



## **Sea-surface and deep-magnetic data at Vavilov Seamount, Tyrrhenian Sea**

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Sea surface and deep magnetic data were acquired at Vavilov seamount, in the Tyrrhenian sea. Vavilov seamount is located in the central portion of the homonymous Vavilov basin. The seamount stands about 2800 meters above the seafloor at 3600 meters depth, with the top at about 800 meters below the sea level. Oceanization of the basin occurred during the Late Miocene-Early Pliocene. The magnetic data were collected in 2011 on board the Nave Ammiraglio Magnaghi by using a Marine Magnetics Seaspy magnetometer. The sea surface magnetic survey was realized with two different grids: the first regional one, with 13 parallel lines about 43 Km long, 3 Km spaced ( $104^{\circ}$  N oriented) and 6 tie control lines about 40 Km long, 5 Km spaced ( $014^{\circ}$  N oriented). The second one was realized to better define the volcanic structure of the seamount, and was achieved by acquiring 12 magnetic parallel lines ( $104^{\circ}$  N), 18 Km long and 1 Km spaced. The deep magnetic data were collected by towing a magnetic sensor coupled with a L3 sidescan sonar Klein 3000. A set of 5 parallel lines were acquired in correspondence of the bathymetric top of the seamount with the sensor flying at about constant depth of 700 meters. These data represents the first near-bottom magnetic data collected for Vavilov seamount and it allows comparison between sea-surface and deep magnetic data.