CORRECTION

Seismic anisotropy in the mantle beneath an oceanic spreading centre

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Nature **366,** 675–677 (1993)

WE have reduced our estimate of the relative travel-time anomaly that may be associated with anisotropy in the mantle beneath the Mid-Atlantic Ridge at 34° S from 0.6–1.2 s to 0.4–0.6 s. The revised estimate reflects the realization that reverberations between the sea surface and the sea floor introduce serious bias into the long-period pressure data[1]. Re-analysis with an improved filtering scheme suggests that only stations on the east flank show a trend of steady increase in relative travel-time with distance off-axis. It is not clear whether this pattern reflects an anomaly that has an overall increasing trend to the east, independent of age, or whether the low signal-to-noise ratios of all west-flank arrivals have contaminated our results. Pressure-channel arrivals with high signal-to-noise ratio and useful vertical seismometer records are available only from the three east-flank ocean-bottom seismographs.

The lack of an axis-centred anomaly leads us to the conclusion that shear-induced anisotropy associated with mantle flow is consistent with our high-quality east-flank data but it is not required by the complete dataset. If the signal we detect is due to preferred orientation of olivine, our revised estimate suggests a degree of anisotropy (4–8%) more in line with that determined in previous studies (which did not resolve the ridge axis; see, for example, ref. 2) of alignment in the oceanic upper mantle due to plate motion. □

1. Blackman, D. K., Orcutt, J. A. & Forsyth, D. W. *Bull. Seism. Soc. Am.* (in the press).
2. Nishimura, C. E. & Forsyth, D. W. *Geophys. J. Int.* **96,** 203–229 (1989).