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THE UFO REPORT (Three)

A Monthly Publication

THE JULY 1986 ISSUE - EDITORIAL INTENT

It is the editorial intention for this monthly report to involve people in a lucid and technically competent discussion of UFO phenomenon. These reports will discuss the history of the phenomenon, UFO flight characteristics, the occupants, UFO physical effects, their propulsion methods, the technological and theoretical implications, and the social and spiritual implications of the phenomenon.

Sincerely,
Gary Wade (Editor)

UFO CONTRAILS

Sometimes when UFOs are observed flying at altitudes, such as above 20 thousand feet, they leave a snow white contrail behind them similar to that observed behind high altitude jet aircraft. In fact the contrails left by the UFO and the jet is the same. That is, the contrail is made up of ice crystals. However, the sources of the water for the ice crystals are different for the jet and UFO. The water for the jet contrail comes from the burning of hydrogen contained in the hydrocarbon jet fuel with oxygen from the earth's atmosphere. The water for the UFO contrail comes from water already in the earth's atmosphere. UFOs commonly generate and effectively propagate a high density, highly ionized air envelope with them. As new air enters this envelope and is compressed, so is the water vapor contained in it. If the air compression is large enough the water vapor condenses into water droplets which freeze into ice crystals or it condenses directly to ice crystals. The ionization enhances the water vapor condensation rate. Figure 1 illustrates the contrail formation process. The condensation rate is also enhanced to a considerable degree by the intense magnetic field strength (million gauss range) used by UFOs in their propulsion process. At the magnetic field strength used the energy levels of the rotational and vibrational states of air molecules are significantly raised and are no longer significantly occupied at normal temperatures. The magnetic field can effectively cool the air to below the water freezing temperature.

There is a second kind of contrail associated with starship refueling in the earth's upper atmosphere. Figure 2 shows what the author witnessed, along with hundreds of thousands of other Californians, in the Spring of 1979. It was a starship refueling in the earth's upper atmosphere off the California coast. The official explanation was a meteor, even though the flight time from southern to northern horizon was a minute and a half with no breaking up of the "meteor". As a byproduct of the refueling process, copious amounts of excited metastable atoms are generated. There are two significant forms of metastable atoms formed for your purposes here.. One metastable atom type has a significantly longer half life then the other. If the excitation energy levels of these metastable atoms is high enough, then when a metastable atoms collides with a nitrogen molecule there is a small probability that the metastable atom will leave its metastable state by giving part of its excitation energy to the nitrogen molecule, raising the nitrogen molecule into one of its optical molecular band energy states. These states will rapidly decay by emitting light in the green through blue frequency range. A similar process holds for other air molecules. The net result is as shown in Figure 2. The long contrail here comes from the relatively long half life metastable atom making molecular collisions with nitrogen molecules. The short inner contrail comes from the relatively short half life metastable atoms making molecular collision with nitrogen molecules. There are also plasma exhaust processes forming the shape of the inner contrail.

SUPER SONIC FLIGHT WITHOUT SHOCK WAVE GENERATION

One of the interesting phenomenon associated with UFOs is super sonic flight without the production of a shock wave. Normally when a aircraft travels relative to the atmosphere faster than the speed of

