BOOK REVIEWS

DIPOLE RADIATION IN THE PRESENCE OF A CODUCTING HALF-SPACE. By A. Banos, Jr., Pergamon Press, Vol. 9 of the International Series of Monographs in Electromagnetic Waves—Editors : A. L. Cullen, V. A. Fock, and J. R. Wait; 1966. 70s

Consider an infinite plane surface separating two media—one a conducting medium which for simplicity is assumed to have infinite conductivity and the other a dielectric; and now put an oscillating dipole anywhere and with its axis either parallel to the plane of separation or perpendicular to it and you will have the basic considered in this monograph. While the problem is, to be sure, of interest, yet the reviewer is afraid that except the few who are actively working in the line (to which group the reviewer does not belong) the average physicist will find a perusal of this book of some 250 pages a tough job demanding too much of his time, patience and mathematical skill. However the book will be a useful reference book for any mathematical physicist who may be interested in the saddle point method of integration.

A. K. Ray Choudhuri

ATOMS TO ANDROMEDA—Edited by S. T. Butler and H. Messel; Pergamon Press, Oxford, 1966, pp 301, Price 21s.

'Atoms to Andromeda' is a collection of lectures in a summer School for high school students arranged by the Sydney School of Physics in 1966. Perhaps in such a course of lectures, one would expect to find an introduction to the Maxwell field theory, something about the wave theory of light, photons and the so-called dual aspect of light and may be there would be something about mesons, the expanding universe, the quasars and nuclear energy. Well, you really find all these in this book but it goes much further. There is the Dirac hole theory (even a mention of Feyman's idea of a particle proceeding in the negative direction of time), a discussion of the magnetic mirror and the magnetic bottle in plasma physics,a fairly detailed discussion of the digital computers and lastly something on parity, strangeness, SU(3) and SU(6). The reviewer would consider it a real wonder i t the school students had been able to appre ciate and benefit from this survey over such a vast and advanced field of Physics in the short time span provided by a summer school. Indeed, the reviewer feels that the topics and the level of discussion would be more suitable for, say, a refresher course for school or college teachers.

Perhaps the few lines above give a fairly good idea about the book, but it must be mentioned that the reviewer has found it an extremely readable book and has himself learnt much about branches he cannot consider his own. However, the picture of two boys throwing balls or trying to snatch away balls as a model of exchange interaction (Pp 29-30) seems too naive and is perhaps likely to lead to misconception. Again the explanation in parenthesis of angular momentum as mass × angular velocity is simply wrong.

An accent throughout the book has been on what has been done and is being done by the Sydney schoool. That is no doubt interesting reading for in some fields Sydney is now 'leading and not just following" but the details of the Molonglo radio observatory or the stellar inter ferometer at Narrabri observatory are likely to be considered a little too elaborate by the average foreign reader.

The reviewer would recommend the book for off time reading by mature physicists as it would be both entertaining and would broaden the general knowledge of present day physics.

A. K. Ray Choudhuri