

About Scalar Waves

A scalar wave is a purported type of electromagnetic wave that works outside physics as we know it.

The central conceit is that scalar waves restore certain useful aspects of Maxwell's equations "discarded" in the 19th century by those fools Heaviside, Hertz, and Gibbs. Nikola Tesla was also interested in them, in his more-than-a-little-odd period.

Free energy advocates have pushed the concept since the 1990s, particularly Thomas E. Bearden. It has since been adopted by some alternative medicine practitioners as the new "quantum": a universally-applicable sciencey handwave to support any arbitrary claim whatsoever. Conspiracy theorists hold that it is behind weather-changing superweapons that brought down space shuttles.

In Real Physics

In physics, a quantity described as "scalar" only contains information about its magnitude. In contrast, a "vector" quantity contains information both about its

magnitude and about its direction. By this definition, a "scalar wave" in physics would be defined as any solution to a "scalar wave equation". In reality, this definition is far too general to be useful, and as a result the term "scalar wave" is used exclusively by cranks and peddlers of woo.

Solutions to scalar wave equations are actually quite prevalent (and useful) in physics. Some prominent examples include acoustic (sound) waves, the motion of a taut string being stretched (such as a guitar string being plucked), and the motion of waves in water (such as the ripples from a stone being dropped into a pond). In contrast, electromagnetic waves are vector quantities derived as solutions to a set of vector wave equations (in this case Maxwell's equations).

The concept of a scalar field theory also exists, and plays an important role in several branches of physics. In comparison, "scalar waves" have never been observed in nature.

Free Energy Subculture

A major proponent of scalar wave pseudophysics was zero-point energy advocate Thomas E. Bearden, who concocted an entire pseudoscientific "scalar field theory" largely unrelated to anything in actual physics. It starts with Maxwell's equations originally having been written as quaternions; Bearden holds that the (mathematical) transformation to vectors lost important information.

Bearden claimed that scalar waves differ from conventional electromagnetic transverse waves by having two oscillations anti-parallel with each other, each originating from opposite charge sources, thereby lacking any net directionality. The waves are conjugates of each other, and so, if left unperturbed, can pass through ordinary matter with relative ease. So they are not included in mainstream physics. They don't work like ordinary longitudinal waves either.

You can apparently make scalar waves with a bifilar coil (one wound with a pair of wires instead of a single wire) and pushing opposing currents through the wires (join the far ends together). So if you want to experiment with this stuff, you can build a remarkable just-post-steampunk lab filled with coils and wires and sparks.

The really astonishing thing about this - which fascinated Tesla for years and years - is that you can pour practically limitless amounts of power into such an apparatus and achieve precisely nothing other than converting electricity into heat - each of the two

wires in the coil produces a magnetic field, but since the currents are going in opposite directions, the two magnetic fields cancel out.

Richard C. Hoagland thinks Col. Bearden was dead right. So much so that he has adopted Bearden's view and given it a different name, "hyperdimensional physics". According to him, the vectorization of Maxwell's quaternions eliminated a whole dimension from which energy magically appears. Hoagland is so mathematically challenged that it's doubtful if he even understands what a quaternion is, let alone knows how to use one in a calculation. Certainly in all he has written and said about HD physics, he has never cited a single one of the quaternions.

Scalar Superweapon Conspiracy Theory

According to Bearden, the Soviet Union developed a powerful superweapon - the Scalar Interferometer - based on scalar waves and fueled by free energy generators, themselves apparently designed by T. Henry Moray in the 1920s. It may have brought down the Columbia spacecraft. Bearden further claims that the human brain has a milder capacity to exploit the same effects, providing an explanation for psychokinesis, telepathy, and levitation, among other things. However, some conspiracy theorists believe Bearden was an agent of disinformation on this topic.

Alternative Medicine

Bearden was pushing the medical effects of scalar waves as early as 1991. He specifically attributed their powers to cure AIDS, cancer, and genetic diseases to their quantum effects and their use in "engineering the Schrödinger equation". They are also useful in mind control.

Scalar waves appear to have broken out into the woo mainstream around 2005 or 2006, with this text (now widely quoted as the standard explanation) from The Heart of Health; the Principles of Physical Health and Vitality by Stephen Linsteadt, NHD:

Scalar waves are produced when two electromagnetic waves of the same frequency are exactly out of phase (opposite to each other) and the amplitudes subtract and cancel or destroy each other. The result is not exactly an annihilation of magnetic fields but a transformation of energy back into a scalar wave.

This scalar field has reverted back to a vacuum state of potentiality. Scalar waves can be created by wrapping electrical wires around a figure eight in the shape of a Möbius coil. When an electric current flows through the wires in opposite directions, the opposing electromagnetic fields from the two wires cancel each other and create a scalar wave.

The DNA antenna in our cells' energy production centers (mitochondria) assumes the shape of what is called a super-coil. Supercoil DNA look like a series of Möbius coils. These Möbius supercoil DNA are hypothetically able to generate scalar waves. Most cells in the body contain thousands of these Möbius supercoils, which are generating scalar waves throughout the cell and throughout the body.

At this point, it was all-in. Scalar waves explain homeopathy, achieve lymph detoxification, cure diabetes, short sightedness, kidney stones, Parkinson's, strokes, arthritis, cancer, and reverse the aging process.

Scalar waves are also part of the biological powers of ORMUS.

"Harmonized H2O" is a drinkable sunscreen, made only of pure water, that works by scalar waves. It apparently cancels out the UVA and UVB slightly above the skin.

Scalar Wave Laser

The Scalar Wave Laser is a "quantum cold laser rejuvenation technology" which "combines the most advanced low level laser technology with state of the art quantum scalar waves".

The device is a small handheld unit with a wand end that shines light on the patient's skin. It uses eight 5mW 650nm (red) laser diodes and eight 5mw 780nm (near infrared) laser diodes. Oddly, these happen to be the wavelengths used for DVD and CD reading, respectively. It also has 20 5mW violet LEDs. The unit costs only \$3500.

The laser directly delivers energy (photons) and electrons directly to cells. The mitochondria convert the photons to ATP, promptly initiating healing and rejuvenation. So these guys have discovered photosynthesis in humans! Quick, hand them their Nobel Prizes!

The Scalar Wave Laser also cures goat polio.

Scalar Wave Mind Control

"Who makes the crop circles? The technology used is the most dangerous technology ever invented...SCALAR WAVES..."

Cranks have wholeheartedly adopted the concept of scalar waves as a form of dangerous mind control, mostly because it sounds scary, and it's easy to make people afraid of anything related to modern wireless technology (even if it actually isn't).

Internet fear mongers vigorously promote the idea that scalar waves are some kind of treacherous radio waves (rather than a mathematical solution to an ordinary Wave equation).

For example, many cranks perceive the shift from analog to digital television with suspicion, and feel mind control messages must be embedded "via the flickering of the TV picture", and believe that the use of such evil waves allows mobile phones and Wi-Fi (and don't forget to throw in the traditional boogeymen HAARP and GWEN towers to raise the level of batshit insanity) to "program" people.

These mythical scalar waves are somehow even supposedly able to produce crop circles, earthquakes, and hurricanes, too.