QUICK SEARCH
GO

HEADLINES
ARCHIVE
ENVIRONMENT
REAL X-FILES
SCIENCE

ABOUT US
ADVERTISE
CONTACT US
CONTRIBUTORS
EARTHFILES SHOP
SEARCH IN DEPTH
SUBSCRIPTION

LOGIN
LOGOUT

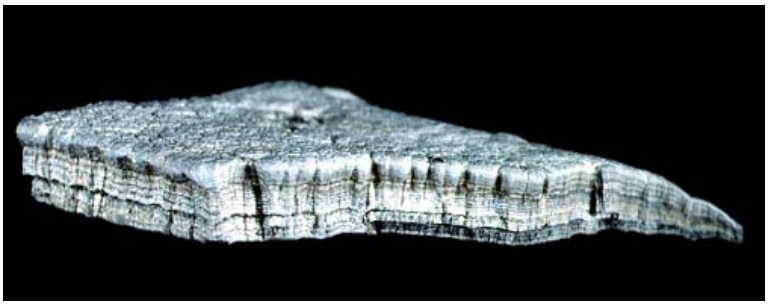
HELP

Printer Friendly Page

Earthfiles, news category.

Share: Digg Facebook StumbleUpon

Part 2: Mysterious Bismuth/Magnesium Metal from Wedge-Shaped Aerial Vehicle



Alleged extraterrestrial metal taken from the bottom of a "wedge-shaped craft in 1947" was created from alternating layers of 1-4 microns dark bismuth and 100-200 microns silver magnesium/zinc alloy, approximately twenty-five to thirty layers thick. Each of six pieces received were "formed" with a curvature that tapered, as shown to the right in photo magnification above.

Return to **Part 1**

May 2 , 2006 Albuquerque, New Mexico - *Coast to Coast AM* and *Dreamland* radio host, Art Bell, called me and said there were half a dozen pieces about two inches long, an inch wide and about a quarter-inch thick. One side was dark and the other side was a shiny silver.

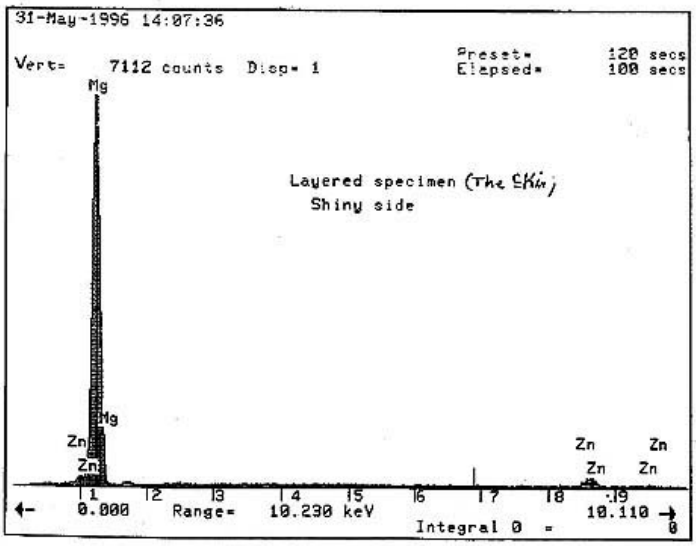
I contacted the university professor who agreed to analyze the new material and Bell shipped two fragments to him, keeping the other four in a safe deposit box.

The professor's first step was to photograph the metal pieces as they arrived at his laboratory. He placed the dark side of one piece on the left and silver side of the other on the right, both next to a quarter coin that is about an inch in diameter for size comparison.

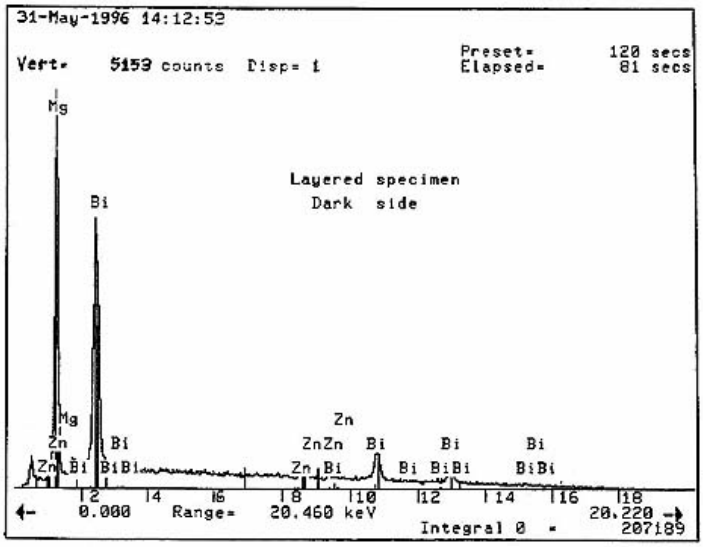
Photograph of two metal pieces from the South Carolina writer's second shipment of six received May 27, 1996. Each piece had a dark side and a shiny silver side. On the left, the dark side is up; on the right, the silver side is up. An inch-diameter quarter coin is for size comparison. Photograph by university professor © 1996.

