



## **New data on geophysical surveying of permafrost in Livingston and Deception Islands, Maritime Antarctic. The campaign of 2007-08.**

V. Batista (1), R. Melo (1), **G. Vieira** (1), F. Santos (2), M. Ramos (3), C. Hauck (4)  
(1) Centre for Geographical Studies, University of Lisbon, Portugal, (2) Centre of Geophysics,  
University of Lisbon, Portugal, (3) Department of Physics, University of Alcalá de Henares,  
Spain, (4) Institute for Meteorology and Climate Research, Forschungszentrum  
Karlsruhe/University of Karlsruhe, Germany (vanessambatista@gmail.com, +351-217938690)

Geomorphological features may be indicative of the presence of frozen ground dynamics, but permafrost is generally invisible without the existence of exposures or through direct observation by drilling. Therefore, geophysical techniques enable the detection of frozen ground with the advantage of a very low environmental impact. These techniques are extremely valuable for application in a very sensible and protected environment like the Antarctic. Field surveying in the Antarctic campaign of 2005-06 showed that Electrical Resistivity Tomography is a good technique for the detection of ice-cemented permafrost and massive ice bodies in Livingston and Deception Islands (Maritime Antarctic). In January and February 2008 we have applied new Vertical Electrical Soundings in Deception Island and the Transient Electromagnetic Method in Livingston and Deception Islands. In this poster we present the preliminary results from these surveys.