



The Data Base of the International Geodynamics and Earth Tide Service (IGETS)

Christian Voigt (1), Christoph Förste (1), Hartmut Wziontek (2), David Crossley (3), Bruno Meurers (4), Vojtech Pálinkáš (5), Jacques Hinderer (6), Jean-Paul Boy (6), Jean-Pierre Barriot (7), and Heping Sun (8)

(1) GFZ German Research Centre for Geosciences, Potsdam, Germany (christian.voigt@gfz-potsdam.de), (2) BKG Federal Agency for Cartography and Geodesy, branch office Leipzig, Leipzig, Germany, (3) Department of Earth and Atmospheric Sciences, St. Louis University, St. Louis, MO, USA, (4) Department of Meteorology and Geophysics, University of Vienna, Vienna, Austria, (5) Geodetic Observatory Pecný, Ondřejov, Czech Republic, (6) EOST-IPGS (UMR 7516 CNRS/Université de Strasbourg), Strasbourg, France, (7) Geodesy Observatory of Tahiti, University of French Polynesia, Faa'a, Tahiti, France, (8) Institute of Geodesy and Geophysics, Chinese Academy of Sciences, Wuhan, China

The International Geodynamics and Earth Tide Service (IGETS) was established in 2015 by the International Association of Geodesy (IAG). IGETS continues the activities of the Global Geodynamics Project (GGP, 1997-2015) to provide support to geodetic and geophysical research activities using superconducting gravimeter data within the context of an international network. The primary objective of IGETS is to provide a service for continuous ground based measurements to monitor temporal variations of the Earth's gravity field and deformation of the Earth's surface by long term records from ground gravimeters, tiltmeters, strainmeters and other geodynamic sensors. IGETS also continues the activities of the International Center for Earth Tides (ICET), in particular, in collecting, archiving and distributing Earth tide records from long series of the various geodynamic sensors.

This presentation introduces the IGETS data base hosted by GFZ and accessible via <http://igets.gfz-potsdam.de> to the geodetic and geodynamics community as well as to all other interested data producers and users. At present, records from superconducting gravimeters at 34 stations worldwide are available. Level 1 products are raw gravity and local pressure records decimated at 1 minute samples. As a new feature, records with 1 or 2 seconds samples are already provided for a few stations. Level 2 products consist of gravity and pressure data corrected for instrumental perturbations and ready for tidal analysis, which are derived from Level 1 datasets and computed by the University of French Polynesia (Tahiti, French Polynesia). Gravity residuals after particular geophysical corrections (including solid Earth tides, polar motion, tidal and non-tidal loading effects) considered as Level 3 products are derived from Level 2 datasets and computed by EOST (Ecole et Observatoire des Sciences de la Terre, Strasbourg, France).

The IGETS data sets are stored by GFZ on a FTP server and are freely available after a compulsory user registration. A major benefit of IGETS is the provision of digital object identifiers (DOI) by the research repository of GFZ Data Services for the data sets of every station. This ensures a long term storage and an increased visibility as part of an international network but also a proper data citation. At present, the IGETS data base is supported by 24 data producers providing records to almost 100 registered users. All relevant information on the data base, i.e. data availability and access, stations and sensors, conventional data formats, etc. are compiled in a specific scientific technical report (see <http://doi.org/10.2312/GFZ.b103-16087>). As IGETS is seeking for providing all kinds of long-term geodynamic time series, interested station operators are cordially invited to provide their data sets to the IGETS data base and, in return, benefit from being part of the IAG service IGETS.