On June 8, 1996, the professor released his first report about the material. He had examined a cut and polished cross-section with the scanning electron microscope and energy dispersive spectroscopy (EDS). He stated:

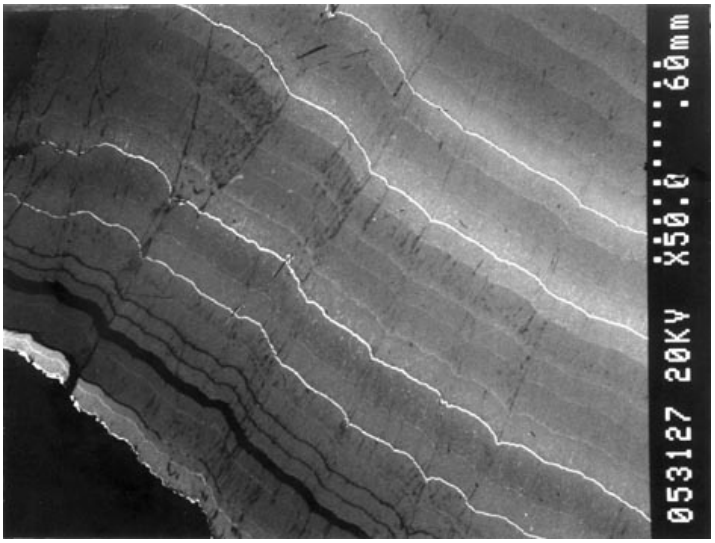
> "Each sample had a 'silvery,' shiny side with a rough (granular) appearance. The other side was blackish-gray. Looking at the samples edge-on, numerous layers can be seen. The samples were hard but brittle, and a few small pieces could be broken off using a small hand vice and manual pressure.
>
> "Energy dispersive spectroscopy (EDS) revealed that the shiny side contained more than 95% magnesium (Mg) and a small amount (2-3%) of zinc (Zn). The dark side contained a significant amount of bismuth (Bi).
>
> "...the material appears to represent layers ... consisting mainly of magnesium and a small amount of zinc separated by thin layers containing a high bismuth content."



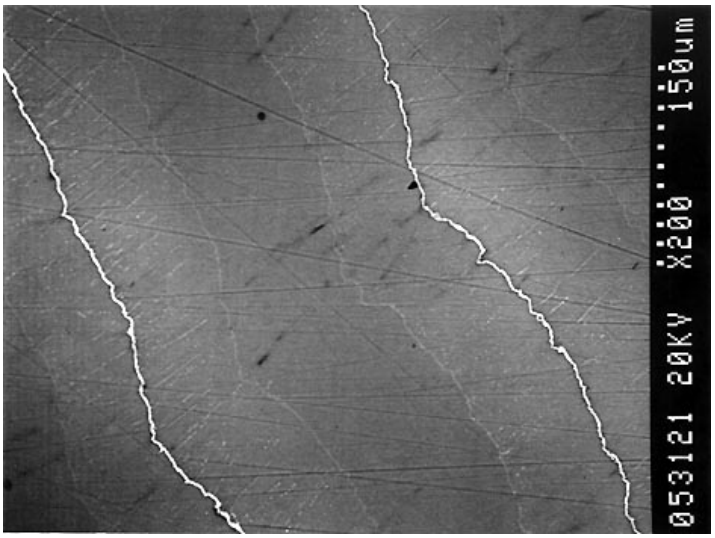
Above: Magnesium (Mg) spike and small amount of zinc (ZN) in EDS analysis of silver layer.
Below: Bismuth spike in EDS analysis of black layer. Spectra by university professor.



