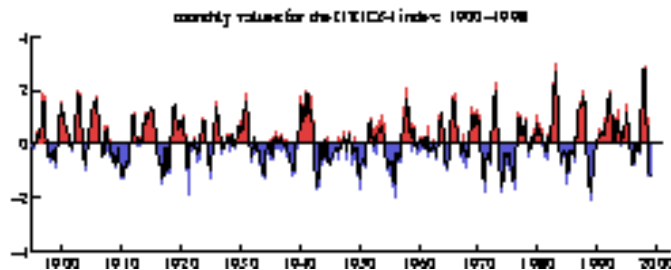
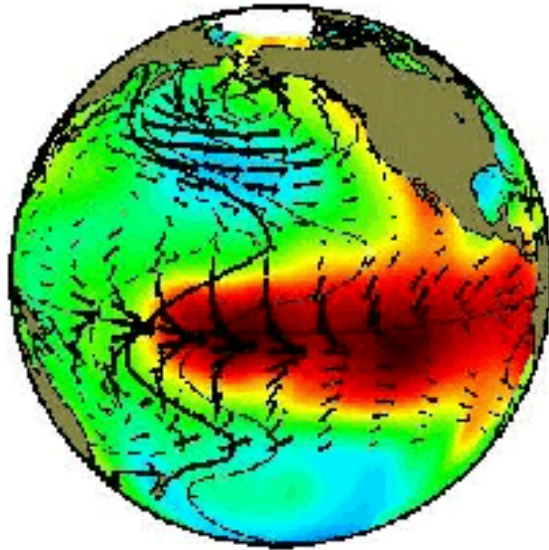


Issues

- ◆ What is the observed decadal change in East Asian monsoon climate system ?
- ◆ Can such a decadal change be considered as natural variability (say, the PDO's impact)?
- ◆ What is the role of increased CO₂ and aerosols?
- ◆ Summary

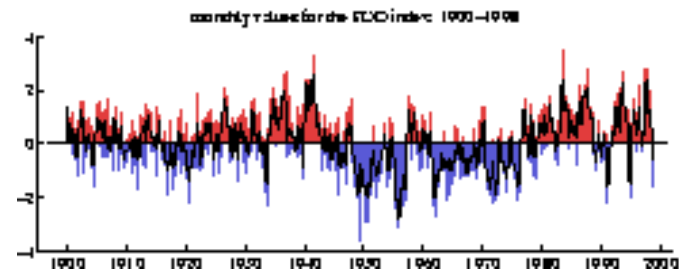
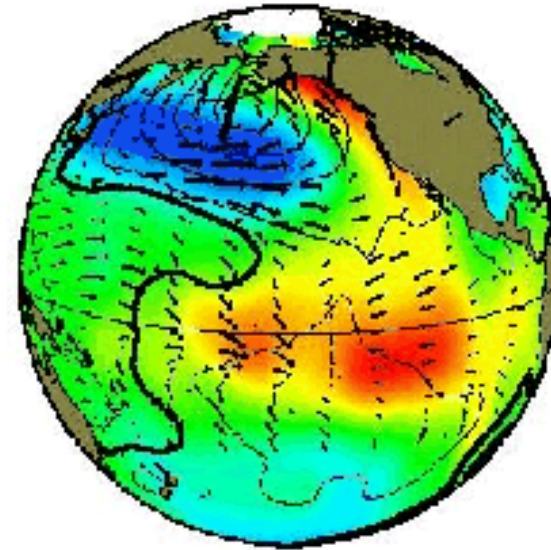
Basin-scale air-sea interaction signatures in the Pacific

