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The diffraction echo-signal arising in the case of the incidence of a planar wave on a prolate spheroid. (Russian. English summary) [Zbl 0553.76071](#)

Zap. Nauchn. Semin. Leningr. Otd. Mat. Inst. Steklova 140, 18-35 (1984).

The problem of high-frequency diffraction of the plane wave on a prolate spheroid located in a liquid is considered. The spheroid is a solid or a shell. The contribution to the echo-signal, i.e. the back-reflected field, of the diffraction waves (creeping waves and breaking-off waves) is investigated. Computational formulas for geometric spreading of surface rays as well as for creeping and breaking-off waves are obtained.

MSC:

[76Q05](#) Hydro- and aero-acoustics

Cited in **1** Review

Keywords:

high-frequency diffraction; creeping waves; breaking-off waves

Full Text: [EuDML](#)