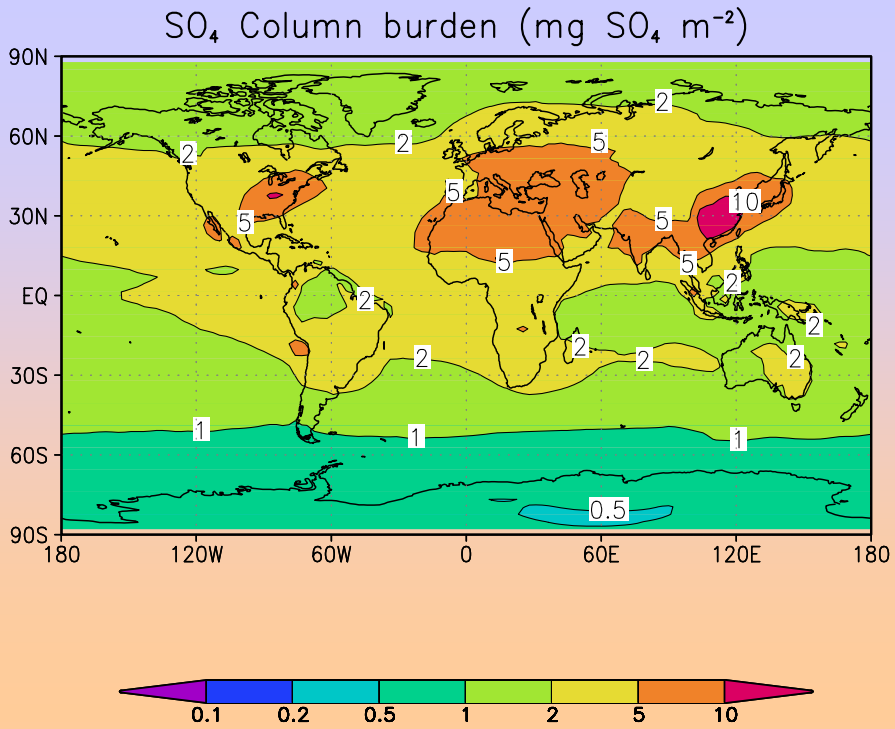
Status Aerocom

- 5 year model runs using the last 3 years for statistics
- Aerosol components given in wanted format
- Size distributions and radiative effects calculated, but not in the wanted format