El Niño/Southern Oscillation



Interannual Signature

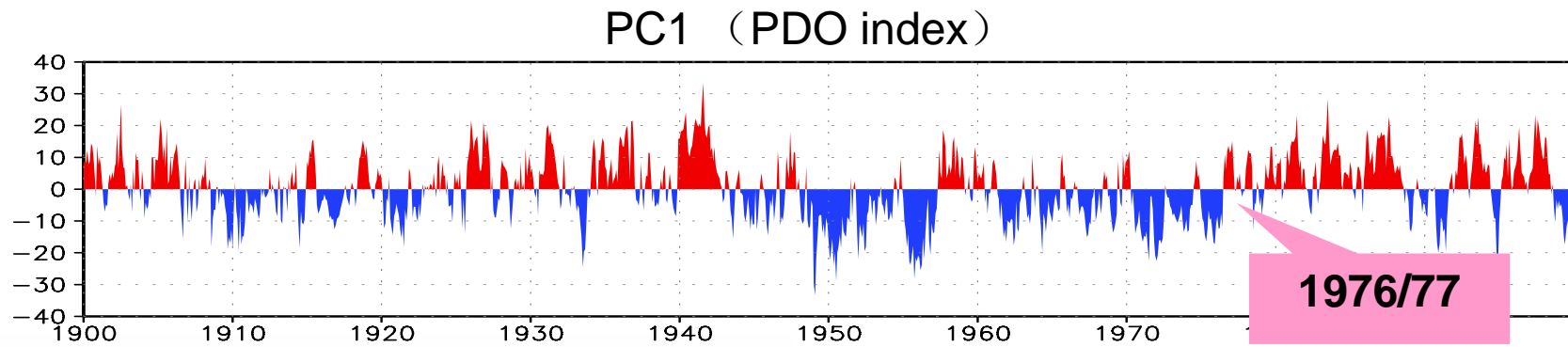
Pacific Decadal Oscillation



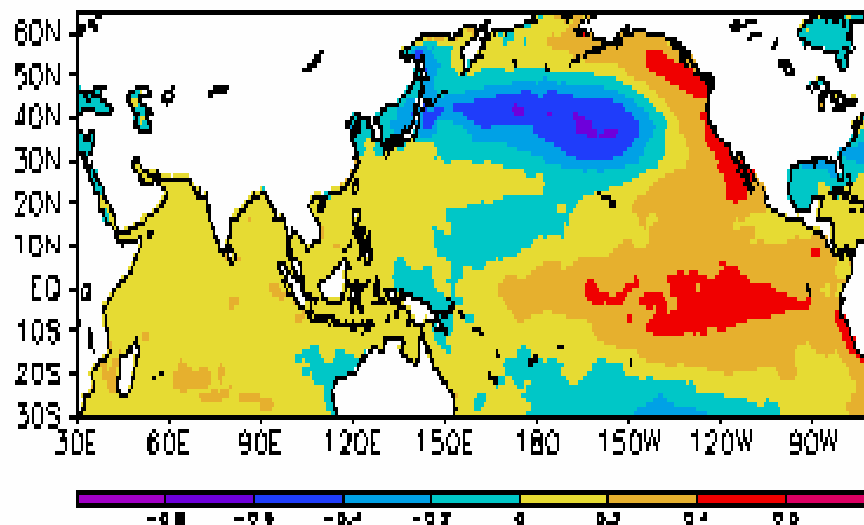
Decadal-to-interdecadal Signature

Basin-scale pattern of PDO

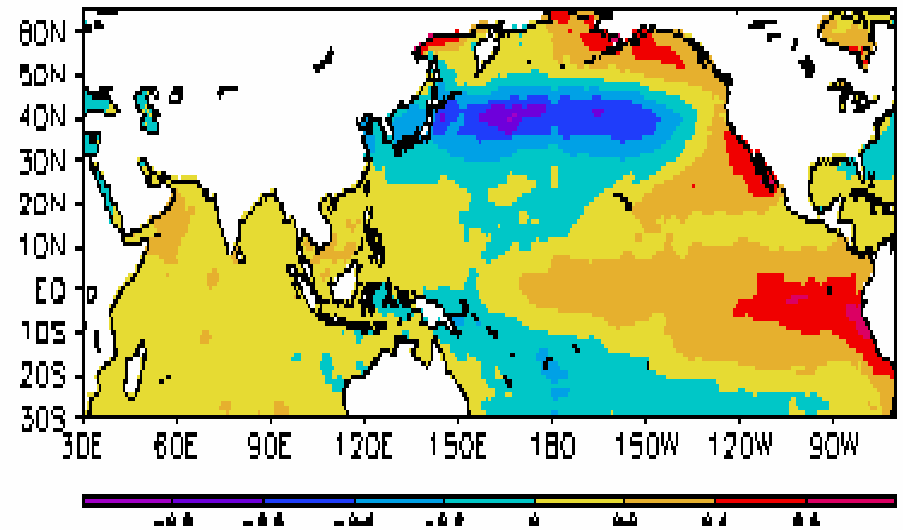
Warming in the tropical Indian and Pacific Oceans,
while cooling in the North Pacific



