StreamZ Global – Explanation of the "CYCLOTRON effect"

This document explains the "Cyclotron effect" and its impact on living creatures, including ourselves. It shows how the StreamZ products work and how unique they are.

In a cyclotron, a modest electric field can accelerate a moving ion into enormous energy levels by a gradual resonant build up. This is caused by energy from a weak field pulsating in harmony with the resonant frequency of ion motion in a 'steady state' magnetic field.

In the case of the human body, that steady field is the Earth's magnetic field. The ions in motion are those chemical ions in fluids found within the cells of the humans body, plant, or animal. The activating field producing resonance is the electric and magnetic field set up by a variety of man-made devices such as overhead power lines, or magnetic field producing appliances such as TV's, mobile phones, and most other commonly used electrical devices.

It is assumed by many that electromagnetic radiation does have an effect on us and that they can even proliferate cancers already present in our cells. This assumption is not convincing given that we all have a latent capacity to develop cancer cells through oncogene/gene reactions anyway.

Cyclotron resonance only occurs if the hazardous frequency range lies within the exciting field. Unfortunately, the 50Hz or 60Hz frequencies relating to the two pole magnetising motor fields (on synchronous alternators running at a speed of 3000 or 3600 RPM) happen to be close to the frequency which ions in bodies respond to, while in 50µT of the geomagnetic field.

The cyclotron formula requires that the angular frequency of the resonance should be simply Hq/m, where H is the strength of the geomagnetic field and q/m is the charge to mass ration of the ion. For a unit atomic mass, q/m is 96 million coulombs per Kg. Therefore, if H is 50µT, an ion of unit atomic mass and the normal unit charge will have a cyclotron angular frequency of about 4800 radians per second, or about 760Kz.

In a publication by H. Aspden (Cyclotron Resonance in Human Body Cells, Sabberter 1990)[i] it is shown that the inter-reaction processes involved when two dominant forms of ion are present can cause one ion form to screen the geomagnetic effect on the other form, to bring about a resonance at a frequency of up to 1.5 times higher than that for a single ion.

In effect, this occurs by what we regard as a self-tuning of the system, and is the key 'science' behind the StreamZ Global product ranges.

This condition is limited by the higher frequency listed. In other words, over a frequency range above that of natural resonance of the single ion form, there will be a perfect resonance of one of the ion forms even

though the external frequency is not exactly the frequency required for that form.

Table I (published by BR McLeod and Abraham Liboff) assumes that H is exclusively the geomagnetic field strength (50μT).

Table I

Molecular ion	Mass (units)	Frequency
Hydroxyl OH	17	45 - 67
Hydronium OH_3	19	40 – 60
Sodium Na	23	33 – 50
Magnesium Mn	24	32 – 47
Chlorine Cl	35	22 – 33
Potassium K	39	19 – 29
Calcium Ca	40	19 - 28

The above shows the resonant cyclotron frequencies of single ions of different forms when subject to the steady geomagnetic field. The lower frequency expressed in Hz is that of a single ion type. The presence of other ions may raise the resonant frequency by up to 50%.

Table II shows how the power supplied to a purely resistive load is, by conventional electrical engineering analysis, divided between the lower frequency components of an unsmoothed full-wave rectified sinusoidal 50Hz voltage source.

Table II

Frequency (Hz)	Power
0	81.0569
100	18.0127
200	00.7205
300	00.1323
400	00.0408

Living close to overhead power lines causes health hazards – this is the conclusion of many epidemiological studies about weak electromagnetic exposure and cancer. This may be attributed to cyclotron resonance induced in the human body cells by weak electromagnetic fields. This effect can be eliminated if we cease to use our 50Hz or 60Hz frequencies and rely on DC or alternatively double the operating frequency to 100Hz or 120Hz. It could therefore be assumed that by doubling the frequencies concerned lives would be saved. Another story for another day!

Extensive experimental research has focused on ion forms involving Calcium (Ca) and Sodium (Na) etc., but what appears to have been missed or overlooked in this prior research is the appreciation that water forms its own ion form in that it dissociates into Hydroxyl (OH) and Hydronium (OH_3) ions as listed in Table I.

It would seem that the prevalence of such ions and their rather special relationship to the 50 – 60Hz frequencies, both of which they encompass by their combined effect and as illustrated in Table I, has to give the underlying basis for field induced activity in body fluids.

This is not a critical point – what is critical is the need to realise that, if one accepts that AC fields are dangerous but inescapable, then one should choose a power transmission line frequency that will not set our ions jangling. For instance, at a power line frequency of between 100 and 120Hz, only Lithium of atomic mass 7, could come near to satisfying the resonance requirement.

In this situation, bearing in mind that the very prevalent OH and OH_3 ions are probably the dominant cause in the hazard risk at 50 – 60Hz and it can be presumed that a hazard free situation prevails at 100 or 120Hz, therefore as a simple expedient, the object should be to eliminate the 50 or 60Hz basic frequency.

This is not to be a feasible solution, except for the odd application such as electric blankets or under-floor heating where full-wave rectified unsmoothed 50 or 60Hz AC will produce heating from a mixture of 81% DC and 19% AC at 100Hz or 120Hz and above. In the case of overhead power lines, unless we think in terms of screening power lines, which seems uneconomic or using normal closely wound cable forms, as used underground, the most appropriate, but drastic, remedy is to adopt a new standard frequency for power generation and supply, such as 100Hz.

The question is not so much that of understanding the cause, but rather of eliminating the possibility of cyclotron ion resonance brought about by AC field in a domestic or normal commercial environment - where the only prevalent DQS2DC magnetic field is that provided by the Earth itself. Our natural state!

The cyclotron speeds charged particles up to a very high energy level creating the actions of a very powerful magnetic field, and a high-frequency pulsating electric field. However, the weaker the magnetic field, the lower the frequency is needed. The weaker the AC electric field, the longer it takes to build up the power of those ions. The build-up is unavoidable if the particle mass, the magnetic field strength, and the AC signal frequency satisfy the formula for resonance.

In a cyclotron the energy of the particles are deployed into an orderly spiral motion around the axis of the magnetic field, and the pumping action of that weak pulsating electric field progressively adds to that energy and causes a pressure build up at confining surfaces as the particles are driven in spirals of larger radius.

A cyclotron is fine-tuned to a resonant frequency specific to one chosen ion type. In the bloodstream, as in any ionised plasma, gaseous or liquid, there is a mix of positive and negative ions. Cyclotron action implies that one polarity would spiral clockwise as the other spirals anti-clockwise. Collisions do not preclude the build-up of the resonance effects as the health hazards reports imply. Indeed, there is a case for saying that it is the mix of ions of opposite polarities that makes the resonance formula adaptable and actually causes a self-tuning resonance. This explains why resonance of the ions typically in water or blood can occur at 50 or 60Hz.

Can body cells be the seat of a human cyclotron effect? The cyclotron needs a magnetic field and a transverse AC electric field to pump up ions in motion in that field. There are ions activated by thermal motion in blood, and these are always subject to the Earth's magnetic field (50µT). Proximity to a weak 50 – 60 Hz electric field therefore means that ions in a certain mass range can respond to cyclotron action. The ions in water and blood happen to be in the critical mass range.

Eric Dodd (Inventor and patent owner of Streamz Global product ranges) **September 2011**

References Used:

[i] Cyclotron Resonance in Human Body Cells, 1990