

at a family reunion. Part of this no doubt stems from the predominance of dynamics, the study of atmospheric motions, in the minds of meteorologists. Contributing to this neglect has been the absence of a suitable textbook. Although there are several fine monographs on topics of such limited scope as radiative transfer and inversion theory, none of them taken separately meets the needs of instructors of introductory courses. Therefore, the effort of K. N. Liou, who is a member of the meteorology faculty at the University of Utah, to fill this gap with *An Introduction to Atmospheric Radiation* is to be greeted with enthusiasm: The table of contents promises a set of topics that would be ideal for senior and graduate-level courses.

Enthusiasm soon gives way to disappointment, however, as one encounters page after page of awkwardly written prose full of errors in grammar and syntax. The author's consistent inability to use the definite article idiomatically ("Figure 1.8 shows an energy level diagram for the hydrogen.") suggests that English is not his first language. If this is so, the publisher had a responsibility to edit the manuscript carefully. This, however, was not done. No competent copy editor, even one working in haste, could have failed to notice the many glaring errors.

The author, however, must assume responsibility for the conceptual errors: Their abundance seriously flaws the book. Radiometric and photometric units are confused (page 6). In the derivation of the Schwarzschild equation (page 22) the medium is said to be a blackbody, which it is not unless it is optically thick. What is meant is that it emits according to the Planck function. The author repeatedly refers to the refractive index of molecules when he means gases, and on page 79 the refractive index of anisotropic molecules is said to be a vector, which it is not. The derivation of the optical theorem on page 136 is an incoherent and confusing mixture of two approaches. The author's grasp of the physical significance of the complex refractive index is particularly weak: On page 78 the real part is associated with scattering and the imaginary part with absorption; a perfect reflector is asserted to be one with a vanishing imaginary part (page 138).

This book is a collection of formulae unilluminated by physical insight and bound together by uninspiring, unidiomatic prose. Clear physical explanations of basic concepts and physical phenomena are not given. A course taught from this book would pit its author against the instructor, who would have to correct the numerous errors. Indeed, one of my colleagues at another university is using it: Both he

and his students find it confusing and lacking in physical interpretation.

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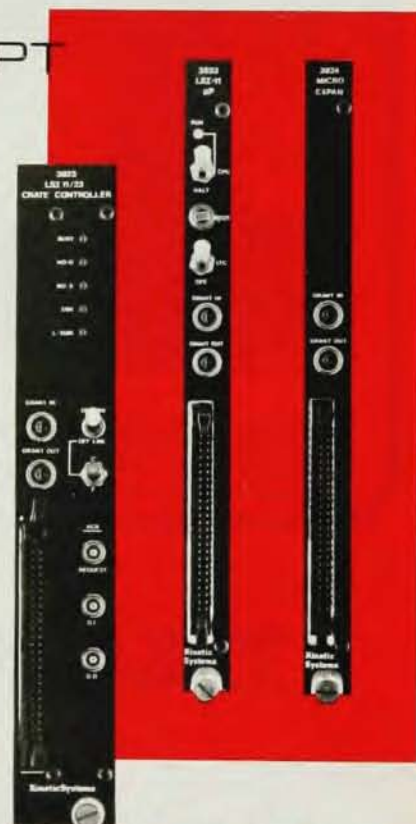
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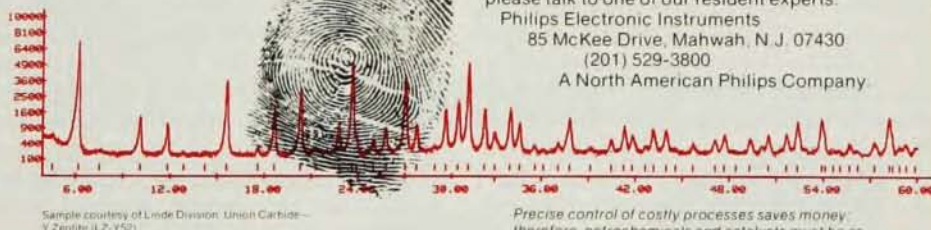
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