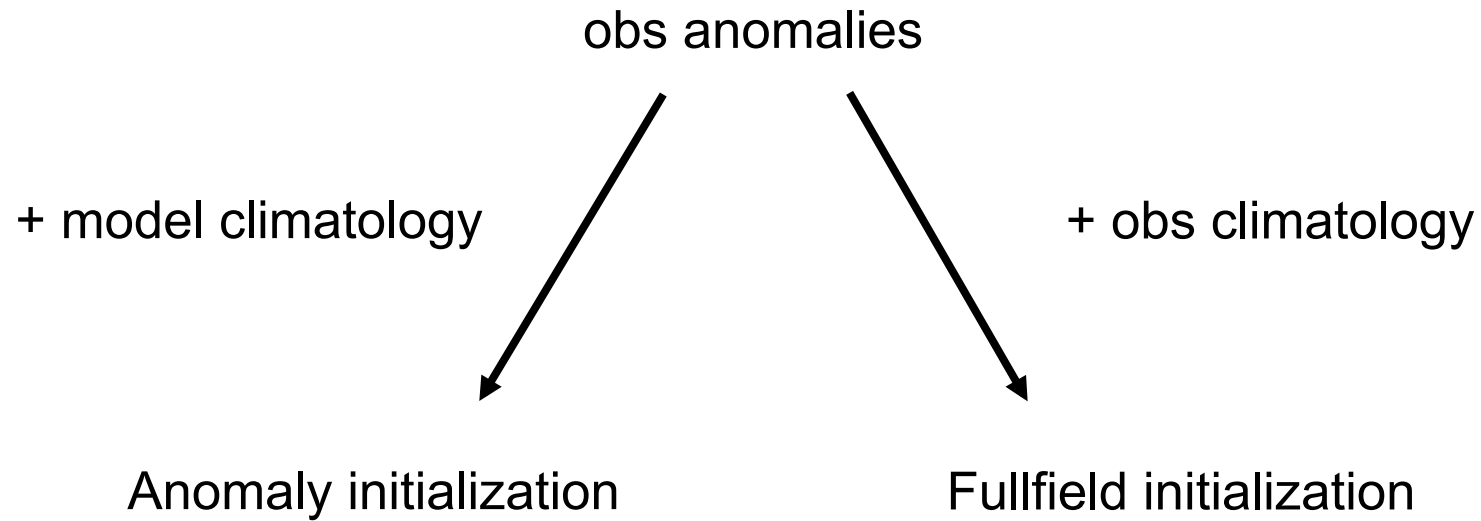




Anomaly vs Fullfield initialized DePreSys CMIP5 simulations

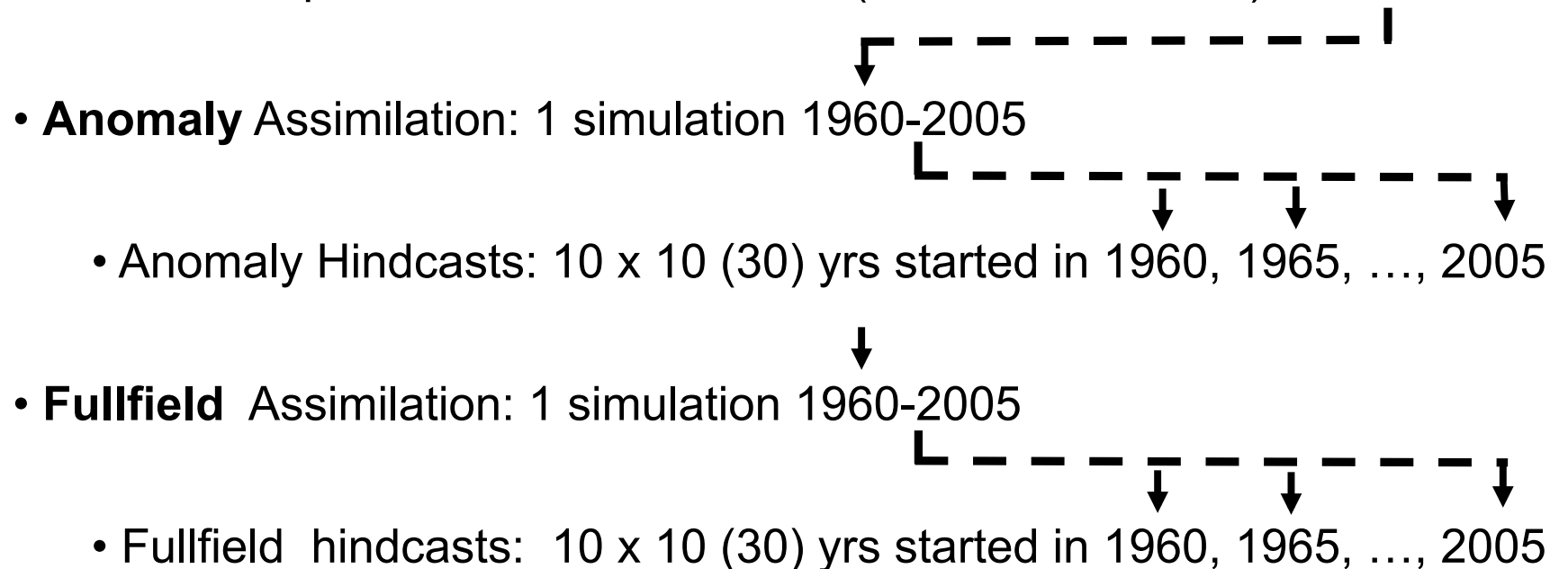
Holger Pohlmann and Doug Smith

1. Introduction: Initialization Techniques



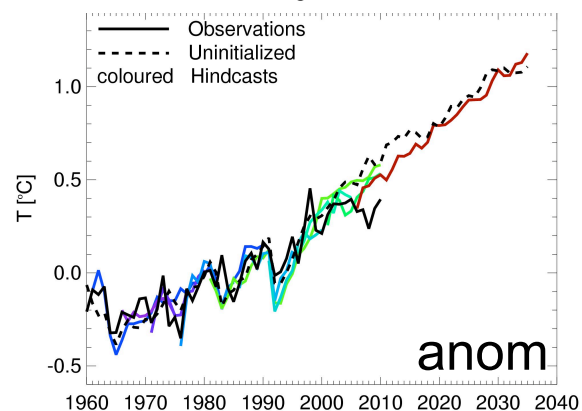
1. Introduction: DePreSys CMIP5

Uninitialized comparison: 10 transient runs (historical+RCP4.5) 1860-2035

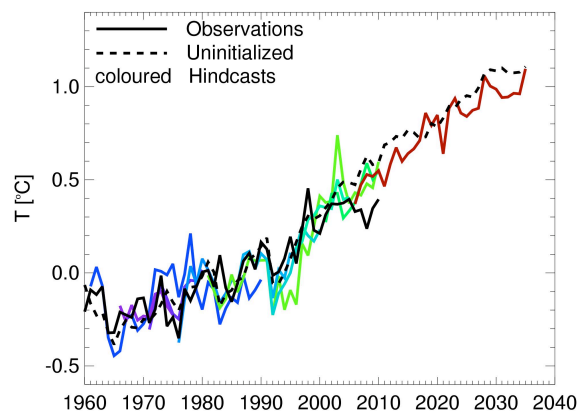


2. Global mean surface air temperature

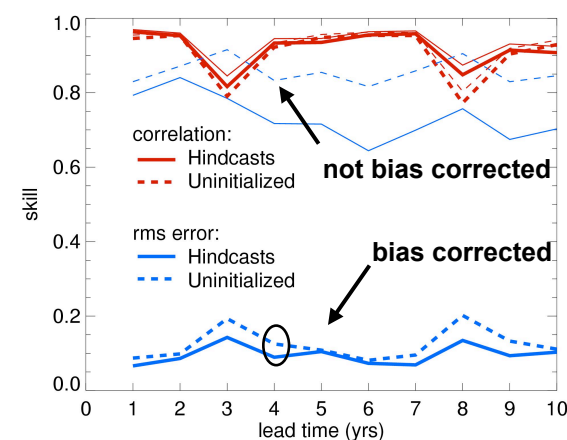
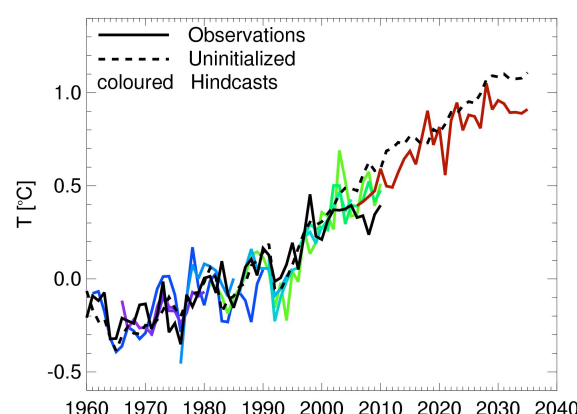
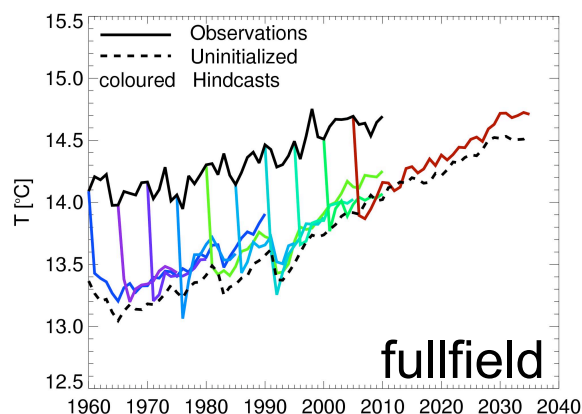
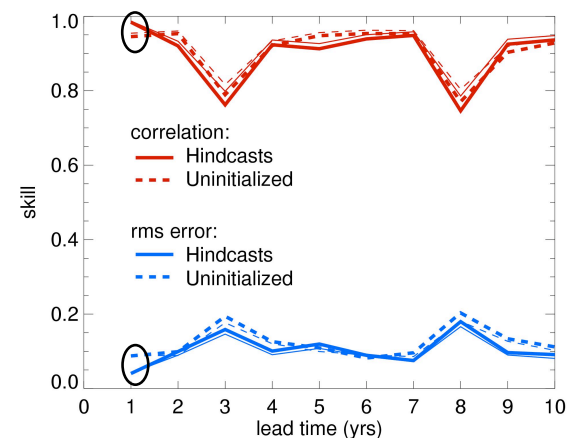
DePreSys CMIP5:



