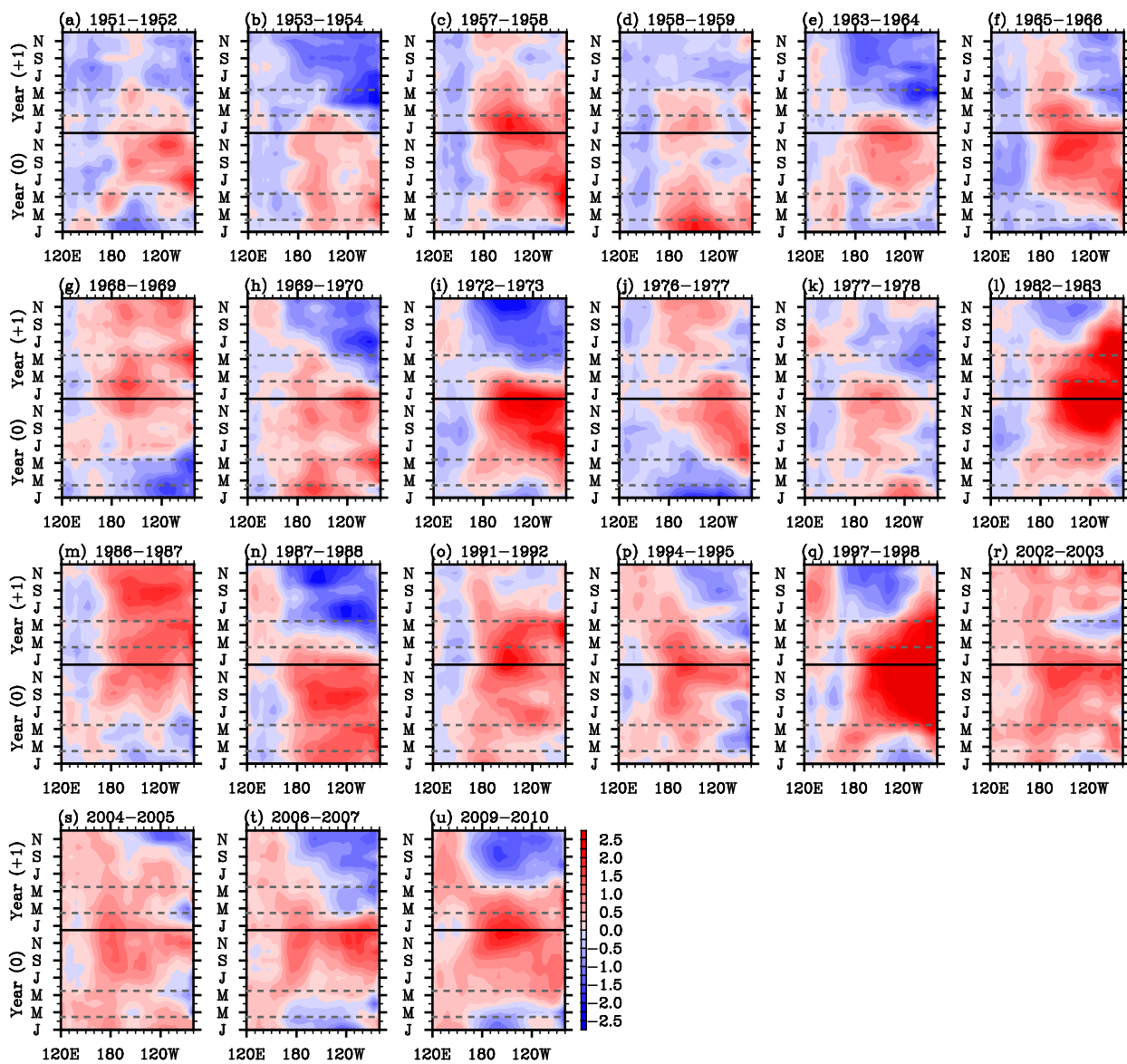
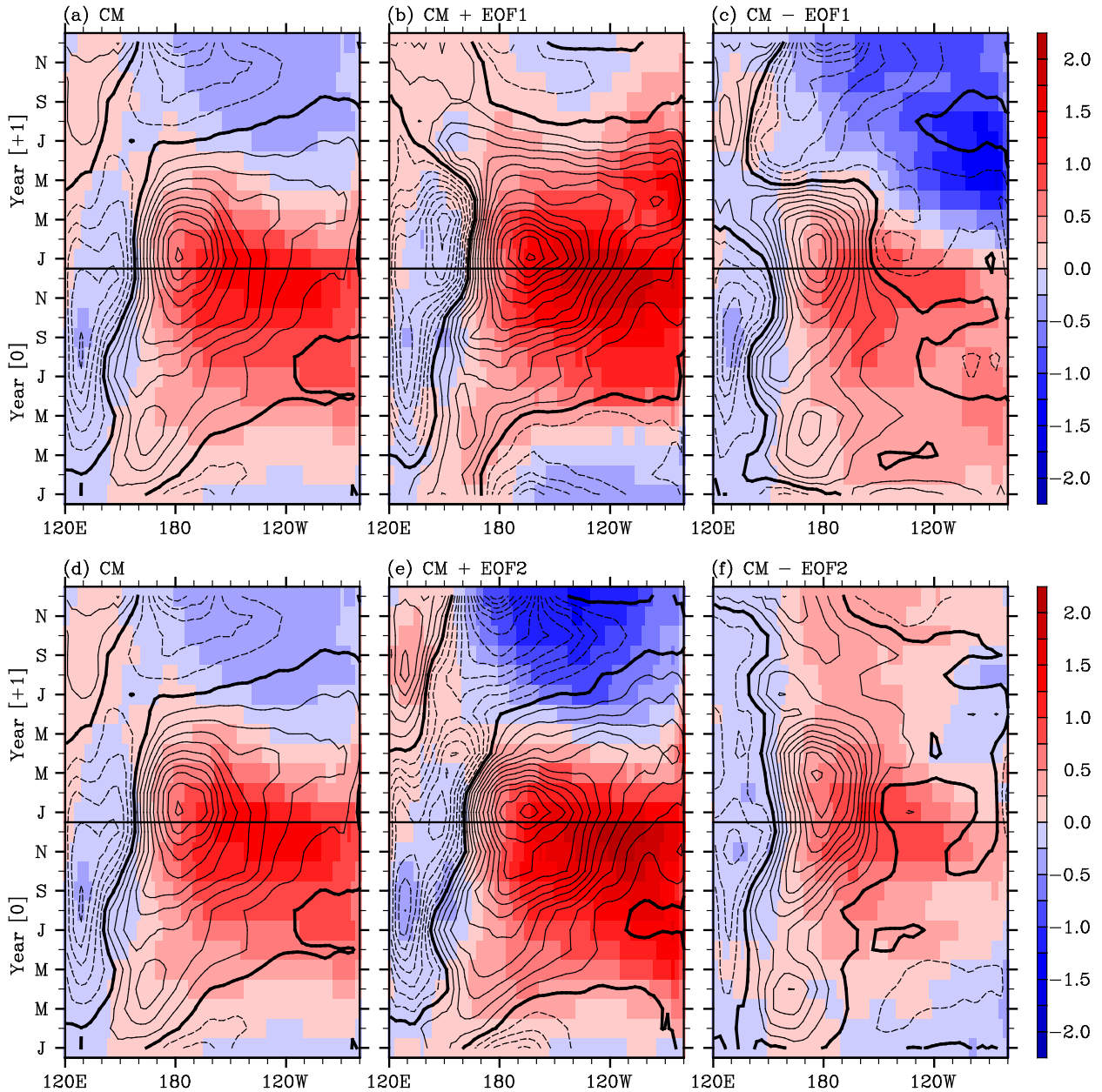


## Equatorial Pacific SST Anomalies during El Ninos



**Figure S1.** Time-longitude plots of the tropical Pacific SST anomalies averaged between  $5^{\circ}\text{S}$  and  $5^{\circ}\text{N}$  for 21 El Niños that occurred during 1949-2013, derived from ERSST3. Units are  $^{\circ}\text{C}$ .

SST and PREC Linked to Two Leading Modes



**Figure S2.** Time-longitude plots of the equatorial Pacific SST (color shade) and rainfall (contour) anomalies averaged between  $5^{\circ}\text{S}$  and  $5^{\circ}\text{N}$ , for (a) CM, (b) CM+EOF1, (c) CM-EOF1, (e) CM+EOF2, and (f) CM-EOF2 of the 21 El Niños during 1949–2013. NOAA’s precipitation reconstruction [Chen et al., 2002] is used to compute the rainfall anomalies. The units are  $^{\circ}\text{C}$  for SST, and  $\text{mm day}^{-1}$  for rainfall.

## References

Chen, M., P. Xie, J. E. Janowiak, and P. A. Arkin (2002), Global land precipitation: A 50-yr monthly analysis based on gauge observations, *J. Hydrometeor.*, 3, 249-266