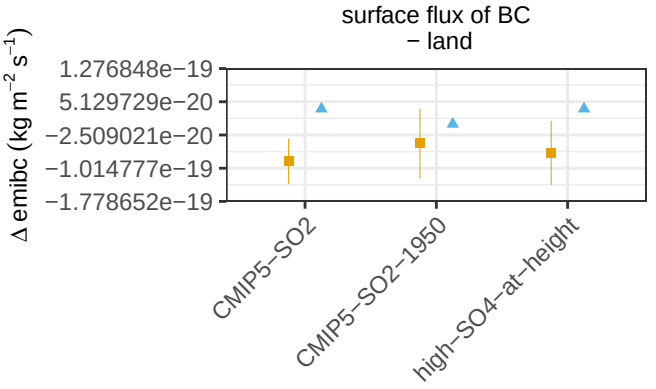
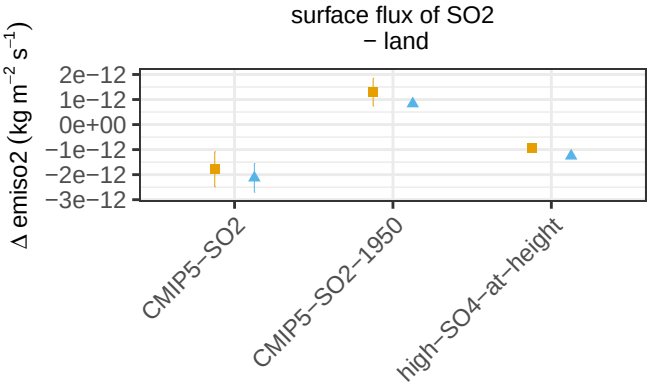
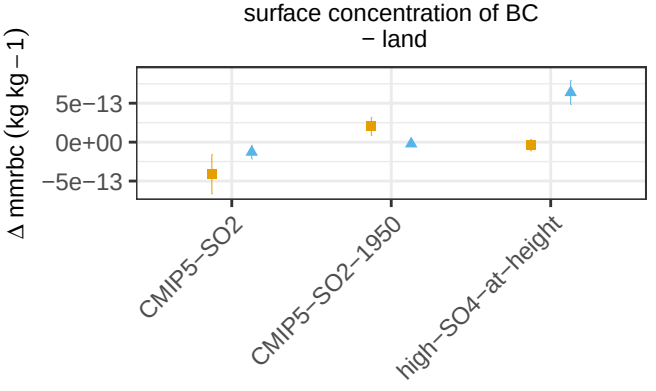
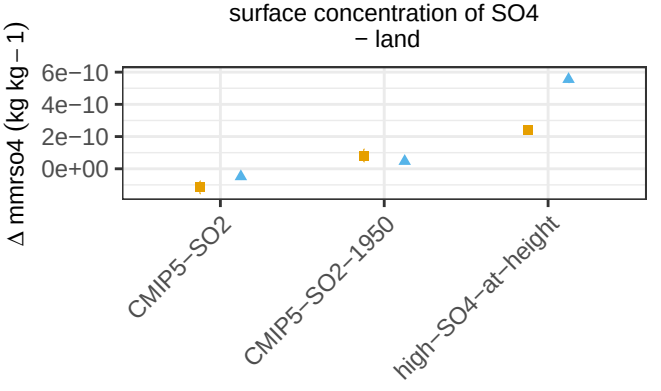
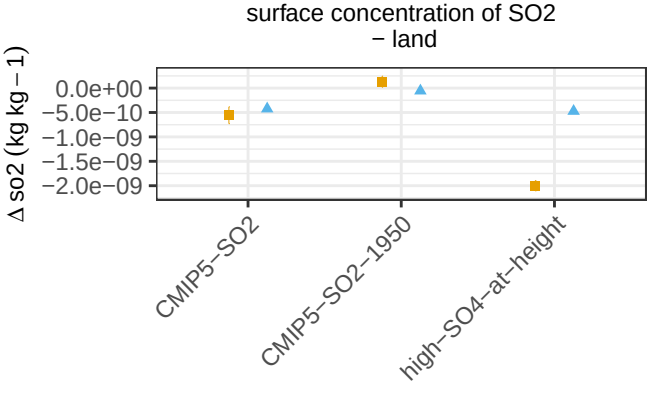
Summary − absolute difference

