

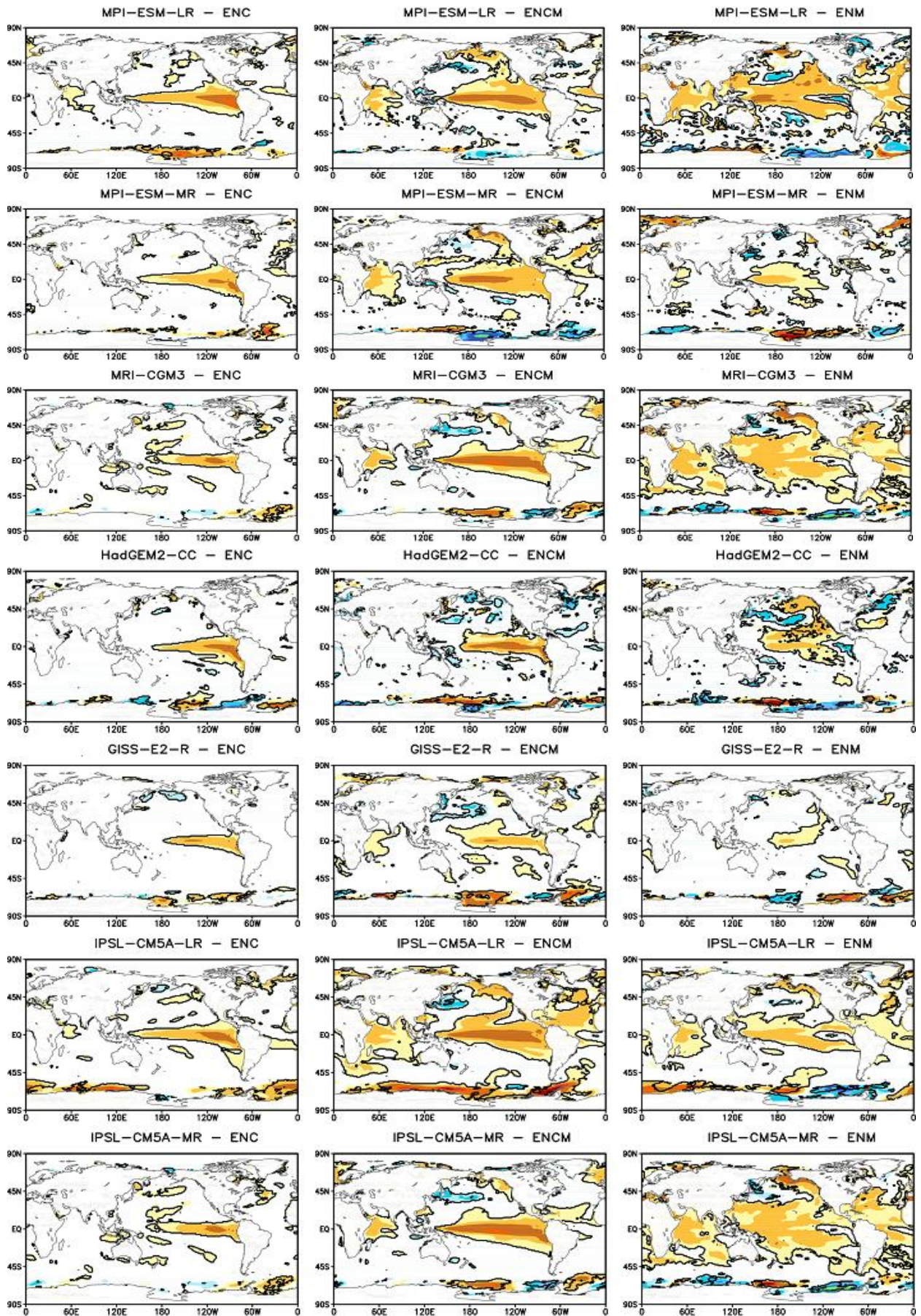
## Supplementary Figures.

