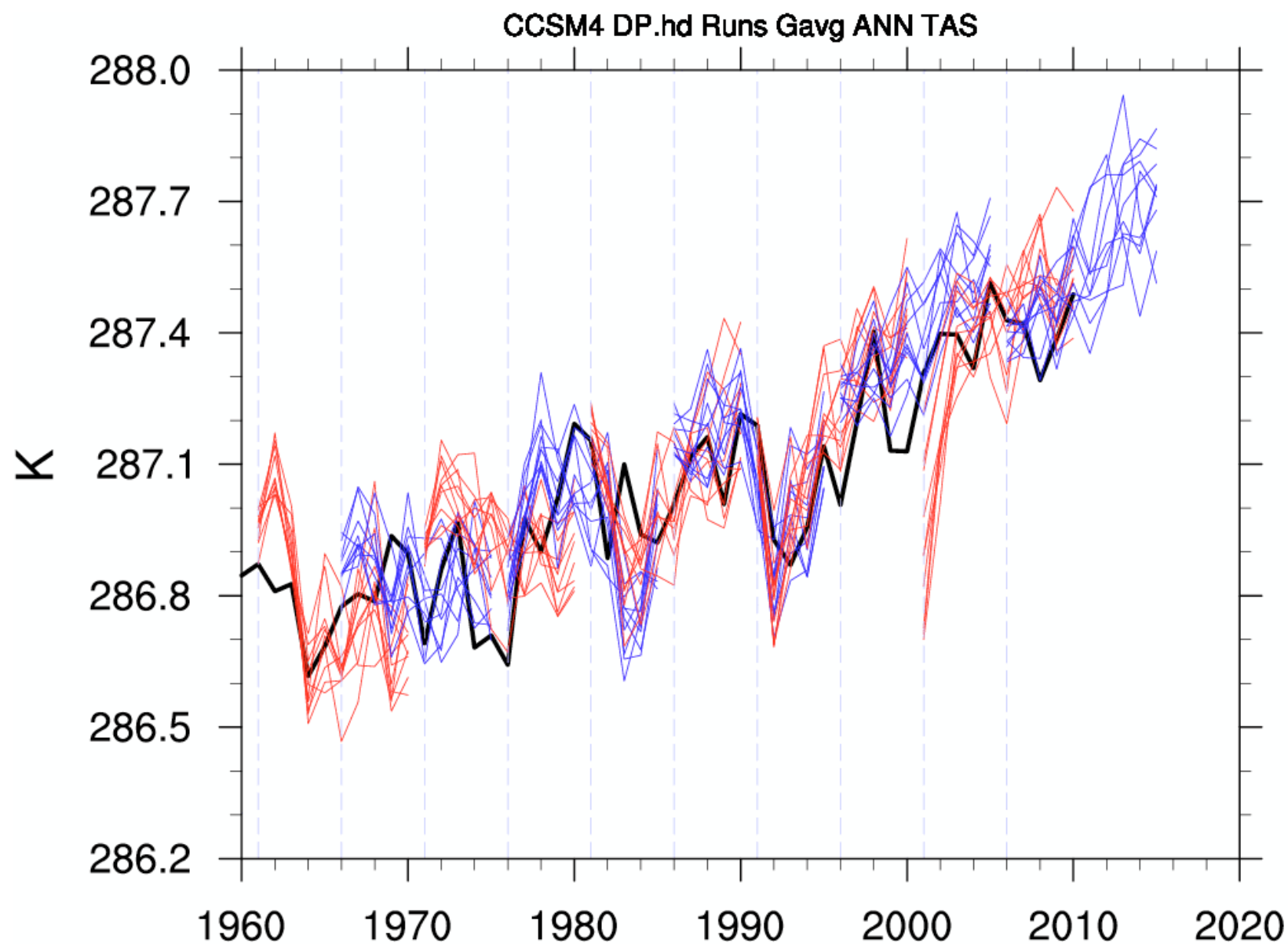


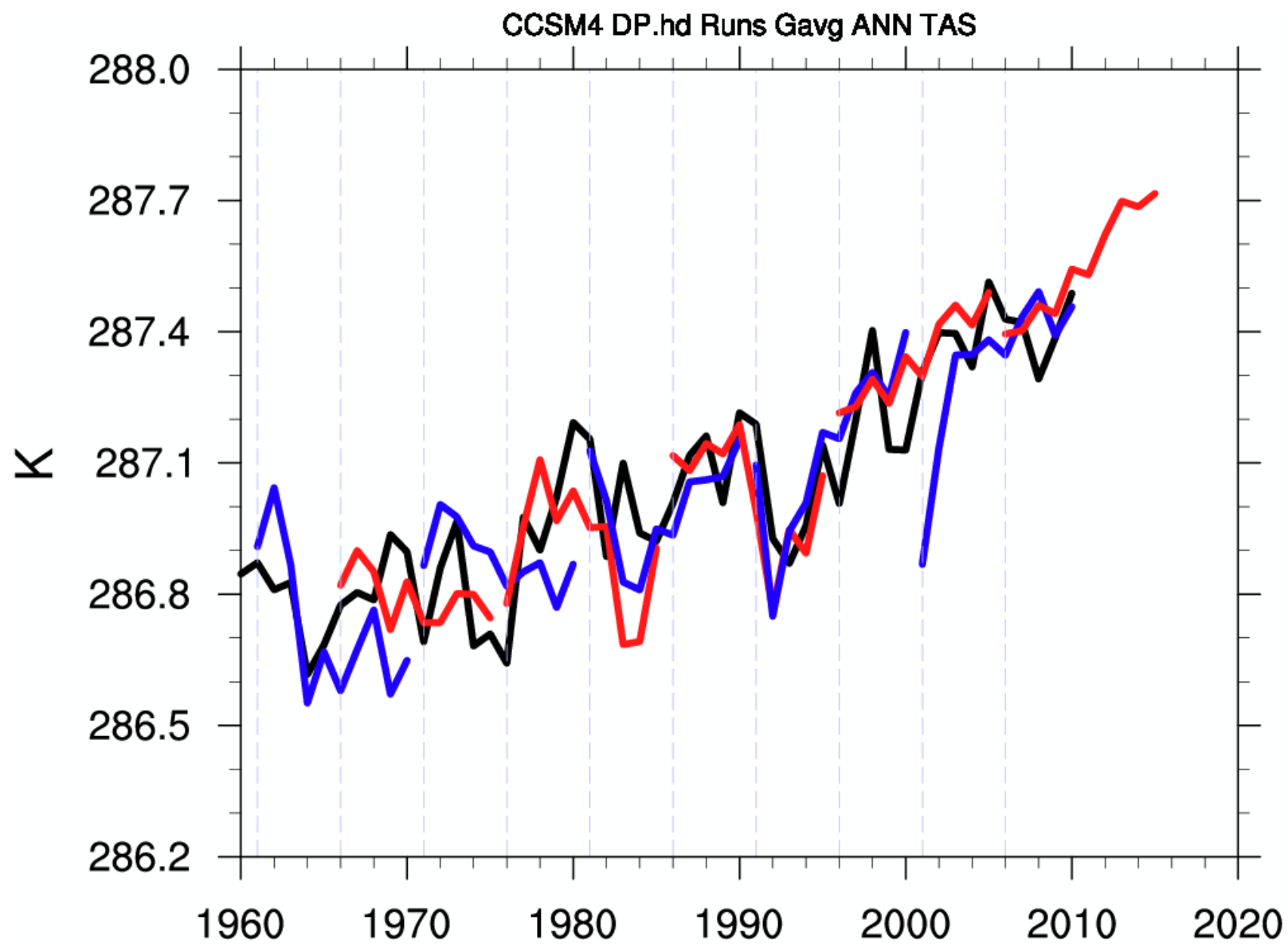
Does a multi-model average out-perform
any individual model for decadal
predictions? (an example)

