AIRBORNE DOPPLER NAVIGATION SYSTEM APPLICATION FOR MEASUREMENT OF THE WATER SURFACE BACKSCATTERING SIGNATURE

A. Nekrasov[*a b]

[b] University of Bologna, Interdepartmental Center of Research in Environmental Sciences, , 48123, Ravenna, Italy
[a] Southern Federal University, Taganrog Institute of Technology,
Per. 1 Krepostnoy 34, k. 249, 347922, Taganrog, Russian Federation

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ABSTRACT:

A method for measuring the water surface backscattering signature using the airborne Doppler navigation system in addition to its standard navigational application is discussed. A case of an airplane circle flight measurement of the azimuth normalized radar cross section curve of the water surface is considered. This is done in the range of middle incidence angles by the Doppler navigation system. The system operates in the scatterometer mode and uses a fore-beam directed to the right side at a typical mounting angle in the vertical plane that is not so far from nadir at a straight flight. An algorithm for measuring the water surface backscattering signature is proposed.

TOPIC: Microwave remote sensing
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