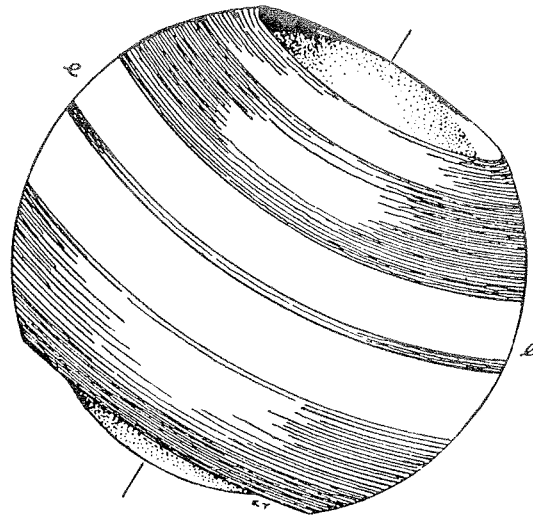


# The Journal of Borderland Research

Vol. XLVIII, No. 2

March-April 1992

NEW VIEWS  
OF



OUR  
SOLAR SYSTEM

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**EDITOR-IN-CHIEF**

Thomas Joseph Brown

**MANAGING EDITOR**

Michael Theroux

**CONTRIBUTORS THIS ISSUE**

Alison Davidson, Tom Brown, Peter A. Lindemann, Paul Rowe,  
Larry Spring, Buryl Payne, Jeane Manning

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# SHADOWS OF THE ANCIENTS

## 1991 BSRF Desert Expedition Report

Alison Davidson & Tom Brown

*Report to the BSRF Membership on a fact-finding research expedition to the Four Corners area of Utah, Colorado, Arizona and New Mexico. We reported on a previous expedition to this area in the Sept-Oct 1989 JBR, and presented some of the awesome rock formations and curious petroglyphs and pictographs of Utah's Arches National Park and Canyonlands.*

The desert is of prime interest in borderland research, as it provides a laboratory for understanding the formation of the earth, which would include all the life thereon, human, animal, plant and mineral (yes, even the rocks are alive in a sense). The orthodox theories of geological formation just don't fit with the way that the land looks. Where is the evidence of the great mountain ranges that supposedly wore down, creating layer upon layer of sedimentary rock, some layers being rich in fossils of ancient animals, which appear to have died *en masse* as the layers were formed?!?!?

When we think of the ancient civilisations that once existed in the world and their ruins which testify to a highly advanced and sophisticated practice of art, astronomy and architecture, we tend to think of such places as Egypt, with its monumental temples and pyramids, the astronomically aligned monoliths of Stonehenge, the wonders

revealed in the cyclopean structures of Machu Piccu and the Mayan pyramids of Yucatan. These places are well known and visited by thousands of tourists seeking a glimpse into the mysteries of prehistory. But we needn't travel so far afield to discover such wonders of the ancient world. In the southwestern territory of the US the evidence remains of civilisations which extended from Utah, Colorado, New Mexico and Arizona, in the area

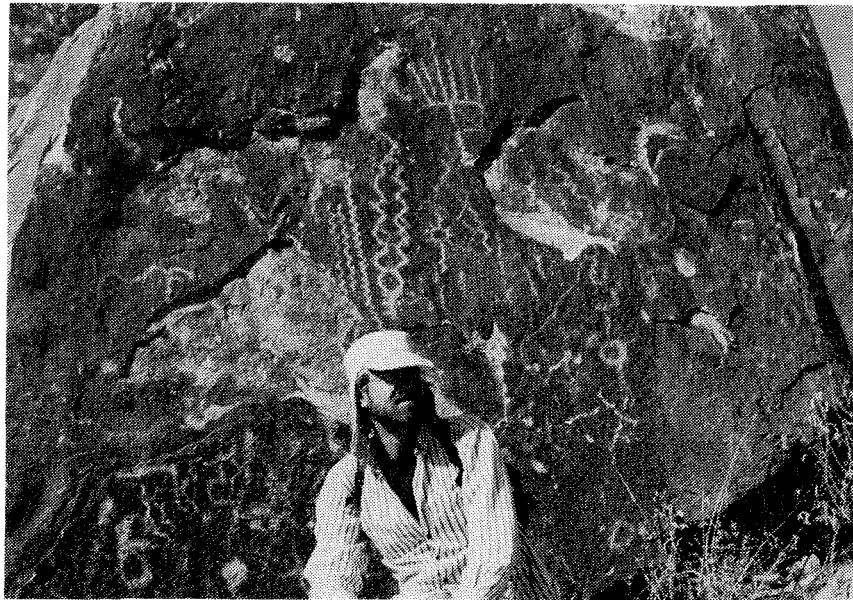
known as the Four Corners. These vanished civilisations -- builders of the astronomically aligned pueblos, with their vast roads and irrigation networks across the desert -- from whence came their great knowledge, to where did they vanish? William Corliss' **Sourcebooks** were used as a preliminary guide to geological, paleontological, and anthropological anomalies, and we expected to find more information on site. In fact the discoveries went far beyond our expectations.

This was actually our second BSRF expedition to the American desert in 1991. In March of '91 we went to Death Valley National Monument to check up on the moving

is found on several other dried lake beds in the area. The rocks slide and leave long trails, some straight, some winding. Interestingly, out of the center of Racetrack Playa juts the tip of a buried black quartz crystalline mountain, which may have been an island at one time in the geological past when the playa was a lake. We speculated that perhaps this large crystalline structure creates some effect that causes the rocks to slide on horizontal ground, but we have no information on whether this type of crystalline mass is found around the other dried lake beds that exhibit the same phenomenon.

Our attempt to videotape the sliding rocks

failed, but we stumbled upon a greater mystery -- the Cottonwood Mountains. As the Racetrack Playa is 25 miles out on 4-wheel drive roads we decided to wilderness camp in the area. We poked around and found a nice dry wash and set up camp. It didn't take long to discover that there were some incredibly interesting rocks around. The ridge above us to the east was comprised of broken pieces of some sort of grey sediment with small black spheres and cylinders imbedded within. The black rock smells petroleum based. The ridge to the west contained metallic-like lenticular geodes, but with other metallic-like pieces laying about. One piece



BSRF Director Tom Brown amidst enigmatic petroglyphs at White Tank Mountains to the west of Phoenix, Arizona

rocks of Racetrack Playa -- large rocks that slide along the horizontal surface of an ancient dried lake bed. No one has ever seen them move, but long tracks can be seen where the rocks have travelled. We chose the Spring to go because supposedly the rocks slide after rains moisten the ground and heavy winds then push them. Our attempts to videotape the tracks we found were unsuccessful due to extreme light conditions. This phenomenon

examined resembled a cross-section of irregular pipe with layers formed of different colors of the substance. The layers had fine striations running through them. It all looked quite organic, but still metallic. What forces of nature caused cylinders and spheres to be imbedded in regular sediment and mysterious organic-looking metal-like fragments to be formed? Unknown from this point of view, but there are giant piles, thousands of feet

high, composed of such bizarre rocks in the northwest corner of Death Valley National Monument. On subsequent expeditions we will gather further details and attempt to discover the mineral composition of these rocks. As this is a national monument, no samples may be taken.

But the desert in the Four Corners area is of a different quality. In this starkly beautiful desert landscape, split with deep canyons, with mesas that rise to breathtaking height from the red desert floor, the walls and cliffs glowing rose-red in the sunset, extraordinary columns and spires carved against the intense blue sky, vestiges of this once vast civilization are found, structures that have survived for centuries preserved by the same harsh desert heat that makes human survival so precarious. Layer upon layer of rock can be seen in the canyons, some bearing life-prints of some ancient life form that somehow got covered up with further layers of rock.

Far from being a mere handful of sites made available to tourists in glossy pamphlets, these stone ruins, or "wrecks" as they're known, are found throughout the Four Corners Area. We had no idea when we set out on our expedition, just how extensive these prehistoric civilizations actually were. We had heard of Mesa Verde, Chaco Canyon and Canyon de Chelly, and we had come across such place names as Hovenweep and Pueblo

Grande from Corliss' amazing research. But they were just the tip of the iceberg...

Thousands of these ruins exist, hundreds which have been excavated by archaeologists, showing a common archaic root which spread out and diversified into such civilizations as the Anasazi, the Hohokam, and Mogollon. To the Navajo who came to the area later, the Anasazi were the "Ancient Ones". We have no idea what they called themselves, they left no written records, only petroglyphs inscribed in the rock.

It is to the Anasazi we look for the advanced architecture and superb stone masonry...as well as the mystery which surrounds their origin and after hundreds of years of living and thriving in this region, their rapid and unexplained disappearance and the abandonment of their pueblos.

The enigmatic pictographs of the Ancients leave one wondering what sort of spirits make these strange lands their home. While some of the formations can be attributed to "natural" geological evolution, some of them look like they were built by a giant, artistic hand, and that is the conclusion we are holding to right now.

We visited the Hopi mesas in 1986. The city of Oraibi has been continually occupied since 1,000 A.D. On the tip of the First Mesa at the village of Walpi, overlooking the desert floor with the San Francisco peaks in the distance, one can find a dinosaur and deer print next to each other in stone at the point where the Kachinas land.

The remnants of an ancient civilization lay scattered about the desert. Most people just think of the pueblos when they think of the natives of that area, but there are many mysterious buildings, square and circular towers of the finest masonry skills laying at seemingly random spots around the canyons. There are ruins of giant masonry cities with large kivas, circular subterranean chambers representing the transition from one world to the next, which may well be dimensional portals for the higher bodies. The cliff dwellings at Mesa Verde are but one small part of this vast network, which included large irrigations systems over hundreds of square miles.

#### FIRST CONTACT

Mule Canyon Ruin was the

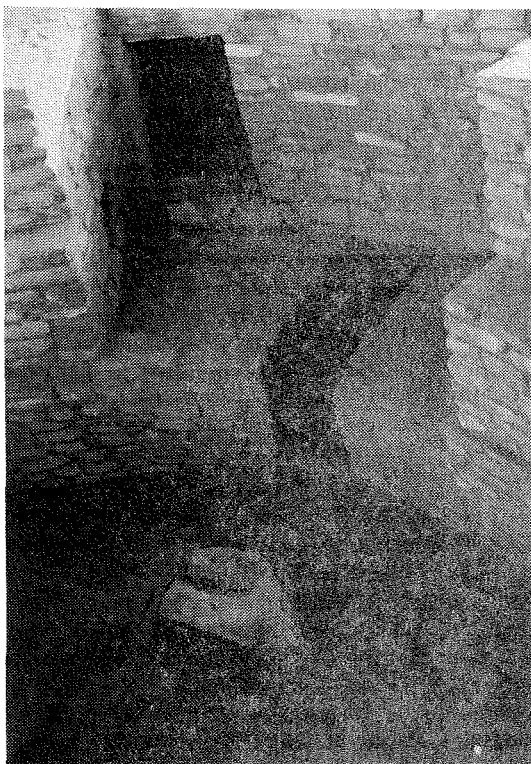
first indication we found of the extremely fine masonry characteristic of the Anasazi. This was a great vantage point just off Highway 95, overlooking a vast expanse of sagebrush and juniper covered terrain. Here an extremely well preserved kiva is linked by tunnels to a round tower close by. The masonry, walls, ledges and tunnel openings were impeccably crafted. A few yards away a cluster of irregular stone rooms were also connected to the kiva via another tunnel.

Through a chance meeting with a woman who knew the area well, we learned of the location of cliff dwellings on BLM (Bureau of Land Management) land and discovered Owl Creek Canyon where smooth moonlike rocks open unexpectedly into deep canyons. Part way down this canyon we came across the first ruins, stone structures almost perfectly preserved nestled beneath overhanging rock, three small round towers with their stone walls covered with a type of mortar. One with an open entrance is large enough for a small person to climb into, and unidentifiable markings are scratched on the inside walls, perhaps used for storage as we found a dry corn husk still lying on the floor. Beside it another larger round stone structure was built with a top layer of wooden beams and thatching, possibly juniper bark, lying on the floor next to it and probably carefully stripped to the side by pottery thieves who make a good living destroying ancient sites. The view from here is incredible, a sweeping vista of the canyon below. The overhanging roof was imprinted with several rather small red handprints marking it as a sacred site, and a large pictograph, some ten feet off the floor, although anthropologists say these ancient people were barely 5' tall.

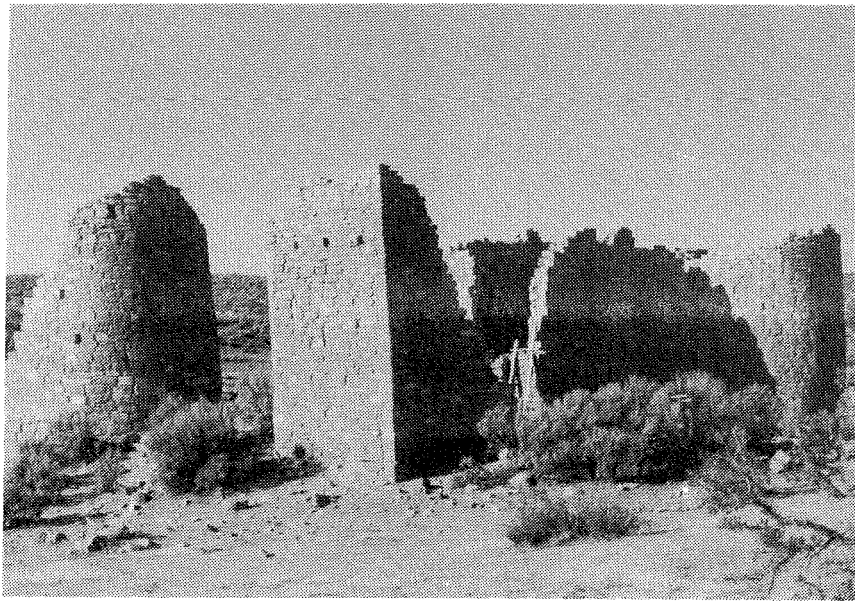
#### HOVENWEEP

"Historical Pueblo Indians have watched the movements of the sun along the horizon, have observed the play of light through windows and portholes at crucial times of the year, and have established sun shrines at key locations."<sup>1</sup>

Called "deserted valley" by the Ute Indians, Hovenweep is one of those truly enigmatic discoveries that leaves you with a feeling of awe and amazement. We learned of this site through the Sourcebook Project<sup>2</sup> and thanks to the time of year, the last clear days of fall, we were alone with only the spirits of the past for company. Best known for its towers built on the edge and inside the canyons, Hovenweep contains some of the clearest examples of Anasazi astronomy. The towers are round, square, oval and D shaped, some standing solitary, others built side by side. Sometimes a round tower faces a square tower



Inside a well preserved kiva at Mule Canyon Ruin



Front view of Hovenweep Castle

across the canyon.

Although official literature describes these structures as dwellings the fact is that *no one knows what their function really was.* Why should these people go to so much trouble to build these structures as homes? They look like fortresses, rivalling mediaeval European castles with their fine masonry. But if they were fortresses there has been no trace of warfare discovered. The doors are very small, some opening onto sheer rock cliff face, accessible only by ladder -- or wings! The architecture is highly advanced and imaginative. One of the most striking is a square tower built on top of a boulder with sheer sides some 20 feet down to the canyon floor. While the boulder comes to a point at the top, the tower is buttressed and built so that its floor is quite flat. Hand and footholds up the boulder are the only way to reach the small doorway.

Inside the towers, some of which are well preserved and some with their walls fallen away, are remains of wooden beams which seem to divide the levels, and portholes built into the walls. These apertures caught our attention because of their clever engineering, and because many are angled and carefully mortared inside. Some have definite celestial alignments testifying to a very close and detailed observation of the sun, and possibly other stellar movements, and there are hundreds of these apertures, some pointing to the desert floor, others to nearby buildings, and still others to every direction of the sky. These holes were obviously very important for the builders of these towers and were no doubt integrated into their function.

Hovenweep Castle, so-called, is built on the rim of the main canyon, with a D-shaped tower and other rooms attached. A rectangular room attached to the south has been shown to be a solar observatory with alignments for the solstices and equinoxes. Two wall portholes and the cliffside door focus the light at sunset at the Winter solstice. Light passing through the south side port casts the last rays of the sun on the lintel of the north door inside.

At the equinox, light passing through the south door at a narrow angle focuses on the lintel of the inside door to the east. At the Summer solstice light is focussed on this same spot through the western port.

Another structure, unimaginatively called "Unit-Type House", only a few hundred yards from Hovenweep Castle and perched on a large boulder, is another observatory. Consisting of a kiva and six rooms, the eastern room has four portholes built into the wall. Three of these ports focus the first direct light on days near the solstices and equinoxes. At Summer solstice light is cast from the north port into the southwestern corner of the room. During Spring and Fall equinoxes the port next to it fo-

cuses to the centre of the wall, and at Winter solstice, light is focussed through another port, falling into the northwest corner.

At the Cajon Group, about 6 miles from Hovenweep Castle, more portholes in a tower admit light from the setting solstice and equinox sun. There is also evidence to show that the shadow from another building moves from shortly after the Fall equinox to cover the western wall of the tower at the Winter solstice sunset. The shadow then reverses its path until the Spring equinox, when both buildings are unshadowed. Then the shadow of the tower moves to slowly fall over the western building until some time near the Summer Solstice. It could be -- as the authors of *Prehistoric Astronomy in the Southwest* suggest -- a giant seasonal sundial deliberately constructed by the Anasazi.

Perhaps the most dramatic celestial alignment at Hovenweep is near "Holly House" where the Anasazi carved two spirals and a sun symbol onto a large boulder. Other boulders form a natural tunnel through which shafts of sunlight focus at the Spring equinox and then again near the Summer solstice, at which time "the rising sun throws two narrow beams of light onto the spirals and the sun symbol".

The more we pondered the mysteries of Hovenweep, the stranger these towers seemed. OK to build one solar observatory with great effort, but why several in the same area? This couldn't have been purely an agricultural calendar complex as the anthropologists assume.

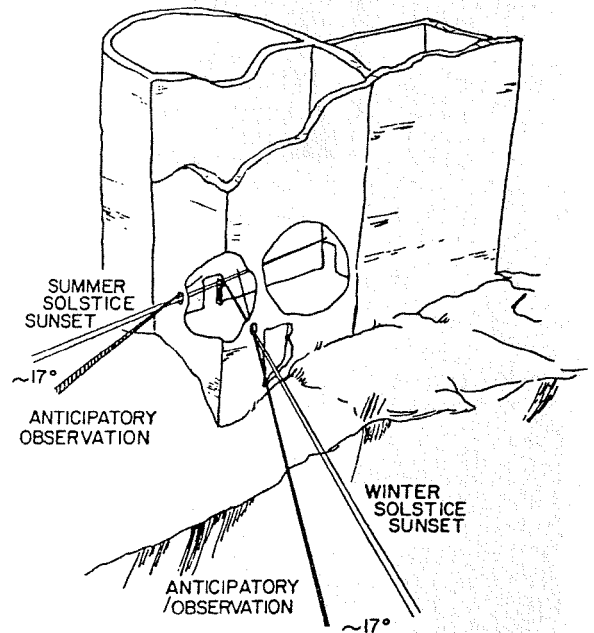


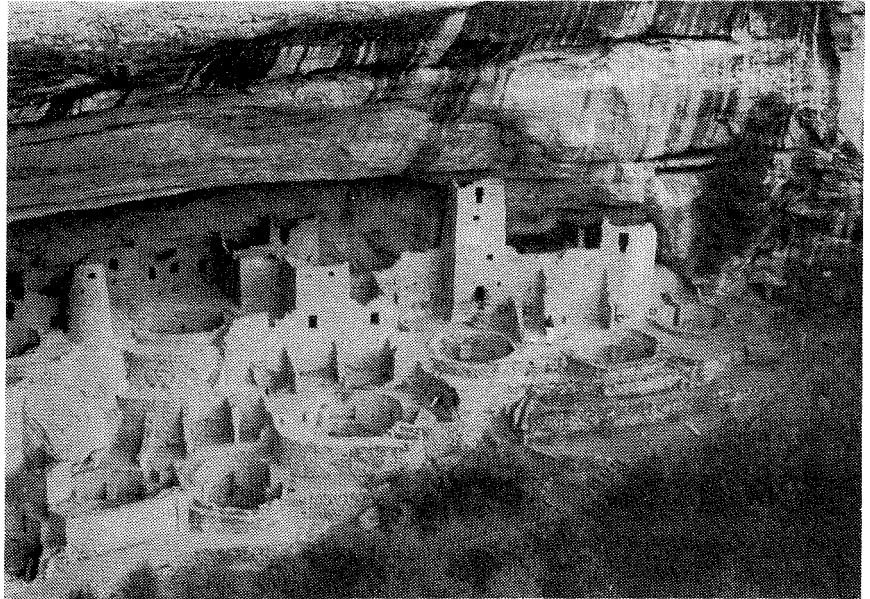
Diagram of Hovenweep Castle showing path of sunlight at the Summer and Winter Solstices

Surely after thousands of years the people could tell by looking at the constellations, and by feeling the sun's changing warmth, and even by watching the desert plants sprouting and the birds nesting, when to plant their corn etc. The feeling grew that these towers were some type of initiatory chambers, and it also appeared -- because of the incredible quality of the masonry -- that these buildings were intentionally smashed when their purpose was fulfilled. With sites of incredible esoteric engineering, one cannot take the chance for the uninitiated to stumble through and interfere with the connections.

**MESA VERDE**

East of Hovenweep, past Sleeping Ute Mountain -- from where a slumbering giant will someday arise -- onto the high tablelands of Mesa Verde in Colorado, the largest and most awesome cliff dwellings of the Anasazi are found. From the top of this huge mesa approaching storm clouds obliterated our view of the distant horizon. Heavy snow was following close behind. But, fortunately, the clouds parted long enough for us to view some of these spectacular ancient pueblos.

