



Review of North Atlantic volcanic margins and implications for mantle plume dynamics

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Recently published maps of the North Atlantic igneous province highlight several asymmetric patterns that developed during the early stages of volcanic margin development. These include asymmetries that develop between various conjugate pairs, as well as a distinct difference in volcanic volumes erupted north and south of the presumed track of the Iceland mantle plume. Many of the asymmetries may be related to pre-existing lithospheric and crustal structure. In this contribution, the patterns of volcanism around the North Atlantic are reviewed. Several enigmatic observations between the NE Greenland margin to the Norwegian margins will be highlighted. This part of the North Atlantic experienced a prolonged period of repeated episodes of extension and basin formation prior to significant volcanism and eventual seafloor spreading. Thus, the region offers a unique perspective for understanding plume-lithosphere interaction.