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**Shallow-water tank experiments and model comparisons over  
range-dependent elastic bottoms**

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A series of tank experiments has been conducted in order to obtain high quality data for acoustic propagation in shallow-water environments with elastic bottoms. Such problems can now be solved accurately with the parabolic equation method, which is being used for comparisons with measured transmission loss. Results from the initial experiment with a flat or sloped slab of PVC demonstrated both benchmark quality agreement between computed solutions and data, and the necessity of accounting for elasticity in the bottom [J. M. Collis, *et al.*, *JASA* **122**]. This paper will present results of a second experiment, conducted in the same manner as the first, but modified to allow for variable bottom slopes. Time series were collected at 100-300 kHz on horizontal arrays for two source positions. Parabolic equation solutions for treating variable slopes, using coordinate transformation methods of mapping and axis rotations, will be benchmarked against the new data. [Work supported by the Office of Naval Research.]