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Detailed distribution of microearthquakes along, an oblique spreading center, the northern Reykjanes Ridge

Masashi Mochizuki[1], Bryndis Brandsdottir[2], Hajime Shiobara[3], Gunnar Gudmundsson[4], Ragnar Stefansson[4], Hideki Shimamura[5]

[1] ERI, Univ. of Tokyo, [2] Science Inst., Univ. of Iceland, [3] OHRC, ERI, Univ. Tokyo, [4] Icelandic Met. Office, [5] Institute of Seismology and Volcanology, Hokkaido Univ.

We have obtained a snapshot image of the earthquake activity along the northern Reykjanes Ridge using a dense ocean bottom seismometer array. The earthquakes are narrowly concentrated along the NE-SW trending ridge crest. The seismicity is segmented into clusters by the en-echelon NNE-SSW trending axial volcanic systems which characterize the obliquely spreading ridge. The hypocenters are concentrated at somewhat greater depths (3-7 km) than on the Reykjanes Peninsula, where the crust is thicker. Normal faulting dominates at the ridge crest. The focal planes are oriented more NE-SW than NNE-SSW, i.e., parallel to the ridge crest and its peripheral faults rather than the trend of individual axial volcanic systems and associated faults.