Geophysical Research Abstracts
Vol. 14, EGU2012-7297, 2012
EGU General Assembly 2012

Noise reduction in GOCE gradient data

G. Pajot-Métivier (1), I. Panet (1,2), and O. de Viron (2)

(1) Institut National de l'Information Géographique et Forestière (IGN), Laboratoire LAREG, Marne-la-Vallée, France, (2) Université Paris-Diderot, PRES Sorbonne Paris Cité, IPGP, CNRS (UMR7154), Paris, France

Previous experiments on ground gravity gradiometry data have demonstrated that it was possible to significantly lower the noise in the gradients, using physical relationships between pairs of those components in addition to the traditional Laplace equation. We present here the extension of the method to GOCE gravity gradient data. In comparison with the case of ground data, we focus on the specific problems raised by the coordinate system issues, as well as by the inhomogeneous quality of the components. We also discuss the benefits of applying such a method for the GOCE gradient processing in order to enhance the time series of the gradients.