

BOOK REVIEWS

Physics in Nuclear Medicine. James A. Sorenson and Michael E. Phelps. Grune and Stratton Inc., New York 1980 pp. 404

The book is intended as an introductory text covering the physics and instrumentation of nuclear medicine at an adequate level for the serious student or potential specialist. It covers the range from basic atomic and nuclear physics, through radiation detectors, electronic instrumentation, statistics of counting, the physics of radiation interaction with matter and internal dosimetry, to radiation spectrometers and radionuclide imaging.

The treatment is clear, giving a straightforward account of the basic physics, with qualifications and exceptions treated separately or in footnotes, and there is a bias towards the practical on measurement techniques and instrumentation. The standard of accuracy is generally high; a surprising slip is the implication on p.219 that ^3H beta particles can be detected by a survey meter with a window about $1.3\text{mg}/\text{cm}^2$ thick.

Instrument calibrations and adjustments are well treated and the importance of regular quality assurance checks and performance records noted.

The text contains much useful information in table or graphical form and there are many examples of calculations. There are appropriate references for each of the nineteen chapters, an adequate index and useful appendices including the decay schemes of some radionuclides used in medicine, adsorbed dose estimates for some internally administered radionuclides and some photon mass attenuation coefficients.

There is a final chapter on Radiation Safety and Health Physics.

The book should be a standard introductory text for years to come.

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