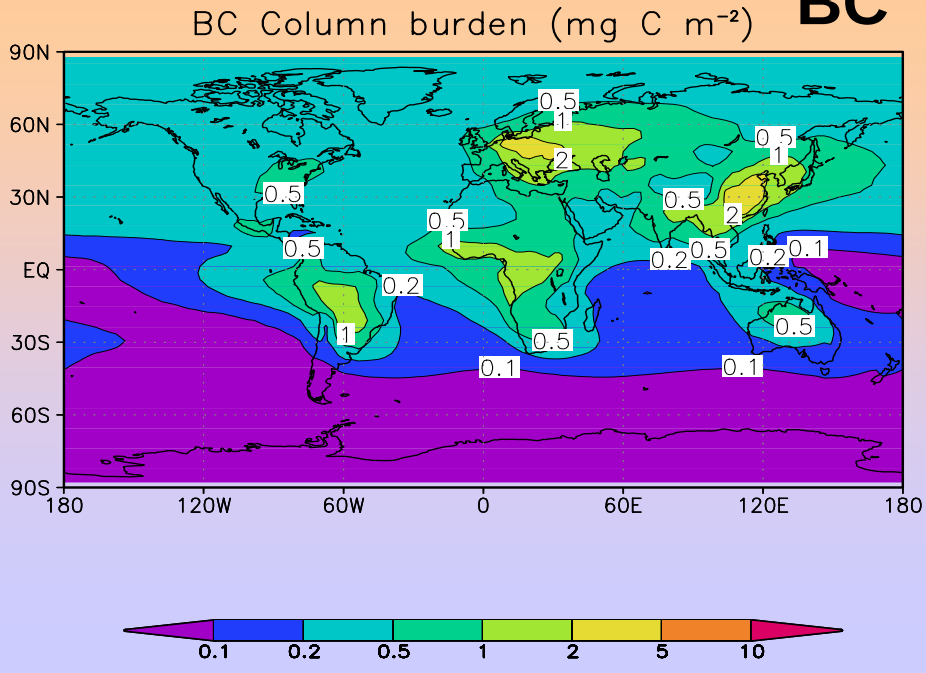
The CCM-Oslo model



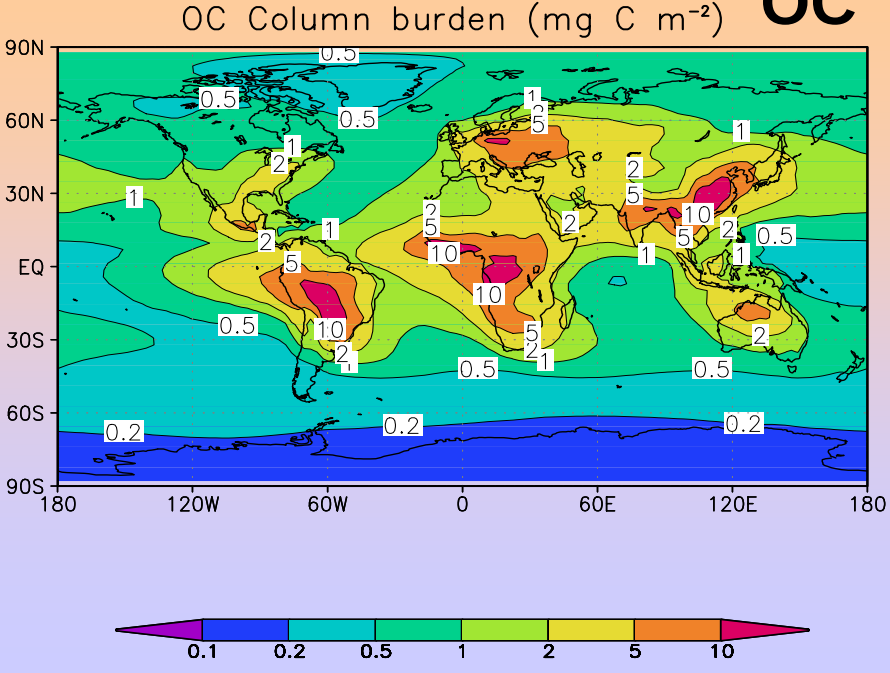
SO4

Annual Burdens mg/m²

BC



OC



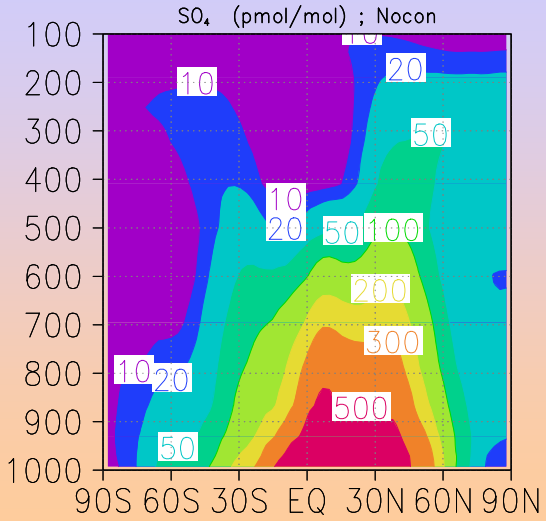
Global Budget numbers

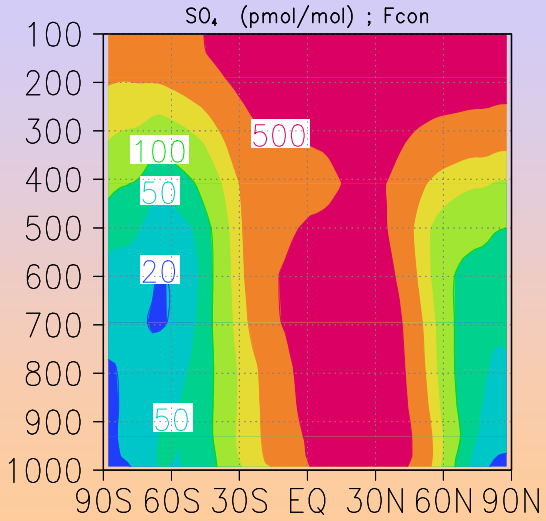
	Source (Tg S/C)	Burden (Tg S/C)	Lifetime (days)	Wet dep. (%)
SO2	90.4	0.39	1.6	19
SO4	51.0	0.44	3.1	92
BC	12.4	0.18	5.3	76
OC	81.4	0.90	4.0	79

Sensitivity to deep convection treatment

The CCM-Oslo model

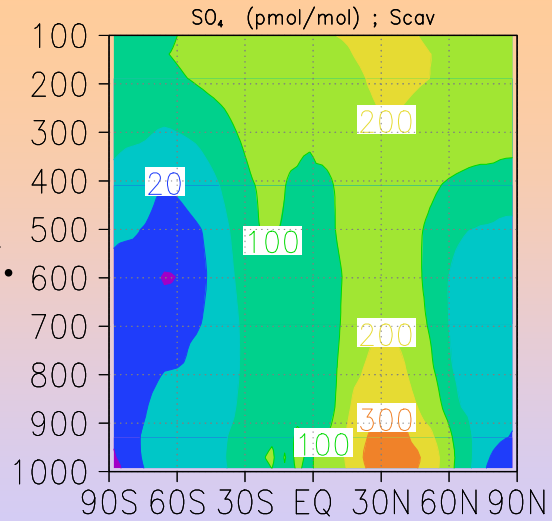
No conv. Transport
B=0.60 TgS
T=4.1 d

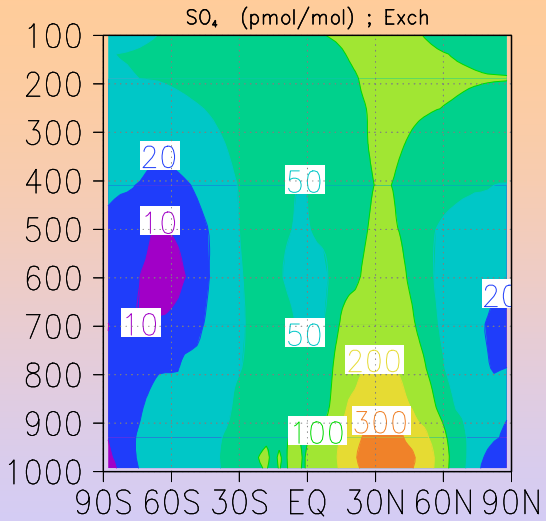




Full conv. Transport
B=2.40 TgS
T=14.6 d

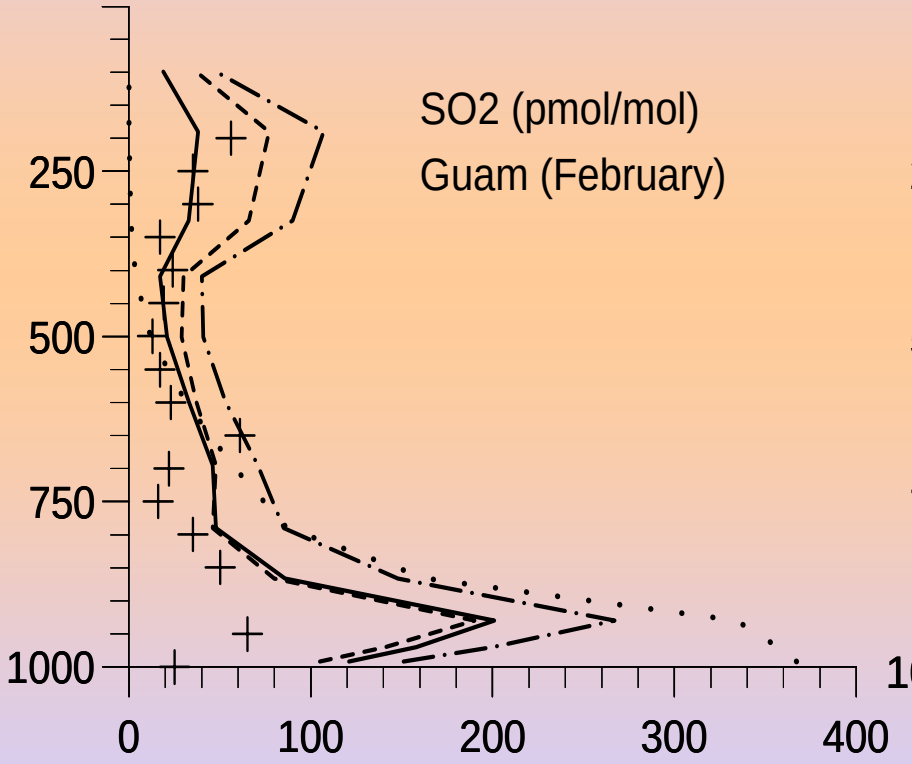
Full conv. transport & Incr. Low-lev. Scavenging
B=0.63 TgS
T=4.4 d

