Saucer Design Proposal

FlyingSaucerField_1.xmcd Jerry E. Bayles

The charged electrophorus surface (q_o^2) of a saucer having a changing circular magnetic B field orthogonal to a changing radial electric E field generates a field having the units of Plank's constant times the units of the pressure tensor $T_{u,v}$ of Einstein's General Relativity equation.

$$q_o := 1 \cdot \text{coul}$$

$$B := 1 \cdot \frac{\text{volt} \cdot \text{sec}}{\text{m}^2}$$ also, $$A_{vec} := \frac{1 \cdot \text{volt} \cdot \text{sec}}{\text{m}}$$

$$E := 1 \cdot \frac{\text{volt}}{\text{m}}$$

$$h := 1 \cdot \text{joule} \cdot \text{sec}$$

The usual cross-product equation times the dot product of charge squared yields:

$$\left[\begin{pmatrix} B \\ 0 \\ 0 \end{pmatrix} \times \begin{pmatrix} 0 \\ E \\ 0 \end{pmatrix}\right] \cdot \begin{bmatrix} 0 \\ 0 \\ (q_o)^2 \end{bmatrix} = 1 \cdot h \cdot \text{Pa}$$ The result is not a vector. 1)

However, the simultaneous alternating B and E field result is a vector always in the same direction in the Z axis:

$$\begin{pmatrix} q_o \cdot B \\ 0 \\ 0 \end{pmatrix} \times \begin{pmatrix} 0 \\ q_o \cdot E \\ 0 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} \cdot h \cdot \text{Pa}$$ or, $$\begin{pmatrix} q_o \cdot -B \\ 0 \\ 0 \end{pmatrix} \times \begin{pmatrix} 0 \\ q_o \cdot -E \\ 0 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} \cdot h \cdot \text{Pa}$$ 2)

Thus, the ac field produces mono directional vector in the Z direction.

The vector magnetic potential (A_{vec}) is key to the propulsion vector Z as: $\left(A_{vec} \cdot q_o\right) \cdot \frac{\text{N}}{\text{m}} = 1 \cdot h \cdot \text{Pa}$ 3)

QED

Allowing for a changing charge per second, we develop pressure times power where the power increases as the square of the frequency of the charge change. Both charges in the below equation are always the same polarity for the force vector to remain the same.

Example A — Example B

$$\begin{bmatrix} \frac{-q_o}{sec}\cdot\left(\frac{volt\cdot sec}{m^2}\right) \\ 0 \\ 0 \end{bmatrix} \times \begin{bmatrix} 0 \\ \frac{-q_o}{sec}\cdot\left(\frac{volt}{m}\right) \\ 0 \end{bmatrix} = \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} Pa\cdot watt \qquad \begin{pmatrix} \frac{-q_o}{sec}\cdot -B \\ 0 \\ 0 \end{pmatrix} \times \begin{pmatrix} 0 \\ \frac{-q_o}{sec}\cdot -E \\ 0 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} Pa\cdot watt \tag{4}$$

In the above equations, examples A and B are identical in the result where example A shows that B is equal to $\left(\frac{volt\cdot sec}{m^2}\right)$ and E is equal to $\left(\frac{volt}{m}\right)$. Then the Example A equation can be restated as:

$$\begin{bmatrix} -q_o\cdot\left(\frac{volt}{m^2}\right) \\ 0 \\ 0 \end{bmatrix} \times \begin{bmatrix} 0 \\ \frac{-q_o}{sec}\cdot\left(\frac{volt}{m}\right) \\ 0 \end{bmatrix} = \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} Pa\cdot watt \tag{5}$$

which shows that power is proportional to frequency.

(This is by reason that the inverse of time is frequency.)

Then the rate of charge change per second will determine the force field strength as well as the applied voltage.

In constructing our flying saucer, the first step is to consider a pair of circular metal conductors (plates) which are separated by some distance and which also have a dielectric medium between the two plates within that distance. This is a capacitor which will form the central circular floor of our flying saucer.

When charging a capacitor constructed as described above, there is a circulating magnetic flux generated within the space between the plates that is parallel to the plates and also 90 degrees to the electric field lines between the plates and 90 degrees to the plates.

The relevant equation for the field generated as described is given by reference 1 below:

Reference 1: Fleish, Daniel, A Student's Guide To Maxwell's Equations, Cambridge University Press, 2008, 2009, p.100

The next page develops an example for the nature of the field generated.

