shp−10p−red: absolute difference

Figure showing a grid of line plots versus Year (2000–2004) for CESM1 (blue) and GISS (orange) model differences across multiple variables:

- surface flux of BC – NH–land (Δ emilbc)
- surface flux of SO2 – NH–land (Δ emiso2)
- surface concentration of BC – NH–land (Δ mmrbc)
- surface concentration of SO4 – NH–land (Δ mmrso4)
- surface concentration of SO2 – NH–land (Δ so2)
- upwelling longwave flux at TOA – NH–land (Δ rlut)
- upwelling shortwave flux at TOA – NH–land (Δ rsut)
- net radiative flux at TOA – NH–land (Δ rlut + rsut)
- incident shortwave flux at TOA – NH–land (Δ rsdt)
- upwelling clear–sky longwave flux at TOA – NH–land (Δ rlutcs)
- upwelling clear–sky shortwave flux at TOA – NH–land (Δ rsutcs)
- clear–sky net radiative flux at TOA – NH–land (Δ rlutcs + rsutcs)
- implied cloud response at TOA – NH–land (rlut + rsut − rlutcs − rsutcs)
- dry deposition rate of BC – NH–land (Δ drybc)
- wet deposition rate of BC – NH–land (Δ wetbc)
- total deposition rate of BC – NH–land (Δ drybc + wetbc)
- dry deposition rate of SO2 – NH–land (Δ dryso2)
- wet deposition rate of SO2 – NH–land (Δ wetso2)
- dry deposition rate of SO4 – NH–land (Δ dryso4)
- wet deposition rate of SO4 – NH–land (Δ wetso4)
- total deposition rate of S – NH–land (wetso2)/2 + (dryso4 + wetso4 + dryso4)
- cloud cover percentage – NH–land (expression cltc (%))
- Ice water path – NH–land (clivi (kg m^{-2}))
- Dimethyl sulphide (DMS) mole fraction – NH–land (dms (mol mol^{-1}))
- ambient aerosol optical thickness at 550nm – NH–land (Δ od550aer)
- load of so4 – NH–land (loadso4 (kg m^{-2}))
- load of bc – NH–land (loadbc (kg m^{-2}))

