

BOOK REVIEW

Positional Astronomy and Astro-Navigation Made Easy: A New Approach Using the Pocket Calculator, H. R. Mills, New York: John Wiley & Sons, 1978, 267 pp, \$24.95.

To many, the subject of positional astronomy is one to be feared and avoided. There are terrible stories of the complexities of spherical geometry. I am sure, however, as we rummage through the A.A.V.S.O. Chart Catalog many of us have wondered about the origin of the simple and beautiful system of star location: right ascension and declination.

H. R. Mills presents in his book the result of a life's experience making the mysteries of positional astronomy comprehensible and interesting to the serious student and interested amateur. Similar endeavors have been carried out at the college level in this country by Holzinger and Seeds (1976), but Mills has also incorporated the use of the pocket calculator into his book.

I found it great fun to take a pocket calculator (Texas Instrument TI-30 or similar calculator of this capacity is necessary) and solve the seemingly hopeless calculations that Mills clearly leads his reader through. Somehow, being able to carry out these horrendous calculations in a matter of minutes puts positional astronomy in a class of mental challenge on a par with chess rather than that of the Schrödinger Equation in three dimensions. With the confidence gained in handling difficult calculations, I then was able to ponder enthusiastically the details of the diagrams of spherical angles and triangles which Mills so clearly sets forth.

For those interested in positional astronomy and calculating celestial events, and in actually making measurements with a simple sextant, sundial, or astrolabe, Mills describes the construction of inexpensive versions of these instruments. In particular, he gives some very satisfying experiments for predicting certain celestial events that can be measured at the observer's position. By use of the calculator and simple homemade instruments one can test the prediction. Of course the telescope fitted with setting circles is perfect for carrying out many of Mills' experiments. Thus, an A.A.V.S.O. member with such a telescope and adequate pocket calculator can easily use Mills' Positional Astronomy and Astro-Navigation Made Easy to gain a better understanding of present-day methods of determining positions and even predicting times pertaining to celestial bodies and their movements.

REFERENCE

Holzinger, J. R., and Seeds, M. A. 1976, Laboratory Exercises in Astronomy, New York: MacMillan Publishing Co., Inc.

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