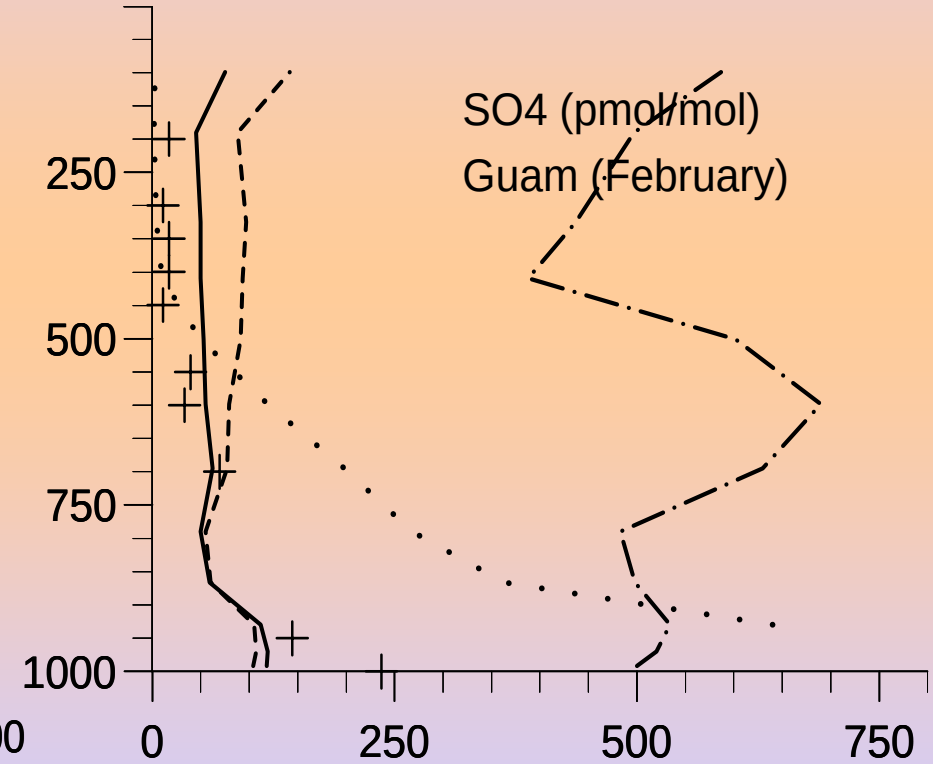




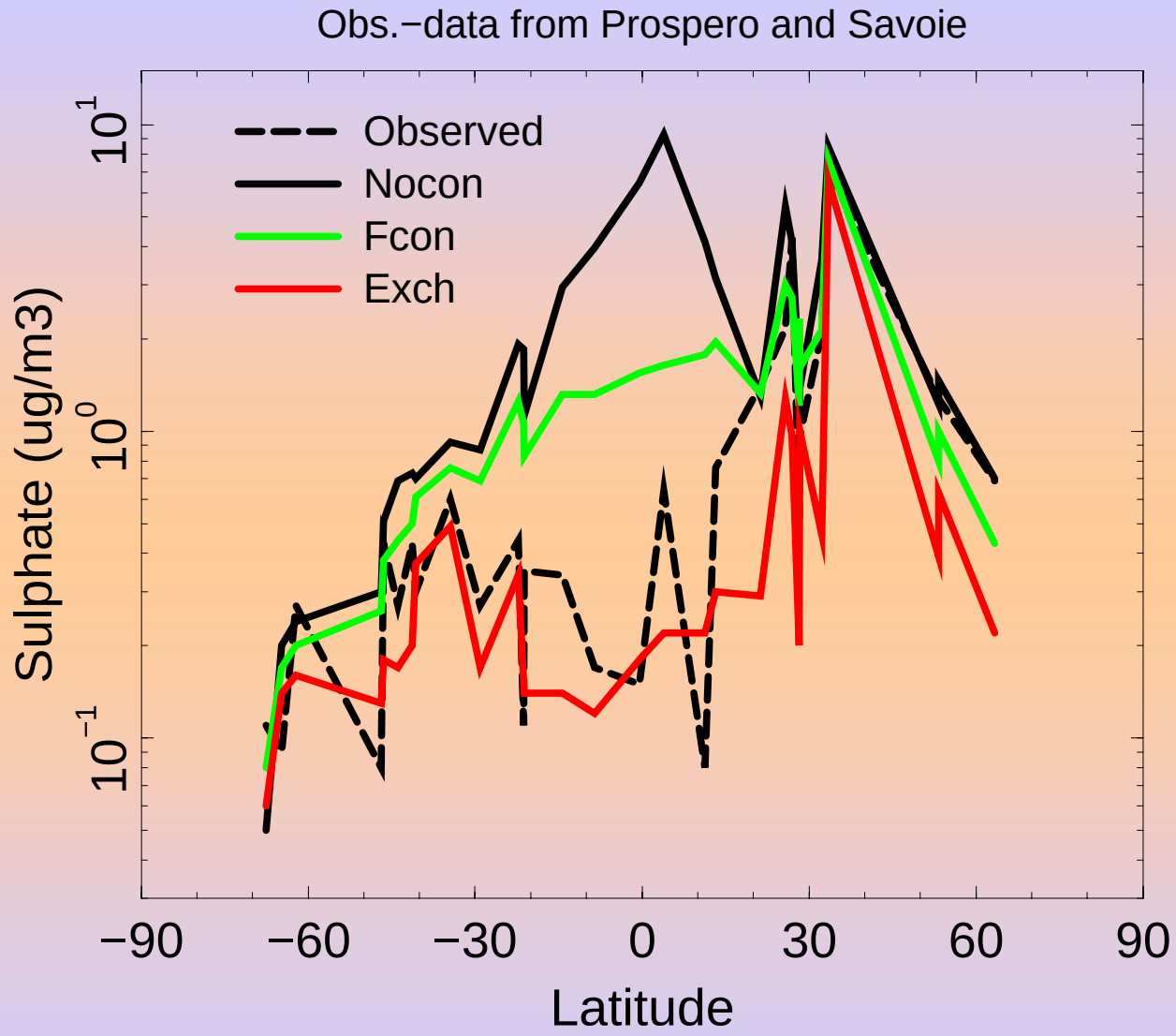
Full conv. transport & incr. scav. & updraft-downdraft Exchange
B=0.44 TgS
T=3.1 d

