

## Seismic images of hotspots and mantle plumes

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We have used a novel global and regional tomography approach to study the deep structure and dynamics of hotspots and mantle plumes. Plume-like slow anomalies are imaged clearly under hotspot regions from the crust down to the core-mantle boundary (CMB). There is a good correlation between the distribution of hotspots on the surface and that of slow anomalies in the lower mantle down to the CMB, suggesting that most of the mantle plumes under the hotspots may originate from the CMB. The slow anomalies under hotspots usually do not show a straight pillar shape, but exhibit winding images, which suggests that plumes are not fixed in the mantle but can be deflected by the mantle winds.