Below the canyon rims the cliff dwellings are situated in rock alcoves; according to archeology they date from the 13th century. Within the confines of Mesa Verde National Park, sharing the mesa with Ute Tribal Park,



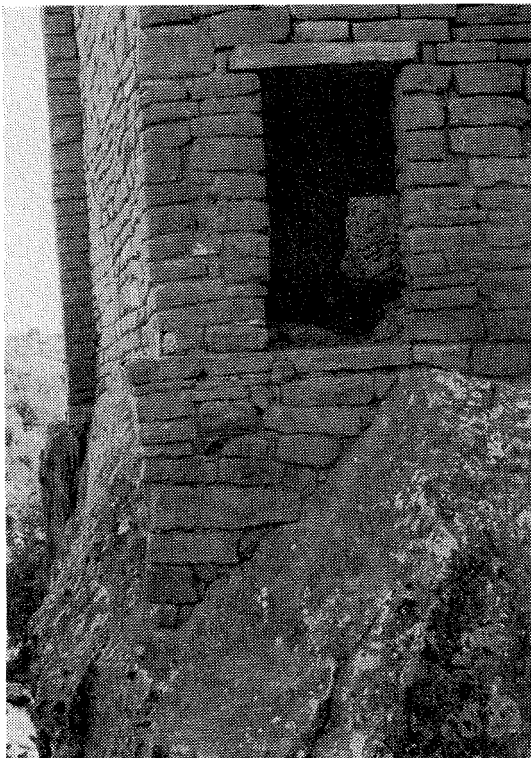
"Cliff Palace", the largest cliff dwelling at Mesa Verde

nearly 600 cliff dwellings have been discovered, over 60 of them along the 15 mile length of Navajo Canyon alone. The largest is Cliff Palace, containing more than 200 hundred rooms and 23 kivas -- a small city of multistoried rooms built of sandstone blocks carefully shaped and mortared together. Square Tower House, another cliff dwelling we viewed from the canyon rim, is named for its multistoried tower built against the large alcove wall, along with adjoining rooms and kivas.

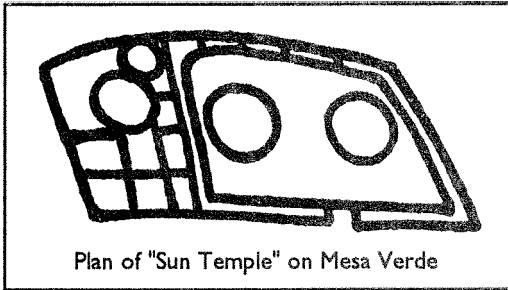
At Spruce Tree House we joined a ranger's tour, the only way you're allowed to see this pueblo up close, and passing by a small spring in the canyon, we followed a trail to the large natural cave protected by an overhanging cliff. Here an open courtyard has a large three-storied wall fronting many rooms deeper in the cave, in all over 100 rooms, and 8 kivas in the front. Entrance to the rooms is gained by small rectangular and curious T-shaped doorways which look like keyholes, a motif found throughout Mesa Verde architecture, and another mystery. A round room near the centre of this pueblo baffles archaeologists as it isn't connected to the kiva by a tunnel as many of the mesa top towers are.

We are told that the pueblo dwellers who had lived close to their agricultural land on the top of the mesa moved down into the canyons near to the natural springs, building these dwellings which are reached mainly by hand and toe holds carved into the sandstone wall. Some are coded, so you would have to know which foot to begin with in order not to come to a sticky end while climbing the sheer rock cliff. It has been suggested that the people moved into these caves for defensive purposes, but, as with Hovenweep, no traces of warfare have been found. These pueblos demonstrate a massive construction project, from pithouses on the mesa top to these whole towns built in caves, and yet they were apparently only inhabited for up to 100 years. Why were they abandoned? There are great secrets here that the archaeologists will never be able to unravel in their present state of mind.

Structures incorporating celestial alignments have been mentioned in connection with Mesa Verde -- wall, window and kiva alignments -- particularly the so-called "Sun Temple," high on the mesa top and close to the edge of deep canyons. This is an extremely interesting labyrinthian stone walled building shaped like a giant D with walls that may have reached 18" high. It incorporates two main circular stone structures inside a courtyard, surrounded by a narrow passage walled off at certain points, strangely reminiscent of prehistoric mazes found in other part of the world. Other rooms and kivas are clustered at one end of the courtyard. This ceremonial structure, said to be aligned with



"Boulder House" at Holly Ruins, Hovenweep



Plan of "Sun Temple" on Mesa Verde

the solstices and equinoxes, is an enigmatic and haunting example of the Anasazi mysteries. Work on it is thought to have been abandoned before it was ever completed, although the atmosphere here is still charged with the energies of ancient ritual.

The entire Four Corners area was abandoned by 1300. Although there was a severe drought, the people had survived more severe droughts in the past. It is a true mystery why the Anasazi disappeared from such a large area with such finality, leaving no one behind. "In some of the ruins at Mesa Verde, the inhabitants seemingly intended to return, leaving cups, bowls, sandals, and other domestic items carefully arranged."<sup>1</sup> But they never came back. According to authors Malville and Putnam, extreme sunspot activity between 1100 and 1387, and peaking at 1200, known as the Medieval Maximum, may have been related to the abandonment of their homes by the Anasazi people: "In the Four Corners Region there is clear and direct evidence of a serious climate change. Pollen analysis and tree ring studies indicate that the region was hit by a devastating combination of drought and cold beginning approximately in A.D. 1200...At that time there was apparently a sudden change to cold and dry weather that continued for 600 years."<sup>1</sup>

But to where did they disappear? No large burial sites have been found, in fact, far fewer bodies have been discovered than the large number of people who once lived in the cliff dwellings. Their descendants are found among the Hopi and New Mexico Pueblo Indians.

Astute researchers have noted that the bubonic plague wiped out large parts of the world population from 1334 to 1351, the same period that the Anasazi and Hohokam cultures declined rapidly.<sup>3</sup> If one considers such ideas as that some diseases may be carried from deep space on comets then such a global scenario is possible -- but still, where are the desert dweller's bones?

### AZTEC RUINS

Aztec is one of the major prehistoric towns of the Southwest. Not built by the Aztecs as the early pioneers thought, but the

Anasazi, this is one of the many sites found within a 100 mile radius of the great Chaco Canyon centre, about 40 miles southeast of Mesa Verde. One of the principle roads from Chaco Canyon led directly to Aztec, situated close to the lifeblood of the Animus River.

The excavated part of the ruins is large showing remarkable engineering and careful architectural planning. The shaped and dressed stones show a high degree of crafting. Apparently in historic times the Pueblo women did most of the rock work, and may also have been responsible for the intricate stone work in prehistoric times, a view which overturns the general preconceptions of which sex did what work, presented in museum displays etc. The anthropologists hold fast to a patriarchal overview of prehistoric cultures, especially regarding spiritual or community leadership, without any evidence to support their theories. There are *no* written records to tell us the details of the Anasazi daily life. Any reconstructed pictures are drawn purely from the artist's own imagination to fit in with the currently acceptable theories or world view. We gained the impression that the desert dwellers were guild societies -- their pottery, weaving, stonework, agriculture and hunting skills bespeak an ordered transmission of knowledge within the specific clans.

Some of the pueblo walls at Aztec reached nearly 30" high. Over 500 rooms and more than two dozen kivas surround a plaza which has the only reconstructed Great Kiva within. In ancient times four massive pillars up the ceiling beams which supported a roof whose original weight has been estimated at 95 tons!

And these people are considered primitive!

The Chaco people who apparently built this town abandoned it around 1200. Later Mesa Verde people inhabited it briefly before deserting it forever in the latter 1200s.

Driven south by a heavy snowstorm we were unable to visit the great Anasazi centre of Chaco Canyon. Even as we wandered around the deserted ruins of Aztec flurries of snow swept autumn leaves into piles against the stone walls. The kivas, cold and roofless seem to echo the voices of people long gone. They seem to wait, sacred and protected for the Ancient Ones to return. They urge us to consider the sacred life, a way of life in which the spirit permeated all, where art and beauty found an extraordinarily high level of expression; where so many could live together in harmony with nature at such close quarters. They were farmers and hunters, but primitive? Our cities in comparison are sprawling and chaotic, built without any guiding spiritual values or concern for nature. Who, we may ask, are the real primitives ...

### CHACO CANYON

Chaco Canyon, a target site for our next expedition, is one of the great puzzles of the American desert. Hundreds of miles of roads branch out from the canyon, over 15 feet wide over perfectly straight distances of up to 25 miles at a stretch, and lined with mounded earth curbs -- an astounding engineering feat. At one time in the American west all roads led to Chaco Canyon, then the center of everything, now the middle of nowhere.

Of the nine or ten great pueblos (our sources differ) in the canyon, Pueblo Bonito has been the most closely examined. The site



Stone walls at Aztec Ruin

covers 3 acres, was originally five stories tall with 650 rooms! Each great house used tens of millions of cut sandstone slabs. The 215,000+ spruce and fir trees used in the great houses for support beams came from high elevations at minimum distances of at least 40 miles away over extremely rugged desert terrain. The exact logging site has not been determined, and the beams -- on average a foot in diameter, 15 feet in length and weighing about 600 lbs each -- bear no transportation scars! The canyon was too poor agriculturally to support a large permanent community, though many thousands of skilled workers were needed to construct such buildings. There are many large kivas, obviously the central foci of the inhabitants. A place of great mystery and enchantment, Chaco Canyon is truly one of the great wonders of the world.<sup>4</sup>

### THE HOHOKAM - PUEBLO GRANDE

Known as the Canal Builders, the Hohokam were the most skillful agriculturalists known in the prehistoric southwest. "These were the original engineers, the true pioneers who built, used and abandoned a canal system when London and Paris were a cluster of wild huts" - Dr Omar A. Turney.

The modern city of Phoenix in southern Arizona now rises like the mythical bird above the ruins of the Hohokam civilisation, a Pima Indian expression meaning "old ones" or "all used up". The Hohokam constructed a tremendous network of canals from the Salt

and Gila rivers to irrigate six hundred square miles of desert. Hundred of miles of irrigation canals fed their fields, and traces of them can still be seen today in and around Phoenix city. Some are still in use.

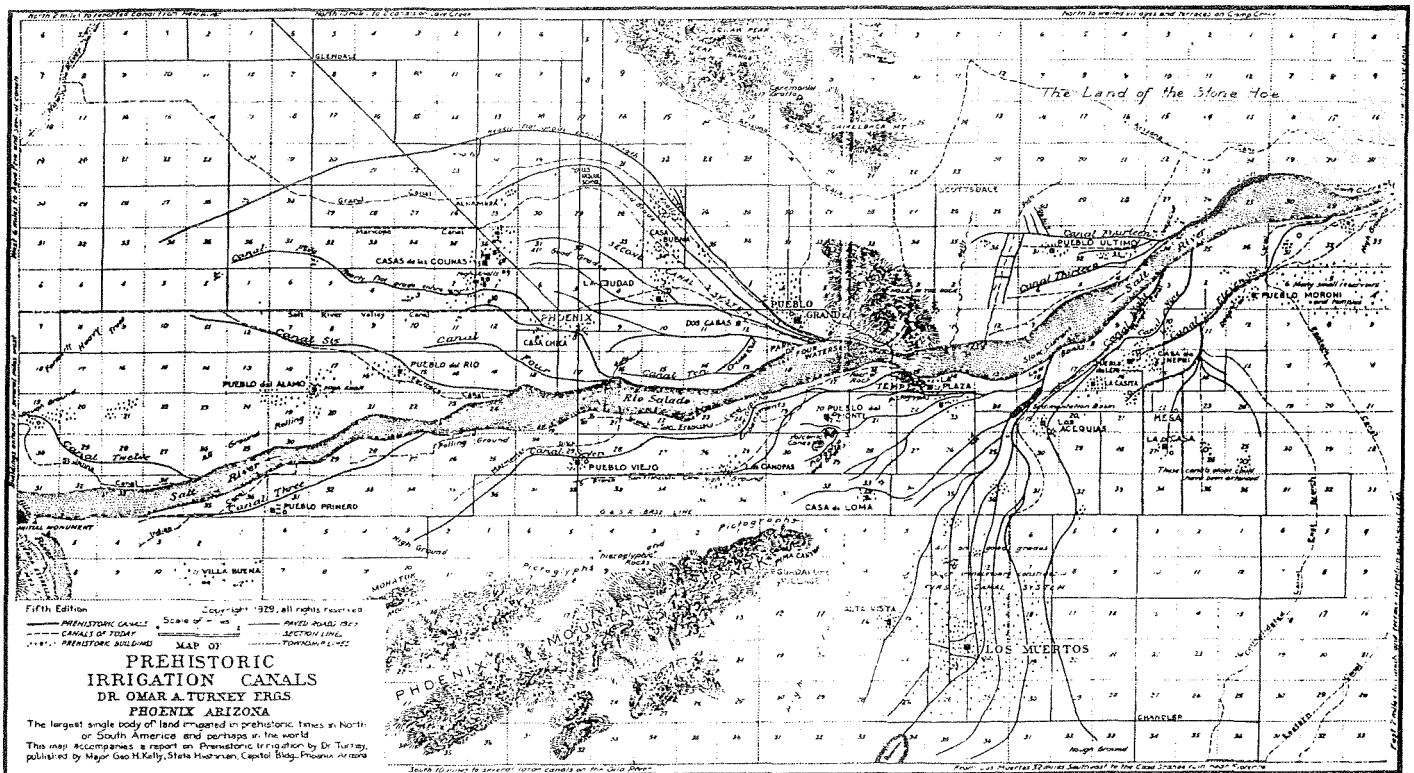
The ruins of Pueblo Grande, the largest Hohokam town in the area, are situated near the airport and within the city itself. The worn and crumbling walls here are nowhere as well preserved as the more northerly Anasazi dwellings we had seen, but they are equally fascinating. A raised platform mound at the centre of the compound contained numerous rooms, including the remains of a solar observatory, with doorways aligned to the solstices. Other structures include the traces of several ball courts, perhaps showing a direct connection to the ceremonial ball courts of the great Mayan centres far south of the Mexican border. The exposed walls of this pueblo which may once have been home for some 1500 people are deteriorating further due to the ruins' close proximity to airport and highway traffic. Pueblo Grande was the main site controlling the vast Hohokam irrigation system. Astronomically aligned ruins, placed every three miles along the canal network, allowed for efficient manipulation of the precious waters.

Only a few miles to the west of Phoenix the White Tank Mountains hold many secrets of the ancient Hohokam. Camped among the giant saguaro cactus, their spiky arms raised to the burning sun by day and the cold full moon at night, this is a truly magical place.

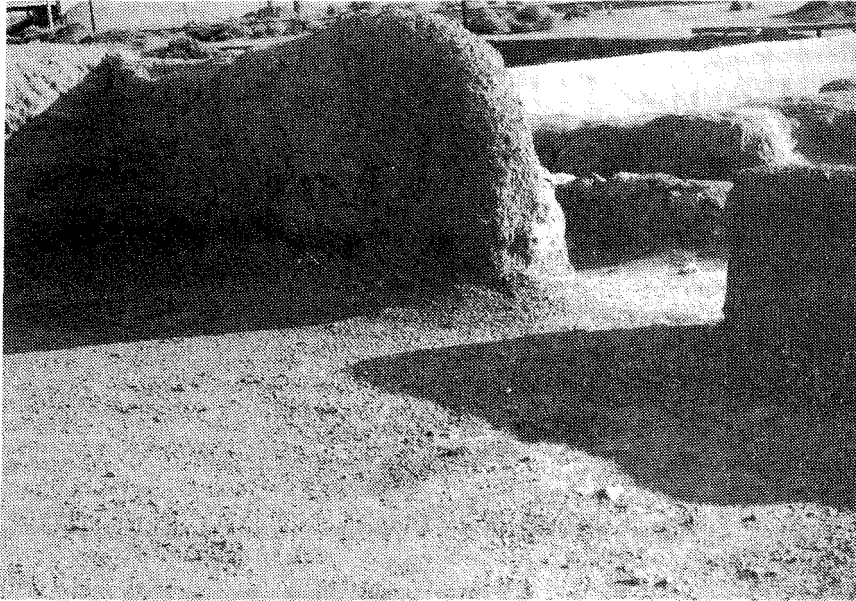
Another chance meeting with a local while hiking up to the White Tank Falls led us to a large expanse of rock above the falls covered in petroglyphs. Inscribed into the dark brown desert lacquer, the petroglyphs are so numerous in this area we could have spent weeks exploring and meditating upon their enigmatic patterns. In the heart of the canyons the reddish brown rock is transformed into white walls and huge white boulders, an unexpectedly beautiful sanctuary for the old gods. The forces of nature, given form by ancient artists, live powerfully here. Only the sudden thundering scream of air force jets, using the awesome desert as a site for practicing large scale destruction, disturbs the perfect desert silence. How far our unbalanced society is from the ancients who once dwelt here.

### THE CANOPY THEORY

Our last stop on the trip was a good friend and BSRF member ranging back to the 1950s, Rich Horton, who has been a source of great ideas and important research material over the years. He lent us **Those Astounding Ice Ages** by Dolph Earl Hooker which explores the canopy theory of planetary development. We hadn't been previously aware of the implications of this theory. **Stonehenge Viewpoint** was always pushing the canopy theory, but we didn't understand exactly what the full concept or ramifications were. Hooker's book lays it out very clearly -- there was once a canopy of mineral and water around the earth







Ruins of Solar Observatory at Pueblo Grande showing doorway aligned to path of solstice sun

spheres, as well as the distribution in space of the sun and planets. We can wonder whether the sun is an advanced planet, a young one, or perhaps something completely inverse along the lines of projective geometry! Whatever the full story, the canopy theory helps explain the incredible and mysterious desert canyons and is an important tool for the refined imagination.

Somehow the people, the rocks, the plants, are all tied in with the canopy theory. Knowledge must have fallen from somewhere also. Different races, mystery traditions, etc., all evolved out of different organs/sections of the canopy consciousness. A vast field of new ideas is implied by these concepts.

Let's speculate whether the atmospheric critters Trevor Constable discovered, *Amoeba constablea*, are perhaps what is left of the etheric life of the canopy; they may be holders of vast knowledge which cannot be directly transmitted from their form to ours. We would probably not know they were even there if he hadn't discovered them in his reach beyond the borders of the senses. And it is the desert which gives us many opportunities to read the past, scry the future, and make our presence a positive evolutionary one.

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2. Ancient Man: A Handbook of Puzzling Artifacts, William R. Corliss. The Sourcebook Project. Glen Arm MD 21057
3. Science Frontiers no. 45, May-Jun 1986.
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rotating at vast speed, all layers sharing a common center and axis. As the original warmth body began to cool, igneous rock formed the core (probably a rock canopy around some inner life-ether source) which had this canopy above at a distance. The superior planets, mistakenly called the gas giants, are similar cores with their canopies and rings still intact for the most part. As time went on various portions of the canopy fell to earth causing mass extinction (no, it wasn't a meteor that got the dinosaurs, but a regulated progression of the planetary organism), and the water falling later caused the geologically short-lived ice ages, which melted and raised the seas 12,000 feet from their earliest levels in stages. Periodically minerals would precipitate out and fall to the inner surface creating the stratification found in sedimentary rock (which for the most part is on top of the rock that it supposedly wore down from!).

While profound in its insights, the canopy theory is lacking in any awareness of any life process causing the formation of the planets. Rudolf Steiner claimed that the early planet earth was a single large being -- like a head in space. For the sake of trying to build a picture in the imagination let's place this at the stage of the canopy. All the minerals, metals, sands, stones, etc. are precipitated from the life process of the canopy-being. The individualized forms of life began to form on the core, developing as the canopy deteriorated. The final fall of water -- Noah's flood -- was the last of the canopy and a major stage on the way for the planetary consciousness to incarnate

into conscious form. The Fall -- what else is it? This would be the stage of transition indicated in Julian Jaynes' *Origin of Consciousness in the Breakdown of the Bicameral Mind*, and would also fit in with many other theories of the evolution of consciousness. This could very well mean that Jupiter, Saturn, etc., still have dinosaurs, or other such creatures! But it also indicates that the superior planets are still living, singular intelligences, unlike earth which now has parasitic lifeforms living on its decaying body. It also indicates that Walter Russell was perhaps mistaken and Guenther Wachsmuth was correct on the implication of the saturnian type of rings now known on all the superior planets. Russell said they showed decay -- as later stages of planetary life. Wachsmuth showed them as layerings of etheric life. Earth may have once had rings, along with the canopy.

This all ties in with advanced Qabalistic insights. The Qabalah describes a layering of concentric



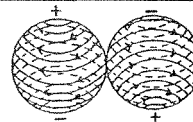
The Four Corners Area

# MENDOCINO BRUSHLESS SOLAR MOTOR

by Larry Spring

225 Redwood Ave., Ft. Bragg CA 95437

LARRY SPRING'S ELECTROMAGNETIC SPHERES



February 9, 1991 Doug Doe of Mendocino, California loaned me a little solar motor, which I placed in the window of my electromagnetic experimentation shop at 225 Redwood Ave. in the town of Fort Bragg, California, on the Mendocino coast.

Doug Doe had constructed this superbly simple solar motor from his own thoughts and imagination, coupled with input from Bob Blick, a local electronic wizard and teacher. Bob had built a small pilot solar motor some years ago using a solar cell mounted on a coil wound around a spool from the center of a roll of scotch tape.

Doug Doe no doubt had some ideas he wished to work out with solar energy, as he had purchased some solar cells during the solar Energy Expo & Rally held in Willits, California, August 11 & 12, 1990. Doug Doe first showed me his beautifully designed Mendocino Brushless Solar Motor around the end of 1990.

The unique part of this self starting motor is that the solar cells are mounted right on the armature of the motor. The cell, turned to face the sun as the armature rotates, energizes the coil between the two ceramic permanent magnets. The permanent magnet field rejects the circular magnetic field around the coil wires, thus causing the armature to rotate to expose the next solar cell, and the process is repeated. The armature rotation is timed by the sun and the armature's own rotation. The armature, composed of a balsa wood block, solar cells, coils and piano wire shaft, placed in the magnetic field between two ceramic magnets, completes the working part of the motor. The rest is a structure that holds the magnets and provides a bearing for the armature shaft.

