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EL NIÑO SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC ADVISORY 88/1
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In many regions of the equatorial Pacific positive sea surface temperature (SST) anomalies have decreased from the peak values observed during the August-October 1987 period. However, the SST anomalies in this region for December generally remained greater than those observed one year ago. Very warm water (>30°C) continued to be observed near the date line centered at 5°S. Since September, the area of warmest water has expanded and shifted westward and southward. In December this region experienced an increase in cloudiness due to enhanced convective activity. Also, sea level pressure was once again above normal at Darwin and below normal at Tahiti resulting in a negative value of the Southern Oscillation Index (-0.7). The equatorial Pacific 850 mb zonal wind indices, however, were near zero in all three regions indicating near normal zonal winds.

Other features of the tropical tropospheric circulation pattern, which normally accompany ENSO episodes, weakened noticeably in December. The strong equatorial easterly anomalies in the upper troposphere (200 mb) decreased to near zero. This change was accompanied by a substantial weakening in the strength of the anticyclonic anomaly couplet that has been observed in the central equatorial Pacific since December 1986. The extent of subtropical westerly anomalies in the Southern Hemisphere during December was greatly reduced from previous months.

The ocean general circulation model being run at CAC indicated a continuation of the anomalous patterns in oceanic thermocline depth and sea level, although there was a slight trend towards normal in both the western and eastern portions of the basin. The thermocline was shallower (deeper) and sea level was lower (higher) than normal in the western (eastern) equatorial Pacific.


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