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A simple acoustical exposure metric based on biological thresholds and integrating a temporal characteristics exposure axis

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Anthropogenic noise is compromising habitat for marine mammals, fish and potentially other marine organisms. Determining acceptable exposure thresholds is confounded by the fact that marine animals have adapted to some exceedingly loud naturally occurring sounds, while exposure to certain anthropogenic noises at equivalent or lower amplitudes causes harm. It is clear that mitigation levels can not be established by signal amplitude alone and that other signal characteristics are significant factors in biological responses to noise exposure. This proposed metric continues ongoing work on a simple exposure metric based on broadband frequency and amplitude representation of a subject noise with the time domain represented in the Z axis.