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Bathymetry, and gravity and magnetic anomalies west of Okinawa Island during GH09 cruise

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Geological Survey of Japan started surveys of Okinawa area to produce marine geological maps of the region from 2008. During GH09 in 2009, multibeam echo sounding, seismic survey, and gravity and magnetic surveys were conducted west of Okinawa Island. There are bathymetric feature expressing half graben structures west of Okinawa Island. Bouguer gravity anomaly represent two sets of negative anomalies parallel to the arc, which may be interpreted as a result of half graben structures. Total magnetic field anomaly show a short wave length strong positive anomaly on the southeastern side of a half graben, which form a strong reflector on the seismic records around Aguni Island.

Keywords: Okinawa Island, gravity anomaly, magnetic anomaly, bathymetry, Rykyu arc, Aguni Island