The SEM was set in a "back-scattering" configuration so that heavier elements show up brighter. Therefore, the dark bismuth appears as thin white lines and the much lighter magnesium/zinc shows as darker shades of gray. The professor measured the layers and found that the thin, wavy lines of bismuth varied from one to four microns, about half the diameter of a human blood cell, and the magnesium/zinc varied from one hundred to two hundred microns in thickness. One scientist thought the waviness in the metal layers might be a fractal wave pattern superimposed deliberately during the process of layering the metals together. If so, the metal might resonate with a specific electromagnetic frequency. Or, the waviness might be the result of heat absorbed in the metal's production or function.



Scanning electron microscope (SEM) photograph at **50 times** magnification
of the alternating layers of bismuth and magnesium/zinc. Photograph © 1996 by professor.



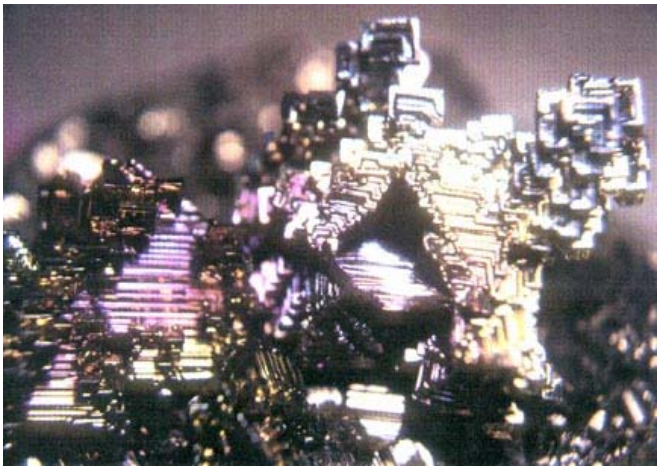
Scanning electron microscope (SEM) photograph at **200 times** magnification
of the alternating layers of bismuth and magnesium/zinc. Photograph © 1996 by professor.

Later the professor did more refined analysis with Wavelength Dispersive Spectroscopy (WDS) and said:

> "The material corresponds to layers of Bi and Mg/Zn with the weight percent of the Zn varying slightly from about 2.4% to 2.9% between Bi layers. No Zirconium (Zr) could be detected with the Mg/Zn area which is frequently found in magnesium/zinc alloys."

In summary, the metal fragments allegedly from the "central underside of a wedge-shaped" spacecraft found in New Mexico have about twenty-five alternating layers. The bismuth layers average one to four microns and the magnesium/zinc layers average 100 to 200 microns.

Bismuth is a hard, brittle metallic element that is greyish-white with a tinge of red. That pink color in the stomach medicine, Pepto-Bismal, comes from a bismuth ingredient.



A pure, man-made bismuth crystal. Photograph © 1996 by Linda Moulton Howe.

Bismuth's atomic number on the Periodic Table of Elements is 83. Lead is 82, so bismuth is heavier than lead. Bismuth is frequently found in ores of tin, lead, copper and cobalt. Bismuth is not attacked by hydrochloric acid, and only slightly by hot sulfuric acid. But the element is rapidly dissolved by either dilute or concentrated nitric acid.

Further, the *Guide to Uncommon Metals* says, "Bismuth is one of the few metals that expands when cooled, like water does when it turns to ice, and that makes bismuth valuable for detailed metal castings. Bismuth also has a low melting point, but its thermal conductivity is lower than that of perhaps every other metal with the exception of mercury, and its electrical resistance is high. A modern use is as a coolant for nuclear power reactors."

Bismuth is the most diamagnetic of the elements - meaning it resists penetration by magnetic fields more strongly than any other element. Magnetic field lines tend to be displaced around bismuth, rather than passing through it. Bismuth also has the greatest Hall Effect. That means if a voltage is placed on bismuth while the metal is in a magnetic field, a current flow will be induced that is ninety degrees to the voltage. Bismuth is an efficient absorber of infra red energy and researchers are experimenting with bismuth coatings that will convert heat to electricity. Bismuth is also added to metal mixtures in superconducting research.

