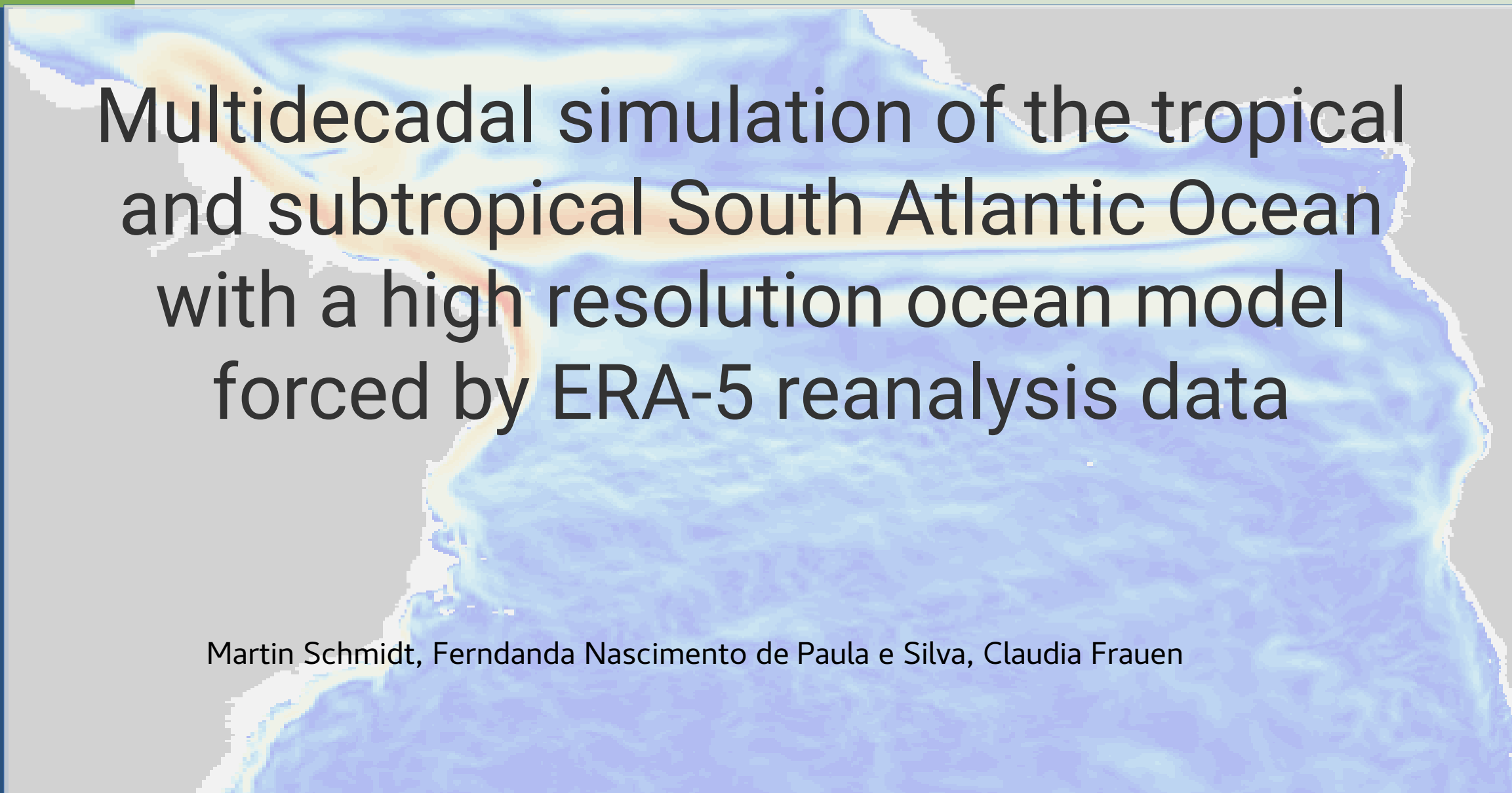




Multidecadal simulation of the tropical and subtropical South Atlantic Ocean with a high resolution ocean model forced by ERA-5 reanalysis data

