

Schumann Resonance Explained

Schumann Resonance, the global electromagnetic resonance phenomenon is named after physicist Winifred Otto Schumann of University of Munich, who predicted it mathematically in 1952 and calculated it to be 7.83Hz. The theory – now proven scientific fact – is that a planet has a pulse like a living organism.



The first documented observations of global electromagnetic resonance were made by Nikola Tesla at his Colorado Springs laboratory many years earlier, in 1899. This observation led him to certain conclusions about the electrical properties of the Earth, which made the basis for his idea for wireless energy transmission.

He had discovered the existence of stationary waves between the surface of the Earth and the ionosphere. This space is now known as a Schumann Cavity (a cavity is a space enclosed entirely by conducting walls). His measurements of the wave length and frequency have matched perfectly Schumann later theoretical calculations.



Tesla has proven with his Colorado experiments that electrical energy can be propagated between the surface of the Earth and the ionosphere at extreme low frequencies (ELF). The electromagnetic waves of ELF are in the range of ~8 Hz(oscillating 8 times in 1 second), with this Schumann Resonance frequency naturally moving around the planet within the Schumann Cavity. Tesla's plan was to transmit the energy using principles similar to microwave oven technology, by resonating it in order to deliver free power via the Schumann Cavity to any point on Earth. This would result in practical wireless transmission of electrical power everywhere.

Also during his research in Colorado Tesla discovered non-herzian waves or scalar waves, which could be transmitted through the ground without diminishing with distance (unlike herzian waves) so they were more suitable to wireless transmission of energy. It is believe years later that this Scalar technology has actually been used for weather manipulation & as a weapons technology.

NB: Tesla research disappeared to the world even before he dies, with the remainder of his research & documentation confiscated by the US Government after his death. It is interesting to note that the Scientific advisor to the FBI responsible for reviewing these materials after confiscation of Tesla's works was Professor John G Trump (MIT) uncle to President Donald Trump.

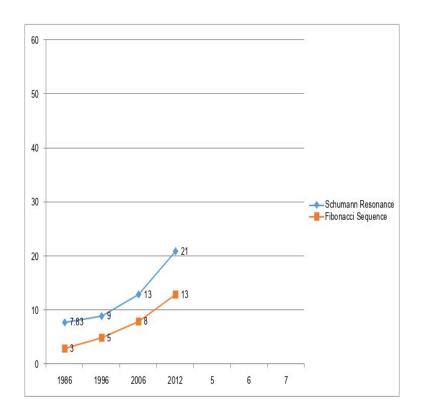
The Schumann Resonance was so reliable that the US Navy built their communication system on its stability, so the US Blue Water fleet inter-ship communications systems is based on this frequency as a carrier wave (for long distance Extra Low Frequency [ELF] communications).

For more great info on the Schumann Resonance please read "Stillness in the Storms" Article - https://stillnessinthestorm.com/2015/06/what-is-schumann-resonance-science-of/



Changes to the Schumann Resonance - Base/Primary Frequency

Then inexplicably, from the mid 1990's the US Navy fleet globally started having long range communications problems – it was found that the Primary Schumann resonance frequency was observed to be increasing (no longer constant at 7.83Hz), having been measured at ~9Hz in 1996, ~13.8Hz in 2006 & ~21Hz in 2012. As seen in the chart below; this sequence aligns almost exactly with the **Fibonacci Sequence** (al la Golden ratio), a naturally occurring sequence represented in much life on the planet. I don't know precisely what this means but it is important – and it seems to be speeding up.

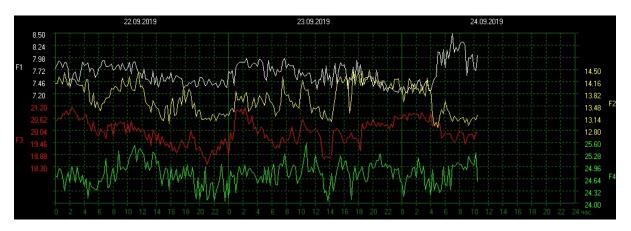


What does it mean if the vibrational base of Life suddenly starts changing? Are we going to follow?



Esoteric Connections

Further investigation has revealed that instead of a single resonant frequency detected in the Schumann Cavity, in fact 4 frequencies have been identified, with the base frequency exhibiting the most stable characteristics over the decades that it was being monitored (hence known as the Primary SR frequency & adopted as the best ELF carrier wave frequency by the US Navy due to the distance it can reach successfully).