**Fig. S1.** EN composites during JJA for ASST ( $^{\circ}\text{C}$ ) for High Top (A) and Low Top (B) models separately [ENC (left), ENCM (middle) and ENM (right)]. Significant regions at 95% level are marked by black colour.

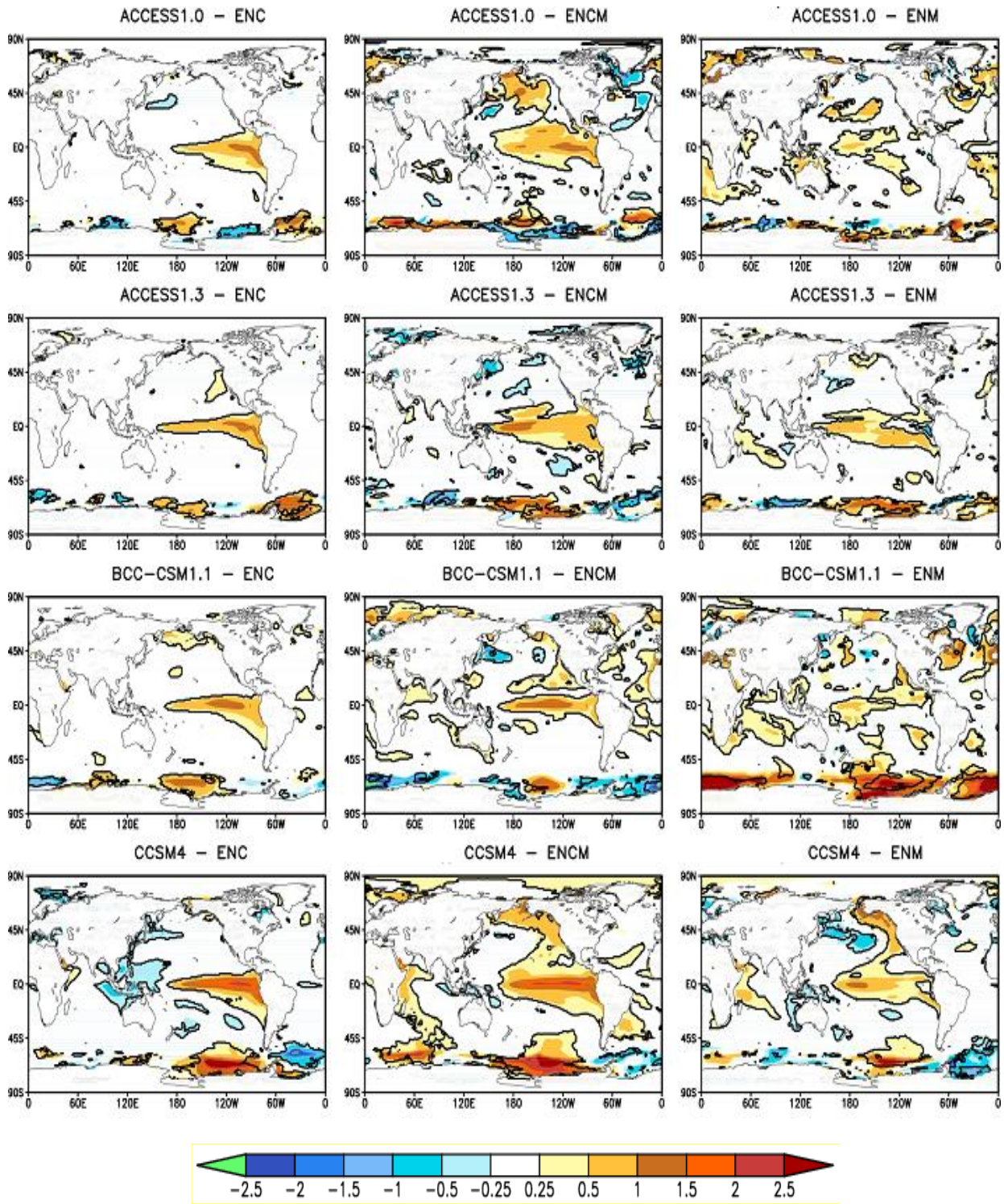
**Fig. S2.** Same as Fig. S1, but for LN composites. Some places are kept blank because there is not a single year for that particular type of composite in those models.

