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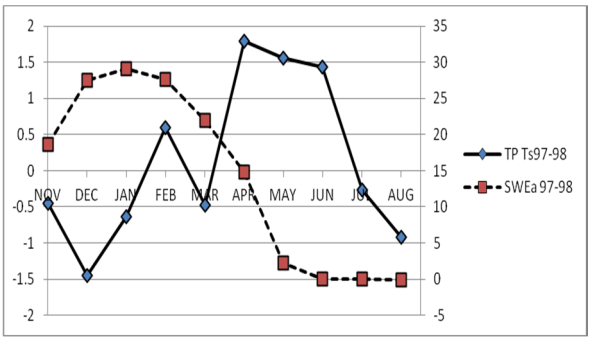

Fig.1 Evolution of the anomalies of the SWE (90–104°E, 27.5–37.5°N) and surface temperature in TP from November in 1997 to the next August. The left (right) y-coordinate indicates scale K for the surface temperature (scale mm for SWE).

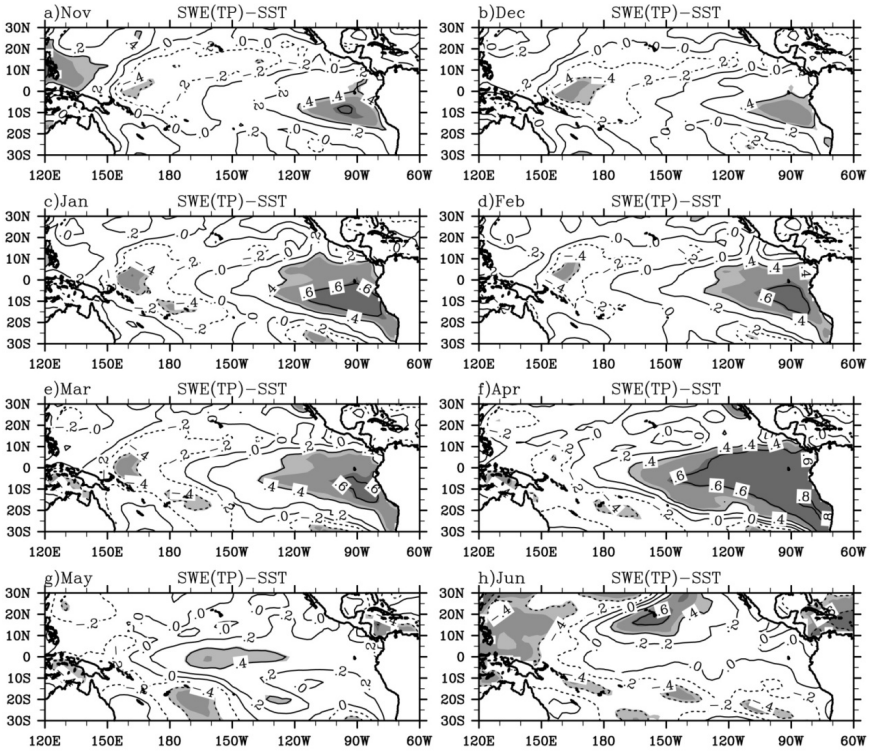

Fig. 2 The correlations between SWE from November to next June and the SST in the November (1987–2005). Shaded areas indicate the confidence level over 95%.

- There were significantly positive correlations between the snow water equivalent (SWE) over the Tibetan Plateau (TP) from November to next April and sea surface temperature (SST) in the Eastern Equatorial Pacific (Fig. 2).
- SST in Eastern Equatorial Pacific in November is most significantly correlated with the TP-SWE in next April, which suggests an accumulative effect of the ENSO on the TP snow cover.
- Preceding El Niño conditions tended to be associated with increasing TP surface temperature in May and there were significant positive correlations between SWE in April and TP surface temperature in May and June (e.g. Fig. 1).
- A plausible mechanism based on the relation of ENSO-TP thermal condition has been proposed. The mechanism explained the direct and indirect effects of ENSO on the TP thermal condition and role that the seasonal progress can play in this relation.