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# THE UFO REPORT

A Monthly Publication

THE JANUARY 1987 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 )

## MY LONGEST DAY

It was the summer of 1967, a Saturday, the 26 th of August at 5:35 P.M.. I had just arrived home after working my shift at the cannery just outside Merced, California. My mother said, "Did you see the UFO story this last week in the Sun Star? Some people in Coulterville saw one." My mind reeled with excitement. At last! Some place nearby where I could go and talk with people who had seen them too and could tell me what they saw! I quickly showered, ate and loaded my packed saddle bags and me on my motorcycle. I headed for Coulterville. By 7 P.M., I was in the mountains riding down a long straight grade into the upper part of a mountain valley, which is now under the back waters of Don Pedro Dam. Just after I reached the bottom of the grade, I noticed something moving over a oak tree on a hill about a quarter of a mile away at the end of the valley. As I watched, I got goose flesh all over my body and my mind kept recycling the word. "WOW !". I was looking at two identical metallic ellipsoidal objects orbiting each other about thirty feet above an oak tree. They appeared to be approximately fifteen to twenty feet long on the major axis and about half that on the minor axis. I stopped my motorcycle and just stared at them. After a minute or so of mental adjustment, I went for a closer look. The road I followed continued another eighth of a mile with the objects 45 degrees to the right. As I reached the point nearest the objects, the road made a ninety degree turn away from them. I stopped again. They continued their orbiting. I was now a little over an eighth of a mile from them. I knew that a little further up the road there was a dirt road leaving the main road and going near to where the objects were. So, I decided to get a closer look, but as I continued up the road I could not find that dirt road. After going about a half mile I could not find that dirt road, which I knew was there. I stopped at a turn out. Something very strange was going on. Roads just do not disappear. So, I had a conversation with myself. I said: "Do you really want to go back down the road and find that dirt road and meet those UFO people? Or just go on to Coulterville?" The answer came quickly, Coulterville! When I arrived in Coulterville, a town then of about 250 people, I went to the local hotel - restaurant - bar - museum and inquired about the people who had reported the UFO. I was informed that a member of their family was gravely ill and that it was not a good time to visit. So, I took a poll of the patrons to find out about opinions and UFOs in the area. One rancher told me he had seen two UFOs fly over his place near Dog Town while at the same time they were orbiting each other. Although these UFOs were too high and fast moving to get a good look at, he thought they were spheroidal in shape. The patrons were equally divided between believers and non - believers in UFOs, with the bartender being firmly neutral.

Well, it was getting near sun down and it had been a long day. So, I went to the local park and began to settle in for the night. As I was putting down my sleeping bag, several vehicles arrived full of people. They began unloading food, chairs, and tables. More and more people kept arriving, so I went over and inquired what was up. It was the 50 th wedding anniversary of the towns most beloved people and the whole town was turning out. Well I was tired and wanted to rest, so I packed up my gear and headed seven miles up the road to the Greely Hill and Hill Top campgrounds. As I reached Greely Hill it was about an hour and a half after dark. I turned off the main road and headed down the dirt road to the campgrounds. Just after I had turned onto the dirt road, a car came from the opposite direction. It was

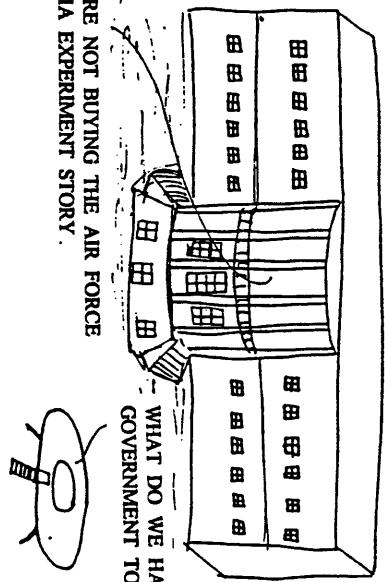
HEY BLACK BIRD DO YOU WANT TO RACE TO NIAGARA FALLS? WE WILL GIVE YOU A 1,500 MILE HEAD START THIS TIME.



NORTON CONTROL THIS BLACK BIRD, CAN WE TAKE ON AN EXTRA FUEL LOAD AT GOOSE BAY? WE'D LIKE TO CHECK OUT THE AFTER BURNERS THIS FLIGHT.



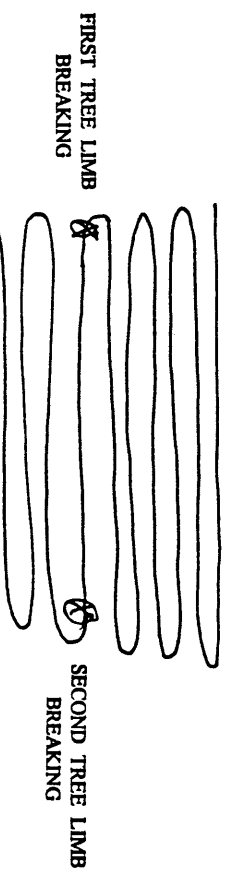
THE PEOPLE ARE NOT BUYING THE AIR FORCE MASS HYSTERIA EXPERIMENT STORY.



