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COASTALT: an international effort to enable science with coastal altimetry

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In the last few years ESA has actively supported research and development of satellite altimetry in the coastal zone - a key region for the impact of changing oceans on society - via the COASTALT Project (http://www.coastalt.eu). The Project has delivered a number of key contributions to the advancement of the topic and has gained visibility within the lively international community of researchers involved in the development of coastal altimetry. COASTALT is now in its Phase 2 (2010-2011) and is carrying out the validation of products over three pilot areas around the coasts of Europe.

In this presentation we will first present the rationale behind coastal altimetry and discuss how it can play a significant role in coastal observing systems.

Then we will give a comprehensive overview of what COASTALT has achieved so far in terms of:
- issuing recommendations on the corrections for coastal altimetry
- implementing novel wet tropospheric and tidal corrections
- defining product specifications and producing the relevant documentation
- testing and implementing retracking techniques in the coastal region, both more established ones and experimental/innovative ones

Furthermore we will present the new products and we will discuss how those products are being validated, and we will illustrate some of the possible scientific applications that make coastal altimetry an effort well worth the investments currently being made by ESA and by the research community.