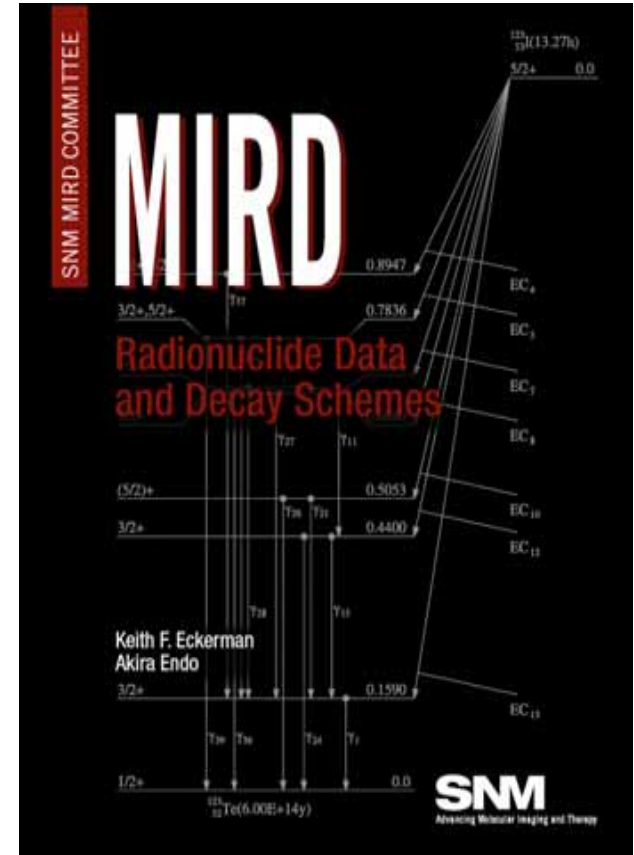


Emission of Radionuclides in Nuclear Medicine: Book published by the Society of Nuclear Medicine

Contact: Keith F. Eckerman, kfe@ornl.gov, 865-574-6251

Sponsor: United States Environmental Protection Agency

- Second edition of "Radionuclide Data and Decay Schemes" will continue to be the principal reference for comprehensive nuclear decay data for physicists, physicians, chemists, dosimetrists and others in nuclear medicine, medical physics, radiation oncology, and health physics.
- Emission of 333 radionuclides of relevance in diagnostic and therapeutic nuclear medicine tabulated in a manner need by medical physicists.
- An attempt was made to include all radionuclides that potentially offer desirable localization and/or decay properties for use in nuclear medicine.
- Accompanying CD provides electronic access to spectral data (e.g., Auger electron cascade) needed for cellular level dosimetry.
- Collaborative effort between ORNL, Japan Atomic Energy Agency, and the USEPA



Emission of Radionuclides in Nuclear Medicine: Book published by the Society of Nuclear Medicine

Contact: Keith F. Eckerman, kfe@ornl.gov, 865-574-6251

Sponsor: United States Environmental Protection Agency

Abstract: In the second edition of the *MIRD:Radionuclide Data and Decay*¹, radionuclides were selected for inclusion based on their relevance and use in diagnostic and therapeutic nuclear medicine. This revision tabulates the energies and intensities of radiations emitted in the decay (nuclear transformation) of 333 radionuclides of 87 elements. This includes 91 radionuclides that were not addressed in the earlier edition. This expansion reflects the addition of radionuclides that are either currently in use or offer promise for future use in imaging, other diagnostic applications, therapy or as daughter products of these radionuclides. As with the first edition, this new edition is designed and formatted to provide physicists, physicians, chemists, dosimetrists, and others in nuclear medicine, medical physics, radiation oncology, health physics, and related specialties with a comprehensive and up-to-date tabulation of decay schemes and nuclear decay data for radionuclides used in their specialties. An attempt was made to include all radionuclides that potentially offer desirable localization and/or decay properties for use in nuclear medicine. This includes the decay schemes and decay data for radioactive daughter products that are in significant abundance, parent/daughter radionuclides used in radionuclide generators, radionuclides that appear as contaminants in the production of a radionuclide for diagnosis or therapy, and radionuclides that are used in the calibration and testing of nuclear medicine instrumentation.

¹Eckerman, K. F and Endo, A. *MIRD: Radionuclide Data and Decay Schemes, 2nd Edition*. The Society of Nuclear Medicine, Reston VA, USA, 765 pp.