Geophysical Research Abstracts, Vol. 9, 07514, 2007 SRef-ID: 1607-7962/gra/EGU2007-A-07514 © European Geosciences Union 2007



Ellipsoidal Vertical Deflections based on the Somigliana-Pizzetti Ellipsoidal Reference Gravity Field

E. W. Grafarend (1), G. Finn (1), A. A. Ardalan (2)

(1) Department of Geodesy, Stuttgart University, Geschw.-Scholl-Str. 24 D, D-70174 Stuttgart, Germany (Fax: +49-711-685-83285, finn@gis.uni-stuttgart.de), (2) Department of Surveying and Geomatics Engineering, University of Tehran, Karegar-e-Shomali, P.O.Box 1136 Tehran, Iran (ardalan@ut.ac.ir)

Based on three definitions of vertical deflections, in particular in Jacobi ellipsoidal coordinates, we have chosen the Somigliana-Pizzetti gravity potential field as a reference. Based on Software SEGEN up to degree/order 360/360 we present 6 maps of vertical deflections, very spectacular for interpreting various Earth's structures. All computations of geophysical information are presented in equi-areal ellipsoidal map projections.