# Re: The motion of waves

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***From:*** bz (*bz+sp_at_ch100−5.chem.lsu.edu*)
***Date:*** 03/27/05

Date: Sun, 27 Mar 2005 16:06:46 +0000 (UTC)

"jahn" <susysewnshow@yahoo.com.au> wrote in
news:3ao023F65gui7U1@individual.net:

*>*
*> "bz" <bz+sp@ch100−5.chem.lsu.edu> wrote in message*
*> news:Xns962655B0EC4B4WQAHBGMXSZHVspammote@130.39.198.139...*
*>> "jahn" <susysewnshow@yahoo.com.au> wrote in news:3anq8aF6c9vi6U1*
*>> @individual.net:*
*>>*
*>> > Is their like... some kind of choreographer to keep all of the*
*>> > photons in step... or cadence... or whatever you call it?*
*>> >*
*>> > Sue...*
*>> >*
*>>*
*>> If they are generated 'in step', as in a laser, they stay in step. This*
*>> is called phase coherence.*
*>*
*> I don't think lasers exist naturally do they ? Maybe short ones.*

That is a good question. It is possible that the 'jets' of energy and matter that are seen coming from collapsing star(s) might be a similar phenomina. You have a lot of ions confined by a magnetic field.

*>>*
*>> If the E field points in the same direction, they are plane polarized.*
*> How do atoms "point the same way" ?*
*>>*
*>> If the EM fields rotate as the photons travel, the photons are*
*>> circularly polarized.*
*> Circular... you mean like the shape of an atom?*

No [what makes you think atoms are circular?]. I mean that the wave/photon spins about an axis that represents its direction of travel, like a bullet spins around an axis that is parallel to its direction of travel.

Lets look at microwave photons. They can be launched from a 1/2 wave

dipole. In which case the receiving antenna dipole should be parallel to the transmitting antenna dipole. If it is perpendicular, most of the signal is lost. If the dipole is aligned vertically, the wave is said to be vertically polarized. If the dipole is aligned horizontally, the wave is said to be horizontally polarized because the 'E field' oscillates in the horizontal plane.

An antenna