

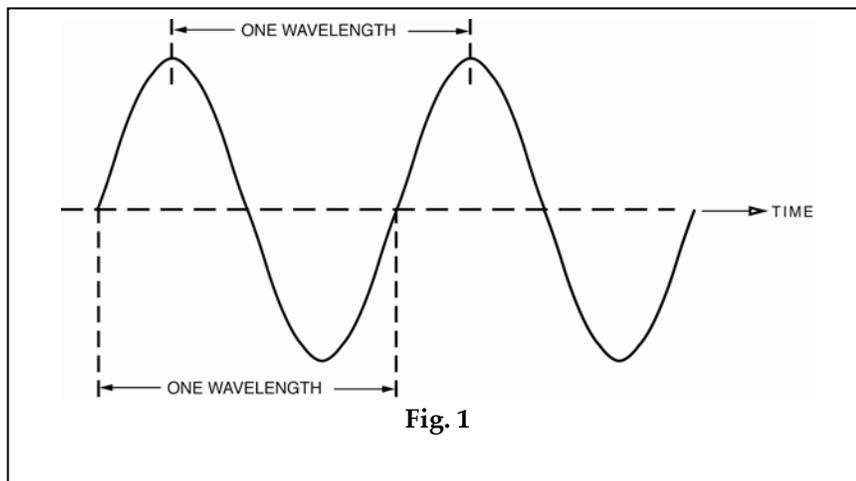
Chapter 1 - The Body Antenna

Excerpt 3 from [The Sage Age – Blending Science with Intuitive Wisdom](#)

Overview of Frequency

Since energy, waves and frequency are such common words used by scientists and intuitives, let's take a moment to discuss what these terms mean.

One full cycle of a wave is known as its wavelength. (See Fig. 1.) The time it takes a wave to complete one full cycle is its frequency. This is true of all waves whether they are a mechanical wave such as a sound wave or a water wave, or a non-mechanical wave such as electromagnetic energy. (Mechanical waves require a medium in order to move, i.e., sound waves propagate through air. EM waves require no medium.) The rest of this discussion focuses primarily on the aspects of EM waves. More on sound waves can be found in Chapter 7.



The length of a wave in meters is determined by its velocity, which in this case is the speed of light, divided by its frequency in megahertz. So, the length of waves in the part of the spectrum that is visible light falls into a range of about two inches. The wavelength of an FM radio station is about one millimeter in length, which accounts for one reason why you can't see it. X-rays are about ten nanometers in length. A nanometer is one-billionth of a meter, or one-millionth of a millimeter. The shorter the wave, the higher the frequency and the more energy it has.

Want an example of frequency and energy you can see? Tie a piece of rope to a fixed point, like the knob of a closed door. Now, holding the other end of the rope, step back until the rope has a gentle arc above the floor, like a jump rope. Begin moving your arm up and down, parallel to your body as if whipping a garden hose, but keep a constant, gentle motion. The energy from your

arm movement will be transferred down the length of the rope and will result in the rope making an undulating wave pattern. How many times you can bring your arm from its upper-most position, then down, and back to the upper position in one second is the frequency of the wave motion of the rope. Now, move your arm up and down very quickly. You'll see a lot more little waves across the rope. That's because the wavelength is shorter, hence a higher frequency. Since you are moving your arm faster you are also exerting more energy, which is transferred to the rope. The resulting wave in the rope has a higher frequency and is carrying more energy as well.

It's interesting to note that the height of the waves likely decreased when you increased the frequency of your arm movement. The height of the wave is called the amplitude and is inversely proportional to the frequency. In other words, you would have to expend a whole lot more energy with your arm to raise both the frequency and the amplitude of the wave on the rope. Why is this interesting? Because applying different combinations of amplitude and frequency have different results. Low-amplitude, low-frequency magnetic fields are being used as a non-invasive treatment for patients suffering with knee pain due to osteoarthritis. Low-amplitude, high-frequency components of ECG signals give a non-invasive way to diagnose coronary-artery disease.

