THE POTENTIAL OF A SPACE ALTIMETER WHEN MEASURING SIGNIFICANT WAVE HEIGHT

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ABSTRACT:

This paper is dedicated to a new method of sea surface significant wave height (SWH) measuring. The method can be applied to space-born radar altimeter data. This method is based on the fundamentals of Bayesian optimal measuring of a parameter. The correlation function of sea surface echo was used to calculate a state of the art likelihood function of the SWH estimate. Optimal discriminator of SWH is developed using the least square error of the SWH estimate criteria, apart from others papers which mostly minimize the least square error of altimeter waveform fitting function. Discriminator characteristics are plotted and subsequent results are presented as well as potential measurement accuracy calculation results.

TOPIC: Microwave remote sensing
ALTERNATIVE TOPIC: Microwave remote sensing