Bias corrected:

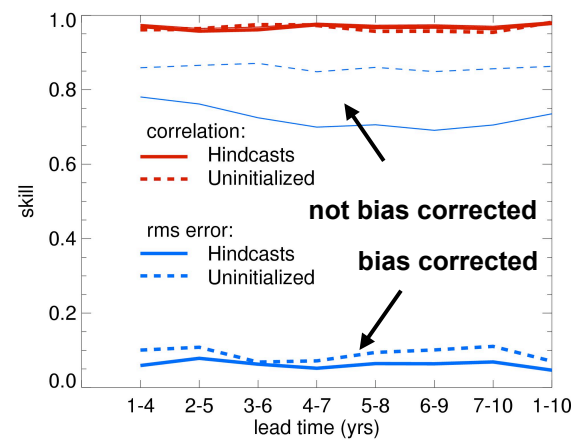
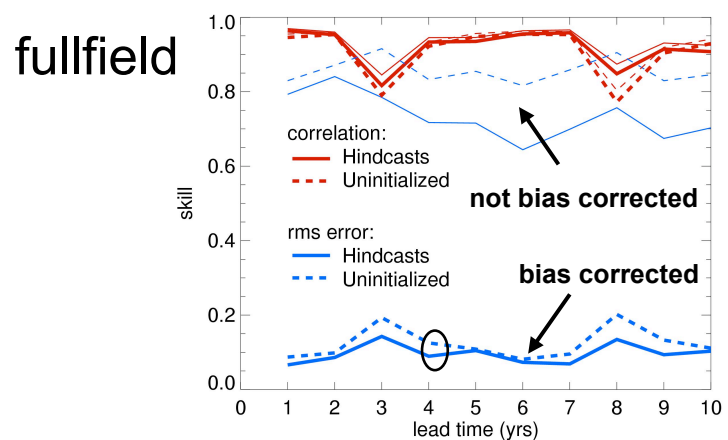
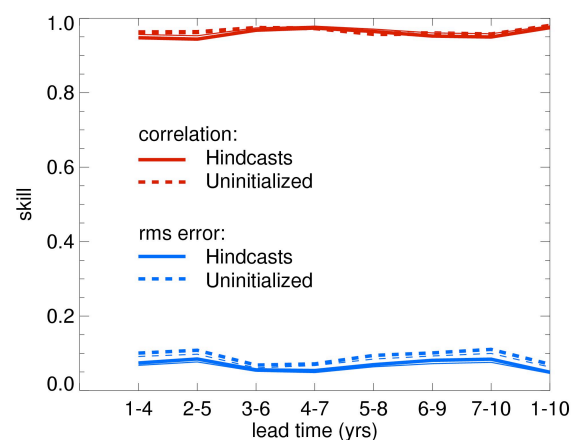
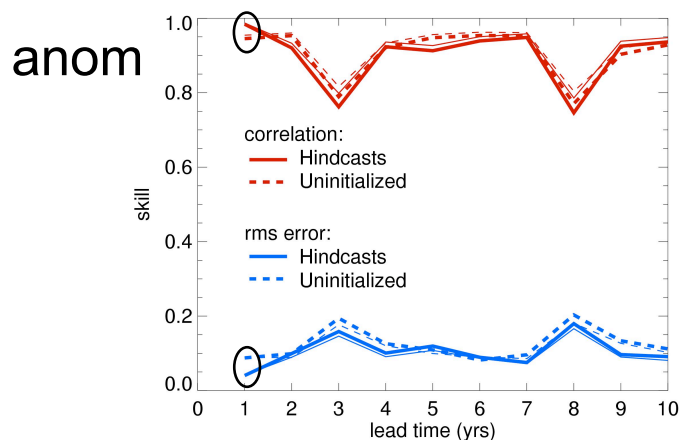


Skill:

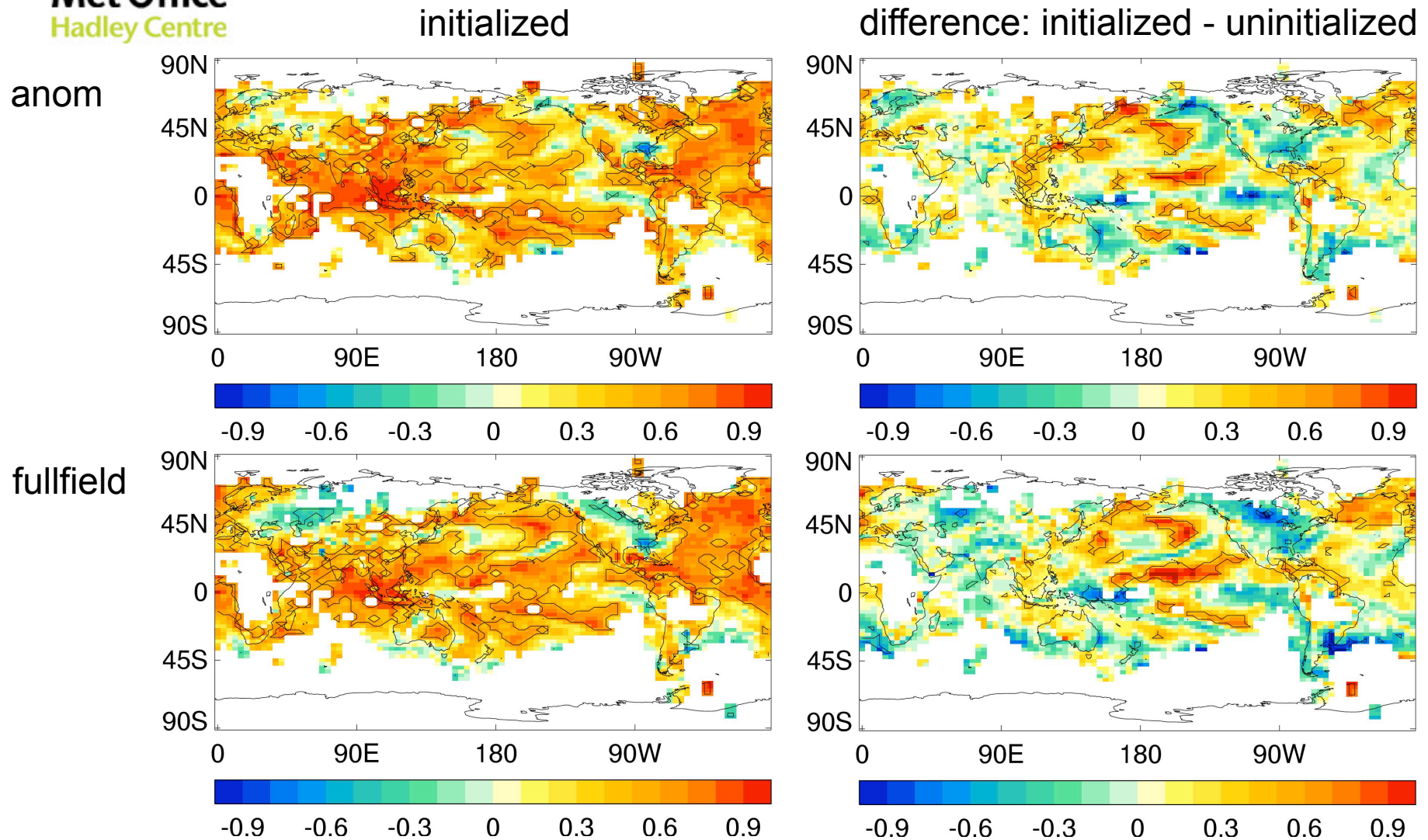


2. Global mean surface air temperature

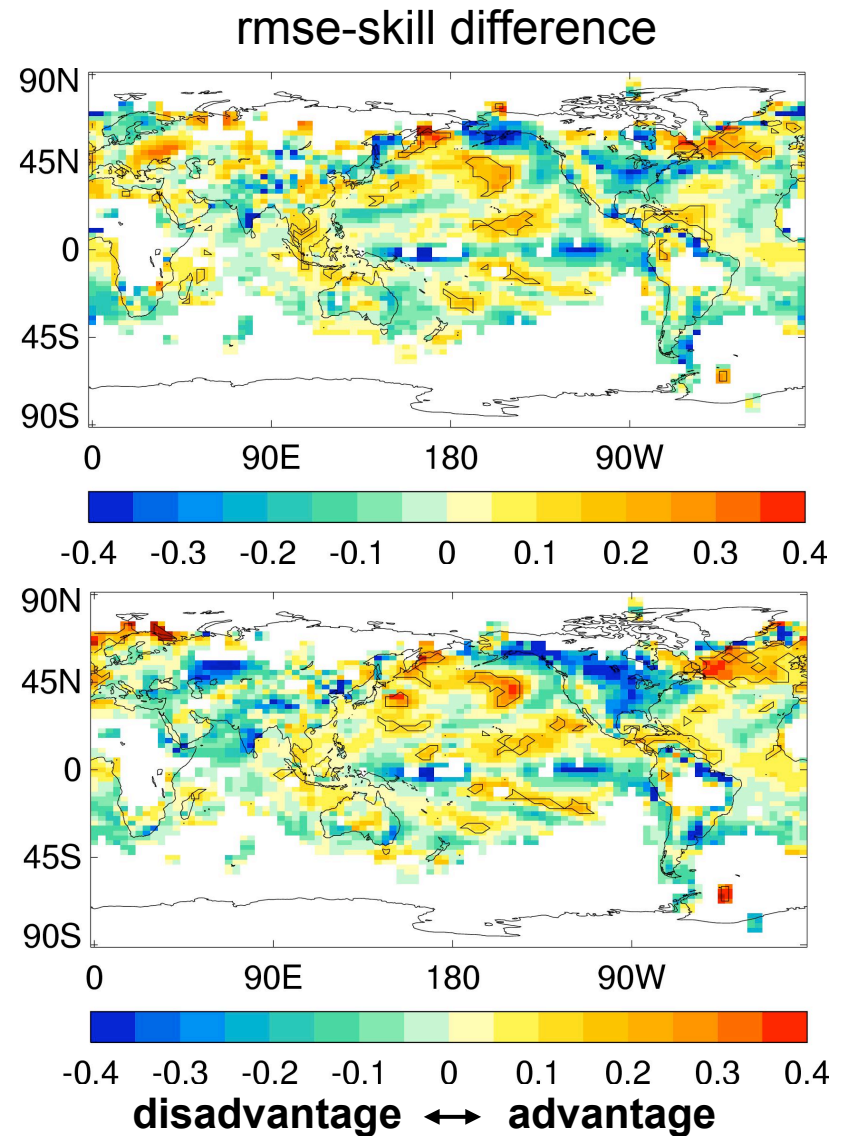
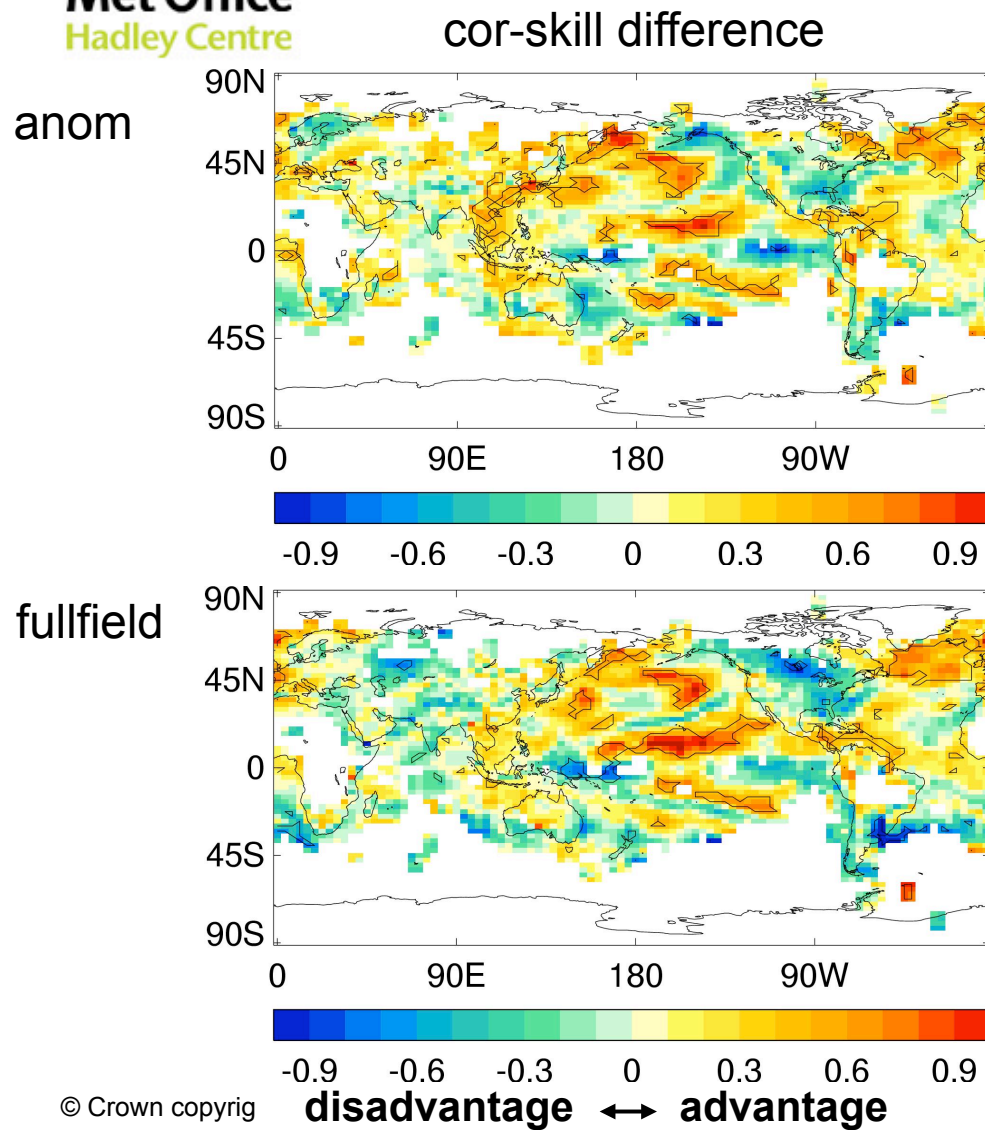
Longer lead times:



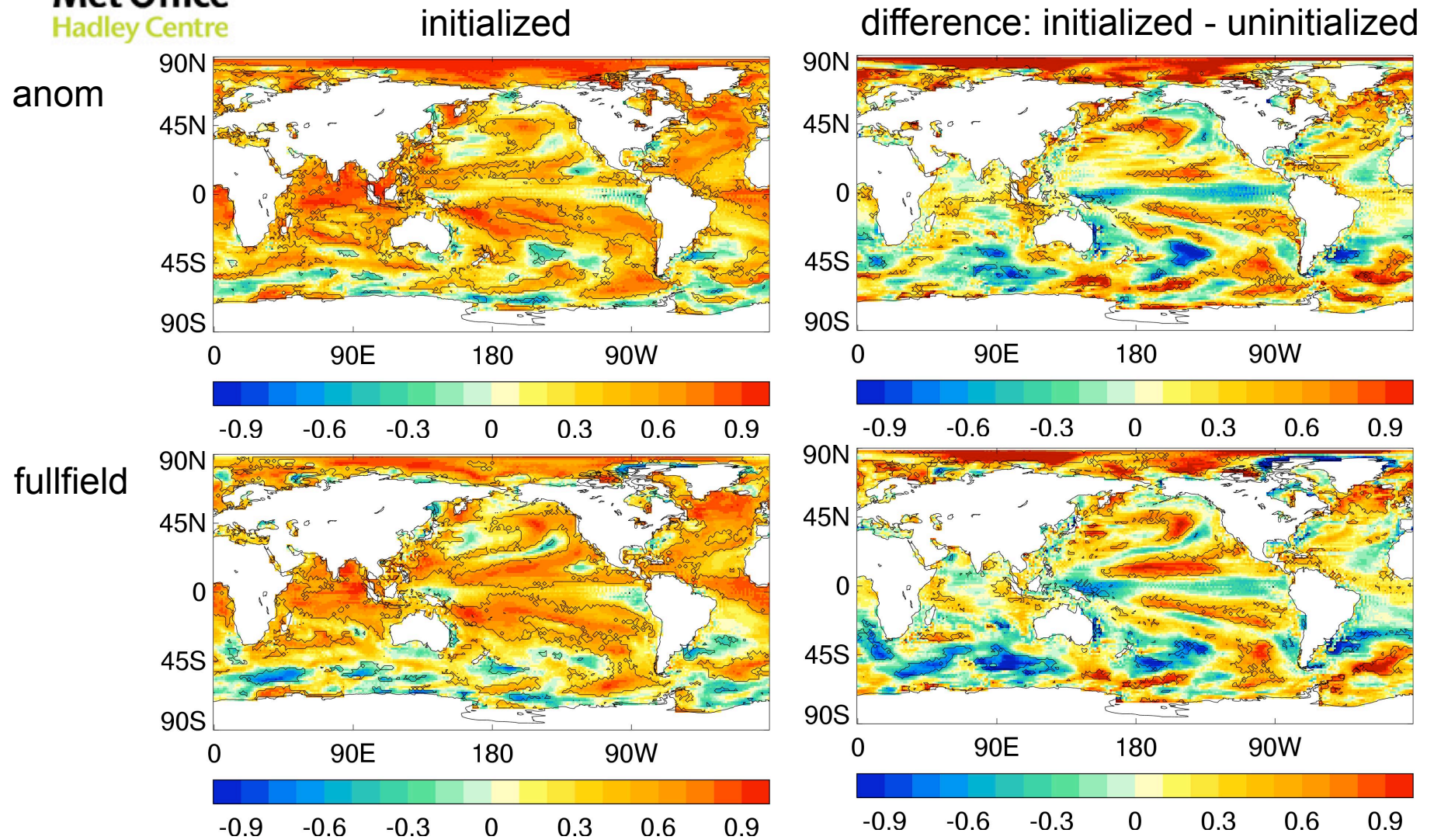
3. Temperature cor-skill first year



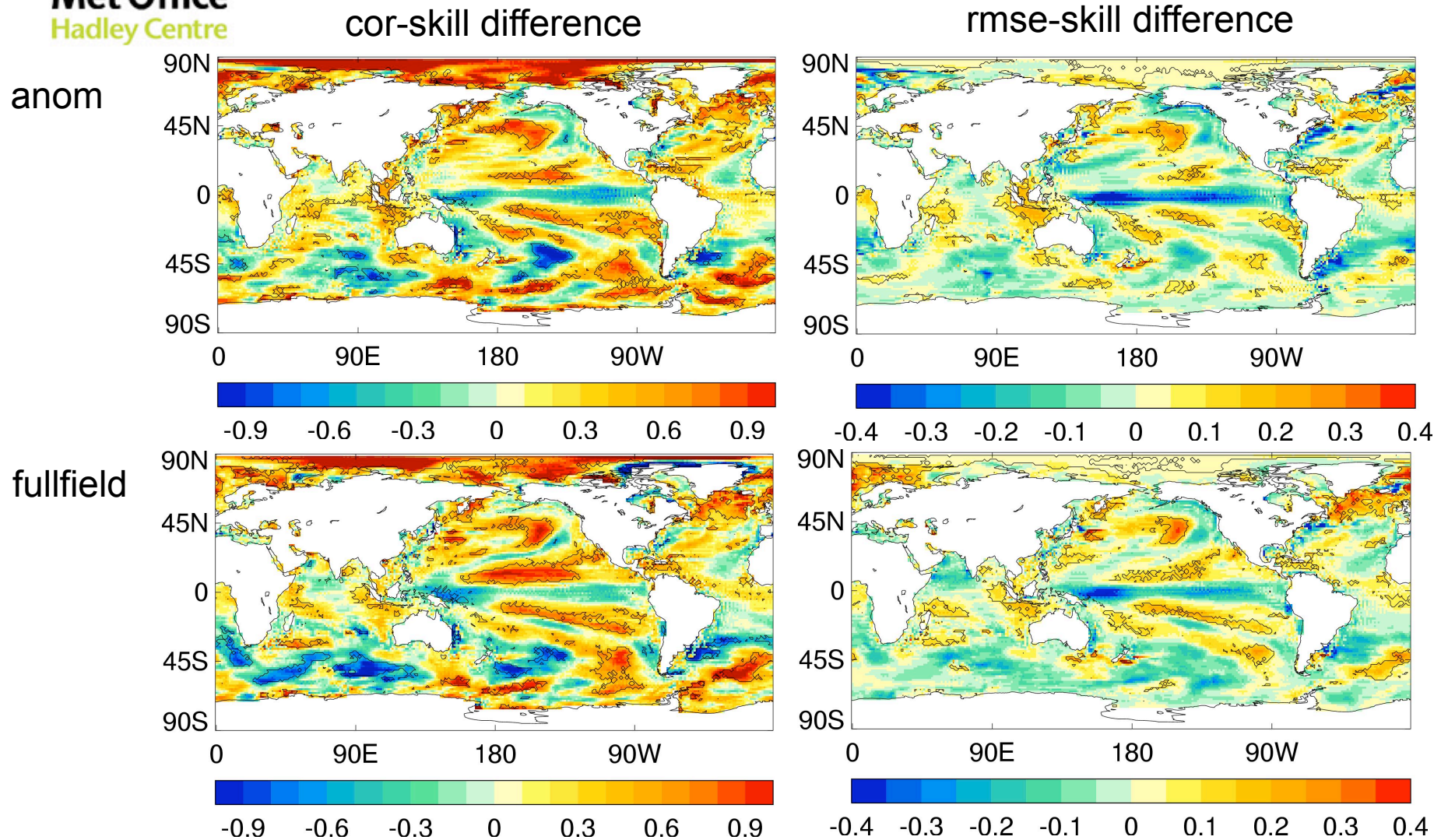
3. Temperature skill difference first year