Legend: —— CESM1   —— GISS

shp−10p−red−1950: absolute difference

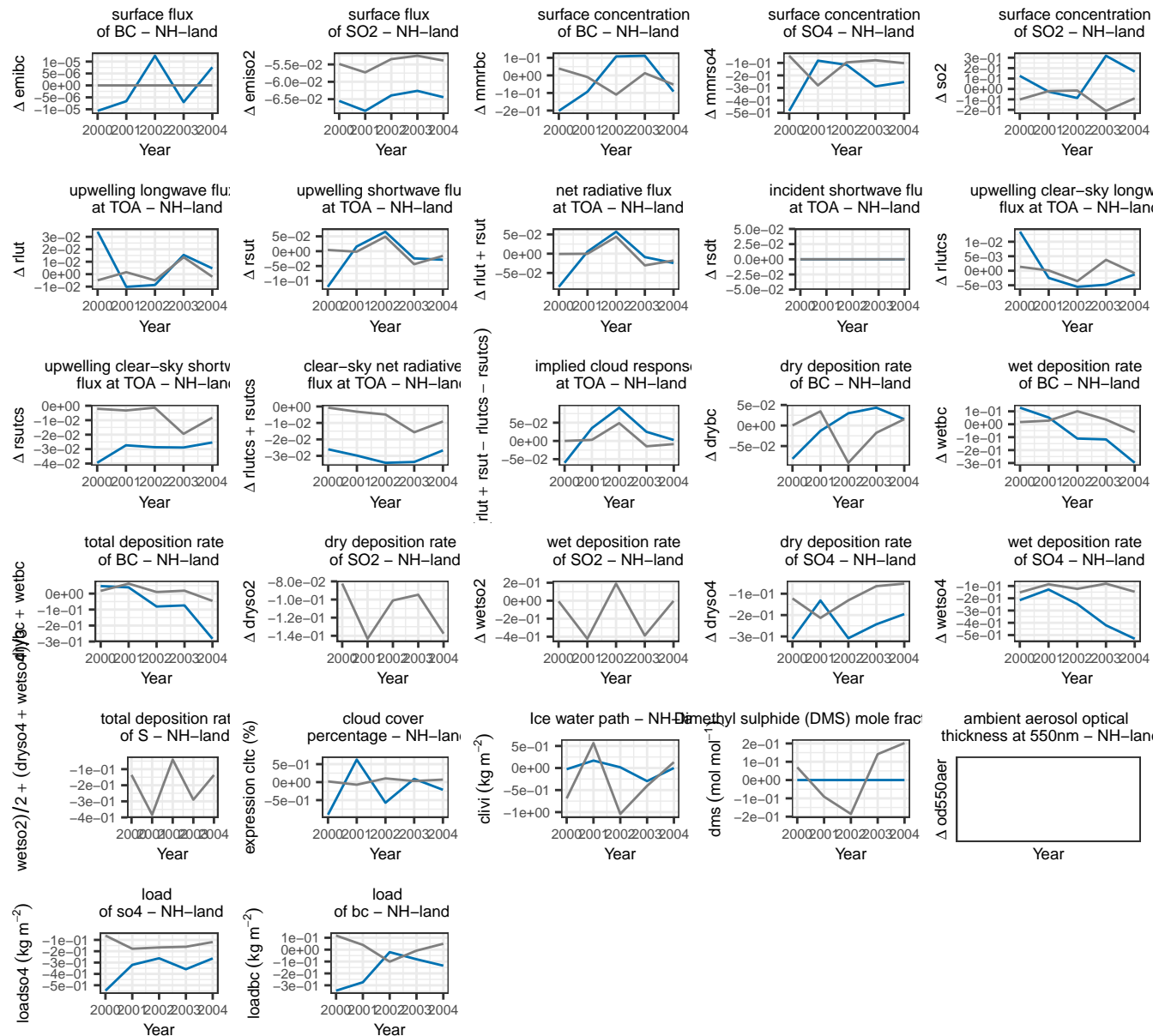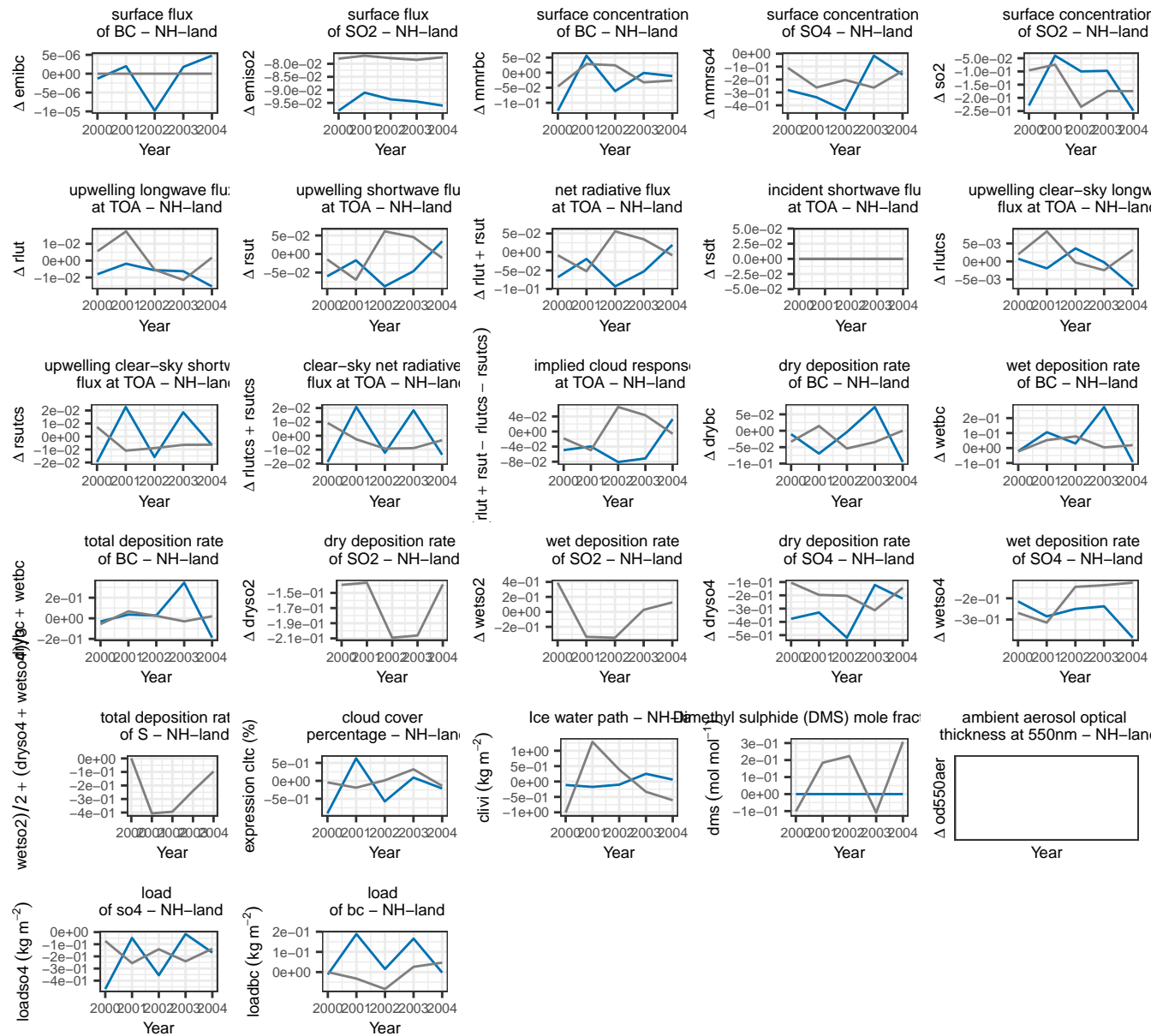