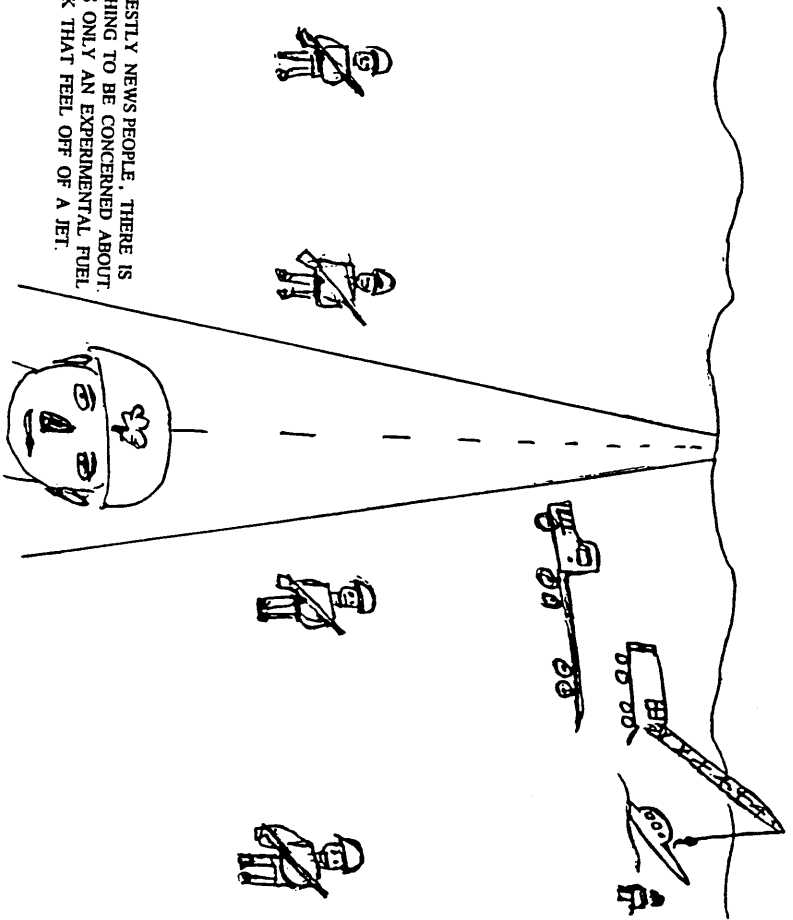
WHAT DO WE HAVE TO DO TO GET THIS GOVERNMENT TO ADMIT WE EXIST?



FIGURE 1



HONESTLY NEWS PEOPLE, THERE IS NOTHING TO BE CONCERNED ABOUT. IT IS ONLY AN EXPERIMENTAL FUEL TANK THAT FEEL OFF OF A JET.



doing fifty plus miles per hour and literally forced me off the road, leaving me in a thick cloud of pine forest dust. Well, I cursed a blue streak at the driver and then continued on to the campgrounds. The campground was empty. The only signs of life were several flood lights lighting up the camp and a raging camp fire that had been left unattended, presumably by the guy who ran me off the road. I warmed up by the fire for about twenty minutes, then put down my sleeping bag. I doused the fire, switched off the flood lights, which were controlled by a circuit breaker box located on the side of a tree next to where I had set up camp, and settled in for a good night of sleep.