These 4 resonant frequencies generally sit within the following observable ranges:

- F1 Approx. 7.83Hz (in range 7.0Hz 8.5Hz)
- F2 Approx. 13.5Hz (in range 12.8Hz 14.5Hz)
- F3 Approx. 20Hz (in range 18.3Hz 21.2Hz)
- F4 Approx. 25Hz (in range 24.0Hz 25.6Hz)

As per the recognised increase steps for the Primary Schumann Resonance frequency in alignment with the Fibonacci Sequence, the next numeric sequence that these 4 SR frequencies appear to be closely approximating is a the simple "System of 7's", where the steps in the sequence are increments of 7: 7 14, 21, 28 (well we have ~20 & 25 for F3 & F4 respectively, however please stay with me here).

In Esoteric literature, we know that a living physical body has 7 Chakra's (whether all 7 are realised/activated does not detract from the fact that 7 Chakra's do/may exist).

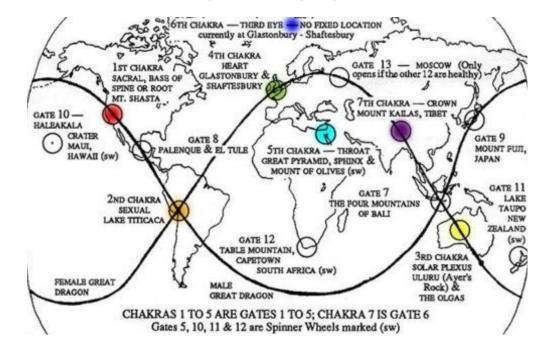


Earth/Gaia's 7 Chakra's

Number	Chakra Locations
One	Mt Shasta, California, USA
Two	Lake Titicaca, Peru-Bolivia, South America
Three	Uluru-Kata Tjuta, Northern Territory, Australia
Four	Glastonbury and Shaftesbury, England
Five	Great Pyramid, Mt. Sinai, Mt of Olives, Middle East
Six	Aeon activation chakra, mobile (currently stationary)
Seven	Mount Kailas, Tibet

There for attributing each Schumann Resonance frequency to a Chakra in the traditional (Core) 7 Chakra range, we would see:

- 1. Base Chakra (RED) Schumann Primary Resonant Frequency (F1)
- 2. Sacral Chakra (Orange) Schumann Secondary Resonant Frequency (F2)
- 3. Solar Plexus Chakra (Yellow) Schumann Tertiary Resonant Frequency (F3)
- 4. Heart Chakra (Green) Schumann Quaternary Resonant Frequency (F4)



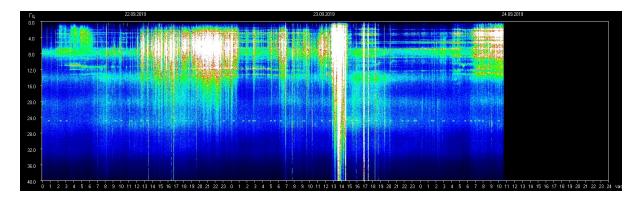


This is very interesting, as many esoteric teachings talk about the planet having 7 Chakra's (just as Human's do) and that we have entered a period of "Ascension" as many have called it - I prefer to think of this as "Activation" & "Convergence". This Convergence & activation will see Earth/Gaia transition from a Primary 3rd Chakra 3D planet, where the lower 3 Chakra's (Red/Orange/Yellow) are fully activated & take precedent Energetically & Philosophically, to a 4th Chakra activated (Green Ray) planet - Centred on the Heart Space.

With this in mind, we can make some clear indications for changes into the future:

- 1. The changes in Schumann Resonance frequency is not only impacting the Primary frequency (F1) but all 4 identified SR frequencies (F1 F4)
- 2. As the Primary SR frequency stabilises at a new base frequency range, we can expect all 3 frequency ranges to shift upward accordingly (maintaining the "System of 7's" sequence).
- 3. As noted in articles posted on Earth & Solar Changes (see link below), the dramatic changes occurring on the planet at this time are providing significantly increased Energy levels (X-Ray, Cosmic Ray, Electro-Magnetic). https://twinmoons.net/earth-solar-system-changes/
- 4. We are indelibly linked to the Schumann Resonance through entrainment with the our core neural rhythms & Nervous system synchronisation (reach on for details concerning this link). Hence, a change of this magnitude for Earth/Gaia will require us to change (Shift our energetic & Neural frequencies in alignment). Periods of synchronisation disturbances will produce what is being described as "Ascension Symptoms" at best, extreme emotional disturbances, Psychosis & sleep deprivation like symptoms at worst.

