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Evoked potential and behavioral hearing thresholds in nine
bottlenose dolphins (*Tursiops truncatus*)

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Auditory evoked potentials are popular for assessing hearing in marine mammals because they do not require the same access to and training of animals as behavioral methods; however, within-subject comparisons of behavioral and electrophysiological thresholds are still necessary to benchmark evoked potential results against the more universally accepted behavioral data. In this study, auditory thresholds were measured in nine dolphins using both behavioral and electrophysiological methods. Subjects included eight males and one female, ages 21-43 yrs. Some had a full-range of hearing and others exhibited high-frequency hearing loss. Tests were conducted in-air, in San Diego Bay, and/or in quiet pools. Hearing test stimuli included frequency-modulated, amplitude-modulated, or pure tones projected in the direct field or via a "jawphone" contact transducer. Comparisons reveal good agreement between the evoked potential and behavioral methods, particularly when the testing environments, stimulus delivery methods, and stimulus waveforms are similar. The results show that evoked potential thresholds obtained in a variety of conditions provide reasonable approximations to underwater sensitivity, especially with respect to the shape of the audiogram and the upper limit of hearing.