

## Chemical characteristics of hydrothermal fluid venting discovered near the Rodriguez Triple Junction, Indian Ridge

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First hydrothermal fluid venting in the Indian Ocean was found by the ROV "Kaiko" at northward of the Rodriguez Triple Junction, Indian Ridge. Before the ROV dives, detailed tow-yo surveys for hydrothermal plume mapping were conducted around a knoll located 4 miles northeastward from the first segment of the Central Indian Ridge. A hydrothermal active zone, which consists of seven complexes of hydrothermal chimneys, was observed at (25-19.17S, 70-02.40E; ~2,450 m depth) on the southwestern flank of the knoll. The most active black smoker chimney showed a fluid temperature of 360 C. Fluid samples were taken using Alvin-type titanium samplers. Fluid chemistry is similar to those of mid-oceanic ridge black smoker fluids so far observed in the East Pacific Rise and Mid Atlantic Ridge.