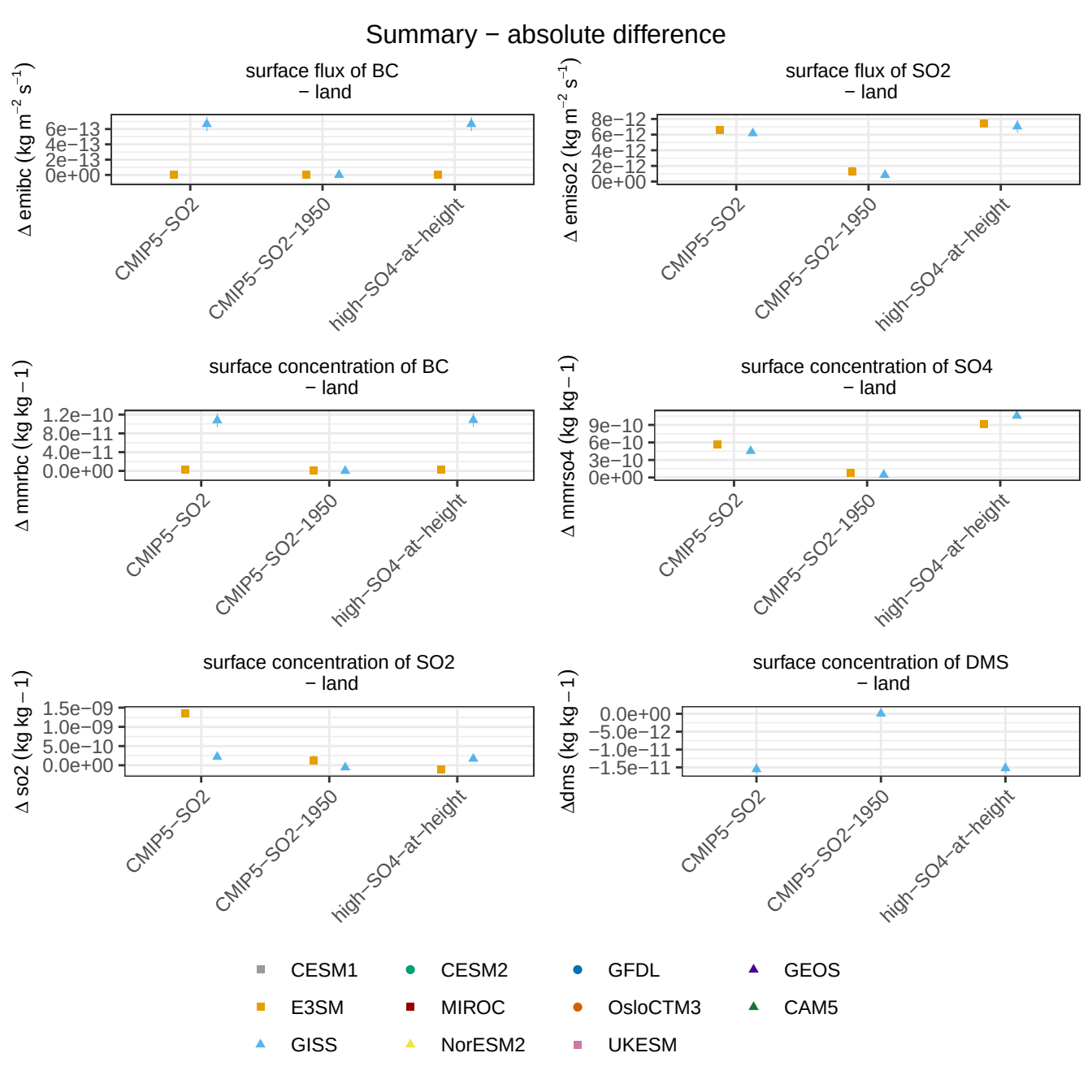
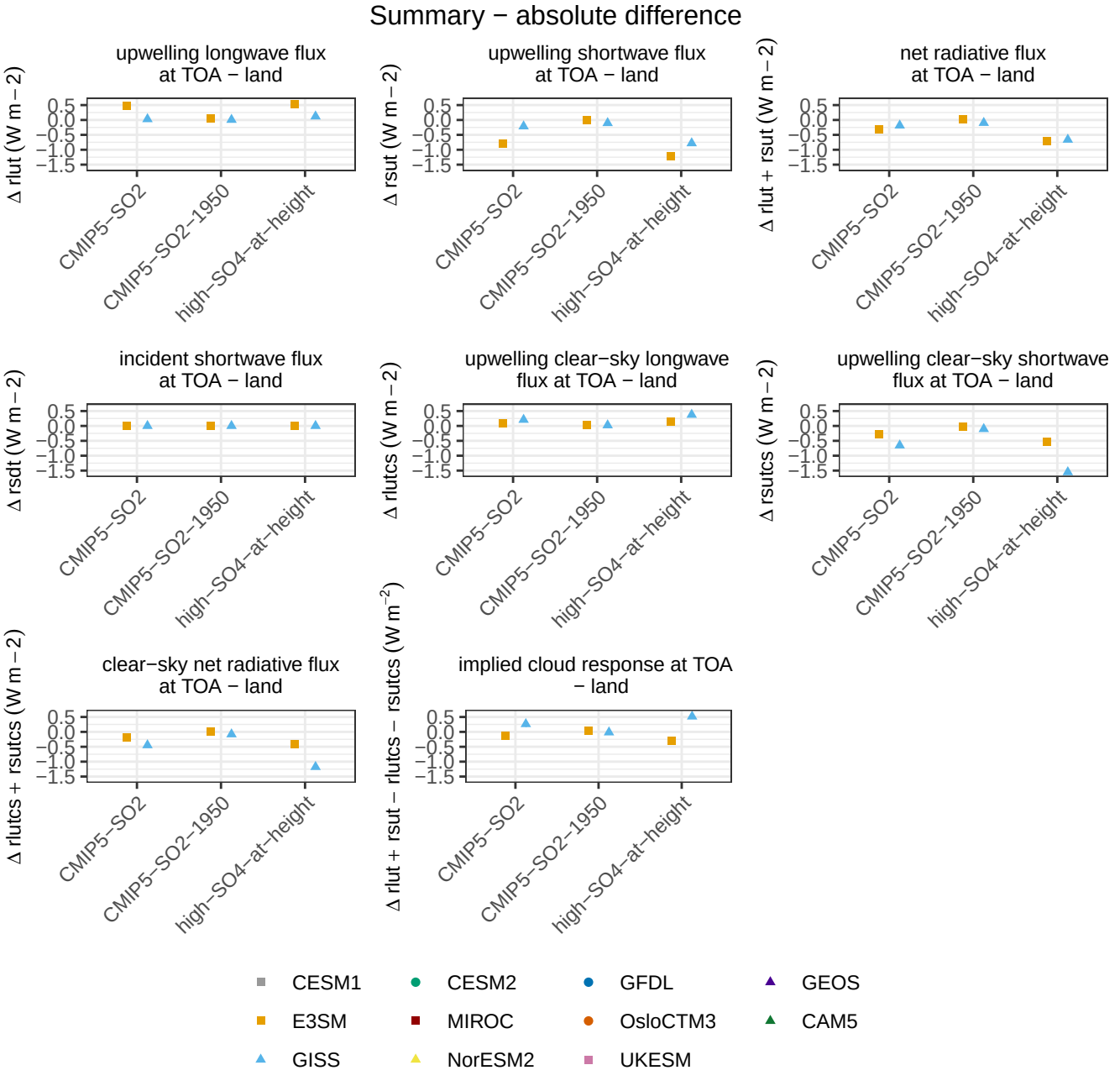
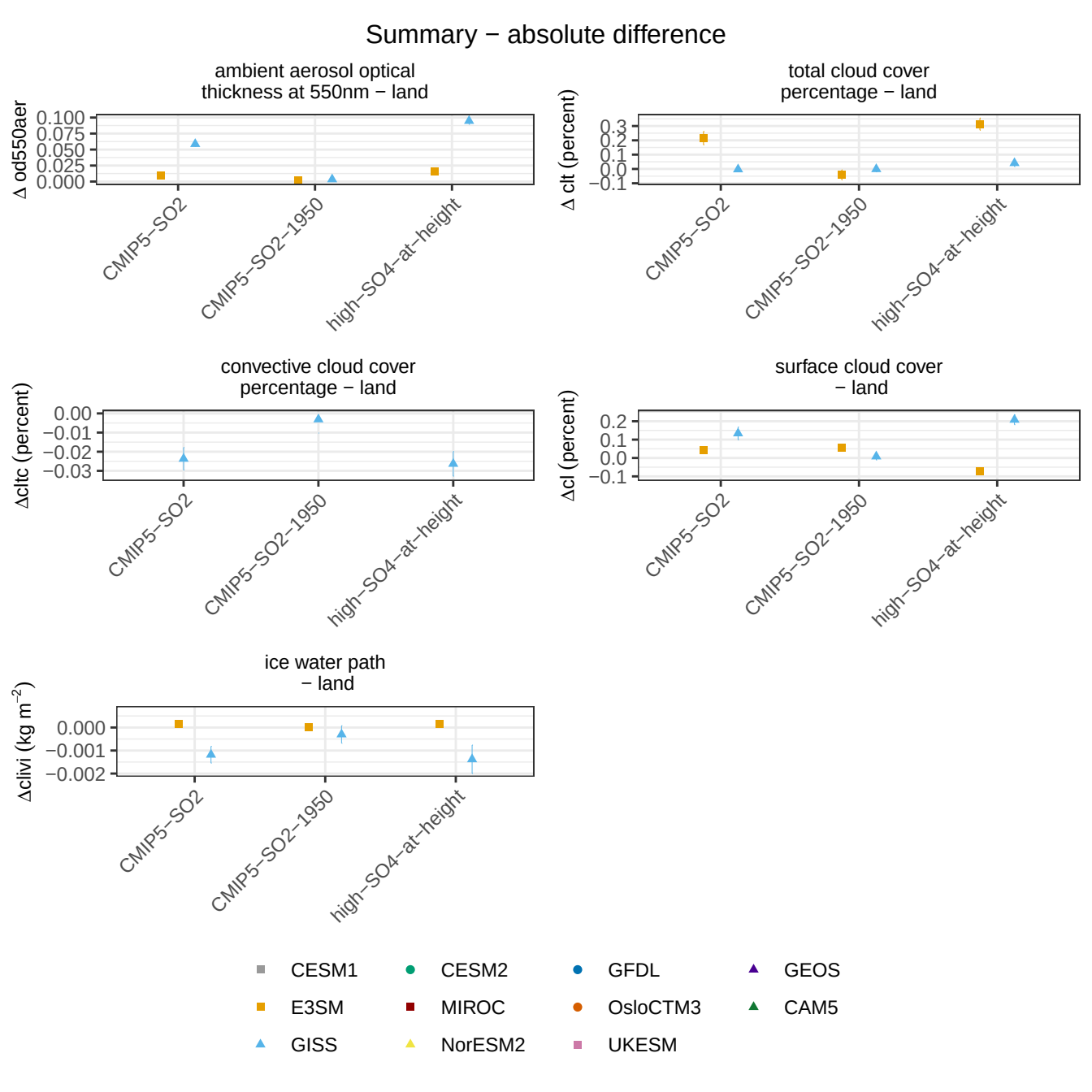
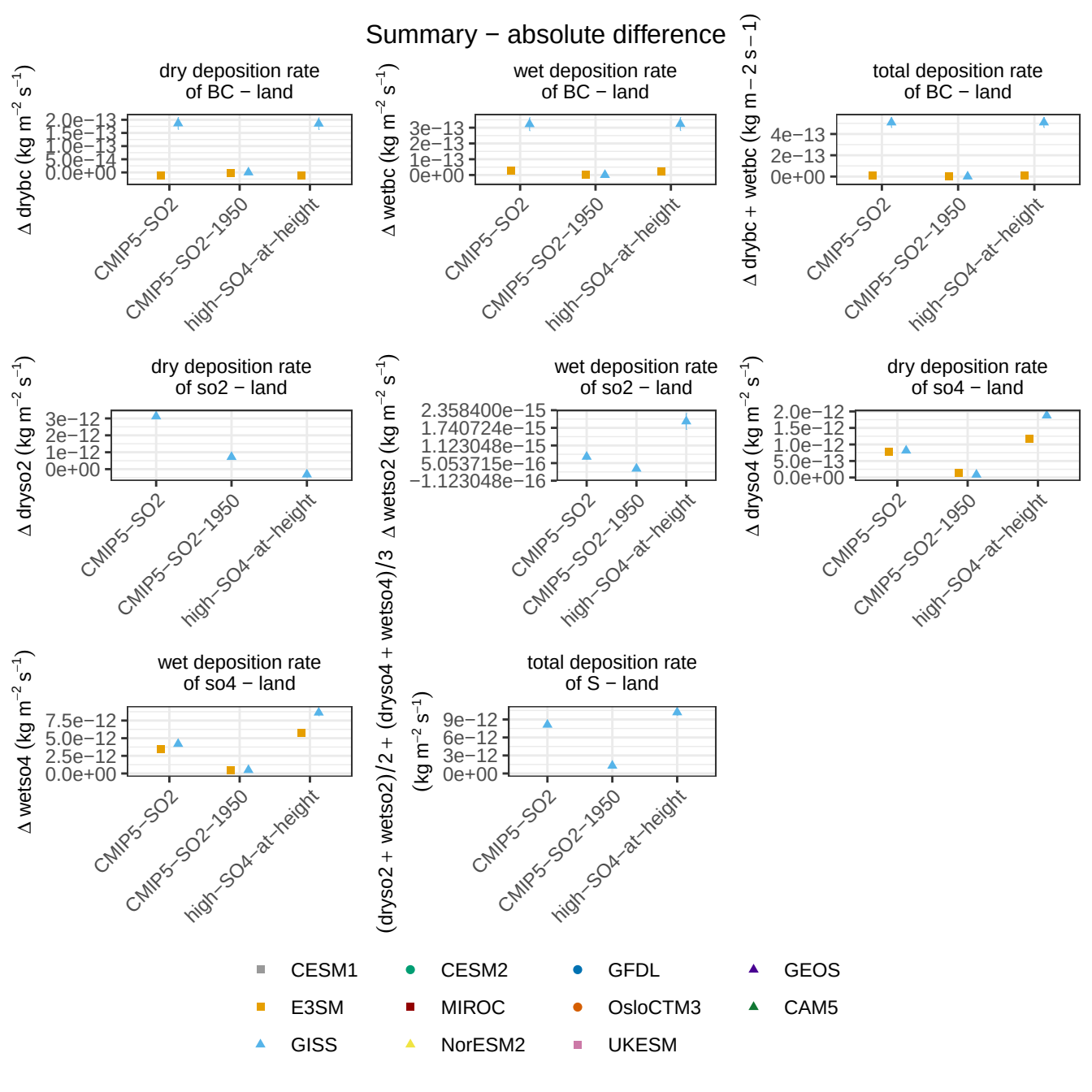
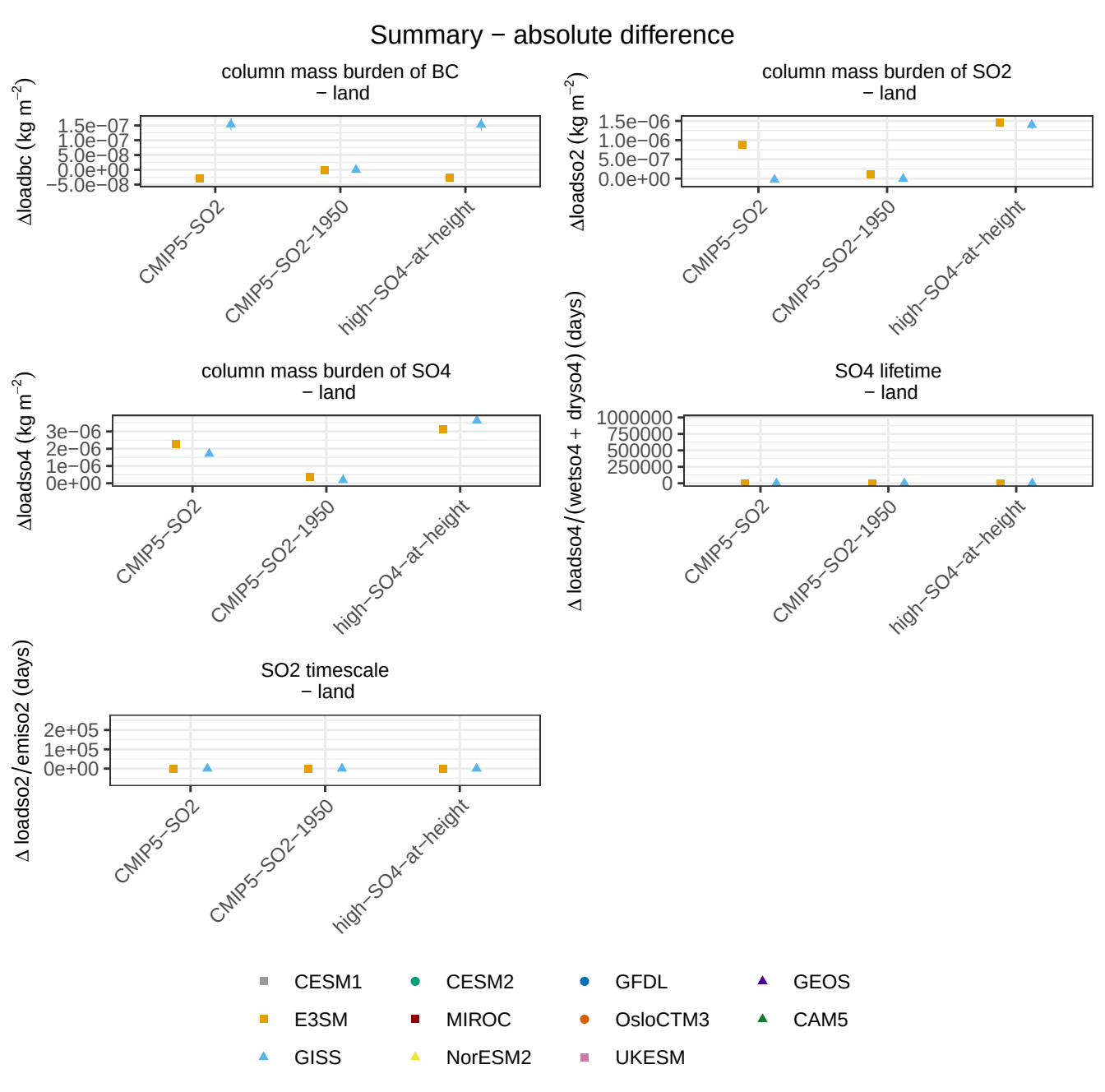

Summary − absolute difference
surface flux of BC
− land
Δ emibc (kg m−2 s−1)
6e−13
4e−13
2e−13
0e+00
surface flux of SO2
− land
Δ emiso2 (kg m−2 s−1)
8e−12
6e−12
4e−12
2e−12
0e+00
surface concentration of BC
− land
Δ mmrbc (kg kg − 1)
1.2e−10
8.0e−11
4.0e−11
0.0e+00
surface concentration of SO4
− land
Δ mmrso4 (kg kg − 1)
9e−10
6e−10
3e−10
0e+00
surface concentration of SO2