Martin Schmidt, Ferndanda Nascimento de Paula e Silva, Claudia Frauen

Motivation

Produce consistent oceanic model based datasets

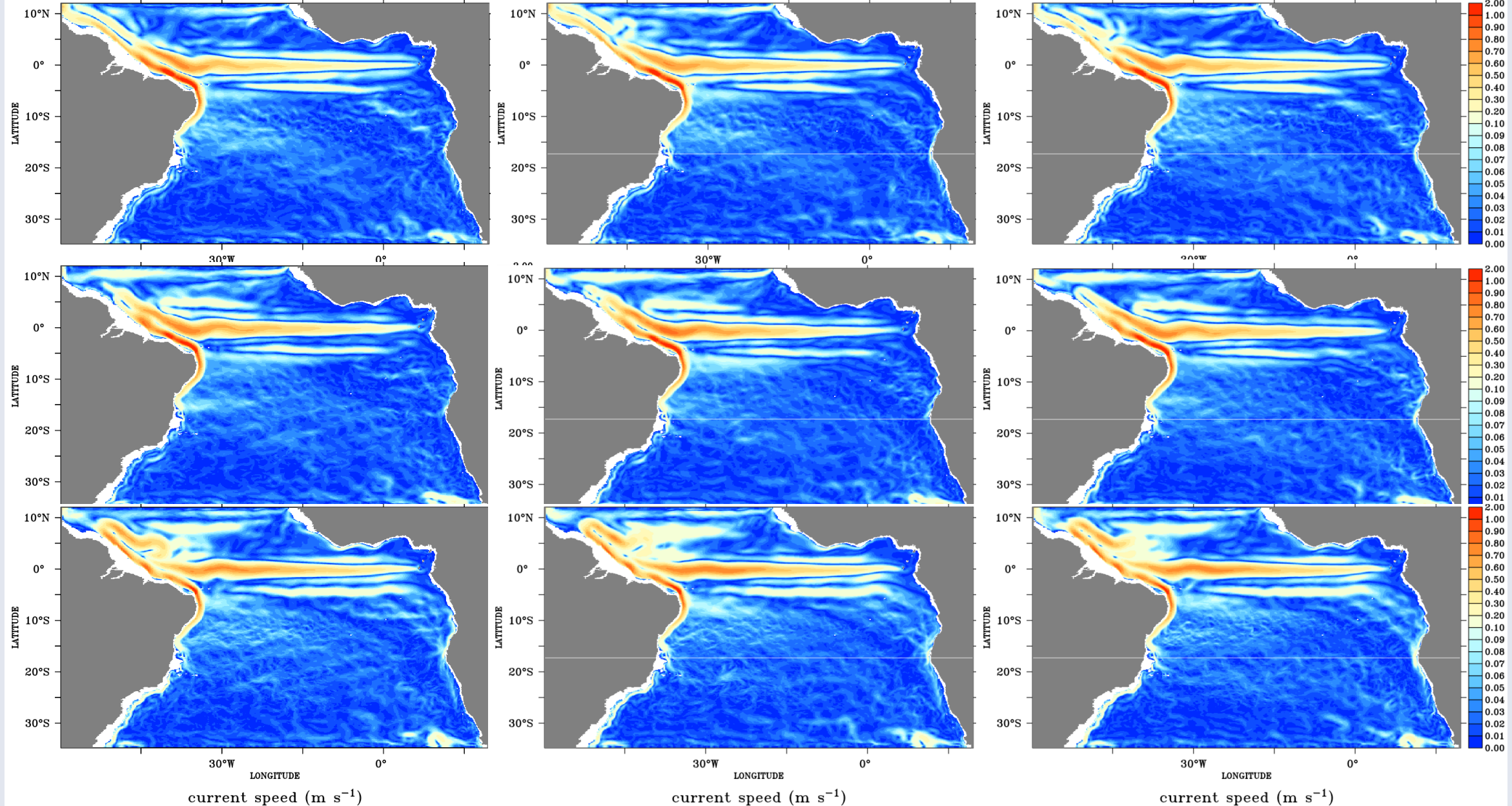
- Forced ocean only experiments
- Comparable with field and remote sensing data: validation
- Realistic span of hydrographic variability: ecosystem dynamics
- Consistency: interannual and interdecadal variability

