The Broadview Radar Altimetry & the GOCE Gravity Mission User Toolboxes

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The universal altimetry toolbox BRAT (Broadview Radar Altimetry Toolbox) is a collection of open source tools and tutorial documents designed to facilitate the processing of radar altimetry data. It can read all previous and current altimetry missions' data. It now incorporates the capability to read the upcoming Sentinel-3 L1 and L2 products. ESA endeavoured to develop and supply this new capability to support the users of the Sentinel-3 mission.

The BRAT suite is mostly made of command line tools, of which the BratGUI is the front-end. BRAT can be used in conjunction with MATLAB/IDL (via reading routines) or C/C++/Python/Fortran via a programming API, allowing users to obtain the desired data, bypassing the data-formatting hassle. BRAT can also be used to simply visualise data quickly, or to translate the data into other formats such as NetCDF, ASCII text files, KML and raster images from the data (JPEG,...).

Several kinds of computations can be done within BRAT, involving both user-defined combinations of data fields that can be saved for posterior use and the BRAT's predefined formulas from oceanographic altimetry. BRAT also includes the Radar Altimeter Tutorial, which contains an extensive introduction to altimetry, showing its applications in different fields. Use cases are also available, with step-by-step examples, covering the toolbox usage in different thematic contexts.

Both the toolbox and the tutorial can be accessed through http://earth.esa.int/brat or http://www.altimetry.info/.

The GOCE User Toolbox GUT is a compilation of tools for the utilisation and analysis of GOCE Level 2 products. GUT support applications in Geodesy, Oceanography and Solid Earth Physics.
It can compute and process a range of higher level products relevant to the fields of oceanography, solid earth physics and geodesy at global and regional scales. GUT can also process any global gravity model in the ICGEM format. GUT may be used on Windows PCs, UNIX/Linux workstations and Mac and comes as fully open source software under GNU GPL licence. GUT generates all output files in netCDF format in compliance with the CF Conventions, and gridded results may be visualised using the Brat Display tool from ESA's Broadview Radar Altimetry Toolbox (BRAT). Advanced users can easily extend the toolbox in accordance with the workflow based processing design principles, and contribute these enhancements to the GUT user community. Originally only a command line tool, the current version of GUT is 3.0. This version has been enhanced with a newly developed graphical user interface. This interface is built on top of the command-line interface, providing a more user friendly alternative to it.
The GUT Tutorial provides information and guidance in how to use the toolbox for a variety of applications. GUT consists of a series of advanced computer routines that carry out the required computations. It may be used on Windows PCs, UNIX/Linux Workstations, and Mac. The toolbox is supported by The GUT Algorithm Description and User Guide and The GUT Install Guide. A set of a-priori data and models are made available as well.
The toolbox and the tutorial can be accessed through: http://earth.esa.int/gut