TIGA WG Splinter

IGS Workshop Wuhan

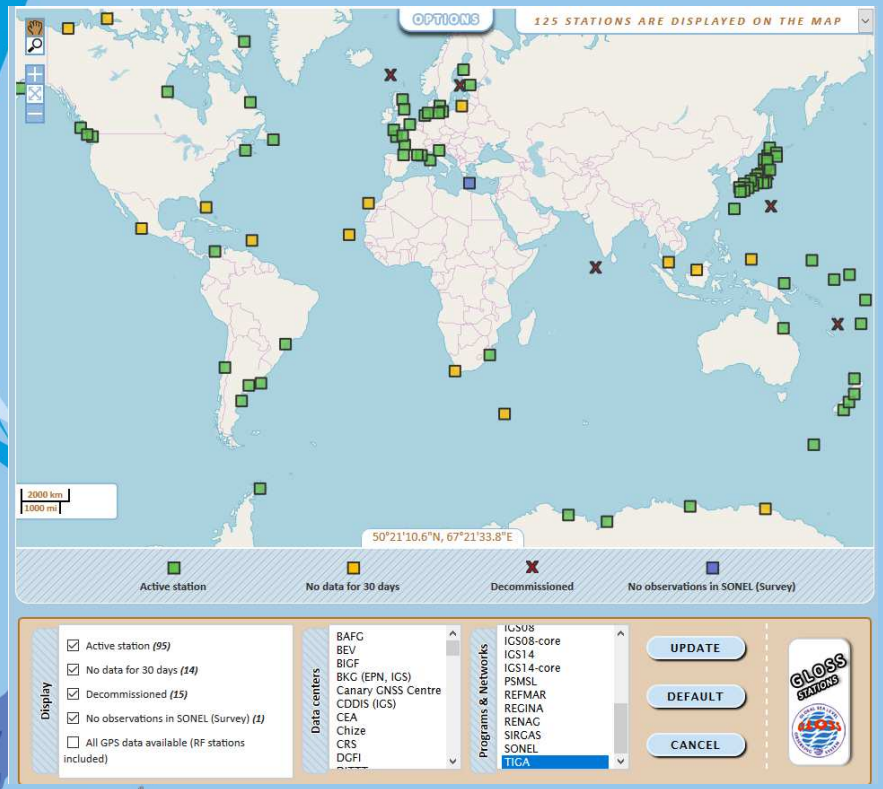
31. October 2018

TIGA Objectives

- Maintain a global virtual GNSS @ TG network
  - Select a set of tide gauges equipped with GNSS, with a long and reliable history, useful for sea level studies.
  - IGS network operation standards should be applied.
  - Promote the establishment of local ties (leveling) between GNSS and TGBMs.
  - 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
- Compute precise coordinates and velocities of GNSS stations **at or near tide gauges** with a significant delay to allow as many as possible stations to participate (aka repro).
- Provide training to tide gauge operators through workshops, encourage station operators to provide necessary metadata. Through GLOSS advice station operators about the operation of GNSS @ TG stations.

