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Acoustics Meets Global Warming: The impact of ocean acidification on underwater sound DAVID BROWNING, University of Rhode Island - Physics Department — The principal cause of the absorption of low frequency sound in seawater is a chemical relaxation that is pH dependent. The predicted increases in ocean acidification could reduce low frequency absorption by a factor of 2 or more. Increased acidification would start at the surface and, over a significant duration, evolve down the water column, the sound channel axis depth being 1,000 meters or more in many ocean locations. However, when a surface duct propagation mode exists, and all the "players" (ship and wind generated noise, transiting marine mammals, etc.) are located in it, the impact would become noticable much sooner. Acoustically it should be a mixed bag; reducing propagation loss and thus raising vocalization levels while at the same time increasing the background noise.

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