Problem - missing consistent atmosphere data sets covering long time scales

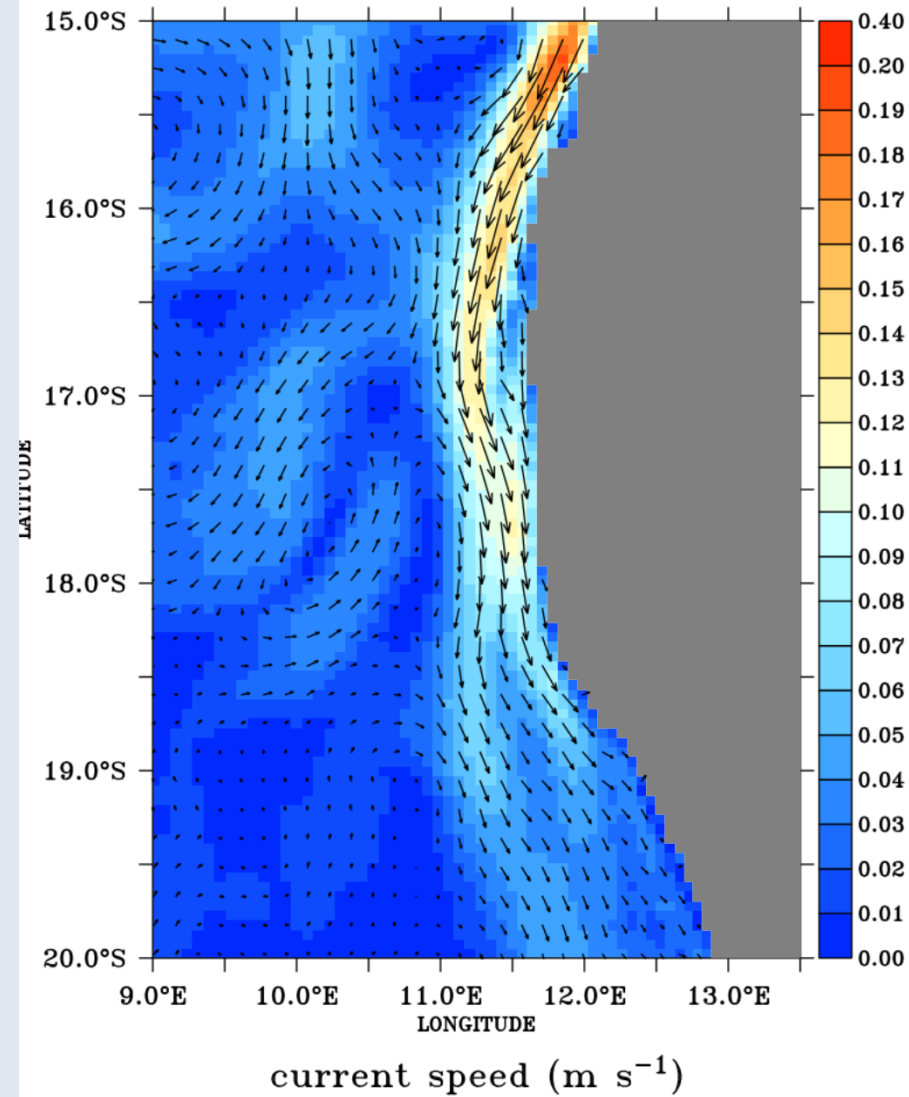
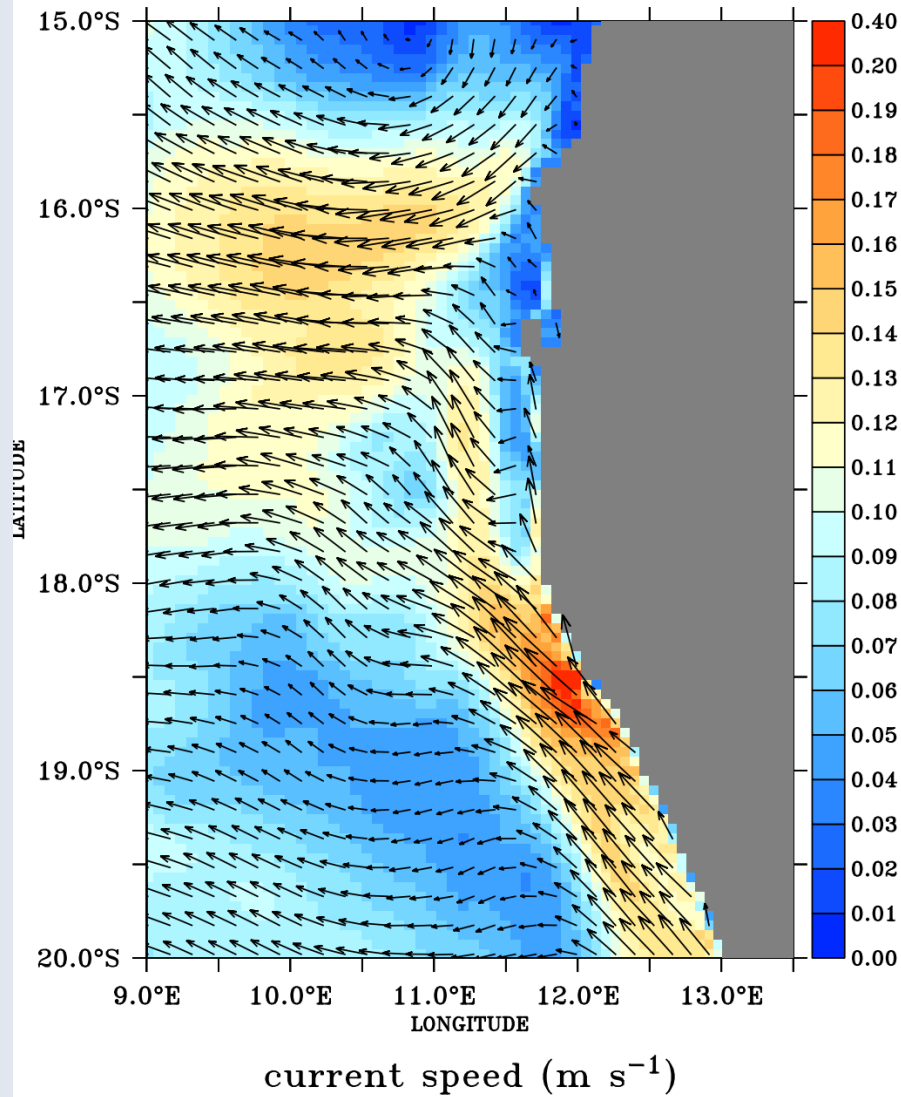
Era-interim, NCEP:

Overestimate poleward flow → “SST bias”, much tropical water in the Benguela upwelling system

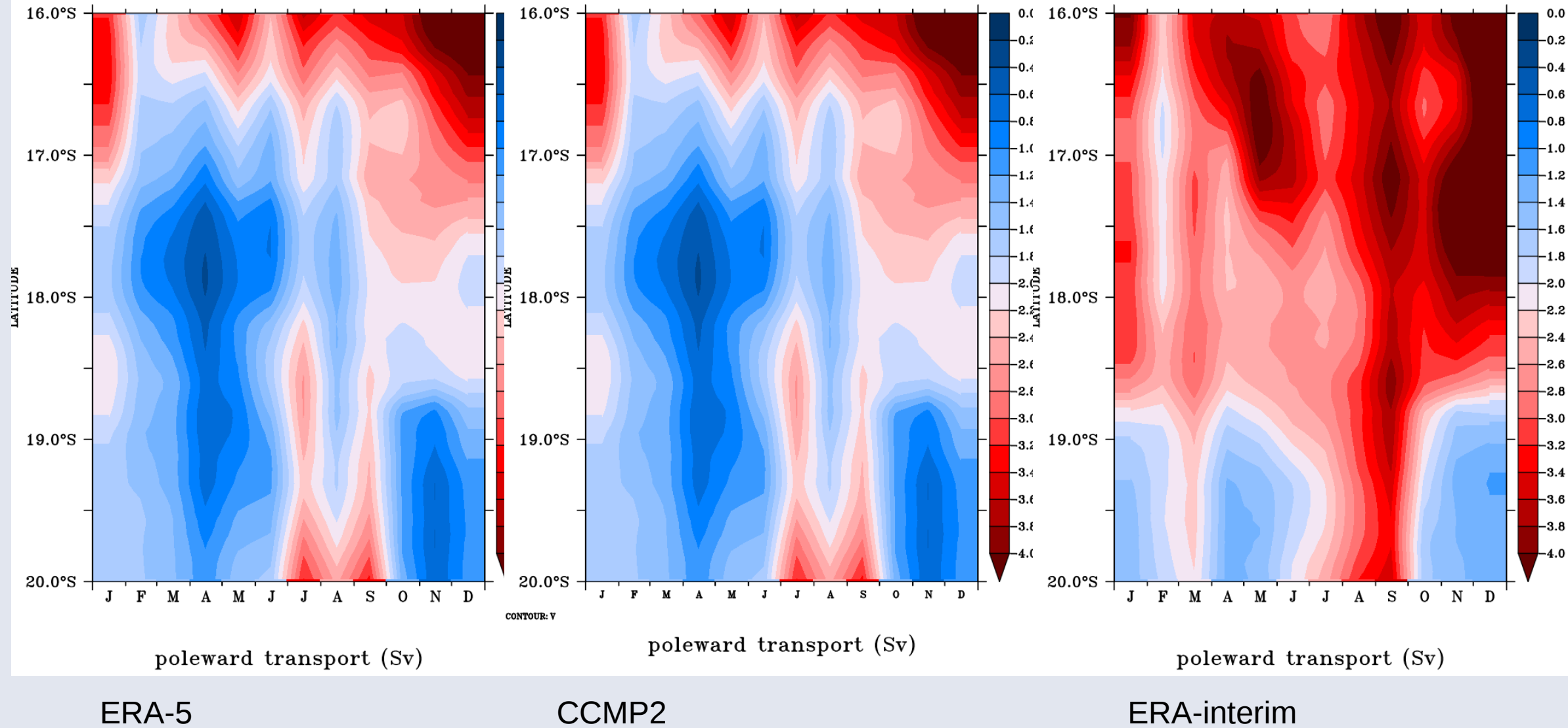
Climatology (2000-2008)