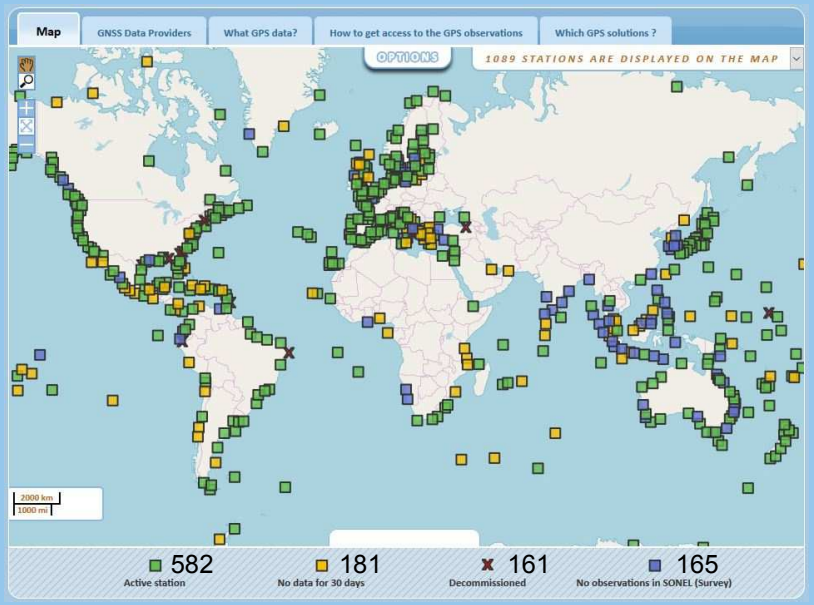
TIGA network status

GNSS@TG stations committed to TIGA



125 full TIGA stations

SONEL GNSS@TG network

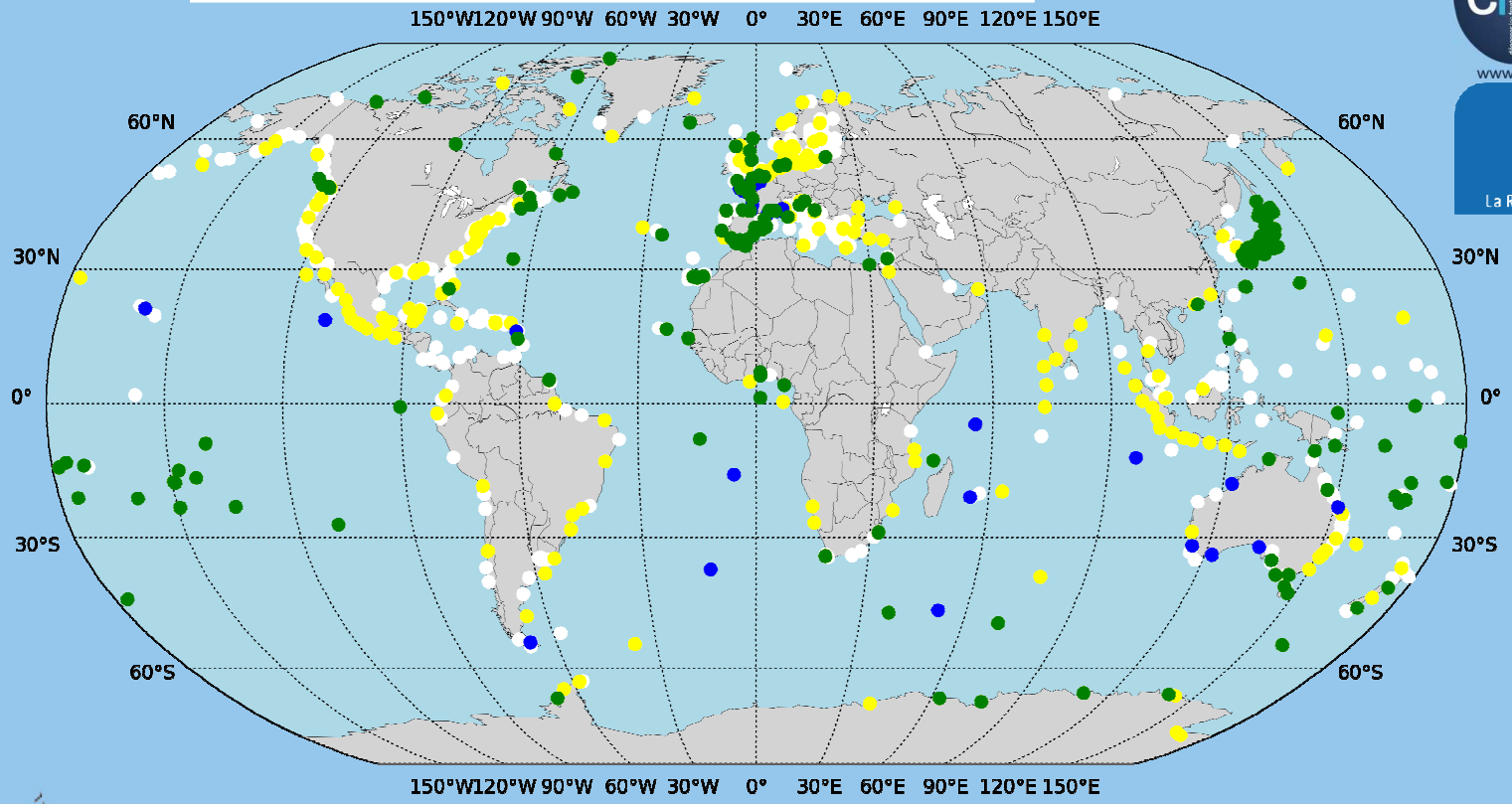


1089 GNSS @ or near tide gauges

TIGA Data Center and Network Coordinator
@ www.sonel.org

SONEL network status

Leveling status for GNSS@TG stations on SONEL



175 GNSS@TG stations with leveling information in SONEL (= 15 more than in 2017)
296 Tide gauges without any known geodetic connection (GNSS-TG ≤ 1000 m)
31 Tide Gauges with leveling information in SONEL but no link to the GNSS stations collocated
914 GNSS@TG stations without any leveling information in SONEL

