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Titolo	Foundations for Innovative Application of Airborne Radars : Measuring the Water Surface Backscattering Signature and Wind / / by Alexey Nekrasov
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Nota di contenuto	Water surface backscattering and wind retrieval -- FM-CW demonstrator system as an instrument for measuring the sea surface backscattering signature and wind -- Doppler navigation system application for measuring the backscattering signature and wind over water -- Measuring the water surface backscattering signature and wind by means of the airborne weather radar -- Water-surface wind retrieval using the airborne radar altimeter -- Near-nadir wind estimation over water with the airborne precipitation radar.
Sommario/riassunto	The 'wind vector' – wind speed and direction – is a main meteorological quantity and relevant for air-sea exchange processes. This book explores the use of several airborne microwave instruments, some of which are part of standard aircraft equipment, in determining the local wind vector over water. This is worthwhile as local wind information is usually only available at measurements sites like weather stations and airports, and global wind information from satellites has very coarse

resolution and poor temporal coverage – at most a few times daily. In his book, Nekrasov uses known results in a novel way and gives explicit and application-oriented descriptions how to additionally retrieve local wind information from standard airborne microwave instruments. The results presented here are highly valuable for flight operation above the sea (e.g., search-and-rescue) but also for complementing other measurements of atmospheric or oceanic parameters during research flights.
