Final project report

Project ID 2002/4.08
Title MAGMAP: Serie Cartografica Geomagnetica del Continente Antartico (Geomagnetic Map Series of Antarctica)
Principal investigator Merlanti Fulvio
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Duration 2002-03 years
Assigned funding 25000,00 Euro

Activities and results

Aeromagnetic anomaly mapping is a strategic tool for geological exploration of Antarctica first because of ice cover which often makes geologic fieldwork patchy. Also it can lead to improved interpretation of several geologic issues since it may offer a broader geodynamic perspective.

Within the framework of the Italian Scientific Program in Antarctica, an Antarctic Geomagnetic 1:250,000 Map Series was initiated in 1995 over Victoria Land and Marie Byrd Land. The magnetic anomalies for the Victoria Land Maps were overlain over the USGS topographic sheets.

The new MAGMAP project aims at compiling a novel set of aeromagnetic anomaly maps and relative digital databases using data collected over Victoria Land and George V Land in 1999-2001. New maps were compiled using data acquired during the GANOVEX VIII-BACKTAM campaign.

The aeromagetic data were integrated by knitting procedures in a compilation format for the International ADMAP project.

The geological and geophysical interpretation work of these maps furnished the scientific products in terms of national and international papers reported in this final report.

Products

A – papers in scientific magazines

Programma Nazionale di Ricerche in Antartide (PNRA)

5. Ferraccioli, F., E. Bozzo, D., Damaske, Aeromagnetic signatures over western Marie Byrd Land provide insight into magmatic arc basement, mafic magmatism and structure of the eastern Ross Sea Rift flank, Tectonophysics, 347, 139-165. 2002.


B – book chapters


C - proceedings of international conferences


D – proceedings of national meetings and conferences

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E – thematic maps


F – patents, prototypes and data bases

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G – exhibits, organization of conferences, editing and similar

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H - formation (PhD thesis, research fellowships, etc.)

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Programma Nazionale di Ricerche in Antartide (PNRA)

Research units

RESEARCH UNIT: (Title) “Antarctic Magnetic Mapping”

COMPONENTS:

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Notes