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EL NINO SOUTHERN OSCILLATION (ENSO) ADVISORY 87/2

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Consistent with the eastward progression of the deepening of the thermocline in the equatorial Pacific, noted in Advisory 87/1, sea surface temperature anomalies increased substantially along the South American coast during January 1987. For the first time during the current ENSO warm episode the SST index for the Niño 1+2 region (Ø to 10° S along the west coast of South America) has exceeded 1° C (January value 1.3° C). The SST indices in the central and eastern equatorial Pacific also increased in January.

Atmospheric convection, as inferred from the satellite derived outgoing longwave radiation data, continues to be enhanced on the equator in the region from the date line eastward to 150°W. Weaker than normal convection is found to the west of this region from the date line to the northeast coast of Australia. This pattern represents an eastward shift of equatorial convection and the South Pacific Convergence Zone to the region of anomalously warm water in the central Pacific.

The Southern Oscillation Index continues to be negative although the January value is higher than the values observed during the past two months primarily due to a drop in the sea level pressure anomaly at Darwin, Australia. The equatorial zonal wind indices increased during January to near zero indicating that the zonal winds throughout the equatorial Pacific have returned to near normal. However, these indices have shown considerable month-to-month variability in the past and an individual monthly value should be viewed with caution.

The pattern of enhanced convection in the central equatorial Pacific and positive SST anomalies throughout the central and eastern equatorial Pacific indicates that we are in the mature stage in the evolution of an ENSO warm episode.

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