**Supplementary Figures.**

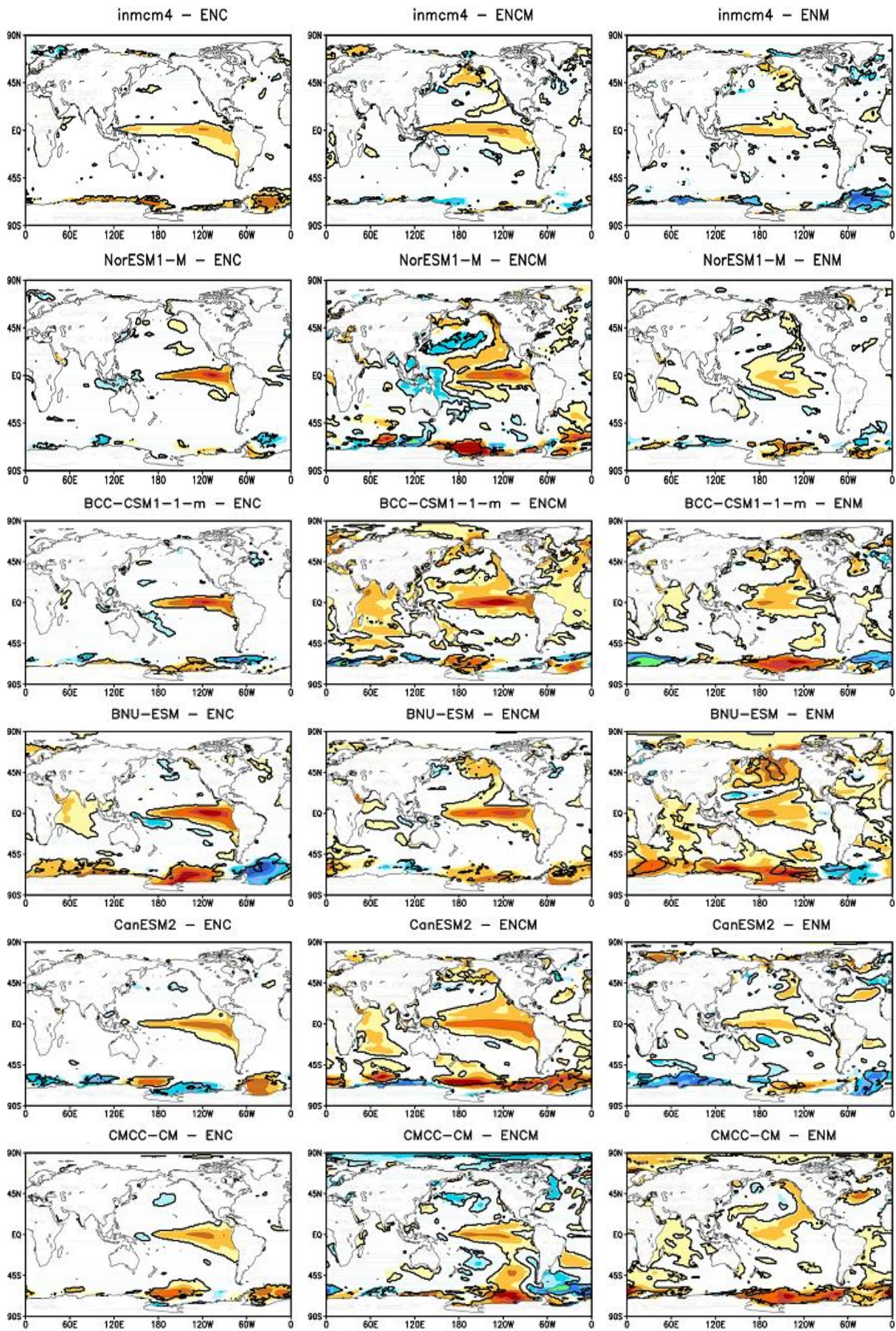
### A) High Top Models



## B) Low Top Models



Cont..