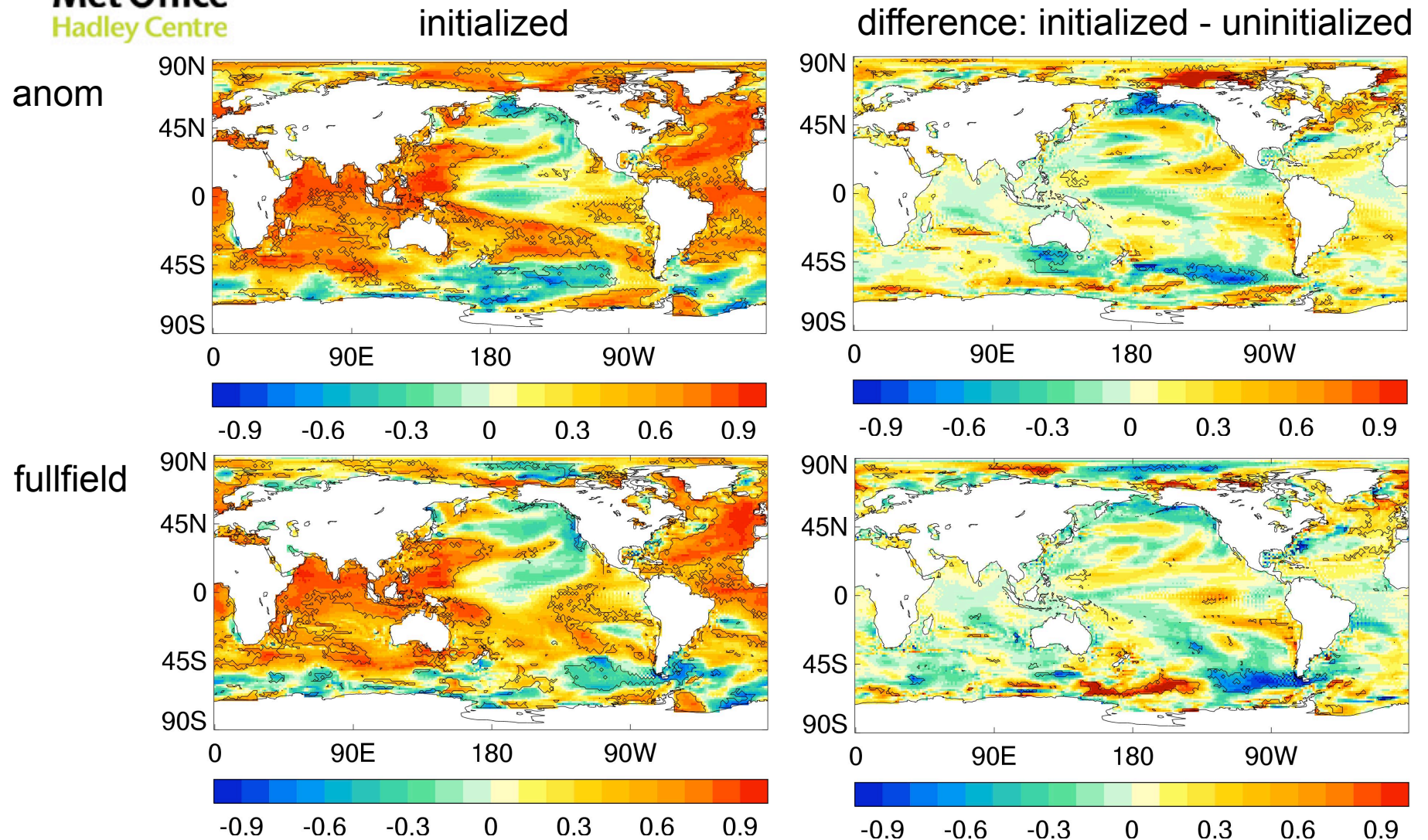
4. SST cor-skill first year



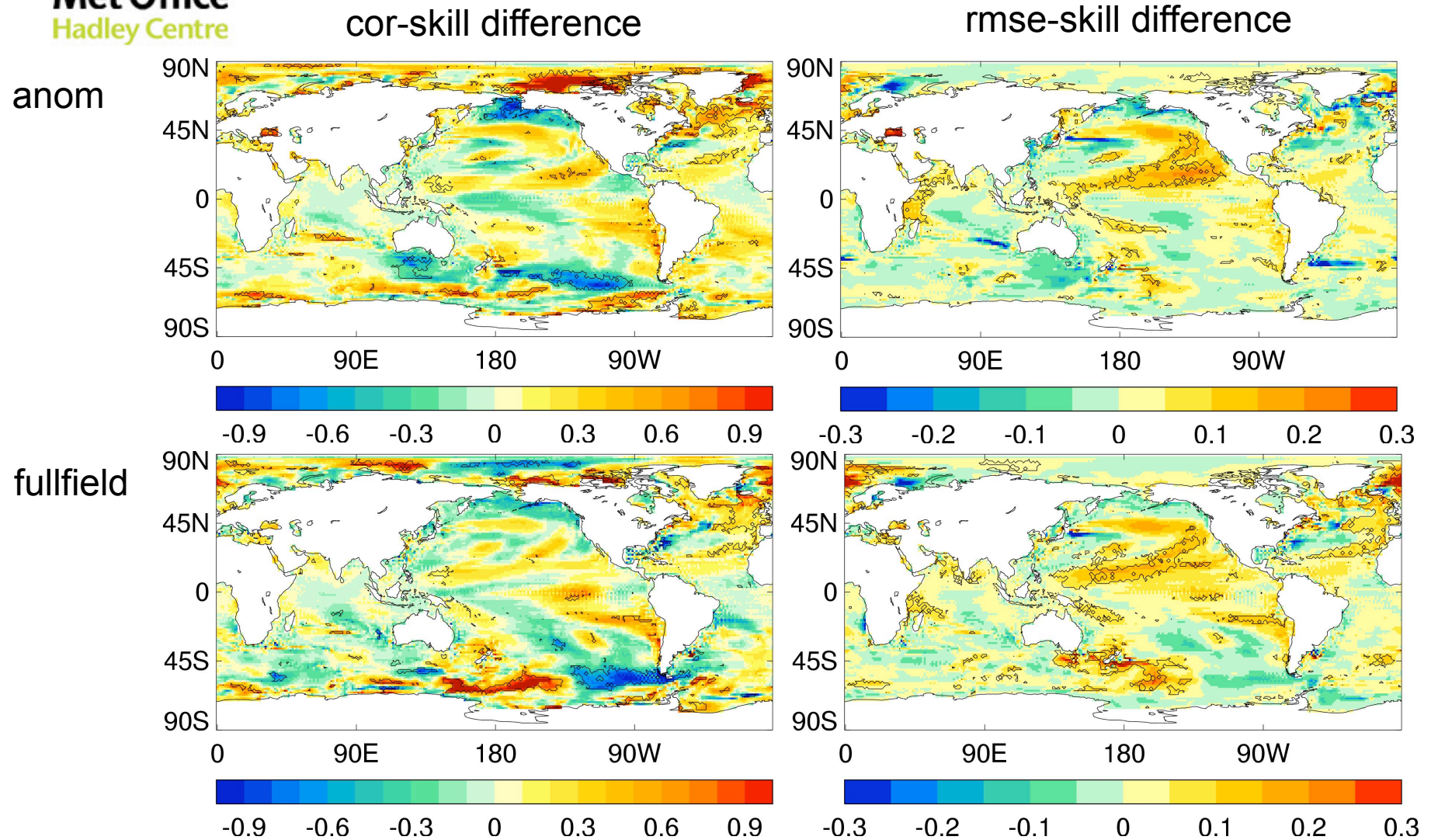
4. SST skill difference first year



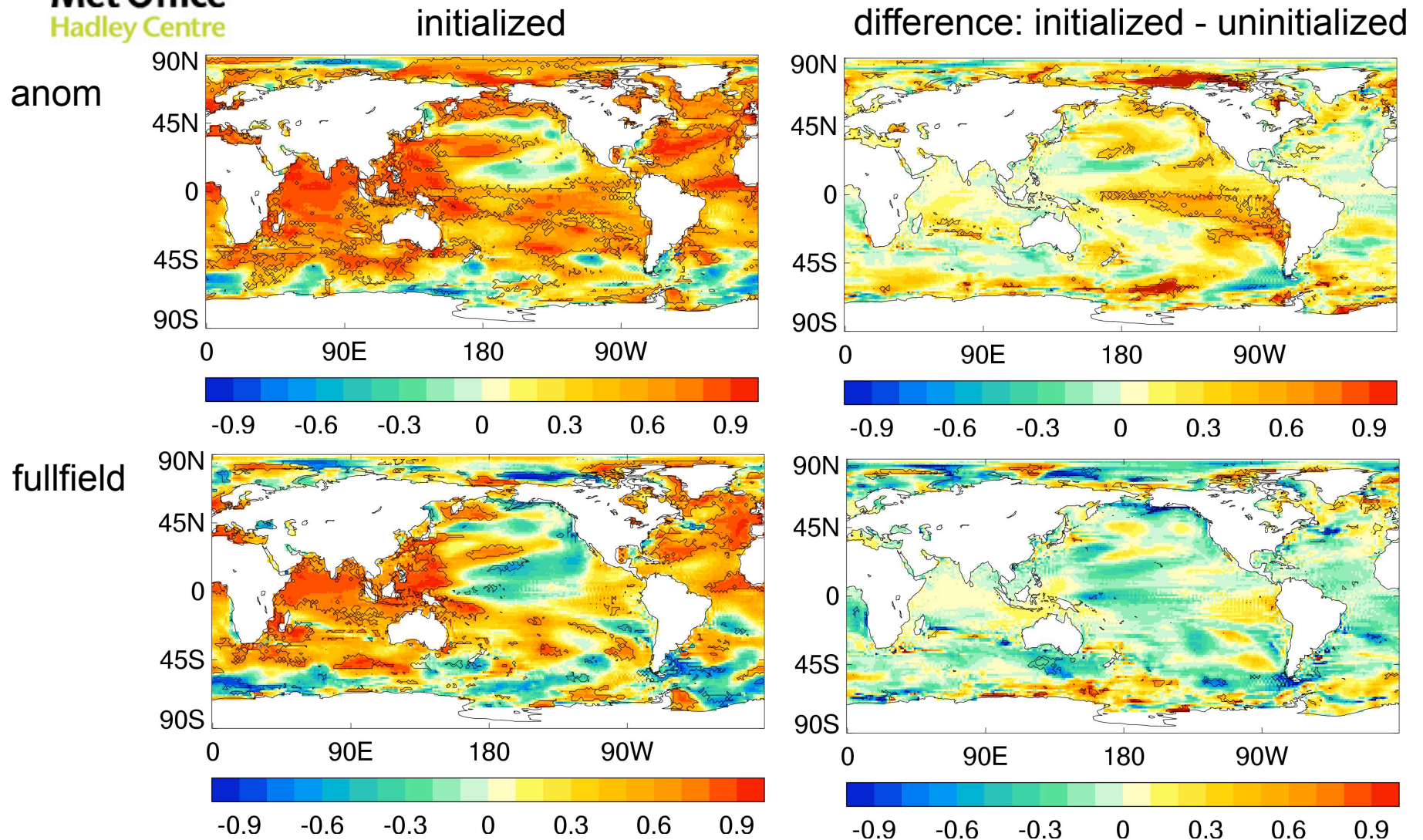
4. SST cor-skill years 2...5



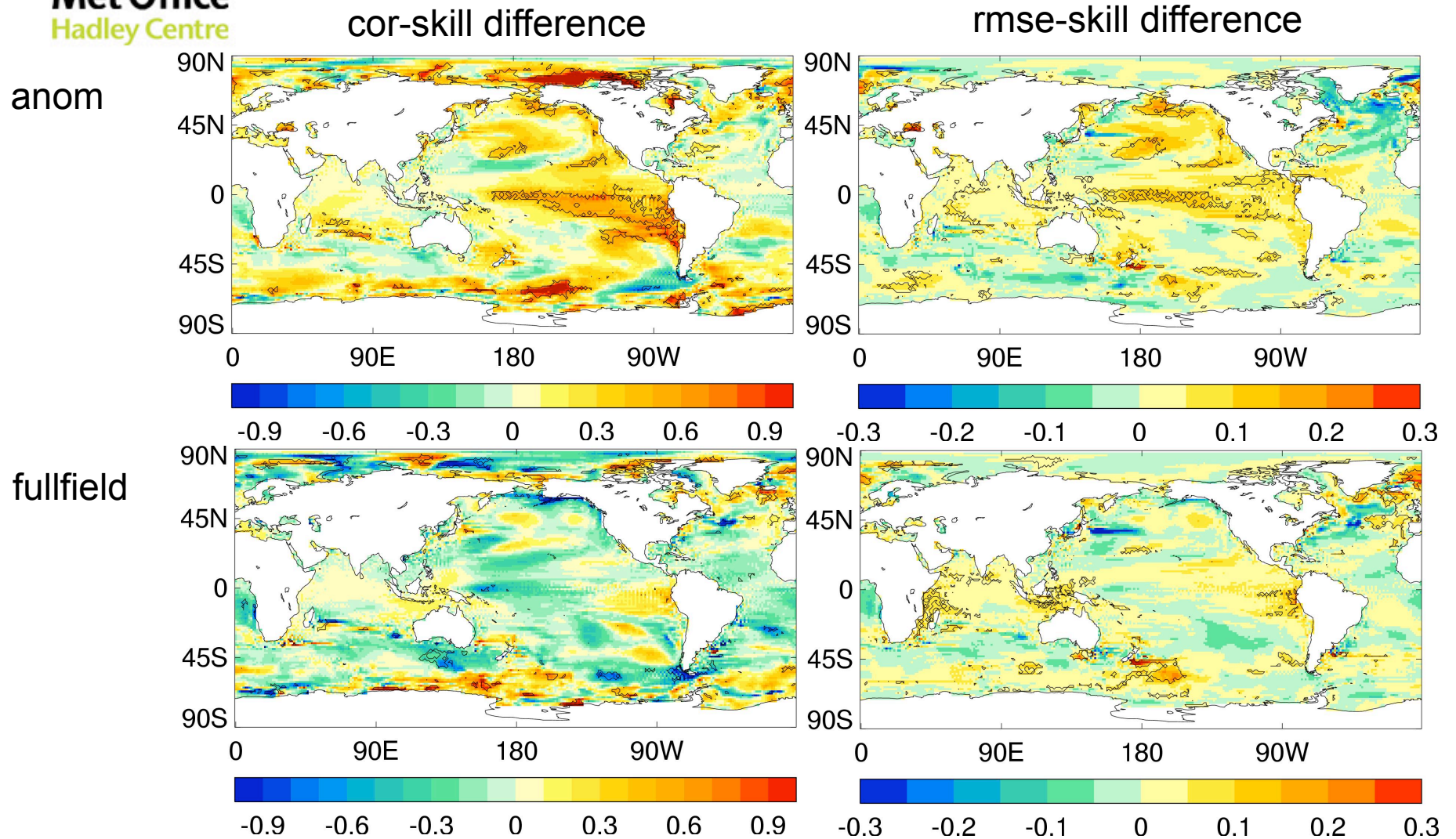