MagFluxGenTemp3.xmcd

Superconductor? Plate radius Field radius

$C1 := 10\cdot nF$ $\quad R1 := 1.2\cdot 10^{-07}\cdot ohm$ $\quad r_o := 9\cdot in$ $\quad r := 9\cdot in$

$\Delta V := 1\cdot 10^{05}\cdot volt$ $\quad \mu_o := 4\cdot\pi\cdot 1\cdot 10^{-07}\cdot\frac{henry}{m}$ $\quad f := 1.420405\cdot 10^{14}\cdot Hz$

$t := \frac{1}{f}$ $\quad R1 = 1.2\times 10^{-7}\,\Omega$ $\quad C1 = 1\times 10^{-8}\,F$ $\quad \frac{t}{R1\cdot C1} = 5.8668713031377$

Mylar has a dielectric constant K of 3.2 and a breakdown voltage of 7500 volts per mil.

$$C = \frac{\varepsilon_o\cdot K\cdot Area}{d_o} \qquad Area := \pi\cdot r_o^{\,2} \qquad \varepsilon_o := 8.854187817\cdot 10^{-12}\cdot\frac{farad}{m} \qquad 6)$$

Where: $r_o = 9\cdot in$ $\quad r = 9\cdot in$ $\quad K_d := 3.2$

$$d_o := \frac{\varepsilon_o\cdot(K_d)\cdot Area}{C1} \qquad d_o = 18.3133298013145\cdot mil \qquad \text{where:} \quad 1\cdot mil = 1\times 10^{-3}\cdot in \qquad 7)$$

Cap. voltage limit: $d_o\cdot 7500\cdot\frac{V}{mil} = 1.3734997350986\times 10^{5}\,V$ @7500 v/mil for Mylar 8)

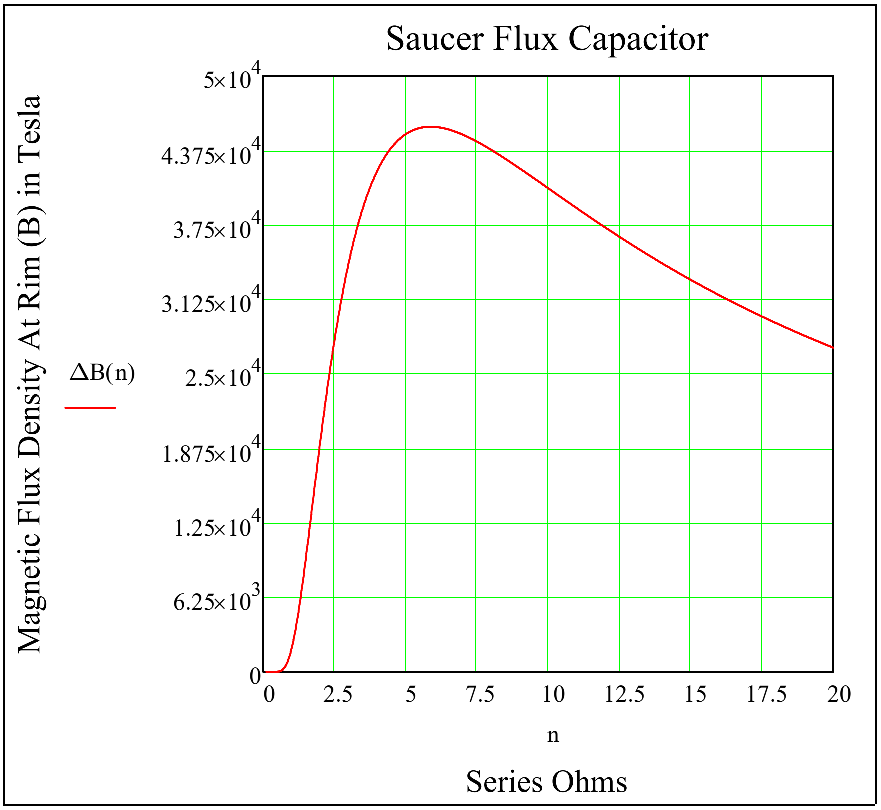
$$\text{Given:} \quad B = \left(\frac{\mu_o\cdot\Delta V}{2\cdot\pi\cdot R1}\right)\cdot e^{-\left(\frac{t}{R1\cdot C1}\right)}\cdot\left(\frac{r}{r_o^{\,2}}\right) \qquad n := .1, .11 .. 20 \qquad \Delta R1(n) := R1\cdot n \qquad 9)$$