Cont..

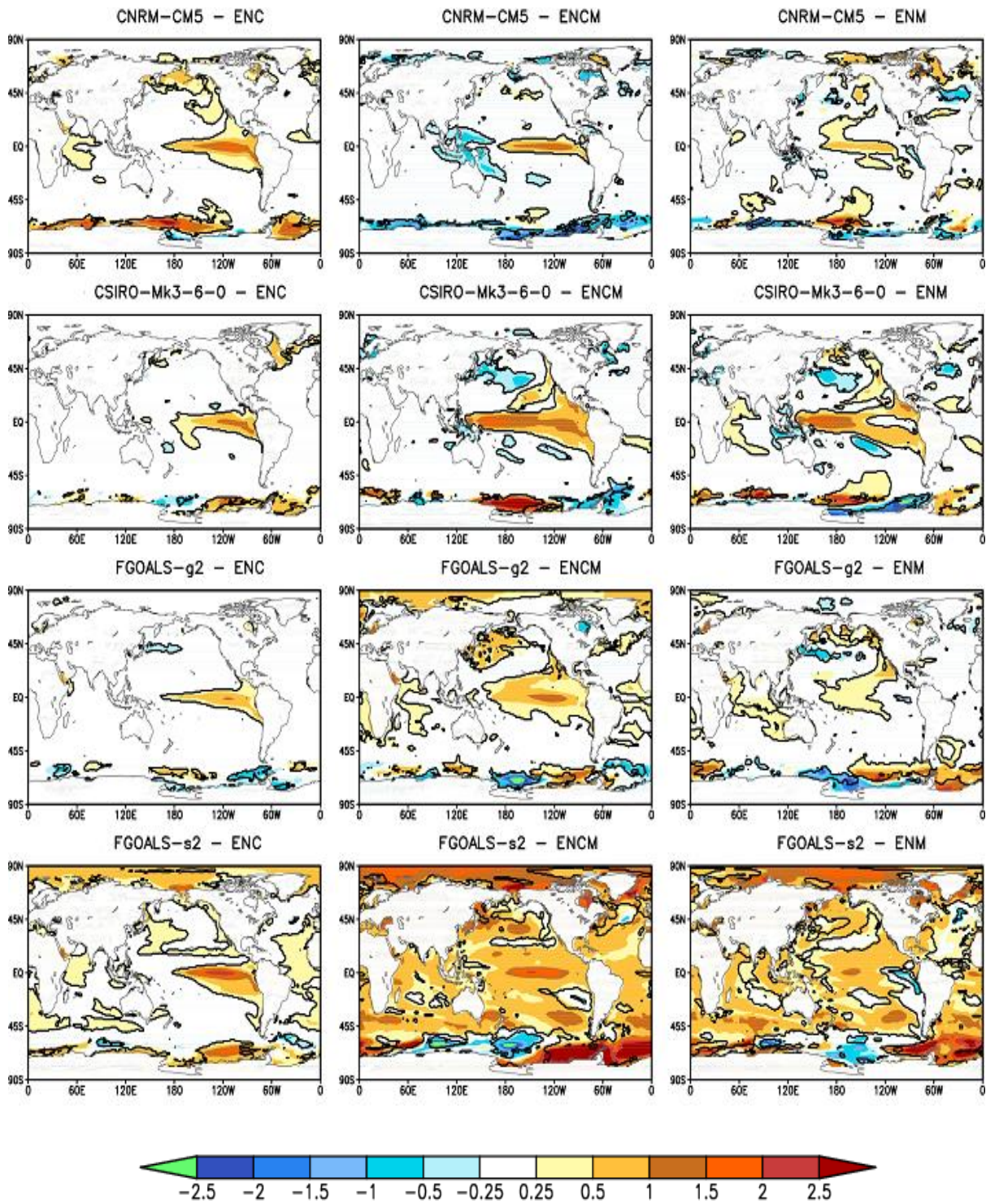