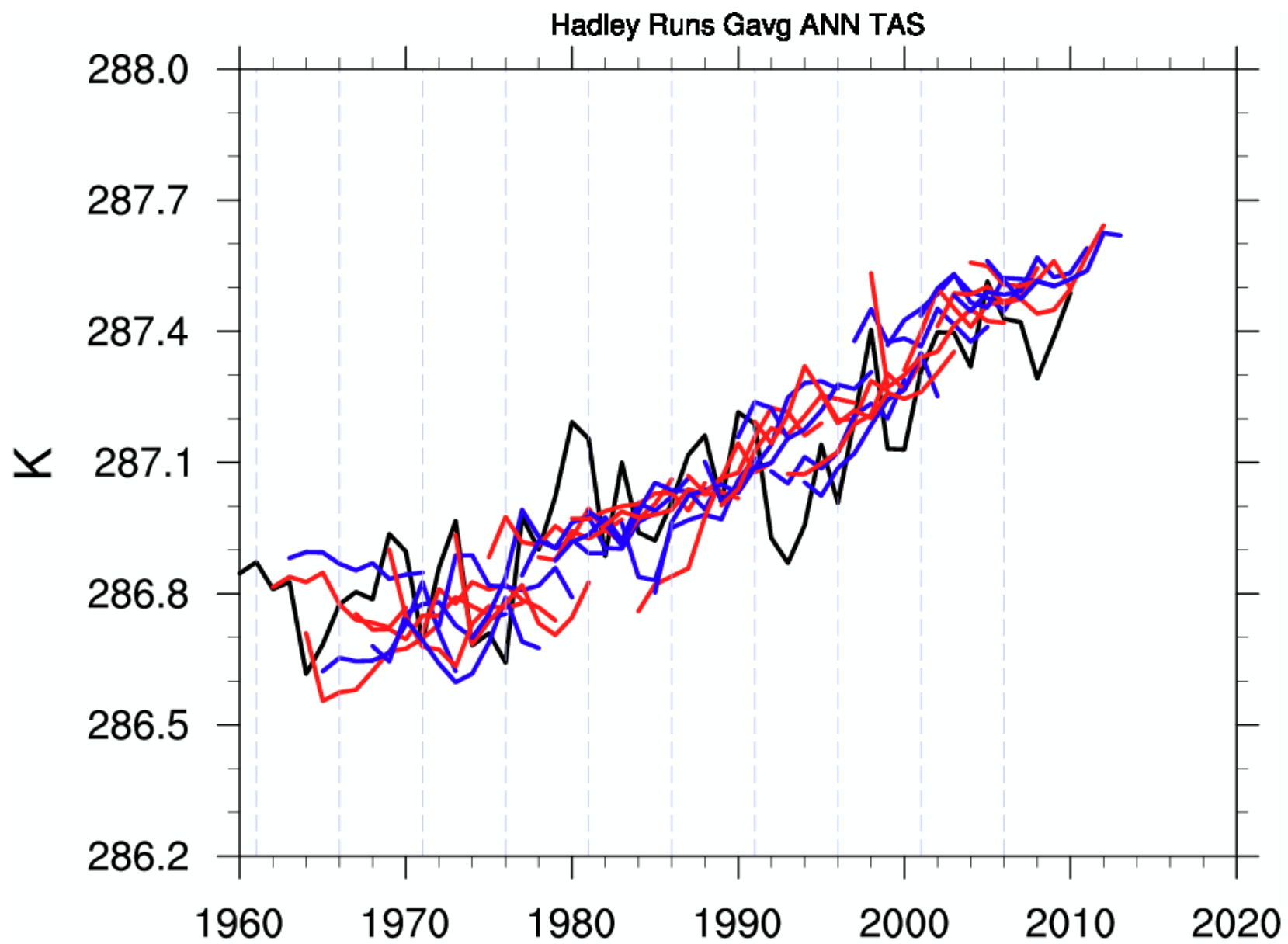
Jerry Meehl and Haiyan Teng

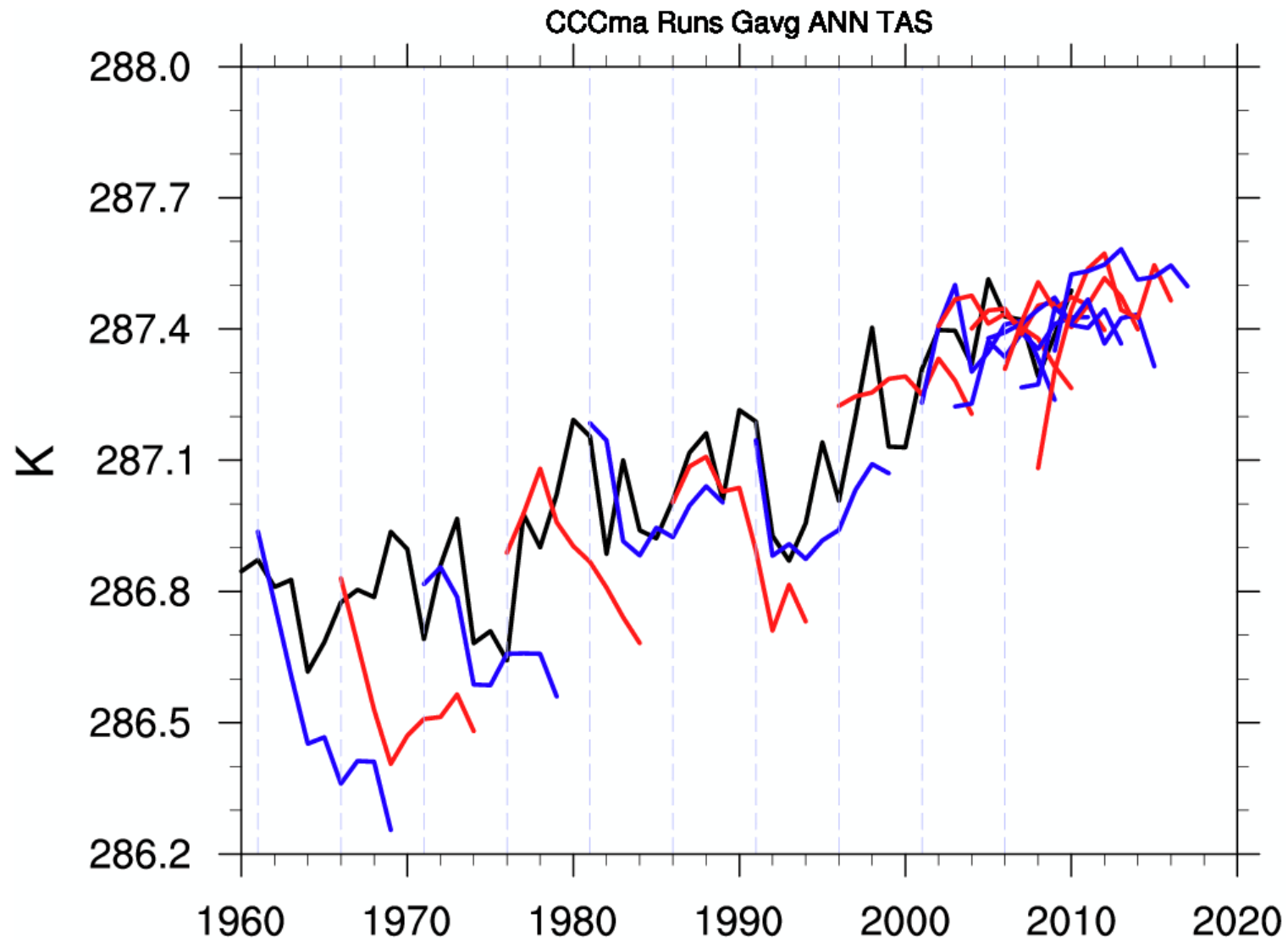
NCAR

	ensembles	Initial years
CCSM4 hindcast ICs	10	10
CCCma	10	17
Hadley depresys	9	41
RSMAS (only TS)	3	10