The CCM-Oslo model

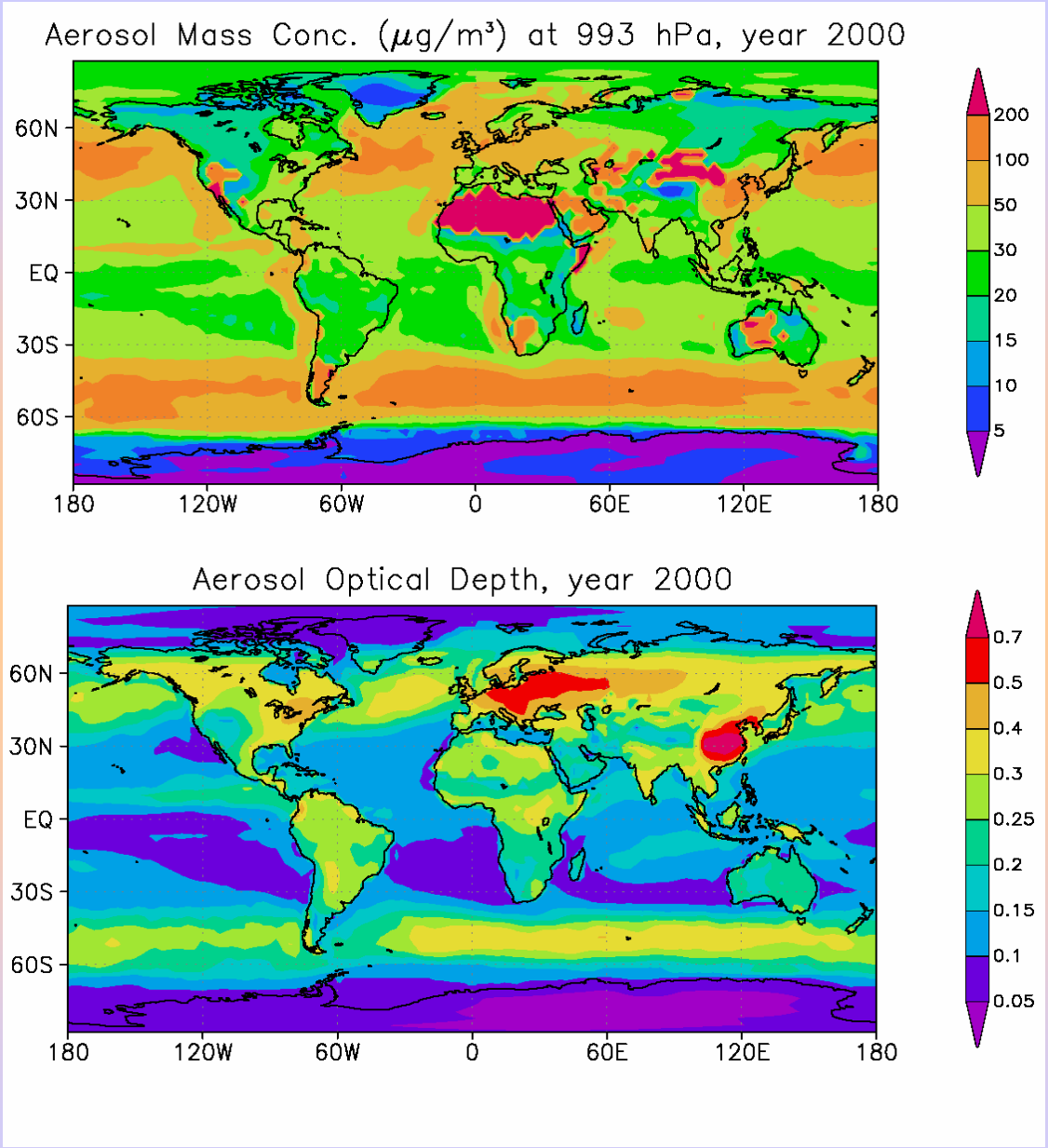




Annual nss−sulphate in oceanic areas



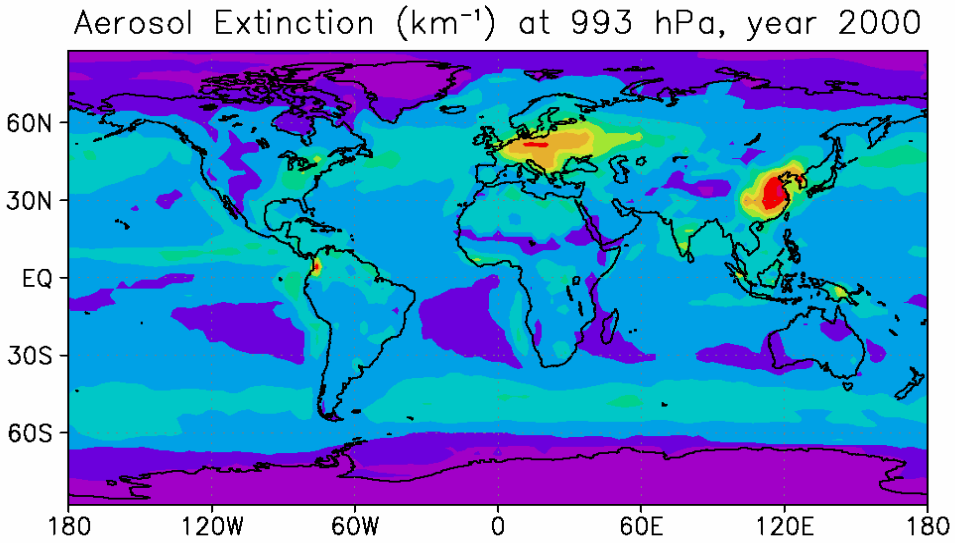
The CCM-Oslo model

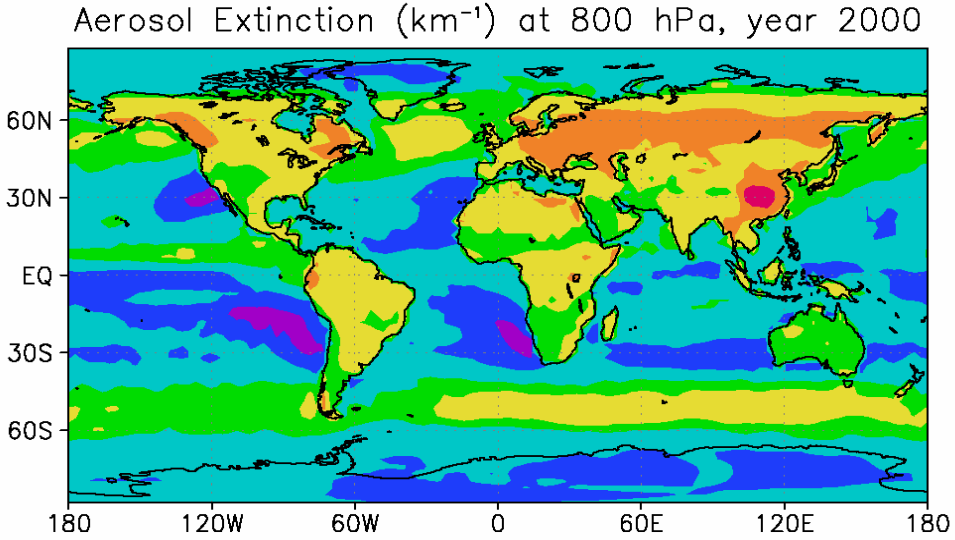


AOD-Average=0.19

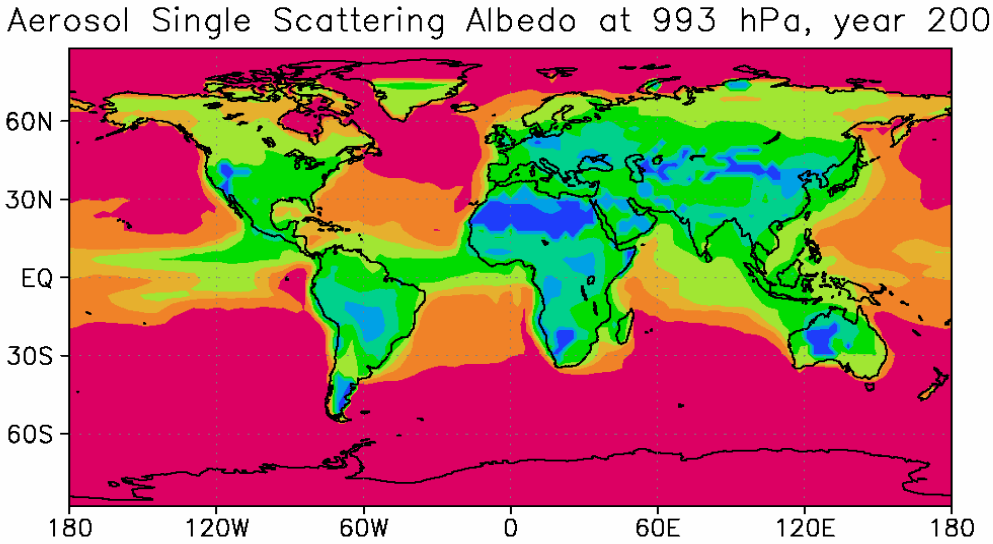
(old scheme: 0.37)