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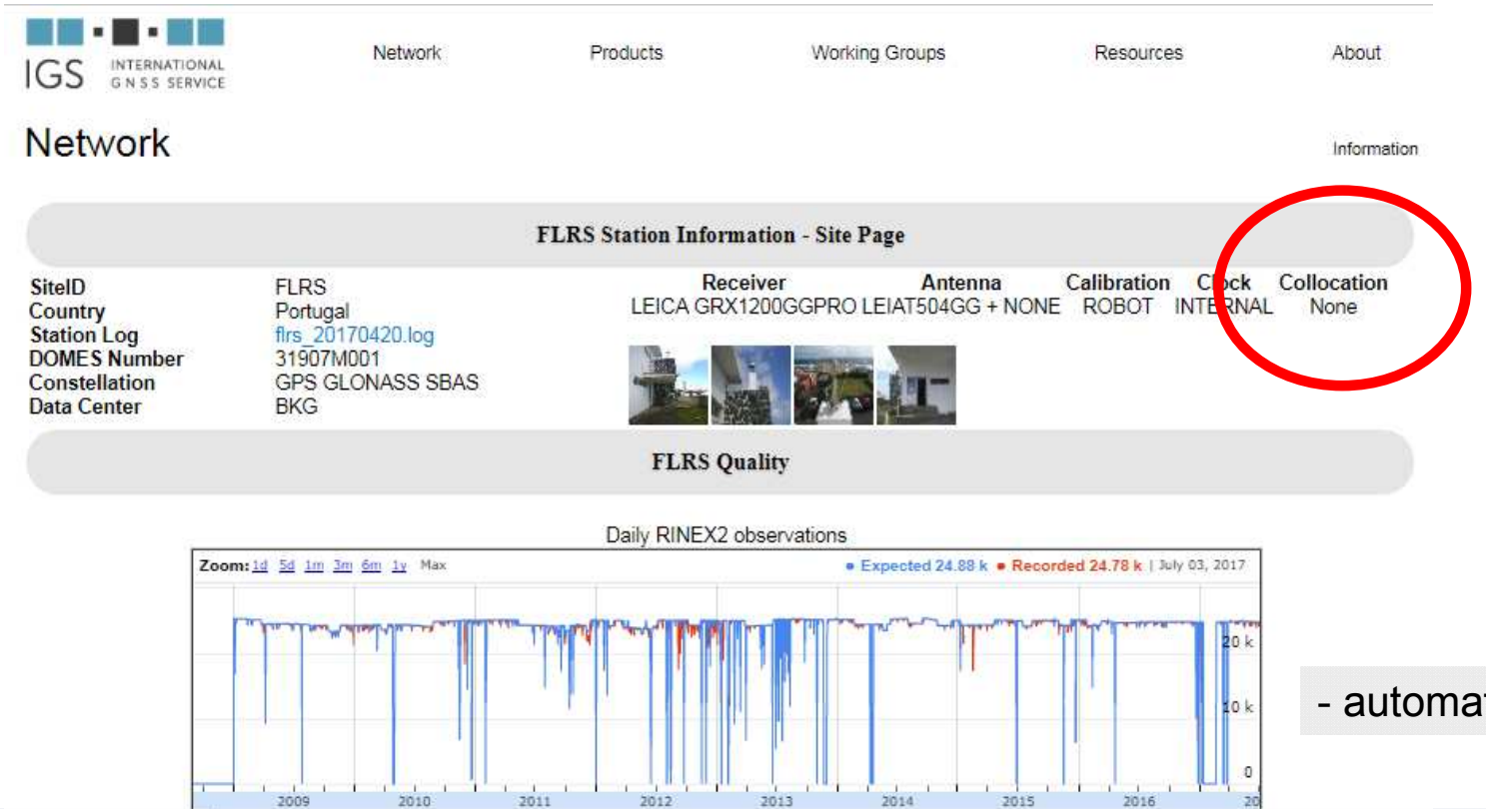
Advancing the Interface to IGS



Ways have been defined for exchange of collocated tide gauges with IGS web site

- automated data exchange with SONEL

TIGA Analysis Center repro3

TIGA Analysis Center (TAC)	TIGA	Submit to IGS
BLT (University of Nottingham , University of Luxembourg)	yes	yes
DG3 (DGFI/TUM Germany)	pending	pending
GT3 (GFZ Potsdam TIGA Solution)	pending	pending
UL3 (University La Rochelle)	Yes	yes

Feedback pending, or under discussion

TIGA-WG Recommendations

- TIGA-ACs should be included in preparations of repro3
- Ask IGS-AC's to include as many as possible GNSS@TG stations for repro3
- Ask the IGS-AC+ACC+RF to study the impact of multi-GNSS combinations on long-term homogeneity of the vertical of GPS-only time series (req. sub-mm/a)
- Encourage IGS community
  - to explore possibilities to establish new GNSS stations at or near tide gauges
  - to provide resources for establishing ties between GNSS-ARP and TG-TGZ/TGBM

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