

Is the Hawaiian plume a part of the Pacific superplume?

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<http://www.epsu.jp/jmoo2002/>

We have investigated the relationship between the Hawaiian plume and the Pacific superplume. Our recent whole mantle tomography (Zhao et al., 2001) shows that the Hawaiian plume is not connected to the South Pacific superplume, which indicates that the Hawaiian plume is not a part of the Pacific superplume but an independent one. This may provide a key constraint for clarifying the difference between the Hawaiian hotspot and the South Pacific hotspots in chemical composition and degree of volcanic activity.