As noted in the articles on Earth & Solar System changes, the increases in energetic radiation & high energy particles hitting our planet result in the following observable elevation in Schumann Resonance Frequency and Amplitude (Strength):



These white bars that indicate measurements "off the scale" represent Earth's response to these changes.



During these periods, the most important things you can do are:

- Rest as much as possible (to give your Neural & Nervous systems time to adjust)
- Maintain emotional balance as much as possible practice Mindfulness.
- Meditate as much as possible to cclear your mind of chaotic thoughts.
- Take 3 breaths before reacting to a triggering event or situation.

In my next article posted to the News (Blog) portal on Twinmoons.net, I will be discussing the Human aspects of this period of **Activation & Convergence**.

For those interested more research on the human aspect of our Entrainment with the Schumann Resonance at a Neural & Nervous system level, please read on to the next section.



Human SR Entrainment - Neural & Nervous System

Lets look once again at the scientific facts – in 1952, Schumann published his mathematical findings in a small scientific journal. His discovery was barely noticed. At the same time Hans Berger, another German scientist was engaged in a research on the human brain activity, trying to measure it using EEG (Electro Encephelo-Graph) machine, which he himself has build. He discovered neural activity frequency which was between 6–12 Hz and he called it "alfa waves". Soon after this discovery one of his colleges stumbled upon the scientific journal with Schumann article written several years before. He was astounded to see that the frequency of alfa waves was identical to "the pulse" of the Earth.

The frequency range in the Universe is almost infinite and on this infinite continuum our brain frequency and the Earth frequency have miraculously met. It could not be considered an accident.

The pulse of Earth became the pulse of life itself. ENTRAINMENT

Max Planck Institute has conducted years spanning research during which students-volunteers have stayed in the underground bunker isolated from Schumann Resonance for several weeks. The students were experiencing physical and emotional problems shortly after being placed underground. This was changed as soon as a resonator reintroduced 7.83 vibrations into their living quarters. We are tune up to the frequency of our planet and Schumann Resonance is absolutely necessary for our well being.

HIV Nobelist L. Montagnier's group have been doing research on water membranes and the way the water stores the memory. They have discovered that two strands of DNA communicate with each other using electromagnetic waves even if they are in separate test tubes. They submerged the DNA in the water together with organic nucleotides (building blocks of DNA). The messages from the DNA has caused the nucleotides to form in the water the second strand of DNA. In the next stage of experiment all DNA was removed from the water and only the DNA memory has remained. Nothing new happened with floating nucleotides which was easy to predict since all Life comes from Life. Nobody was able to create life in a test tube" from the scratch" yet.

When 7.83hz frequency was introduced into the water "a miracle" has happened and nucleotides formed new DNA strand using just the memory of DNA in the water.

From this outcome we can see that:

- 1. Life was created by the Earth and it is a function of EMF interaction.
- 2. All life is electromagnetically sensitive.

Presently it is not possible to measure Schumann Resonance in the cities because of their EMF pollution. We are experiencing many millions of times increase of EMF in the last 25 years because of the new technologies of wireless communication.



http://www.youtube.com/watch?v=5vb9R0x_0NQ

There are devises available on internet that can protect us from EMF at least to some degree. One of them is: www.envirohealthtech.com

In spite of changes in the frequency of Schumann Resonance I still feel wonderfully when I leave behind electromagnetic cocktail of the city and I trust that we are all following the Earth where we are suppose to go in this adventure of ours.

When we consider that the ionosphere surrounding our planet is electrically positive charged whilst the earth's surface carries a negative charge, we must conclude that this amounts to a prevailing electrical tension within the earth/ionosphere cavity. This tension is discharged when thunderstorms develop in this cavity. In physics two concentric electrically charged balls, one placed inside the other, are called ball condensers, or capacitors.

The inside of the ionosphere layer is used in wireless information transfer to bounce off radio waves emitted by transmitters on the earth's surface. In this way the information can be transferred over large distances.

The physicist and inventor Nikola Tesla was the first to carry out wireless energy experiments at Colorado Springs, USA, which produced such powerful electrical tensions that they resulted in the creation of artificial lightning. These lightning flashes also produced radio waves. Due to their extremely low frequency these waves could penetrate the earth without resistance and thereby Tesla discovered the resonance frequency of the earth. Unfortunately Tesla was before his time and his discoveries were not taken seriously.

