The International Terrestrial Reference Frame and The Glacial Isostatic Adjustment

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The International Terrestrial Reference Frame (ITRF) is a multi-technique combined frame presented in the form of positions and secular or linear velocities of stations embedded in the observing networks of the four space geodetic techniques (VLBI, SLR, GPS, DORIS). The ITRF station velocities are estimated in three dimensions, but for the particular focus of this paper, the vertical velocities will be analyzed and confronted to some available global Glacial Isostatic Adjustment models. The different technique network shapes of the four techniques will be studied in order to assess the impact of the Post Glacial Rebond on the ITRF definition and in particular on its origin and scale. Some examples on a site-by-site basis of the ITRF and GIA model confrontation will be discussed, using preliminary analysis of the ITRF2008 input data.