

## Sub-bottom structure and tectonics in the Atlantis-II - Novara Fracture Zone as derived from the marine geophysical data

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The Atlantis Bank around the ODP Hole 735B and the Atlantis-II -Novara Fracture Zone on the Southwest Indian Ridge were surveyed during the MODE'98 YOKOSUKA/SHINKAI-6500 Cruise Leg4 in October-November, 1998 and KR00-06 KAIREI/KAIKO Cruise in September 2000. Multibeam bathymetry, gravimetry and magnetic survey were conducted as a night-time programme after the dives. These geophysical surveys revealed an unusual signal that seems to be associated with the exposure of plutonic and ultrabasic rocks on the Atlantis Bank. The bank gravity data exhibit good correlation between bottom topography and free air gravity anomaly, and no or slightly positive correlation between topography and mantle Bouguer anomaly.