

Evidence of active hydrothermal fluid venting around hotspot volcanoes in the western Gulf of Aden

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We searched for hydrothermal plumes in the central Gulf of Aden between 45-30E and 53-00E, by conducting tow-yo observations from R/V Hakuho Maru. We used a CTD-transmissometer system attached with an in situ Mn-Fe analyzer (GAMOS) and X-Niskin bottles for clean hydrocast. At least two hydrothermal active zones were clearly recognized for the first time as water column anomalies of Mn, Fe, pH and light transmission in the westernmost survey area (12-05N, 45-38E), where the seabeam observation found twin seamounts of probably hot spot volcanoes. Chemical characteristics of the hydrothermal plumes suggest active black or white smoker fluid venting associated with hot spot volcanism in the western Gulf of Aden.