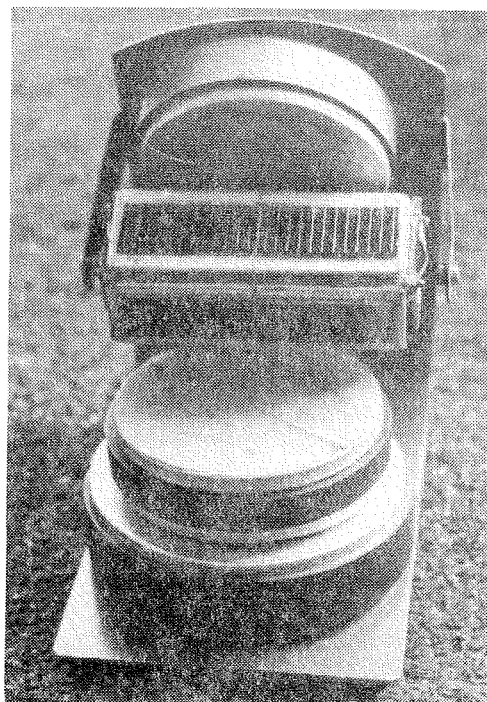
About April 15, 1991 I constructed my first Mendocino Brushless Solar Motor, and by May 24, 1991 I had constructed number 5. I changed the design on each to see which one I liked best.

Mounting solar cells right on the armature may have far reaching use for home and industry, but as an experimenter I would like to see it used as a teaching tool for kids. It embodies the principles of sun energy, electrical current, production of circular magnetic fields around a conductor and their interaction with permanent magnet fields.

The small ceramic magnets are safe, rea-

sonably priced and readily available. Large ceramic magnets pull together with such force that they are dangerous because they can make blood blisters on your fingers when caught between their flat surfaces.

Materials used for the armature: A block of balsa wood, one inch square by 1-1/2 inches long, a 3 inch piano wire shaft 1/16 inch in diameter, 50 to 60 feet of 30 AWG Kynar Wrapping wire (any fine insulated or coated single strand copper wire about 30 gauge), (4) 10 x 20 MM space age solar super cells purchased from Edmond Scientific Co., 101.



ORIGINAL DOUG DOE MOTOR

E. Gloucester Pike, Barrington, NJ 08007-1380, Phone (609) 573-6260. There are other sources of high quality solar cells. They are very thin and quite fragile. The physical size of the solar cell will govern the size of the armature which dictates the size of the frame, and to some extent the size of the magnets.

I used (6) 3/4 x 1 inch x 3/16 thick ceramic magnets, with a 3/16 inch hole, magnetized so they stack together. Other size ring or rectangular ceramic magnets can be used if sufficient space between the frame and the armature is provided. (4) 1/4 x 1-1/8 inch diameter ring magnets will work just as well.

Light weight galvanized sheet iron was

used for the frame. A template for the motor frame is included with this article. Cut out and try a mock up in cardboard before you make it in metal.

The piano wire shaft is sharpened and pushed through the center of the balsa wood block lengthways with the grain of the wood. This should be done very accurately, so the armature will not wobble when turning.

A small piece of tubing or insulating material from electrical wire is slipped over the protruding end of the shaft to keep the winding wire from pressing on the shaft, as you need to pull the shaft out when assembling the armature in the frame.

Hand wind 25 to 30 feet of fine insulated or enameled copper wire around the long dimension of the armature block. About 1/2 of the wire is wound on each side of the shaft. I wound the wire in layers across the center portion of the armature. I rounded the center portion square edge to make a more gradual bend for the wire. I kept the wire windings as flat and uniform as possible, so I could glue the solar cells right on the wire surface. With larger solar cells a thin sheet of balsa wood can be glued over the wire to support the fragile solar cells. For glue, I use model airplane cement.

I use a brad stuck into the corner of the balsa wood to temporarily hold the beginning and ending of the wire coil, and I left 6 inches of wire sticking out which I numbered.

The second coil was wound on the other side around the block from end to end like the first coil.

I apply a sufficient amount of model airplane cement to stabilize the wires in position, and, when it is dry, I remove the brads holding the ends of the wire, and also the covering over the piano wire shaft ends, which thereby leaves a slightly larger hole for the shaft passing between the wires on the end of the armature.

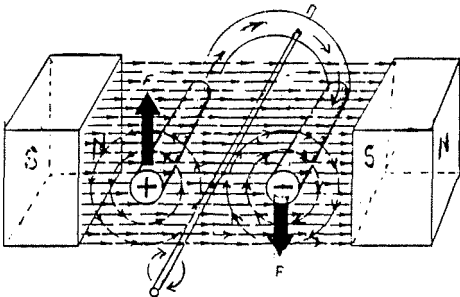
The solar cells are soldered onto the ends of the wires as shown. Use 60/40 rosin core solder and a 30 watt soldering iron. Some cells are hard to solder.

The cell facing the sun energizes the coil between the magnets, and the second cell in the same series is placed on the back side of the armature away from the sun. The second coil is connected to the other two solar cells in

he same way.

Anywhere a metallic connection can be made on top of the cell is one pole, and anywhere on the bottom is another pole, like poles of a battery. The top of the cell must face the sun. The bottom looks like a sheet of metal.

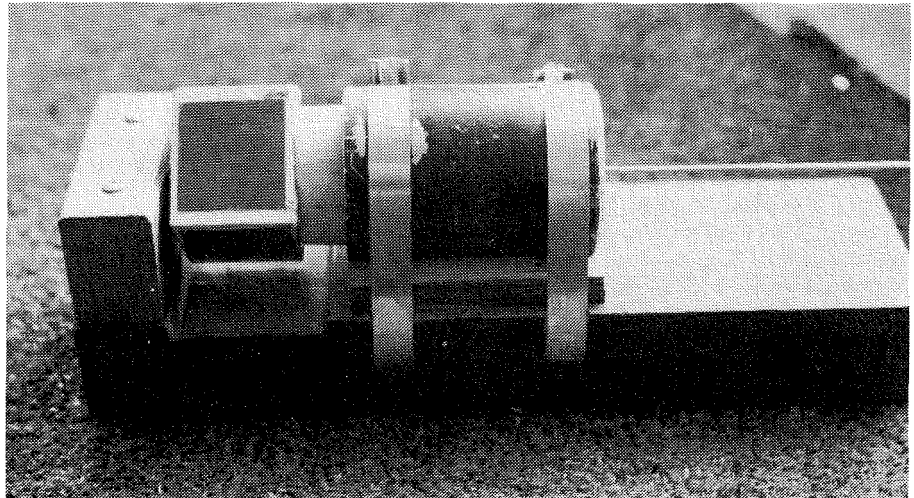
I suggest attaching the cells lightly to the armature with tiny strips of scotch tape at first, as once they are cemented down tight they would probably break if removed for any reason.



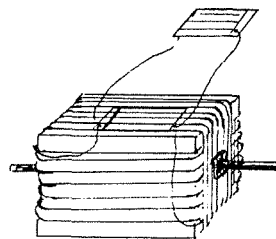
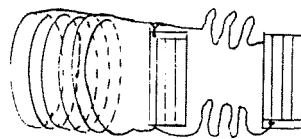
**Force on a wire carrying a current**

If the sun is not out, this motor will run when held near a regular light bulb, a spot light or an automobile head light. Try each cell to make sure it is working properly, and all turning in the same direction. Glue the cells down tight with cement along the edges to keep them from flying off when the armature is spinning fast.

Washers fitting over the end of the shaft can be made by punching a hole through a small square of copper sheeting with the ice pick. It will look like an inverted funnel. The small end should be pointed outward to give a tiny bearing surface contact against the outside wall. They can be glued right on the ends of the armature.



This brushless solar motor was designed by LARRY SPRING in an attempt to drive this motor from the back side with a mirror. This plan did not work, because when the solar cell came around to face the sun, it wanted to drive the armature back the wrong way



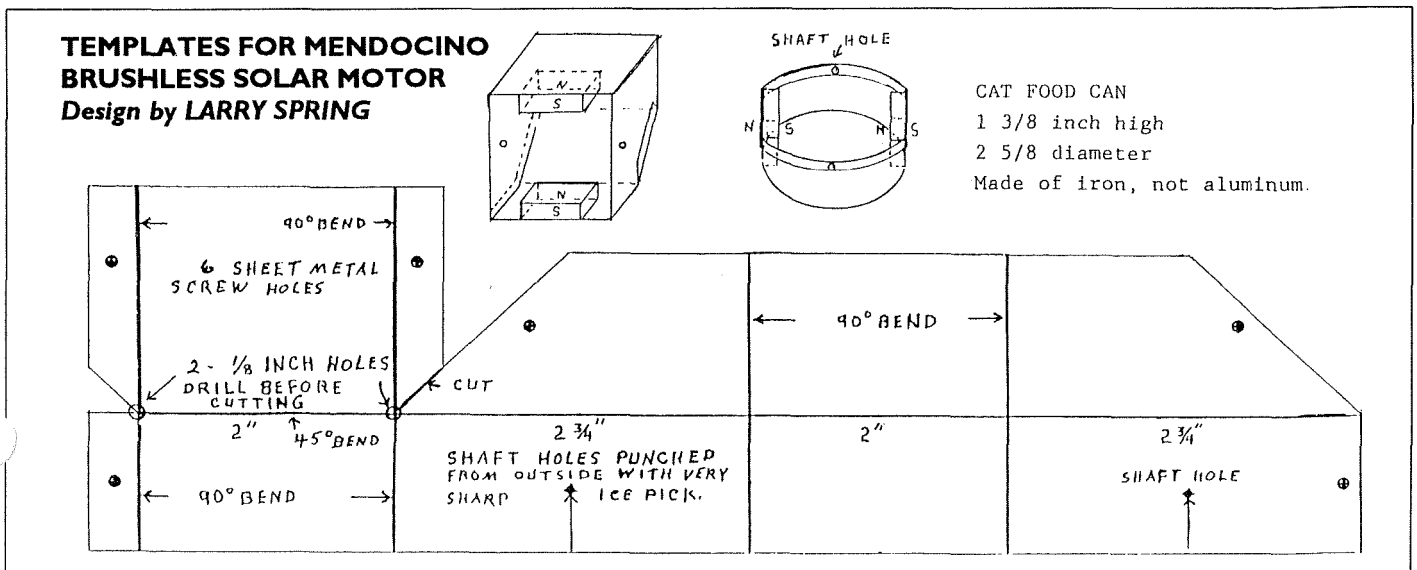
**Solar cell assembly**

A small hole punched through the sheet metal wall from the outside gives more bearing surface than a drilled hole, and by twisting the sharp ice pick a hole can be made that just fits the piano wire shaft.

Iron in the armature gives all kinds of trouble. I do not recommend iron except for the piano wire shaft. The galvanized frame holds the magnets in place, so it is good. Stainless steel is non magnetic, so will not hold the magnets.

The armature is balanced on two parallel brass rods. Small pieces of copper wire can be glued on the side that turns up until a perfect balance is achieved.

I have a great deal of pleasure building the solar motors and I hope you will derive pleasure building your own variations of the MENDOCINO BRUSHLESS SOLAR MOTOR.



# FiziKorner<sup>+</sup>

with Peter Lindemann

Well, after a two year sabbatical, I'm back. Unfortunately, I can't say "by popular demand". Yes, some of you miss me, I know, but there has not been a ubiquitous pleading from the masses for my return. I quit writing this column because I just didn't have the time. Well, I still don't. But as an excuse, it just doesn't work anymore. This time, however, I may indulge, not only in the "facts" as I see them, but also in some commentary. My peculiar biases have evolved considerably since 1989, and I feel they are no longer fully confinable. With that warning, I will proceed.

For those of you who are new to the Journal, this column is for people who aren't afraid to get their hands dirty. Its for those people who don't always believe what they are told, because they already know better. And we know better because we see for ourselves. We take other people's pretty little beliefs and take them apart on the laboratory work bench. Yes, we are science's "bad boys on the block". There are no mean science teachers here to tell us "it can't be done". Even if there were, we'd do it anyway! So, let's get started, let's take something apart.

Today's topic is LIGHT. For over 15 years I have been deeply interested in light and have done a fair amount of research on the subject. It is from this platform that I now offer my insights. I was first introduced to the idea that light could be used to heal the body back in the mid-70's. My initial response to this preposterous concept was to rightly dismiss it without a second thought. After all, colors are pretty, but that's about it. Little did I know at the time, but I had fallen in with a group of people who had studied a simplified Dinshah color healing system. Within a year of this self-righteous dismissal, I had the misfortune of actually lying down and shining some colored light on my body. The effect was dramatic! It almost immediately cured me of my sophomoric world view. Unfortunately, the cure was not permanent and I have had many relapses into a state of imagining that I know more than I actually do. In spite of this, God still loves me and I have become an avid experimentalist.

Most of the popular myths about light can be attributed to the work of John Ott. He has published a number of books on his research

and is also the developer of the VITA-LIGHT and the new OTT Light systems. He has been one of the primary popularizers of the "full spectrum" myths that are almost common knowledge now. Ott's experimental data looks impressive to the untrained eye. What he has repeatedly tried to prove is that plants grown under artificial light grow better when the spectrum of light emitted by the artificial source (light bulb) is similar to that of sunlight. Now, for anyone schooled in our brand of science, the idea, that plants that have evolved for millions of years in an environment that includes sunlight might have adapted to it and now may even prefer it to "man-made" light, is no great scientific leap of faith. Most of us would say "so what else is new?" But Mr. Ott is a mechanist. He has not incorporated the works of Steiner, Reich, Dinshah or Sheldrake and he knows nothing of the nature of light but its colors. Mr. Ott's idea of "full spectrum" light is that it is supposed to be like sunlight. I agree with him on this point. But let's see how far this goes.

The new Ott Light systems are marketed by a company in Santa Barbara, California, where I used to live. On a number of occasions I visited the office and was shown all of the inside scoop on this "amazing technical breakthrough." A one foot by two foot lighting fixture costs about \$300. It consists of two, 2 foot long fluorescent tubes and a smaller tube in the center. The larger tubes provide the visible spectrum and the smaller tube provides UV (ultra-violet). The ends of the fluorescent tubes are shielded with lead foil to block the soft x-ray emissions that Mr. Ott found was killing his plants. And, the front panel has a grounded screen across it to block EM (electro-magnetic) emissions. All in all, it is the best and the safest fluorescent lighting fixture I have seen. But I still don't want one.

Many amazing and wonderful claims are made for this lighting system and I don't doubt any of them. After all, Mr. Ott's experimental research is impeccable. Is this system better than all previous fluorescent light systems? To my knowledge, yes, it is much better. A number of important improvements, listed above, are incorporated. Is this light fixture emitting light that even remotely resembles sunlight? The answer is NO.

So, what is the problem? To find out, I spent some time with my good friend, Roger Modjeski. Roger is an electrical engineer and an audio circuit designer. We borrowed an Ott Light from the company and went to work at his Santa Barbara facility, RAM Labs. We also had two other fluorescent light systems to test. One was a standard unit and the other was a "high efficiency" unit with a solid-state ballast and power supply. Roger also rigged up a bench model of a power supply to drive the fluorescent tubes with direct current. We had a wide variety of probes to look at current, voltage, wave forms, light emission and EM radiation, all on an oscilloscope. Whatever was happening, we were going to find out.

So, here are some of the highlights of what we found. All of the systems that ran on power from the wall (117 VAC) suffered from the same problems. The most significant of which is the light intensity variation. This test is easy to duplicate. We simply connected a silicon "solar cell" to the oscilloscope and viewed the wave form. In sunlight, this test set-up produced a flat line on the screen indicating two things: the voltage produced and the continuous nature of the light. When exposed to the light from any of the fluorescent fixtures, it produced a wavy line that varied from zero to maximum, 120 times per second (40,000 times per second for the solid state unit). We were seeing a 100% light intensity variation. It means that a room lit only by fluorescent lights is actually completely dark 120 times per second! Needless to say, the sun is not going on and off 120 times per second, but a fluorescent light is. The eye may not "see" this, but it all registers in the nervous system. This effect is responsible for one of the major irritations associated with fluorescent lighting, and the Ott Light system was no different than an ordinary one, in this respect.

So, why is this happening? Essentially, the problem begins with the AC power. Alternating current, by its very nature, is constantly changing. The voltage rises to +117 volts, then drops to zero, then drops further to -117 volts and then rises again to zero. This is called one cycle. Since the power coming out of the wall is 60 cycles per second, and the voltage moves through two points each cycle when the voltage is zero, the voltage is zero 120 times per second. When the voltage is zero, the fluorescent light goes out.

So why not power the fluorescent bulbs with DC? Here's what we found out when we did. A typical 40 watt fluorescent tube (4 foot long tube) runs on about 100 volts. But it will not start on 100 volts. The bulb will only start glowing after it is shocked with a quick burst of about 350 volts, and this only when the little

heater coils at each end are warmed with some current at 3 volts. Once glowing, the plasma between the ends of the tube behaves like a negative resistance. The 40 watt bulb ran on about .4 amps at 100 volts (.4a x 100v = 40w). When we gave the bulb .5 amps it got brighter, but only drew 95 volts! This unusual situation requires the tube to be powered by a current-limiting power supply to prevent the bulb from blowing up due to current run-away. The other problem we saw when running the tube on DC was that the end of the tube being supplied by the negative was brighter than the end connected to the positive. With all of these problems, don't hold your breath waiting for a DC powered fluorescent fixture to be for sale anytime soon.

So we are back to AC. Believe it or not, the AC power supplies (the ballast) effectively deliver to the tube all of these requirements. At the beginning of each cycle, it jolts the tube with 350 volts and then holds the voltage around 100 volts for a while before turning the tube off at the half-cycle. Interestingly, the inductance of the ballast and the negative resistance of the fluorescent tube plasma work against each other to create a parasitic oscillation in the supply voltage at about 2500 cycles per second. This parasitic oscillation can also be seen in the supply current and in the magnetic field of the ballast transformer. It is the primary source of the hum that fluorescent light fixtures make. It is also the reason for the high levels of ELF

magnetic pollution associated with fluorescent lights. All of the systems we tested behaved this way, even the Ott Light. Roger and I concluded that since the Ott Light did not address the light intensity variation problem or the magnetic pollution problem, it was not worth the extra money. We gave the test unit back.

So, you may ask, how do you get real "artificial" sunlight? How do you get "full spectrum" light you can live with? We next went back and looked at some ordinary incandescent bulbs. Powered on AC, a regular light bulb also exhibits a light intensity variation. This fluctuation is between 100% intensity and 60% intensity, a 40% variation, at the same rate as the fluorescent fixtures of 120 times per second. Again, this variation is in step with the AC power.

Only an incandescent bulb powered by DC gave light at a continuously even rate. Only an incandescent bulb powered by DC gave light free of x-rays, high frequency EM and ELF magnetic pollution. So, what about its spectral balance? Is it "full spectrum"? According to all of the information I have, an incandescent light bulb produces what is referred to as "continuous spectrum". This means that it produces all of the colors in the visible spectrum. It also produces a fair amount of infrared (heat). For years I have used a 100 watt incandescent spot light as the light source for my Dinshah color healing system and I assure you, it can and does

produce all of the colors, right down to the deep violets. But what about the UV Mr. Ott says is so important? Its simple. The hotter the bulb, the more UV it produces.

But what about the spectral balance? Ordinary fluorescent lights emit light that is predominantly blue, while incandescent bulbs emit light that is heavy on the red end of the spectrum. The "full spectrum" Vita-Light fluorescent tubes you can buy start out OK, but the materials inside the tube responsible for emitting the UV end of the spectrum burn out in about 100 hours, leaving you with an ordinary light at extra cost (this is why Mr. Ott abandoned this system to develop his new one). GE and some other European light bulb manufacturers make a "full spectrum" incandescent bulb with enhanced blue and UV output. All of this research points me in this direction. If you run these "full spectrum" incandescent bulbs on pure DC, you will be very close to the "artificial sunlight" that this whole quest is about.

If any of you are interested, we have plans for a 120 VAC to 120 VDC converter that can deliver about 200 watts. Send us a self-addressed, stamped envelope and \$1.00, and we'll send you the plans. We aren't publishing them here because 120 VDC is potentially lethal and we only want serious experimenters working with it.

Next time, we look at "free energy" systems based on heat pumps. 'Til then, this is your favorite myth-grinder, signing off.

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## NOTICE: INVESTORS WANTED

BSRF is interested in re-establishing its "free energy" research laboratory in the near future. After reviewing the technology in this field for a number of years and realizing that NO ONE has or will be allowed to bring a true self-running engine to the commercial market anytime soon, we propose a commercial venture using the following technology.

A very interesting process has come to our attention that allows for the production of HEAT using permanent magnets. Since most of the energy consumption in our current economic structure is based on heat production, we feel that this process could sell very well if embodied in the following products.

The first product we propose the development of is an electric portable space heater that could produce three times more heat per watt of electricity than the currently available space heater. The unit would be similar in size to other portable heaters but could produce 5000 BTU's of heat using only about 500 watts instead of the usual 1500 watts. This would

make electric heat about as cheap as heat produced by burning gas or wood. The commercial value of such a product should be obvious. Once the basic magnetic heater module is developed, it could be put into larger furnaces and water heaters as well. Each of the envisioned products offers a substantial improvement over its currently available counterpart, but does not inherently defy the power structure. Because of this, we believe that these products will be accepted in the general market and be able to capture a sizable market share.

We are looking for an investor who, for a sizable percentage of the deal, is willing to fund the project from first prototypes to market. A number of patents are possible, so proprietary ownership is also part of the package. Initially, we believe that a 6 month prototyping period could be funded for about \$50,000. A complete investment prospectus is being prepared and will be available upon request.

A second project that could also be quite lucrative is the development of a bicycle light

generator that provides a bright headlight, but does not make the bicycle harder to peddle. This style of generator is not scaleable to very large sizes and therefore cannot be developed into a useful, home power plant. It can, however, solve a serious problem in the bicycle industry. There is every reason to believe that such a generator could capture a sizable percentage of the world market for bicycle light generators. Patents would also be available here.