4. SST skill difference years 2...5



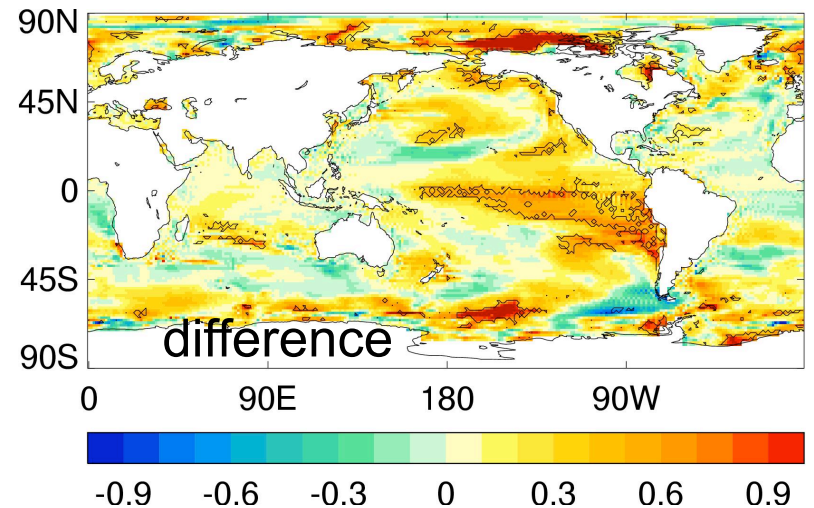
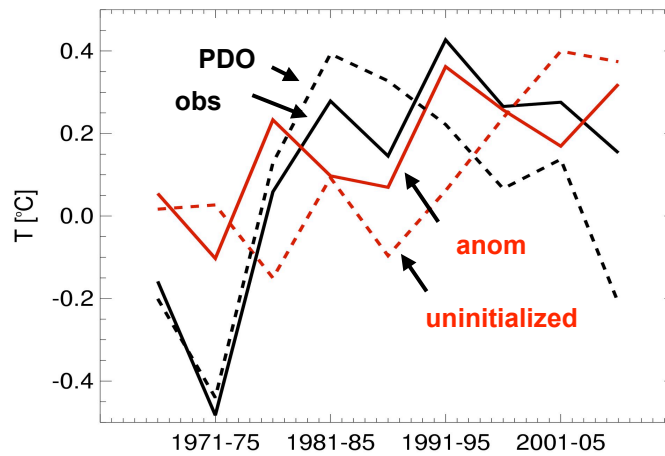
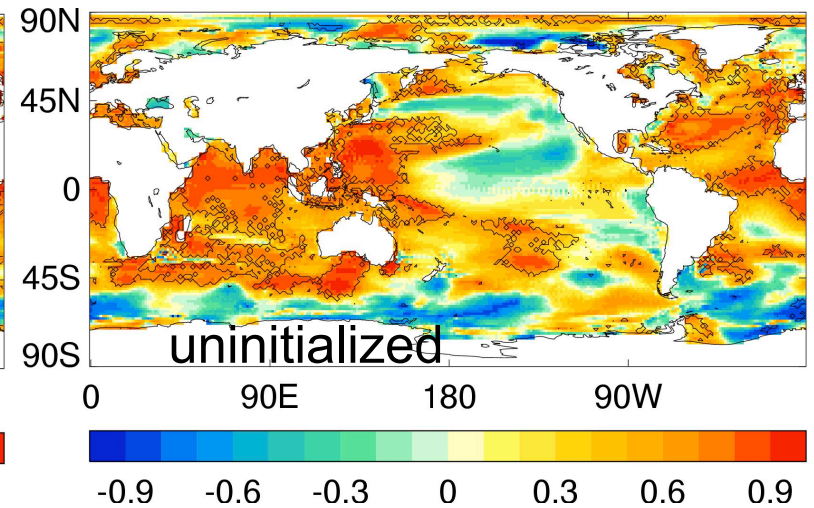
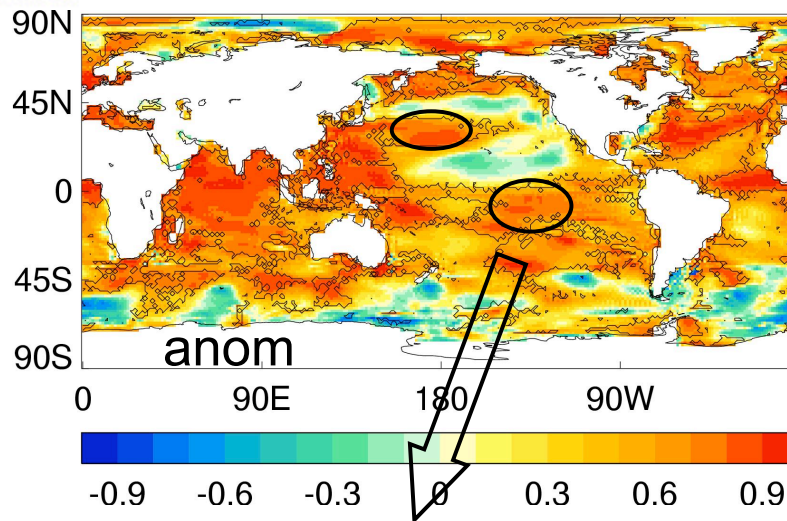
4. SST cor-skill years 6...10