Just as I was heading into the twilight of sleep, a car pulled into the campground and parked about twenty feet from me on the other side of a large tree. The occupants were a young couple. They evidently did not know I was there. My motorcycle and I were out of sight on the opposite side of the tree. The young woman was sobbing and her husband was trying to console her. After about ten minutes of this I was about to announce my presence in hope that they would leave or at least go to the other side of the campground and let me sleep. Well, just as I was about to speak up, another car arrived and pulled in behind them. It was Constable Abbott. He got out of his car and went up to the couple. He asked them what they were doing there and if they had heard or seen anything strange. They said they had not seen or heard anything strange. At this point I spoke up and they all were visibly shaken. I explained that the only strange things I had seen were the abandoned camp fire and the guy who ran me off the road. Abbott replied that it was probably the guy who called him to report some strange unseen creature that had terrorized him and his family there in the campground. Abbott was of the opinion that it was probably just the fears of a greenhorn camper generated by a bear. Well Abbott dismissed the problem and he and the couple left. Again, I settled down to sleep. Again, as I was entering the twilight of sleep I began to hear something. Something big was walking in the forest about a hundred and fifty yards due north of me ( see Figure 1 ). It was meandering back and forth in wide arcs. With each arc it seemed to be moving in ten yards closer. As it came between fifty and seventy yards northwest of me, it stopped and it became stone quiet for about fifteen seconds. Then came the loud thundering sound of a large tree limb or the upper part of a tree being ripped apart and failing to the forest floor. Stone quiet followed again for another ten seconds or so, then to the north east, at the same distance, came the same sound of the upper part of a tree being ripped apart and falling to the forest floor. The thing began walking in a back and forth path again. As it came closer, about thirty yards out in the darkness, to the northwest of me, it began to move due south until it was about twenty yards west of me. There it began to rip up and scatter a manzanita grove while making a blood - curdling scream. This was followed by the sound of a tree being uprooted and ripped to pieces. Finally, it came toward camp, making a deafening roar just like the monster of the Krell in the movie Forbidden Planet. It appeared in my mind's eye to be about twelve feet high and twelve feet wide and it was coming to kill me. I was fully dressed by now and I had reached for my 14" crescent wrench which was my only weapon. I decided to make a try for the light switch on the adjacent tree. I wanted to get a look at this thing. As, I reached the switch, the thing was only a few feet away, roaring in blood curling screams. I switched on the lights. With it came total silence. There was nothing there. I sat there on a picnic table with the lights on for about ten minutes, continually looking around me in a paranoid state of mind. I then turned off the lights and sat there in the dark for another five minutes or so. I convinced myself that whatever it was, it was gone now. Things were OK.. I could go back to bed. Looking back on this decision, I realize that it was irrational. I now believe that I was not in full control of my mind. I believe that just as my conscious mind was not allowed to perceive the dirt road. I was not allowed to make the proper rational decision and get the hell out of there.

I went back to bed. However, this time I was clutching my crescent wrench to my chest like a security blanket. Just as I was relaxing, it was suddenly back. Now it was about ten feet away from me on the other side of the picnic table. It was rooting up the ground and making that screaming noise. I could hear the large tree roots snapping as it tore up the ground. I was out of my bag in a flash and heading for the light switch. As the lights came on silence came again. There was nothing there. No dust in the air, no ground rooted up. I was in a panic state, a sort of adrenaline shock. I had to get out of there. I quickly rolled up my bag, packed my saddle bags and mounted my motorcycle. I cranked over my cycle and it started on the first crank. However, I was so uptight that when I revved the gas, I broke the cable mechanism. This left the engine running at full bore. The roar was more than I could stand and my only thought was to stop the engine. I went berserk. I jumped off the cycle and attached the engine with my bare arms. I grabbed the engine in a bear hug and thrashed the cycle until it was quiet. What actually

stopped the engine was that my arm covered the carburetor intake and choked the engine off. At this point I was bonkers and would probably have gone running off through the forest, but a car full of drunk high school kids from Sonora came driving in at that point. I went over to them and explained that there was this thing here and that it was not safe to stay. They looked at the panicked state I was in and started to leave. I grabbed the driver's window and door and strongly insisted that they not leave me alone until I had fixed my gas throttle mechanism. They reluctantly agreed and I quickly went to work on the mechanism. In less than five minutes I had a temporary fix in place and I got out of here, leaving the high schoolers behind. As I reached the main road, a sense of great relief and joy came over me. I felt the muscles of my back relax. I realized that I must have been rather up tight since I found that I had been driving with my head down in-between my handle bars and my chest on top the gas tank. I slowly straightened up and headed down the road back toward Coulterville. I was feeling very happy to be alive. After going about a mile, the road began to descend into a step winding canyon. Just as I began the down grade I noticed something in my peripheral vision. To my about 250 feet above me and five hundred feet away, traveling along the ridge line at my speed and going in the same direction. As I traveled on down the canyon it continued to slowly cruise down the ridge line. As I came to where the road crossed over the ridge line I turned out at an overlook of the mountain valley in which Coulterville is located. As I came to a stop, the object flew almost directly over me. It was a flying saucer. It made no noise, it had three solid cherry red glowing hemispheres on the bottom forming an equilateral triangle centered about the center of the saucer. Its diameter was around fifty feet. I watched it fly off over Coulterville and on toward the San Joaquin Valley. It was near mid - night, I started back on the road to Coulterville. It would be a long strange night until the illusory safety of dawn would come. However, that was another day and another story.

EPILOG – In 1974 while I was reading Carlos Castaneda's book SEPARATE REALITY . I came across his description of his encounter with a spiritual creature that lives in the wilds of our planet. These creatures, which he called allies, have the power of auditory illusion. Anything that you have ever heard. this creature can play back for you in your mind. It can play things back in any order and any amplitude. In the dark it can create another reality, totally real to the beholder. Castaneda described how he ally introduced itself by the sounds of walking and the breaking of two large tree limbs, the same way as I experienced.

