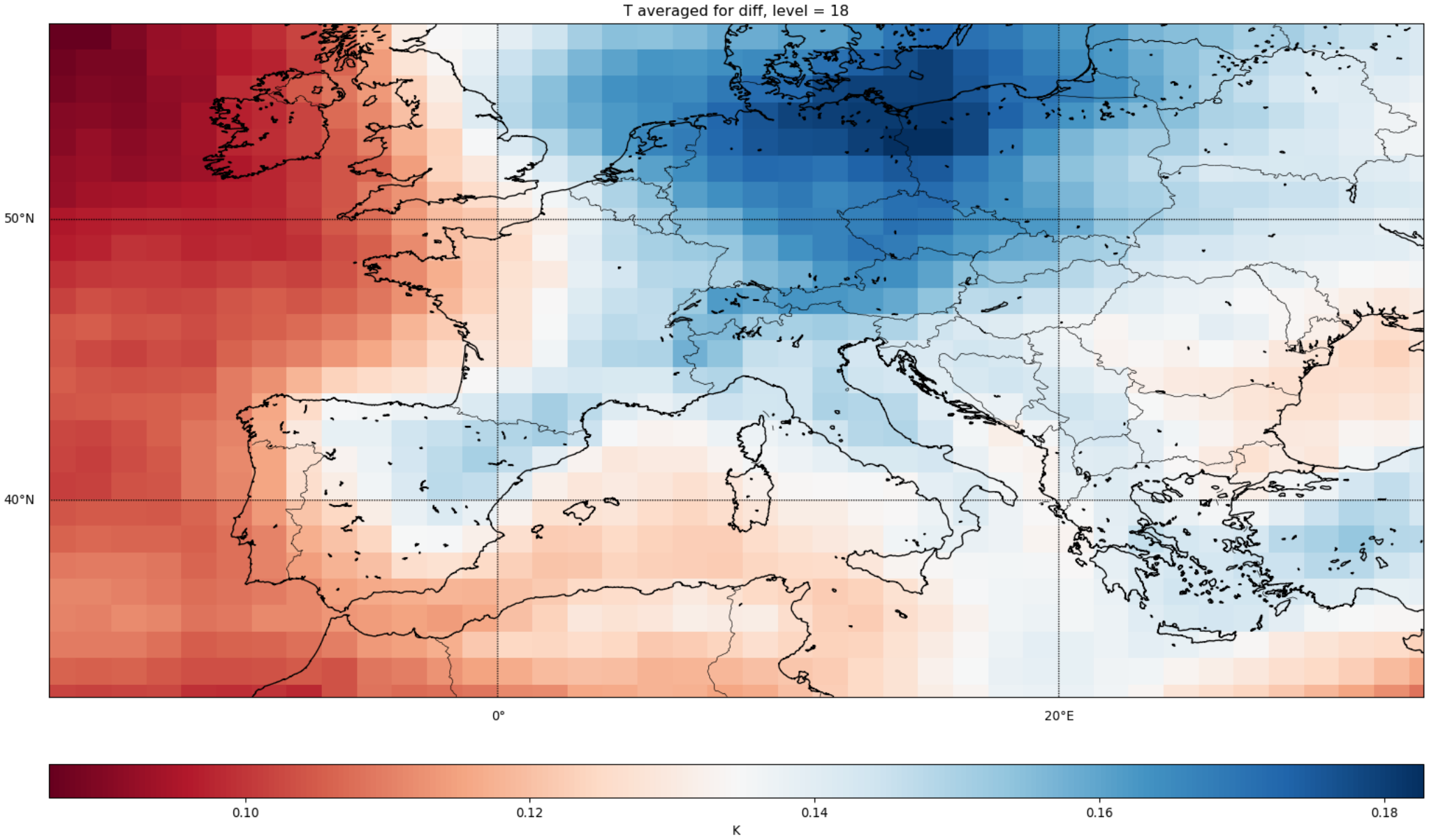

IWC averaged for diff, level = 17
50°N
40°N
0°
20°E
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
kg/m3
1e−6


IWC averaged for diff, level = 18
50°N
40°N
0°
20°E
0.0
0.5
1.0
1.5
2.0
kg/m3
1e−6

