

题目: Acoustic Mapping of Marine Organisms

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Acoustic technology is by far the most effective sampling technology in the ocean compared with the other physical sampling technologies. Due to the relatively weaker absorption of the acoustic wave in water, use of active acoustic, or sonar technology enable us to sample much larger volume and map distributions of marine organisms in the ocean. Because of the complexity in morphology, anatomy, and behavior among different species, reliable biological interpretations of acoustic backscattered signals, or echoes, are by no mean easy tasks. In this talk, acoustic characteristics of different groups of marine objects are analyzed. As an example, acoustic surveys to map the particular fish stock, Pacific hake distribution of a (Merluccius productus), off the west coasts of the US and Canada, and how to estimate its biomass are presented.