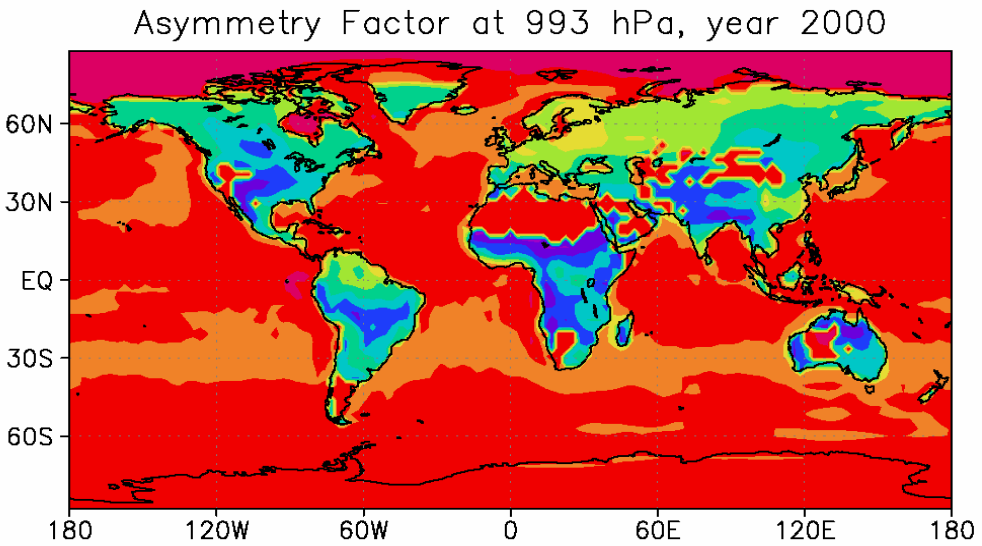
The CCM-Oslo model



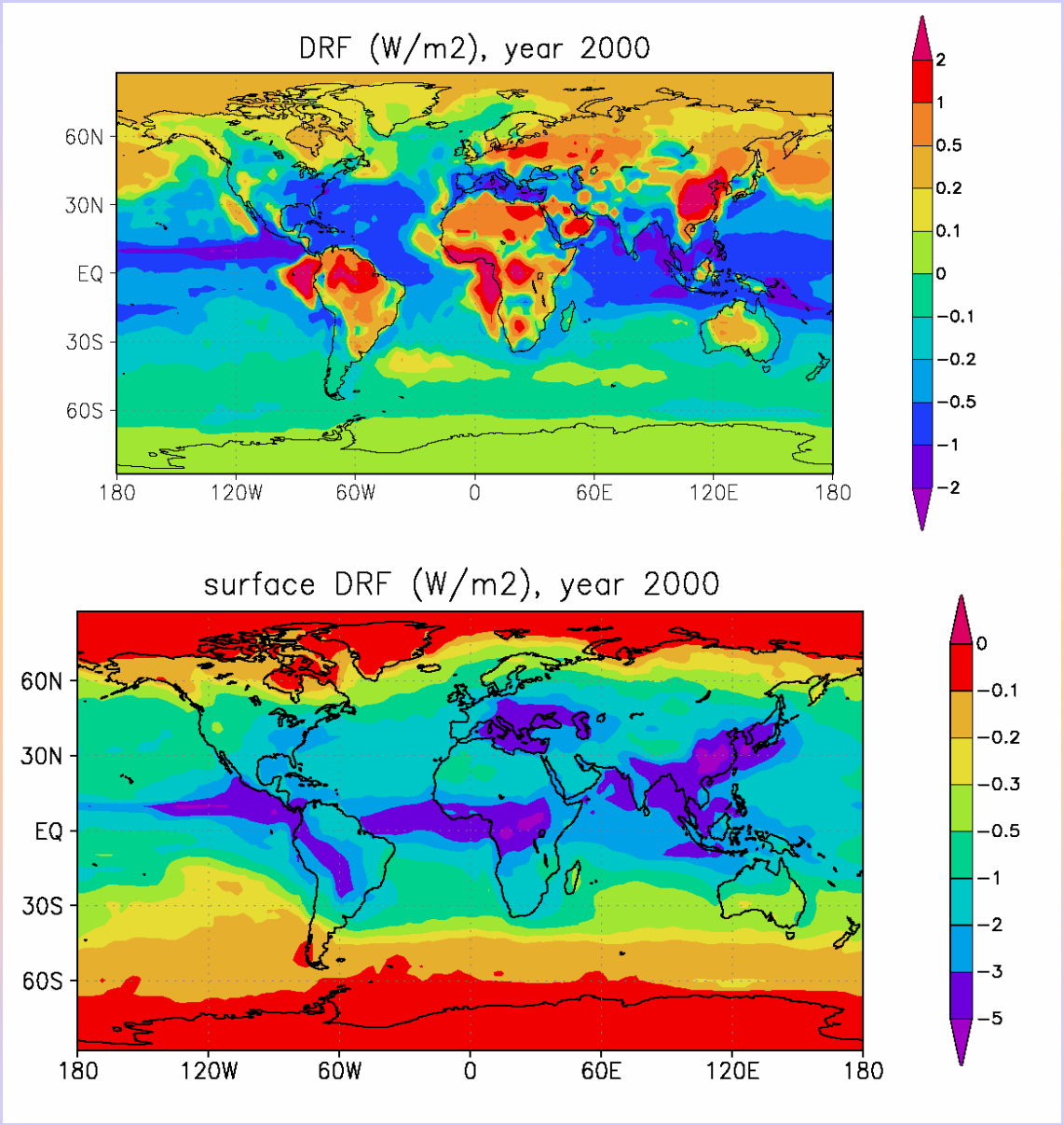


The CCM-Oslo model





The CCM-Oslo model

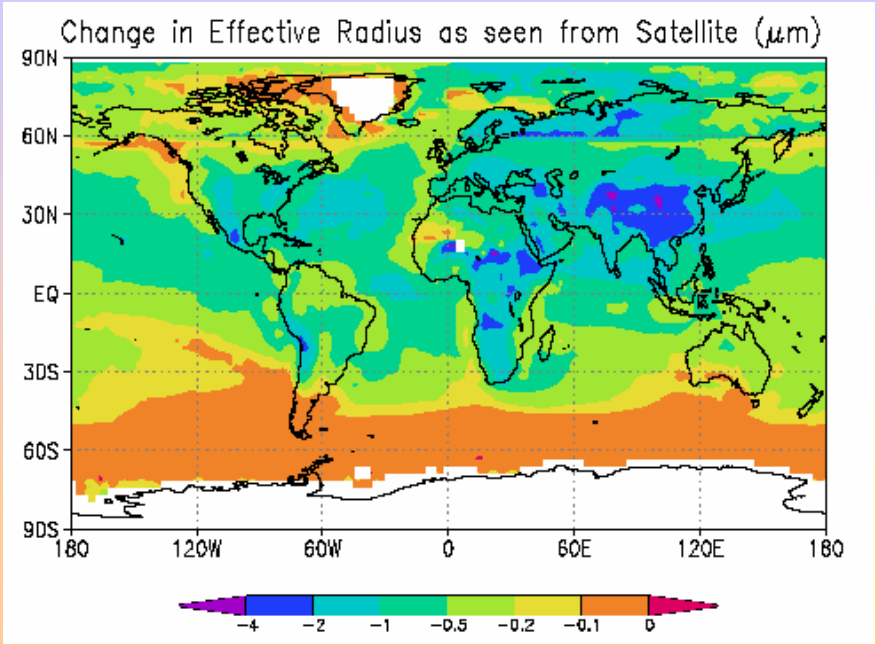


Anthropogenic Direct RF

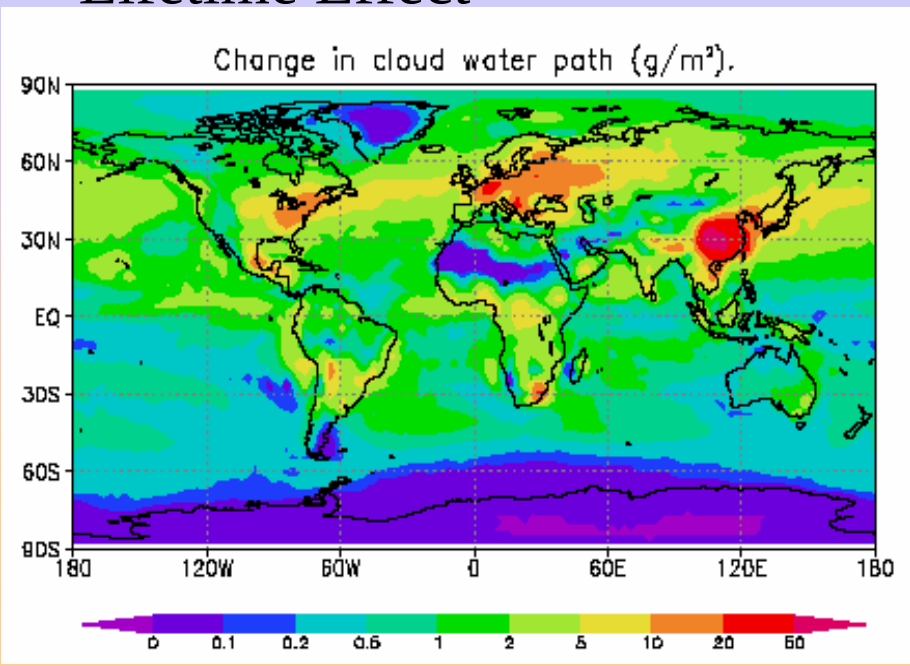
