Acoustic Reverberation Experiment Planning

W. S. Hodgkiss and J. A. Hildebrand

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**Abstract (Maximum 200 words).**

The Office of Naval Research initiated a series of detailed surface and bottom reverberation planning meetings as part of the Office of Naval Research Acoustic Reverberation Special Research Program (SRP). As an outgrowth of these meetings, surface and bottom reverberation field measurement groups have been formed to engage in the detailed planning of surface and bottom reverberation experiments.

**Subject Terms.**

acoustic reverberation  
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Objective

Detailed planning of surface and bottom reverberation experiments as part of the Office of Naval Research Acoustic Reverberation Special Research Program (ARSRP).

Approach and Accomplishments

The Office of Naval Research initiated a series of acoustic reverberation planning meetings in FY89. As an outgrowth of these meetings, surface and bottom reverberation field measurement groups were formed in FY90 to engage in the detailed planning of surface and bottom reverberation experiments. Dr. Hodgkiss met with the surface group and Dr. Hildebrand met with the bottom group.

The scientific plan for the surface reverberation component of the ARSRP has placed special emphasis on low grazing angle backscatter and high wind speed conditions in the 15-30 kt region [1]. An experiment plan proposing the collection of a high-quality, well-documented data set evolved out of extensive discussions [2].

Although seafloor scattered wavefields have been studied previously, many of the seafloor characteristics important to their understanding had not been measured concurrently. Scattering may vary spatially in the ocean due to variations in seafloor roughness, sediment cover, and water depth. The scientific plan for the bottom reverberation component of the ARSRP has placed special emphasis obtaining a detailed description of the bottom in the "natural laboratory" where acoustic experiments are to be conducted [3]. The SRP natural laboratory will provide a setting where adequate environmental control is available to understand the connection between seafloor characteristics and scattering characteristics.
References

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