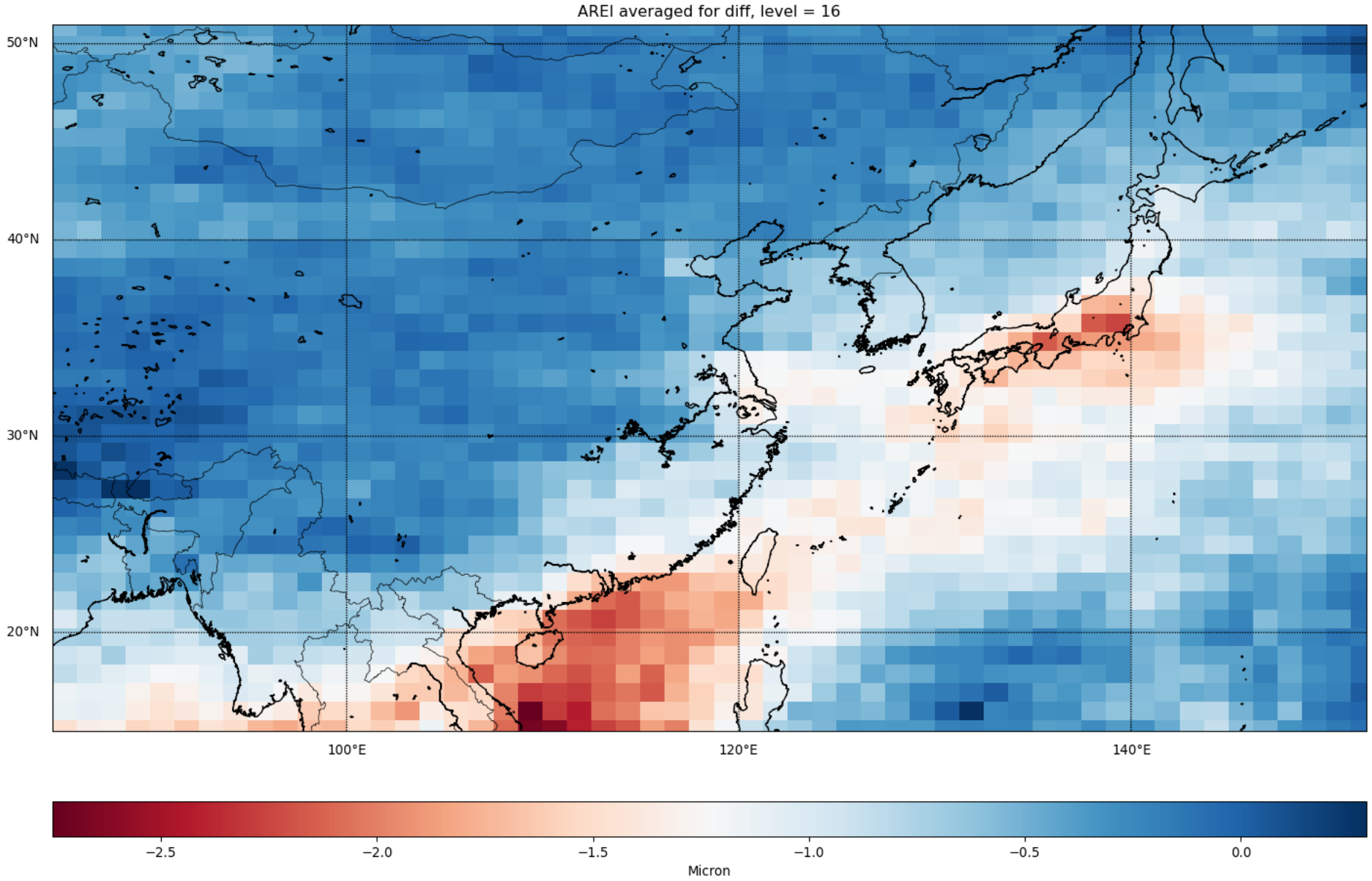
T: West Europe

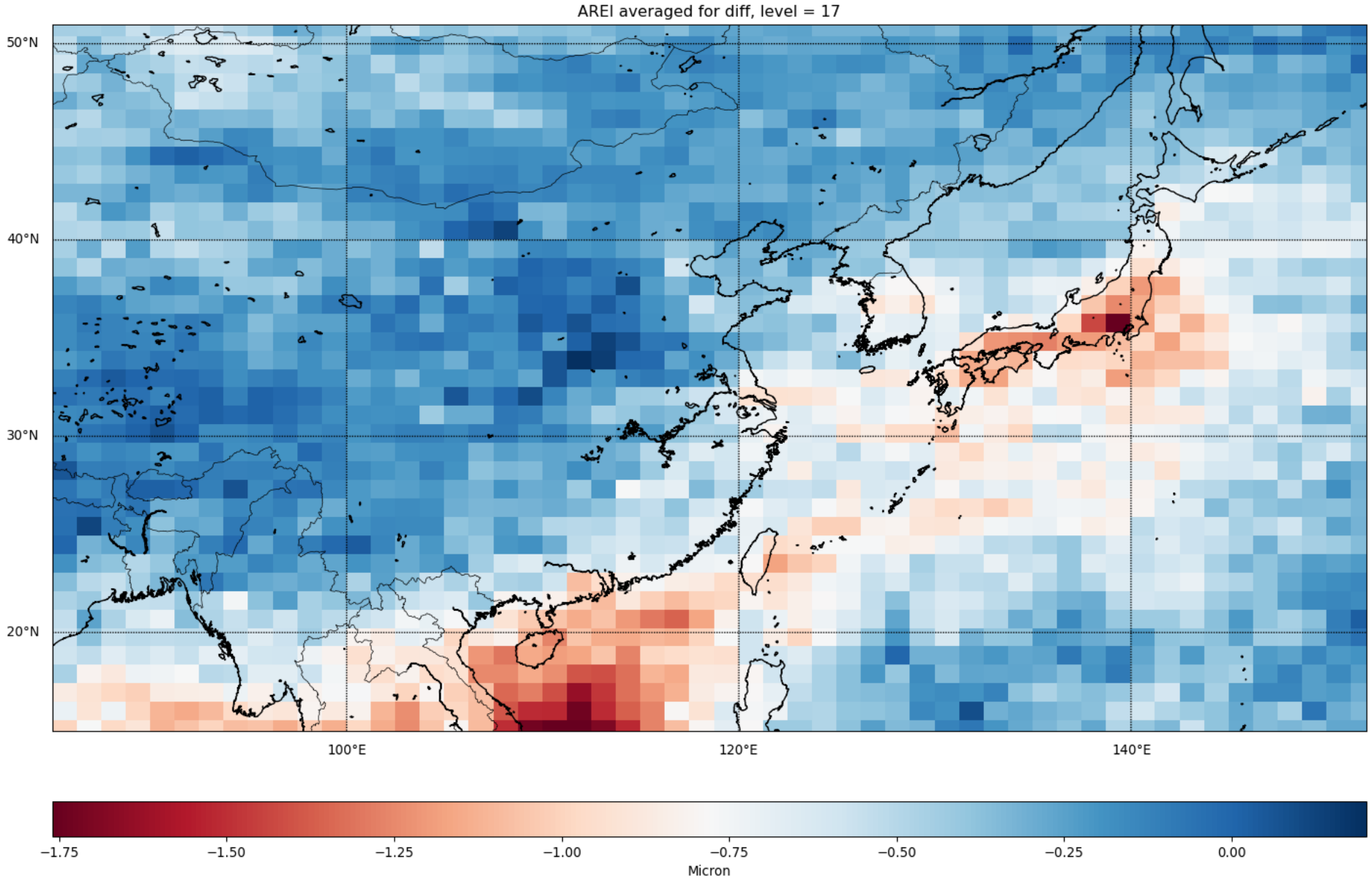

T averaged for diff, level = 16
50°N
40°N
0°
20°E
0.08
0.10
0.12
0.14
0.16
0.18
0.20
K

