

3 Types of Radiation: recap



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alfa radiation	beta radiation	gamma radiation
<p>2 P + 2 N =alfa alfa particle= He nucleus</p>	<p>3 types: beta - : electrons beta+ : positrons e- capture</p>	<p>photons</p>
<p>P/N ratio unstable : too many P</p>	<p>P/N ratio many N->P+electron many P->N+positron</p>	<p>excited nucleus</p>
<p>A-4,Z-2 Z>83 e.g.U,Ra, Pu</p>	<p>A=const. Z+1 beta - : most Z-1 beta + : F, O</p>	<p>A=const.Z=const. after @, beta decay</p>



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3 Types of Radiation: symbol, composition, charge, mass

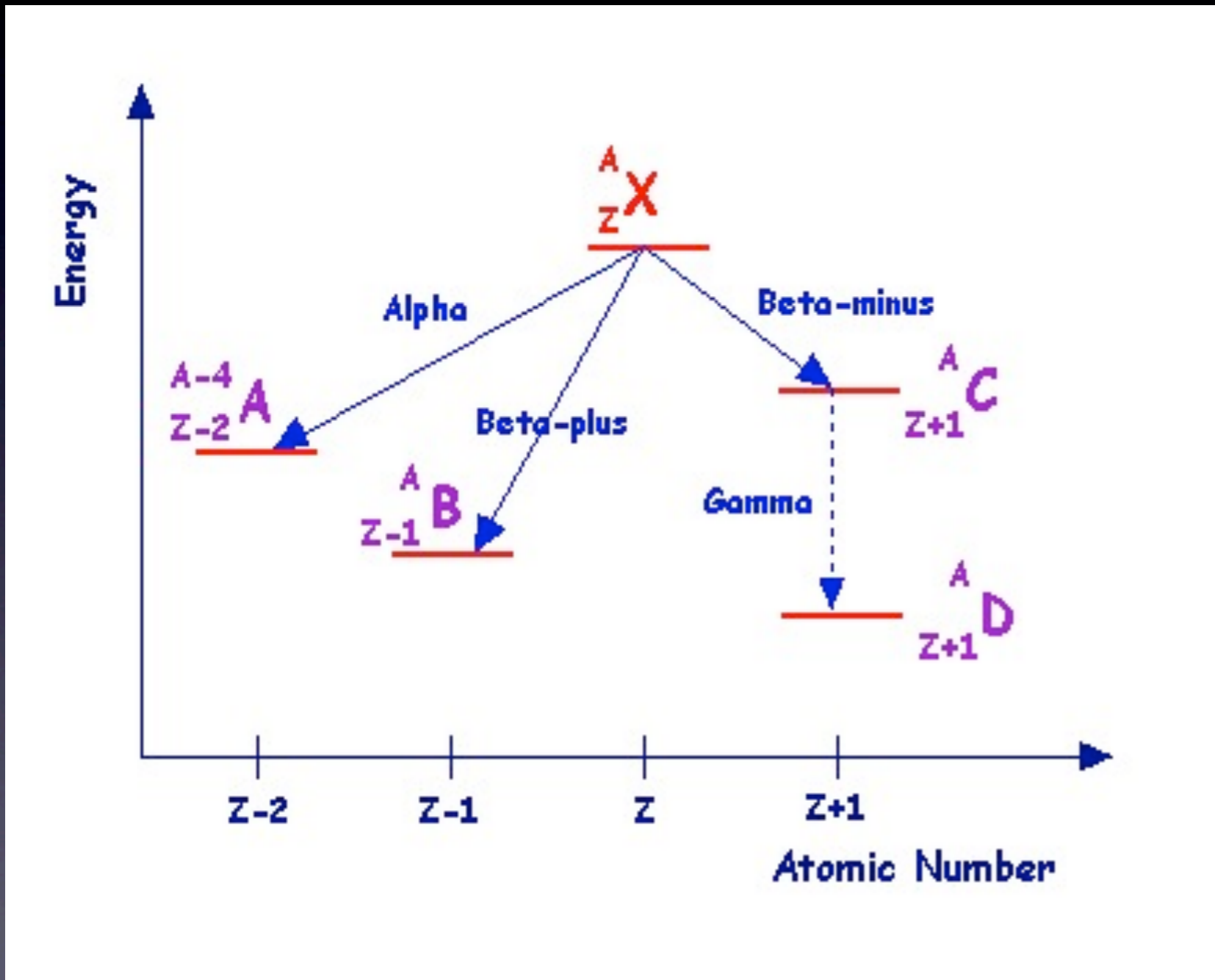
Type of radiation	Symbol	Composition	Charge	Mass (atomic mass units)
Alpha	α	2 protons and 2 neutrons (a helium nucleus)	+2	4
Beta	β^-	electron	-1	Negligible
Positron	β^+	antimatter electron	+1	Negligible
Gamma	γ	photons of electromagnetic energy	0	0

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3 Types of Radiation: variation of Z, A and energy level



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- Different types of radioactivity left nucleus with different amount of protons/ neutrons ratio or Z/A ratio and different energetic levels.

3 Types of Radiation : Interaction with various materials



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Three types of radiation exist in nature.

