IGFS STATUS REPORT October 22nd, 2017

International Gravity Field Service

Riccardo Barzaghi(1), George Vergos (2)

(1) DICA-Politecnico di Milano, Italy
(2) GravLab, Aristotle University Thessaloniki, Greece

Present Status and Progress

Through its structure the International Gravity Field Service (IGFS) promoted the interaction between the Gravity Services that proved to be effective and able to provide users with the required gravity products.
Particularly, through its Central Bureau (CB), hosted at the Department of Geodesy and Surveying (DGS) of the Aristotle University of Thessaloniki (AUTH) since April 2016, an effort was put forth in order to update its presence in the web and make the IGFS data and products more visible to the interested scientific and user community.
A new webpage has been recently created focusing more on the data and products availability, so that interested users can acquire them directly from the available portals. In the new webpage layout, the availability of gravity, geoid, GEM, DEM, SG and tide data through the IGFS services portal is more visible, while a news section has been created as well to direct to IGFS related conferences, updates, etc.
The IGFS CB has developed, within the IGFS webpage, an IGFS front-end application where three main components have been established. The first one refers to the generation of metadata for both relative and absolute gravity observations, either point values and gridded. The rest refers to metadata for geoid models as well as a geodatabase and geolocator for the visualization of all products offered by IGFS and its services.
Furthermore, many IGFS actions have been performed in strict contact with the GGOS Bureau of Products and Standards, the Bureau of Network and Observations and GGOS Focus Area on "Unified Height Systems".
In particular, IGFS strictly co-operated with GGOS focus area on "Unified Height Systems". At the same time, IGFS is also involved in the definition of the Global Geodetic Reference System/Frame (GGRS/GGRF) that includes the definition of the new global gravity reference system that will replace IGSN71.

Planned Actions and Milestones

The IGFS planned actions will be mainly along the following lines:

- to strengthen the cooperation among the Gravity Services related to IGFS
- to strictly cooperate with GGOS Focus Area 1 for the definition of the IHRS/IHRF and to evaluate the adoption of IHRS/IHRF as IGFS product

- to participate to the definition of the GGRS/GGRF
- to support the IGETS activities aiming at monitoring temporal variations of the Earth
- to improve the IGFS webpage in order to make gravity products more visible and available
- to support the activities devoted to the establishment of the new global gravity reference system
- to cooperate with GGOS-BPS in the adoption of standards in gravity related products (e.g. a reference GGM)
- to organize the transition of the ESIGEM project (European Gravity Service for Improved Emergency Management, presently a H2020 project) to a service within IGFS, the COST-G service.