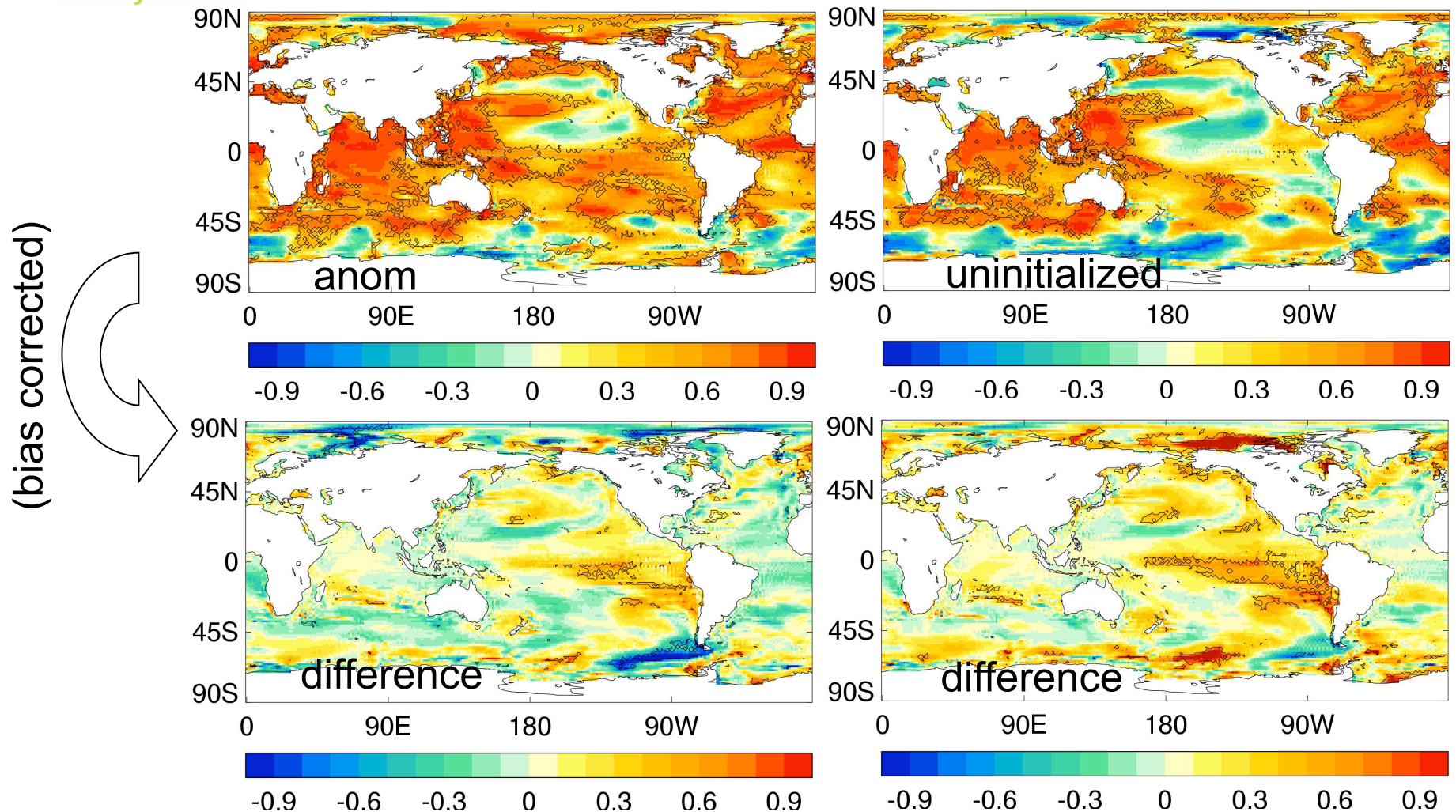
4. SST skill difference years 6...10



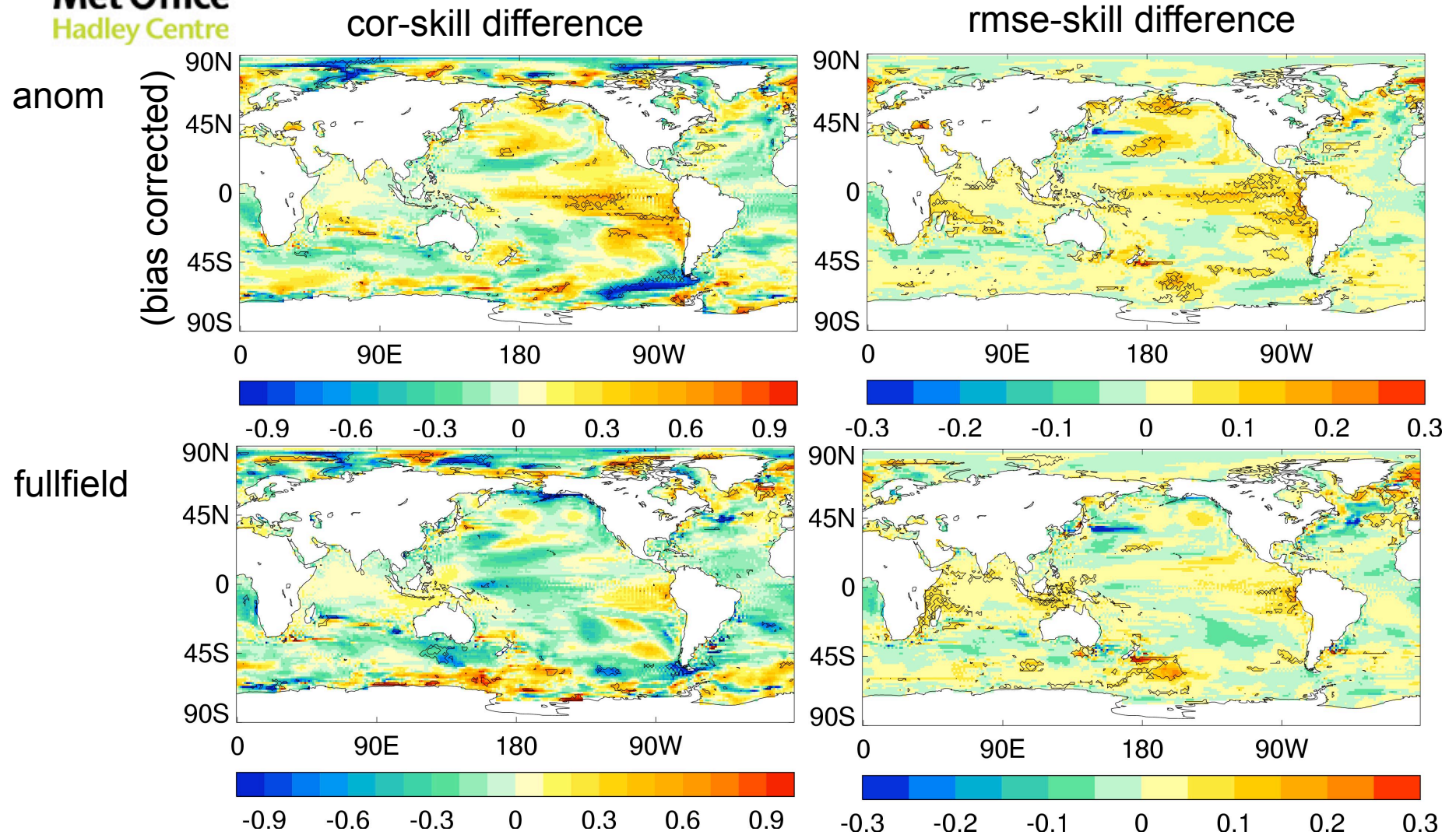
4. SST cor-skill years 6...10



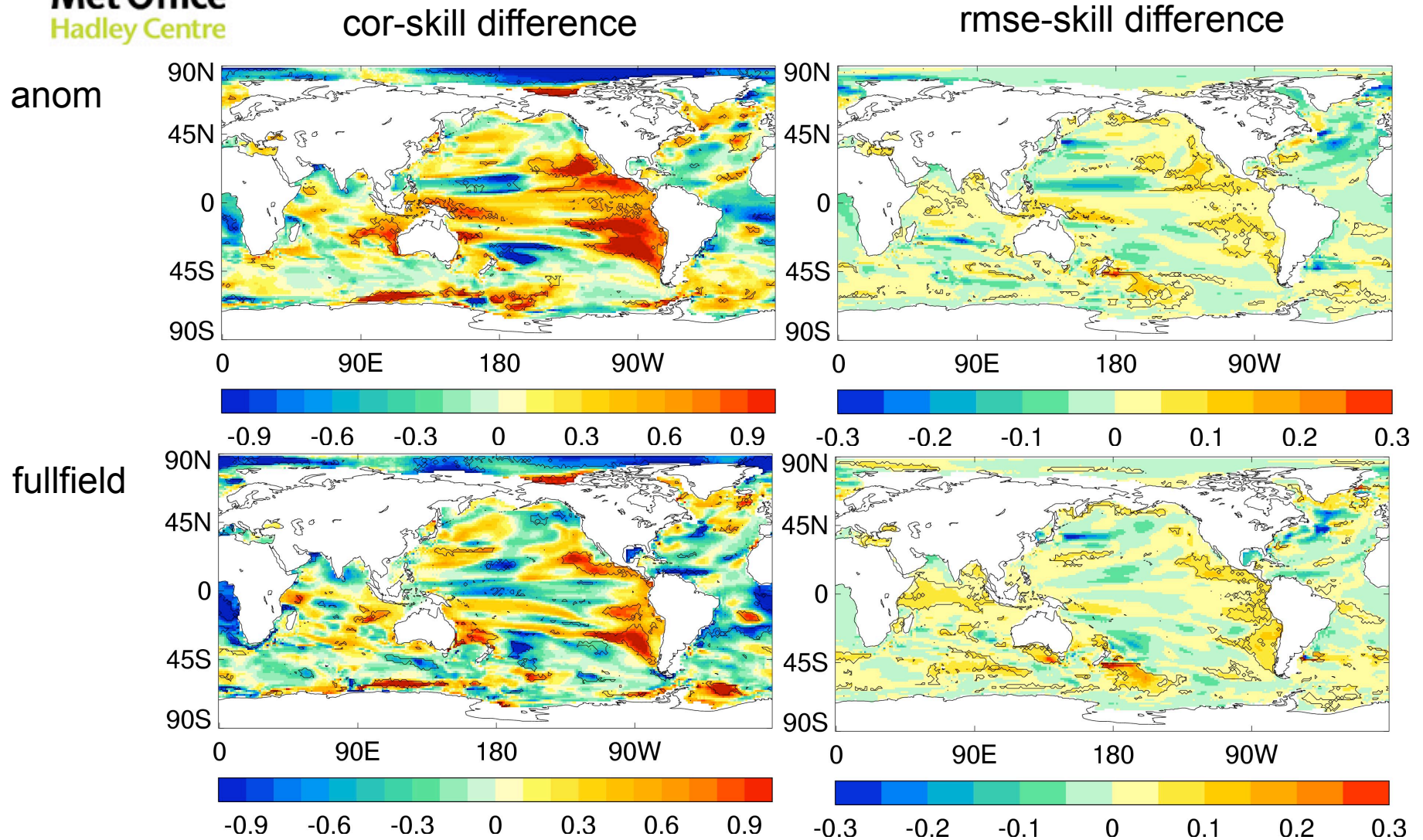
4. SST cor-skill years 6...10



4. SST skill difference years 6...10

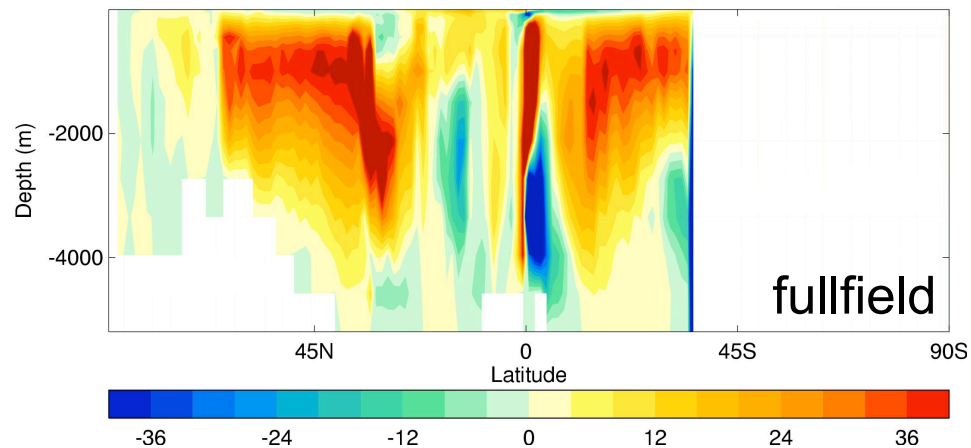
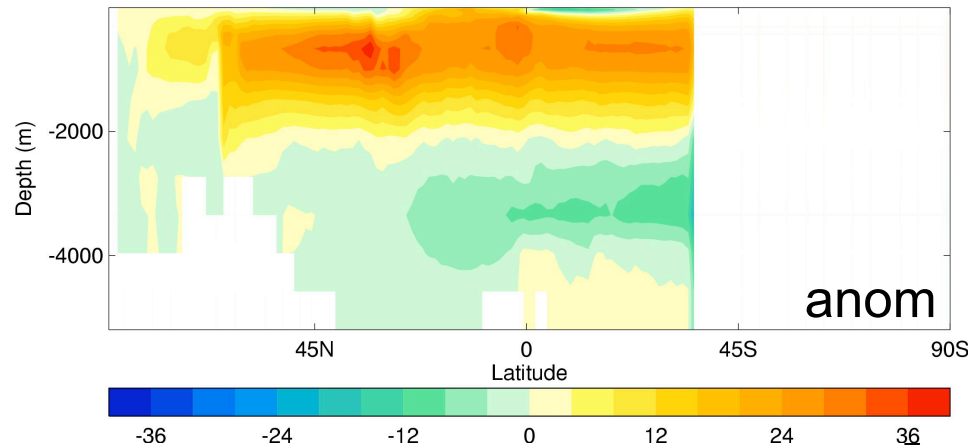


