



## **Can hotspot volcanism explain the Tertiary tectonic and volcanic reactivation of the Manihiki Plateau in the central Pacific?**

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The absence of continuous, age progressive volcanic hotspot chains in the central Pacific has been reason for an ongoing discussion about the existence of mantle plumes. Plate reconstruction models of Wessel and Kroenke (2008) are based on a fixed hotspot frame and interpolate between the missing parts of recent hotspot trails, such as the Society Island Hotspot, Pitcairn Hotspot or Tahiti Hotspot. In this interpolated region, all of these trails cross the Manihiki Plateau between 54-42 Ma and 25-12 Ma and therefore make it possible to study hotspot volcanism. The Manihiki Plateau is a Large Igneous Province (LIP), which formed during the Early Cretaceous (~125Ma) together with the Ontong Java and Hikurangi Plateaus (Taylor, 2006). The emplacement period is characterized by voluminous outpourings of lava and break-up related tectonism. It was followed by a volcanic and tectonic quiet period. During the Tertiary a reactivation occurred, which was restricted to the south-western part of the High Plateau. We present high resolution seismic reflection data, gathered during cruise So224 in 2012, to show in detail the relationship of tectonic and volcanic features in the sedimentary strata. We illuminate the questions: What is the spatial and temporal distribution shift of the reactivation? What are the causes? Was it triggered by hotspot volcanism or by internal strain?