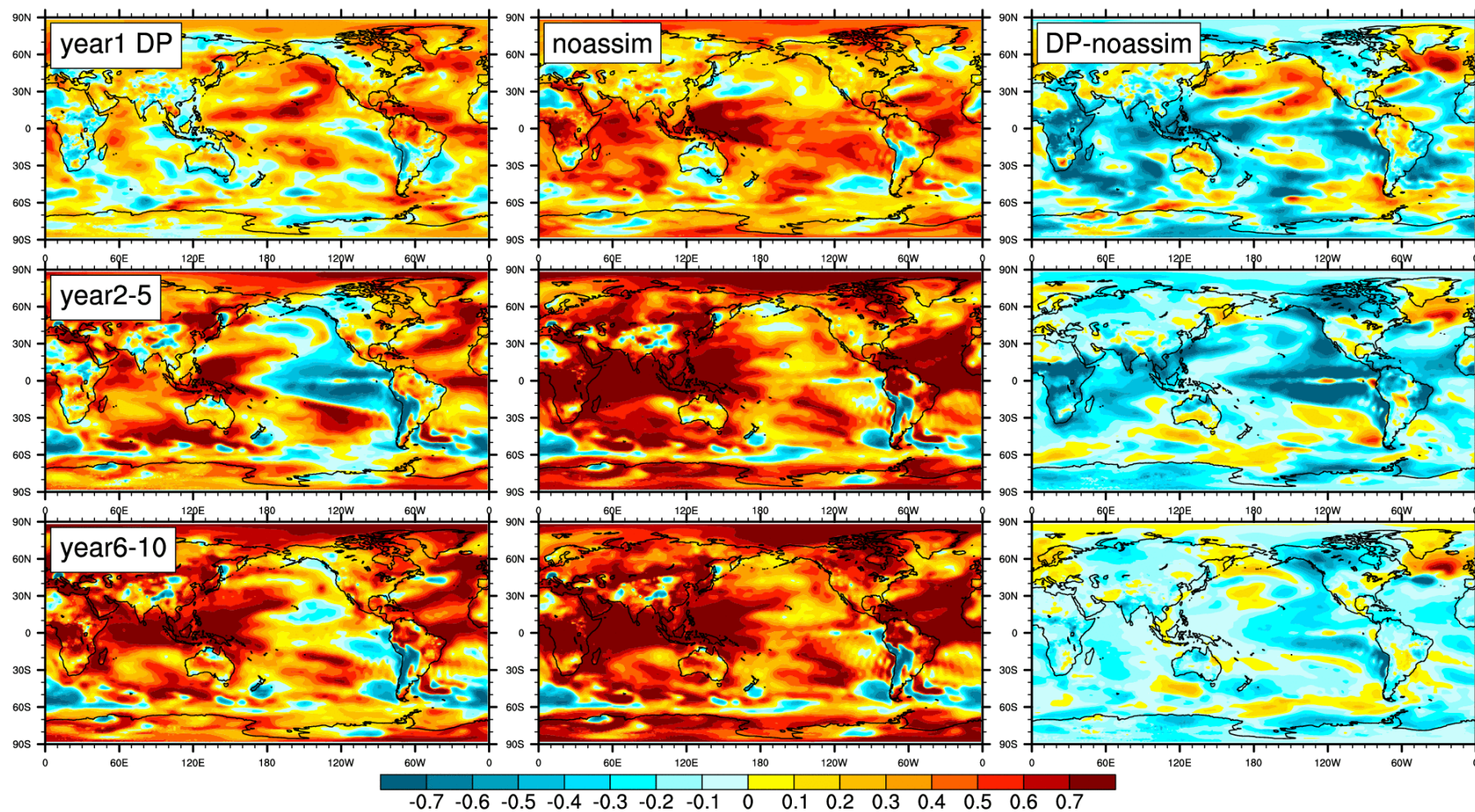




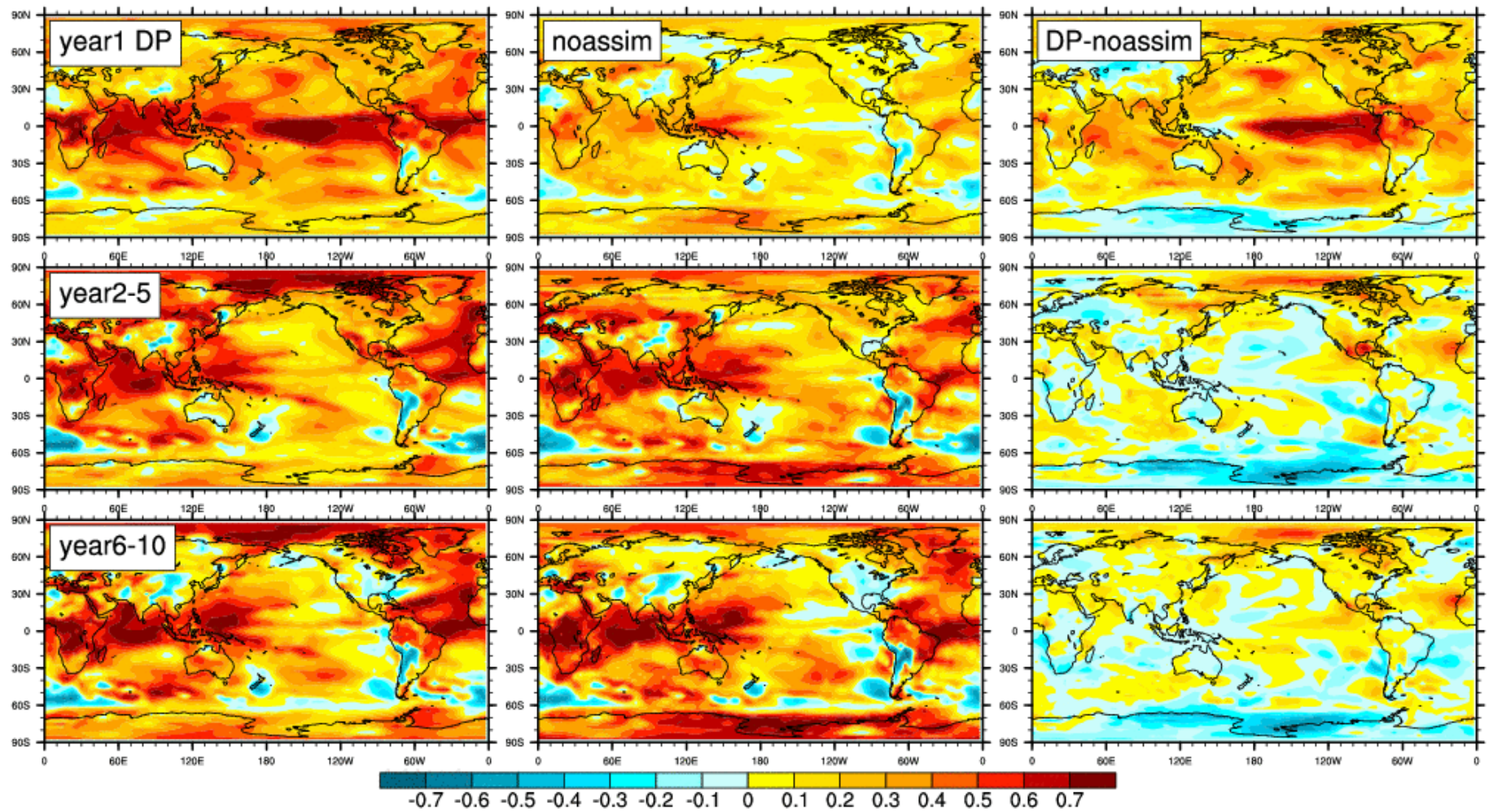




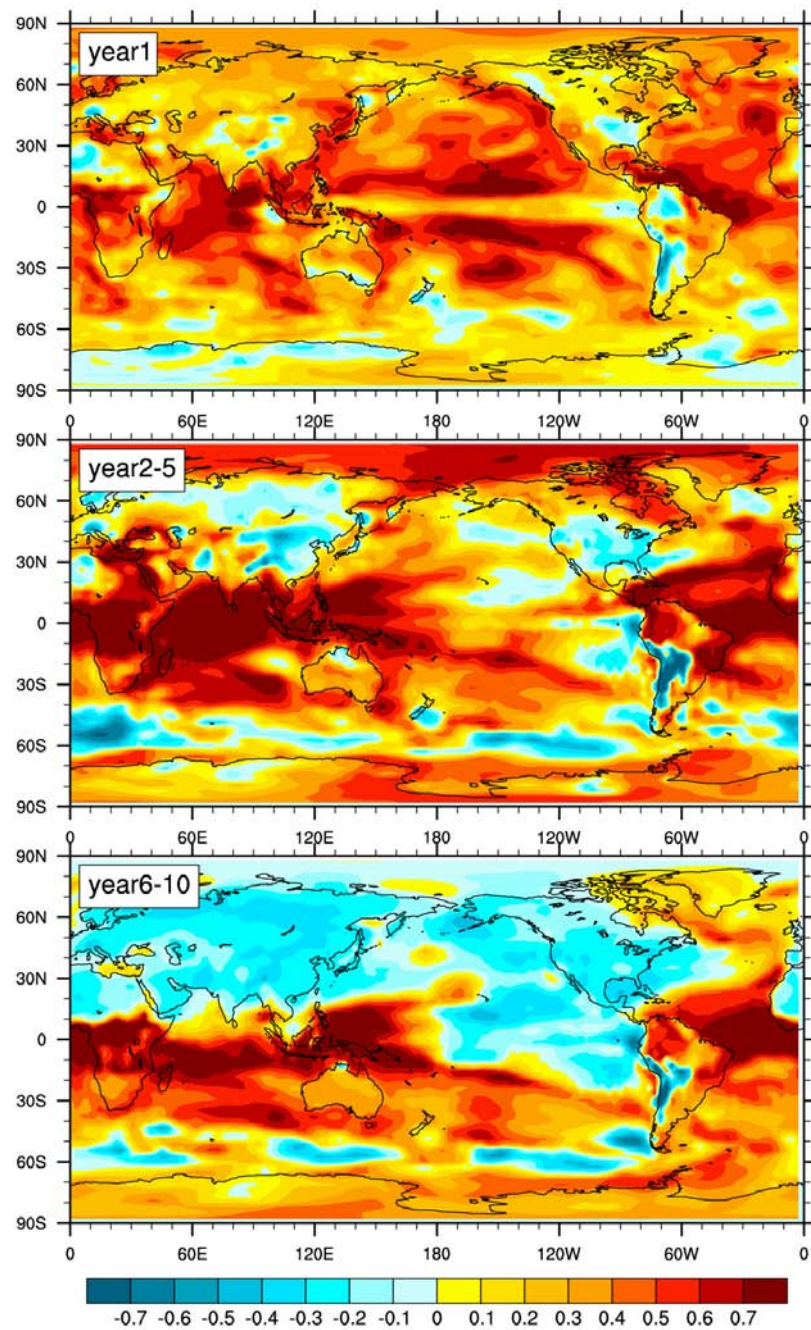
CCSM4 TAS ANN



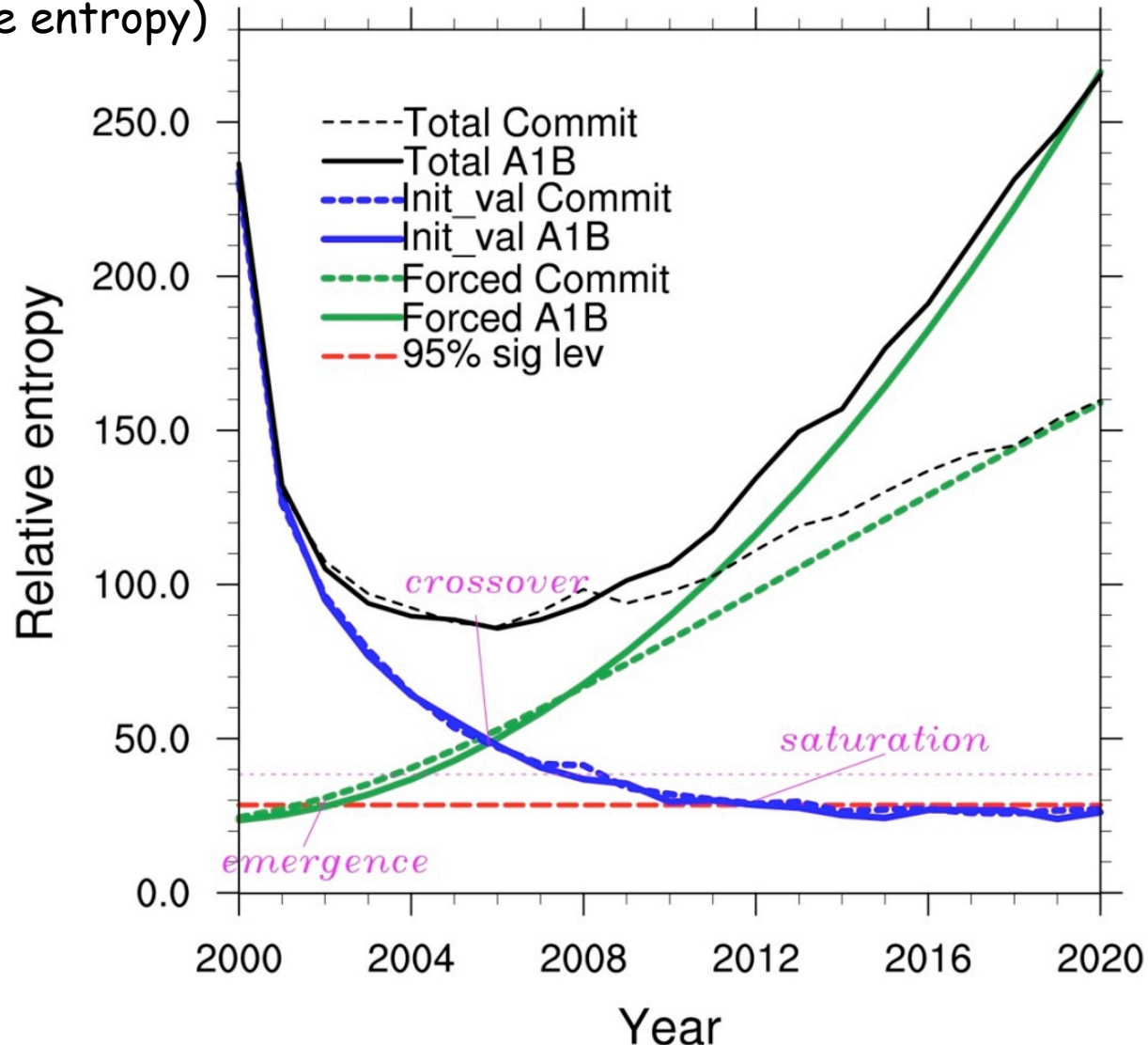
Hadley TAS ANN