See www.fosar-bludorf.com/archiv/schum eng.htm

It wasn't until more than half a century later in 1952, when the German physicist Professor W.O.Schumann of the Technical University of Munich predicted that there are electromagnetic standing waves in the atmosphere, within the cavity formed by the surface of the earth and the ionosphere. This came about by Schumann teaching his students about the physics of electricity. During a lesson about ball condensers he asked them to calculate the frequency between the inner and outer ball, meaning the earth and ionosphere layer. They came up with a calculation of 10Hz.

This was confirmed in 1954 when measurements by Schumann and König detected resonances at a main frequency of 7.83 Hz. In the years following this discovery, several investigators worldwide have researched "Schumann resonance" and a number of properties and characteristics have now been established.



Schumann Resonance Properties

The spherical earth-ionosphere cavity is created by the conductive surface of the earth and the outer boundary of the ionosphere, separated by non-conducting air. Electromagnetic impulses are generated by electrical discharges such as lightning, the main excitation source, and spread laterally into the cavity. Lightning discharges have a "high-frequency component", involving frequencies between 1 kHz and 30 kHz, followed by a "low-frequency component" consisting of waves and frequencies below 2 kHz and gradually increasing amplitude. This produces electromagnetic waves in the very low frequency (VLF) and extremely low frequency (ELF) ranges.

ELF waves at 3 Hz to 300 Hz are propagated as more or less strongly attenuated waves in the space between the earth and the ionosphere, which provides a waveguide for the signals. Certain wavelengths circumnavigate the earth with little attenuation due to the fact that standing waves are formed within the cavity, the circumference of which is "approximately equal to the wavelength which an electromagnetic wave with a frequency of about 7.8 Hz would have in free space" (König, 1979, p34). It is the waves of this frequency and its harmonics at 14, 20, 26, 33, 39 and 45 Hz that form Schumann Resonances.

On a global scale the total resonant spectrum is the effect of the global lightning worldwide which is estimated at an average of 100 strokes per second. Since there is a concentration of lightning activity during the afternoon in Southeast Asia, Africa and America there are Schumann Resonance amplitude peaks at 10, 16 and 22 UT (universal time), with activity over America around 22 UT being dominant.

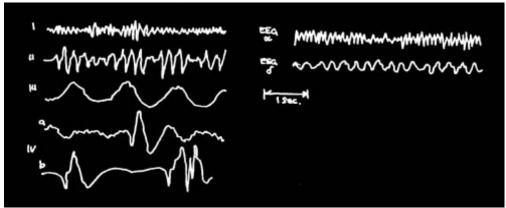
There are also +/-0.5 Hz variations in the center frequency, caused by a diurnal increase in ionization of the ionosphere as a result of radiation from the sun, having the effect of reducing the height of the ionosphere at 12 local time. Another factor which influences center frequency is sunspot activity.

A Tuning Fork for Life

Although the existence of the Schumann Resonance is an established scientific fact, there are very few scientists who are aware of the importance of this frequency as a tuning fork for Life. I propose that it is not merely a phenomenon caused by lightning in the atmosphere, but a very important electromagnetic standing wave, acting as background frequency and influencing biological oscillators within the mammalian brain.

At the time when Schumann published his research results in the journal `Technische Physik', Dr Ankermueller, a physician, immediately made the connection between the Schumann resonance and the alpha rhythm of brainwaves. He found the thought of the earth having the same natural resonance as the brain very exciting and contacted Professor Schumann, who in turn asked a doctorate candidate to look into this phenomenon. This candidate was Herbert König who became Schumann's successor at Munich University. König demonstrated a correlation between Schumann Resonances and brain rhythms. He compared human EEG recordings with natural electromagnetic fields of the environment (1979) and found that the main frequency produced by Schumann oscillations is very close to the frequency of alpha rhythms.





Natural electromagnetic processes in the environment (I-IV), human EEG readings in comparison. Schumann oscillations (I) and the EEG α -rhythm, as well as locally conditioned fluctuations of the electric field (II) and the EEG δ -rhythm, show a noticable similarity in their temporal variation. From König, 1979.

Dr König carried out further measurements of Schumann resonance and eventually arrived at a frequency of exactly 7.83 Hz, which is even more interesting, as this frequency is one which applies to mammals. For instance, septal driving of the hippocampal rhythm in rats has been found to have a minimum threshold at 7.7 Hz (Gray, 1982).

This relationship has been explored by a number of investigators. For further information see <u>Natural electromagnetic</u> fields research on the h.e.s.e. project website.

One of the foremost researchers in this field is Dr Wolfgang Ludwig, who has been investigating Schumann Resonance and its place in nature for many years.

