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**Early Cenozoic Stratigraphy of the
Equatorial Pacific and the Eocene Revealed**

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The broad mound of sediments found in the equatorial Pacific contains a detailed and complex record of the history of equatorial divergence, trade wind strength, biogeochemical fluxes, and biologic evolution. To extract this history from the biogenic sediments of this region the recovery of undisturbed and complete sections is required. Also required is the development of a detailed chronostratigraphy with which we can determine both the times and rates of paleoceanographic and paleoclimatic change. As this mound of sediment has ridden northward on the Pacific crust the most biogenic parts of the lower Cenozoic sediments have gradually moved from under the region of high flux rates at the divergence center. Now they lie within the reach of APC coring on the JOIDES Resolution. The sections recovered on Leg 199 form a paleolatitude transect from about 4.5°S to 18.5°N. Study of these sections has given us a well documented magnetic stratigraphy back into the Eocene, good calcareous nannofossil stratigraphy for the lower Miocene, Oligocene, and early Eocene, and excellent radiolarian stratigraphy from the lower Miocene through the middle Eocene. In addition we recovered good the Miocene/Oligocene and Eocene/Oligocene boundaries in an equatorial setting and LPTM sections near basement at three different sites. These results have allowed a more certain assignment of ages of biostratigraphic events and an opportunity to develop orbitally tuned time scales in sections from the lower Miocene down through the Oligocene. The initial estimates of sediment accumulation rates in the radiolarian oozes indicate variation by a factor of three from upper to middle Eocene times. Mapped patterns of sediment accumulation in the Eocene using both ODP Leg 199 and older DSDP data indicate at least two latitudinal zones of maxima in accumulation rates. Determination of the exact latitudes of these zones awaits further study.

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