The following equation yields the magnetic flux density in Tesla (**B**) at the rim of a circular capacitor having plates of r_o in radius as a function of changing series ohms.

$$\boxed{\Delta B(n) := \left(\frac{\mu_o\cdot\Delta V}{2\cdot\pi\cdot\Delta R1(n)}\right)\cdot e^{-\left(\frac{t}{\Delta R1(n)\cdot C1}\right)}\cdot\left(\frac{r}{r_o^{\,2}}\right)}$$

Decreasing R and t proportionally causes the magnetic flux B to increase proportionally. 10)

Plot 1



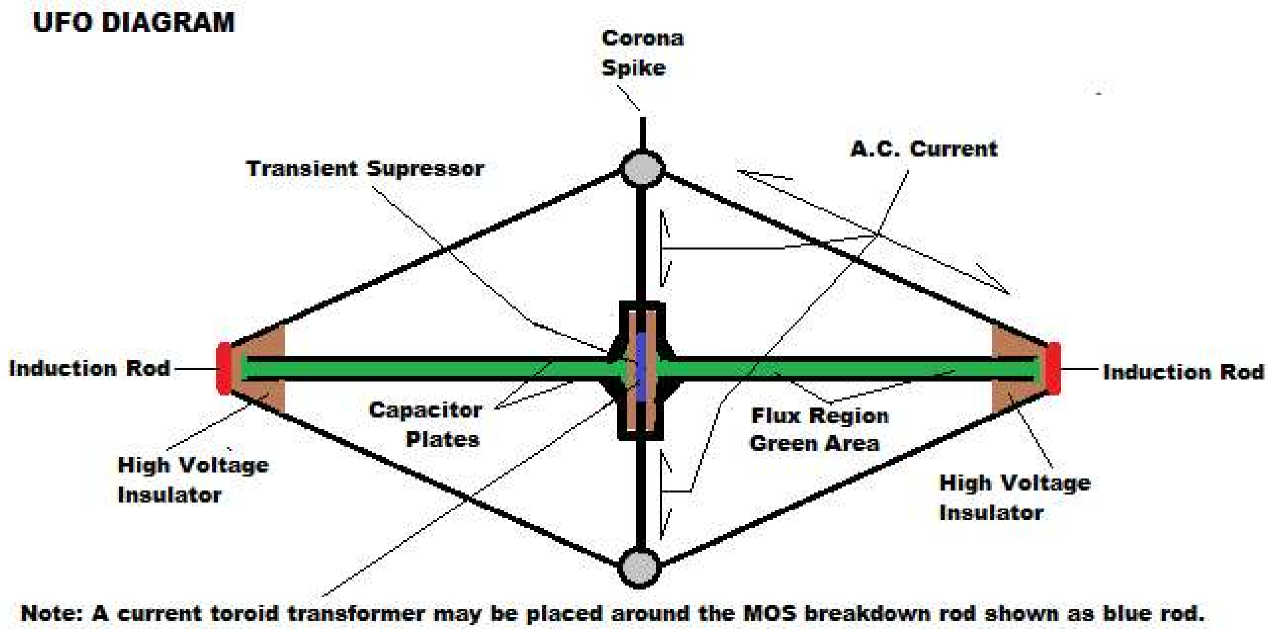
$$\frac{t}{(R1)\cdot C1} = 5.8668713031377 \quad B_{max} = \mu_o \cdot \frac{i_{cur}}{m} \quad \text{and} \quad H_a = \frac{i_{cur}}{m} \quad \text{or} \quad H_a = \frac{B_{max}}{\mu_o} \tag{11}$$

$$H_a := \frac{.457\cdot tesla}{\mu_o} \qquad H_a = 3.6366904496498 \times 10^{5} \cdot \frac{amp}{m} \qquad \frac{\Delta V}{r_o}\cdot H_a = 1.5908532150699 \times 10^{11} \cdot \frac{watt}{m^2} \tag{12}$$

$$Press := \mu_o \cdot (H_a)^2 \qquad Press = 3.4710913660106 \times 10^{3} \cdot \frac{lbf}{ft^2} \qquad Press = 1.66196753549 \times 10^{5} \cdot \frac{newton}{m^2}$$

$$Q_{max} := C1 \cdot \Delta V \qquad \Delta i_{max} := \frac{Q_{max}}{t} \qquad \Delta i_{max} = 1.420405 \times 10^{11} \cdot amp \tag{13}$$

Figure 1 Complete saucer design showing external surface and total resonant circuit.