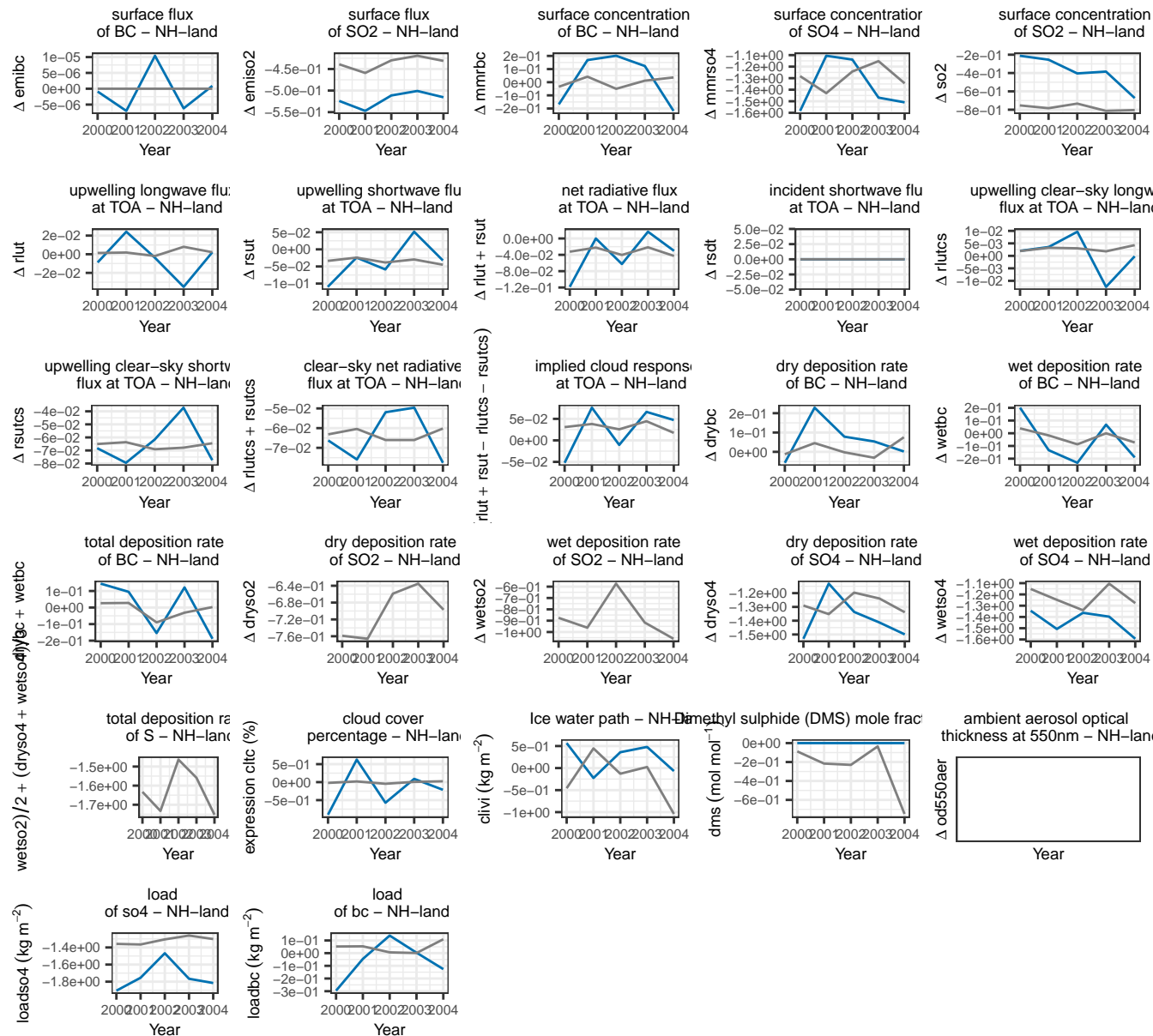# shp−20p−red: absolute difference
