



A New Magnetic Anomaly Compilation off SW Portugal

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Here we present the preliminary computation of a new marine magnetic anomalies map based on three different surface-towed surveys undertaken in the offshore of the SW Iberian Peninsula within the last few years by different research institutes. The groups now converged into the synergy of the SWIM project and are coordinated under the ESF-Euromargins umbrella. BIGSETS's were acquired in 1998 on board the R/V Urania with a GEM Model GSM-19MD Overhauser effect magnetometer, the sensor was towed at a 220 m offset from ship's stern. VOLTAIRE's were acquired in 2002 on board the R/V Urania by a G-811 Geometrics proton-precession magnetometer towed at 240 m from ship's sensor. DELILA's were acquired in 2004 on board the R/V Don Carlos by towing a Geonics GSM-19 Overhauser type magnetometer. The instrument was surface towed 160 m behind the vessel. We performed coordinates corrections in respect to cable length and GPS antenna position, magnetic anomalies were computed by removing the total magnetic field as defined by the IGRF2000 model, we removed effects of diurnal variation using base-station readings kindly provided by Real Instituto y Observatorio de la Armada located in San Fernando (Cádiz), and by Observatorio Geofísico de Toledo (IGN), located in San Pablo de los Montes and participating in the intermagnet network. Combining this new piece of information with a large network of seismic reflection data, characterised by intermediate to deep penetration, that have been hitherto acquired (RIFANO92, IAM93, BIGSETS98,

SISMAR2001, VOLTAIRE2002) and put at disposal of the SWIM community, behind a signed agreement of data sharing, our goal is: (1) better describing the deeper structure of the SW Iberian margin; (2) defining the nature of the crust in the western Gulf of Cádiz and (3) locating the complicated trace of the Africa-Iberia boundaries in the study area.