

⁸Tricomi, F., *Integral Equations*, Wiley Interscience, New York, 1957, pp. 141-143.

⁹Conway, H. D. and Dubil, J. F., "Vibration Frequencies of Truncated Cone and Wedge Beams," *Journal of Applied Mechanics*, Vol. 32, Series E, No. 4, Dec. 1965, pp. 932-934.

¹⁰Steele, Charles R., Application of the WKB Method in Solid Mechanics," *Mechanics today*, Vol. 3, edited by S. Nematt-Nasser, Pergamon Press, 1976, pp. 243-295.

Reply by Author to A. H. Flax

Franklin E. Eastep*

*Air Force Institute of Technology,
Wright-Patterson Air Force Base, Ohio*

FLAX has used another perturbation theory, first presented by Rayleigh, for determining the natural frequencies of a beam with variable thickness. He obtains the very interesting result in Eq. (11), which is the fundamental frequency of a linearly tapered beam and is correct to within second order of the taper ratio α . The results obtained by using Eq. (11) do compare quite favorably with those of Ref. 1 and the exact results of Conway and Dubil.²

The selection of the simple support conditions and the particular examples (linearly tapered beam and plate) was merely a matter of numerical computation convenience and in no way limits the perturbation method of Ref. 1. Furthermore, it should be mentioned that the results displayed in Ref. 1 were obtained to within second order of a small perturbation parameter for both frequency and mode shape of a beam and plate. In particular, the fundamental mode shape of a linearly tapered plate is given in Fig. 2 and Eq. (19) of Ref. 1.

Received April 14, 1978. Copyright © American Institute of Aeronautics and Astronautics, Inc., 1978. All rights reserved.

Index category: Structural Dynamic Analysis.

*Professor, Dept. of Aeronautics and Astronautics. Member AIAA.

References

¹Eastep, F. E., "Estimation of the Fundamental Frequency of Beams and Plates with Varying Thickness," *AIAA Journal*, Vol. 14, Nov. 1976, pp. 1647-1649.

²Conway, H. D. and Dubil, J. F., "Vibration Frequencies of Truncated Cone and Wedge Beams," *Journal of Applied Mechanics*, Vol. 32, Series E, No. 4, December 1965, pp. 932-934.

Errata

Ionospheric Doppler Sounder for Detection and Prediction of Severe Storms

R.J. Hung* and T. Phan†

*The University of Alabama in Huntsville,
Huntsville, Ala.*

and

R.E. Smith‡

*NASA Marshall Space Flight Center, Huntsville, Ala.
[AIAA J 16, 763-766 (1978)]*

PROFESSOR Hung's title was inadvertently omitted from the footnotes for this Technical Note. The footnotes should have read:

*Associate Professor, Mechanical Engineering. Associate Fellow AIAA.

†Senior Research Assistant, Mechanical Engineering.

‡Deputy Chief, Atmospheric Science Division.

Received July 17, 1978.

Index categories: Sensor Systems; Wave Motion and Sloshing.