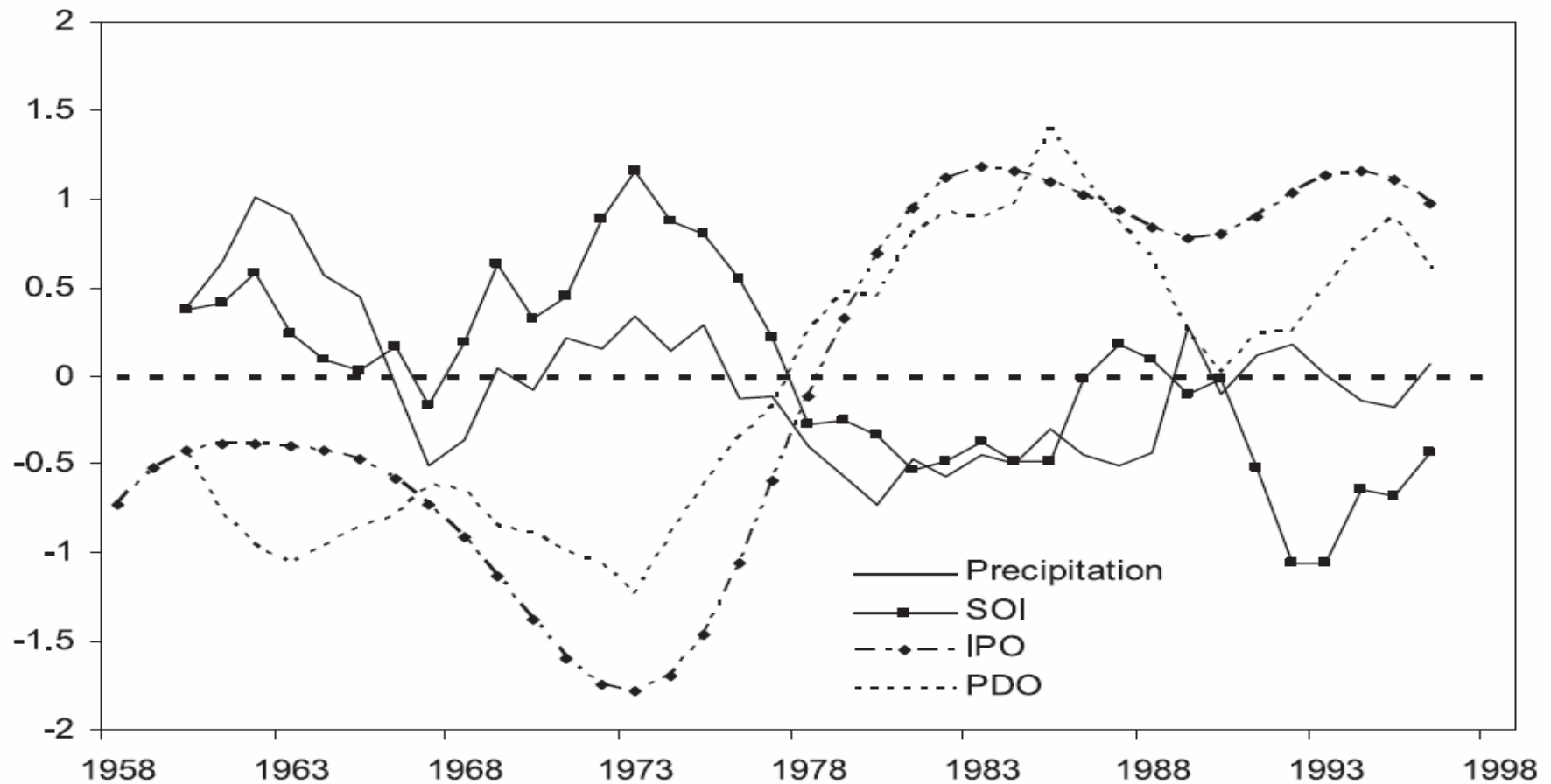
Regression of SSTA on PDO index (DJF)