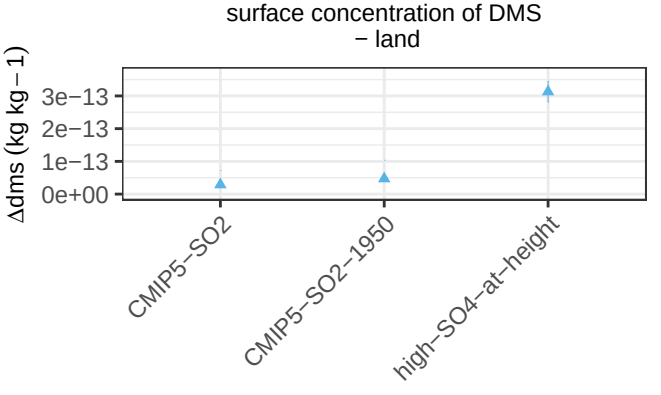




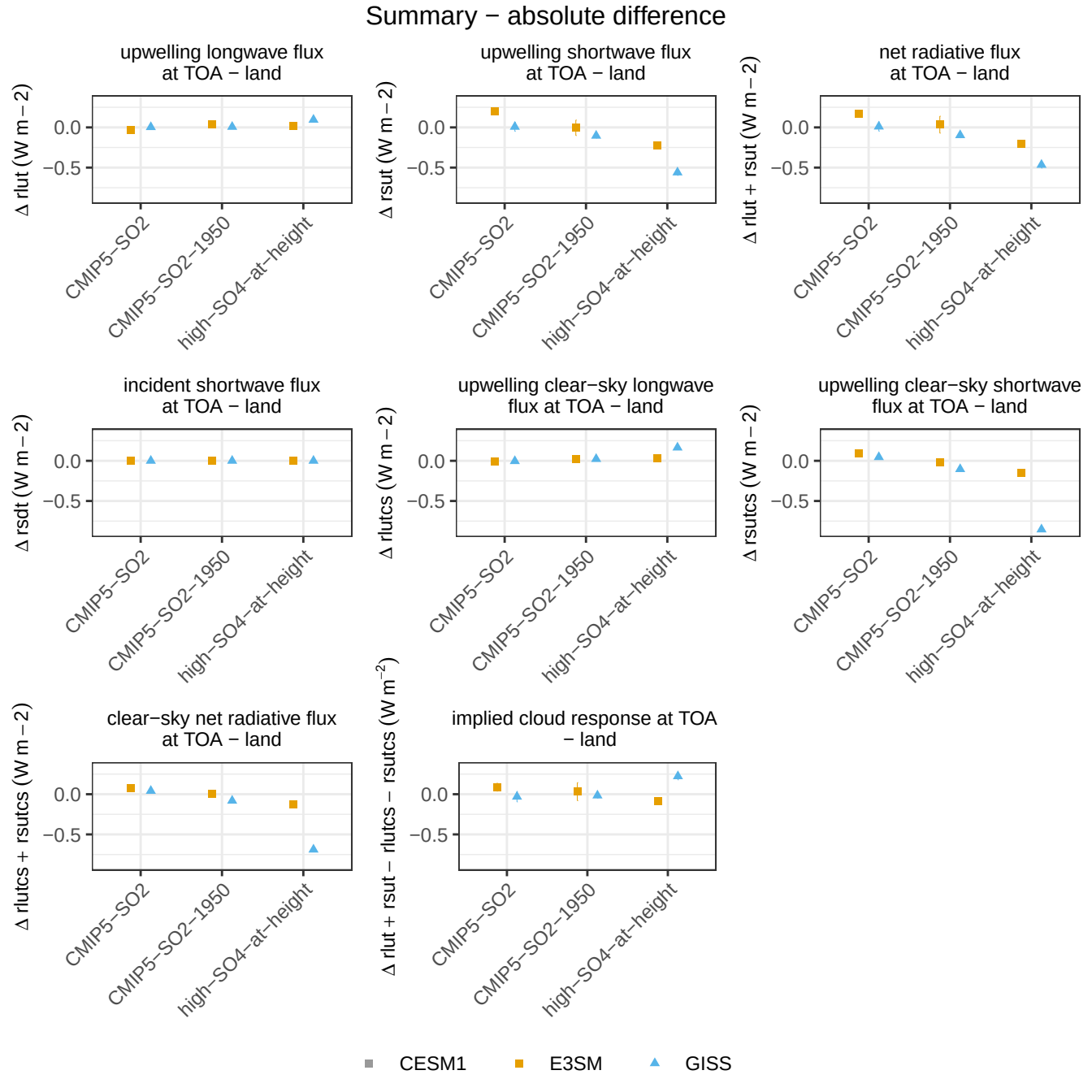


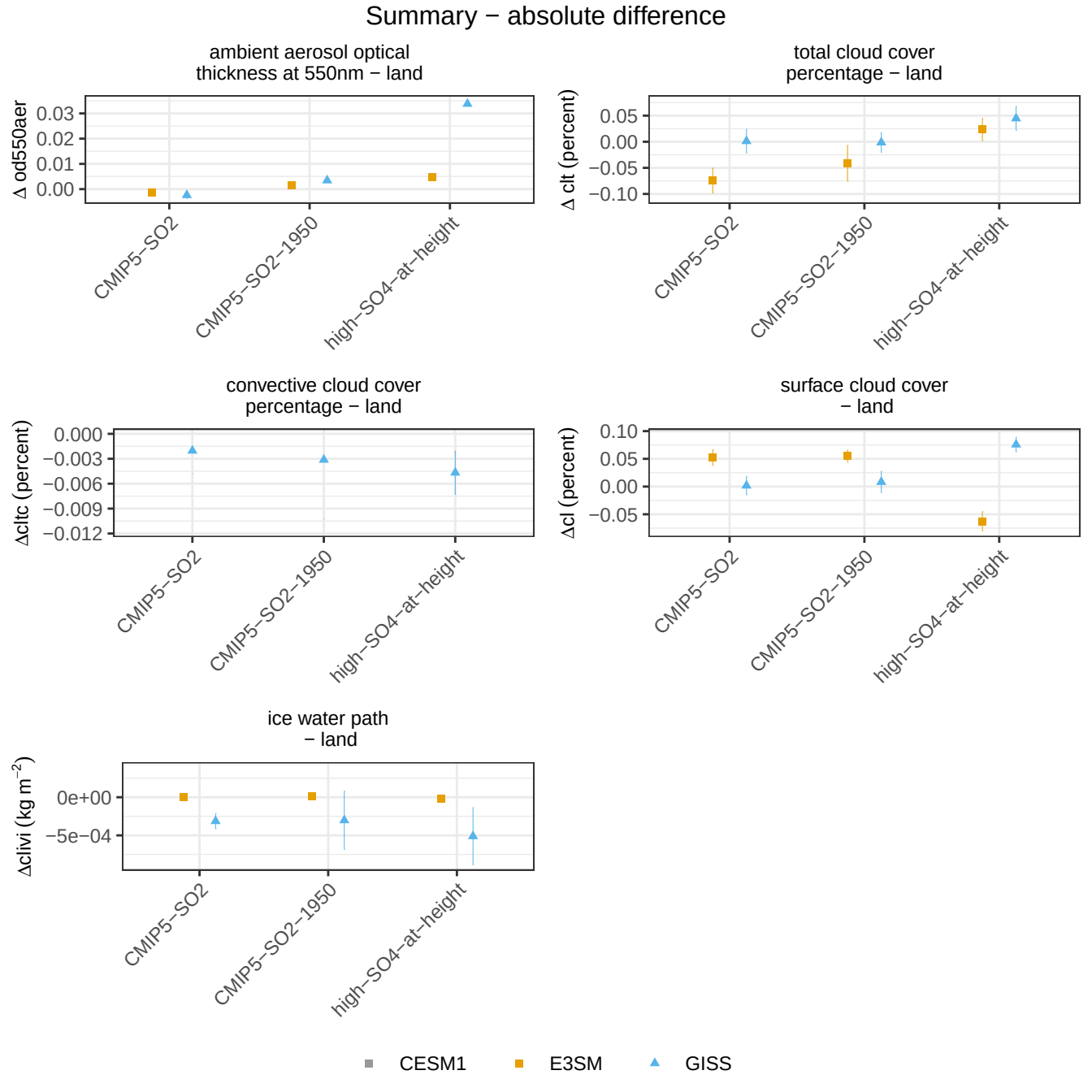


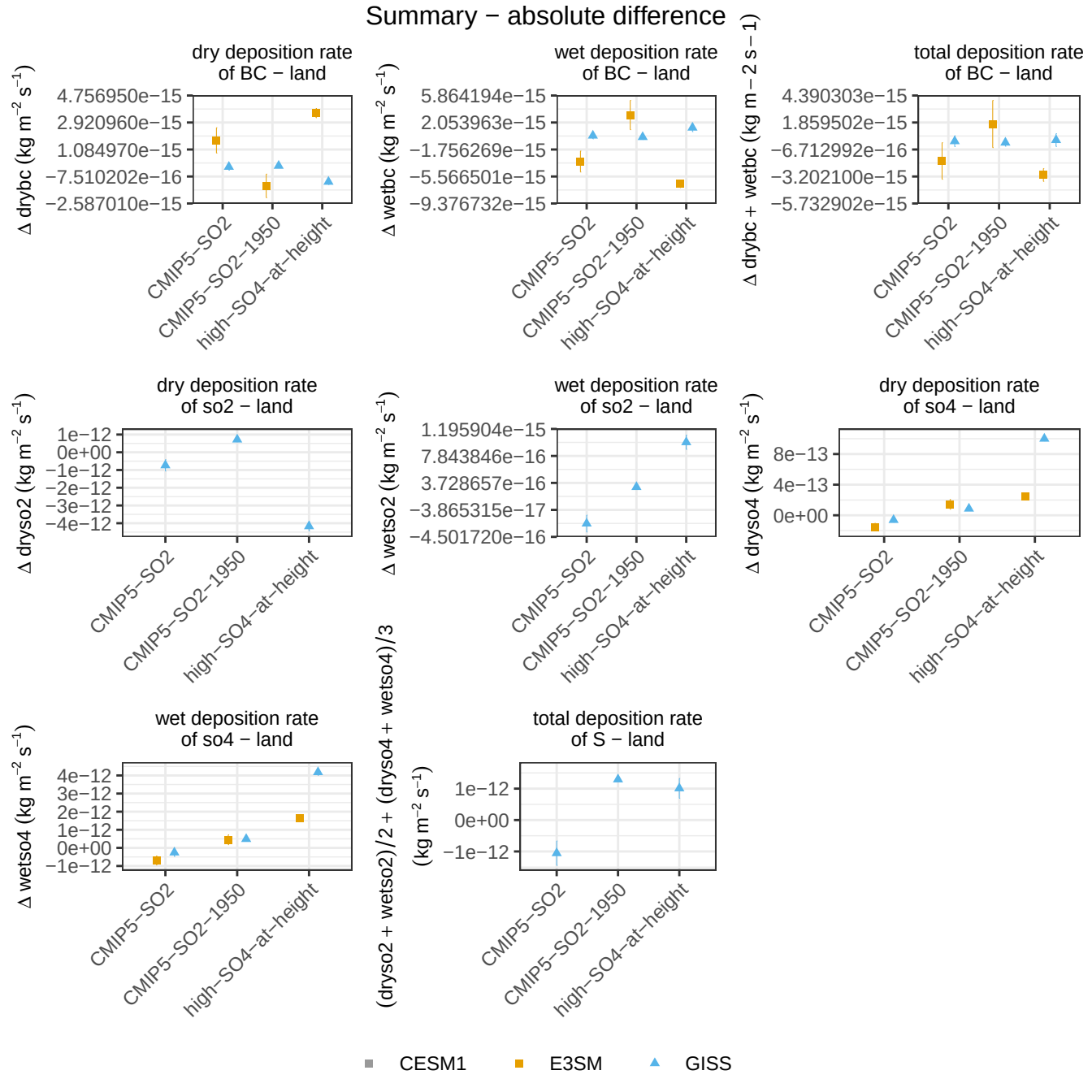


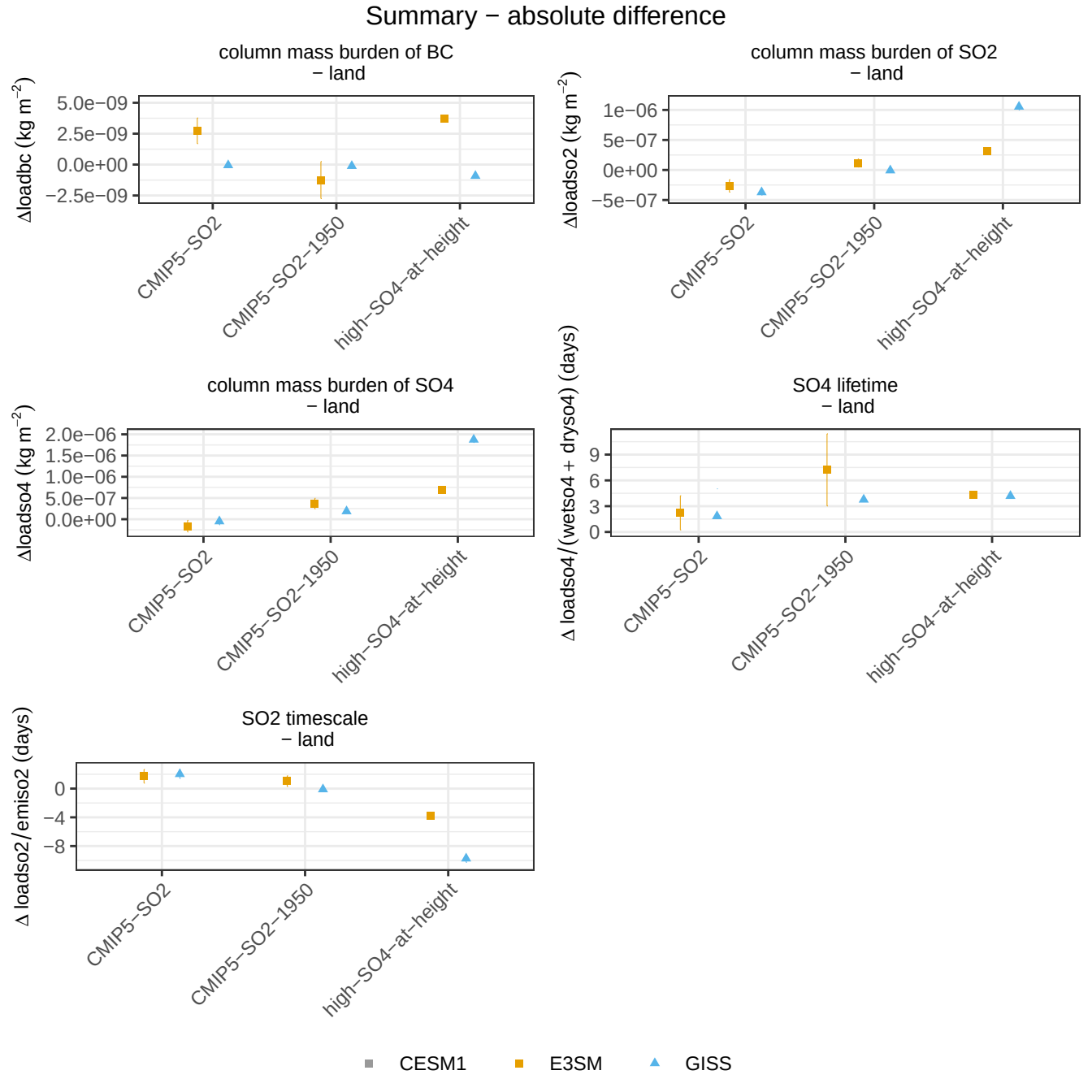


CESM1 E3SM GISS


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)
0.0
−0.5
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
E3SM
GISS


Summary − absolute difference
ambient aerosol optical thickness at 550nm − land
Δ od550aer
0.03
0.02
0.01
0.00
total cloud cover percentage − land
Δ clt (percent)