The Research of Dr Wolfgang Ludwig

It was Dr Wolfgang Ludwig who carried out further measurements whilst writing his thesis on the Schumann Resonance. His aim was to measure what kind of natural signals actually exist in a healthy environment. He became aware of the fact that due to manmade electromagnetic signals within the atmosphere, the accurate measurement of Schumann waves was almost impossible in the city. For this reason he decided to take measurements out at sea where, due to good electrical conductivity, the Schumann waves are stronger. He then had the idea to take underground measurements in mines. Here he recognized that the magnetic field of the earth fluctuated too. This was also investigated by Dr Robert Becker in his book 'Electricity and Vitality: The spark of Life'.

Dr Ludwig came up with an excellent idea to take accurate measurements. When taking measurements at the earth's surface, the reading is the result of two signals, one coming from above and one from below. But subsequently taking measurements below ground makes it possible to come up with exact readings by separating the two.



YIN and YANG

During his research Dr Ludwig came across the ancient Chinese teachings which state that Man needs two environmental signals: the YANG (masculine) signal from above and the YIN (feminine) signal from below. This description fits the relatively strong signal of the Schumann wave surrounding our planet being YANG and the weaker geomagnetic waves coming from below, from within the planet, being the YIN signal

The Chinese teachings state that to achieve perfect health, both signals must be in balance. Dr Ludwig found that this is indeed the case. He writes in his book `Informative Medizin' that research carried out by E.Jacobi at the University of Duesseldorf showed that the one sided use of Schumann (YANG) wave simulation without the geomagnetic (YIN) signal caused serious health problems.

On the other hand, the absence of Schumann waves creates a similar situation. Professor R.Wever from the Max Planck Institute for Behavioural Physiology in Erling-Andechs, built an underground bunker which completely screened out magnetic fields. Student volunteers lived there for four weeks in this hermetically sealed environment. Professor Wever noted that the student's circadian rhythms diverged and that they suffered emotional distress and migraine headaches. As they were young and healthy, no serious health conditions arose, which would not have been the case with older people or people with a compromised immune system. After only a brief exposure to 7.8 Hz (the very frequency which had been screened out), the volunteers health stabilized again.

The same complaints were reported by the first astronauts and cosmonauts, who, out in space, also were no longer exposed to the Schumann waves. Now modern spacecrafts are said to contain a device which simulates the Schumann waves.

All the aforesaid points to the fact that the ancient teachings are correct. Mankind depends on two subtle environmental signals, the Yin from below and the Yang from above.

The urgent need for further research into Schumann Resonance Effect

Although Schumann Resonance could easily be confirmed by measurements at the time of its discovery, it is no longer so obvious due to our atmosphere being filled with man-made radiation noise at different frequencies. This is almost drowning out the natural signals - signals that have been there through aeons of evolution. It is possible that these signals act like a natural tuning fork, not just for the biological oscillators of the brain, but for all processes of life.

With the advent of new wireless technology, in particular microwaves pulsed at frequencies close to Schumann Resonance as in mobile telephony, another threat is emerging. We may be creating an environment that is literally 'out of tune' with Nature itself. And it is at this point that there is an urgent need for us to understand how everything alive responds to the most subtle changes in magnetic and electromagnetic fields surrounding us. For instance, we need to examine the possible interaction between magnetite crystals within cells and man-made magnetic fields in the environment.



There is a great need for independent research into the bio-compatibility between natural and man-made signals. By linking together the potential importance of Schumann Resonance and the dangers posed by man-made pulsed frequencies, it will become apparent that unless we find a way to use bio-compatible signals to power new technology, we may expose all life to dangers previously not encountered. We may have to pay a high price for this short sightedness. Serious attention must now be paid to the possible biological role of standing waves in the atmosphere, so that we do not overlook the importance of oscillations in nature that may be central to consciousness and life itself.

The late Dr Neil Cherry, a fierce opponent of the frequencies used in mobile telephony, has also focused on the importance of Schumann Resonance in his publications 'Schumann Resonances, a plausible biophysical mechanism for the human health effects of Solar/Geomagnetic Activity' (2002), and 'Human intelligence: The brain, an electromagnetic system synchronised by the Schumann Resonance signal' (2003).

See also Sedona Anomalies

If organisms do in fact respond to, and perhaps depend on, electromagnetic fields as weak as that produced by Schumann resonance at 0.22-1.12 mV/m (from Cherry, 2002), this is of major significance for the development of present and future wireless technologies. Funding for research projects investigating the Schumann Resonance Effect is now being sought and scientists who support this call for research are invited to contact by e-mail.







mobile

Energy Field changes detected by PIP (see electrocrystal therapy website www.electrocrystal.com)



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