FIGURE 1
WATER DROPLET AND CONTRAIL FORMATION

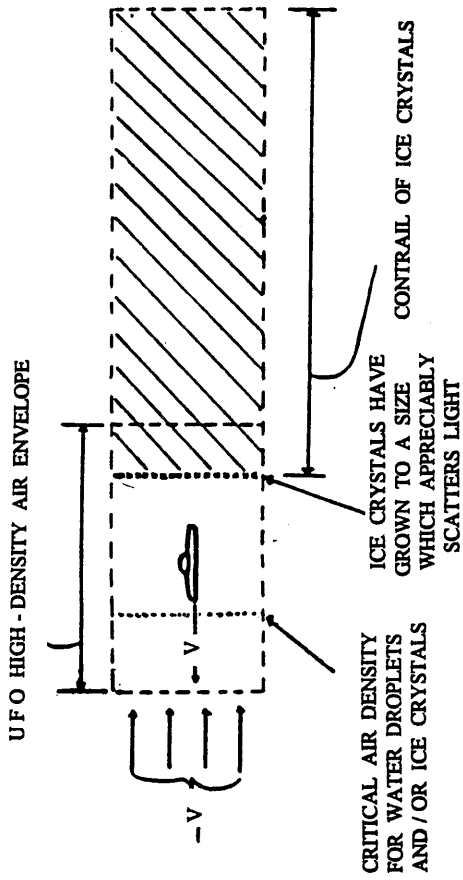


FIGURE 2
STAR SHIP IN THE FAR WESTERN SKY AT SUNDOWN

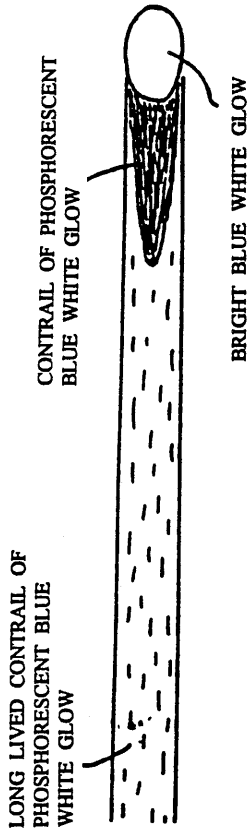


FIGURE 3
SHOCK WAVE GENERATION

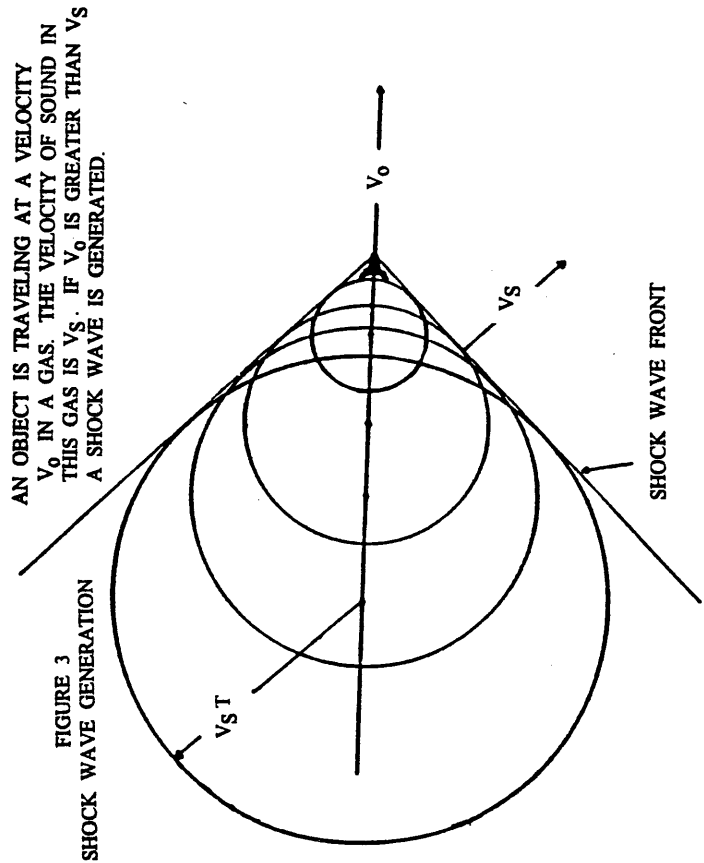
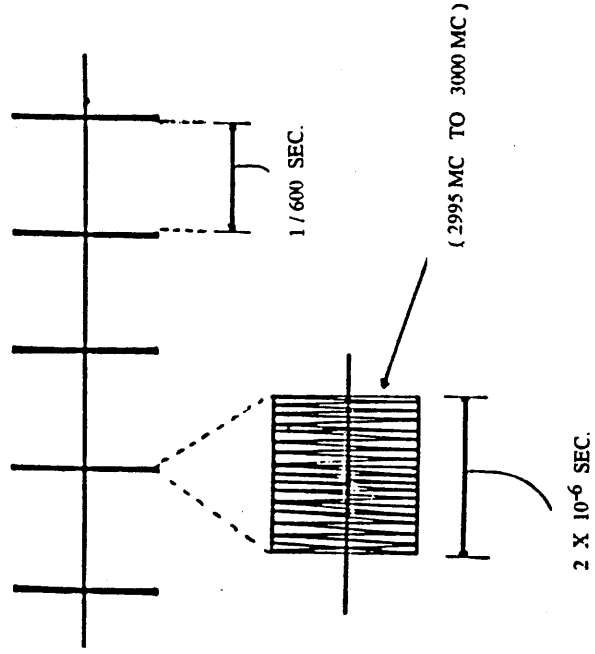