Fifth Letter from "Grandad" - July 5, 1996

On July 5, 1996, the fifth and final letter from the South Carolina source added a few more comments about the layered fragments, supposedly copied verbatim "from Grandad's journal":

"Sample extraction radiated light for a full (3) hours. Originally located on central underside of Wedge-shaped Disc. Speculate some type of Shielding to enable Craft & Crew to survive accelerated entry into atmosphere, when Craft was experiencing uncontrolled descent. Pile of blackened ash was analyzed and ash was confirmed of same elements of layering. Ash consisted of (sic) fiberous dust & residue. Ash & all debris swept into bagging. Bags placed in tagged boxes. Boxes placed into Metal Footlockers. Initial examination (offsite) conducted at New Mexico Institute of Mining & Technology. Secondary examinations at Los Alamos Facility. Footlockers subsequently airlifted by Courier to Wright Field, Ohio."

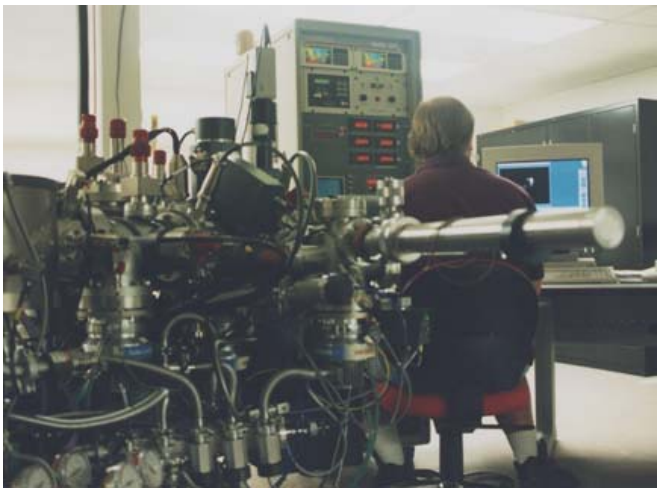
In addition to the unfamiliar combination of bismuth and magnesium/zinc, there were questions about the isotope ratios in the magnesium. Isotope refers to the number of protons and neutrons in the nucleus of each atom. For example, magnesium on Earth is made up of about eighty percent 24-Magnesium. That means there are twelve protons and twelve neutrons at the center of each 24-Magnesium atom.

The other twenty percent is equally divided between 25-Mg, which has one additional neutron compared to 24-Mg, and 26-Mg, which has two additional neutrons compared to 24-Mg. If the layered metal were truly extraterrestrial in origin, some wondered if anomalies might be detected in those ratios, or percentages, of isotopes.

One such anomaly was reported in 1957 when a metal fragment allegedly from a UFO in Ubatuba, Sau Palo, Brazil, was analyzed by the Brazilian government in laboratory tests. The fragment was found on September 14, 1957, after eyewitnesses saw a "flying disc" explode into thousands of fiery fragments which fell onto the beach and sea. The metal tested to be nearly 100% pure magnesium and was 6.7% heavier than ordinary pure magnesium. Former NASA scientist, Paul Hill, calculated that the density anomaly could be explained if the metal were the pure isotope 26-Mg not found naturally on Earth. Supposedly, that Brazil metal no longer exists to test further. (See More Information below.)

I learned that an ion microprobe, which could analyze magnesium isotopes, was newly installed at the Carnegie Institution of Washington, D. C. After discussions with Dr. Erik Hauri in the Department of Terrestrial Magnetism, who agreed to analyze the layered Bi/Mg metal, I drove to washington on July 20, 1996, with a cut and polished slice of the layered material. Dr. Hauri found about 11% more 26-Mg in our mysterious sample, but still not outside terrestrial ranges for magnesium metal.

Slice of bismuth and magnesium/zinc layered metal being placed by Erik Hauri, Ph.D., operator of the ion microprobe, into container for magnesium isotope ratio analysis on July 20, 1996, at Carnegie Institution of Washington, D. C. Photograph © 1996 by Linda Moulton Howe.