Both of these projects are based on technological effects that are known to exist and have been tested by us. What we need to do is prototype these effects into useful embodiments and test their efficiencies. These devices could be very competitive with what already exists on the market.

Anyone interested in forming a joint-venture, please contact: Peter A. Lindemann, BSRF Research Director, at (503) 895-3724. Serious inquiries only. No technical data will be transferred without signing "non-disclosure" agreements.

# Copernicus II

by Paul E. Rowe

In the middle ages scientists knew that the earth was the center of the universe. The most brilliant people of the time went to extreme efforts to make their observations fit this fact. They were very successful at this and explained all then available observations by combinations of mathematics and philosophy. For example, the fact that some planets moved in complex patterns was easily handled mathematically. As more and more information became available the explanations became more and more complex. It got so that only a few especially gifted individuals could understand them. Copernicus pointed out that if one assumed that the sun was the center of the universe many things became simpler. After about 200 years, Copernicus' ideas became generally accepted.

Is there anyone here that believes that innate human intelligence or, indeed, human nature has changed dramatically over the past 400 years? Certainly current theories of magnetism, light, gravity and relativity are not clearly understood by the average intelligent individual. I'm sure everyone here understands them and can quite easily explain them to me. I'll settle for an explanation of how these two magnets exert forces on each other at a distance. It is generally accepted that the forces involved would be the same in space, and the presence of the air or my fingers exert very minor effects. The usual answer has to do with the presence of magnetic fields around the magnets. In other words, the *nothing around one of these magnets changes when the orientation of the magnet is changed.*

Prior to the turn of the last century, it was pretty much accepted that a medium existed throughout space which somehow carried light, magnetism and possibly gravity, much as the air carries sound. Faraday, Kelvin, Hertz and sometimes Maxwell were the leading exponents of this medium -- the aether or ether. This concept so simplified the understanding of magnetism that it was used as a teaching tool when I went to school -- always with the caveat that there is no such ether.

The ether concept died early in this century. The direct cause of its death was the results of interferometer experiments of Michelson and Morley. It was believed that the earth in its journey around the sun must travel through the ether. If this were the case, there must be an "ether wind" along the direction of motion. Michelson and Morely set up an experiment to measure the velocity of the ether wind. The experiment depended on the interference of two light waves which were out of phase. One of the waves traveled down ether wind and then back

up ether wind while the other traveled across the ether wind and back. They both traveled the same distance relative to the apparatus. The experiment depended on the wave property of light (the main reason the ether was invented). Regardless of the orientation of the apparatus the results indicated that there was no ether wind. This was taken as proof that there was no ether. Since this time, physical phenomena had to be explained without benefit of an ether. Theoretical physics became difficult for some and incomprehensible to me. The seeds of the rebirth of the ether were sown just as it was dying.

The results of experiments described in the scientific literature in the first quarter of this century and results of experiments I have performed more recently have lead me to the conclusion that there is, indeed, such an ether, and to a suggestion as to two components of the ether. I will describe most of these experiments in generalities and the simplest ones in some detail. First I will try to arrive at these components philosophically. Since I know what I want the answer to be, this should be easy.

Let's examine these magnets again. I am particularly impressed when they repel each other at a distance. It is generally accepted that electron spins in non-magnetic materials are random, while the spins of at least some of the electrons in permanent magnets are aligned. This is an over simplification but electrons are either paired and not available for magnetic effects or unpaired and available. If a piece of iron is brought close to a magnet some of its unpaired electrons tend to become aligned and that piece of iron becomes a magnet. Iron forms a soft rather than permanent magnet. Its electron spins will become randomly oriented soon after it is removed from the permanent magnet. My point is, the aligned electrons of the permanent magnet aligned some of the unpaired electrons in the iron bar.

If the same iron bar is wrapped in a coil of insulated copper wire which is attached to a DC current source, the bar becomes a magnet. If the current source is removed from the wire the bar loses its magnetism. This may indicate that electron spins in the wire tend to be oriented when a current is passing and random when there is no current. Possibly moving electrons are oriented. If there were electrons in the space between magnets their orientation would be affected by the magnets and magnetic forces at a distance and magnetic fields would be easily understood. Of course, a medium composed of only electrons would immediately disperse itself due to repulsion of the negatively charged particles. If space also contained properly distributed protons its charge would be neutral and the arrangement would be neutral in charge. After all, a salt crystal is a similar combination of

negative and positive charges. It is quite stable and as far as I know there is no salt crystal wind. As a matter of fact a salt crystal has a dielectric constant which is attributed to the tendency of the negative chloride ions to move toward the positive plate of a capacitor and the positive sodium ions to move toward the negative plate. Maxwell's equations, which quite accurately predict the transmission and reflection of light between different media, require that a vacuum have a definite dielectric constant and magnetic permeability. If space is nothing, could it have these properties? A medium composed of an arrangement of protons and unpaired electrons would have a dielectric constant and a magnetic permeability. If such a medium does exist the present theories of theoretical physics which are based on the absence of such a medium will have to be reconsidered and the experimental results will have to be explained in the light of such a medium.

Although I believe the above explanation is reasonable, it is not the way in which I came upon the concept of an ether made up of protons and electrons. The concept was forced on me by the results of my own experiments and those of others.

In 1959, I detonated various explosives in a partially evacuated steel chamber (initial pressure = 1 torr.), and recorded the pressure after the temperature had equilibrated. The quantities of gas produced were quite reasonable until I detonated explosives containing aluminum powder. These explosives consistently produced much more gas than could theoretically be produced from the known contents of the steel chamber. At first, I felt that the extra gas had been trapped in the walls of the steel chamber and was released by the detonation. Prolonged heating and evacuation of the chamber prior to detonation did not affect the quantity of gas produced by the detonation. After a series of detonations the amount of gas produced by each detonation was still about the same. I was transferred to another project but the results of these experiments continued to bother me.

In 1980, I had some free time and performed a literature search to find if any other experimenters reported similar anomalous results. Much to my surprise, I found that there were several reports of unexplained gas in the scientific literature of the first quarter of this century. Papers by Nobel prize winners Sir William Ramsay and Sir J.J. Thomson and other respected scientists were included. The subject was given considerable prominence in several Annual Reports of the Chemical Society. The experiments most similar to mine were performed by Gerald L. Wendt and Clarence I. Irion (J.A.C.S., 44, pp. 1887-94, 1922) at the University of Chicago. They atomized tungsten wires in carbon dioxide using high voltage

capacitor discharge. After the discharge they dissolved the carbon dioxide in potassium hydroxide solution and measured the volume of the remaining gas. They did not determine the nature of the gas but showed that it wasn't any of the expected decomposition products of carbon dioxide. They obtained gas even after prolonged heating and evacuation of the Pyrex flask prior to the atomization. In all, they performed 21 experiments. The quantity of gas obtained varied widely but they obtained some gas in each experiment.

"The gas evolution is very irregular, but this is probably due to irregular conditions of explosion; it is impossible with the present technique to produce explosions of uniform brilliancy and temperature. The volume of gas produced is so large as to exclude its arising from gas dissolved or absorbed by the wire, for the average volume of the wires was 0.0381 cubic millimeter, and the average volume of gas produced is 26,500 times greater."

In my view, the most pertinent paper was by Clarence A. Skinner (Phys. Rev. 21, pp 1-15, 1905) of the University of Nebraska. It is titled, "The Evolution of Hydrogen from the Cathode and its Absorption by the Anode in Gases." The first two paragraphs of the paper are quoted below:

"While making an experimental study of the cathode fall of various metals in helium it was observed that no matter how carefully the gas was purified the hydrogen radiation, tested spectroscopically, persistently appeared in the cathode glow. Simultaneous with this appearance there was also a continuous increase in the gas pressure with the time of discharge. This change in gas pressure was remarkable because of its being much greater than that which had been observed under the same condition with either nitrogen, oxygen or hydrogen.

"Now the variation in the cathode fall with current density and with gas pressure in helium was found to be so like that obtained earlier with hydrogen that it appeared necessary to maintain the helium free of the latter in order to make sure that the hydrogen present was not the factor causing this similarity in the results. Futile endeavors to attain this condition led to the present investigation, which locates the source of the hydrogen in the cathode, shows that the quantity of hydrogen evolved by a fresh cathode obeys Faraday's law for electrolytes, and that a fresh anode absorbs hydrogen according to the same law".

Skinner referred to the law of electrolysis. Initially, the system behaved as if a hydrogen atom was formed at the cathode for each electron carried through the discharge tube. He gave graphs of pressure versus time for cathodes of several different metals. Each graph had a diagonal line which represented the rate gas

evolution calculated using Faraday's law, the current carried by the tube and the volume of the discharge tube. In each case, the actual curve followed the diagonal line for a time, then the rate of evolution decreased. In this series of experiments, the current was 2 milliamperes and the initial pressure was 3 torr. of helium. When Skinner employed hydrogen in place of helium in these experiments, no pressure change was noted during the discharge. The paper also gives strong evidence that hydrogen is produced at the cathode (just as it is produced at the cathode in the electrolysis of water). I found the following statement particularly interesting:

"With a freshly polished metal as cathode the gas pressure increases at first at a constant rate, but after a time this rate begins to drop off until the pressure appears to have reached a constant maximum value. Silver was depleted in this way giving off about two tenths of a cubic centimeter (measured at atmospheric pressure) of hydrogen. The current was then broken and the hydrogen adsorbed by the Na,K cathode. After standing in the helium overnight and then tested again the next morning it was found to have a new supply equal to the one given up the day before. Without allowing it any chance of regaining hydrogen from an external source it was thus depleted six or eight times during the course of two weeks and found to give off at each time about the same amount of gas. With an hours rest only a slight recovery was noticed.

"After this series the silver was removed from the tube, repolished, and then tested again with the same results. Altogether about two cubic centimeters of gas had been given off by this silver disk, which is 15 m. in diameter and about one millimeter thick. It shows no sign of having its supply of hydrogen reduced in the least".

In another part of the paper Skinner states: "All metals are renewed by being polished, but whether this arises wholly from cleaning the surface of the metal or partly also from exposure to the moist atmosphere remains undecided. The kind of polish used does not seem to affect the results".

The quantity of hydrogen Skinner produced at the silver cathode is thousands of times greater than it could have originally contained. This was later shown in solubility test performed by others. Skinner's paper describes many interesting results and I recommend that anyone interested in this topic study the paper.

George Winchester (Phys. Rev. 3, pp. 287-94, 1914) of Washington and Jefferson College performed discharge experiments at much lower pressures and higher voltages using aluminum electrodes. He gave a curve of gas pressure versus time of discharge which is consistent with the electrolysis if an ether composed of protons and electrons. Under the conditions

of the discharge a proton of the ether may react with an electron of the cathode to produce a hydrogen atom. Meanwhile a hydrogen atom may lose an electron at the anode leaving an ether proton. When no hydrogen is present initially, gas is produced until an equilibrium concentration of hydrogen gas is achieved. The overall reaction is certainly not this simple but the above mechanism does quite accurately predict the shape of Winchester's curve.

Actually Winchester produced helium, neon and hydrogen gases in his discharge tube as determined by their spectra. The helium and neon ceased to be produced after a time.

"The case of hydrogen is different; I have sparked tubes until the electrodes were entirely wasted away and this gas can be obtained as long as any metal remains".

A quote from Sir J.J. Thomson (Nature, 90, pp. 920-46, (1920)) is pertinent here:

"I would like to direct attention to the analogy between the effects just described and an everyday experience with discharge tubes -- I mean the difficulty of getting these tubes free from hydrogen when the test is made by a sensitive method like that of positive rays. Though you may heat the glass of the tube to the melting point, may dry the gases by liquid air or cooled charcoal, and free the gases you let into the tube as carefully as you will from hydrogen, you will still get hydrogen lines by the positive-ray method, even when the bulb has been running several hours a day for nearly a year".

J. Norman Collie, F.R.S., Hubert S. Patterson, and Irving Masson (Proc. Roy. Soc., A, 91, pp. 30-45, (1914)) noted the disappearance of hydrogen gas in discharge tubes.

"But the remarkable fact was noticed that hydrogen (4.6 c.c.) admitted to the inner tube and sparked at the end of the experiment had diminished to about 0.4 c.c. Moreover, after breaking up the tube and melting the electrodes and the powdered ends of the inner tube in a hard glass tube, only 0.6 c.c. of hydrogen was obtained. This apparent disappearance of hydrogen is always a noticeable fact during the discharge, and up to the present has not been entirely explained. The absorption of gases in vacuum tubes has been noticed by several people:....".

They also noted the disappearance of hydrogen in a mercury arc.

"An experiment was made in which hydrogen was admitted without affecting this result; it was noticed, however, that after about 10 minutes of passing the arc the whole of the hydrogen (about 1 c.c.) had completely vanished and the mercury could be driven practically to the top of the capillary."

The authors also claim to have produced hydrogen gas by heating fresh cut sodium in a vacuum.

The above literature search led me to suspect that the extra gas produced in my detonation experiments might have been hydrogen. Explosives were no longer available to me, so I studied a tamer mixture similar to thermite. I found that an intimate mixture of fine aluminum powder and cupric oxide could be ignited with a resistance wire coil attached to a variable transformer. A similar mixture in a Pyrex tube containing a resistance coil was suspended in a steel chamber which was then evacuated to a pressure of one torr. and sealed. The coil was heated using the transformer until a ping was heard (about ten seconds). The chamber became warm. When it cooled, the a valve leading to a mercury manometer was opened and the equilibrium pressure was determined. Many experiments were performed and in each case, considerable gas was produced. In cases where a second resistance coil was not severed by the reaction, the experiment was continued. The coil was heated as above and the temperature was allowed to equilibrate. Only very minor pressures changes were noted. An excess of air, assuming the gas produced to be hydrogen, was let into the chamber and the coil was heated again. A ping was heard and the pressure increased. When the chamber cooled, the pressure was quite close to that calculated assuming the initial gas was hydrogen and that it reacted with air to form water which liquefied leaving water vapor at the pressure expected at room temperature. In one case, the original gas produced was transferred to a Pyrex flask. The gas was colorless. Air was let into the flask as above and a resistance coil in the flask was heated. This produced a loud ping and a bright flash. The gas produced was colorless and practically odorless. I have no doubt that the gas produced in the original reaction was hydrogen. The amount of gas produced was substantial. The gas obtained from 1.5 grams of the powder mixture was almost equal to that which would have been obtained if all of the copper oxide had somehow decomposed into solid copper and oxygen gas. Of course, such a decomposition would not have produced a ping or heated the steel chamber. Oxygen would not have reacted with air to produce a second detonation.

The above results convinced me that the extra gas produced in my original experiments with explosives was, indeed, hydrogen.

I have performed many experiment in low pressure discharge tubes and confirmed many of Skinner's and Winchester's observations. I have produced gas in discharge tubes having anodes and cathodes of different metals, and removed that gas by reversing the wiring to the electrodes. Also, I have caused considerable quantities of hydrogen gas to disappear in such tubes.

Experiments employing copper cathodes yielded particularly interesting results. During

discharge, the gas pressure increased from .015 torr. to about 3 torr. On continued discharge, the pressure increased slowly and a yellow coat formed on the inside surface of the Pyrex tube near the cathode. With time, the yellow coating turned into copper foil in the hottest portion of the tube (about 100 degrees C.; and into a brown coat in the cooler portions of the tube. When the discharge was stopped while the coating was still yellow, and the coating was treated with hydrochloric acid, gas was evolved and a white solid formed. The properties of the yellow solid are consistent with those of cuprous hydride while those of the brown solid are consistent with those of cupric hydride. The white solid is doubtless cuprous chloride. The vaporization of copper requires a combination of much higher temperature and much lower pressure than existed in the discharge tube.

At this stage, I was quite confident I was producing hydrogen from a vacuum and that vacuum must contain the ingredients of hydrogen -- protons and electrons. Each experiment was simpler and required less sophisticated equipment than the previous one, and the conclusions seemed to be getting less and less questionable. The real problem was to get anyone to recognize this effort. Part of my problem was that all of my equipment had been obtained inexpensively at surplus sales and was far from modern. The common comment from the few scientists who were kind enough to listen to me was that everyone knows metals absorb and adsorb considerable quantities of hydrogen. My rejoinder that the quantities of hydrogen I was producing was much greater than the reported hydrogen content of the metals fell on deaf ears.

I set up an experiment in which there was no metal present in the discharge tube. One of the water inlets of a Pyrex distillation condenser was sealed and a Pyrex stopcock was attached to the other using a propane-oxygen flame. The open end of the stopcock was attached through a Tygon tube to a McLeod gauge (a device for measuring pressures between 0.001 and 5 torr.). An aluminum rod placed in the center tube of the condenser was attached to a spark coil. The stopcock was opened, the system was evacuated to a pressure of 0.015 torr. and the stopcock was sealed. The spark coil was turned on for 30 minutes. After the coil had been off the 2 minutes the stopcock was opened. The value of the pressure obtained indicated that the pressure in the discharge tube was about 0.200 torr. at the end of this discharge. A similar experiment in which the discharge tube initially contained 0.158 torr. of water vapor was performed. The value of the pressure after the stopcock was opened indicated that the finally pressure had been about 1.22 torr. Apparently the presence of water vapor greatly increased the rate of gas production. In these experiments there was

nothing present in the discharge tube except Pyrex and a minimum of stopcock grease.

A series of experiments was performed using different gases and leaving the stopcock open so the pressure could be measured as the experiment progressed. The curves obtained were similar to that of Winchester. The results led to the following conclusions:

1. Hydrogen had little effect on the rate of gas production.
2. Helium had little effect on the rate of gas production.
3. The gas produced by the discharge had little effect on the rate of gas production.
4. Carbon dioxide increased the rate of gas production.
5. Oxygen increased the rate of gas production considerably.
6. Water vapor had a dramatic effect on the rate of gas production. The effect appears to increase up to a water vapor pressure of about 0.250 torr.

I should point out that this entire series of experiments was performed consecutively without air being let into the system.

It seemed likely that oxygen may have reacted with the gas produced by the discharge to form water vapor which further increased the gas production. A flask containing Drierite (a granular water absorbent) was incorporated into the system. It was immediately noted that a much better vacuum was obtained indicating that the system had been slowly outgasing water vapor. When the spark coil was run, no measurable gas was evolved. A run in which the initial pressure was 1.719 torr. of oxygen had a pressure of 0.969 torr. after 30 minutes of discharge. Only minor pressure changes were noted on further discharge. Oxygen was added to a total pressure of 3.6 torr. After 27 minutes of discharge the pressure was 2.030 torr. These results are consistent with hydrogen gas produced by the discharge slowly reacting with oxygen to form water which, in turn, is removed by the Drierite. Formation of ozone from oxygen cannot account for this much of a pressure drop.

The above results indicate that the production of hydrogen gas from the ether requires that some gas molecules be present. Water vapor is particularly effective in catalyzing the conversion to hydrogen under the above conditions. It is not surprising that production and loss of gas under mysterious circumstances was noted by many observers in the early part of this century and ceased to be observed as vacuum techniques improved.

I believe this paper demonstrates that vacuum is permeated by protons and electrons. This fact must be recognized in properly explaining such phenomena as light, magnetism, and gravity. If time permits, I will give my best guesses for the mechanisms for these and other phenomena.



# PLANETARY POSITIONS AND SUNSPOTS

by Buryl Payne, Ph.D

## ABSTRACT

Variations in sunspot numbers were found to correlate both positively and negatively with some planetary positions for the two year period 1989-1990 during the extended maximum cycle #22. The results of this study will now enable long term predictions of sunspot number peaks to be made with better than 80% accuracy.

## PURPOSE OF THIS PAPER

A. To increase awareness of the fact that Earth is one element in a dynamic system that includes all of the planets, as well as the Sun and Moon.

B. To provide the beginnings of a coherent theory of solar/planetary interaction with the Biosphere.

C. To stimulate new directions of research.

## INTRODUCTION

Many people have claimed that the formation of sunspots are connected with planetary positions, but the exact connections have been obscure. John Nelson, an RCA radio engineer, maintained that he could forecast solar activity with about 90% accuracy (1951), but his work was not able to be duplicated by others. Wood (1972) found a connection between the 11 year solar cycles and the center of gravity of the whole solar system, which varies continuously with planetary positions. However, his work was focused only on the long term cycles, not the day to day variations, which is the emphasis of this research.

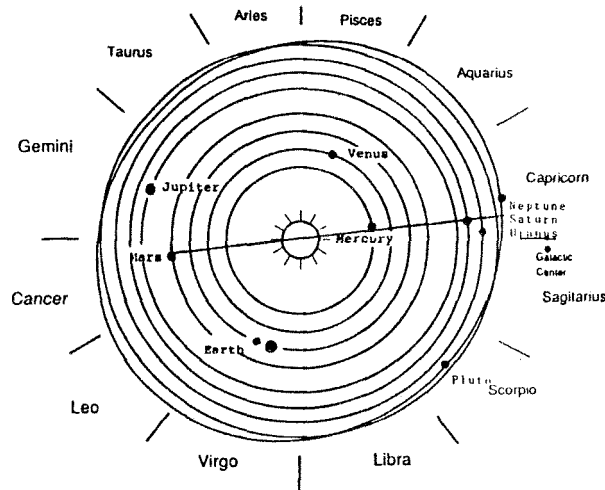
For the past twelve years the author has been studying sunspot numbers, solar and geomagnetic activity, weather patterns, and some aspects of human behavior, on a daily basis in conjunction with planetary positions. Definite links were found between these parameters and some planetary positions. Reasonably accurate predictions (65-75%) of the gross peaks of sunspot numbers have formally been made by the author in the form of a newsletter for the past several years. In order to improve the accuracy of the monthly predictions a formal analysis of the period of the extended maximum of solar cycle #22 was

undertaken.

Initially it was presumed (following Nelson) that when two or more planets lined up, or were heliocentrically conjunct, solar activity would increase. The analysis of the data has shown that only some planetary conjunctions are associated with increased solar activity: other planetary alignments are associated with decreased solar sunspot numbers.