Regression of SSTA on PDO index (JJA)

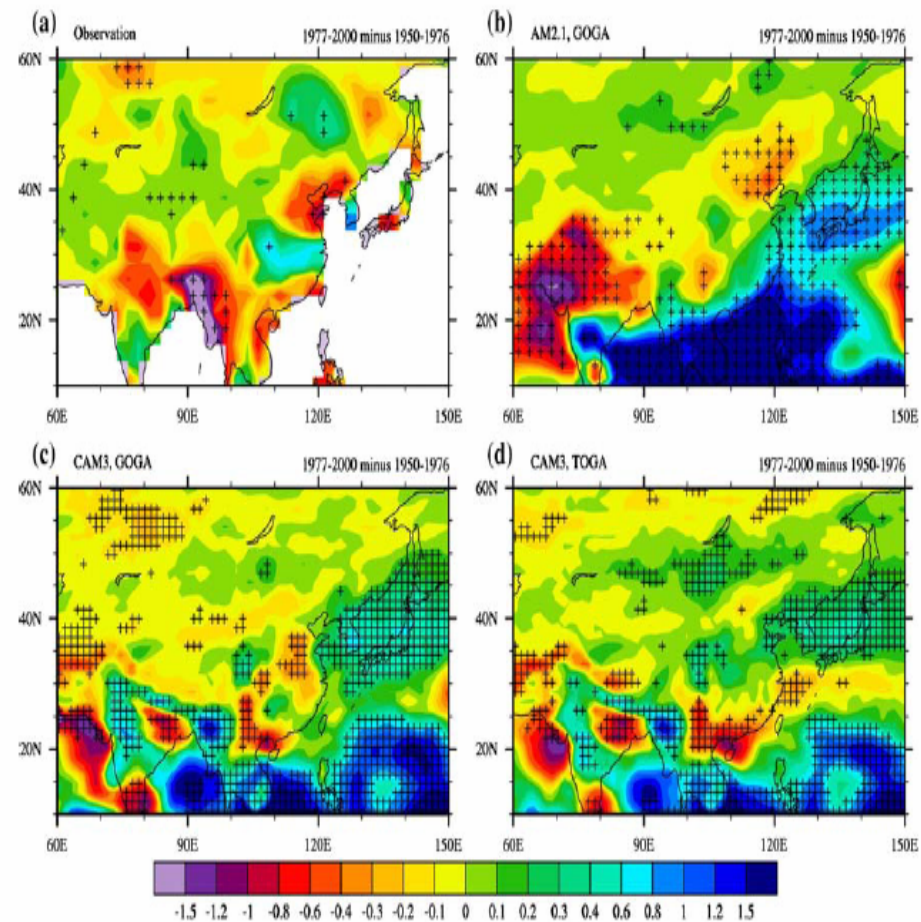
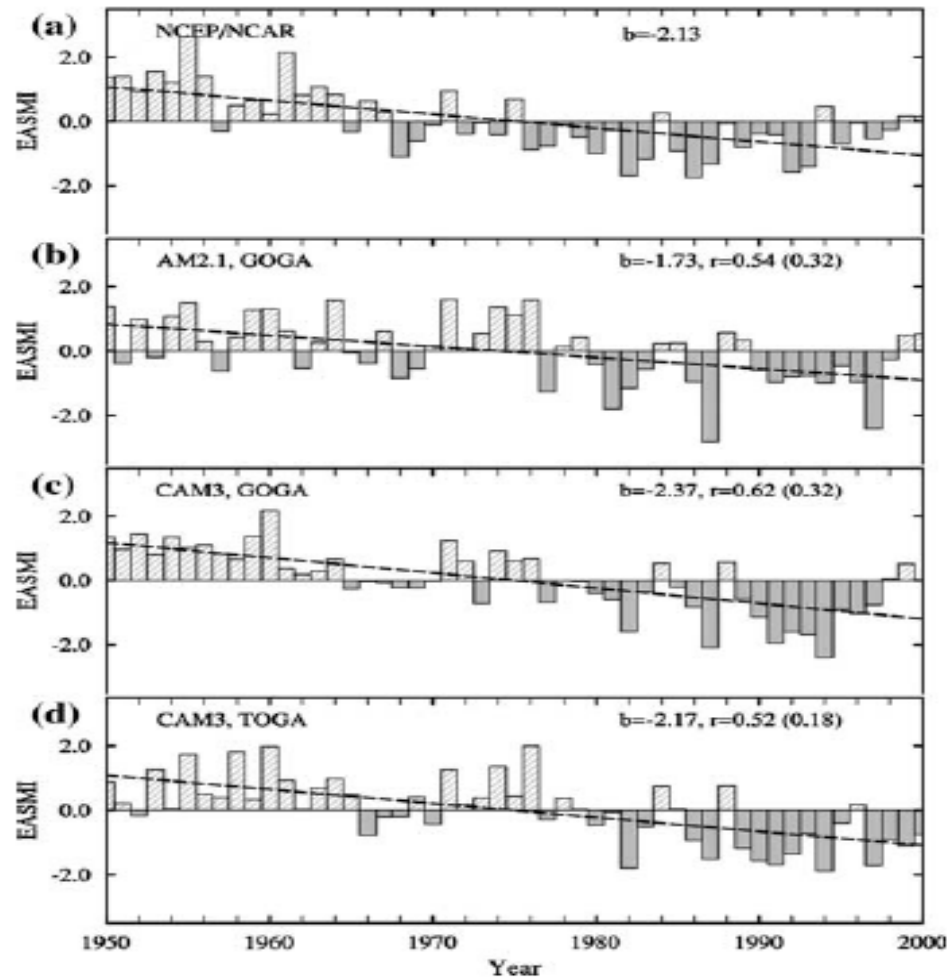