Some years later when I told my mother of this longest day and described the flying saucer that had flown over me, she told me that , that very same "night" ( 3:30 A.M. ) she was driving from Merced to Hornitos by the back way on the road behind Yosemite Lake and a flying saucer of the same description flew over her car.

## THE TECHNICAL CORNER

THE WORK FUNCTION POWER CELL – A device for converting the near zero energy photons of the background quantum electromagnetic sea into useful electric power.

While working on developing a more efficient cold cathode device, I happened upon a physical electronics process, which I have used to invent a work function power cell ( WFPC ). Upon first inspection, the WFPC broke the first and second laws of thermodynamics. I therefore assumed that a fundamental error or errors in the understanding of the physics of the phenomenon involved had been made. After many months of careful review, I could show to my satisfaction that the processes involved did not violet the first or second law, if the interpretation of the second law was liberalized to include normally non - detectable or non - recognized processes going on in the background quantum electrodynamic sea ( normally called the vacuum ). Because the WFPC appears to break both the first two laws of thermodynamics, generally held in high regard by scientists, care shall be taken to explain the processes involved.

The WFPC converts some of the almost randomly distributed near zero energy photons of the background quantum electrodynamic sea ( the vacuum ) into usable electric power. The physical

phenomenon which combine to power the WFPC are the three well known and relatively well understood physical phenomenon of quantum tunneling, induced current flow by charge motion, and the contact potential difference between dissimilar crystalline conductors.

The principles of operation for the WFPC can probably best be explained through the use of several examples of simple experiments which illustrate the phenomenon needed to explain the WFPC.

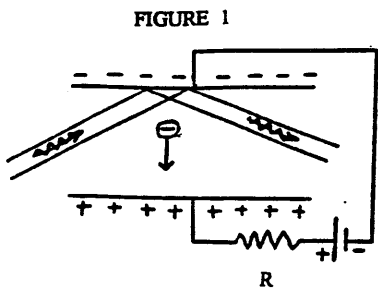
1) Induced Current Flow By Charge Motion – Consider Figure 1 where a battery and resistor are connected in series with a capacitor, which is formed from two parallel rectangular clean mirror - polished metal plates of the same metal maintained in a vacuum. The battery charges the capacitor up to a charge  $Q = C V$ , where  $C$  is the capacitor capacitance and  $V$  is the potential difference across the battery. Let a well collimated beam of light be incident at a low angle to and in a small area in the center of the negatively charged capacitor plate as shown in Figure 1. If the light is monochromatic and of just the threshold frequency for photoelectron emission, electrons will be emitted from the plate surface and be accelerated across the capacitor gap. Now let the intensity of the light be lowered to the point where the probability is that only one electron will be emitted and be in the capacitor gap during the transit time of an electron across the gap. The electric current induced by the movement of the electron across the capacitor gap is  $I = eV / d$ , where  $e$  is electron charge,  $V$  is instantaneous electron velocity and  $d$  is capacitor gap distance. Figure 2 illustrates this situation. The electron is accelerated across the capacitor gap by the electric field created by the net charge transferred from one capacitor plate to the other by the battery. As the electron crosses the gap from the negative to the positive plate, its induced image charge transfers from the negative to the positive plate. It is the change in the induced image charges that gives rise to the external circuit current flow in the circuit of Figure 1. If the light intensity is increased so that a large number of electrons are transiting the gap at any one time the external current flow will become essentially a constant as illustrated in Figure 3.

The external circuit current expends the power  $P = I^2 R$  in the resistor in the form of heat. From classical electromagnetic theory the source of this power is the energy stored in the electric field between the capacitor plates. This energy is supplied and renewed by the electrochemical energy stored in the battery.

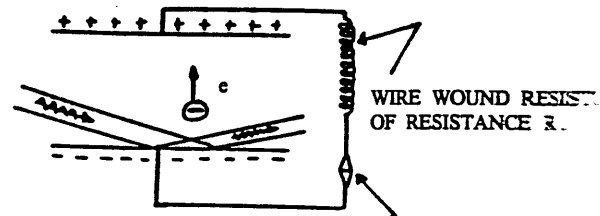
2) Contact Potential Difference Between Dissimilar Crystalline Conductors – Let us now consider two dissimilar metal blocks shown in Figure 4 A along with energy level diagrams for their conduction electron shown in Figure 4 B.