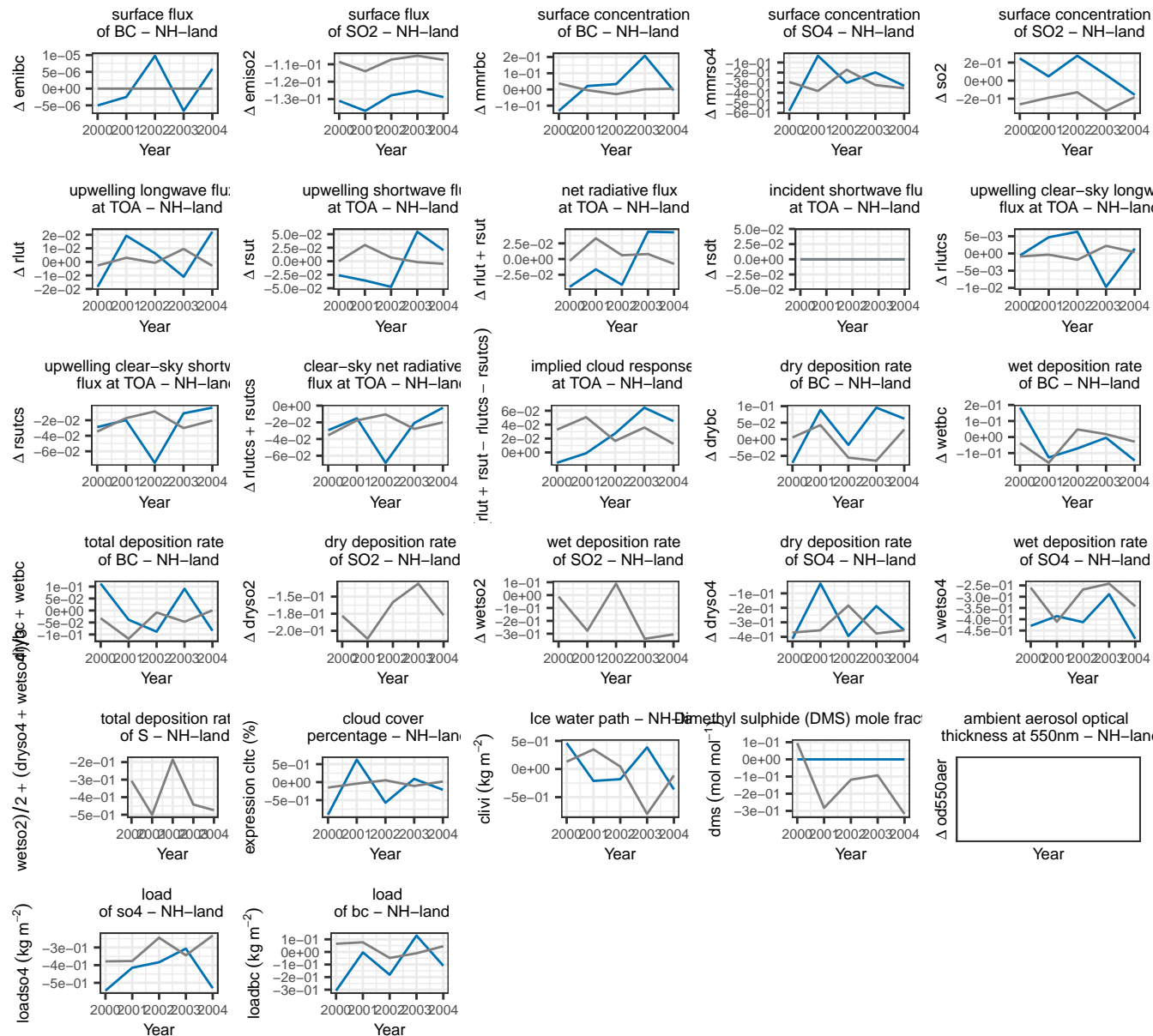
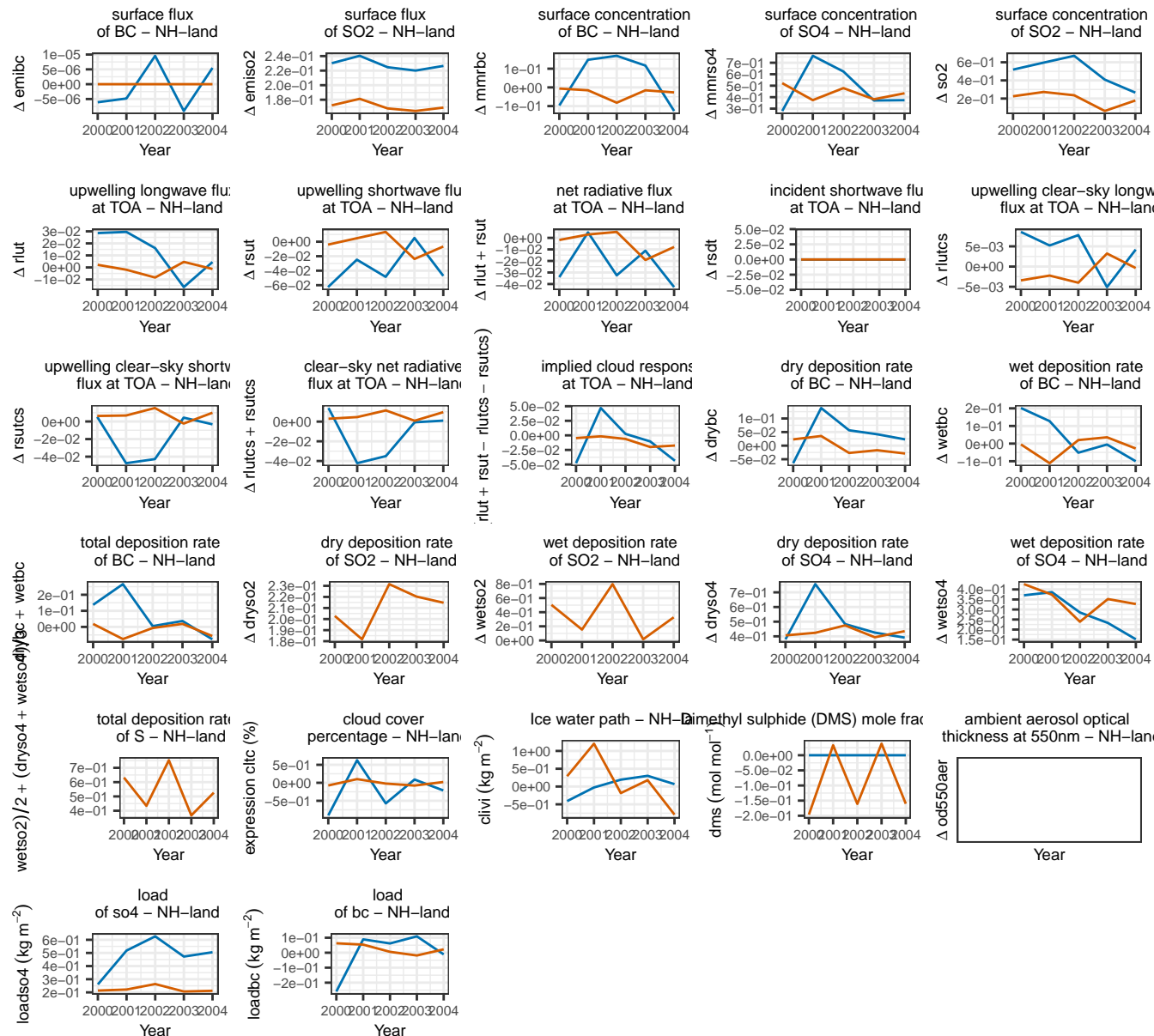# shp