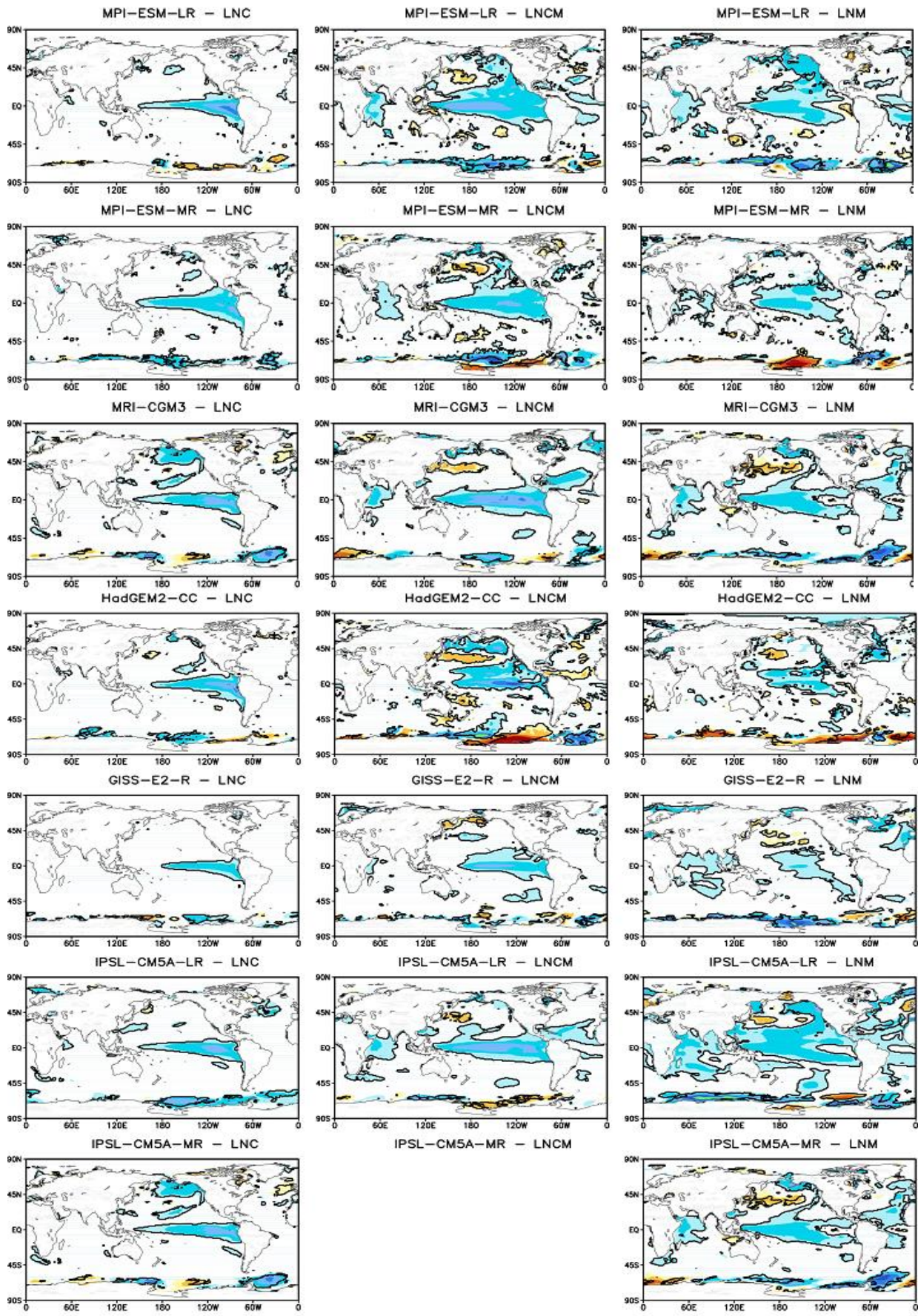