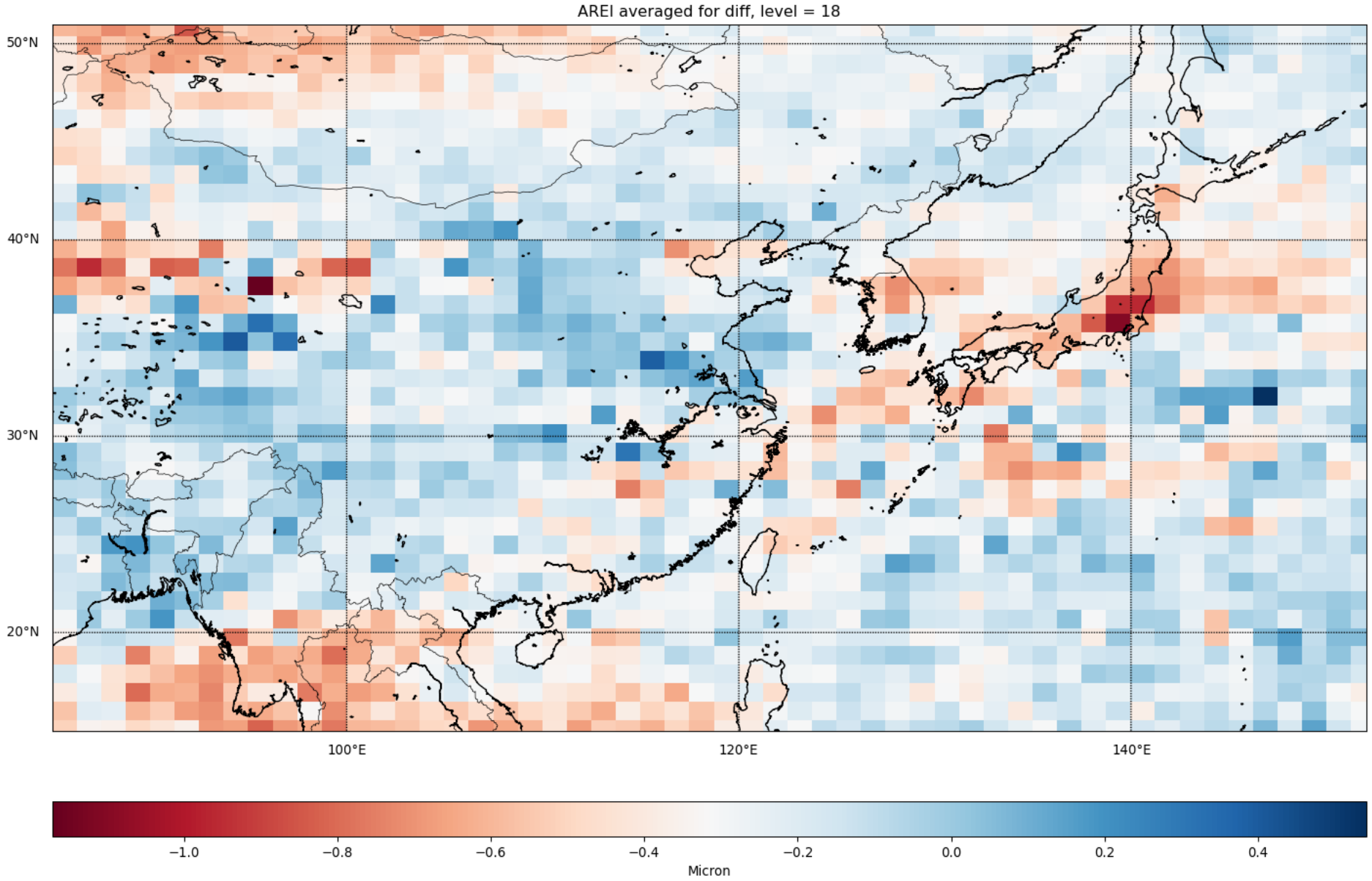

T averaged for diff, level = 17
50°N
40°N
0°
20°E
0.10
0.11
0.12
0.13
0.14
0.15
0.16
0.17
0.18
K


