

Mapping of gravity anomalies in the Gulf of Aden

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The Gulf of Aden in the northwestern Indian Ocean is one of interesting seafloor spreading systems. We carried out mapping of gravity anomalies over the mid-ocean ridges between 45.5 E and 49.5 E. The crossover errors at intersections of the ship's tracks were several milli-gals. While the short segments in the eastern part are associated with relatively rough topography and gravity anomalies, the amplitudes of them are reduced in the western part. We can recognize small amplitudes of negative free-air anomalies along the spreading axis, but local minimum in the Bouguer anomalies is not well related to the axis. Although the along-axis topographic highs in the western part are interpreted to be volcanoes of hot-spot origin, Bouguer anomalies do not show any distinct gravity low.