−20p−red−1950: absolute difference
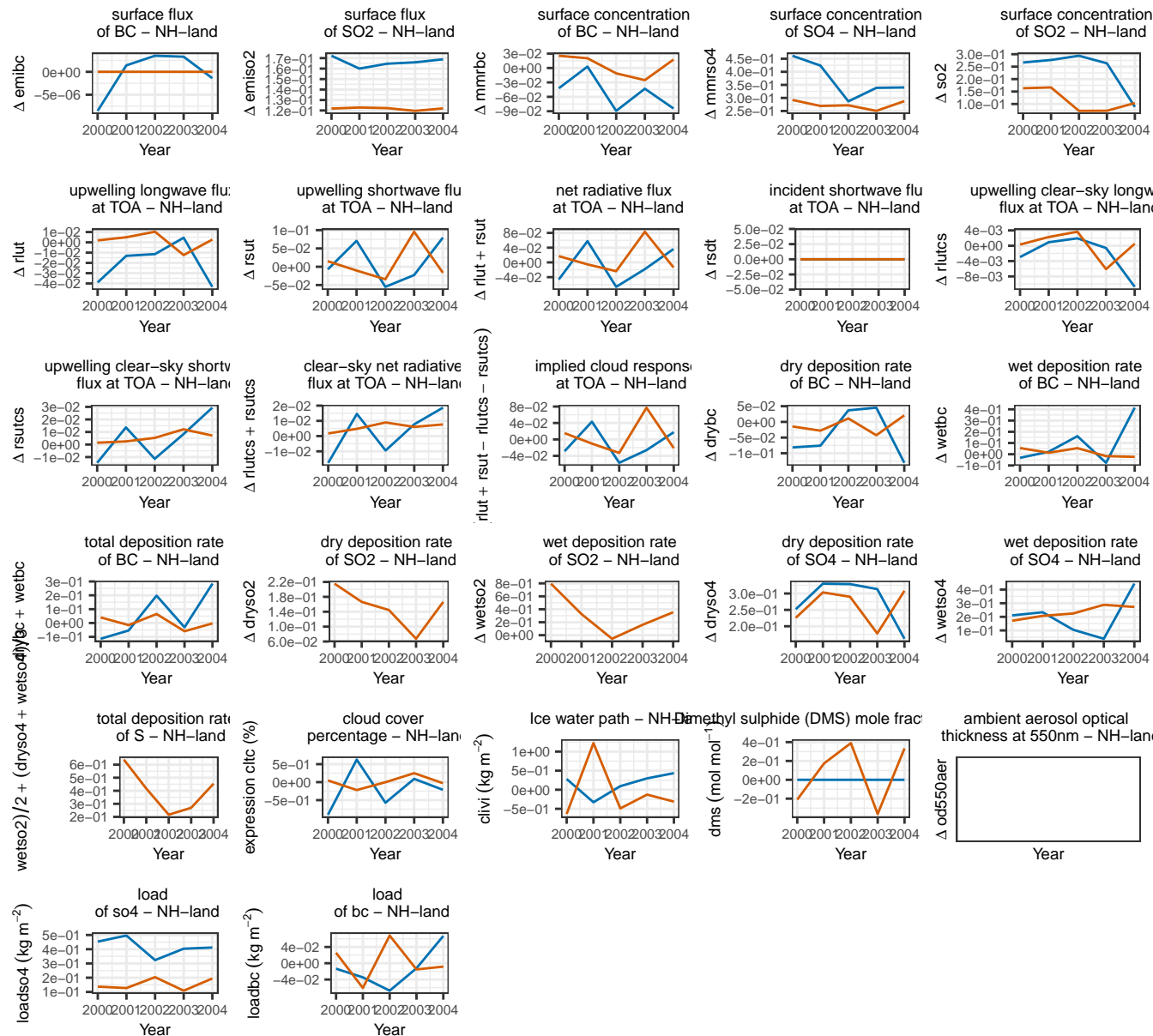