T averaged for diff, level = 18
50°N
40°N
0°
20°E
0.10
0.12
0.14
0.16
0.18
K

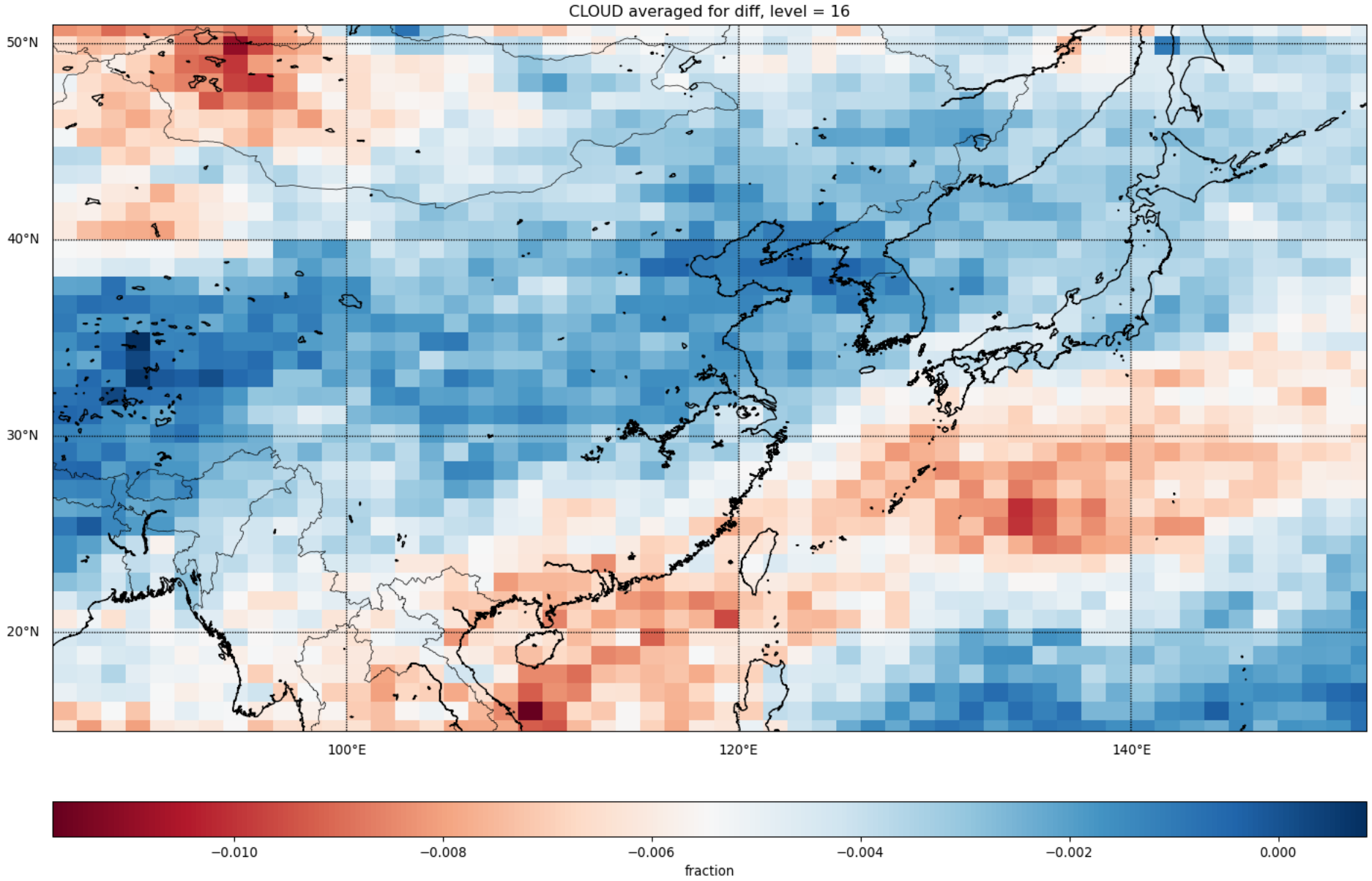
AREI: East Asia

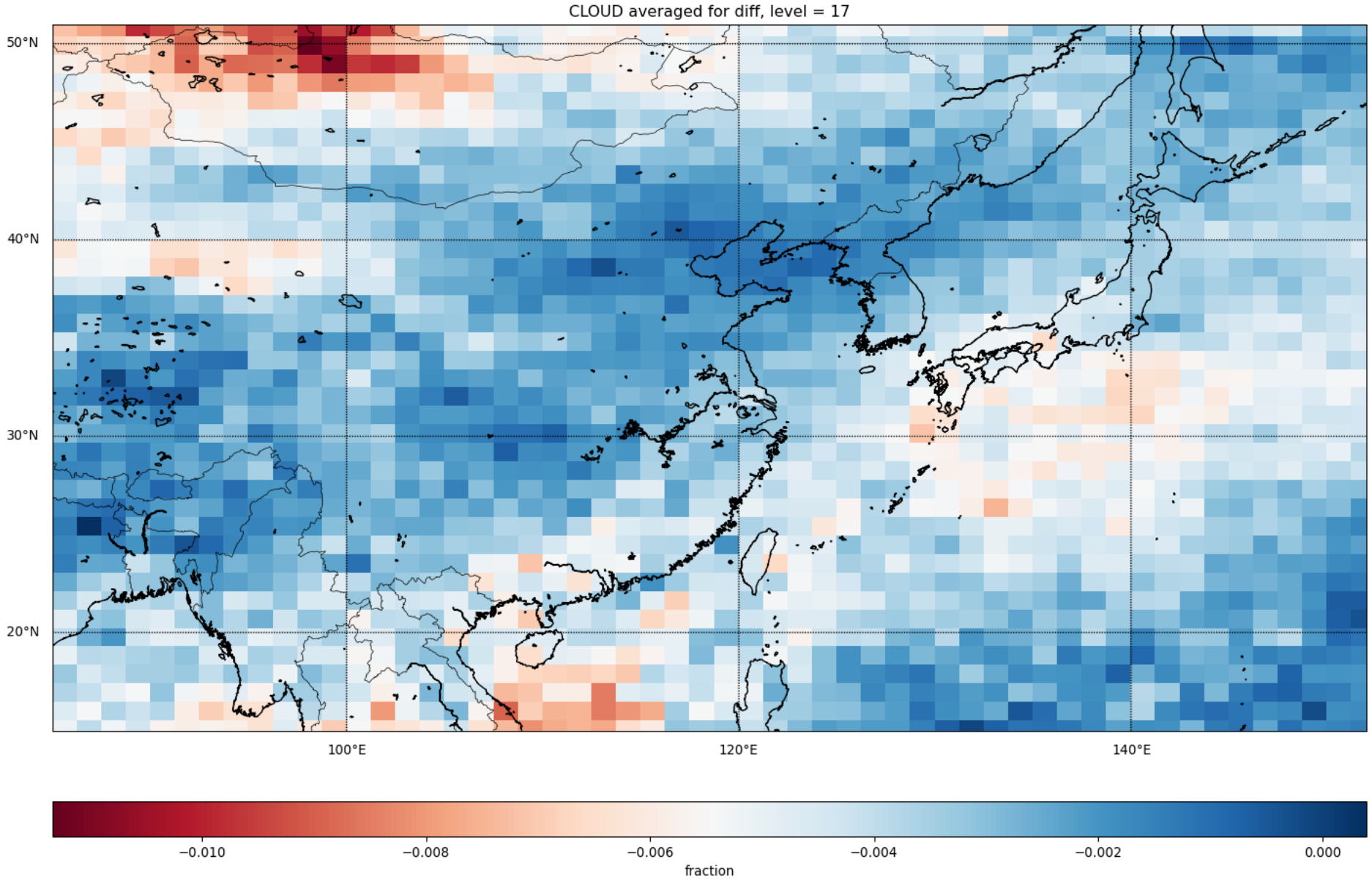

AREI averaged for diff, level = 16
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
Micron