Relationship among precipitation in northern China, SOI, IPO and PDO



Simulated response of EASM to historical SSTs with CAM3/NCAR

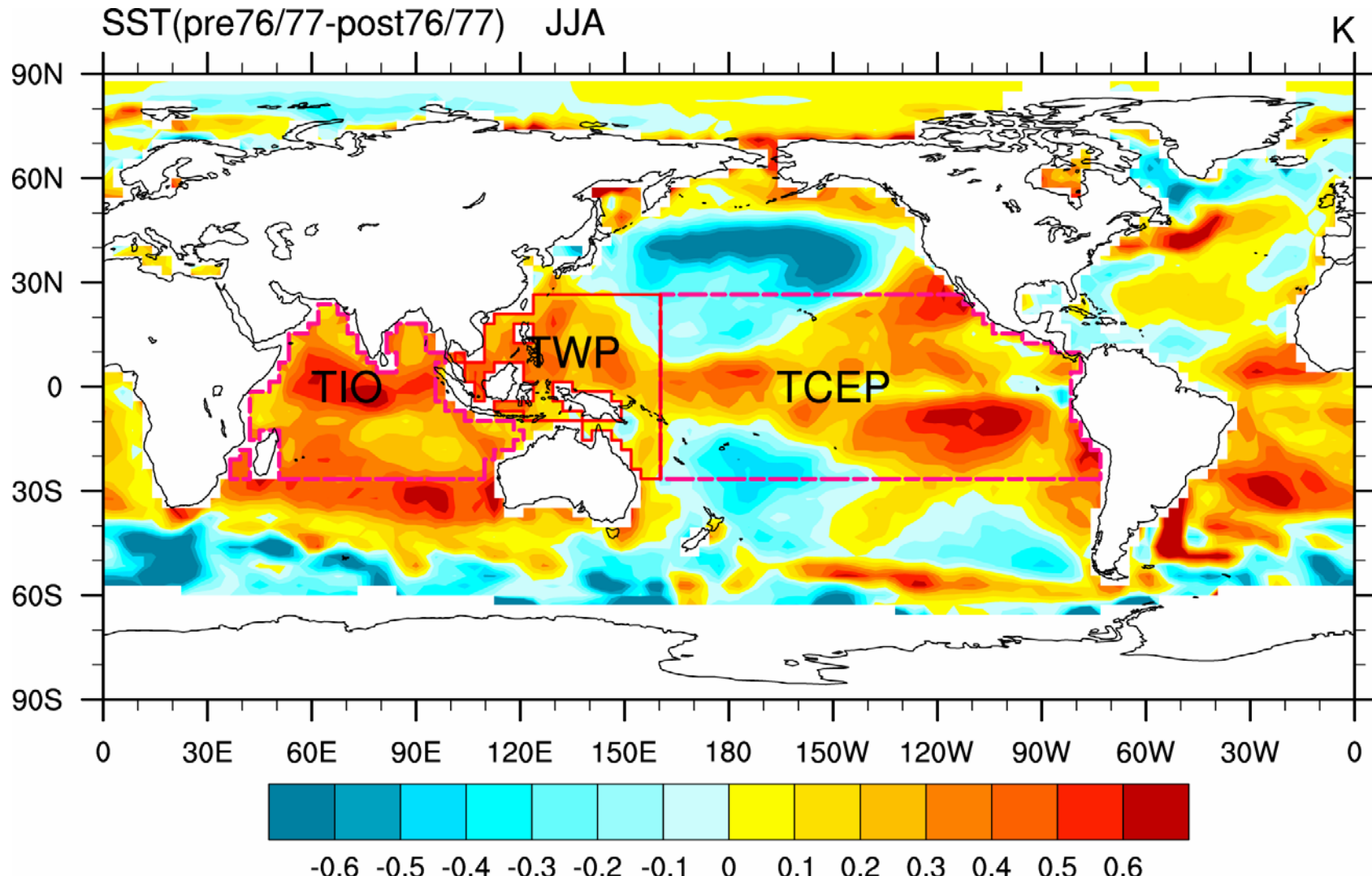
Li, Dai and Zhou, Clim Dyn, 2010



