## **ALTICORE** National Oceanography Centre, Southampton UNIVERSITY OF SOUTHAMPTON AND NATURAL ENVIRONMENT RESEARCH COUNCIL An initiative for coastal altimetry Vignudelli S. <sup>(1)</sup>, Cipollini P. <sup>(2)</sup>, Snaith H. M. <sup>(2)</sup>, Venuti F. <sup>(2)</sup>, Lyard F. <sup>(3)</sup>, Roblou L. <sup>(4)</sup>, Kostianoy A. <sup>(5)</sup>, Lebedev S. <sup>(6)</sup>, Mamedov R. <sup>(7)</sup> **ALTICORE objectives:** NOCS (1) to generate an improved altimetric data stream for the Mediterranean, Black, Caspian, White and Barents Sea coastlines; (2) to raise awareness of the advantage of Grid and Web technology in the context of coastal altimetry and provide users with relevant products. **ALTICORE outcomes:** (1) a set of quality protocols for coastal altimetry; (2) a set of improved altimetric corrections, algorithms and quality control procedures, optimized for coastal targets; (3) a system for the generation of these improved products; the system will be configured as a Grid application and will include a portal for access to the improved data; **CNR** Example: Caspian Sea O AND THE ACTORS Q1: Can I get a map of sea level variability? Is sea level rising or falling? Research Centre: Provides the latest satellite orbits Data Centre: Provides raw merged altimeter data Regional Authority: **OUR VISION FOR** Provides in situ data WEB OF LINKED DATA AND SOFTWARE for validation FOR COASTAL ALTIMETRY Altimeter data require a complex sequence Grid and web services altimetry fabric: Provides dynamic access to all available data Today and customizable interfaces Research Centre: Datasets dispersed geographically Provides retracked Access to relevant data not easy waveform data near Research Laboratory: coast Continuous system upgrading necessary Provides a new experimental Validaton data often missing corrective term Issues of data format ..... etc. etc.. (e.g. Sea state bias) Regional Centre: Calculates tidal Specialized Laboratory: A collection of medieval enclaves and atmospheric effects from Carries out more coastal local modelling on request Tomorrow specific data editing Altimetry mall open 24/7 THE COASTAL ALTIMETRY CHALLENGE Updated information in a click Altimetric data recovery in coastal areas is poorly developed, owing to several specific difficulties, ranging from the reduced intrinsic quality of altimeter data (e.g., bad returned waveforms) to the See it the way you want to

Consiglio Nazionale delle Ricerche (CNR), Istituto di Biofisica, Area Ricerca CNR San Cataldo, 56127 Pisa, Italy - e-mail: vignudelli@pi.ibf.cnr.it

In order to meet the stringent accuracy requirements for operational monitoring of coastal and marginal seas, a dedicated scheme for processing of coastal altimeter data is needed.

- National Oceanography Centre Southampton (NOCS), Southampton, European Way, SO14 3ZH Southampton, United Kingdom e-mail: cipo@noc.soton.ac.uk
- (a) Laboratoire d'Etudes en Géophisique et Océanographie Spatiale (LEGOS), 18 Av. Edouard belin, 31401 Toulouse Cedex 9, France, e-mail: florent.lyard@cnes.fr
- <sup>(4)</sup> Noveltis, Parc Technologique du Canal 2, avenue de l'Europe 31520, Ramonville-Saint-Agne, France e-mail: roblou@noveltis.fr
- <sup>(9)</sup> P. P. Shirshov Institute of Oceanology (SIO), Nakhimovsky Pr. 36, 117997 Moscow, Russia e-mail: kostianoy@online.ru
- (6) Geophysical Center (GC), Molodezhnava Str. 3, 119991 Moscow, Russia e-mail: lebedev@wdcb.ru

inaccuracy of corrections (e.g., tides, atmospheric effects).

🖱 Institute of Geography (IG), Center for Caspian Sea Problems, H. Javid Str. 31, Az1143 Baku, Azerbaijan - e-mail: ramiz.mamedov@geo.ab.az

of processing steps to get usable information

Easily manipulate it



A web of trust

## ALTICORE

Value added satellite **ALTI**metry for **CO**astal REgions