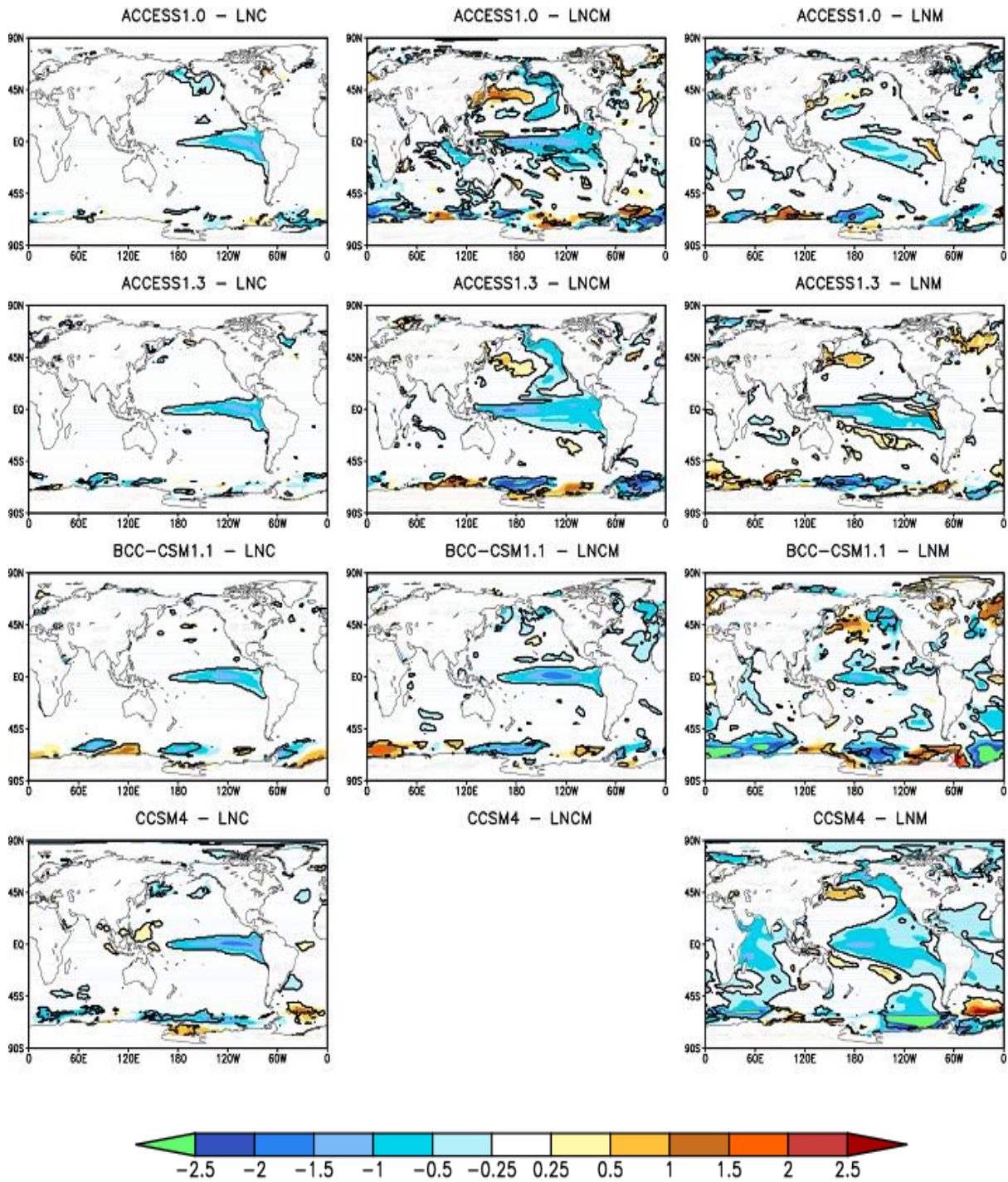


