

Discussion radioactivity

- Discuss the main radioactive decay modes
- What decay mode would cause the highest 'local' dose, and what would cause the highest 'regional/peripheral' dose (for the same amount of kinetic energy emitted)?
- What is the charge of an atom after internal conversion?
- In PET, typically 200 MBq of a positron emitter is injected into the patient. The half life is 110 min. Assume that the positron energy is 600 keV and that 20 % of all disintegrations result in energy absorption. What is the dose to a patient weighing 80 kg?