7. HC (400m) skill difference years 6...10

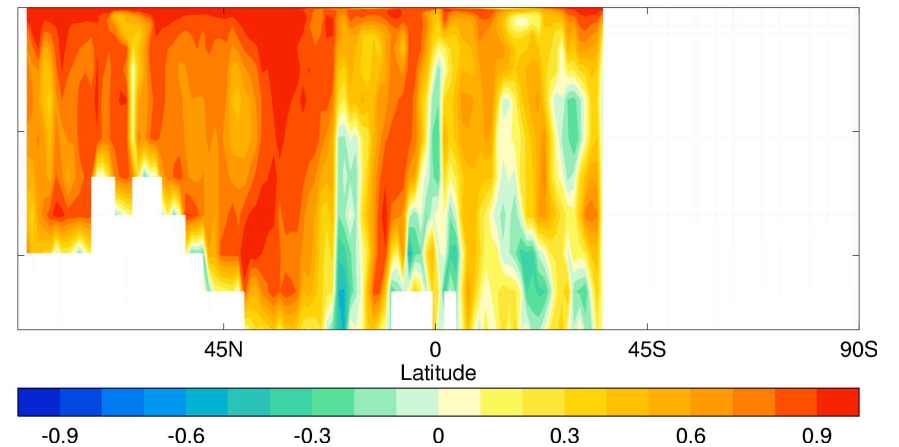


5. AMOC in assimilation run

mean 1960-2005

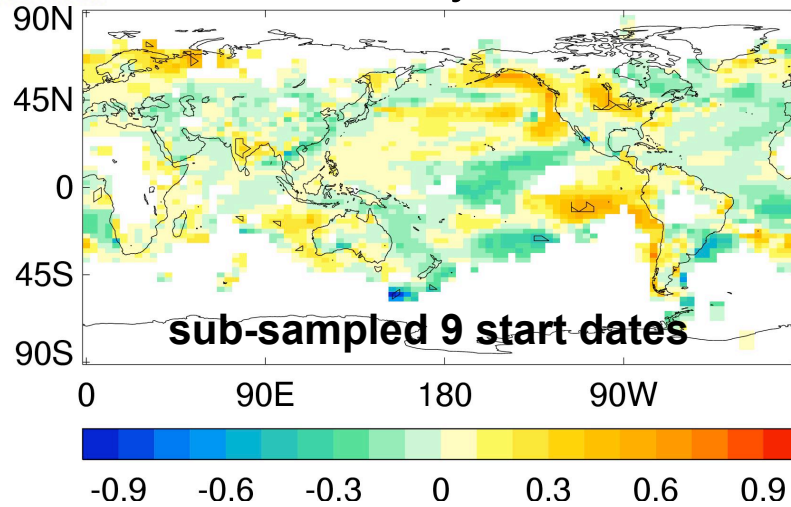


correlation

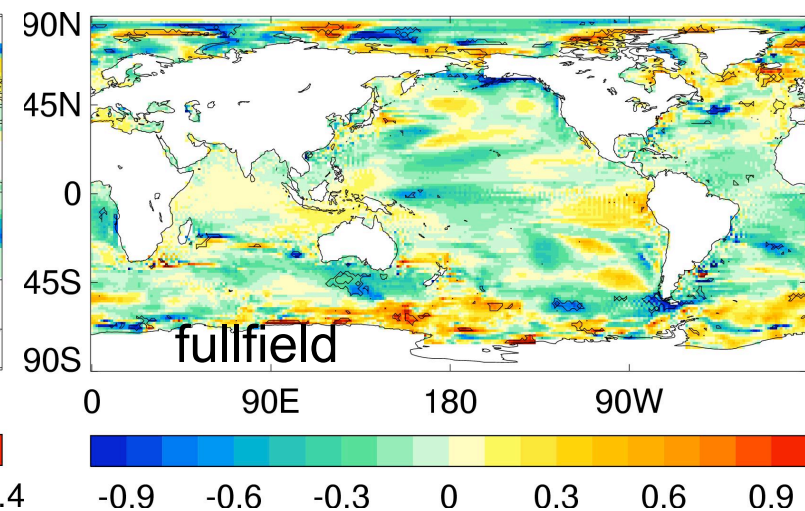
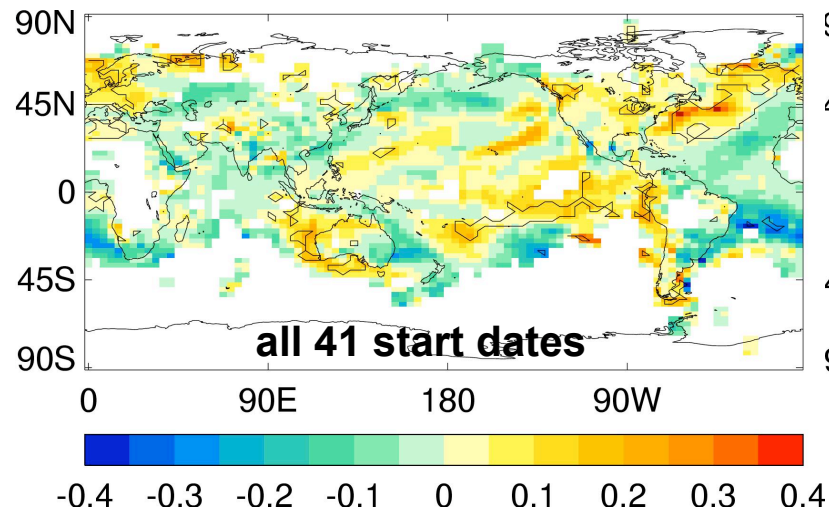
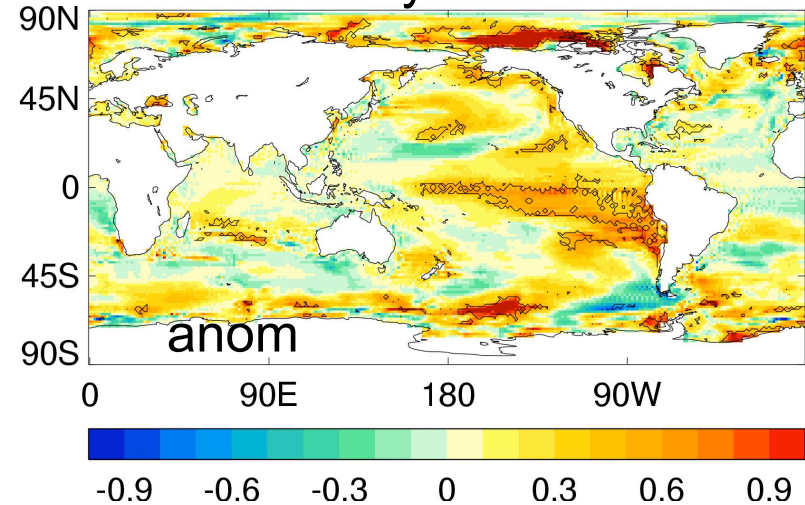