The fermi energy is given to a good approximation by:  $E_f = (h / 4\pi M) (3\pi^2 P)^{2/3}$ , where  $P$  is the density of conduction band electrons ( number per volume ). The electrons of metal 1 have a higher fermi energy than those of metal 2 because metal 1 has a higher density of conduction electrons than metal 2. The fermi energy of each metal is equal to the kinetic energy of the electrons which are furthest up the conduction band energy level diagram of both metals in Figure 4 B. When the two metals are brought together as shown in Figure 5 A, there is a net exchange of electrons between the two metals until a dynamic equilibrium is set up ( see Figure 5 B ). Here there is a net transfer of electrons from the metal with the lower electron work function ( higher fermi energy ) to the metal with the higher work function ( lower fermi energy ) such that an external contact potential difference  $\Delta V_c = (\phi_2 - \phi_1) / e$  is set up between the external surfaces of the metals. There is also an internal contact potential  $V_i$  at the interface of the two metals given by:  $V_i = (E_{f2} - E_{f1}) / e$ .

Imagine, as shown in Figure 6, that the two metal blocks shown in Figure 5 A are maintained in contact so that the internal and external contact potentials remain, but that the blocks are continuously deformed to form an electrical circuit consisting of a parallel plate capacitor and wire wound resistor in series. This circuit is similar to that shown in Figure 1, but without the battery. In fact, the circuit portion external to the contact region of the two metals is equivalent to the circuit of Figure 1. The external contact potential difference takes the place of the potential difference supplied by the battery in Figure 1. Just as in the set up of Figure 1, the photo - emitted electrons will induce current flow ( $I$ ) in the external circuit. This current flow will expend a power of  $I^2 R$  in the wire wound resistor, producing heat per time of that amount in the resistor. At first inspection, this would seem to violate the conservation of energy law as well as the second law of thermodynamics. However, this is not the case. Standard classical electromagnetic theory asserts that the energy dissipated in the resistance comes from the electric field between the capacitor plates and is given by:  $W = (C / 8\pi) \int E^2 dV = A E^2 d / 8\pi = \text{a constant}$

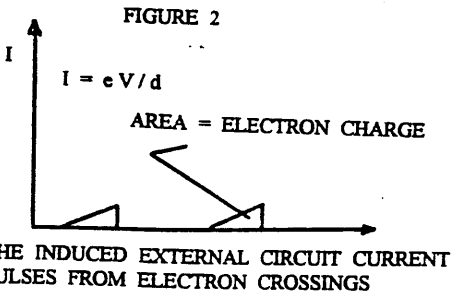
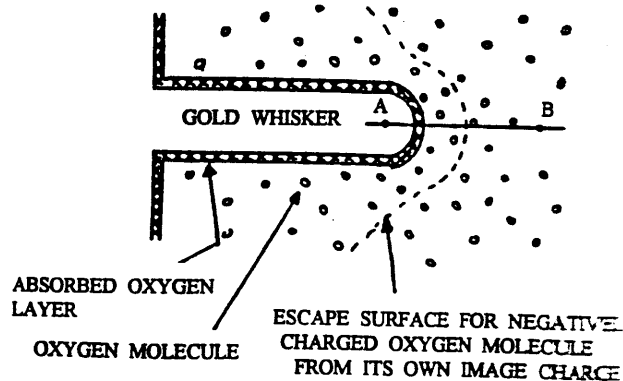


**FIGURE 6**

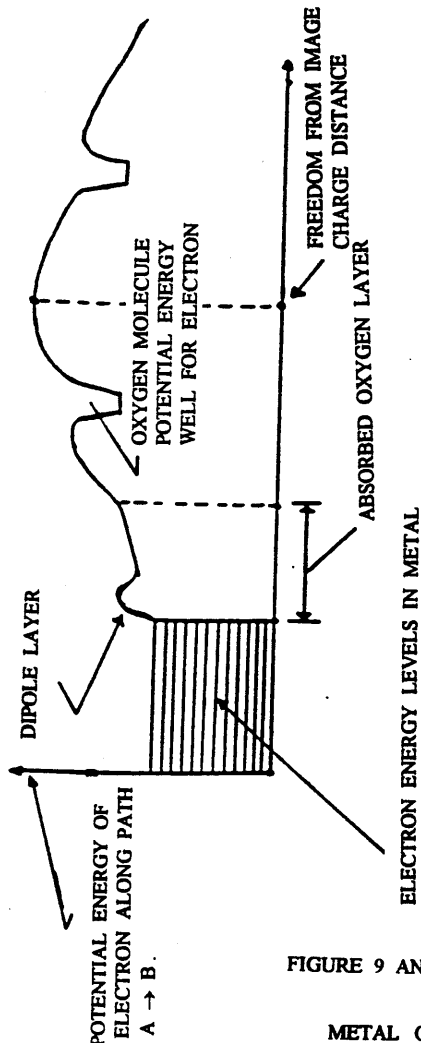


CONTACT BETWEEN METAL 1 AND METAL 2.

