RECENT DEVELOPMENTS IN CAL/VAL ACTIVITIES SUPPORTING SATELLITE ALTIMETRY IN THE CASPIAN SEA

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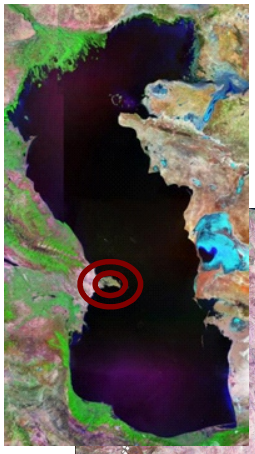
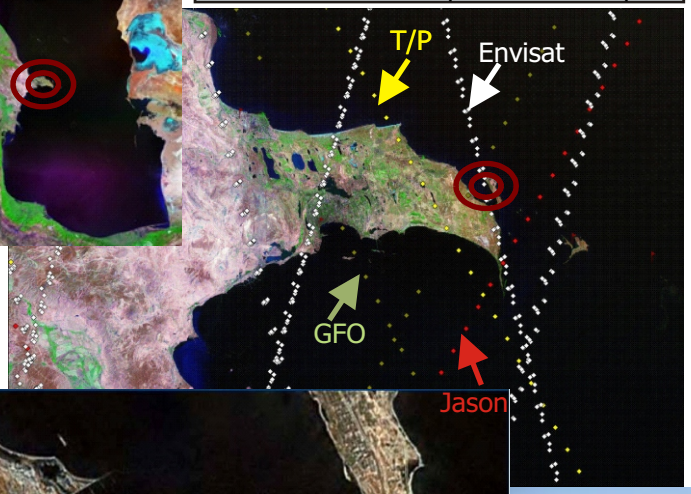
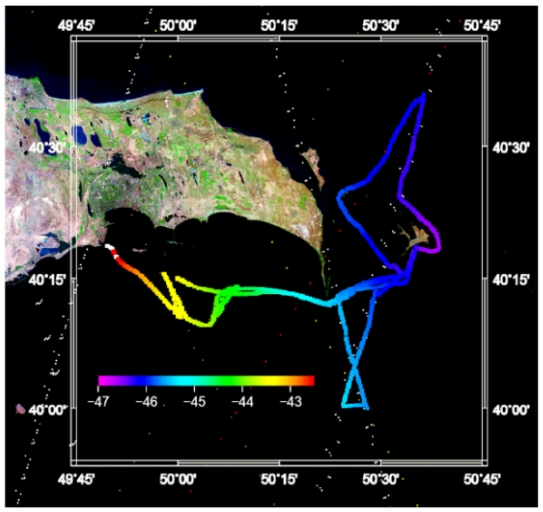
CONTEXT



The Caspian Sea is the biggest enclosed body of water on Earth which is also subject to significant water level fluctuations which have had serious consequences in the past.



GPS profile along the Jason-1, T/,P Geosat Follow-on and Envisat ground tracks using data collected as part of a campaign carried out in the Caspian Sea during 2005.



REASONS FOR CAI/VAL HERE

There is clear evidence that the calibration of satellite altimetry over ocean does not apply to inland seas (e.g., corrections, retracking, geographical effects).

It is acknowledged that a regional Cal/Val site would supply invaluable data to formally establish the error budget of altimetry over continental water bodies, in addition to the global mission biases and drift monitoring.

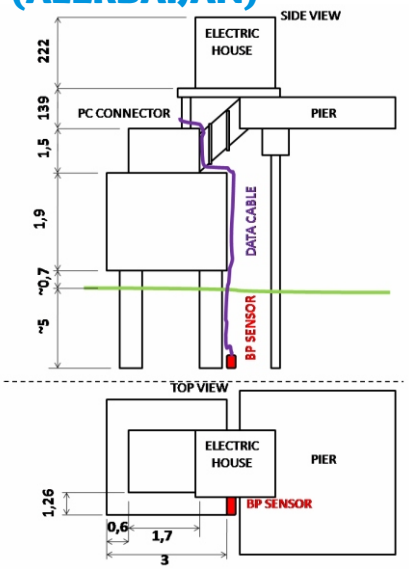
Calibration techniques over lakes are still immature even though important progresses are already achieved.

The Caspian Sea is currently the best natural target for calibration over continental water bodies being a big lake with favorable location of satellite tracks and cross-over points.

No similar optimality of any existing cal/val site in Europe would satisfy these requirements.

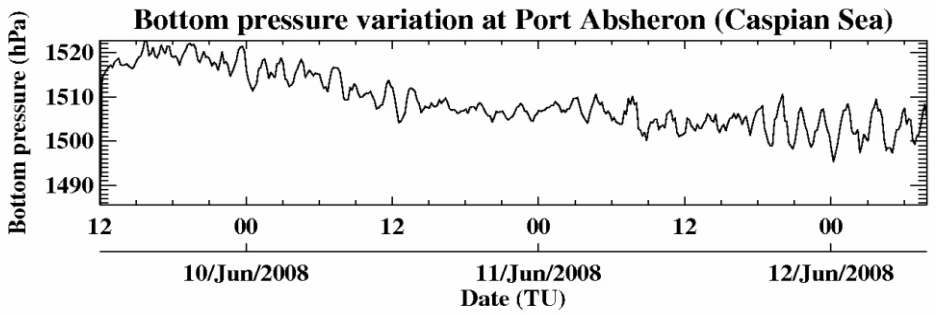
We propose the Caspian Sea be used as a "laboratory" for developing a cal/val site for lakes

PILOT STATION AT ABSHERON PORT BAKU (AZERBAIJAN)



PRELIMINARY RESULTS

We made a preliminary analysis on the basis of the data collected at time of installation. We can clearly detect the presence of an oscillation phenomena with period around 2 hours. This oscillation could be the different mode of a seiche caused by the closure of the end of the Island by a dam or a product of the Caspian sea metocean dynamics itself.



FUTURE PLANS

Making the pilot station GLOSS-compliant, including near real time transmission, permanent GPS Station near tide gauge to control the vertical motion of the sea level sensor and regular offshore leveling along the altimetry ground tracks.

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