## PROCEDURE

Sunspot numbers from December, 1988 thru January, 1991 were used for the purpose of this analysis. During this time interval solar cycle #22 was at its peak. Although the



Configuration of the Solar System Log Scale  
Planets move counterclockwise  
March 10, 1989

Diagram 1

range of sunspot numbers varied from 60 to 418, the majority of the sunspot numbers were between about 150 and 300. **The average sunspot number was 213.**

This research was greatly aided by the construction of a model of the solar system which used a log scale for the planetary distances. By the use of a heliocentric ephemeris, the model can be set for any year one chooses. Use of the model enables one to perceive patterns that would probably be missed by mere examination of numerical tables.

Diagram 1 shows a typical planetary pattern analogous to that provided by the model.

The orbits are drawn in circular form rather than elliptical, and there is a slight error in the orbit of Pluto, but the basic patterns can be readily seen.

The author's monthly newsletter contains a diagram of the solar system for each month along with predictions of solar and geomagnetic activity and predictions of some weather patterns. Each issue of the newsletter also contains an analysis of the previous month's predictions and the actual data of what happened as published by NOAA in Boulder, Colorado. Figure 1 is an example of a typical monthly graph of sunspot numbers; a graph of geomagnetic activity is also included in each issue of the newsletter.

As a preliminary step to the analysis provided in this paper, the monthly sunspot number graphs were cut and pasted together to form one long continuous graph. (Sunspot number graphs provided by NOAA are based on smoother monthly averages and are not suitable for day to day analysis).

During this interval there were approximately 33 identifiable peaks in the data, spaced approximately 25 days apart. It is well known that there is a 27 day solar rotation cycle in sunspot numbers, but this did not clearly appear in this analysis.

Most of these peaks had already been identified with specific planetary conjunctions or oppositions in the monthly newsletter and these were re-checked and compared with the diagrams of the solar system for each month to look for relevant patterns. From this visual analysis, a few reoccurring planetary conjunctions which appeared significant were selected for formal analysis. Sunspot numbers were tabulated from the NOAA Solar Geophysical Reports for time intervals of 8-10 days around the times of these conjunctions and these numbers were averaged and graphed.

## RESULTS

### Sunspot Numbers

Figure 2 shows the average sunspot numbers for, Earth conjunctions with Jupiter, and Earth conjunctions and oppositions with Uranus. The highest sunspot number of solar cycle #22 occurred on Jan. 28, 1991, when Earth was conjunct with Jupiter (two weeks after the U.S. began bombing Iraq). Although there were only 5 events in one case and three in the other, these graphs clearly show the link between sunspot numbers and planetary positions. **Note that the average sunspot number is shown as a horizontal line on the graph and the graph starts at 200, not 0.**

Sunspot numbers rarely dropped below 130 during the time of the extended maximum.

These averages were sharp! For aspects with Uranus, the peak number for each individual event was either on the day of the conjunction, the day before, or the day after. Two of the three conjunctions with Jupiter showed peaks exactly on the day of the event. Diagram 2 shows how the planets were configured for one of the Jupiter conjunctions.

Figure 3 shows sunspot number increases related to Mercury. Note that the scale is the same as that of Figure 2. During the period of this analysis, the planets Uranus, Saturn and Neptune were so close together that Mercury moved in and out of conjunction with them within three or four days. This interval is shown by vertical dashed lines in Figure 3. On the average, solar activity increased by 40, compared with the 80 or more observed for Jupiter and Uranus conjunctions with Earth. The reason why the peak for the Mercury conjunctions occurs several days after the conjunction is explained in the discussion section.

Figure 4 shows the average decrease in sunspot numbers when Mercury was conjunct Earth. Diagram 1 shows a typical example of this pattern, which occurs about three times a year. Note that the scale is the same; so this is a dramatic decrease in sunspot number -- more than 70 -- almost as much as Earth-Jupiter and Earth-Uranus conjunctions increase it. The curve is also sharp, with 5 minimum occurring one day before the conjunction, one on the day of the conjunction, and one on the day after.

Figures 5, 6, and 7 show Mercury con-

junctions with Mars, Jupiter, and Pluto. As is the case when Mercury is conjunct with Earth, sunspot numbers showed a decrease. The maximum decrease consistently occurred after the day of the conjunction (see discussion section for explanation).

Venus conjunctions were also associated with large peaks in sunspot numbers. A combined plot of Venus with several planets is shown in Figure 8. In this case the peaks were not sharp, but were scattered on both sides of the conjunctions. Frequently other planetary alignments happened at the same time, so the summarized data is somewhat misleading. One consistent pattern that did manifest with Venus aspects was first an increase, then a decrease in sunspot numbers.

Other planetary conjunctions were linked with individual sunspot peaks, but these either occurred only once or twice during the time period of this study, or happened to occur when there were other alignments within a day or two, so it would be misleading to graph the data.

### Geomagnetic Activity

In general geomagnetic activity follows solar activity. The particles expelled from the Sun take two or three days to travel to the vicinity of Earth and interact with Earth's magnetic field.

Four exceptions have been observed:

1. When Mercury is conjunct Earth there are more geomagnetic storms, even though sunspot numbers decrease.
2. When Earth is conjunct Jupiter, geomagnetic activity is less, even though sunspot

number is higher. Both of these effects were noted by Bigg (1963, 1967) although he did not give specific data.

3. It has been frequently observed that geomagnetic activity will show an increase simultaneously with an increase in sunspot number on the exact day of the conjunction of Earth with another planet, not a day or two afterwards as would be expected by considering the transit time of the solar wind.

4. Sometimes increased geomagnetic activity occurs only in association with a geocentric planetary conjunction. The Moon's position plays a part in these events. Some data on this has been published (Payne, 1986, 1990).

For instance, when Mercury was conjunct with Jupiter, which happened seven times during the interval studied, the geomagnetic indices for Anchorage were 29 or greater four times on the day before, the day of, or the day after, the conjunction. The average geomagnetic index for Anchorage was about 19 during this time period.

When Earth was conjunct with Jupiter, which happened only three times during the interval studied, the geomagnetic indices were only 4, 5, and 6 on the day of the exact conjunctions.

These findings correspond with observations made in many previous years by the author.

### Weather

Observations made for over a decade have shown that there are generally four times each year when the weather is noticeably altered in association with planetary posi-

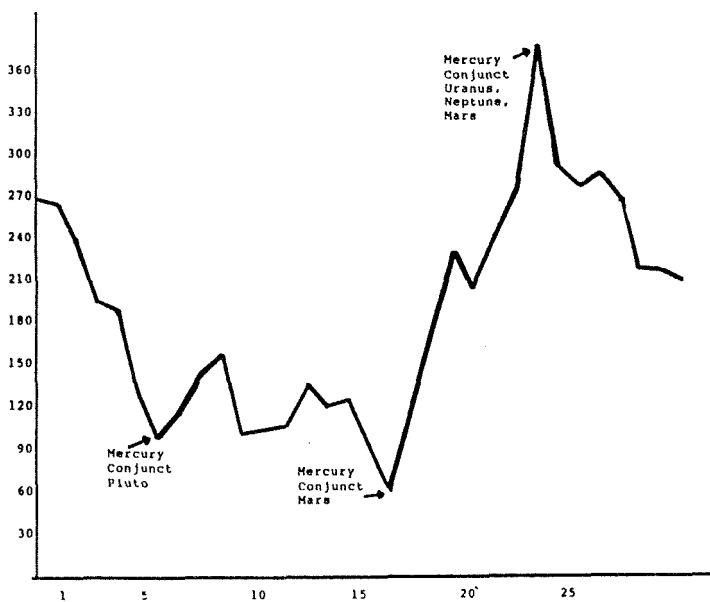


Figure 1. Sunspot Numbers (Vertical) Versus Day of the Month February 1990

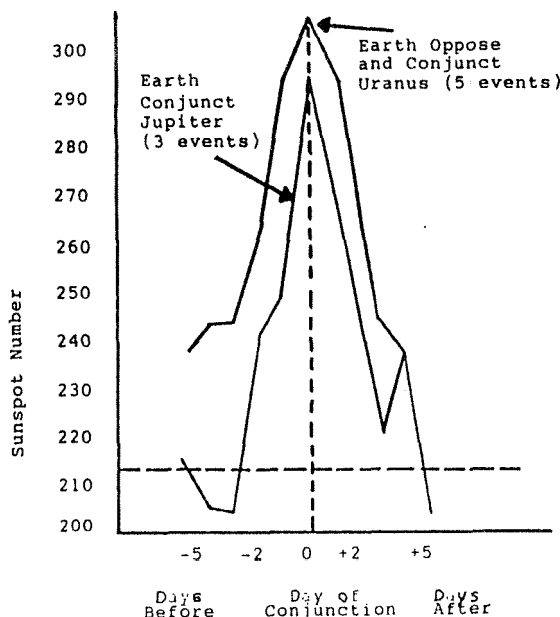


Figure 2. Earth Aspects With Jupiter & Uranus

3. These are: Earth conjunct or oppose Pluto, and Earth conjunct or oppose Jupiter. Conjunction associations are larger, and if the Moon is either conjunct (or near to it), or at a 120 degree angle to the planet, the effect is much greater. Pluto aspects are associated with cold and stormy days, and Jupiter aspects with warmer than average days. For example, at the time of the Earth-Jupiter conjunction on December 27, 1989, (see Diagram 2) it was warm all across the United States. U.S. weather maps showed the isothermal lines were farther north on December 27 than at any other day of the week. This effect occurs about every 13 months when Earth overtakes Jupiter. If it happens in the summer, there is a heat wave, if it happens in the fall, there are Indian Summer days, and if it happens in the winter there is a winter thaw. Saturn's presence, if nearby or at exact opposition, adds to the effect. Where world wide spot checks have been made, the effects for both Pluto and Jupiter have been present. It is probably world wide, though global weather data has not been analyzed.

The data is extensive and a separate paper planned. Some has already been published on Pluto (Payne, 1984, 1990) and details for the past two years have been published in the monthly newsletters.

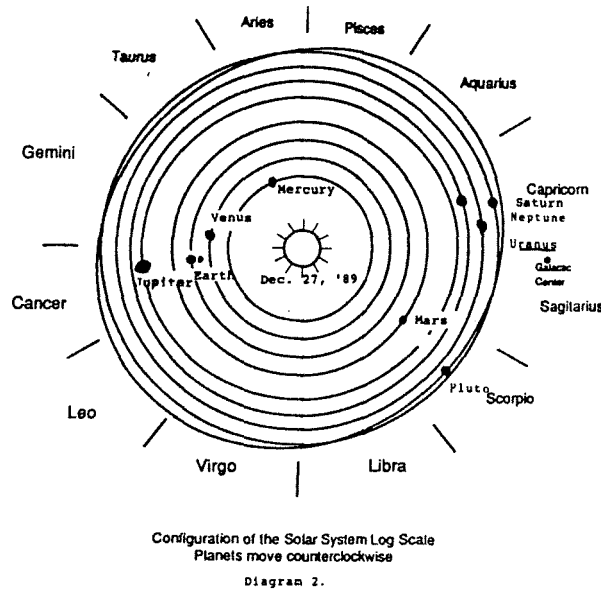
**SUMMARY OF RESULTS**

The figures and graphs included in the report do not comprise the total material analyzed by the author over the past twelve years, but they do give an idea of the direction of the research of its accuracy.

Of the 33 peaks identified in the raw data of sunspot numbers, 8 were related to Earth conjunctions with Jupiter and conjunctions and oppositions with Uranus, 9 were associated with Mercury conjunctions with Uranus, Saturn, and Neptune, and 14 were connected with conjunctions between Venus and other planets. This totals 31, but some of these events were simultaneous and there were a few conjunctions between other planets which were not discussed.

Overall it appears that about 89% of the peaks could be linked to some specific heliocentric conjunctions or oppositions, but the

moving geometry of the solar system must be taken into account in order to predict what will be observed on Earth on any particular day.



**DISCUSSION**

To predict solar and geomagnetic activity is quite a challenge. With at least 10 variables involved, we are not likely to find out all the 'truth' right away. The solar system undoubtedly operates as a whole, but we have to break it down into pieces in order to build up a useful model. While it appears so far that only

other angular relationships between the planets which are important. No obvious associations were found in this study with right angle patterns as Nelson claimed, but weather patterns associated with geomagnetic storms have definitely been observed for 120 degree geocentric relations between Saturn, Pluto, and the Moon (Payne, 1983, 1990), and weather patterns have sometimes been observed in association with heliocentric oppositions and 120 degree angles for Jupiter, Pluto, and the sun, so there are probably solar changes which were not obvious by a simple examination of sunspot numbers alone.

Sunspots are probably not the most meaningful solar parameter to study. Sunspot area, the 10.7 centimeter radiation, number and types of solar flares, proton and electron density in the vicinity of Earth, or some as yet unknown parameter, may be much more relevant to planetary positions. There were times when sunspot area seemed to be more closely connected with planetary patterns than sunspot numbers. Solar flares are

probably more closely linked, via changes in the geomagnetic field, to human behavior, as well as effects on radio communications. There were also times when solar flare activity was high, but sunspot numbers were only moderate such as March 1989 period when solar flares set records. Now that NOAA is tabulating X-Ray and optical flares on a daily basis it

may be possible to develop an overall flare number for each day and compare that with planetary patterns. More careful studies need to be made associating all available solar parameters with planetary positions.

Sunspots are mostly observed from Earth. Therefore we only see one side of the Sun. If two or more planets align on the other side of the Sun, we won't know if there any sunspots formed in association with such an alignment until the Sun rotates around so that the sunspots are visible from Earth. Eventually we will be able to obtain that data from a space probe orbiting in position to provide that information on a regular basis.

It has been a tentative working hypothesis of the author that when a large sunspot

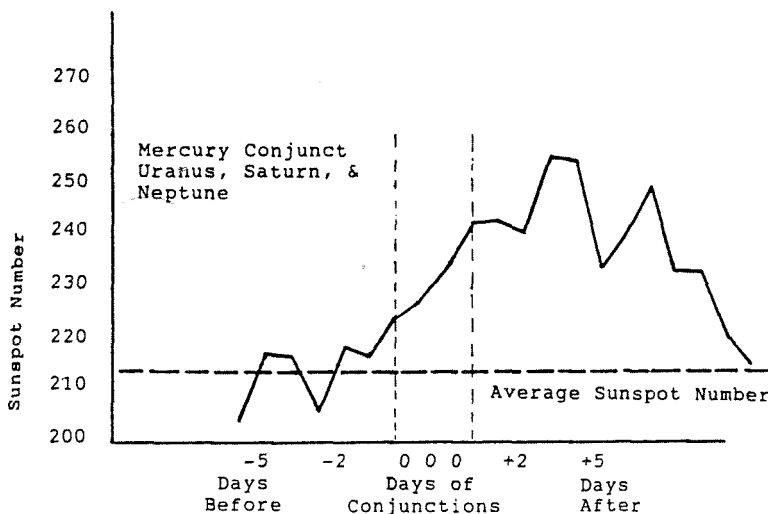


Figure 3. Mercury Conjunctions

conjunctions and a few oppositions are the significant planetary patterns, associated with sunspot formations, it is possible that there are

pair forms on one side of the Sun, a corresponding pair forms on the opposite side as well. If two planets align, and Earth is not nearby, the associated sunspot increase may not be visible from Earth, but in a few days, either the sunspots will come into view on that side that was aligned with the two conjunct planets, or the sunspots formed on the opposite side will come into view. This explains why graphs for Mercury conjunctions with planets other than Earth all show dips or peaks a few days after the actual time of the conjunctions. The maximum delay that could occur would be less than one quarter of the Sun's rotation time; perhaps only three or four days. This is so whether the Earth is in front of the conjunction or behind it. Please examine Diagram 1 to best visualize this situation. In this case, Earth was not near the alignment of Mercury with Uranus, Saturn, and Neptune, but was about 90 degrees behind it. Yet within a few days, the sunspots formed on the opposite side of the Sun from Mercury came into view on Earth. In this instance, solar flare activity was the highest observed since 1960. Mars was also opposite Mercury, Saturn, Uranus, and Neptune, which probably increased the effects.

When Earth is part of the alignment involving other planets, then the sunspot increase is immediate; in fact it often precedes the actual time of the conjunction by a day or so. If the hypothesis that sunspots are formed on the opposite side of the Sun is correct, then about ten days later, sunspots on the opposite side of the Sun should come into view on the leading edge of the Sun. This has not yet been

systematically investigated.

In order to predict sunspot numbers and geomagnetic activity for a given day, planetary patterns for the previous two weeks as well as the next day or two, need to be examined. The rotation of the Sun, the movement of Earth in its orbit, and the velocity of the solar wind need to be taken into account.

There may also be differences in the Sun's behavior in connection with planetary positions, depending on whether the Sun is active (at its peak for that solar cycle) or quiet. Each 11 year cycle, the Sun spends 7-8 years in a quiet mode where sunspot numbers are under one hundred and often are zero. Figure 9 shows sunspot number for June, 1987. Planetary positions do seem to be associated with sunspot peaks for the quiet Sun. For instance, there is a clear peak associated with Earth's conjunction with Saturn, but a careful analysis of the total quiet period should be undertaken. Note that the scale of this figure is from 0 to 50 or almost a tenth of the other figures.

It would be possible to assign some weighting or normalizing factor to the sunspot numbers, so they could be combined regardless of whether or not the Sun was active or quiet. But until we are fairly sure that the Sun responds equally during its quiet and active periods, such an analysis could be misleading.

#### POSSIBLE MECHANISMS -- SOME SPECULATIONS

In order to make some educated guesses about how the planets could be linked with solar activity, it will be helpful to obtain

additional data about the dynamic distribution of the interplanetary plasma. So far, space probes have provided some measurements, but hardly enough to get a clear picture. The Sun is constantly emitting streams of particles, mostly electrons and protons. This so-called solar wind varies in intensity, velocity, and composition. Geomagnetic activity is probably closely connected with the distribution and variation of the solar wind/interplanetary plasma.

#### Solar Wind -- Plasma Tubes

Could there be links, via plasma tubes, between the Sun and its planets? Such plasma tubes could be intermittent or continuous. They could be direct, or curving upwards from the Sun and back down to the planets, much as magnetic field lines are imagined to be. When two or more planets align, there may be enough turbulence on the Sun to produce sunspot activity, solar flares, or other activity. When the space probe, Galileo, flies over the pole of the Sun, some data may be obtained to support or reject this hypothesis.

If there is such an effect on the Sun, it may be possible to find evidence of continuous or intermittent solar turbulence or some localized indication in association with every plan

#### Gravitational

Wood (1972) calculated center of gravity changes of the solar system associated with planetary positions. When two or more planets align, the center of gravity moves toward those planets. Maybe this produces some turbulence within the Sun which results in the

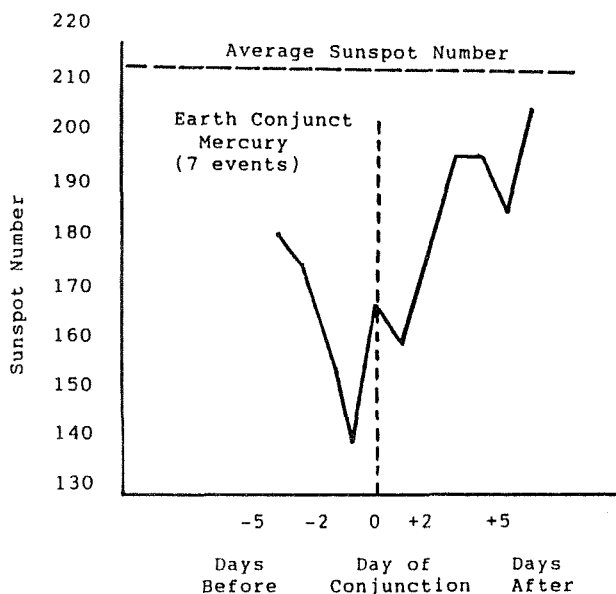


Figure 4. Earth Conjunction Mercury

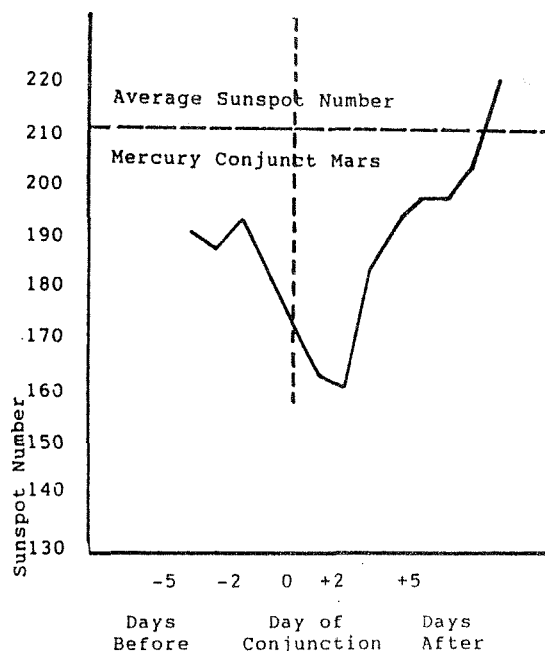


Figure 5. Mercury Conjunction Mars

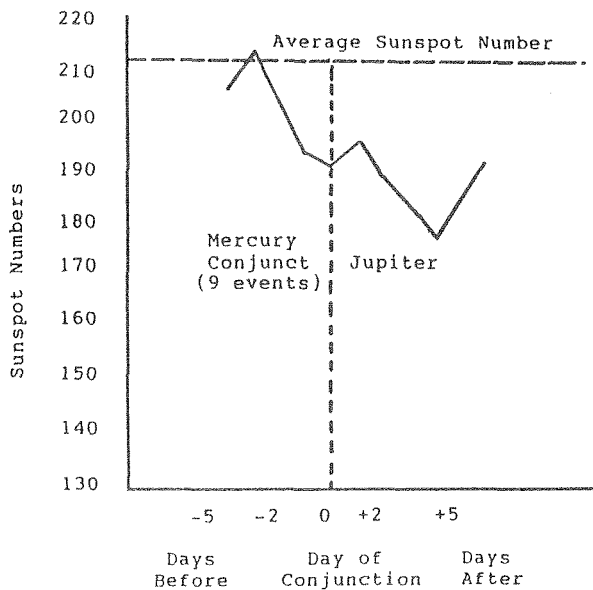


Figure 6. Mercury Conjunction Jupiter

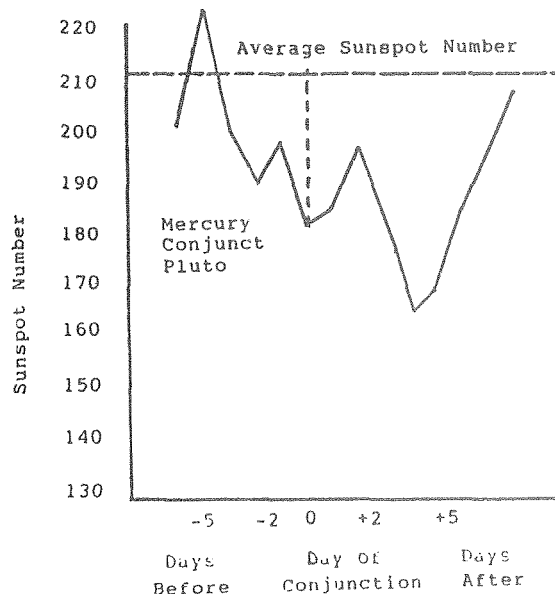


Figure 7. Mercury Conjunction Pluto

formation of some sunspots. If this is the case it seems difficult to account for the formation of sunspots on the opposite side of the Sun or to account for observed effects when planets are at 120 degree angles with the Sun. Also it is puzzling to account for the inverse effects served in the case of Mercury.