− land
Δ so2 (kg kg − 1)
1.5e−09
1.0e−09
5.0e−10
0.0e+00
surface concentration of DMS
− land
Δdms (kg kg − 1)
0.0e+00
−5.0e−12
−1.0e−11
−1.5e−11
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
CESM2
GFDL
GEOS
E3SM
MIROC
OsloCTM3
CAM5
GISS
NorESM2
UKESM


Summary − absolute difference
upwelling longwave flux at TOA − land
upwelling shortwave flux at TOA − land
net radiative flux at TOA − land
incident shortwave flux at TOA − land
upwelling clear−sky longwave flux at TOA − land
upwelling clear−sky shortwave flux at TOA − land
clear−sky net radiative flux at TOA − land
implied cloud response at TOA − land
Δ rlut (W m − 2)
Δ rsut (W m − 2)
Δ rlut + rsut (W m − 2)
Δ rsdt (W m − 2)
Δ rlutcs (W m − 2)
Δ rsutcs (W m − 2)
Δ rlutcs + rsutcs (W m − 2)
Δ rlut + rsut − rlutcs − rsutcs (W m−2)
0.5
0.0
−0.5
−1.0
−1.5
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
CESM2
GFDL
GEOS
E3SM
MIROC
OsloCTM3
CAM5
GISS
NorESM2
UKESM


Summary − absolute difference
ambient aerosol optical thickness at 550nm − land
Δ od550aer
0.100
0.075
0.050
0.025
0.000
total cloud cover percentage − land
Δ clt (percent)
0.3
0.2
0.1
0.0
−0.1
convective cloud cover percentage − land
