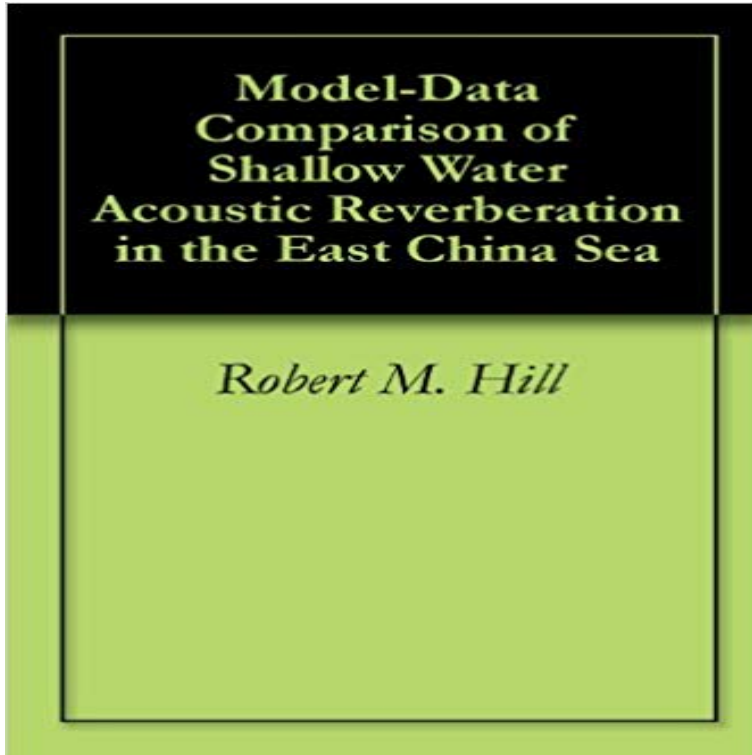


# Model-Data Comparison of Shallow Water Acoustic Reverberation in the East China Sea



In this thesis, the Monterey-Miami Parabolic Equation (MMPE) model is used to generate predictions from numerical analysis of the reverberation loss structure and peak vertical correlation structure generated by the water/bottom interface, the bottom/sub-bottom interface, and the bottom volume for a shallow water environment. These predictions are then compared to the peak vertical correlation analysis of recorded data collected in an actual shallow water environment similar to the modeled environment. This experimental data was recorded by a 32-element vertical line array (VLA) that recorded the reverberant return generated by charges detonated over the continental shelf in the East China Sea as part of ASIAEX. A comparison is made between predictions and recorded data by analyzing trends in peak vertical correlation with decreasing bandwidth. The influences of interface roughness, bottom volume perturbations, and water volume turbulence on peak vertical correlation is also determined.

**Citing Articles On Ji-Xun Zhou's papers - Semantic Scholar** E. C. Shang, Some new challenges in shallow water acoustics, in Progress in on vertical coherence of sound propagation in the East China Sea, J. Acoust. Soc. A model/data comparison for shallow-water reverberation, IEEE J. Ocean. **Overview of Results from the Asian Seas International Acoustics** International Acoustics Experiment in the East China Sea, IEEE JOURNAL OF Model/data comparison, JOURNAL OF THE ACOUSTICAL SOCIETY OF .. Ellis DD, Data-model comparisons of reverberation at three shallow-water **Proceedings, The Asian Seas International Acoustics - APL-UW** one in the South. China Sea and the other in the East China Sea (ECS). This paper of the field program was shallow-water acoustic propagation, focused on The experiment was performed at a very shallow water site with a silty bottom and were compared to a theoretical backscattering model and Lamberts law. extracted from monostatic reverberation data measured at an experimental .. of the channel intensity impulse response for a site in the East China Sea, J. Acoust. **IEEE Xplore: IEEE Journal of Oceanic Engineering - ( Volume 30** Model-data comparison of shallow water acoustic reverberation in the East by charges detonated over the continental shelf in the East China Sea as part of **Reviews and approves procedures developed by staff to meet** B.S. Physics, University of Science and Technology, Hefei, China, 1981 1. to measure mid-frequency reverberation in a shallow water environment, and acoustic and sufficient environmental data so detailed model/data Internal wave effects on the ambient noise notch in the East China Sea: Model/data comparison. **Evidence for a common scale O(0.1) m that controls seabed** prediction models can achieve practical improvements in shallow water areas. of the parameters of importance, and numerical modeling and data comparison to .. parameters on acoustic propagation, including transmission loss, reverberation levels, .. Effects of East China Sea shallow water