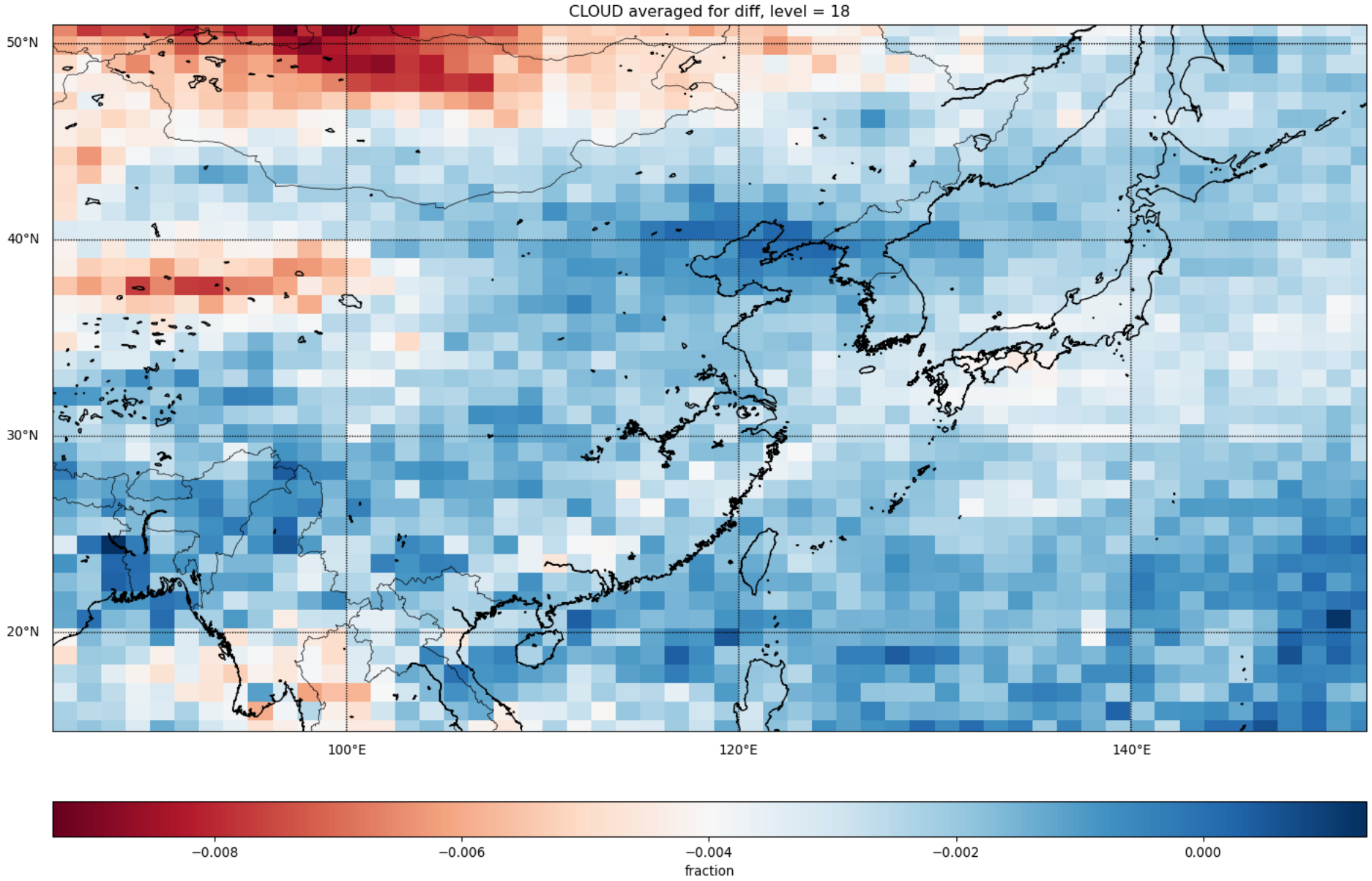

AREI averaged for diff, level = 17
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−1.75
−1.50
−1.25
−1.00
−0.75
−0.50
−0.25
0.00
Micron


AREI averaged for diff, level = 18
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
0.4
Micron