FIGURE 4
MICROWAVE EMISSIONS FROM UFO



sound, a shock wave is generated. This is illustrated in Figure 3. The essential condition for shock wave generation is for the relative velocity between the aircraft hull and the air reaching the hull to be greater than the speed of sound at that air density. If this condition is not met, there will be no shock wave generation. This is why UFOs do not usually generate shock waves. UFOs achieve this feat by generating a ionization cloud in front of them which they propel towards themselves while at the same time compressing the cloud to a higher density. The UFO first accelerates the plasma cloud and then decelerates the plasma cloud relative to the UFO. The deceleration process increases the ionization cloud density so that when it reaches the hull its relative velocity to the hull is below that of the speed of sound at that density.

The method of ionization cloud acceleration, deceleration, and compression is that of a crossed electric and magnetic field as shown in Figure 6. The ionization cloud is also rich in metastable nitrogen molecules. These metastable nitrogen molecules are very polarizable and also are propelled by the crossed electric and magnetic field.

Other advantages of this form of propulsion are no energy wasted in shock wave generation and no noise pollution.

A COMMON PROPULSION METHOD FOR ATMOSPHERIC FLIGHT

Though there are many variations of it, there is only one commonly used method of propulsion used by UFOs when traveling in our atmosphere. This propulsion method uses intense microwave pulses to form a plasma cloud in front of or around the UFO (see Figures 4 and 5). This plasma cloud contains positively and negatively charged air molecules along with a high density of metastable nitrogen molecules. The charged and metastable molecules are quite susceptible to the influence of crossed electric and magnetic fields as illustrated in Figure 6. The charged and metastable molecules are propelled in the same direction by the crossed electric and magnetic fields. Part of the electric field needed for the propulsion of the plasma cloud comes from an oscillating or pulsed magnetic field component. The rest of the electric field is supplied by the motion of the static component of the magnetic field relative to the atmosphere. This effect is illustrated in Figure 7, which can be imagined as the main super conductive current carrying ring aboard an average flying saucer, as illustrated in the crosssectional view of the ring shown in Figure 8. The UFO utilizes the crossed electric and magnetic fields to both move the plasma cloud toward the UFO providing action / reaction propulsion and to compress it to a higher density. The compressive action is needed so as not to generate atmospheric shock waves, which wastes energy. As long as the relative velocity between the UFO hull and the air (plasma cloud) reaching it are below the speed of sound for that air density, there is no shock wave generation. Figure 9 shows the time average flow diagram of air velocity and density for the air flow around a hypothetical UFO. These qualitative flow diagrams illustrate how air velocity relative to the UFO is kept below the speed of sound at the hull surface. Actual flow diagrams of air velocity and density for the air flow around UFOs are more complex.

This, then is an excellent form of propulsion for any ionizable and electrically polarizable atmosphere. Pick a planet, any planet, with an atmosphere.

