

Re: Bohr's Atom still number one

Source: <http://sci.tech--archive.net/Archive/sci.physics.relativity/2007-05/msg01341.html>

- *From:* bz <bz+spr@xxxxxxxxxxxxxxxxxxxxxxxx>
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The_Man <me_so_horneeeee@xxxxxxxx> wrote in
news:1178649624.062647.77960@xx:

We DO observe that electrons, when their path is changed, radiate energy.

I think you are referring to a synchotron? However, in atoms, though the electrons are "accelerating", they don't emit photons in the same manner.

The explanation given at <http://bethe.cornell.edu/> (if I understood it correctly) is that 'not even the electrons know where they are' to a high enough accuracy to be able to 'accelerate' while they are in their 'orbitals'.

Their location is so uncertain that the probability plots ARE the correct 'picture'.

But they only shows where we can find the electron, they do not imply that the electron moves in any way that we ordinarily understand things to move, so it DOES NOT radiate because it is NOT accelerating.

I got the impression that it is only in CHANGING orbitals [energy levels] that the electron's location/momentum is well enough known BY THE ELECTRON so that it can emit a photon.

Of course, I may have missed Bethe's point entirely.

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bz

please pardon my infinite ignorance, the set-of-things-I-do-not-know is an infinite set.

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