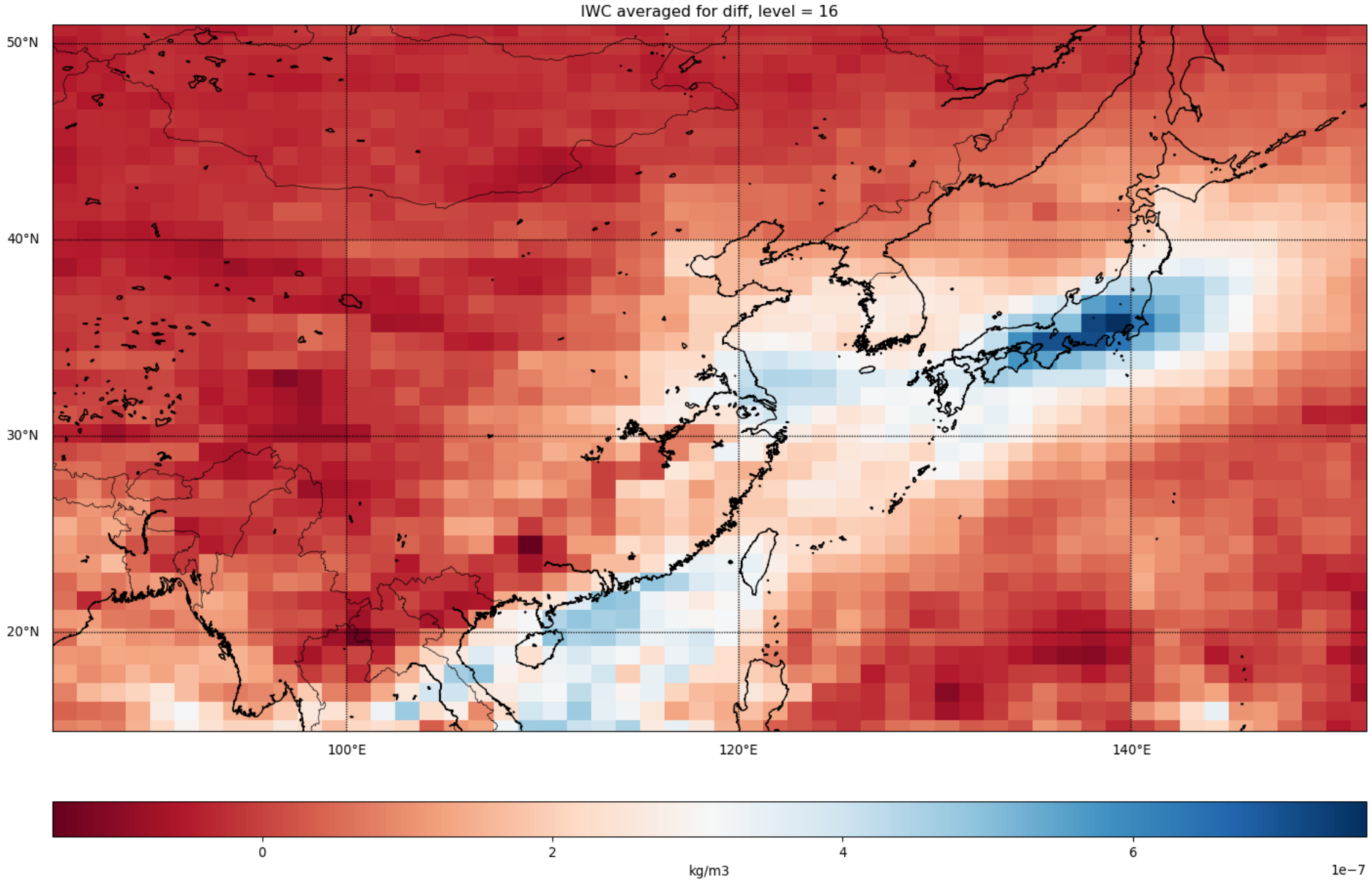
CLOUD: East Asia

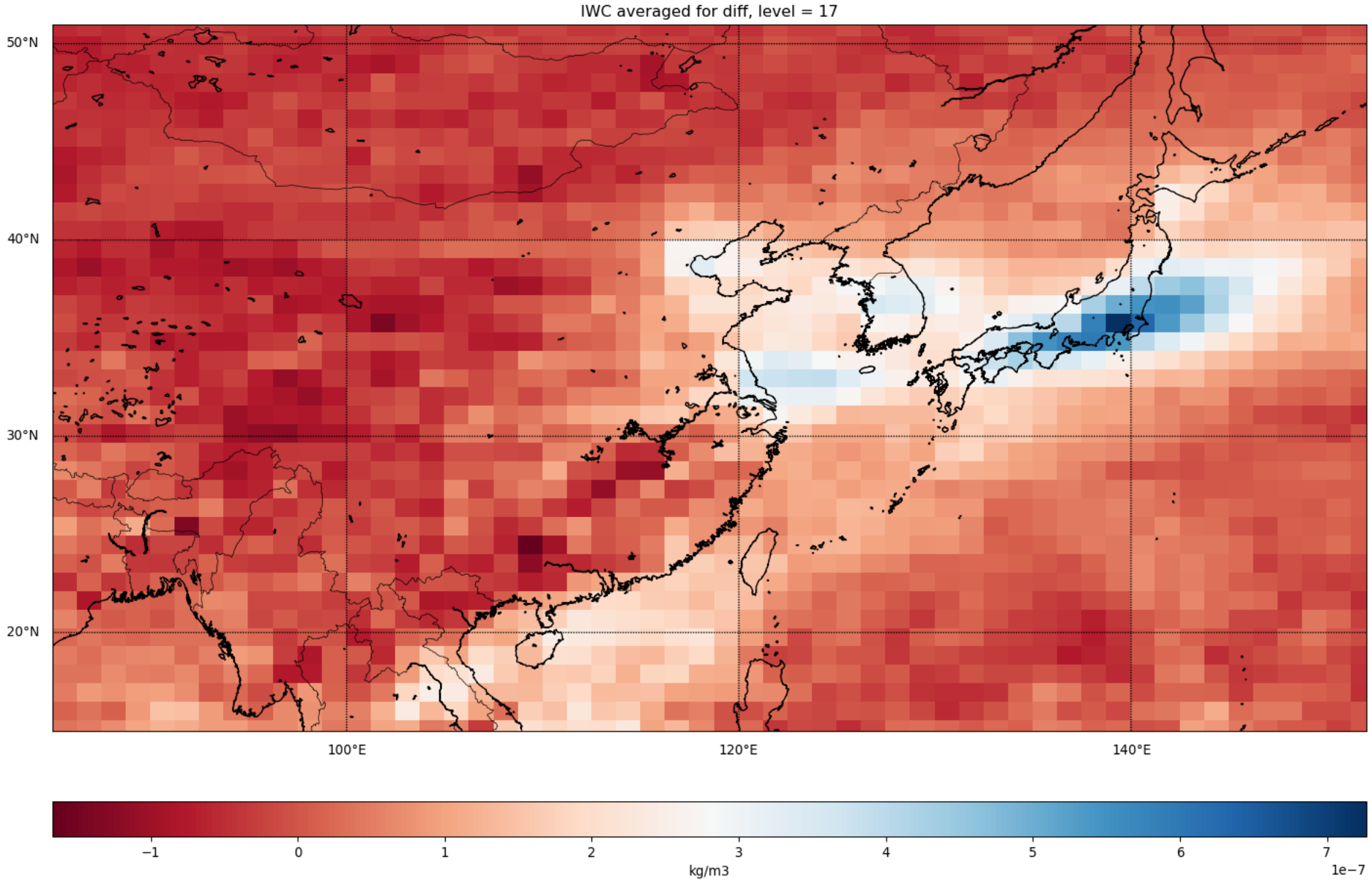

CLOUD averaged for diff, level = 16
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−0.010
−0.008
−0.006
−0.004
−0.002
0.000
fraction

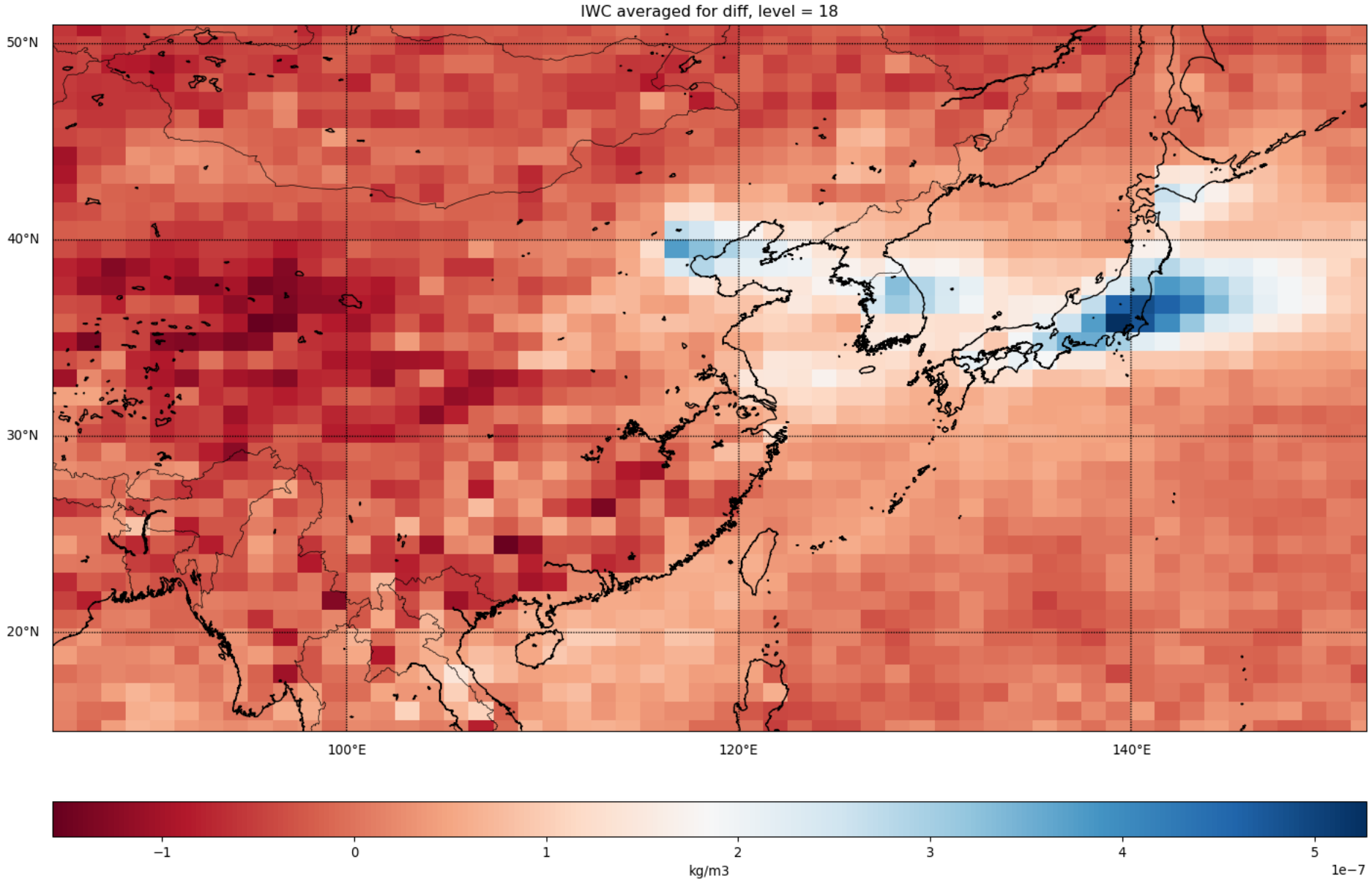

CLOUD averaged for diff, level = 17
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−0.010
−0.008
−0.006
−0.004
−0.002
0.000
fraction