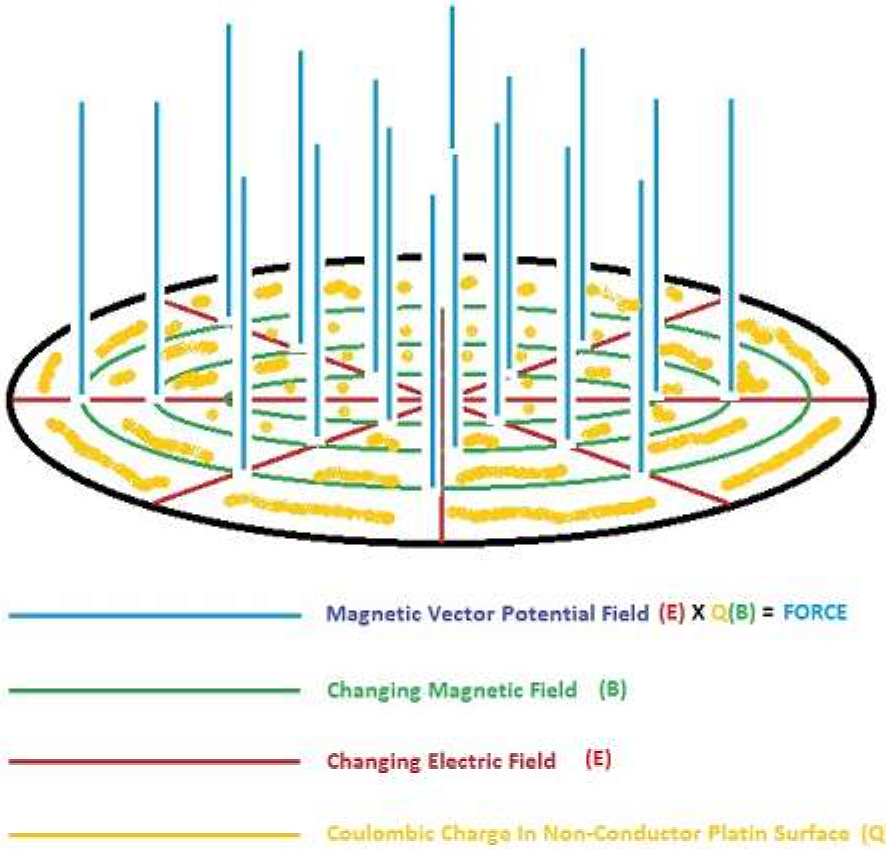


Surface of saucer could be a dielectric having a charged metal plate underneath that is charged and discharged at the same rate of the resonance frequency but having no direct connection to the outside surface of the craft. Further, the surface has powdered iron embedded into it to enhance the circular magnetic field strength.

The changing radial electric field would then generate a strong circular magnetic field around the surface of the craft 90 degrees to the radial electric field. The force field that provides the upwards propulsion would be the field containing the vector magnetic potential contained within equation 4 and 5 result on page 2 above.

Note the induction rods (red) are isolated electrically from the capacitor plates and serve to pick up the changing magnetic flux (green) and act as very low impedance source to the quarter wave surface of the craft. The ends at the corona spike will be the very high voltage point. Multiple quarter wavelengths could be employed for higher frequency modes of operation.

End



The red and green vectors change together and are 90 degrees to each other in space but are zero degrees phase-wise. The resultant blue force vector is 90 degrees to both the red and green vectors but is zero degrees phase wise to both. By the mathematical rule of the cross-product, the force vector is always in one direction since the (B) and (E) change polarity and direction in phase with each other making the propulsion vector pulsate in only one direction as shown by the vertical blue lines. This is a changing radial E field with a coupled circular B field which is not the typical electromagnetic or Maxwell modeled transverse wave in space. Coupling this action through the embedded charge (Q) creates the lift.

A force-field projector is also possible with the above design. The design is inherant to waveguide field mechanics and also quantum action. Instead of using the charged non-conductive top the bottom of the craft could then become a force-field projector. The vector mechanics of the field would interact at a distance with matter since matter contains atoms. A synchronizing laser beam could be used to pinpoint the interaction area so that the above field would interact with only that point. Depending on the phase of syncronization pulse, the force-field would cause attraction of repulsion or if both modes, vaporization due to the rapid vibration of the back and forth motion of the target matter. --Jerry E. Bayles