

**P-III-7**

**Regime shift and ENSO event in the global SSTs**

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Significant phase changes in the global SST anomaly field are found five times from the 1910s to the 1990s, which are consistent with the Northern Hemisphere regime shifts already reported by other studies. The regime shifts happened concurrently with the ENSO event. The seasonal evolutions of the regime shifts resemble those corresponding to series of the evolution of ENSO events. After the shifts happened, the spatial patterns of changes at the regime shift persist until the next shift. From the EOF analyses, four dominant variation modes are detected in the global SSTs; the ENSO mode, the trend mode, the North Pacific (NP) mode, and the Arctic Oscillation (AO) mode. At the years when regime shifts occurred, the ENSO mode, the NP mode, and the AO mode show significant concurrent phase reversals.