Average=-0.13 W/m²

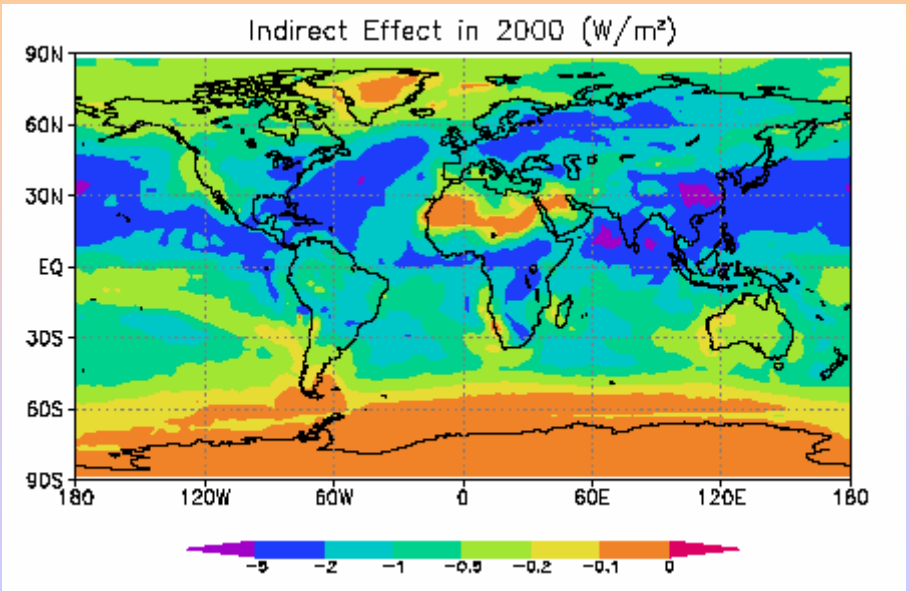
The CCM-Oslo model

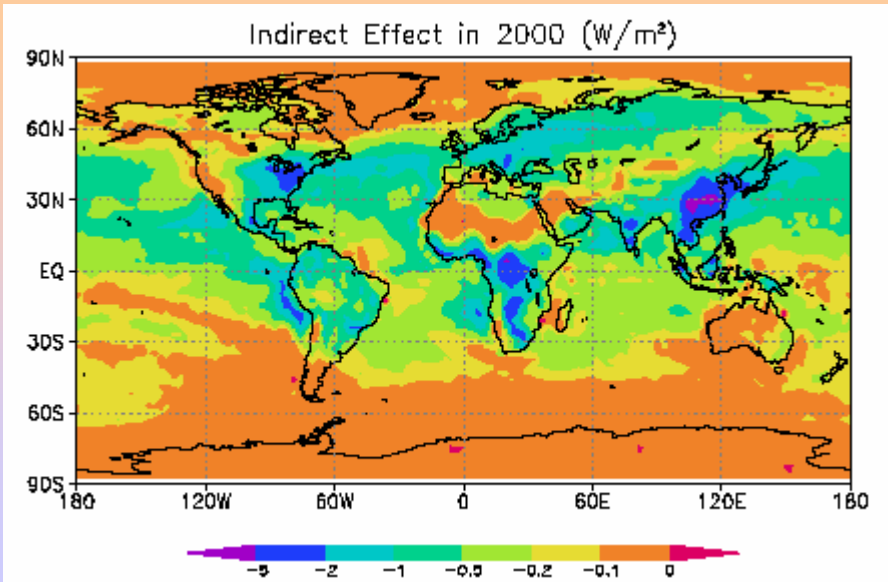
Radius Effect



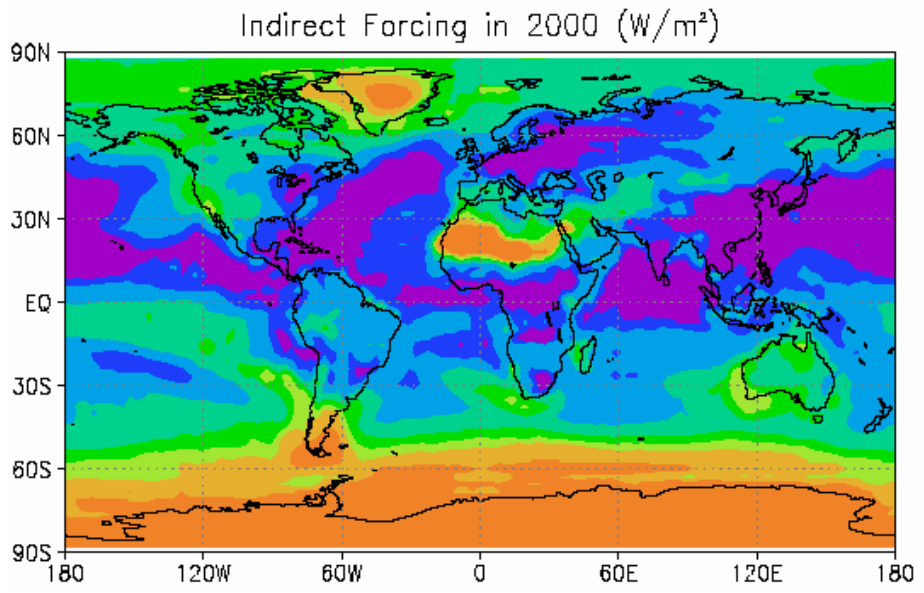
Lifetime Effect

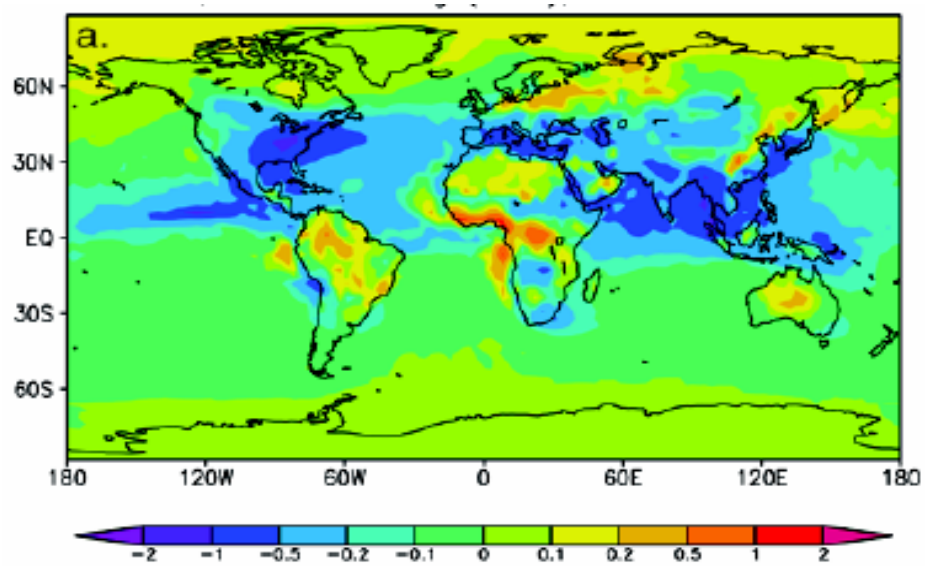






The CCM-Oslo model