0.05
0.00
−0.05
−0.10
convective cloud cover percentage − land
Δcltc (percent)
0.000
−0.003
−0.006
−0.009
−0.012
surface cloud cover − land
Δcl (percent)
0.10
0.05
0.00
−0.05
ice water path − land
Δclivi (kg m^{-2})
0e+00
−5e−04
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
E3SM
GISS


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)
4.756950e−15
2.920960e−15
1.084970e−15
−7.510202e−16
−2.587010e−15
5.864194e−15
2.053963e−15
−1.756269e−15
−5.566501e−15
−9.376732e−15
4.390303e−15
1.859502e−15
−6.712992e−16
−3.202100e−15
−5.732902e−15
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)
1e−12
0e+00
−1e−12
−2e−12
−3e−12
−4e−12
1.195904e−15
7.843846e−16
3.728657e−16
−3.865315e−17
−4.501720e−16
8e−13
4e−13
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)
4e−12
3e−12
2e−12
1e−12
0e+00
−1e−12
1e−12
0e+00
−1e−12
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
E3SM
GISS


Summary − absolute difference
column mass burden of BC
− land
Δloadbc (kg m−2)
5.0e−09
2.5e−09
0.0e+00
−2.5e−09
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
column mass burden of SO2
− land
Δloadso2 (kg m−2)
1e−06
5e−07
0e+00
−5e−07
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
column mass burden of SO4
− land
Δloadso4 (kg m−2)
2.0e−06
1.5e−06
1.0e−06
5.0e−07
0.0e+00
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
SO4 lifetime
− land
Δ loadso4/(wetso4 + dryso4) (days)
9
6
3
0
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
SO2 timescale
− land
Δ loadso2/emiso2 (days)
0
−4
−8
CMIP5−SO2
CMIP5−SO2−1950
high−SO4−at−height
CESM1
E3SM
GISS