



The Definition of a Geophysically Meaningful International Terrestrial Reference System. Problems and Prospects.

Athanasios Dermanis

Department of Geodesy and Surveying, Aristotle University of Thessaloniki, Greece

The problem of transforming a global reference system, established for a geodetic network of discrete points, into a geophysically meaningful reference system for the continuously distributed earth masses is examined. The necessary additional geophysical hypotheses for the realization of such a transformation are outlined. A relevant solution is given for the special model of constant station velocity, which is currently implemented in the ITRF. The question of extending the solution into more general models is discussed with special emphasis to the spectral characteristics of station motions.