Re: About EMR (kst)

Source: http://sci.tech−archive.net/Archive/sci.physics/2005−08/msg00839.html

- *From*: "TomGee" <lvlus@xxxxxxxxxxx>

- *Date*: 4 Aug 2005 14:05:22 −0700

Ken S. Tucker wrote:
> IMHO, we should examine the basic circumstances
> needed for photon emission (aka EMR), independant
> of the frequency, which Doppler can adjust anyway.
>
>
I agree, and in fact I have posted an alternative explanation which
takes into consideration the needed basic circumatances, as you put it.
>
>
> In Purcell's EM on pg 11, describes "Energy of a
> System of Charges", he calls "electrical potential
> energy", wherein the simplest case uses two charges,
>
> Work = q1*q2/R12 = P
>
> and then sums to assemblies.
>
> A photon derives energy from the "electrical potential
> energy of a system"
>
>
But how have you separated e from m if they are interdependent?
Shouldn't you say "from the 'electrical and magnetic potential...."?
>
>
> so P becomes...
>
> P => p + energy(photon)
>
> where
>
> p = q1*q2/r12
>
> and p < P.
>
> The point I'll stress, photons (EMR) require a relative
> change in the relation of q1 and q2 for emission.

>
>
Yes, I agree.
>
>
> An example is the relative change in an electron orbital,
> w.r.t the nucleus.
>
> Maxwell's famous "displacement current" given by
> the partial &E/&t really requires a charge "q1" to be
> detected, like,
>
> q1*&E/&t = &(q1*E) /&t = &F/&t .
>
> But to complete the dipole the source of E should
> use charge "q2", where q1 and q2 are different and
> separate by some length R12=ct.
>
> Using Force*distance = energy "P" gives,
>
> P = F*R12
>
> so that,
>
> &P/&R12 = F
>
> which means the emission or detection of EMR
> is relative, ie a single charge can't radiate and
> therefore can't be affected by radiation.
>
>
That sounds correct to me, Ken. My model requires a transformation from a stable state into a temporary active state for the creation of light. The em wave transfers energy into the "energy potential" photon particle and light is created from that interaction.

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- ***Follow−Ups***:
  - ♦ ***Re: About EMR (kst)***
    - ◊ *From:* Ken S. Tucker

- ***References***:
  - ♦ ***About EMR (kst)***
    - ◊ *From:* Ken S. Tucker

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