**Magnetic**

Solar activity is governed by magnetic influences. Magnetic continents are continually forming and moving on the Sun, and turbulent magnetic fields are always associated with solar flares, filaments, and sunspots. The Sun's magnetic field is continuously varying, probably much more so than Earth's. Planetary interactions with the Sun and between planets may be based on some kind of

tuned or resonant magnetic effects.

Possibly there is some magnetic influence from a planet to the Sun. When Mercury, which has no magnetic field, is between that planet and the Sun, the magnetic influence is cut off and sunspots don't form. Uranus may be an exception, and Saturn and Neptune's effects haven't been investigated at this time. Earth in conjunction with Jupiter, Saturn, Uranus, and Pluto appear to have additive effects. Earth conjunctions with Venus, Neptune, and Mars are not yet clarified.

Obviously a lot more information from space probes would be necessary to give support to a theory of magnetic interactions between the planets much substance; but one should keep all options open at this time.

For example, if the magnetic polarity of

Uranus is a factor in sunspot formation, there may be a difference when Uranus swings around in 42 years directing the opposite magnetic polarity towards the Sun.

Speculation is fun, but ultimately predictions are what count. Readers who are interested in predictions or who have ideas on how planetary positions are connected with solar activity, and/or would like to participate in this challenging research, are invited to subscribe to the newsletter and send in their ideas for possible publication.

**CONCLUSION**

Even with the minimal data so far analyzed, it now seems possible to make accurate (80-90%) long term predictions of solar and geomagnetic activity peaks and valleys, as

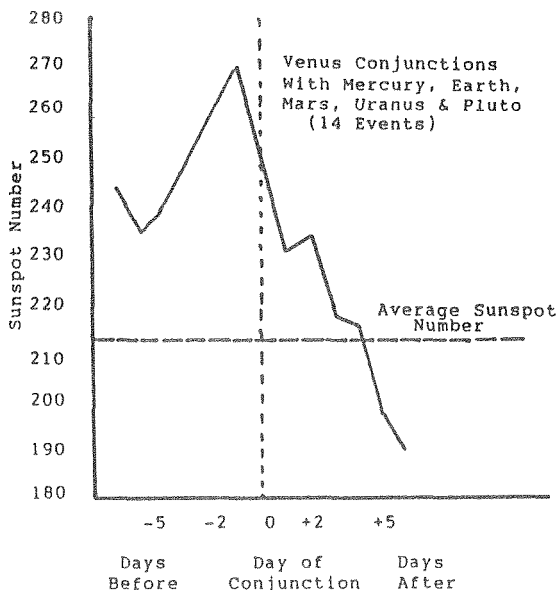


Figure 8. Venus Conjunctions

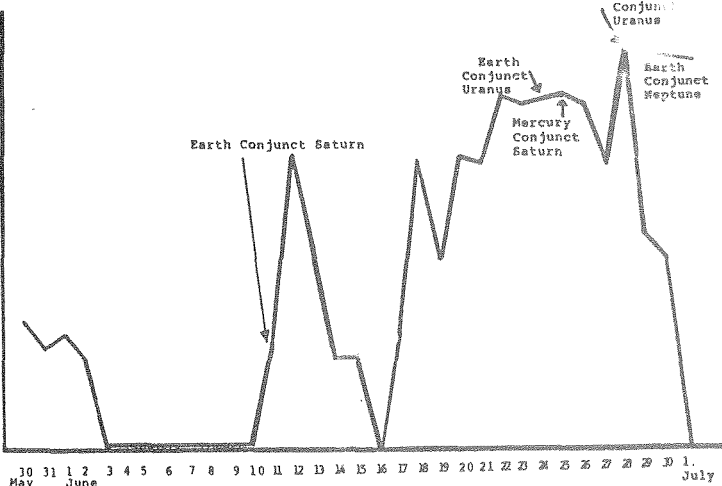


Figure 9. SUNSPOT ACTIVITY JUNE 1987

well as some weather patterns. It may even be possible to make some quantitative predictions of sunspot numbers.

The general principles are:

1. Solar activity increases by an average of about 33% when Earth is conjunct Jupiter, and conjunct or oppose Uranus.
2. Solar activity increases about 15% when Mercury is conjunct Uranus.
3. Solar activity decreases 33% when Mercury is conjunct Earth.
4. Solar activity decreases 20% a few days after Mercury is conjunct Mars, Jupiter, and Pluto.

Some principles of lesser confidence are:

- A. When Venus is conjunct an outer planet, solar activity first increases by about 25%, then decreases about 25%.
- B. When Earth is conjunct Saturn, Neptune, or Pluto solar activity increases.

The moving geometry of the solar system must be considered to accurately predict sunspot number and geomagnetic activity.

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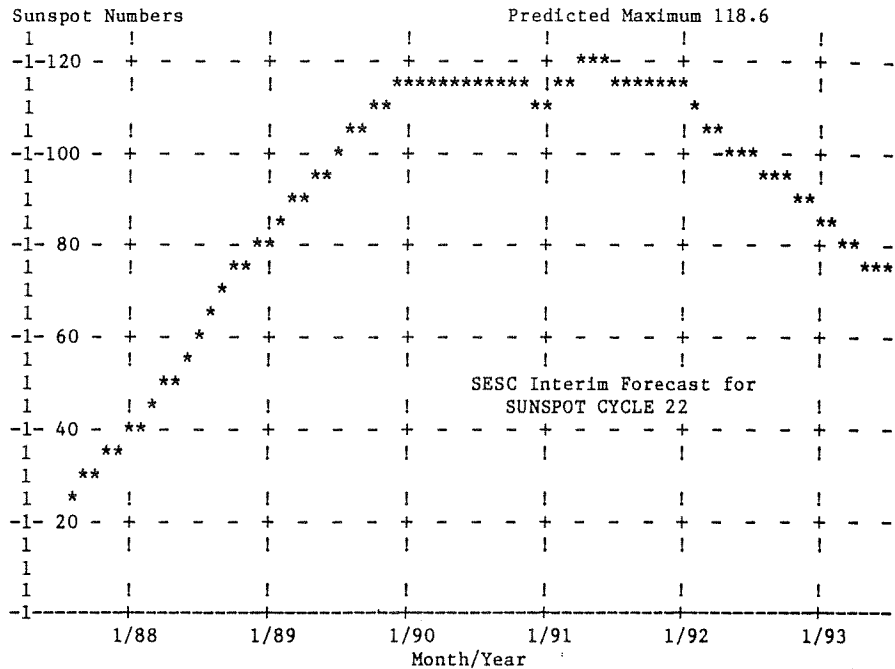
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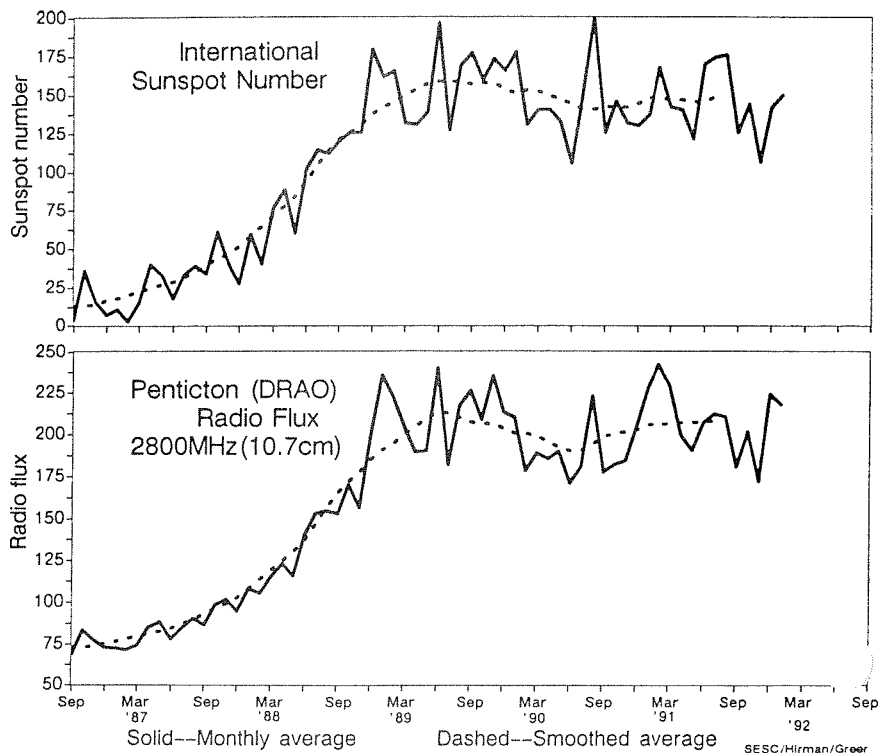
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**PREDICTIONS OF SOLAR CYCLE 22 FROM THE JAN/FEB 1988 JBR**



**ACTUAL SUNSPOT NUMBERS FROM SESC FEB 4, 1992**



# A HOMEOPATHIC LOVE STORY

The Story of Samuel and Melanie Hahnemann  
by Rita Handley  
Reviewed by Alison Davidson

From North Atlantic Books, Berkeley CA and  
Homeopathic Educational Services, Berkeley  
CA. 1990. \$12.95

*"The physician has no higher aim than to  
make sick folks well, to pursue what is called  
the Art of Healing."* The Organon

Almost 200 years ago a new form of  
medicine was born into the world, a system so  
radically at odds with the prevailing medical  
establishment that its founder, Samuel  
Hahnemann, was ridiculed and viciously per-  
secuted.

This book is a fascinating, richly descrip-  
tive account of the birth of homeopathy during  
one of the most dynamic and exciting periods  
of European culture. Although the life of  
Hahnemann, the "grandfather" of the art has  
been well documented, here, for the first time  
we discover Melanie Hahnemann's role in the  
evolution of homeopathy and her extraordi-  
nary love story with Samuel which began  
when she was 35 and he was more than twice  
her age.

Rita Handley's thorough research into  
her subjects vividly evokes the atmosphere of  
the times and the passion and idealism of these  
two people who laid the basis for a system of  
medicine which is only now beginning to  
make inroads into orthodox treatment.

Although trained in orthodox medicine in  
Germany, early on Samuel became severely  
disillusioned with the medical practice of the  
day. His desire was to alleviate suffering, but  
he could see that patients were doing better  
without medical treatment than with it; not  
surprising when the prevailing ideas consid-  
ered disease to be an evil presence that had to  
be driven out of the body with violent purging,  
huge amounts of toxic drugs and bloodletting.  
In 1833, for example, forty-one million blood-  
sucking leeches were imported into France  
for use by the medical profession.

By contrast, following on the tradition of  
Paracelsus and other more enlightened physi-  
cians, Hahnemann worked as closely as possi-  
ble with the healing forces of nature and  
tried to use as few drugs as possible while still  
caring for his patients. As he immersed himself  
in the study of pharmaceuticals, the manufac-  
ture and use of drugs and chemicals, he be-  
came increasingly outraged by contemporary  
medicine which he described as "...a trade

that mixes the disciples of Hippocrates with  
the riff-raff and medical rogues in such a way  
that one is indistinguishable from the other."

Through his research into the curative  
principles of drugs he became more and more  
alienated from his contemporaries. He sought  
how to release the curative properties, the  
vital force, of substances and how to prescribe  
them in the smallest possible doses. The  
release of his book **The Organon of Rational  
Healing** which defined the essence and prac-  
tice of his new system, and his view that  
medical drugs were not only overprescribed  
but downright dangerous for the patient, sig-  
nalled the outbreak of war against Hahnemann  
by the allopaths who felt a dangerous adver-  
sary was threatening the very foundation of  
the supremacy of the old medicine.

Undaunted, he began teaching and con-  
tinued with his experiments or 'provings' of  
substances. During an outbreak of typhoid  
fever his successful treating of this often fatal  
disease, along with his flourishing practice,  
only increased the wrath of the orthodox.  
Homeopathy had left no room for the old  
system.

Recounting a story that has become all  
too familiar with alternative medicine, the  
author describes how legal action was used to  
try and stop Hahnemann. The apothecaries,  
like our modern day drug companies, gained  
no profit from this new system that used  
minute amounts of drugs and that urged the  
physicians to prepare the remedies themselves.

The medical authorities now attacked  
Hahnemann viciously and openly. In the face  
of such hostility he retreated from the front  
line and devoted himself to the theoretical  
questions raised by his system, the fundamen-  
tal cause of disease and the treatment of  
chronic disease.

Meanwhile, Melanie had become an ac-  
complished artist and poet. The author de-  
scribes her as tough, complex and intelligent,  
admired in circles of politics and literature  
fashionable in post-Napoleonic Paris. Al-  
though born into the French aristocracy she  
was stirred by the wretched poverty of the  
underclasses, and she also strongly felt the  
rising spirit of independence for women.

When she came across Hahnemann's  
**Organon**, she immediately set off to find its  
author. From their first meeting they were  
inseparable. Digging him from his trenches in  
the small German town where he lived in  
exile, Melanie brought Samuel and homeopa-  
thy to Paris where they set up a fashionable  
practice in a very elegant salon. News of their  
successful treatments spread and soon pa-  
tients came from all over, novelists, artists  
and theatre people, foreigners from many  
countries, the aristocracy and their servants.

Melanie, who had become a highly competent  
homeopath, worked side by side with Samuel  
and also conducted her own clinic for the  
poor.

Archival records and consultations from  
their case books make this section of Handley's  
book invaluable to homeopathic students and  
practitioners. Their methods of prescribing,  
the remedies used, and the question of poten-  
cies are recorded in case after case. People  
then, as now, were searching everywhere for  
effective medical help. Many of their ill-  
nesses were a direct result of mercury and  
other poisoning inflicted by previous allo-  
pathic treatment.

After Samuel's death Melanie continued  
to practise, but this book describes how preju-  
dice against her as a woman, and official  
persecution, resulted in a very public trial. It  
was impossible for a woman to become a  
qualified doctor, anywhere, at that time.  
"When a man is drowning what does the sex  
of the hand that saves him matter?" Melanie  
wrote in her own defense. It mattered. She  
was prosecuted, but continued to practise un-  
dercover, and finally legally, working tire-  
lessly until her death.

## HOXSEY

*How Healing Becomes a Crime*  
by Ken Ausubel

Video Review by Alison Davidson

Mystic Fire Video, PO Box 1092, Cooper  
Station, New York NY 10276. Also available  
from BSRF. 85 min., \$29.95.

Times haven't changed much in the medi-  
cal world. Money continues to rule the poli-  
tics of medicine, and cancer is one of the most  
lucrative businesses in existence. It's been  
estimated that there are more people em-  
ployed by the cancer business than there are  
victims of the disease itself!

In 1924, a man named Harry Hoxsey  
claimed a cure for cancer -- herbal formulas  
passed down from his great-grandfather. Thou-  
sands of patients testified that his treatment  
cured them, and by the 1950s Hoxsey's clinic  
in Texas was the largest cancer treatment  
center in the world. Eventually there were  
branches operating in 17 states.

Although two Federal courts upheld the  
therapeutic value of Hoxsey's treatment, he  
was hated by the orthodox medical establish-  
ment. Branded as "the worst quack of the  
century" by the high priests of medicine, his  
clinics were closed down and his therapy was  
banned. This riveting film reveals the bitter  
truth of the cancer war between organised

medicine and Hoxsey, their target.

Back in the 1800s there was a choice between two kinds of physicians, allopaths, and empirics (naturopaths and homeopaths). But economic competition from the empirics was hurting allopathic pockets and caused these doctors to found the American Medical Association. Originally only a small trade union, it soon joined with strong financial forces when profitable new treatments were developed and promoted. Medicine was transformed into a money-making industry and the rules were changed so that only AMA approved doctors could legally practise. Any competition was called "quackery".

Hoxsey broke their rules. But his treatment was so overwhelmingly successful that the AMA tried to buy his formula. When they wouldn't agree to one condition, a deathbed promise Hoxsey made to his father that no one would be turned down because of lack of funds, Hoxsey refused to sign the contract. War was declared -- he was blackballed and hounded by the AMA and the Federal Drug Agency for 25 years.

"Bust the medical trust!" was his battle cry as he struggled against the forces that would eventually outlaw his treatment on technicalities, and padlock his clinics.

By 1963, the treatment had been exiled over the border to Mexico where it continues to operate, claiming a success rate of 80%. But how many have heard of Hoxsey today? His treatment remains on the long list of "quack" cures, even though it was never given an honest scientific investigation.

### THE EXTRAORDINARY DISCOVERIES OF GASTON NAESENS

*In the eyes of Scientific Corporate Medicine, Gaston Naessens is another heretic, maverick and "quack". The startling discoveries of this brilliant French-born Canadian researcher have stirred up yet another storm in the tightly controlled field of cancer therapy.*

In the late 1940s Naessens developed a unique microscope. Through it he was able to peer into the "micro-beyond" and see tiny living particles which had previously been invisible. His advances in microscopy, microbiology and immunology led to the development of a highly effective cancer therapy. This, once again, was the healer's crime.

His inventions, and his trial in Quebec in 1989 at the instigation of the Medical Profession, after bringing even terminal cancer patients back to health, are documented in Christopher Bird's detailed report *The Persecution and Trial of Gaston Naessens*. His acquittal and victory over the forces who tried to sup-

press his work might, possibly, inject some hope into the future of the healing arts.

### THE SOMATIDIAN ORTHOBIOLOGY OF GASTON NAESENS

Video review by Alison Davidson

From C.O.S.E. Inc., 5270 Fontaine, Rock Forest, Quebec, Canada J1N 3B6. VHS \$49.99 plus \$5 postage.

This interview with Naessens takes two parts: his brilliant theory of microbiology, and the techniques of his medical treatment for cancer and other immune deficiencies.

Working with special optics, and manipulating incandescent and ultraviolet light, Naessens developed his unique "somatoscope" through which we can see for ourselves the ultramicroscopic forms named *somatids* ("tiny bodies").

These tiny sparkling points of light are described as the basic living particles existing at the very origin of life. Confounding all previous scientific thought regarding blood, life origins, etc, these somatids have proved themselves to be virtually indestructible, whether by acid, salt, carbonization, or even nuclear radiation. You just can't kill them!

Other scientists in the past have noticed small subcellular particles: Antoine Bechamp in 1869, observed them in plasma and called them *microzoma*; Dr Wilhelm Reich identified these transitional energy vesicles as *bions*; and earlier this century Royal Raymond Rife viewed tiny living microbes through his universal microscope. Coincidentally all of these remarkable scientists were condemned by official science.

Naessens has not only observed these tiny particles, but has isolated and grown them in culture. He has established that the somatids go through a normal 3-stage cycle, but when subject to stress or trauma the microcycle becomes unbalanced and develops into a 16-phase cycle. Each step is shown clearly *in vitro* and explained, from the spore to the bacterial forms, the yeast and mycelial forms which finally burst to release new somatids.

It is quite extraordinary to witness this process. On one side we see the usual microscopic slide of dead blood with its motionless cell structures; beside it we see a slide of fresh blood with the living moving cellular inhabitants and the developing forms of the somatids.

With this new cellular biology it is possible to see degenerative diseases and precancerous states actually forming in the blood. The appearance of mycelia and the later stages of the somatid cycle indicate that the normal microcycle is becoming patho-

logical.

The orthodox approach to cancer targets the tumour itself -- through surgery or radiation -- or attempts to kill the cells with chemotherapy, usually ineffective when the tumours metastasize, or spread throughout the body. Naessens' approach is not to attack the cancer cells but to stabilize the body's natural defence system through a specially developed therapy and good nutrition. A nitrogen derivative and organic salts are the basis of this therapy which he calls 714-X. Injected into the body's lymph system, taken under the tongue, or inhaled via a nebulizer this totally harmless formula has a remarkable capacity to restore the activity of the immune system and rid the body of disease. This video gives detailed instructions on the treatment of the patient.

Although the somatoscope is unique, Naessens distributes condensers adapted to all kinds of microscopes. Consisting simply of a lens holder, adaptor and condenser it opens up the incredible world of somatids to the micro-researcher, therapist and open-minded scientist. For further research read *The Persecution and Trial of Gaston Naessens* by Christopher Bird. Available from BSRF. 318pp. \$12.95

### HOMEMADE BIOGENESIS

Commentary by Jeane Manning on the book by Betty Zorotovich: *The Origin of Cells*

Official science today stands pompously in front of its edifices, protecting the jobs inside and denying entrance to heretical concepts.