Fig. S1. EN composites during JJA for ASST (°C) for High Top (A) and Low Top (B) models separately [ENC (left), ENCM (middle) and ENM (right)]. Significant regions at 95% level are marked by black colour.

# A) High Top Models

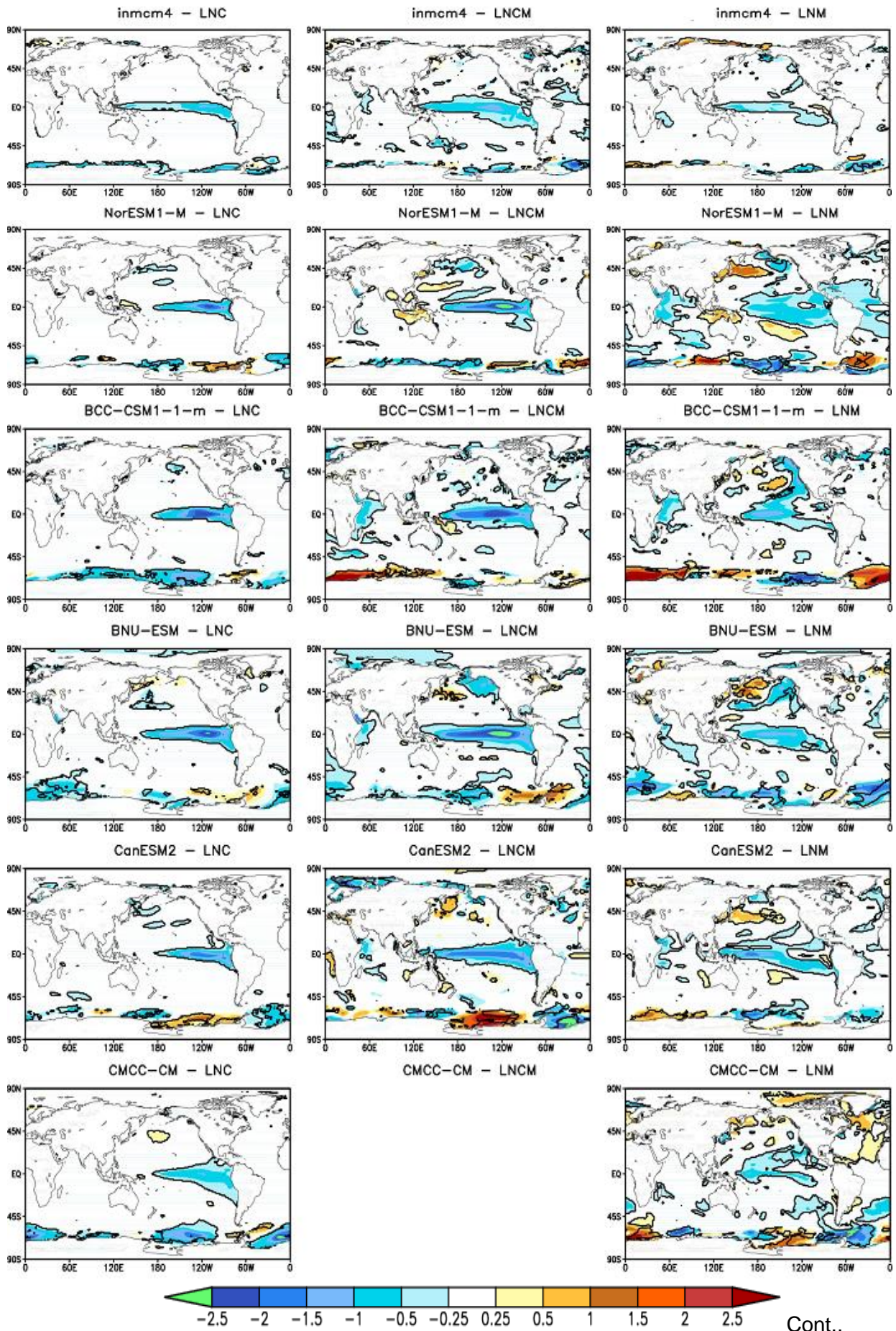


## B) Low Top Models



Cont..





Cont..

