

## Variation in pCO<sub>2</sub> in surface waters of the central and western tropical Pacific observed in 1998/99

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We made observations of pCO<sub>2</sub> in marine boundary air and in surface seawater at the central and western tropical Pacific in January 1998, in January 1999, and in December 1999. TCO<sub>2</sub> and pH in the water columns were also measured in 1999. Longitudinal distributions of these CO<sub>2</sub> parameters along the equator showed a clear boundary between the western warm water pool with lower salinity and pCO<sub>2</sub> and the eastern colder region where pCO<sub>2</sub>, TCO<sub>2</sub>, and concentrations of nutrients increased toward the east. The position of the boundary showed a significant temporal variation within a time scale of months. Processes controlling these spatial and temporal variation and their effects on pCO<sub>2</sub> will be discussed.