NUMBER (N) OF CIVILIZATIONS CURRENTLY EXTANT IN OUR GALAXY

$$N = M_s F_p M_p F_b F_i F_e ; 10^2 < N < 10^8$$

M_s = THE NUMBER OF STARS IN OUR GALAXY

F_p = THE FRACTION OF STARS IN OUR GALAXY WITH PLANETARY SYSTEMS

M_p = THE MEAN NUMBER OF PLANETS SUITABLE FOR LIFE PER PLANETARY SYSTEM

F_b = THE FRACTION OF THOSE PLANETS SUITABLE FOR LIFE ON WHICH INTELLIGENT ORGANISMS HAVE EVOLVED

FIGURE 5
EXPANDING A PLASMA LAYER BY PLASMA OSCILLATIONS

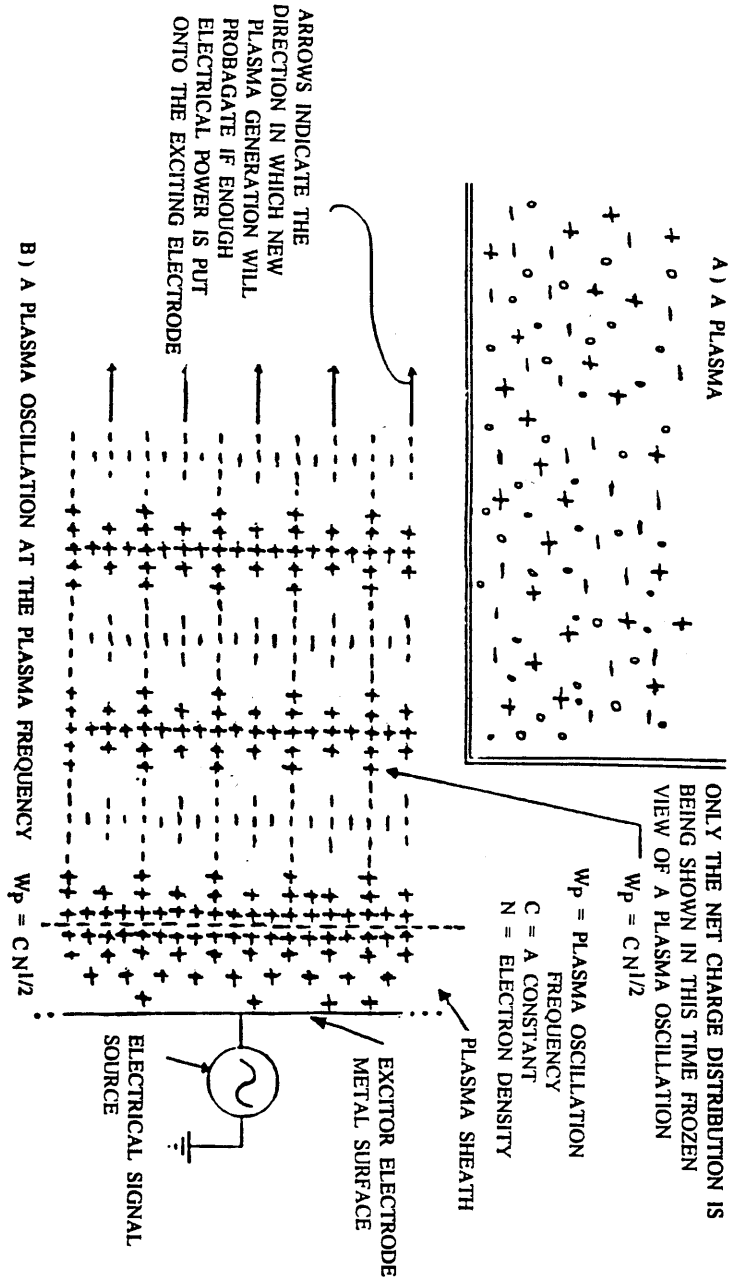


FIGURE 7
E AND B OF MOVING CURRENT RING

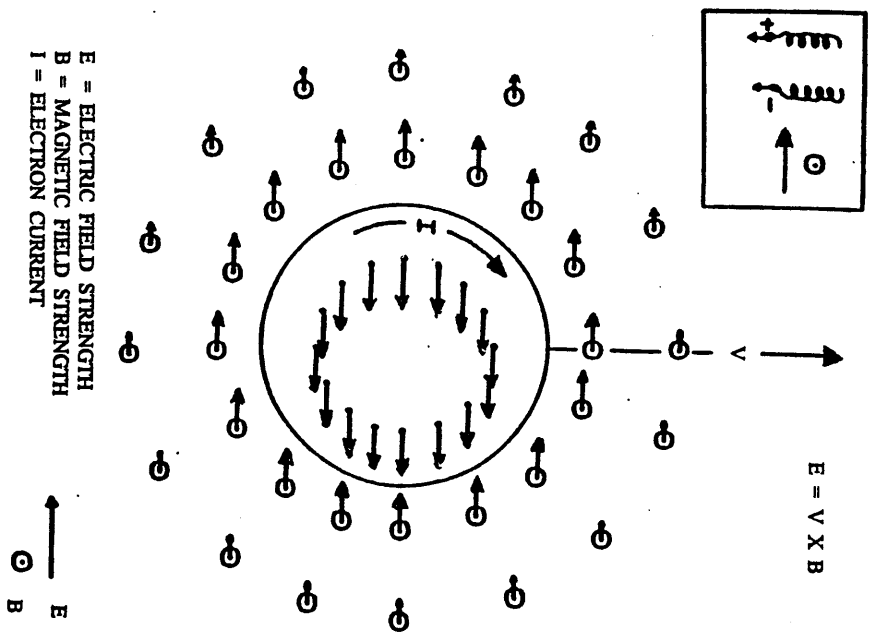


FIGURE 8
MAGNETIC FIELD LINES AND INDUCED ELECTRIC FIELD OF SINGLE CURRENT LOOP IN LINEAR MOTION

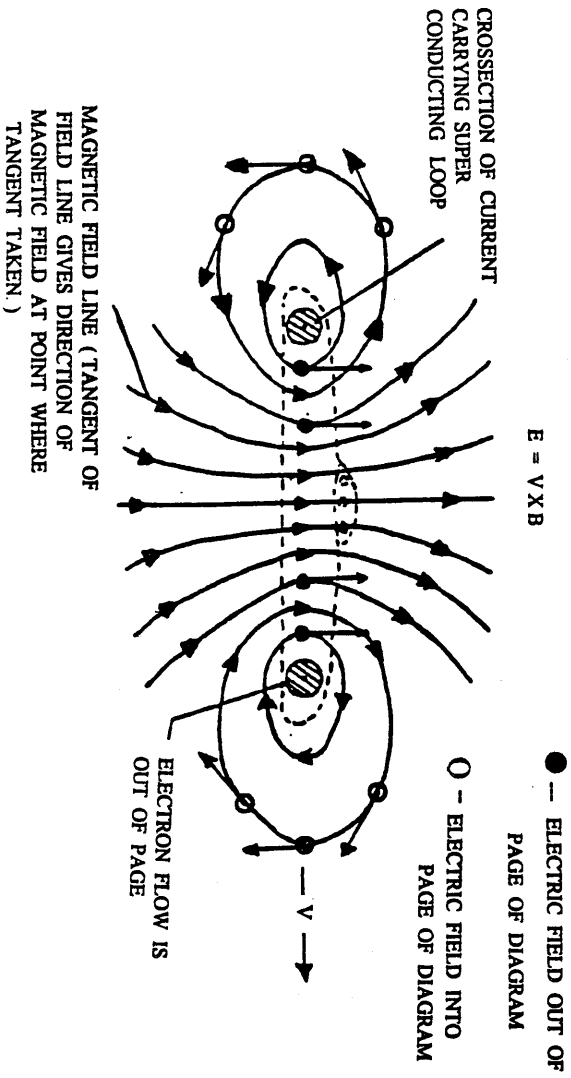
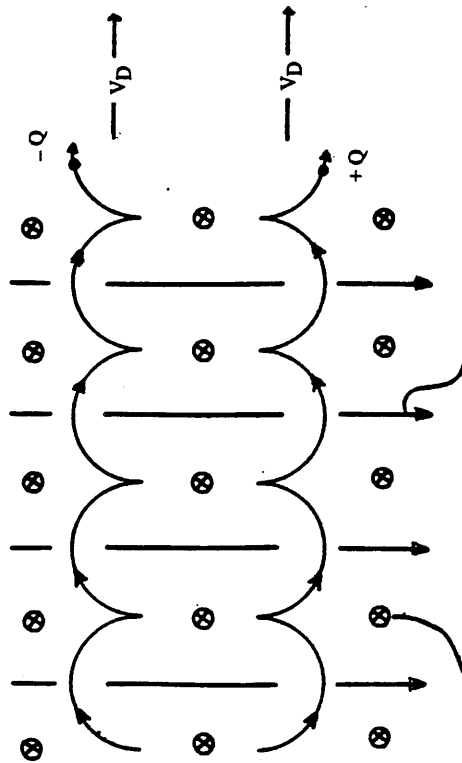


