# MARINE GRAVITY AND MAGNETIC INVESTIGATIONS IN THE WEST ANTARCTICA

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During the Ukrainian marine Antarctic expeditions (1997-98 years) the new geophysical data in western Antarctic Region in area of the Antarctic Peninsula were received. On the basis of the received information the interpretation of the gravity and magnetic fields along separate structures in Draike Passage, South Orkney Islands and Bransfield Strait is carried out. Bathymetric data, combined with magnetic and gravity measurements in this area show previously unknown structure's features that may be connected with the process of the breakup of Gondwana.In a deep-water part of a Draike passage magnetic anomalies were represented with five local magnetized sources of the simple form. Magnetization of bodies is basically positive and systematically increased from north to south from 1.2 up to 3.9 A?m-1. This tendency is broken by the block with strong of opposite magnetization –6.5 A?m-1. The positively magnetized blocks correspond with linear anomalies 4, 4à and 5, 5à.Some magnetic anomalies are mapped in the central part of a Bransfield Strait, greatest of which reaches 1000 nT.Marine magnetic profiles collected near the Antarctic Peninsula reveal the new data about location of fracture zones and recent volcanic activity for the Bransfield Strait. General width of the magnetized objects in a meridianal direction is about 25-30kms. These bodies are parts of extended rift system that formed within the limits of a Bransfield Strait.Some crustal geophysical models were obtained in order to improve our knowledge about the geology and history of the Antarctic Peninsula and other different structures of this region.