CLOUD averaged for diff, level = 18
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−0.008
−0.006
−0.004
−0.002
0.000
fraction

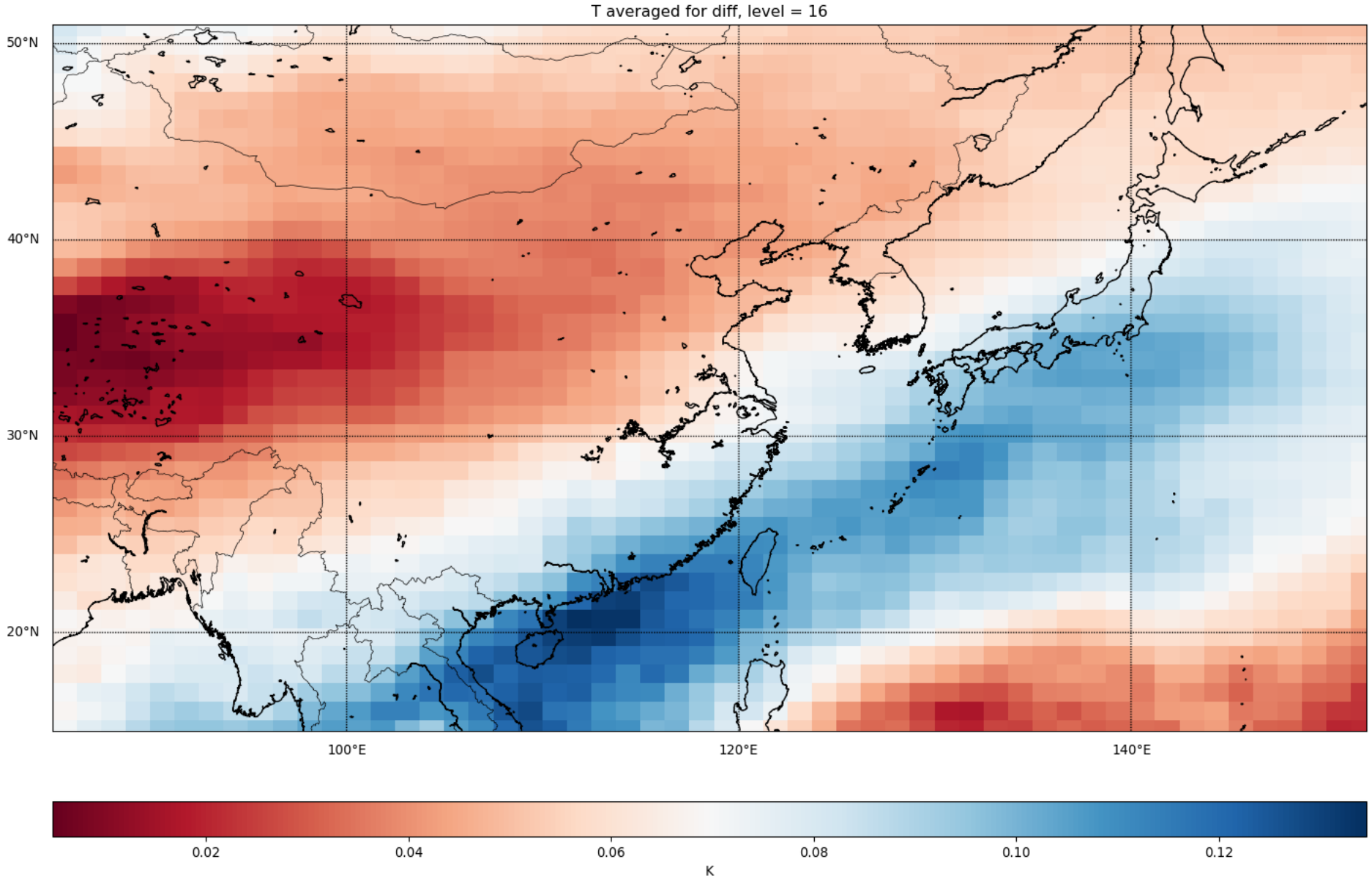
IWC: East Asia

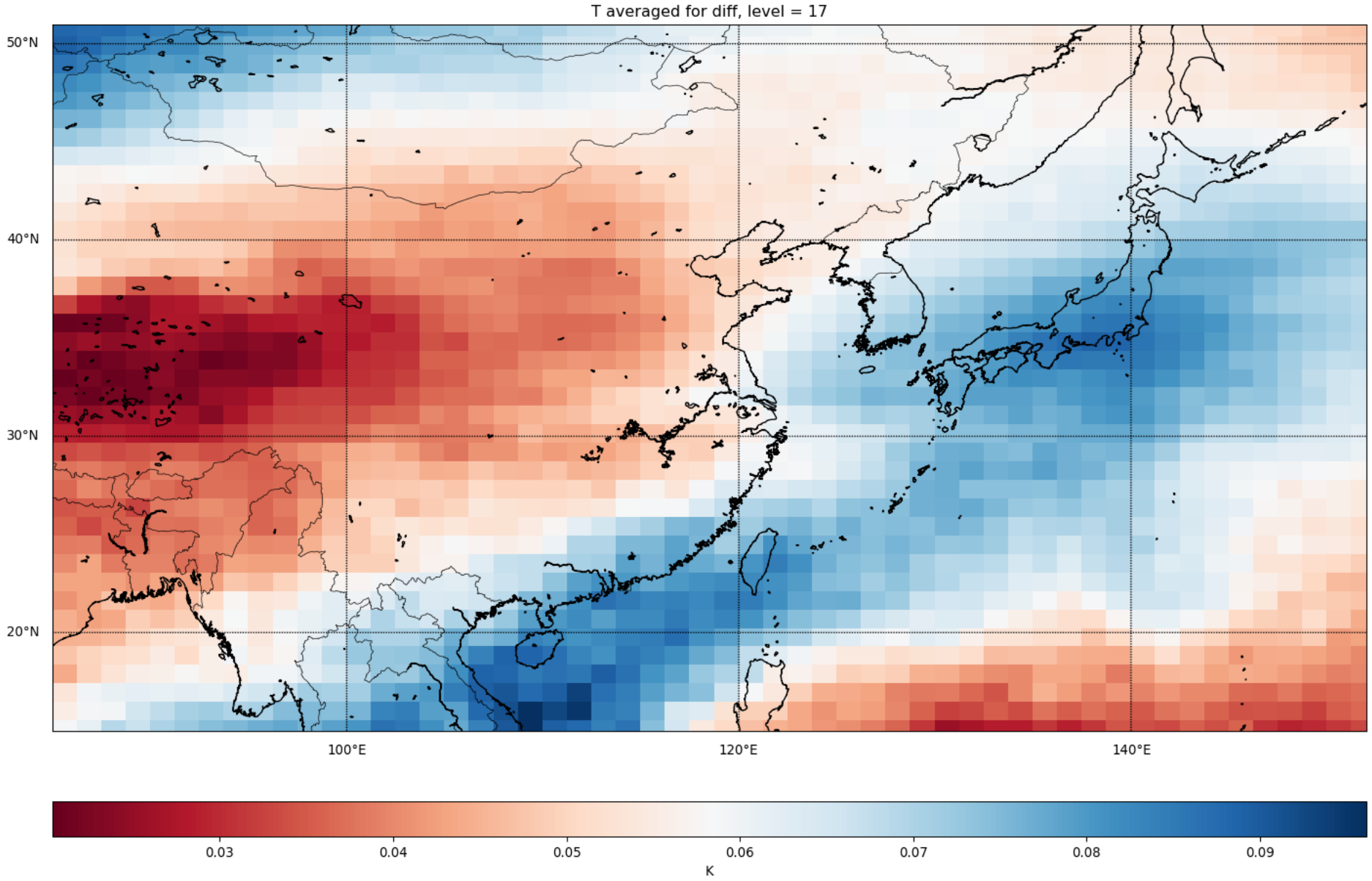

IWC averaged for diff, level = 16
50°N
40°N
30°N
20°N
100°E
120°E
140°E
0
2
4
6
kg/m3
1e−7

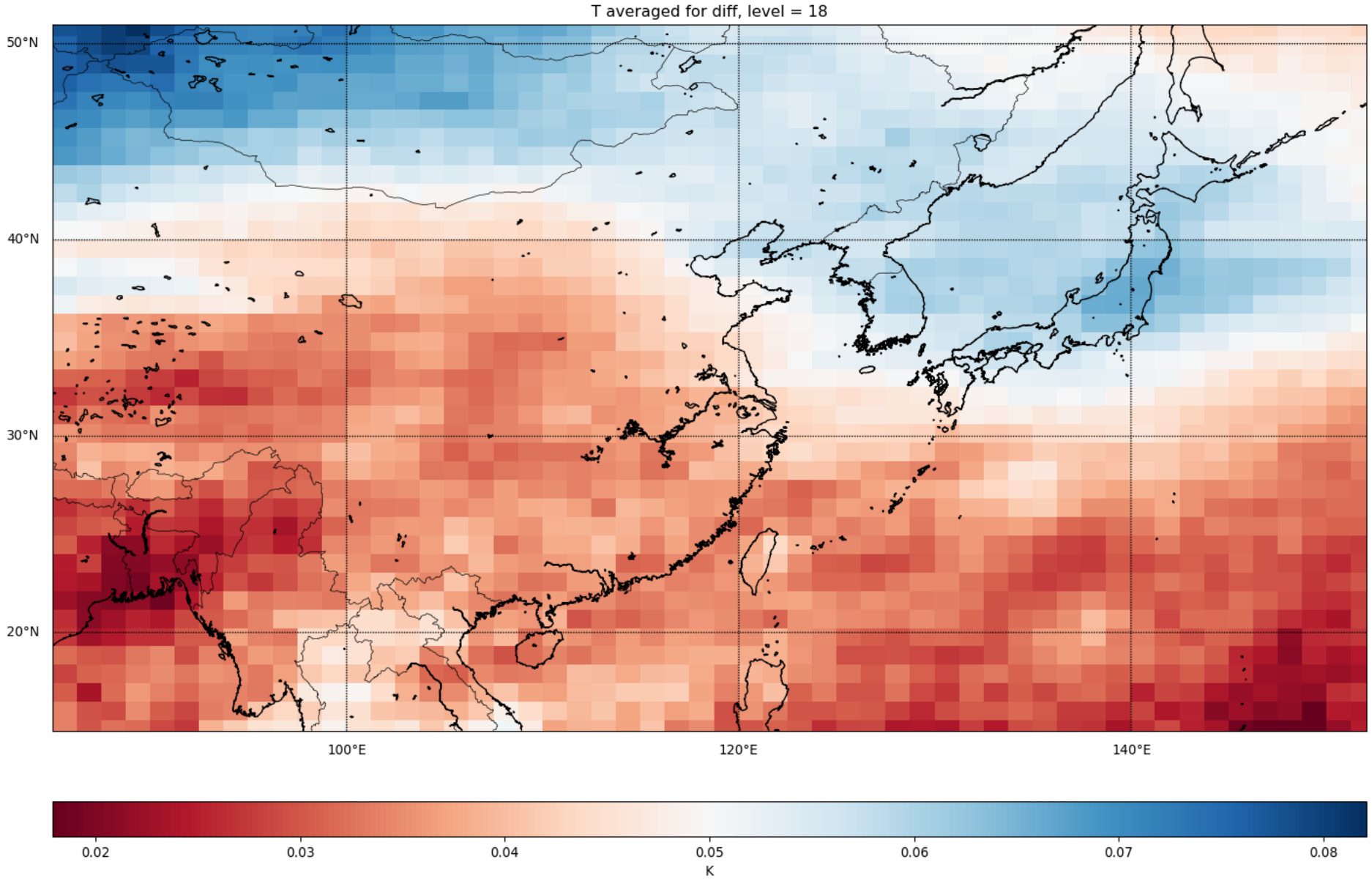

IWC averaged for diff, level = 17
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−1
0
1
2
3
4
5
6
7
kg/m3
1e−7


IWC averaged for diff, level = 18
50°N
40°N
30°N
20°N
100°E
120°E
140°E
−1
0
1
2
3
4
5
kg/m3
1e−7

T: East Asia


T averaged for diff, level = 16
50°N
40°N
30°N
20°N
100°E
120°E
140°E
0.02
0.04
0.06
0.08
0.10
0.12
K


T averaged for diff, level = 17
50°N
40°N
30°N
20°N
100°E
120°E
140°E
0.03
0.04
0.05
0.06
0.07
0.08
0.09
K


T averaged for diff, level = 18
50°N
40°N
30°N
20°N
100°E
120°E
140°E
0.02
0.03
0.04
0.05
0.06
0.07
0.08
K