6. Why is there no advantage in the North Atlantic?

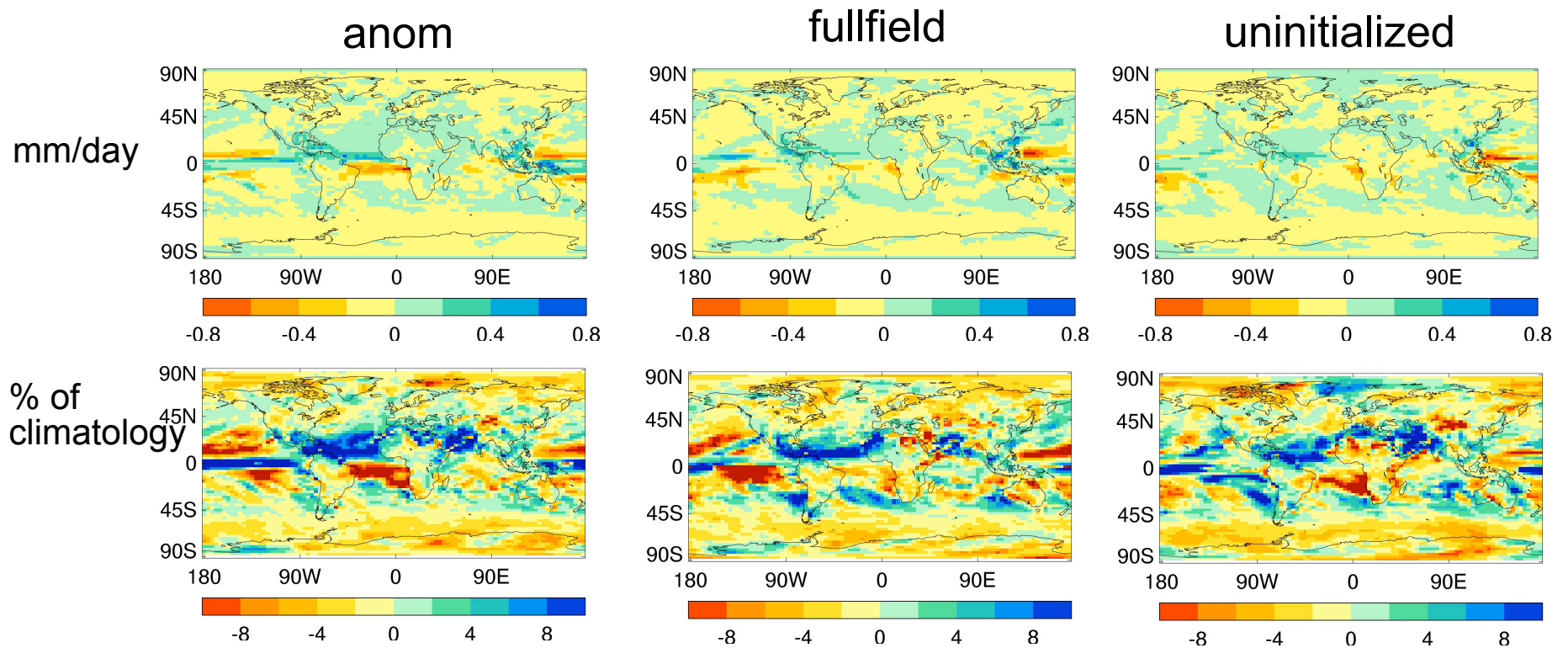
DePreSys PPE



DePreSys CMIP5



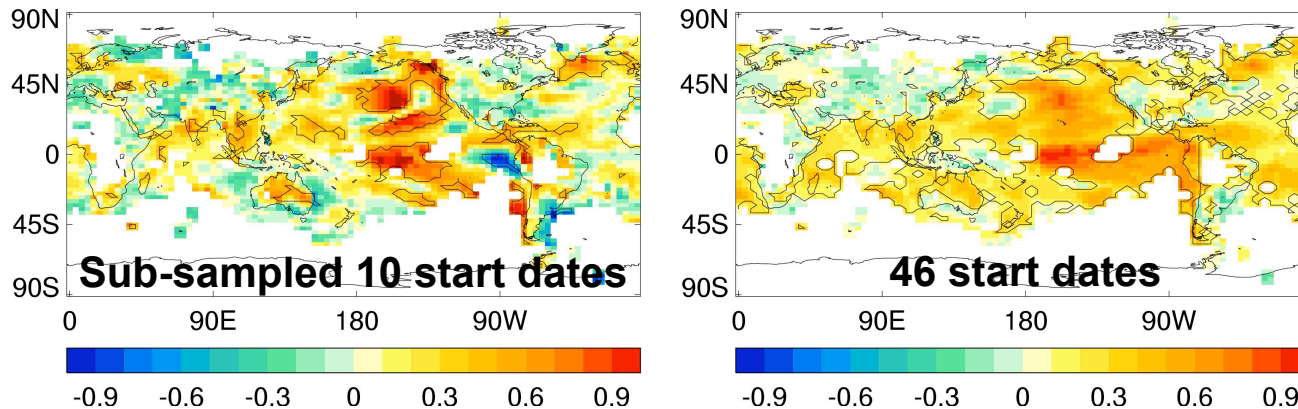
7. Precipitation (1961...70) – (1981...90)



Conclusions

- In the first years similar advantages from anomaly vs fullfield initialization
- Differences evolve after some years
- Limited number of start dates is causing misleading results

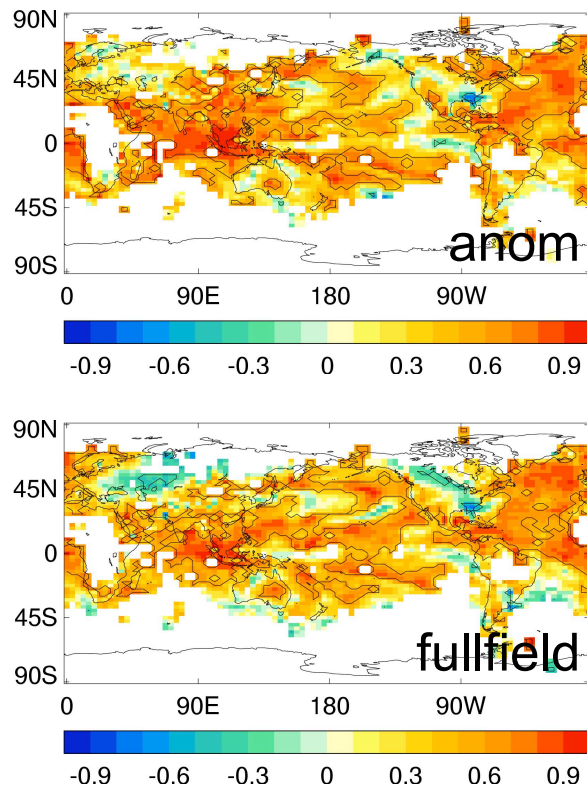
Cor-skill difference DePreSys PPE (first year)



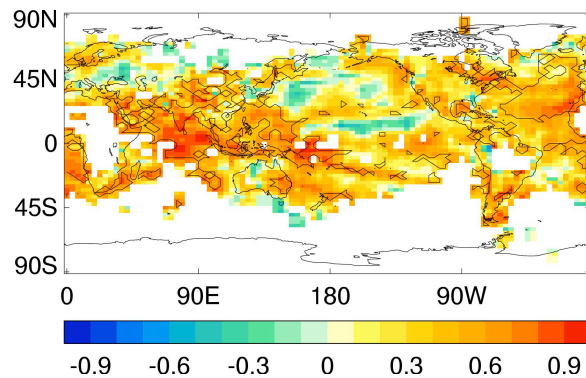


3. Temperature cor-skill first year

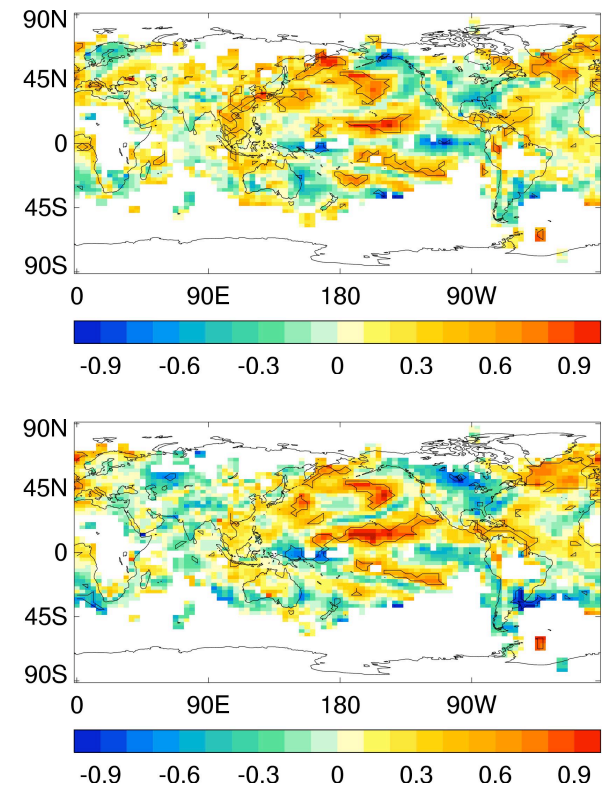
initialized



uninitialized



difference



6. Temp cor-skill first year (2000s filled up)

