

Re: OOPS! Re: Part 2 Re: Ken, need help with this

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2004-10/5269.html>

From: Pax (pax1_at_whitesweb.com)

Date: 10/23/04

Date: Sat, 23 Oct 2004 09:42:12 GMT

"Ken S. Tucker" <dynamics@vianet.on.ca> wrote in message
news:2202379a.0410221134.38e3c337@posting.google.com...
> "Pax" <pax1@whitesweb.com> wrote in message
news:<7l_dd.8758\$q%7.4842@newssvr11.news.prodigy.com>...
> > Guess it would help if I included the link if I want you read something,
> > huh? :)
> >
> > Link added in context below:
> >
> >
> > "Pax" <pax1@whitesweb.com> wrote in message
> > news:gC_dd.8756\$q%7.6805@newssvr11.news.prodigy.com...
> > > "Ken S. Tucker" <dynamics@vianet.on.ca> wrote in message
> > > news:2202379a.0410210101.5f38706a@posting.google.com...
> > > > "Pax" <pax1@whitesweb.com> wrote in message
> > > > news:<LSqdd.7823\$Lk3.5266@newssvr12.news.prodigy.com>...
> > > > Part 2 of "Re: Ken, need help with this"... continuation of Part 1
> > > > >
> > > > > "Ken S. Tucker" <dynamics@vianet.on.ca> wrote in message
> > > > > news:2202379a.0410150154.2fe4ed05@posting.google.com...
> > > > > "Pax" <pax1@whitesweb.com> wrote in message
> > > > > news:<e Fbd.4721\$Lk3.2906@newssvr12.news.prodigy.com>...
> > > > >
> > > > >
> > > > > [Ken]
> > > > > Yes, in analogy, your use of the term "sympathetic" is like
tuning a radio antenna. But you should think in terms of a dipole. The
electron "alone" cannot absorb a photon, (except in vary unusual
circumstances), it is the positive nucleus together with the negative
electron that forms the dipole when emission or absorption occurs, it's like
a tiny antenna.
> >
> > > > [Pax]
> > > > I don't agree because, so far, no monopoles have been discovered.
The primary requirement for absorption is compatible resonance, which then
results in the electron jumping outward a ring in the atom's shell. If the
electron is already at the outermost position in the shell, it has nowhere

to go but out of the atom.

> >

> > > [Ken]

> > > *Well I think we are discussing electrical conduction???*

> >

> > [Pax]

> > *Production, in the case of the photoelectric effect. Here, read over this and let's discuss from common ground, perhaps I was being overly simplistic and missed something important.*

> >

> > *Photoelectric effect*

> > http://en.wikipedia.org/wiki/Photoelectric_effect

> [Ken]

> *Oh now I get it, hit me over the head, then it sinks in!!!*

[Pax]

You're not alone, sometimes when I get an idea in my head it's impossible for me to see around it. :)

> [Ken]

> *I'm sure to be flamed if I abuse you, and you are always welcome to post my explanations as a general question in a new thread, that said, I'll speak with confidence.*

[Pax]

Good grief! Hope you don't mean you think I would flame you, I would never do such a thing to you! I asked specifically for your help, and you've been very kind in offering it. This topic is also an area where I felt unsure and was seeking clarification.

> [Ken]

> *When a photon is absorbed by an atomic antenna that consists of a nucleus and an electron, an equal EM energy is absorbed by both the -charge and the +charge according to their charge magnitude, (not according to their respective masses).*

>

> *The photon only sees the charges, and in the case of hydrogen the nuclear and electronic charges are the same.*

>

> *But because the inertial mass of the charge is so much less than a protons, (~1/1834) it is the electron that exhibits the greatest *recoil* and gets the attention.*

>

> *As a result a common misconception results that the electron is absorbing the energy and the nucleus is passive. IMHO that's not true when you get down and dirty...let's get down and dirty...it's an equal thing, I'll push my point by stating "the absorption of a photon by an atom creates an equal and opposite reaction on the nucleus and the electron", sound familiar, I'm aping Newton's 3rd.*

> *But the most disconcertible measurement, for many reasons, is focused on*

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how the electron reacts, and the part the nucleus plays is relegated to a passive role.

[Pax]

First, it's commonly accepted that an electron takes on or emits a photon when it "jumps" rings in the atom's shell. But, what you're saying is that the action by the electron is initiated through a joint action/reaction of the nucleus–electron construct, and both the electron and the nucleus absorb part of the photon's energy. Is that correct?

Sounds interesting, and it's logical... going to have to think about it for a while. :)

> [Ken]

> *Hope you understand a wee bit...*

[Pax]

Trying to. :)

> *Ken*

Be well – Pax