

Re: Is electromagnetic field theory unified?

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On Fri, 11 Mar 2005, JM Albuquerque wrote:

- > *So there are two types of antennas:*
- > *1 – Loop antenna (looks like a solenoid???)*
- > *2 – Half wave dipole antenna (the said "vertical wire" whose*
- > *length must be equal to half wavelength so that the top is out*
- > *of phase with the bottom???)*

There are many more than just 2 types of antennas. But loops and straight wires are common and simple. But even among thin wire antennas there are those that are neither loops or straight wires, such as helical antennas, V-antennas).

And then there are aperture antennas, reflectors, lens antennas and other dielectric antennas.

- > *I understand that a loop antenna launches EM radiation via*
- > *M field causing an E Field (it's a solenoid after all???)*.
- > *Also I understand that a half wave dipole antenna launches*
- > *EM radiation via E field causing an M field (but I'm still seeing*
- > *an open electric circuit here).*

Remember that the radiation resistance means that the antenna looks like a resistive load to the circuit. So what if the electrons can't actually go from the output wire to the input wire? You're driving this thing with AC. You don't consider a capacitor connected to an AC power supply to be an open circuit, do you?

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Timo