Forcing

of SO_4 and BC only
(old version)

Indirect:

-1.76 W/m^2

Direct:

-0.11 W/m^2

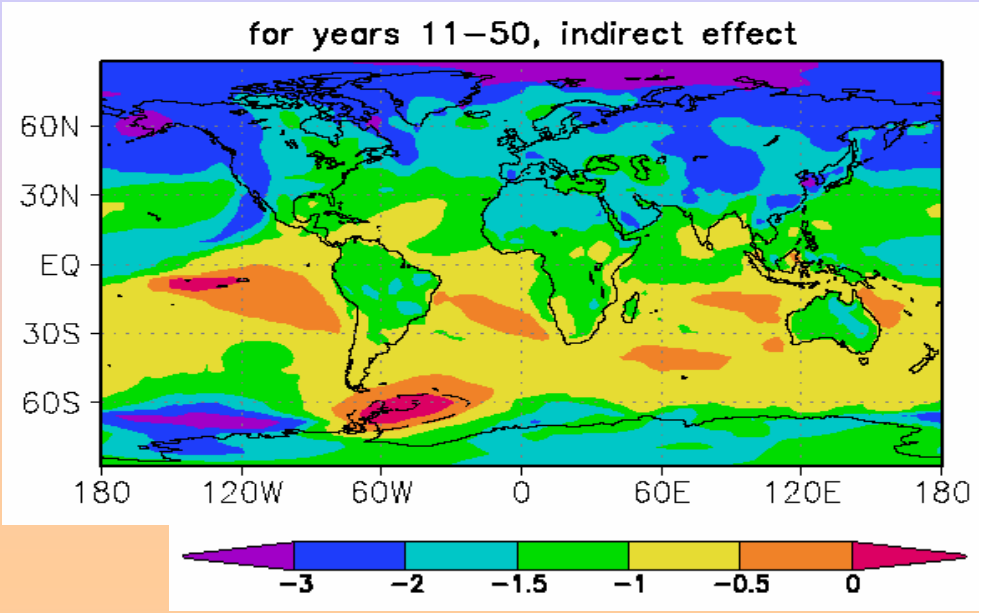
Temperature Change

(equilibrium calculations

The CCM-Oslo model

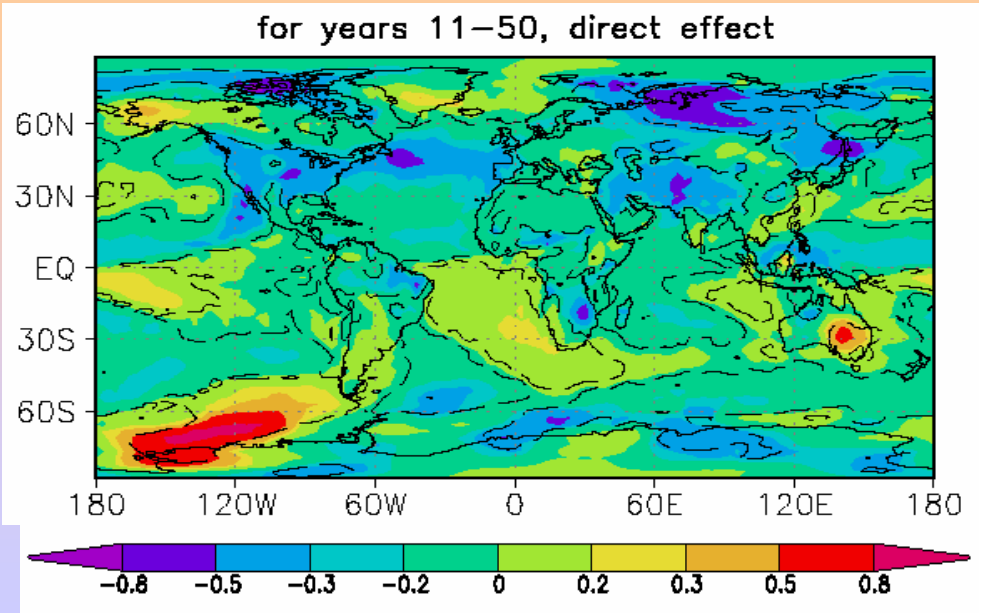
Indirect effect:

Global Average: -1.28 K



Direct effect:

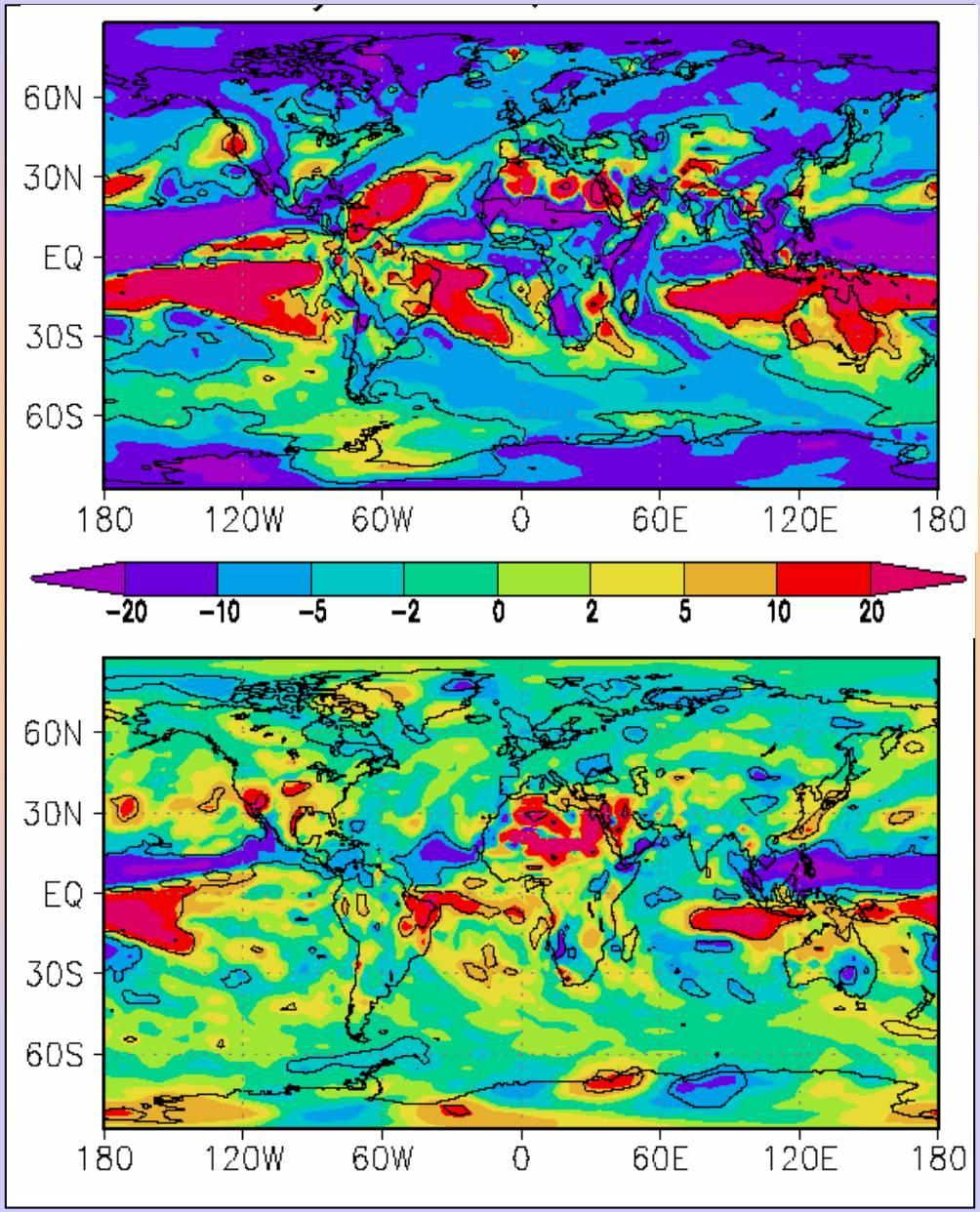
Global Average: - 0.10 K



Percentwise change in precipitation

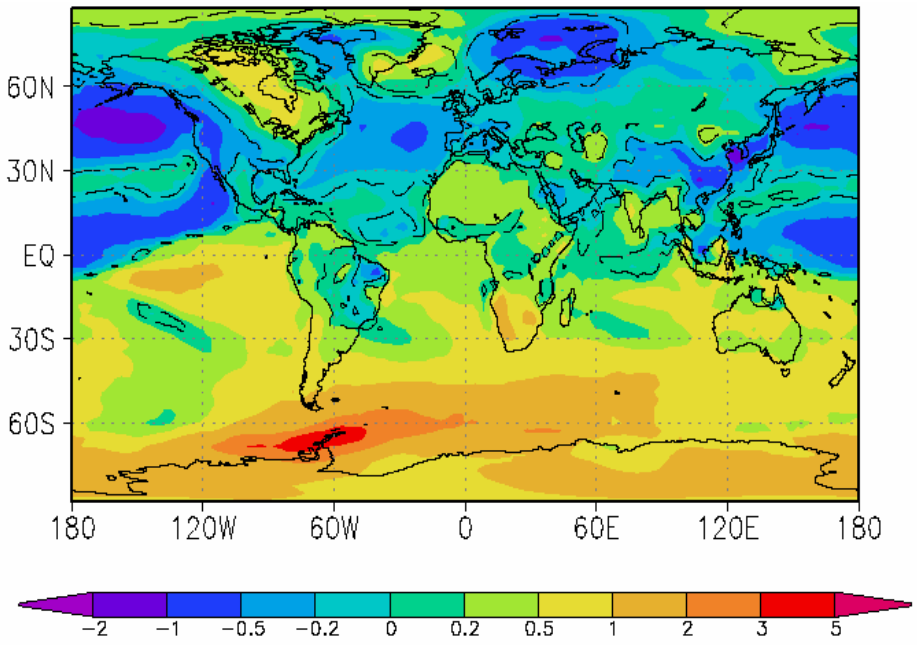
INDIRECT

DIRECT



Greenhouse Gases + Indirect Effect

Temperature change



Precipitation change