## Abstract View

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# On the Influence of Pacific Ocean Temperatures on Atmospheric Carbon Dioxide Concentration at Ocean Weather Station P

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ABSTRACT

The study presents an analysis of atmospheric $CO_2$ measurements at Ocean Weather Station P (50°N, 145°W) and sea surface temperatures over the North Pacific for the period 1974–78. The results show that during 1976 and 1977 sea surface temperatures over the Northwest Pacific were significantly below normal and, coincidentally, atmospheric $CO_2$ levels at Station P also were lower than expected. This indirect evidence does not prove but suggests that the Northwest Pacific (40–45°N) may have been a major sink for atmospheric $CO_2$ during 1976 and 1977. However, a specific mechanism for this sink is not established. Broecker *et al*. (1979) presented direct evidence of a $C0_2$ sink at 40°N, 180°W in late 1973 and early 1974. In the future direct observations of pertinent parameters obtained at appropriate times could establish the significance of the North Pacific as a sink for atmospheric $C0_2$ and lead to studies of the mechanism for such a sink.