SST anomalies related to EASM's weakening

PDO-related SSTA pattern

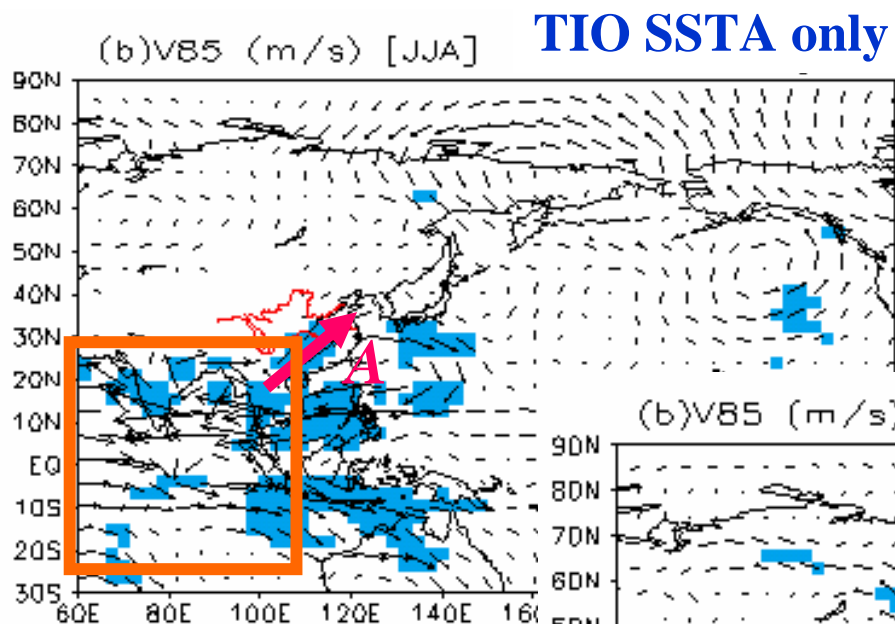
Yang and Zhang, 2011



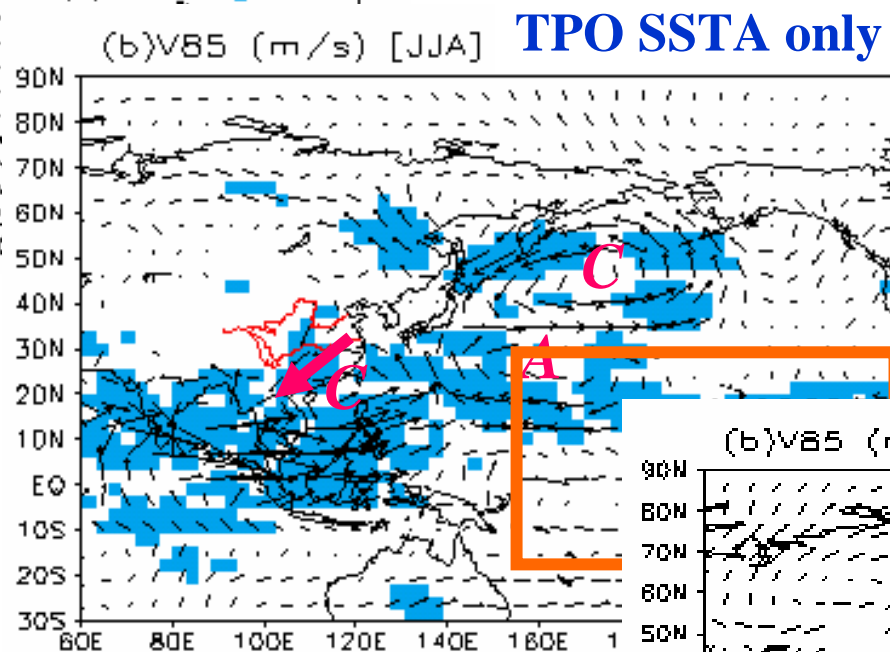
CCM3-simulated decadal change of the EASM with prescribed observed SST for 1949-98