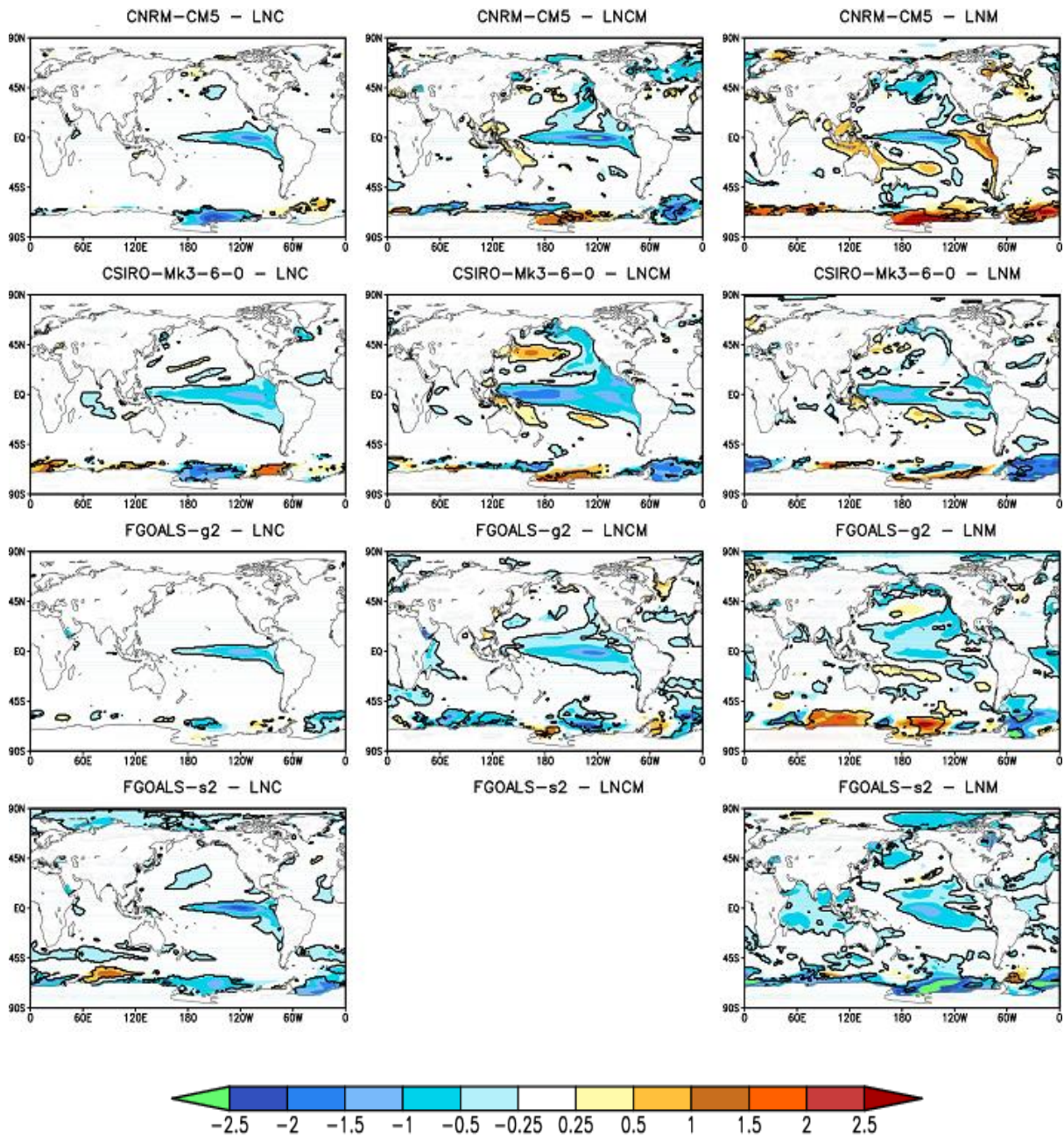


Fig. S2. Same as Fig. S1, but for LN composites. Some places are kept blank because there is not a single year for that particular type of composite in those models.