CCCma TAS ANN

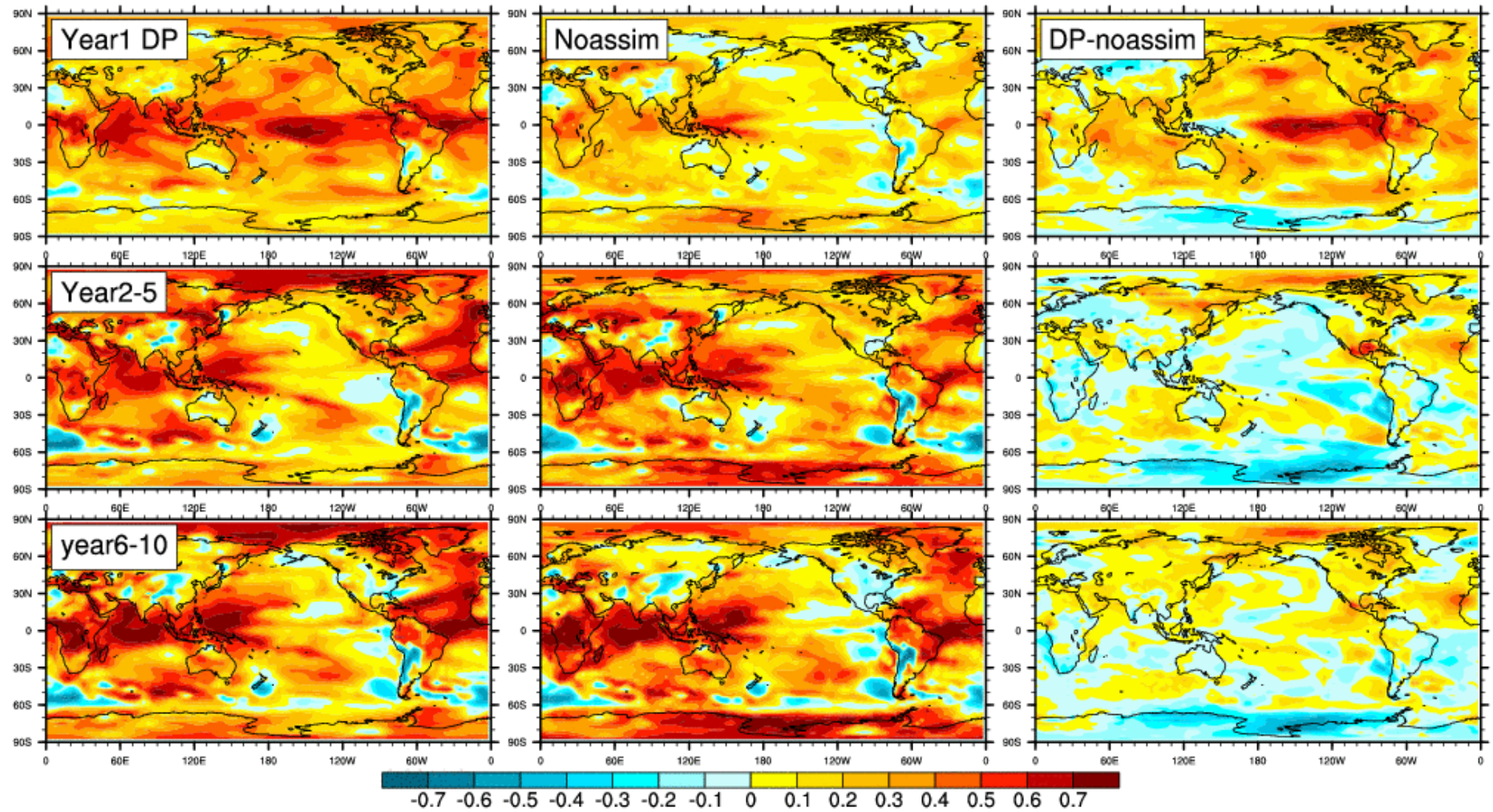


global upper ocean (300m) heat content (from an analysis of 40-member ensemble CCSM3 experiments, as measured by relative entropy)