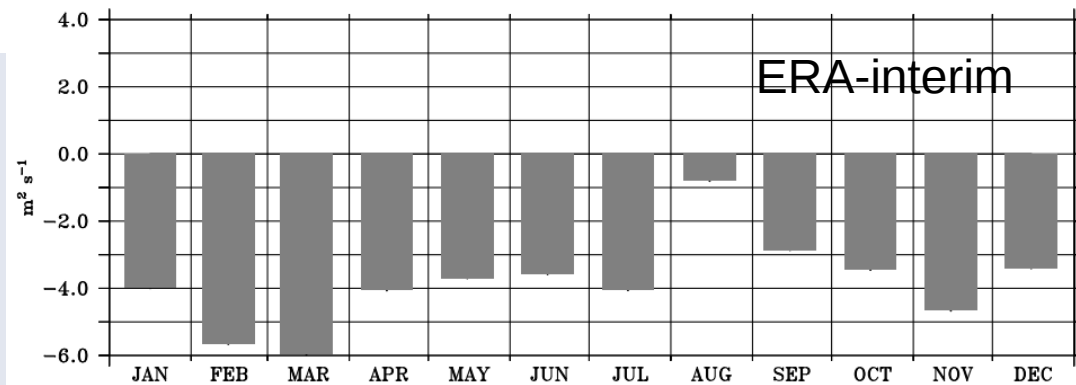
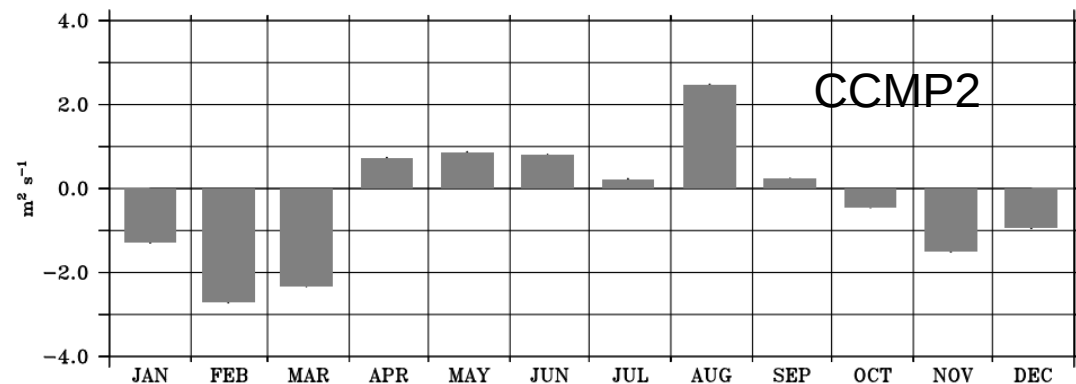
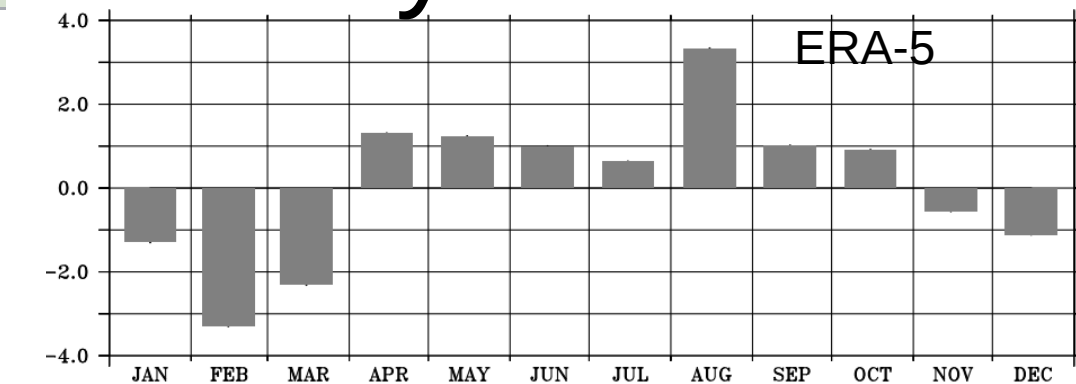
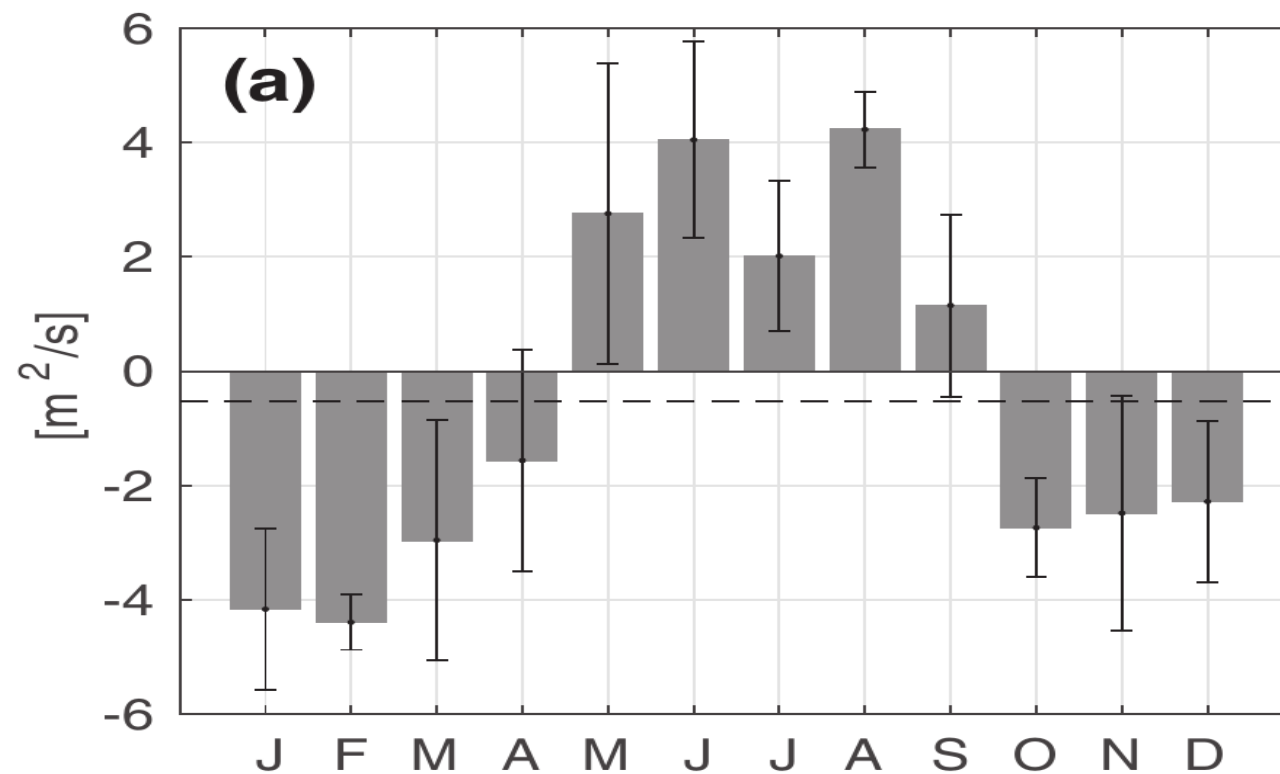
Transports in Kunene cell (April)



Transports in Kunene cell



Transports off Walvis Bay



meridional transport

SST variability