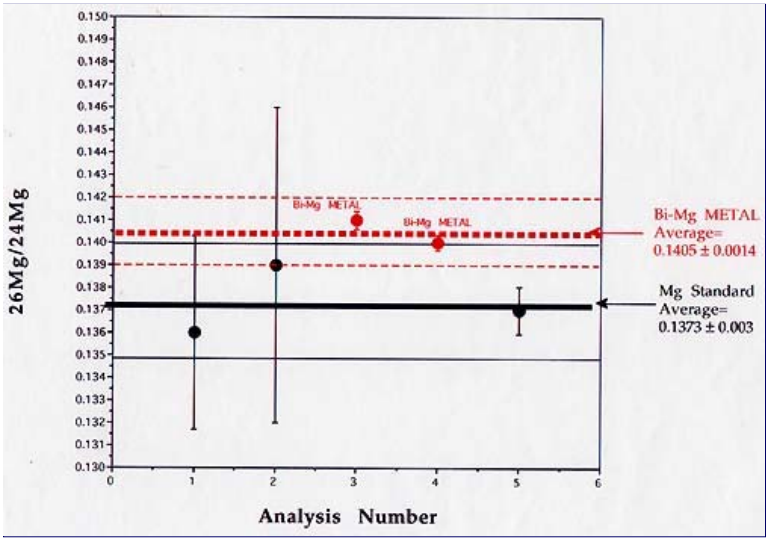
Ion microprobe and Eric Hauri, Ph.D., at Carnegie Institution of Washington, D. C., July 20, 1996, during magnesium isotope ratio analysis of bismuth and magnesium/zinc layered metal. Photograph © 1996 by Linda Moulton Howe.

One anomaly was that the bismuth/magnesium layered material emitted more positive ions than the pure

magnesium metal being used for standard comparison. Hauri wrote in his report to me:

> "The Bi-Mg sample gave count rates of Mg+ ions which were enhanced *sixty times more* than in the pure Mg metal standard." (Howe's emphasis.)

Dr. Hauri suggested three possible reasons for the difference. First, he explained that the zinc might act as a catalyst for Mg ionization. Second, that catalytic process might be enhanced if there were a distinctive arrangement in the Mg crystal structure which related to how the material was originally constructed. Third, if oxygen were somewhere in the sample, it could enhance Mg ionization. However, Hauri acknowledged that none of the ion microprobe spectra showed any oxygen.



Ion microprobe graph comparing layered metal in dotted line to pure magnesium metal standard in solid line for 26-Mg isotope. The layered metal had about 11% more 26-Mg than magnesium metal standard, but not outside terrestrial magnesium ranges. Ion microprobe analysis by Erik Hauri, Ph.D., Department of Terrestrial Magnetism, Carnegie Institution of Washington, D. C., July 20, 1996.

One technician in a solar cell manufacturing company thought he could reproduce the layered metal in a vacuum vapor deposition process. After three unsuccessful tries, he slowed down the vacuum process to build one layer per week. I received the result by mail. There were four layers about the size of a postage stamp. The sample was mostly white, not alternating silver and black layers. Within a month, the four layers delaminated falling apart in a plastic bag along with the bismuth grains that looked like black pepper.

I also contacted dozens of people in the scientific and industrial community to see if I could find anyone who had worked with bismuth and magnesium/zinc layered together in alternating and wavy micron thicknesses. Those inquiries ranged from the Director of Material Sciences at the Massachusetts Institute of Technology (MIT in Cambridge, Massachusetts and the National Science Foundation in Washington, D. C., to metallurgists at Sandia National Laboratory in Albuquerque, New Mexico and aerospace and exotic metals manufacturers to military labs and intelligence agencies. No one had any knowledge of such layered metal.

Speculation about the metal's possible function included resisting or detecting magnetic fields. Another suggestion came from a man who claimed to have worked on back-engineering technology retrieved from the Soviet Union and other sources during the Cold War in the 1970s. He said metal made out of bismuth and magnesium layers came into a lab at Edwards AFB, California, as an "unknown" and left as an "unknown."

He said later that he learned the material might "turn into a lifting body" if placed in a million volt electrostatic field augmented by an unspecified frequency of a "Class C RF signal."

On the radio, I asked for research help. Electrical engineer and optical physicist Travis Taylor, Ph.D., then working at the Army's Redstone Arsenal in Huntsville, Alabama, volunteered to try the experiment. But first, he asked his superiors and contacts at the Defense Intelligence Agency (DIA) if it was all right to work with me on the Bi/Mg metal. Travis told me the DIA officials approved, as long as he kept them informed about what we learned.

First, I asked Travis if he would do a literature search in scientific and military channels to see if he could find any references to bismuth and magnesium/zinc manufactured in thin, alternating micron layers. After several weeks, he told me:

> "I have basically exhausted every resource that I have ever tried to use in the past from about 1940 to now. I have found no reference, even in government research, for bismuth/magnesium-zinc layers. This material didn't just make itself. It had to come from somewhere. And that's one of the things about it that excites me - somebody had to build it and no one has reported building it. It's a very high tech piece of material, so if they didn't report it, why did they build it? That's what we do in science. We do some research and then we tell everyone about it. And nobody's told anyone about this material!"

