

Progress in Observing the Coastal Zone by Radar Altimetry

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Seventeen years after the launch of ERS-1 and TOPEX/POSEIDON, great progress has been achieved in all the components of Radar Altimetry bringing its accuracy over the open ocean to the centimeter level. In the coastal ocean the radar altimeter and radiometer measurements are degraded by land contamination, the global ocean tide models do not properly account for local tidal effects and other geophysical corrections are affected by local effects such as the inverted barometer and the sea state bias.

It is recognized by the community that progress can be made in Coastal Zone Radar altimetry by tackling each of these difficulties. The European Space Agency and the French Space Agency, CNES, have launched a research initiative focused on developing a special Radar Altimetry Coastal Zone User Product.

The interim outcome of this initiative, among other international and national activities, will be delivered at the 2nd Coastal Altimetry Workshop to be held in Pisa on 6 and 7 November 2008. The objectives of this event is to review and acknowledge the important progress recently made in Coastal Zone Radar Altimetry retrieval algorithms, characterise the difficulties, learn from the ones overcome, focus on the unresolved issues and identify future required actions.

The development and validation of novel Coastal Zone Radar Altimetry retrieval algorithms and a new user data product will not only supply user with current Altimetry data in the Coastal Zone but also will permit the reprocessing of data since the launch of ERS-1 and offer to the non-specialist of Altimetry a Coastal Zone sea level, wave height and wind speed time series up to 17 years long, globally. Furthermore with the advent of operational Oceanography and the next launches of Sentinel-3 and Jason-3 an operational Coastal Zone Radar Altimetry product is under development and requirements for the future altimetric missions are scheduled to be presented and discussed in a special session followed by a round table session. A Summary of the findings of the 2nd Coastal Altimetry Workshop will be provided in San Francisco.