Post-77 minus pre-1977

Yang and Zhang, 2011

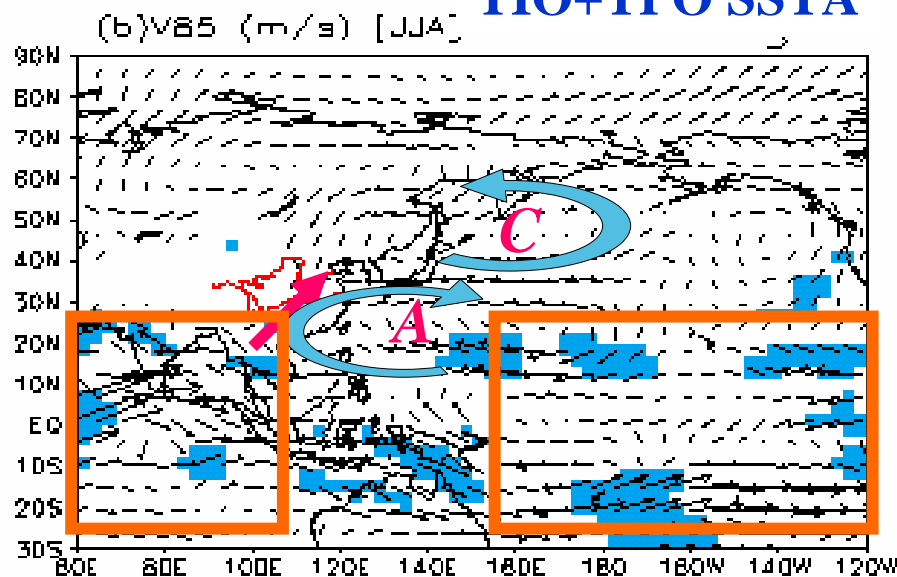


Enhanced EASM



Weakened EASM

TIO+TPO SSTA



Opposite effect of TIO SSTA and TPO SSTA on the EASM