Δcltc (percent)
0.00
−0.01
−0.02
−0.03
surface cloud cover − land
Δcl (percent)
0.2
0.1
0.0
−0.1
ice water path − land
Δclivi (kg m^{-2})
0.000
−0.001
−0.002
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
CESM2
GFDL
GEOS
E3SM
MIROC
OsloCTM3
CAM5
GISS
NorESM2
UKESM


Summary − absolute difference
dry deposition rate of BC − land
wet deposition rate of BC − land
total deposition rate of BC − land
Δ drybc (kg m−2 s−1)
Δ wetbc (kg m−2 s−1)
Δ drybc + wetbc (kg m − 2 s − 1)
2.0e−13
1.5e−13
1.0e−13
5.0e−14
0.0e+00
3e−13
2e−13
1e−13
0e+00
4e−13
2e−13
0e+00
dry deposition rate of so2 − land
wet deposition rate of so2 − land
dry deposition rate of so4 − land
Δ dryso2 (kg m−2 s−1)
Δ wetso2 (kg m−2 s−1)
Δ dryso4 (kg m−2 s−1)
3e−12
2e−12
1e−12
0e+00
2.358400e−15
1.740724e−15
1.123048e−15
5.053715e−16
−1.123048e−16
2.0e−12
1.5e−12
1.0e−12
5.0e−13
0.0e+00
wet deposition rate of so4 − land
total deposition rate of S − land
Δ wetso4 (kg m−2 s−1)
(dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m−2 s−1)
7.5e−12
5.0e−12
2.5e−12
0.0e+00
9e−12
6e−12
3e−12
0e+00
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
CESM2
GFDL
GEOS
E3SM
MIROC
OsloCTM3
CAM5
GISS
NorESM2
UKESM


Summary − absolute difference
column mass burden of BC
− land
Δloadbc (kg m−2)
1.5e−07
1.0e−07
5.0e−08
0.0e+00
−5.0e−08
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
column mass burden of SO2
− land
Δloadso2 (kg m−2)
1.5e−06
1.0e−06
5.0e−07
0.0e+00
column mass burden of SO4
− land
Δloadso4 (kg m−2)
3e−06
2e−06
1e−06
0e+00
SO4 lifetime
− land
Δ loadso4/(wetso4 + dryso4) (days)
1000000
750000
500000
250000
0
SO2 timescale
− land
Δ loadso2/emiso2 (days)
2e+05
1e+05
0e+00
CESM1
CESM2
GFDL
GEOS
E3SM
MIROC
OsloCTM3
CAM5
GISS
NorESM2
UKESM