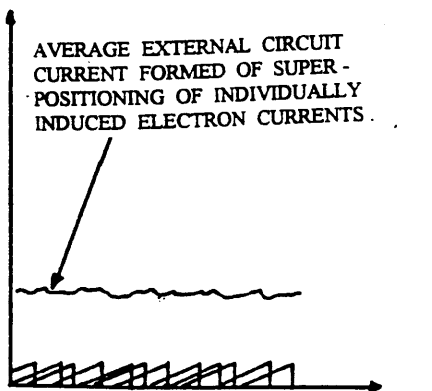
**FIGURE 7**



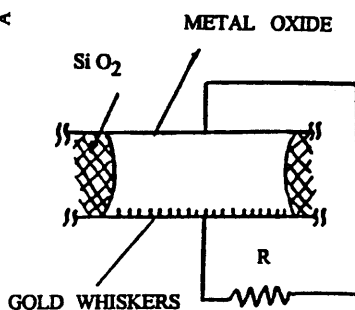
**FIGURE 8**



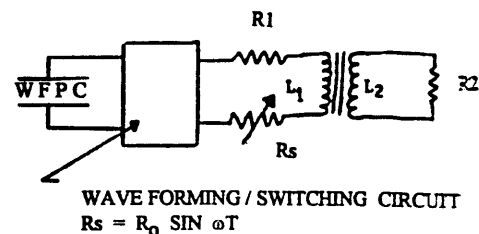
**FIGURE 3**



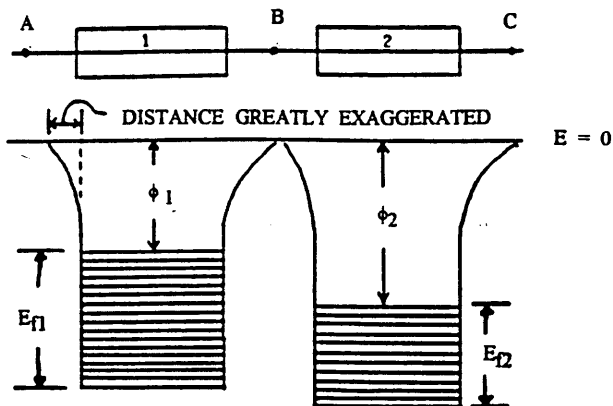
**FIGURE 9 AND 10**



**FIGURE 11**

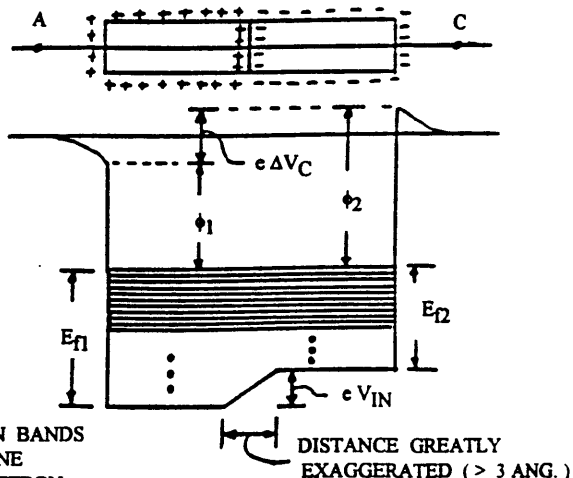


**FIGURE 4**



ENERGY LEVEL DIAGRAMS FOR ELECTRONS IN THE CONDUCTION BANDS OF METAL 1 AND 2 FOUND ALONG PATHS PARALLEL TO THE LINE SEGMENT A → C.  $E_f$  IS THE FERMI ENERGY AND  $\phi$  IS THE ELECTRON WORK FUNCTION.

**FIGURE 5**



for constant charge on the capacitor plates. Classical theory, however, derives this result for the energy in the field by assuming that the charges on the capacitor plates are the source of the electric field and, therefore, also the source of the field energy. This is not quite correct. Quantum electrodynamics asserts that the charges on the plates are only the scatters and organizers of the background quantum electrodynamic sea ( the vacuum ) made up of an exceedingly dense superimposition of near zero - energy virtual photons, which are the intermetary agents of the electric field. This distinction between the classical and more current quantum view of the electromagnetic field implies that the energy is not stored in the field between the plates. Instead, a dynamic equilibrium exists in which the electric field's ability to do work is continually being renewed by the constant generation of an electric field from the scattering of near - zero energy photons from the quantum electrodynamic sea ( the vacuum ) off of the charges on the capacitor plates.

