

论文

利用微波散射特性重建海面波高谱

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摘要

本文利用电磁散射理论进行海面微波后向散射特性的数值分析,并与机载散射计所获得的实验数据匹配重建反映风场的海面波高谱。从而得到散射系数与风速的关系曲线,只要测得海面后向散射系数就能确定海面风速,这对于海洋微波遥感具有一定实际指导意义。

关键词 [无线电海洋学](#) [遥感](#) [微波散射特性](#)

分类号

REBUILDING THE SEA WAVE HEIGHT SPECTRUM USING MICROWAVE SCATTERING CHARACTERISTICS

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Abstract

The microwave back-scattering characteristics are numerically analysed by the electromagnetic scattering theory, and the sea wave height spectrum that reflects the wind field is rebuilt by comparing the calculated data with some experimental data which are measured by airborne scatter. According to the wave height spectrum, the relationship between the back-scattering coefficients and wind speeds can be obtained. Once the back-scattering coefficients of sea surface are measured, thus the wind speeds on sea surface can proximally be determined. It is useful for the microwave remote sensing in ocean.

Key words [Radio oceanography](#) [Remote sensing](#) [Microwave scattering characteristics](#)

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