

CONCEPT: BETA DECAY

Beta (β) Decay occurs when an unstable nucleus emits a(n) _____.

- A beta particle can be represented by _____

Beta decay can be represented by the following reaction:

In terms of the size of radioactive particles, beta particles are _____ than alpha particles.

- It is not as damaging to biological cells and so has a _____ ionizing power.
- _____ penetrating power and can only be stopped by a sheet of metal or a large block of wood.

EXAMPLE: Write balanced nuclear equations for each of the following beta emissions.

a) Magnesium (Mg) – 25

b) Ruthenium (Ru) – 102

EXAMPLE: Pb – 208 is formed from Th -232. How many alpha and beta decays have occurred?

- a. 6, 2
- b. 6, 6
- c. 6, 4
- d. 4, 6
- e. 8, 2