Note that the situation that has been described is one which has the amount of charge flowing between the capacitor plates equal to the amount flowing around the external circuit from one plate to the other and at the same time energy is being expended in the form of heat in the resistor. Since this described charge flow process leaves the capacitor in the same state of charge ( therefore the same energy state ) while expending energy in the resistor, it would seem to break the Second Law of Thermodynamics. However, if we attribute an energy density to the vacuum and define our thermodynamic system as consisting of ( 1 ) the physical material particles with their associated electric fields and ( 2 ) the background vacuum field, the second law need not be broken in the above described process. The system is doing work in the form of heat generation at the expense of the energy stored in the background quantum electrodynamic sea. The energy comes from the vacuum by way of conduction electron kinetic energy in the metal ( crystal structure ). The kinetic energy of electrons in the metal crystal depends on conduction band electron density, which depends on the atomic spacing. The atomic spacing is determined by the size of the inner non - conduction electron orbitals. The size of the inner electron orbitals is determined by and maintained by the energy density of the near - zero energy photons of the vacuum. The density of near - zero energy photons is so large and maintained over such a vast amount of space that for practical purposes it is unlimited in the universe.

This photo - electric driven source of "free" energy is not a practical power source. This is due to the fact that it takes far more energy to produce the needed light which liberates the conduction electrons to just outside the metal surface than the associated energy delivered to the resistor by the induced current flow. However, if a way can be found to deliver the electrons to outside the metal surface without expending external energy, we have a "free" energy device mechanism. In other words, we require a physical mechanism to supply electrons to a point outside the metal surface where the electron's image attraction field is weaker than the electric field supplied by the contact potential difference, while concurrently not requiring energy flow into the system to free the electrons from the metal surface. Such a mechanism exists and is described below.

3) Quantum Tunneling Of Electrons From A Metal Point Into A High Pressure Electronegative Gas – The technology now exists to produce 50 angstrom in diameter and .2 micron long metal whiskers on a mirror smooth metal surface at a density of  $10^{13}$  whiskers per meter squared. If such metal whiskers are placed at a small 1 volt negative potential in the presence of a high pressure ( 500 lb / in<sup>2</sup> or higher ) electronegative gas, a negative ion current will flow away from the whiskers. This process is illustrated in Figure 7 and 8.

Figure 8 illustrates the potential energy of an electron along path (A to B) of Figure 7. Electrons impinging on the inner surface of the gold point can tunnel with significant probability to the potential well of the nearby (  $> 10 \times 10^{-10}$  meters away ) free oxygen molecules. From the potential well of the oxygen molecule the electron can either tunnel back to the metal or tunnel to another oxygen molecule and so on. If the electron should tunnel to another oxygen molecule which is just outside the distance from the metal surface to be free of its image charge field the negatively charged oxygen molecule will be repelled away from the gold whisker.

If the gold whiskers are on the surface of the gold capacitor plate which is faced off against an electrically conductive metal oxide capacitor plate or its equivalent both of which are in a high pressure oxygen environment, then we have the WFPC. A schematic of a WFPC is shown in Figure 9. Note as illustrated in Figure 9, it does not matter what the particular metal conductor is that is used in the load

circuit. The potential difference between the plates depends only on what the work functions are of the two most extreme non touching parts of the circuit. In this case the two plate surfaces.

Now that we have a basic notion of how the WFPC works, let us consider the necessary engineering criteria and calculations needed to construct a WFPC.

1) The Whiskers – Let there be up to  $2 \times 10^{13}$  metal whiskers per meter squared, with a whisker diameter of  $50$  to  $100 \times 10^{-10}$  meters and whisker length of  $2,000 \times 10^{-10}$  meters. Whiskers of this size range and number density range are formed by electroplating onto a mirror metal surface which has a  $5,000 \times 10^{-10}$  meters non - conductive polymer coating that has  $50$  to  $1000 \times 10^{-10}$  meter diameter tunnels through it in which the whiskers are plated out into. Such tunnels are formed by high energy ( $<8\text{Mev}$ ) heavy metal ion bombardment of very low intensity which create approximately  $25 \times 10^{-10}$  meter diameter chemical bond damage tunnels through the coating. These damaged chemical bond tunnels are then selectively and preferentially chemically etched out to  $50$  to  $100 \times 10^{-10}$  meters diameter through hole tunnels in which the electro - plating occurs in.

