Correspondence:  
understanding of marine mammal behaviors and the effects of anthropogenic activities. Work sponsored by NAVFAC  
visually estimated animal locations with acoustically determined bearings and/or localizations. Results indicate that fin  
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A possible case of  
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We conducted aerial–based monitoring of marine mammal behaviors off the Southern California Bight for 7 days during the  
winter and spring of 2012. We integrated visual methods (visual observations and videography) with passive acoustic  
methods (sonobuoys) to study behaviors of cetacean groups. We processed data in real–time, and post–survey, using  
custom–developed software (Difar–Matlab and Mysticetus). We deployed 23 sonobuoys (model AN/SSQ–53F) through a  
belly chute, with only a 9% (n=2) failure rate. Over 16 hours of acoustic data were recorded and analyzed from 23 in–  
flight hours. We acoustically detected and recorded sounds from focal groups of fin whales, gray whales, humpback  
whales and bottlenose dolphins, using DIFAR sonobuoys, and from Risso’s dolphins using omni–directional sonobuoys. A  
possible case of Risso's dolphin call–matching with sonar (e.g. mimicry) was detected. Fin whales were the most  
commonly encountered species, as they migrated northward through the study area. We recorded high signal–to–noise  
acoustic signals and videography from five fin whale focal groups. We plotted bearings to sequential fin whale calls with  
call sources emanating from different directions, indicating counter–calling. During post–processing, we integrated  
visually estimated animal locations with acoustically determined bearings and/or localizations. Results indicate that fin  
whales did not call when at the surface. We greatly improved real–time and post–processing capabilities via integration  
of hardware and upgrades to software. Additional surveys and improvements to the system are planned to increase our  
understanding of marine mammal behaviors and the effects of anthropogenic activities.  [Work sponsored by NAVFAC  
Southwest Division]  
Correspondence: thomas.f.norris@bio–waves.net
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APPENDIX 1: POSTER ABSTRACTS
APPENDIX 2: EVALUATION FORM

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Zalophus californianus