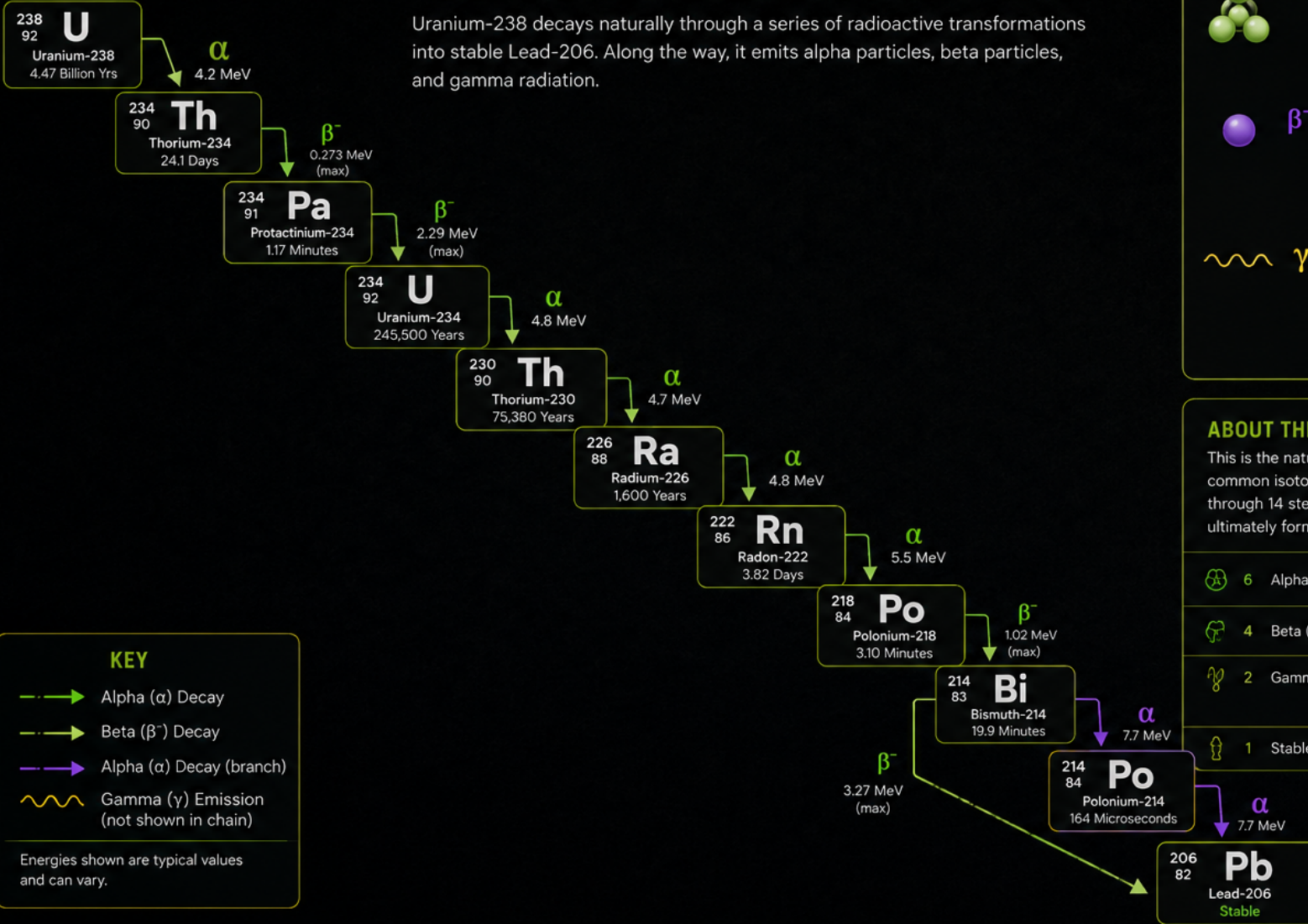


URANIUM-238 DECAY CHAIN

RADIOACTIVE DECAY SERIES & RADIATION EMISSIONS

Uranium-238 decays naturally through a series of radioactive transformations into stable Lead-206. Along the way, it emits alpha particles, beta particles, and gamma radiation.



RADIATION TYPES



α ALPHA PARTICLE

Helium nucleus (2 protons + 2 neutrons).
High energy, low penetration.
Stopped by paper or skin.



β^- BETA PARTICLE (ELECTRON)

High-speed electron emitted from nucleus.
Moderate penetration. Stopped by aluminum or plastic.







γ GAMMA RAY

High-energy electromagnetic radiation.
Very high penetration. Requires lead or concrete for shielding.

ABOUT THE DECAY CHAIN

This is the natural decay series of Uranium-238, the most common isotope of uranium in nature. It transforms through 14 steps involving alpha and beta decay, ultimately forming stable Lead-206.

 6	Alpha (α) Decays	Helium nuclei emitted
 4	Beta (β^-) Decays	Electrons emitted
 2	Gamma (γ) Emissions	High-energy photons (emitted by some daughter nuclei)
 1	Stable End Product	Lead-206



Always handle radioactive materials responsibly. Use proper shielding, monitoring, and safety equipment.