2) The Electric Current Production Of The WFPC – For a high pressure planner electrode gaseous conductor, the current is:  $I = K (\Delta V_1 / d) (e n) A$ , where  $I$  equals total current,  $A$  equals surface area of WFPC plate (cathode),  $K$  is  $O_2^-$  ion mobility,  $e$  is electron charge,  $n$  is the average ion density between plates (electrodes),  $d$  is electrode spacing, and  $\Delta V_1$  is the potential difference between electrodes. Note that  $n = a Q / A d e$ , where  $a$  is the ratio of the charge between the plates to the charge on the cathode when the WFPC is charged to the contact potential difference.  $a$  is determined by a combination of gold finger surface density, gold finger point radius, and oxygen gas density.  $Q = A \Delta V_c / d = C \Delta V_c$ , where  $C$  is the capacitance and  $\Delta V_c$  is the contact potential difference. This implies that  $n = a \epsilon \Delta V_c / d^2 e$ . Substituting this expression for  $n$  into  $I$  gives:  $I = a \Delta V_c K \epsilon \Delta V_1 A / d^3$ . When in operation, as shown in Figure 10,  $\Delta V_1 = \Delta V_c - I R$ . Substitution of this into the above equation for  $I$  and solving for  $I$  gives:  $I = a (\Delta V_c)^2 K \epsilon A / (d^3 + a \Delta V_c K \epsilon A R)$ . Let us chose some realistic values for the variables and calculate the current. Let:  $a = .1$ ,  $\Delta V_c = 2.4$  volts (gold cathode, SrO anode),  $d = .01 \times 10^{-3}$  m.  $\epsilon = 8.85 \times 10^{-12}$  coul<sup>2</sup> / n.m<sup>2</sup>,  $A = 10^3$  meters squared,  $K = 2.4 \times 10^{-5}$  m<sup>2</sup> / volt.sec. (at around 940 lb/in<sup>2</sup>),  $R = 10^{-3}$  ohms. Using these variables values gives  $I = 81.55$  amps. Note that I have left the point radius and density of points adjustable to achieve the desired  $a$ .

Figure 11 is a schematic of a circuit for the efficient use of a WFPC. For the circuit to be practical the sum of the ohmic resistance of the switching circuit and the effective impedance of the transformer must be below  $10^{-2}$  ohms as used above. This can be achieved if a very efficient photo conductor such as iron doped indium phosphide is used in the wave forming / switching circuit. A detailed calculation shows that the average power ( $P_{ave}$ ) delivered to the resistor  $R_2$  is:

$$P_{ave} = Y \int (\cos^2 wt dt / u^4); \text{ where } Y = (1 / TR_2) (wN_2L_1R_0 / N_1)^2 (a K \epsilon A)^4 (\Delta V_c)^6$$

$$\text{and } U^4 = (d^3 + a \Delta V_c K \epsilon A R_L + a \Delta V_c K \epsilon A R_0 \sin wt)^4$$

with intergal taken over one period (T).

In spite of how much "fun" this equation is to work with let us do a quick and dirty engineering calculation to get an approximate idea of the power delivery range we can expect from this WFPC. The energy (W) stored in the magnetic field of an inductor is  $W = L I^2 / 2$ . If this inductor is the primary of a transformer and the coupling to the secondary's load is efficient, then  $P_{ave} \sim 2 W / T = L f I^2$ . For the WFPC, the back EMF of the primary ( $L di / dt$ ) should not exceed the contact potential difference  $\Delta V_c$ . So let  $L di / dt = \Delta V_c / 2$ , which implies that  $L = (\Delta V_c / 2) (dt / di)$ . Now  $di / dt \sim 4f I_{max}$ , which implies that  $L = \Delta V_c / 8f I_{max}$ . Note that  $I_{rms} = I_{max} / (2)^{1/2}$  for a sine wave. We have therefore  $P_{ave} = (\Delta V_c / 8f I_{max}) f I_{rms}^2 = (\Delta V_c I_{max} / 16) = 12.2$  watts for our current situation.

Oh well, we can not power the world with the Work Function Power Cell,\* but hopefully it can break through the belief barrier that "free" energy devices can not exist. As I discussed in the November 86 issue of THE UFO REPORT, the belief barrier is one of the most powerful barriers in the universe. Our beliefs form the basis for most of our limitations and if you fight for your limitations, they are yours. In



this technical corner of this edition I have tried to demonstrate that the normally unthinkable is possible. Specifically, what is normally called a free energy device is possible. I now know of four processes for free energy production. Two of these processes are of practical use. One is John Bedini's plasma ringing circuit for regular lead car batteries. This circuit allows a car battery to be used continuously with out recharging in the regular since, since the recharging takes place during the plasma ringing of the battery. The ringing is repeated many times per second. The battery can be run at 70 % or more of its maximum rated power output. His circuit makes the electric car practical for the masses. Now, if the Energy Department and the inner government would just leave him alone and let him manufacture the circuit. The second process is a MHD type process used by star ships to recharge their power storage cells. I alluded to this process in the July 86 issue of THE UFO REPORT.

We, as a species, can not continue to burn fossil fuels for a power source. Our planet is already sick from this. If we continue indefinitely on our present course of thoughtless pollution we will kill our forests, our oceans, our land ( the green house effect ), and us ( world wide famine ).