



Retracking RA-2 Envisat waveforms for new ocean parameters using the Southampton Oceanography Centre MLE retracking scheme

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This paper summarises the capabilities of the ocean-retracking model used at the Southampton Oceanography Centre to retrieve the significant wave height, wind velocity at the sea surface, range and the skewness of the sea surface for RA-2 Envisat waveforms. This model is based on the use on Maximum Likelihood Estimation. One of the most important characteristics of the model is that added geophysical information can be retrieved about the ocean surface. We will show results for both linear and non-linear MLE retracking obtained over a number of RA-2 data cycles and we will examine geographical and temporal variability of the new geophysical information. This work is part of the RAIES project, for the exploitation of the Envisat radar altimeter individual echoes and S-band data for ocean, coastal zone, land and ice/sea-ice altimetry.