Branstator, G., and H. Teng, 2010: Two Limits of Initial-Value Decadal Predictability in a CGCM. *J. Climate*, 23, doi: 10.1175/2010JCLI3678.1

CCSM4, Hadley



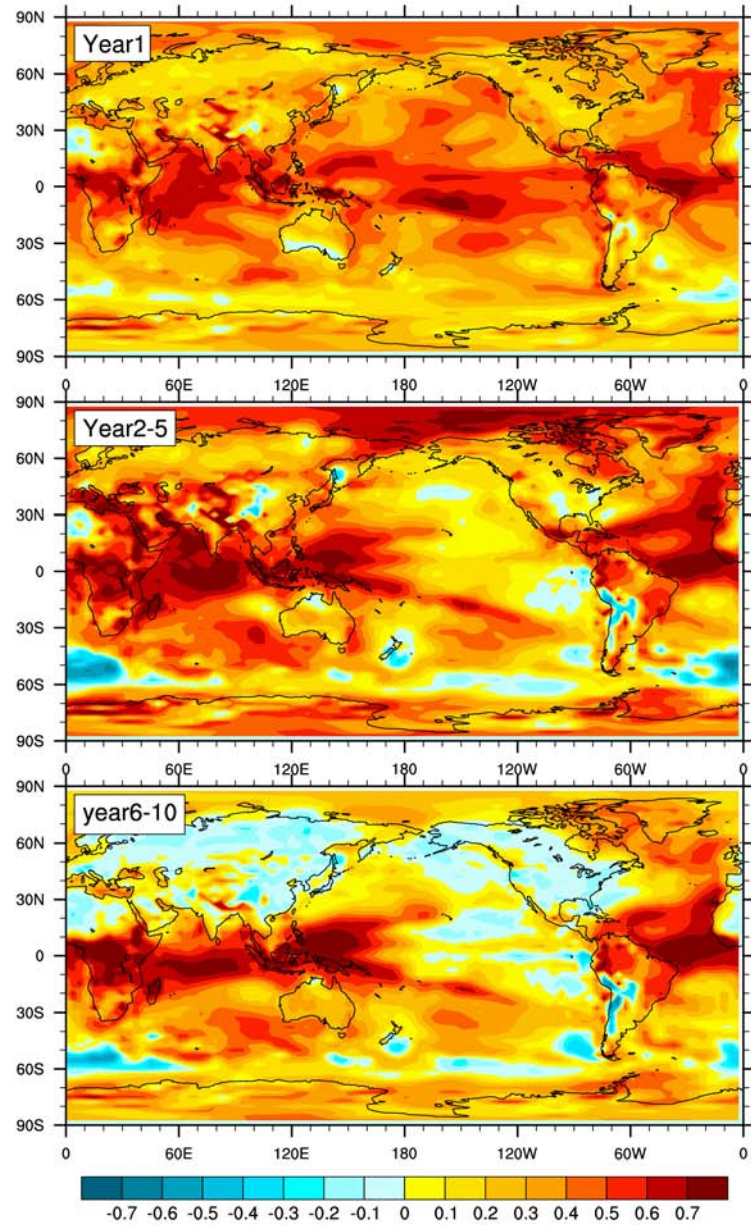
For actual forecast, rely on all sources of skill (forcing, internal variability)

Bias correction must be scrutinized for each model

As skill from initialization degrades, there may be a minimum of multi-model prediction skill around year 5 or so, and then it may come back as forcing becomes more important

How can we best use multi-model data to compute error bars on decadal predictions

CCSM4, Hadley, CCCma



CCSM4, Hadley

