



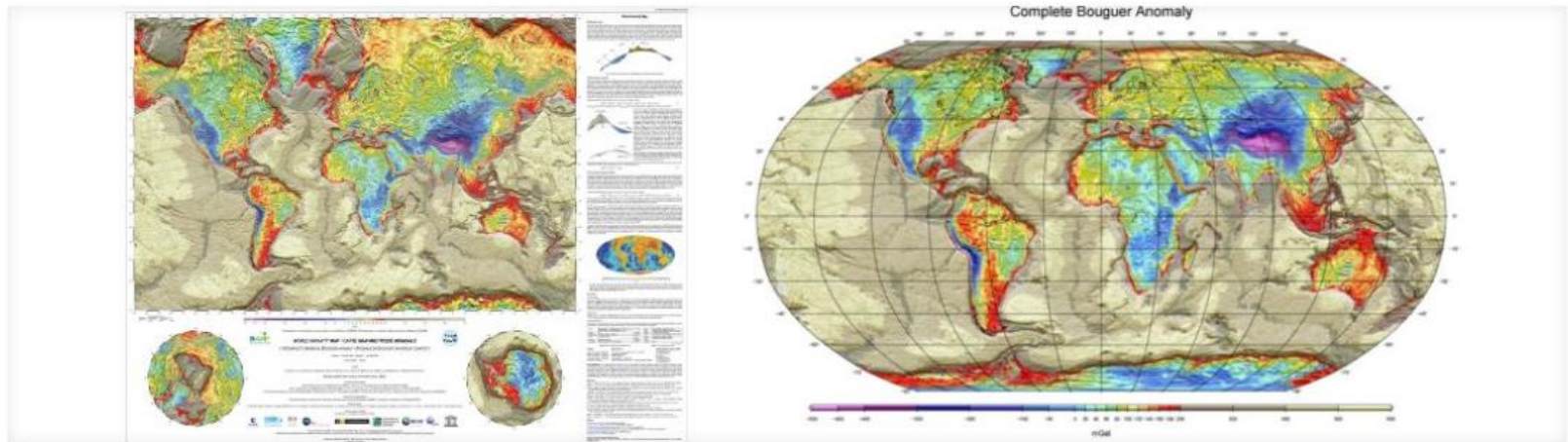
IGFS: on-going and future activities

- ***Promoting the establishment of the Global Geodetic Reference System/Frame (GGRS/GGRF)***
- ***Promoting the establishment of the International Height Reference System/ Frame (IHRS/IHRF).***

It has been proposed that data of the IHRF are to be stored at IGFS and made available through the IGFS web page

- ***Participating to the establishment of the new absolute gravity reference system/frame***
- ***Implementing the new IGFS webpage at the IGFS CB***
 - i) interface on metadata for gravity/geoid data
 - ii) interface showing data availability at the linked Gravity Service web pages
- ***Proposing and establishing a new IGFS service***

This will be the International **C**ombination **S**ervice for **T**ime-variable **G**ravity Field Solutions (**COST-G**) (topic to be discussed at the next IAG-EC, Vienna, April 28th, 2017)



The International Gravity Field Service – IGFS

IGFS is a unified “umbrella” IAG service, which: (i) Coordinates collection, validation, archiving and dissemination of gravity field related data (ii) Coordinates courses, information materials and general public outreach relating to the earth’s gravity field, (iii) Unifies gravity products for the needs of GGOS – the [Global Geodetic Observing System](#).

IGFS coordinates the servicing of the geodetic and geophysical community with gravity field-related data, software and information. The combined data of the IGFS entities data include both satellite-derived global models, terrestrial, airborne, satellite and marine gravity observations, earth tide data, GPS leveling data, digital models of terrain and bathymetry, ocean gravity field and geoid from satellite altimetry.

IGFS Data and Products

IGFS collects through its services gravity, geoid, GEM, DEM, SG raw, and tidal products for use in a wide range of geodetic, geophysical, and oceanographic works. These data sets are used by the geodetic community and the IGFS services members, SGs, JWGs, to generate the data products which are made available to interested users through this website.

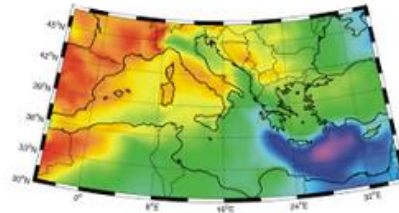
Gravity data

Land, marine, airborne gravity data as point and gridded values. Absolute and relative gravity data, WGM



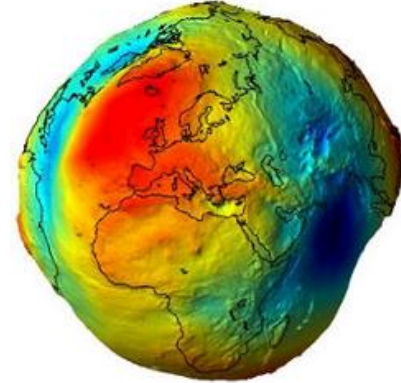
Geoid

Geoid models and geoid determination software, geoid modeling processing methodologies



GEMS

Global Earth Models, static and time-varying, computation and visualization service



DEM data

Digital Elevation Models, relevant software for DEM creation, assesment, manipulation and display



SG and Tide data

Raw and processed data from worldwide superconducting gravimeters, tides and tidal analysis software



The International Gravity Field Service Central Bureau (IGFS CB) develops and provides online applications for the creation of metadata for gravity and geoid data. Additionally, the IGFS CB provides a service for searching the metadata database of the CB in order to locate dataset sources.

Please use the following buttons in order to access the online applications:

g- μ eta
the gravity metadata editor
(v0.1 - beta edition)

N- μ eta
the geoid metadata editor
(under development)

μ eta-Locator
search for dataset sources
(under development)

2.1 General Standards and Conventions

2.1.1 Gravitation Constant of the Earth

2.1.1.1 Gravitation Constant of the Earth (GM) Units: 2.1.1.2 Gravitation Constant of the Earth (GM) Used:

2.1.2 Equatorial Radius of the Earth

2.1.2.1 Equatorial Radius of the Earth Units: 2.1.2.1 Equatorial Radius of the Earth Used:

2.1.3 Flattening of the Earth

2.1.3.1 Flattening of the Earth Units: 2.1.3.2 Flattening of the Earth Used:

2.2 Earth's Gravity Field

2.2.1 Permanent Tide System

2.2.1.1 Permanent Tide System: 2.2.1.2 Earth Orientation Parameters:

2.3 Earth Orientation Parameters

A-Priori Information

2.3.1.1 A-priori Information Used:

2.4 Tidal Conventions

2.4.1 Solid Earth Tides

2.4.1.1 Solid Earth Tides Potential Units: 2.4.1.2 Solid Earth Tides Potential:

2.4.1.3 Solid Earth Tides Wave Groups

2.4.1.3.1 O1 Tide

2.4.1.3.1.1 O1 Amplitude Units: 2.4.1.3.1.2 O1 Amplitude: 2.4.1.3.1.3 O1 Phase Units: 2.4.1.3.1.4 O1 Phase: 2.4.1.3.1.5 O1 Period Units: 2.4.1.3.1.6 O1 Period:

2.4.1.3.1.7 O1 Amplitude Factor Units: 2.4.1.3.1.8 O1 Amplitude Factor: 2.4.1.3.1.9 O1 Phase Correction Units: 2.4.1.3.1.10 O1 Phase Correction:

2.4.1.3.2 K1 Tide