CESM1 — GISS

shp−80p−red: absolute difference

CESM1 ——— GISS

shp−atl−shift: absolute difference
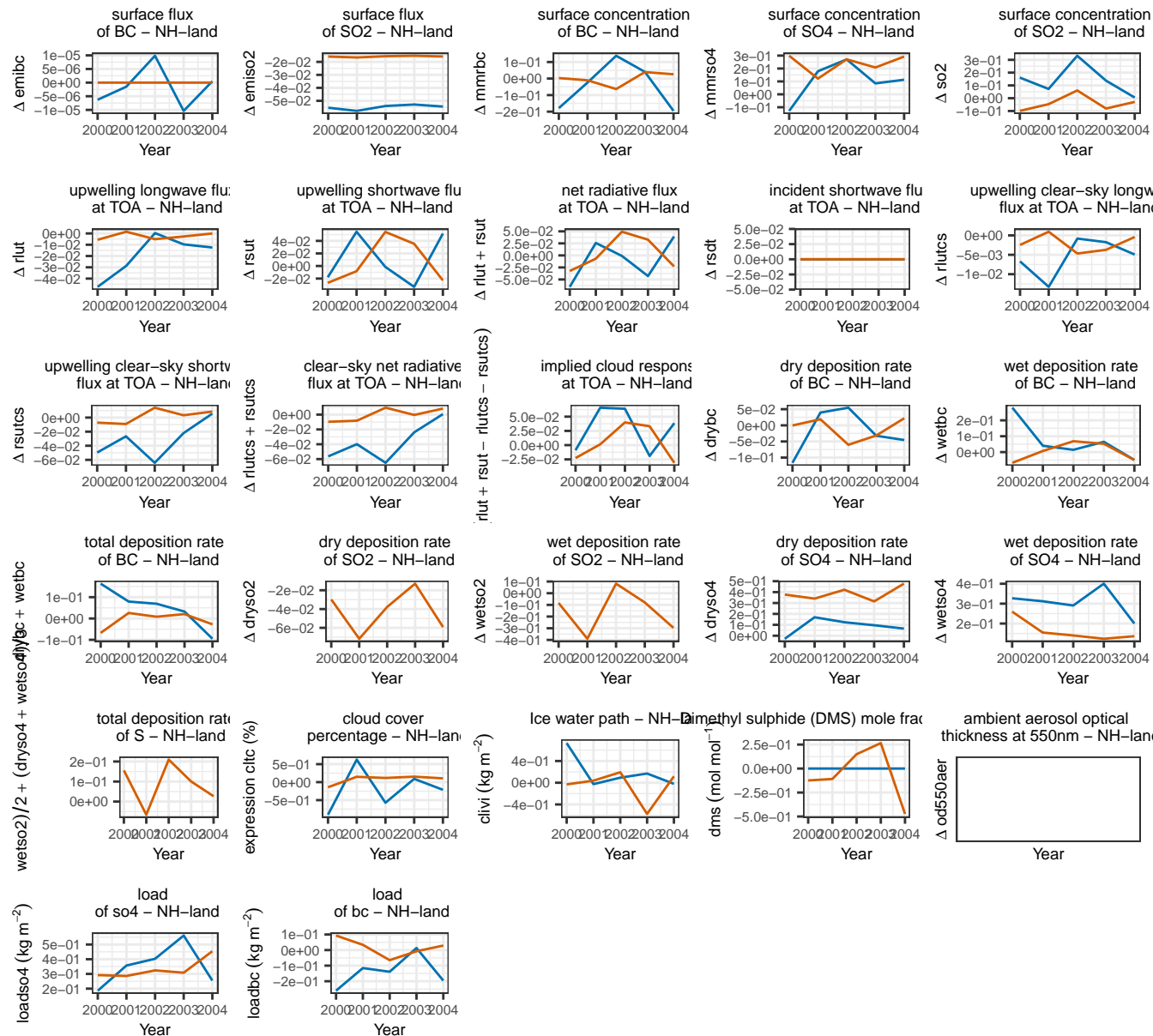
shp−atl−shift−1950: absolute difference