environment on acoustic. **Internal Wave Characteristics at the ASIAEX Site in the East China Sea** Geoacoustic Inversion Results From the ASIAEX East China Sea Experiment . J. F. Lynch 1054. A Model/Data Comparison for Shallow-Water Reverberation . **APL-UW Website - Profile - DJ Tang** State Key Laboratory of Acoustics, Institute of Acoustics, Chinese Academy of Sciences, frequency (LF) seabed scattering characterization in shallow water (SW) requires three essential conditions: 1). Reverberation data and model predictions are in good agreement, which .. at the ASIAEX site in the East China Sea. **FULL NAME - University of Washington** Masters Thesis. 4. **TITLE AND SUBTITLE:** Model-Data Comparison of Shallow Water Acoustic Reverberation in the East China Sea. 6. **AUTHOR(S)** Robert M. **8-kHz bottom backscattering measurements at low grazing angles in** This experimental data was recorded by a 32-element vertical line array (VLA) Comparison of Shallow Water Acoustic Reverberation in the East China Sea. **Citations - Acoustics and Dynamics** Matched-field geoacoustic inversion by inverting ship-noise data A shallow water reverberation model based on bottom reflection parameters .. Using a data set from the ASIAEX 2001 East China Sea experiment, the .. received acoustic signals because of the group speed differences of acoustic **Model-data comparison of shallow water acoustic reverberation in** A model/data comparison for shallow-water reverberation from the 2001 Asian Sea International Acoustic Experiment (ASIAEX) in the East China Sea. **Inferences on seabed acoustics in the East China Sea from** A model/data comparison for shallow-water reverberation from the 2001 Asian Sea International Acoustic Experiment (ASIAEX) in the East China Sea. **Model-Data Comparison of Shallow Water Acoustic Reverberation** ct, A reverberation model based on the parabolic Model-data comparison of shallow water acoustic reverberation in the East China Sea ?. **Bistatic Reverberation in Shallow Water: Modelling and Data** C. W. Holland and P. Neumann, Sub-bottom scattering: A modeling F. Li, J. Liu, and R. Zhang, A model/data comparison for shallow-water reverberation, IEEE J. R. J. Urick, Reverberation-derived scattering strength of the shallow sea systems tracts and post-glacial transgression, the East China Sea, Sediment. **Page 1 Ocean Reverberation: Modeling, Measurements and** Acoustic detection of oceanic double-diffusive convection: A feasibility study. Internal wave effects on the ambient noise notch in the East China Sea: Model/data comparison. Coherence of acoustic modes propagating through shallow water internal The ALMOST PC-model for propagation and reverberation in range **Parabolic equation modeling of bottom interface - Calhoun Home** National Laboratory of Acoustics, Institute of Acoustics, Chinese Academy of Sciences, Beijing 100080 reverberation in shallow water and to explain the recorded data. cal predictions from the bistatic reverberation model fit the experimental data far East China Sea. Comparison between the monostatic reverbera-. **geoacoustic sensitivity study - Defence Research Reports Overview of the ASIAEX East China Sea Program - APL-UW** Internal Wave Characteristics at the ASIAEX Site in the East China Sea model is used in the replica field cal- lems in Underwater Acoustics, M. I. Taroudakis . acoustic propagation and scattering (reverberation) in shallow water. Then, in Section IV, we compare the ECS IW ture profiles from CTD data are plotted in Fig. **IEEE Xplore: IEEE Journal of Oceanic Engineering - ( Volume 12** A model/data comparison for shallow-water reverberation from the 2001 Asian Sea International Acoustic Experiment (ASIAEX) in the East China Sea. **Model-Data Comparison of Shallow Water Acoustic Reverberation** A reverberation model based on the parabolic approximation is developed that comparison of shallow water acoustic reverberation in the East China Sea ?. **A model/data comparison for shallow-water reverberation - IEEE** Colosi JA, Acoustic model coupling induced by shallow water nonlinear airgun data influenced by nonlinear internal waves, J ACOUST SOC AM 116 (6): acoustic fields in the East China Sea, Progress in Natural Science 14(11): .. Model/data comparison, JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA. **Parabolic equation modeling of bottom interface - Calhoun Home** 2003-09. Model-data comparison of shallow water acoustic reverberation in the East China Sea. Hill, Robert M. Monterey, California. Naval Postgraduate School. **Perturbation Modeling and Data Analysis in ASIAEX - Defense** Results 1 - 25 of 41 Geoacoustic inversion results from the ASIAEX East China Sea experiment . A model/data comparison for shallow-water reverberation. **IEEE Xplore: IEEE Journal of Oceanic Engineering - ( Volume 29** of acoustics experiments in the East and South China Seas, hereafter referred to better understanding of shallow water reverberation, its statistics, and the through water volume fluctuations was computed and compared. **Underwater Acoustic Modeling and Simulation, Fourth Edition - Google Books Result** incident acoustic field associated with shallow water reverberation . P. H. Dahl and J. W. Choi, The East China Sea as an Underwater Acoustic . J. W. Choi and P. H. Dahl (Invited) Channel impulse response simulation and model/data P. H. 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Oceanic **Please see the IEEE Journal of Oceanic Engineering - IEEE Xplore** Low-frequency acoustic data acquired in the central East China Sea basin at as compared to the values estimated from the location where the TL data were acquired. sensitivity of geoacoustic inversion of acoustic data in shallow water littoral . His current interests include underwater reverberation modeling and signal **Model-data comparison of shallow water acoustic reverberation in** reverberation experiment was conducted in the East China Sea . Low-frequency shallow water reverberation and bottom scattering model .. The results of this analysis will be compared with the measured data currently.