Two dimensional mechanical waves like the rope or ripples on a pond show that the amplitude decreases with distance. (If you had a long enough rope, you would see that the size of the wave decreases the further it gets away from you.) Even though the energy is the same, the strength of the signal weakens the further it radiates outward. With three dimensional waves, such as those found in electromagnetic radiation, the waves expand outward in a spherical pattern which mathematically requires an additional dimension. They also decrease in strength with distance. That's why the light from distant stars appears to be dimmer than the light from the sun of our own solar system.

The previous example demonstrates how wave propagation in space is subject to the inverse-square law. Basically, this law states that as the signal gets further away from the source, its strength diminishes. This is what makes long-distance space communication by radio wave carrier impossible. But recently there have been speculations about faster-than-light travel that may change this. While at Norwegian University of Science and Technology, William D. Walker submitted a paper on *Nearfield Electromagnetic Effects on Einstein's Special Relativity* which experimentally proved faster than light travel. It has relevance to what we will be exploring later in the subtle body fields that surround and permeate the physical body. The "near-field" is the area immediately surrounding the dipole, or antenna. The "far-field" is the distant regions into which the antenna is broadcasting. (In broadcast engineering, the terms "near-field" and "far-field" can be spelled with or without a hyphen depending on preference.)

The abstract reads:

In this paper Maxwell equations are used to analyze the propagation of oscillating electric and magnetic fields from a moving electric dipole source. The results show that both the magnetic field and electric fields generated propagate faster than the speed of light in the nearfield and

reduce to the speed of light as they propagate into the farfield of the source. In addition, the results show that the speed of the fields are dependant on the velocity of the source in the nearfield and only become independent in the farfield. These effects are shown to be the same whether the source or observation point is moving.

Because these effects conflict with the assumptions on which Einstein's theory of special relativity theory is based, relativity theory is reanalyzed...Because time dilation and space contraction depend on whether nearfield or farfield propagating fields are used in their analysis, it is proposed that Einstein relativistic effects are an illusion created by the propagating EM fields used in their measurement. Instead space and time are proposed to not be flexible...²

The near-field region around an antenna is radically different than the far-field region away from the antenna. We'll be discussing those properties a little later. With his paper, Dr. Walker has pointed out that our assumptions about faster-than-light travel have much to do with how we have been taking measurements. He has suggested that taking measurements in a different way will require a reassessment of part of Einstein's relativity theories. Dr. Walker is now a Duke University Professor Emeritus and belongs to a growing number of physicists attempting to establish the existence of faster-than-light travel.

Some types of electromagnetic radiation have such short wavelengths and carry so much energy that they can break molecular bonds. This range of frequencies in the light spectrum are referred to as X-rays and increase in frequency through the gamma ray end of the spectrum. These frequencies are considered radioactive. Materials which are radioactive can also break down molecular bonds. This is referred to as "ionizing radiation."

Since, at this time, it is physically impossible to measure the frequency range of the spiritual realms and most all of the energy bodies, it would be nearly impossible to come up with a formula to maximize the efficiency of the body antenna and match it to specific wavelengths of light. What cannot be measured and repeated consistently cannot be studied by the scientific method. However, that does not make it any less real or effective. At one time simple radio waves were an unknown and non-measurable phenomenon. Perhaps the millions of people who gather each day for their morning exercises to move chi are participating in something with benefits that can only be measured indirectly, such as their longevity and relative health.

To transceive EM energy in the physical realm, an antenna is needed. Ritual body postures can constitute such an antenna and become a transceiver of even higher frequency signals. Next, we'll discuss the basics of how antennas work and then compare this information to body postures.

Copyright © 2008 MaAnna Stephenson. All rights reserved.

To purchase *The Sage Age*, please visit <http://www.SageAge.net>