FIGURE 6
PATH OF CHARGED PARTICLE IN
CROSSED E AND B FIELDS

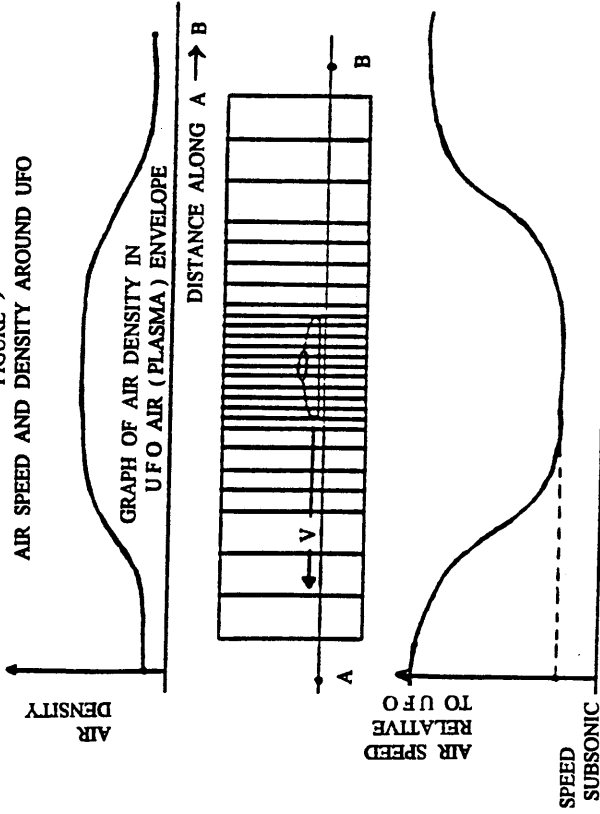


B (MAGNETIC FIELD) IS DIRECTED
INTO PAGE.

$$v_D = (E/B) C ; C = \text{SPEED OF LIGHT}$$

v_D = DRIFT VELOCITY WITHOUT COLLISIONS

FIGURE 9
AIR SPEED AND DENSITY AROUND UFO



GRAPH OF AIR SPEED OF AIR IN THE
ENVELOPE RELATIVE TO THE UFO

F_i = THE FRACTION OF THOSE PLANETS WITH LIFE ON WHICH INTELLIGENT ORGANISMS HAVE EVOLVED

F_e = THE MEAN LIFETIME OF THOSE CIVILIZATIONS IN TERMS OF THE MEAN LIFETIME OF THE CENTRAL STARS IN THE PLANETARY SYSTEMS

Above is shown a formula for the number of planet - wide civilizations currently extant in our galaxy. Depending on your point of view and therefore your choice for the values of the variables, a value of $10^2 < N < 10^8$ is commonly achieved. As for the author, he is definitely on the 10^8 plus side and here is why:

M_s - The number of stars in our galaxy is currently estimated at between 5×10^{11} to 10^{12} . I will be conservative and chose 5×10^{11} .

F_p - When we look into the heavens we note that a clear majority of stars are in binary, ternary, or higher order star systems. When we look at our own star we see nine planets and seven of these planets have their own satellites. In short there is absolutely no justification from the empirical data available for believing that planetary systems are the exception. Quite to the contrary they should be the rule. I therefore set $F_p = .5$ to be on the conservative side.

