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The nadir looking SAR altimeter concept has been studied in parallel in ESA and the US since the mid 1990s. This concept is now implemented in SIRAL instrument operating on board Cryosat-2 mission launched early 2010, and dedicated to ice topography observations. However, this novel altimeter concept can be very advantageous for observation of ocean surfaces, as it promises improved altimetric precision and better along-track resolution than conventional pulse limited altimeters. This will allow to achieve high-resolution, high-accuracy altimetric mapping of the ocean in regions of high mesoscale variability and in coastal areas. Several studies are ongoing to develop and test suitable processing algorithms for this new altimeter mode. This poster presents the ongoing studies conducted by CLS under a CNES funding using simulated tools and Cryosat-2 flight data provided by the CryoSat project.

