possible that the real event on which the above is based is the excessive loss in the transatlantic cable. Heaviside warned the telegraph companies it would have been a problem but they did not listen. The solution came from Pupin who realized that the coefficient of attenuation was proportional to both R'/L' and to G' L' where the prime ' means per unit lenght. Increasing L' by adding discrete coils along the cable reduced the problematic R'/L' term.

user151041 7:58

Yes, excessive loss, but loss of what? Not excessive loss of voltage, but excessive loss of amperage; ergo, not excessive loss of the electric field, but excessive loss of the magnetic field by comparison.

The difference in phase between the electric and the magnetic fields is the.....
en.wikipedia.org/wiki/Propagation_constant#Phase_constant

Sredni Vashtar 7:58

Holy cow! I googled the name. Let me outta here!!!

Marcus Müller 7:58

@Vinyasi really, you look like a lunatic. Get your basics straight. Dropping more out-of-context citations on us will not fix your understanding. I'm out of here. Good luck!

user151041 7:58

I can see my problem was not limiting my question to D/C excluding A/C which complicates matters beyond my simplistic question, because a changing magnetic field doesn't specify how much change much less reversal of polarity.

In fact, Oliver's solution of wrapping iron ribbon around an insulated copper core exhibits the transfer of D/C power across a transformer core. This demonstrates that we have taken a shortcut to our transformer designs by attempting to eliminate eddy currents within the core of transformer material instead of encouraging them. And this shortcut is probably due to the fact that we never use transformers for DC situations. So our current day model of a transformer is restricted to a special case of AC power transfer only.

Another consequential question to ask, here, is what happens if we increase the mass of the iron ribbon beyond a certain critical point, does the amplitude of the magnetic field increase beyond that of the matching amplitude of the electric field? According to an obscure quotation from Nichola Tesla, the amplitude of the magnetic field will increase by 1 hp for every 200 pounds of iron added per unknown unit length of the transatlantic cable. I'll take a guess that the unit length is 50 miles…

This last comment of mine is based on a quotation from William Lyne's book, Pentagon Aliens, chapter 18, concerning Tesla's special generator whose main coil was 50 miles in length of wire wound around a huge horseshoe core... "...he had calculated that, for every 200 pounds of iron connected to the device, a full horsepower was added to it." -
bibliotecapleyades.net/ciencia/pentagonaliens/…

Marcus Müller 7:58

uff, now you're really going into the esoteric / paranoid / Tesla-worshipping. Whatever it is that you believe, it has nothing to do with physics. Again, best of luck getting behind your veil of superstition!

The last message was posted 2 hours ago.