shp−ind−shift: absolute difference

Legend: CESM1 (blue) — GISS (orange)

shp−ind−shift−1950: absolute difference

Figure: Grid of small multiple line plots comparing CESM1 and GISS models across years 2000–2004.

Row 1:
- surface flux of BC − NH−land (Δ emibc)
- surface flux of SO2 − NH−land (Δ emiso2)
- surface concentration of BC − NH−land (Δ mmrbc)
- surface concentration of SO4 − NH−land (Δ mmrso4)
- surface concentration of SO2 − NH−land (Δ so2)

Row 2:
- upwelling longwave flux at TOA − NH−land (Δ rlut)
- upwelling shortwave flux at TOA − NH−land (Δ rsut)
- net radiative flux at TOA − NH−land (Δ rlut + rsut)
- incident shortwave flux at TOA − NH−land (Δ rsdt)
- upwelling clear−sky longwave flux at TOA − NH−land (Δ rlutcs)

Row 3:
- upwelling clear−sky shortwave flux at TOA − NH−land (Δ rsutcs)
- clear−sky net radiative flux at TOA − NH−land (Δ rlutcs + rsutcs)
- implied cloud response at TOA − NH−land (Δ rlut + rsut − rlutcs − rsutcs)
- dry deposition rate of BC − NH−land (Δ drybc)
- wet deposition rate of BC − NH−land (Δ wetbc)

Row 4:
- total deposition rate of BC − NH−land (Δ drybc + wetbc)
- dry deposition rate of SO2 − NH−land (Δ dryso2)
- wet deposition rate of SO2 − NH−land (Δ wetso2)
- dry deposition rate of SO4 − NH−land (Δ dryso4)
- wet deposition rate of SO4 − NH−land (Δ wetso4)

Row 5:
- total deposition rate of S − NH−land (wetso2)/2 + (dryso4 + wetso4 + dryso2)
- cloud cover percentage − NH−land (expression cltc (%))
- Ice water path − NH−land (clivi (kg m^{-2}))
- Dimethyl sulphide (DMS) mole fraction (dms (mol mol^{-1}))
- ambient aerosol optical thickness at 550nm − NH−land (Δ od550aer)

Row 6:
- load of so4 − NH−land (loadso4 (kg m^{-2}))
- load of bc − NH−land (loadbc (kg m^{-2}))

Legend: —— CESM1   —— GISS