Out in what is considered the Borderland, the science of the 21st century is being nurtured. Unencumbered by Dow Chemical or Department of Defense grant proposals, researchers joyously romp through a study of Life. Free of careers which are tied to a strictly chemical or mechanistic model of life, they celebrate nature's ways, and sing their awe of subtle energy influences.

Betty Zorotovich, a grandmother and former junior high school teacher, is one of those free spirits. She didn't accept the viewpoint of scientists who said she couldn't possibly be seeing what she was seeing under her student-model microscope.

She has now been "retired" for 20 years, but her research continues into further regions of unexplored territory. The odyssey is with questions about static electricity. She had been fascinated by kinesthetic-learner students who have to trace words with their



rs before they could learn. She questioned:

Why does the requisite energy reach the brain through the fingertips? What kind of energy is it?

Her first experiments led to discovery of the magnetic field around static electricity, and that was only the beginning. Seven scientist friends told her that what she was seeing was impossible.

"I began to suspect that like Aliases I had stepped through a plastic looking glass into a very strange world indeed. And it was a terrifying world, forbidden by the Law of Physics," she writes. The reader suspects a mischievous twinkle in the eyes of the genteel writer, who continues undaunted. "For a while I pretended I wasn't there, for who in their right minds would choose the physicists of the world as their adversaries? They are the most powerful, most respected, and also probably the most quietly feared men in history. And one of those scientists had been so incensed at my questioning that he cursed at me."

She then asserted her right to explore. "I could play, however. He couldn't complain about that, and I did want to check just a little more. If this bit of plastic could steal iron from Mother Earth, it could probably steal other things as well."

Betty Zorotovich's book, *The Origin of Cells*, chronicles her subsequent search for an answer to the riddle of cancer.

"It is a study of the basic field of energy...," she said in a telephone conversation in January, 1992. "It's a study of the atom, from the time it leaves its crystalline form until it leaves as a wave of energy, or of light."

"The whole purpose of the atom seems to be to achieve additional speed...until it achieves the speed of light, at which time -- off it goes!"

The book is a study of the atom in its adolescence, she said. "After seven years of observing, I realized...the atoms that make up metals are constantly being blown off, or rubbed off or escaping into the atmosphere, and it was those atoms I was studying."

Last year she reflected, in a private correspondence, on her "homemade physics". For 25 years she worked with learning disabled children most of the day, but took an hour each day, in the late afternoon when the sun worked best on her microscope, for her unusual research.

"In my headlong search for cancer, electric energy was tossed from the bottom to the top of the heap. Atoms enlarged again and again despite the curious superstition that they must not do that. Superstition also forbade them to unwind into waves. Above all

they could not be seen by ordinary eyes, nor photographed by ordinary cameras..." But they were and they did.

She ended the letter with a hope that physicists will come to the assistance of their fellow scientists -- physicians -- "to stop the flood of bastard life-like energy which is inundating us."

Many of the insights in the pages of her book ring bells for readers familiar with other pioneers of new science. She breaks new ground, in biogenesis and understanding the nature of the atom -- not in an expensive laboratory but in her home. She used an ordinary microscope, sunshine, rigid plastic from the hardware store, silk, magnets, and items found around the kitchen or dirt and leaves from outdoor.

Like other true pioneers, she is deeply excited about her work. (Didn't Wilhelm Reich's writings about his early research, in Oslo Norway, exude exhilaration as he described staying up late at night cooking stew and studying it under his microscope, while he explored his "bions" -- organic matter called up out of inorganic matter?)

Reichians will surely consider Betty Zorotovich as a "functional" thinker. The reader may see other tie-ins to Reich's experiences. For just one example, I was struck by her description of an energy as roaring up her microscope tube and searing her eye. She doesn't mention Reich as she travels her own road to biogenesis, but trenchant readers will note phenomena which hint of concentrated orgone energy, to use Reich's term.

*The Origin of Cells* is a gripping read for any scientifically-inclined person. When her husband becomes ill, Betty Zorotovich works against time to find clues to the nature of the Faceless Monster called cancer. It's also a how-to book, with her many experiments described clearly. She coins words to describe what she sees, but that doesn't impede understanding.

Her phrases are vivid and only make it easier for the reader to vicariously see, for example, the fierce electrical fire under the microscope. And the unforgettable moments such as when she was trying for spontaneous combustion in coal and instead induced living cells!

The book, 254 typewritten pages, is illustrated by drawings, such as a one-page drawing titled Germination of Starch Granules Produced by Electrostatic Energy. It is a practical book. The reader is given insights on effects of plastics, metals, magnetic fields from electrical cords and other hidden hazards in one's kitchen.

This reviewer's path of discovery which led to appreciation of *The Origin of Cells*

included visiting Dr. George Merkl<sup>1</sup> in El Paso in December of 1990, and seeing the astounding life forms growing under his own modest microscope in his dining room. He took time then to reflect to reflect on the basis of his prolific career of patents and honors which led to work on biogenesis and much more. He said Free Energy is behind it all. At that time he was also doing botanical experiments which proved the static charge in the atmosphere powers the pumping action which draws life-giving fluids up into the microcapillaries of trees and plants. (Electrostatics is also one of the main themes today among pioneering engineers of free energy research who build devices to tap it for power generation.)

It seems the relatively-unrecognized but truly great scientists of our century are working with one life force in its many forms. When the pillars of today's scientific hierarchy finally bite the dust, and a Science of the Life Force can gain a foothold in academia, Betty Zorotovich may well be lauded along with Dr. Merkl, Gaston Naessens of Quebec<sup>2</sup>, and brave innovators of past decades such as Reich and Royal Raymond Rife<sup>3</sup>.

Each had something powerful for cancer patients. *The Origin of Cells* mentions yam juice. Read the book for further insights.

Then watch for her second book, which is approaching the printing stage this year. The research covered in the first book gave her information needed to understand why synapses can be easily healed by electrostatic energy, which she has proven in recent dramatically successful work with severely learning-impaired students!

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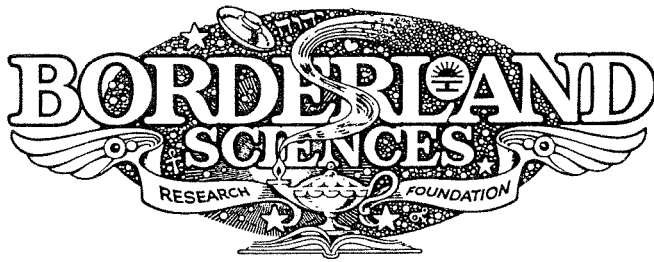
*The Origin of Cells* is available through Williams Bookstore, 708 South Pacific Ave., San Pedro CA 80731

1. See magazine article about the work of Dr. Merkl in recent issues of: *Extraordinary Science*, 330-A West Uintah Street, Ste. 215, Colorado Springs CO 80905-1095

2. See *The Persecution and Trial of Gaston Naessens: The True Story of the Effort to Suppress an Alternative Treatment for Cancer, AIDS, and Other Immunologically Based Diseases*, by Christopher Bird. Available from BSRF.

3. Bird's article "What has become of the Rife Microscope?" is appended to his book.





## BULLETIN BOARD

### ART & SCIENCE

Jan. 1, 1992. Everywhere we see evidence of crumbling of rigid ways. Decay makes compost for a new world to grow up through. But why are those who glimpse the shapes of the coming scene struck mute?

The answer lies in the overwhelming difference between that vision and the picture still presented by everyone else's opinion-molders.

What can I say to my sisters and brothers that they would believe? I'm only an ordinary journalist; how could I know fantastic technologies are possible and could help heal the planet? And who am I to see spiritual swellings and burstings? But we do see beyond the immediate crises. At the same time as sorrow for the Earth weighs the heart, we see hope. For those without the blinders of academic arrogance, a picture of future science emerges—a science of life, not science of destruction.

Unexpectedly, I'm led back in an understanding to where I was as a child on a farm in North Idaho—in awe of nature. Sitting beside a clear stream which splashes over its pebbles, water curling in vortexian dance and winding sinuously through the pasture under orgone-blue skies. An artist's soul sings.

*Perhaps artists will get out the word in time.*

We have to listen to the ways of nature and to our inner knowing, not to today's official "experts." Granted, scientists of the 20th century performed marvels. But their ignorance is equally astounding. In the 21st century if humans are to survive they will have to have recognized LIFE principles, not just mechanistic principles. They will then look back at 20th century science with sadness. Such a pitiful worldview, handicapped by blinders, refusing to recognize the existence of that

which our textbooks deem impossible. Science of the 21st century will know that an atom breathes. And that the earth breathes, as does all of life. We will know water's mysteries, and protect its life force. We will know the Secret Life of Metals, too — that metals resonate with cosmic

forces and even with an individual's thought field. "Tuning in" will further create vibrational medicine and energy devices. *The new growth is cause for hope.*  
Jeane Manning  
British Columbia, Canada

Many thanks for your thoughts on the future of the world. There certainly is hope, just keep the mind open and the TV shut off and the world will grow by leaps and bounds. We look forward to the reconnection of art and science and have made that the theme of our 1992 Borderland Sciences Congress.

### OPEN DOOR

I have enjoyed my first year with "Borderland" immensely! What a truly "OPEN DOOR" you are onto the real universe! I find myself immersed in a society where both religion and the perceptible government are pious phonies feeding the public their various biased scenarios about the nature of reality. None of the popular versions of reality gobbled up by the general public come even close to hitting the mark. The more I examine the various pitches thrown at us by establishment authorities, the more inconsistencies I discover! My attitude is that those who insist upon weaving blinders are choosing to be subject to the "tender mercies" of those predators in our society who do not! It's a downer! "Borderlanders" are certainly doing their part in the struggle against the hypnotic illusion of "consensus reality". Your Journal is one of the bright spots in my life! Much thanks.

Art Khalsa  
Cedar Rapids, IA

Thank you for being a member and contributing your viewpoint! BSRF would not exist

without the support of the membership. I wish we could keep up with all the research info and correspondence that comes in to BSRF HQ here. There is always enough material to do a monthly Journal, but not enough time and money with our current staff and budget. As BSRF expands we hope to be an open door to many more people than the 1100 or so members we currently have. There is no reason why we couldn't have 11,000 members or more. The more minds that actively seek out new information and work towards a life oriented science, the faster the old guard will pass on. Change is inevitable -- let's change things for the better!

### ETHERIC ENERGIES

Because most "scientists" are focused on electromagnetism and the "juice" which runs the universe, they miss the structural effects of what we call the "etheric" energies. I feel that we are at a very rudimentary level in understanding the mind and that the primary thing which is not understood is that one cannot "bracket out" perceptions. As the ancient traditions teach: before a person can actually use these mental energies on any level the inner emotional states must somehow be realized as an item. Not eradicated or controlled absolutely — but taken into account. This lack of self-awareness is why many parapsychologists and psychotronics people get odd results sometimes.

Eugenia Macer-Story  
Magick Mirror Communications  
New York NY

We are at a rudimentary level, but fortunately many people like yourself are working to raise themselves by their bootstraps and share their insights with others to spread seeds and keep them growing. The following letter from Trevor Constable shows that there are those with insights advanced enough to begin to categorize the structural effects of the etheric energies. Trevor's borderland research is a prime example of functional thinking and I know many Borderlanders anxiously await every bit of information that he puts out.

REVERSE ORGONE ACCUMULATORS  
Nov/Dec Journal is full of nuggets, as always...

On mobile homes: There is another aspect to their livability that is probably more significant even than aluminum tamination. The typical mobile home, such as Al Fry's beloved airstream, is actually an orgone accumulator in reverse, or negative

acc. By this, I mean that the standard rich design of a metal box with an insulating layer all around its outside — the basic orgone accumulator — is exactly reversed in a mobile home, and also in a typical jet liner.

Since Reich's time, when the orgone accumulator showed objectively that the second law of thermodynamics is not valid in certain specific arrangements of materials, oraccs have been used and further developed regardless of official sequestration of this breakthrough. Little or no attention has been given to the reverse oracc, with its metal exterior and non-conductive interior walls. Even the most limited mentality can understand that if you reverse the classic Reichian arrangement, you are likely to reverse its effects — although the "proving" aspects of it may be much more difficult than merely tracking the changes in a pair of calibrated thermometers, as with an oracc.

If you consider that Reich's finding was that non-conductive materials attracted and held orgone energy, while metals attracted and repelled that same energy, then layering will result in the energy leaving the metal side of the layer, and being "bound" to the non-conductive side of the layers. In any kind of closed container, whether a 1 cubic foot box, or a Boeing 747 fuselage, the jamming of batts of glass wool against the metal exterior must produce a lowering of the organotic or etheric potential inside the container. The energy departs the metal, outward.

In my view, one of Reich's greatest discoveries, which in due time will lead to the total upending of the fuel racket and the power monopoly with which mankind is cursed, is that etheric potential differences result in flow from low potential to high. If you transfer this cardinal finding to the 747 fuselage, for example, reduction of the potential within the structure becomes self-sustaining by virtue of this law. So also within Al Fry's beloved airstream unless he takes care to break the continuity of the box exterior by opening the doors and windows. In the case of the 747, they cannot do that, and the structure is hermetically sealed for pressurization purposes.

What, then, are the likely effects of living in a reverse oracc? Difficult to answer with any precision at this time, but there may be conditions of bioenergetic overcharge from living within such a structure. The individual organism draws upon a local environment of lowered etheric charge, and gives up energy to a local environment that carries a high etheric charge.

A healthy, non-neurotic individual may find the full-charging of his organism enjoyable and beneficial. A blocked or neurotic organism may well find the same environment decidedly taxing, as their organismic orgone energy is brought against their muscular blocks by the steady tendency toward full charging of the organism. A survey of mobile home residents to catalog any complaints they have about their life style, might prove highly enlightening.

As far as the more complex negative oracc known as an airliner is concerned, something of what happens to humans within them is discernible by anyone with even marginal perception of the etheric. On "red-eye" or overnight flights, where ambient lighting is minimal, an enormous extension of the cabin crews' biofields is readily perceived, as they move about in the cabin. Most of their life force appears to be pulled toward the periphery of the cabin, as though by magnetic action. Airliner velocity and conditions external to the aircraft undoubtedly play a role in the type of electrification through which the phenomenon appears right on the border of the physical dimension. My opinion is that much of the peculiar and pervasive fatigue that bothers airline crews is probably due to this phenomenon. A lot of life force is being lost through the properties of the sealed negative oracc that an airline fuselage is.

Although I personally skipped over the problem of finding thermic differentials and so forth within negative oraccs, I did apply the PRINCIPLE with good effect. I designed the "M.T. Bazooka" as part of my group's campaign to free ourselves from the need for water grounding of weather engineering devices. An "M.T. Bazooka" is a directable projector of etheric force, and we found in many operations in California and at sea, that they worked very well. The principle is simply that a negative oracc, when coupled into the primary continuum by a suitable resonant structure, will "shoot" etheric force to sky regions of higher etheric potential. The power source is the negative oracc itself. One does not have to worry about draining all the power out of the battery. That can never happen. The more etheric force is drawn out, the lower the potential inside the negative oracc becomes, which increases the shooting power of the assembly. These simple devices produced dramatic thunder and lightning effects around our base at Desert Hot Springs, when conditions and operational skill permitted their correct use. An array of M.T. Bazookas will drive a sky area of higher potential all the way to lumination

or discharge point. So the negative oracc is something else that the Old Order has to choke down eventually, along with Dr Reich's revolutionary, original invention. Tally Ho!

Trevor James Constable  
Hauula, Hawaii

Thank you for this excellent piece of information which will help many in their conceptualizations of etheric energies. I have never seen any material on the reverse oracc in any organomic literature, but it is obviously of major concern to any researcher in the field, as well as to anyone living in a mobile home -- or even flying in an airplane. Perhaps someday soon we will get a report from one of our members who has tested the thermic differentials and other properties of reverse oraccs.

#### GEOPATHIC ZONES

Subject: Hartmann lines or Geopathic lines.

As a long-time member, I appreciate the efforts of BSRF to bring to our attention important scientific research information on a formidable array of subjects which are on the borderline of believable by the uninformed public.

Although I have not contacted BSRF before, one subject now has really stirred my interest because the application of this concept may truly relate to the health and well-being of every person on earth.

The attached article refers to the work of two geobiologists:

First: Dr. Ernst Hartmann, Eberbach, West Germany whose investigation has continued for 40 years. He has written three books in German, titles not given. He publishes a magazine for scientists entitled *Weather, Earth and Man*, in German.

Second: Blanche Merz, Vevey, Switzerland has been studying the subject for 20 years. She has written two books on the subject in French, *The Soul of the Place*, and *Points of Cosmic Energy*.

I would very much appreciate documented information on this subject, where to obtain it, and the cost. Also, if BSRF would be considering later articles on this subject, in the JBR. Thank you for your assistance.

Vernon L. Reiersen  
Ft. Walton Beach FL

Thank you for your enclosures and comments. The article is from *Health Discoveries Newsletter*, from The Swannanoa Institute, P.O. Box 348, Ivy, Virginia 22945, and is titled: [The Health Dangers of Sleeping on a Hartmann](#)

Line! "The entire earth is threaded with an invisible grid of Hartmann lines. They appear every 6-8 feet. They are named after the German medical doctor Ernst Hartmann." Drawings are shown with an evenly spaced web of Hartmann lines. These lines, by other names, have been mentioned in past Journals in articles concerning geopathic zones, which are zones of biologically interactive energy -- usually referred to in the detrimental sense -- emanating from the earth, usually connected to underground streams or faults. In the Nov-Dec 87 and Jan-Feb 88 JBR we ran a two-part article The Negative Influence of Water Veins by Zbigniew Wisniewski, a Polish researcher, and in the May-June 1990 JBR we ran Noxious Earth Energies and Their Influence on Human Beings by Kathe Bachler. In the Noxious Earth article these lines are named after Dr. Manfred Curry -- called a Curry Net or Curry Crossing. Vince Wiberg gave an excellent presentation on geopathic zones at our 1st Borderland Sciences Congress in 1990. He travels the world dowsing people's homes to find geopathic, bio-negative earth streams and finds them in various patterns depending on ground morphology. Speaking for myself, living in Humboldt County, California, an area of tremendous faulting and innumerable underground streams, I can say that these lines around here do not follow any specific gridwork, but are geometrically related to ground morphology. Perhaps Hartmann's discovery of the grid was over a geologically homogenous area, and the grid is distorted by specific factors in others. Forget not also Lakhovsky's discovery that the rate of cancer in Paris was directly related to soil morphology -- over large areas and not on specific lines or grids. This is a vast subject on which we would like to hear more. We do not have any currently available research material specifically on Hartmann lines, though we do have the taped lecture of Vince's presentation. (all 1990 Congress videos are now \$19.95). This journal is definitely open for more material on this subject, either Bulletin Board submissions or in article form.

#### SUPERCONDUCTIVITY

Mr Ronald C. Bourgoin of Tarsboro NC gave the banquet talk in 1983 at Atlanta's Non-conventional Energy Meeting. His subject was his success in "high temperature" superconductivity. "Thinner is Better -- Forming Ambient Temperature Super Conducting Filaments". This was several years before the IBM discoveries of liquid nitrogen temperature superconductivity which has become a major scientific endeavor. At the time of the Atlanta meet-

ing, I felt that very few people were interested in Mr Bergoin's claims. However, Mr Bergoin was convinced and time gives evidence he might have had what he claimed. He claimed superconductivity success with alloys at 23 degrees K.

Unfortunately, he was a very disillusioned young man with health problems due to the chemicals he had worked with. In addition he felt the lack of support and had been, in fact, let go from his company.

Can you provide some kind of personal update on Mr Bergoin? It would be of great interest to many of us.

R. Hampton, VA

We have no information of Mr. Bourgoin in our files. If any readers have any updates we will pass them along.

#### RADIONIC QUESTIONS

I have two questions concerning radionics machines. I would appreciate very much any information you have in answer to the following:

(1) I understand that Dr Abrams came to find that he could and did use his radionics machine at a distance from the subject, unconnected by wire, but that the AMA and FDA were not apprized of this, for policy's sake. (Dr Ruth Drown's machine was used at a distance, as well as the radionics machines today.) Where is there written proof regarding Dr Abram's findings and use at a distance?

(2) Did the original Abrams radionics machine rid a subject of negative entities, and if so, where are his findings recorded for proof of this?

(3) How do the radionics machines today differ from the Abrams machine and from those used in the 1930s by Dr Drown and Dr Hazel Parcells -- any significant changes of operation and of results?

Thank you very much for any assistance you can give to clarify these areas of importance. My family for many years benefited from two prominent medical-homoeopathic doctors who used radionics. M.H., Pennsylvania

In response to your questions: 1. Abrams must have used the instrument at a distance, because he was entrapped by being sent a spot of chicken blood which he diagnosed as an ill human's -- nobody ever checked to see if the chicken had the diseases that were detected! I don't know exactly when the step to witness use was, but I'm sure it is contained in the various Abrams books we have reprinted. The FDA did not exist in that day, the AMA I'm

not sure of.

2. I haven't seen anything in the literature suggesting that Abrams used his instrument to rid a patient of negative entities -- his was straight-forward medical research. This may not have been his framework for understanding, but it is a valid viewpoint. What really is a disease? Entity? Germ? Perhaps they are both the same, the bacteria/virus is the physical anchor for an disturbance in an organized life-field.

3. The Abrams and Drown instruments represent physical structures in space. The wire resistors act like a resonant antenna which is tuned by setting the rates. There is still some equipment built like this, but mostly substituting capacitors for resistors -- the outgrowths of the Wigglesworth-Hieronymus Pathoclast of the 1940s. Peter Lindemann built an instrument using a resistor/capacitor coupled for each dial position. There are variations possible, but they all represent physical structures in space. Over the last six or seven years there has been the advent of computerized "radionics." This really falls into the realm of psycho-tronics, that is, the instrument acts as a focus for psychic energy and is really secondary to the radionic process. The original radionic instruments directed the etheric force via geometric relationships, and Dr. Drown especially trained her operators to NOT allow any psychic energy into the instruments, because it would interfere with the true radionic process. This subtle difference is lost on today's workers in the field, except the Hieronymus group which seems keenly aware of it.

