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## Tracking the Equator Into the Paleogene

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Stratigraphy has been compiled for 63 tropical Pacific drill sites that sample lower Neogene and Paleogene sediments. These Sites derive from drilling on DSDP Leg 5 through ODP Leg 199. All Sites have been put on the biostratigraphic and paleomagnetic timescale refined by Leg 199 scientists. Sediment accumulation rates have been calculated for ten intervals ranging in age from 10 Ma to 56 Ma. A simple fixed hotspot model was used for Pacific lithospheric plate rotation in reconstructing the position of the selected sites for each of these ten intervals. The reconstruction of all intervals show the development of a tongue of relatively high accumulation rates associated with

the oceanographic divergence at the geographic equator. The estimated position of the geographic equator based on these reconstructions lies consistently south of the position of the equator based on the rotation model used. However, the southward displacement is generally 2 degrees of latitude or less. We believe that this relatively small disagreement between the two estimates of equatorial position back to 56 Ma indicates: 1) Whatever hotspot movement that may have occurred in the interval between 40 and 56 Ma did not affect the motion of the Pacific plate; its motion after 40 Ma appears to have been approximately the same as before 40 Ma. 2) The estimated rate of true polar wander during the interval of 40 - 56 Ma must be very small (~0.125$\deg$/m.y.) and is probably not significant (i.e., well within the error of these reconstructions).

1206 Crustal movements--interplate (8155)
3030 Micropaleontology
3040 Plate tectonics (8150, 8155, 8157, 8158)
4231 Equatorial oceanography

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