The Changes of the Electronic Cloud Surrounding An Unstable Atomic Nucleus in the Decay

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Abstract: Discussing and shows the changes of the electronic cloud surrounding an unstable atomic nucleus that in the radioactive decay

Main Viewpoints and Conclusions:

Radioactive decay, also known as nuclear decay or radioactivity, is the process by which a nucleus of an unstable atom loses energy by emitting ionizing radiation. A material that spontaneously emits such radiation, that includes alpha particles, beta particles, gamma rays, conversion electrons and other types of emission, are considered radioactive. [1]

The result of a radioactive decay of an unstable atom is transforms into a neutral atom or an ion both with a stable nucleus. And in the process of a radioactive decay of an unstable nucleus, the electronic cloud surrounding the nucleus is equally changing and unstable.

For example in simple and intuitive, a H_3's neutral atom transforms into a He_3's neutral atom by the decay that release of a π-meson (be composed of an electron and a neutrino), a He_3's neutral atom with one neutron, two protons and two extranuclear electrons; a H_3's neutral atom with two neutrons, one proton and one extranuclear electron, compared with each other, a He_3's neutral atom of H_3's neutral atom at more than one proton and one extranuclear electron. That is: after the decay, the electron of the π-meson which released from the H_3's nucleus residing outside the nucleus, and then becoming one of two extranuclear electrons of the He_3's neutral atom. This is an "one γ no β" decay, large amounts of H_3's neutral atoms, in a very short period of time, while producing this "one γ no β" decay, the result is: outbreak Dark-GRBs! [2]

If, the electron of the π-meson which released from the H_3's nucleus both any other types charged particles released out and beyond the atom which with an unstable nucleus, the neutral atom will transforms into an ion. In the process, the charged particles released from the unstable nucleus will interfere and making the electronic cloud surrounding the nucleus into unstable and oscillation while the charged particles via and through it.

So, we have known that in the process of an unstable atom transforms into a neutral atom or an ion, the electronic cloud surrounding the nucleus is equally changing and unstable. [3]

References

[1] *Radioactive decay* https://en.wikipedia.org/wiki/Radioactive_decay#Types_of_decay
[2] The Stability and Radioactivity of Atomic Nucleus http://vixra.org/abs/1411.0501
[3] *Related story*: *Neutrons find 'missing' magnetism of plutonium*
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