#### MWO CORNER!

Here is a nice present for you and your readers. Some tidbits about George Lakhovsky. I phoned my knowledgeable friend on Sat, 14th Dec. To my surprise not only was he at home but he invited me to spend the afternoon with him the following day.

Firstly, it is comforting to know that there are still about four original MWO's within a radius of 200 miles from Paris, and the people who have them are likely to take good care of them.

Secondly, from what I can gather, L. took very great pains with each MWO. I understand now what my friend meant when he said that each one was different. L. would calculate all sorts of parameters relating to the place where the MWO was to be used. He would then do the "fine tuning" with the help, sometimes, of an usual cleric Abbe Breuil.

L. arrived in France around 1896. He was a friend of Tesla and when the latter

to France the first person he wanted to see was L. I don't know anything about this early period but two episodes occurred later which gave L. quite a bit of money and enabled him to finance his future research himself. 1) During the 1914 war, there was a dearth of methylated spirits in France and L. negotiated supplies, on behalf of the French government, with the Russians. 2) He invented a gadget which was used everywhere on the French railways and which brought in tidy sums in royalties. He was thus able to invite titled people to his table, the Count of this and the Duke of that and, of course, Abbe Breuil. This curious cleric was very well known in France, not for saintly endeavors on behalf of the Church but for his exploration of caves in search of traces of early man. He became the High Priest of Pre-history. However, what interests us here is that he was an extraordinary medium. For instance, L. at table, would say something like this: "Abbe, I've just thought up a new design for the MWO (passing him the drawings) what do you think of it?" And the Abbe might reply: "The antenna's too thick here, you should take 1 millimetre off and here, you are using the wrong kind of metal." In this way, L. gradually refined each model, using the Abbe's intuition to verify his own findings, until he got it as near perfect as possible.

What follows is a translation of the notes scribbled down by my friend yesterday. I offer no comments because I wouldn't know a Hertz dipole if I fell over one in the dark.

These are some of the parameters taken into consideration by L.

- 1) Diameter: D.
- 2) Thickness of the wire of the tube (not to be confused with the section).
- 3) Distance "e" between the two ends.
- 4) Orientation of the circuit with respect to the horizontal plane (29° 70' N).
- 5) Kind of circuit. Should it be made of metal or hollow glass containing chemical salts.
- 6) Orientation of the distance "e" with respect to the magnetic North.
- 7) Study of the terrain: the mineralogical, geological, geodesic and tectonic factors.
- 8) Study of the nature of the surface of the circuit and whether and how it should be covered.

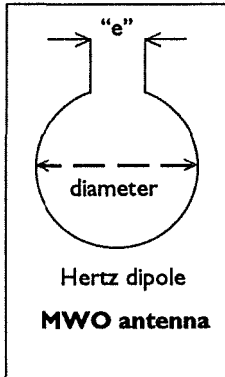
I see now that what I had taken for solid tubes making up the antenna were in reality hollow tubes.

I hope that you and your readers will find this information interesting. It sheds a new light on how L. operated. He used the

pendulum a lot and, as we have seen, the mediumistic talents of his friend Abbe Breuil. My best wishes to yourself and to BSRF in 1992.

Ron Crossley  
Solesmes, France

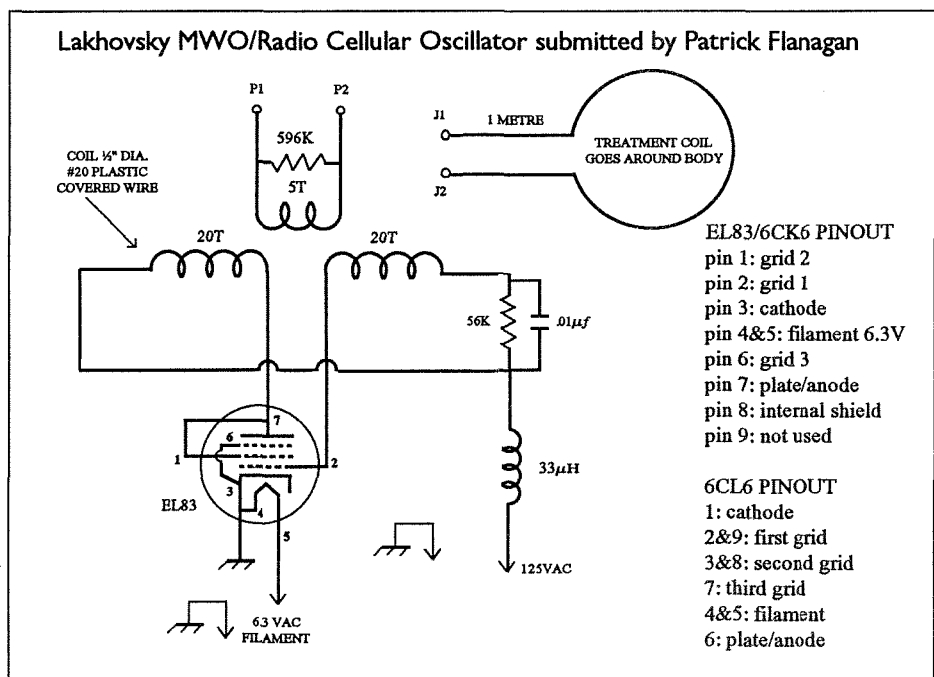
Your input on the MWO project has been most helpful to everyone trying to find the truth of the story, and I offer my thanks and I'm sure the thanks of BSRF members the world around. Georges Lakhovsky was a complex individual whose ideas on cell regeneration have ignited many a seeking mind. It seems as though he had some rather interesting friends also, Nikola Tesla, Professor D'Arsonval, and the curious Abbe Breuil! Your friend's comments indicate some important factors in Lakhovsky's considerations: He was very concerned about the orientation towards the natural energetic lines of the earth, even considering latitude (what you have termed the horizontal plane) as a determining factor in the energetic output of his devices. He must have been aware of the interaction of the electric output with the planetary magnetic, electrostatic and etheric fields. He was also concerned about the underlying earth itself. In his Secret of Life he proposes his theory that cancers are more predominant in areas where the soils (such as



clays) reflect the cosmic radiation back to the surface, causing interference patterns that disrupt the body's energetic flows. It is interesting to note that his antennas were constructed with all these factors involved. It is also very interesting that he relied on the pendulum and the mediumship of Abbe Breuil for his refinements. Lakhovsky was a true borderland scientist! Also of note is your point #5 mentioning the hollow glass circuit containing chemical salts. Something new to figure in our researches. We also have the open question of whether or not some of his tube antennas contained rare gases, which his MWO Tube Patent implies by its refinements in miniaturization. This has been an exciting period of discovering what Lakhovsky was really up to in his vast researches. Please read on....

### A REAL LAKHOVSKY MWO!

This schematic is from a Lakhovsky MWO manufactured by Lakhovsky's son in Paris long after the untimely death of his father in the 1940s. It shows definitively that the development of the MWO followed the path of the radio-cellular oscillator and not that suggested by the "Beck-style MWOs" which have been the type of equipment researched in the US over the last quarter century. Our many thanks go to Patrick Flanagan for providing this information to BSRF. Patrick obtained the unit, removed the seal at risk of voiding the warranty, and provided us with the circuit description you see here. Also, a special thanks to Roger Modjeski of RAM Tube Works of Santa Barbara, California for



providing the pinouts and tube conversion info. As far as our extensive research notes show, this is the first real, complete schematic of a working Lakhovsky MWO that has been published in the US!

This unit, which fits in a small box that can be held in the hand, is a very powerful white noise generator with a treatment coil constructed from coax cable which is looped around the subject when in use. The treatment coil loop is 1 meter in length, the center wire and shield are connected. This unit will interfere with electronic communication devices up to the satellite TV range, and may be illegal to operate under FCC rules -- this needs to be checked. The tube is an EL83, a French tube (Telefunken manual gives the German number as PL83) whose US equivalent is given as a 6CK6 video output pentode, but GE never made them. It is very similar in function to a 6CL6 which has a different pinout. We provide the pinouts for both.

The 5 and 20 turn coils are 1/2 inch diameter tightly wound with #20 plastic coated wire. They are air core and all three are wound in the same right hand direction. They are spaced tightly and arranged exactly as shown. Varying the physical distance between the primary and secondary coils would vary the output strength. The resistors are 1/2 watt. The .01 capacitor is ceramic at 500 volts. The choke is 33  $\mu$ H. The power supply is not shown, but is implied by the circuit.

We have no exact details of the interaction of this generation of Lakhovsky device with the human system, only that suggested by Lakhovsky's original research and its extension through time. This data is provided for research purposes and to record yet another development in MWO research.

We would still be most interested in finding the schematic of one of the original MWOs pictured in Lakhovsky's various publications, as it would provide the exact antenna feed for the concentric ring antennas and other pertinent details.

Also, for those who have contacted us seeking a discount on the **Electrostatic MWO** we will take \$200 off the price until May 31, 1992 if you mention this when ordering.

## RECEIVED

\* **The Rife Way III** by Mark A. Simpson, P.O. Box 710088, Dallas, TX 75371, \$29.95pp. This is the most recent version of Mark's ongoing search for the true story of Royal R. Rife's researches into the treatment of disease conditions with frequencies. Mark indicates that he is coming around to seeing that the secret of Rife's pathogen-destroying process is in the beat frequency caused by the interac-

tion of the audio range "Rife Frequencies" and the output range of the beam tube antennas. It only makes sense -- Rife was heterodyning UV and visible light in his microscope so that the low beat frequency carrying the optical image of viruses (with a wavelength shorter than visible light) would be in the visible range. His reach for the proper "mortal oscillatory rate" to shatter the virus would put him in the same range -- above visible light! Rife's work was obviously not the pumping of audio-range frequencies directly into the carcass via TENS-like (Transcutaneous Electrical Nerve Stimulation) methods -- even though certain system altering results can be expected from that sort of modality, and Mark reports on such results, which he terms "bug blows" -- they have them on video. This book gives an excellent overview of the entire Rife research field and has listings of what he calls "Rife-like" instruments from various manufacturers. He also has a lot of current correspondence with researchers in the field, and listings of various frequencies used on the "Rife-like" equipment. There are a lot of insights in this book, and it is interesting to note the connection between Rife and Albert Abrams -- with the possibility that Abrams's equipment (radionic in nature) was used to modulate some of Rife's! One sparkling gem of information that we had never heard of before pops up in this book, the discovery by Rife and fellow researchers of a "new band of oscillations" which killed every bacteriological culture in the lab, *broke glass of a certain shape throughout the lab*, and killed mold on leather chairs, yet did not harm humans or lab animals! Unfortunately, little more is known about the "new band" than what is said here, but it certainly shows what area Rife himself was working on. Whatever your current level of interest in Rife's work, or in electro-therapeutics in general, you will find **The Rife Way III** to be an excellent piece of ongoing research. Highly recommended, both to dispense further this information, and to support a clear-thinking researcher who is trying to discern the truth.

\* **INFINOUS SPACE ... Where the Outer Limits Reach Inner Emotion**, Drew Pearson Cartoons, P.O. Box 31046, Santa Barbara, CA 93130, \$3/issue. The first edition of this comic book is rather enjoyable, it's about a kid who is supposed to do a science report for school. The kid has some incredible thoughts which causes him to give a deeply insightful report on the structure of the universe, to which the teacher has a typical biopathic reaction and screams at the kid.

(Many more items were received, but we are out of room. See you next issue!)

## CONTACTS

\* Tesla Inc, 820 Bridger Circle, Craig CO 81625, is the publisher of the **Journal of Wireless Power Transmission**, \$25/year + \$15/o'seas airmail for 3 issues; and also runs the **Tesla Bulletin Board** for computer users who wish to find or exchange data. Voice line is (303) 824-6834 and data line is (719) 486-2775, (300, 1200, 2400 baud -- 8,N,1)

\* **BROOKLYN GHOSTS!** Two Park Slope authors are looking for stories of the weird and supernatural in Brooklyn, NY. Your ghost story can be included in their forthcoming book **Brooklyn Ghosts** about the borough's most elusive residents. Please write J. Giles O'Brien at 603 3rd Street, ground floor, Brooklyn, NY 11215, or call or fax at (718)788-8042.

\* **ROCK DUST** sources and inspiring practical info on the remineralization of our planet's soil. **Remineralize the Earth**, 152 South Street, Northampton, MA 01060. Subscription rate \$15 for 3 issues in the US and \$18 outside.

\* **MAYA ROCK DUST** and sustainable agriculture consulting from PlanetCom, Box 33, Mountain Center, CA 92361, phone (8 569-3072

\* **ALTERNATIVE ENERGY INFORMATION**, catalog from: H&A Industries, Route 2, Box 35-E, Bowling Green, MO 63334.

\* **THE UNIVERSITY OF AVALON**, 8B Market Place, Glastonbury, Somerset BA6 9HW, England. The University was established in May 1991 to re-establish Glastonbury as a great sacred centre of learning for the development and expression of the individual and collective physical body, emotions, mind and spirit. Studies include: Sacred Arts, Sacred Sciences, Health and Healing, Consciousness, Spiritual Revelation, Human Potential, and Planet Earth. Faculty lecturers include John Michell, Geoffrey Ashe, Kathy Jones, Terry Walsh, and many others. All courses are at Glastonbury.

\* **NATIONAL SIGHTING YEARBOOK 1990 - Data on 954 UFO sightings from 1986-1990**. An excellent research resource from the National Sighting Research Center, c/o Paul Ferrughelli, 60 Allen Dr., Wayne, New Jersey 07470.

\* **WIND & WEATHER**, P.O. Box 2? Mendocino, CA 95460. An excellent source for sundials, barometers, thermometers, rain gauges, wind speed monitors, weather vanes and literature.

## NEWS FROM THE BORDERLANDS

Compilation & Commentary by Tom Brown

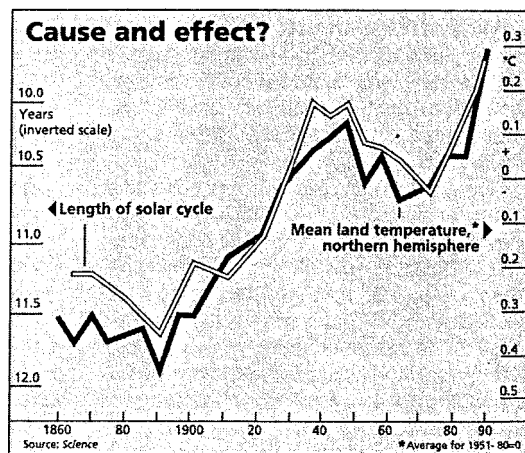
**UNDERGROUND GOD MAY END UP IN COURT.** "A consortium sued the Australian government yesterday for refusing to lift a ban on a mining project imposed after Aborigines said digging the ground would disturb a god and set off mass destruction." The three-company consortium had already spent \$11 million on exploration before "the government blocked the project and incorporated the zone into the Kakadu National Park when elders of the 600-member Jawoyn tribe said it would disturb the god Bula in what they call the Sickness Country, causing earthquakes and pestilence..." (*San Francisco Chronicle*, Feb 11, 1992)

**MEDICAL MONKEYS!** The beginning of the Lunar Year 4690, The Year of the Monkey, brought on an official announcement that "Monkeys May Know Medicine -- Scientists marvel at jungle animals' exploitation of useful plants." The article gives several examples from South America and Africa of how monkeys seek out certain plants to aid in fertility or rid them of worms. (*San Francisco Chronicle*, Feb 8, 1992)

**ARTY ANIMALS.** As earth's ecosystem gets more and more disrupted we can expect the life-forms to reflect these changes accordingly. In Napoleon, Ohio a group of racoons have been acting strangely. Normally coons are nocturnal animals but these have been "staggering around town in the middle of the day, turning somersaults, and even darting into homes to play under the Christmas tree." Meanwhile in West Bengal, a herd of elephants has been breaking into an Indian Army camp regularly to guzzle their rum supply. "New Delhi's *Statesman* reported that electric fences, bonfires, and railings have been no match for the invaders. The wily animals have learned to hose out the bonfires, and to demolish electrified fences by smashing them with wooden logs grasped in their trunks. Once inside the camp, they break open the bottles of rum, then stagger away once they have their fill." Perhaps they are fed up with their declining quality of life and wish to drown their sorrows. Some of their cousins have taken a wilder approach to the problem. In the central Indian state of Madhya Pradesh elephants went wild and trampled four people to death when the villagers attempted to chase the elephants away with noise and brickbats. "Meanwhile in northern India, rogue elephants have killed at least 31 people this year in Assam state, sometimes after guzzling barrels of homemade beer in the villages they attack." Perhaps we should send a peace mission to the herds and find out ways of easing their discontent. I reported on

brains than humans and communicate with subsonic (ELF) waves. "There has never been an elephant 'problem'. There is no elephant 'problem'. There is only a human problem. Exceptionally, the Masai and the Nandi in Africa are reputed to know that the elephant represents another, older order of things; that they are survivors of another age, and consequently give them priority in matters of land tenure." Heathcote Williams. (Source: *Earthweek - A Diary of the Planet*, Dec 20 & 27, 1991. Credit: Haroldine)

**SOLAR/WEATHER CONNECTION.** For many years researchers have been trying to find a direct correlation between solar activity and weather patterns on earth. There is an obvious correlation between solar flaring and geomagnetic storming, but no long term weather con-

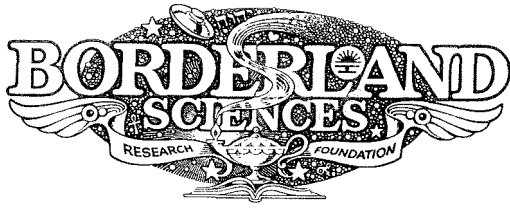


nection has been determined to the point of acceptance... until now. Eigil Gris-Christensen and Knud Lassen, two researchers from the Danish Meteorological Institute, have come up with a simple connection, so simple that "their colleagues distrust such disingenuousness; but, as yet they cannot show that it is wrong." It has been considered that the small change in solar brightness, around 0.1% during the 11-year cycle, is enough to affect the severity of northern winters, but this is widely disputed. The new correlating factor discovered is that the "sun appears also to exhibit an 80- or 90-year cycle, during which the peak intensity of the 11-year cycle varies, as does its length. [The Danish researchers] think that the sun is brightest when the 11-year cycle is shortest. Putting the solar-cycle length and the surface temperature of the northern continents over the past century on to the same graph, they have found that the two fit together astonishingly well." see chart. Despite the evidence, "scientists are loth to discard established theories, even unsatisfactory ones,

on the basis of evidence with no theoretical underpinning." (emphasis added) In other words, what you see doesn't count unless you have a theory that fits in with previously accepted theories. Reality is secondary! This same flaw in 'modern' scientific method surfaced recently when an ice cap was discovered on Mercury. Even though the evidence was right in front of the scientists, they would not accept it until they came up with a new theory that allows the ice cap to exist in their conceptualizations! (Source: *The Economist*, 30 Nov, 1991)

**THE GREAT AMERICAN MEDICINE SHOW** is a book by David and Elizabeth Armstrong published by Prentice Hall, of which an excerpt showed up in *IMAGE*, the Sunday magazine of *The San Francisco Chronicle*, Nov 3, 1991. Albert Abrams comes in for a roasting in this book. It gives a fairly accurate rendition of the use of the apparatus, which of course is made to look like "a Rube Goldberg device if ever there was one." Abrams was such a quack that he believed that "every disease has a signature vibration that can be measured"! It goes on to state that Abrams had some excellent support and that his data was accepted as evidence in a paternity suit, but that serious challenges to his work interfered with his success--the first being the "chicken blood" sample sent to Abrams which he diagnosed as general cancer and tuberculosis of the genital-urinary tract. Also mentioned is that R.A. Millikan, a Nobel Prize-winning Cal Tech physicist, concluded Abrams' inventions "did not rest upon any scientific foundation whatever...." Scientific American investigations "concluded that E.R.A. [Electronic Reactions of Abrams] did not exist. A New York Times editorial,

commenting on the report, observed: "of all this country's many medical quacks and charlatans, Abrams showed the most cynical confidence in the amount of credulity, of gullibility, characterizing a considerable fraction of its inhabitants, and for the exploitation of that fraction, he devised a scheme of magnificent absurdity." The Armstrongs are obviously poor researchers because they have ignored the explicit challenges to the *Millikan* and *Scientific American* studies presented by active users of the equipment -- which have been republished by BSRF in 1991 as **INVESTIGATIONS OF THE E.R.A.** They claim "Most traces of Abrams have... vanished", but fail to mention that much of Abrams' material is still available and that there were other investigations such as those of the Intl Hanemannian Committee which showed that there certainly was a novel energy present in the Abrams equipment. A large body of evidence exists describing the reality of the radionic impulse in medicine, and no hack job will change it!



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### 1992 CONFERENCE SCHEDULE

**OZARK UFO CONFERENCE**, April 3-5, 1992, Inn of the Ozarks, Eureka Springs, Arkansas. \$35/person. Register with Ozark UFO Conference Fund, Route 1 - Box 220, Plumerville, Ar 72127 or call (501) 354-2558

**7 Continent Dowsers Conference and Dowsing School**, June 18-21, 1992, Holiday Inn, Matteson, Illinois. Info: 7 Continent Dowsers, P.O. Box 192, Lansing, IL 60438

**The First World Congress for Electricity and Magnetism in Biology & Medicine**, June 14-19, 1992, Orlando, Florida. Info: First World Congress, 120 West Church Street, Frederick MD 21701

**The International Society for the Study of Subtle Energies & Energy Medicine Conference**, June 26-30, 1992, Boulder Colorado. Info: ISSEEM, 356 Goldco Circle, Golden, CO 80401, phone (303) 278-2228

**International Tesla Symposium**, July 2<sup>nd</sup> - 26, 1992, Colorado Springs, Colorado. Contact Steven Elswick, 17 East Las Vegas, Colorado Springs, CO 80905 (719) 475-0918