Survey on cGNSS@TG

Survey on Continuous GPS and Tide Gauge co-localisations

In order to get a better idea about the status and opportunities on continuous GPS positioning of tide gauges, a survey is carried out periodically within various geoscience communities. The survey aims at identifying the existing permanent GPS stations which are close to tide gauges (up to approximately 10-15 km).

- The following table displays an on-line updated view of the CGPS@TG information that has been supplied to us so far (Click on the Table icon below). The table can be sorted by clicking on the column items, and a version of the view can be downloaded in a format (csv) compatible with applications like excel.

- A ‘.kmz’ file provides a Google Earth view of the CGPS@TG geographical distribution. The cgpstg.kmz file is consistent with the above mentioned table (updated weekly). Clicking on a station symbol provides ancillary information on the station, and further clicking on the station name, provides an access to the so-called GPS sitelog (if the GPS data are available). The CGPS@TG ‘kmz’ view might be useful in conjunction with the ‘.kmz’ files of satellite radar altimetry ground tracks provided by CLS, or with the ‘.kmz’ file of tide gauge records provided by the PSMSL.

- In addition to the periodic surveys, information on CGPS@TG collocations can also be supplied to us any time by filling up this form. Thank you in advance for your collaboration.

PLEASE VISIT: www.sonel.org/-CGPS-TG-Survey-.html

your input is needed and appreciated
Vertical Tide Gauge Control

- Long-term stable and consistent frame to relate globally distributed tide gauge (sea level) measurements
- Connecting national and local height systems to the shore-side sea level
- Height System Unification
- Point-wise constraints for, e.g. GIA
- Short-term control in earthquake-prone areas
- Other scientific studies
GNSS-controlled tide gauges on shaky ground
Objectives of the TIGA-WG

- Provide a dedicated GNSS product (coordinates, time series of coordinates, vertical rates) for sea level research of any kind (and other applications)
- Interact with GLOSS, GCOS, WCRP, IAG/GGOS, etc.
- Align activities with GLOSS
  - defines the scope of TIGA
  - primary users of TIGA results
- Promote the establishment of links to other geodetic techniques (DORIS, AG, SLR, VLBI)
Objectives of the TIGA-WG

- Maintain a global virtual cGNSS @ TG network
- Promote the establishment of more continuous operating GNSS stations, in particular in the southern hemisphere.
- Provide meta information, e.g. on leveling between benchmarks or data access
- Provide training to tide gauge operators through workshops, encourage station operators to provide necessary metadata. Through GLOSS advice station operators about the operation of cGNSS @ TG stations.
Components of the TIGA WG

- TIGA Data Center
  - SONEL/Univ. La Rochelle (ULR), CDDIS

- TIGA Network Coordinator
  - ULR

- TIGA Analysis Centers
  - BIGF/UoL, DGFI, EUREF, GFZ, ULR, (GA)

- TIGA Combination Centers
  - AIUB, UoLuxembourg
Data Center & Network Coordination

http://www.sonel.org
TDC/TNC: Leveling Information

LEVELING OF SAINT-MALO

Benchmark positionning related to the tide gauge station

2001-06-01  2007-06-01

Benchmarks description table


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Levelling evolution

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Levelling evolution data

TIDE GAUGE LOCAL LEVELING NETWORK DATA OF STATION SAINT-MALO

Co-located instruments

GPS: Saint Malo (SMTS)

Tide gauge: SAINT-MALO (SMALO)

Download in csv format

http://www.sonel.org
TIGA Network Development

Increasing network coverage
- more valuable
- more attractive