M_p - The mean number of planets suitable for life per planetary system is the product of ($F_s F_d$) . F_s is the fraction of stars that have life time spans and radiation levels that are consistent with liberal allowances for types of life forms and evolutionary time requirements. F_d is the fraction of those planets which are suitable for life development.

F_b - I believe that enough is known now about the biochemical evolutionary process of life as we know it, that if a planet is suitable for life, life will occur within approximately two billion years or less. So long as the mother star or stars have long life times compared to two billion years, life should be a certainty. Noting that our galaxy is at least 10 billion years old, I therefore set F_b conservatively at .5.

F_i - I believe that if you add a couple of billion of years to the time it took for life to evolve you will have intelligent life. I therefore place F_i conservatively at .25.

Note that the creation of life and the transport of life from one planet to another by extraterrestrials has been completely ignored.

$$N = M_s F_p M_p F_b F_i F_e$$

$$N = (5 \times 10^{11}) (.5) (.25) (.5) (.25) (.5)$$

$$N = 3.9 \times 10^9$$

THE CYCLIC BIG POOF THEORY

The in - vogue theory of the origin / creation of the universe is the Big Bang Theory. In this theory a vast sea of small white holes suddenly comes into existence and the entire mass / energy of the universe is spewed fourth, whereupon the white holes disappear. This birth of the white holes apparently takes place in a universe of Euclidean space, which is then rapidly converted to a non - Euclidean space - time universe by the presents of matter. This theory effectively suspends the conservation of energy law and gives no concern to the lack of a theoretical basis for a white hole. The white hole, or mass / energy spewing singularity, is simply assumed in order to explain the apparent expansion of the universe, which has been inferred from the increasing red shift observed in the light coming from galaxies of increasing distance.

Currently one of the important questions that astronomers and astrophysicists want answered is whether or not the universe will continue to expand indefinitely (open universe) or will someday begin to contract back towards its supposed white hole origins (closed universe). Though the question of whether the universe is open or closed is far from settled, the current popular view is that it is open. However, the recent suggestion that a significant amount of the red - shift coming from distant (billion plus light years away) galaxies is due to Compton scattering of their light by intergalactic gas, if true, implies that the universe is not expanding at the presently believed rate and is smaller in size than be lived.

Some tens of billions of years from now the universe will have essentially consumed / converted all of the lighter elements, currently mostly hydrogen, into the heavier elements. These heavier elements will be concentrated into black dwarf stars, which will be the vast majority of stars then. Associated with the process of conversion of light elements into the heavier elements is the copious generation of neutrinos and interstellar electromagnetic radiation.

Consider the fate of the universe, if the universe is closed. All forms of matter and energy will be drawn back to the region of the supposed creation. The enormous gravitational potential energy of the currently expanding universe will during the contraction be converted into galactic kinetic energy. The neutrino and background electromagnetic radiation energy density will increase approximately as the inverse cube of the radius of the contracting universe. During this collapse the background black body radiation temperature will go from that of a few degrees Kelvin to well beyond a billion of degrees Kelvin. The surface of black dwarfs will be ablated away. The kinetic energy of the coalescing galaxies will be converted into thermal energy and radiant electromagnetic energy. The neutrino density and thermal energy of nuclei will become so large that the heavier elements will be converted to lighter and lighter elements. The thermodynamics of this super plasma are such that only a proton and electron plasma is favored to minimize the electromagnetic radiation and neutrino densities in this contracting plasma.

At some size, perhaps as small as a million light years in diameter the coalescing super plasma / exploding dwarf star universe will pass through a critical thermal / radiation pressure where contraction will stop and the explosive expansion of the universe will begin again. Some billions of years later some funny looking creature will ask, "Daddy where did the universe come from?"

"Ask your mother, she is the astrophysicist."

I ask, I challenge, and I encourage astrophysicists, physicists, and astronomers to contemplate and do calculations on the scenario I have put forth.