Then he tried 500,000 volts produced by a Van de Graaff generator with the Bi/Mg on a plastic insulator. The layered metal at one point moved sideways through the electric field so energetically that it fell off the insulator.

After that, Travis built a Van de Graaff generator big enough to provide 1.2 million volts. He got a

magnesium/zinc alloy control that matched the magnesium and zinc percentages, but had no bismuth and did not have the wavy pattern peculiar to the layered metal. Insulation from the electrostatic field was a thin piece of paper suspended above the generator. The layered bismuth/magnesium metal and the control were placed on the paper.

To Travis Taylor's surprise, the Bi/Mg tended again to move sideways in the electrostatic field while the control did not. When a tunable 1 to 20 MHz radio signal was added, the Bi/Mg seemed to have a more energetic reaction to *back away* from the direction of the RF signal when it was tuned to about 7 MHz. Travis wondered if there might be a connection to the nuclear magnetic resonance frequency of bismuth which is about 7 MHz, the same as the stimulating RF signal. Nuclear magnetic resonance occurs at the subatomic level under certain conditions when a substance is placed in an external static magnetic field.

Research continued with tests of the metal in static and oscillating magnetic fields by a scientist working on "electro-gravitic" research. That scientist had already narrowed his interest to two elements most likely to influence gravity: mercury and bismuth. So far, the Bi/Mg was "dead," not moving, in the magnetic fields tried. The researcher wondered if the large positive ion emission discovered during the Carnegie test might relate to an ion generation function for an unconventional craft propulsion system.

Col. Corso told me he had not heard of layered bismuth and magnesium, but described his understanding of one extraterrestrial spacecraft propulsion: "The craft was able to displace gravity through the propagation of magnetic waves, controlled by shifting the magnetic poles around the craft so as to control, or vector, not a propulsion system, but the repulsion force of like charges."

Whatever the layered bismuth and magnesium/zinc's function might be, by May 2006 it remains a mystery. To date, no one has ever reproduced the layered material, either. The information from the South Carolina source could be a controlled government release into public consciousness without the political commitment of official sanction. If government insiders do know about layered Bi/Mg and the extraterrestrial wedge-shaped craft it is supposed to have come from, their silence is consistent with a policy of cover-up since at least the early 1940s.

Artist's illustration of wedge-shaped aerial vehicle,
based on at least three eyewitness descriptions.

More Information:

Book: *Unconventional Flying Objects - A Scientific Analysis* © 1995 by Paul R. Hill, Hampton Roads Publishing Co., Inc., Charlottesville, Va.

For more about extraterrestrial technology retrievals and back-engineering, please see reports below in the **Earthfiles Archives** and my book *Glimpses of Other Realities, Vol. II: High Strangeness* in the **Earthfiles Shop**:

• 04/19/2006 -- Part 19 - Peculiar Phenomenon: Early United States Efforts to Collect and Analyze Flying Discs
• 04/12/2006 -- Part 18 - Peculiar Phenomenon: Early United States Efforts to Collect and Analyze Flying Discs
• 04/05/2006 -- Part 16 - Peculiar Phenomenon: Early United States Efforts to Collect and Analyze Flying Discs
• 02/17/2006 -- Updated: White Sands Navy Radar Operator Saw Discs Circle V-2 Rocket Launches
• 02/10/2006 -- Crashed Disc Photos, "Ebens," and Area 51 "Anti-Gravity"
• 02/07/2006 -- Military Voices Reply About Government Interaction with UFOs.
• 01/27/2006 -- Part 2: Navy Physicist and USAF Geophysicist Discuss UFOs and ETs
• 01/20/2006 -- Part 1: Navy Physicist and USAF Geophysicist Discuss UFOs and ETs
• 02/10/2006 -- NORAD "Fast Walkers" and "Men In Black"
• 01/13/2006 -- 31st Cattle Mutilation on Red Bluff, California Ranch
• 12/02/2005 -- Former Canadian Minister of Defence Calls for Parliament Hearings About UFOs and ETs
• 10/27/2005 -- Updated Part 1: Unusual Animal Deaths - 22 Horses and 1 Burro Near Calhan, Colorado
• 10/07/2005 -- Part 1: Beam Technology Lifted Body Near Ft. Stewart, Georgia
• 02/21/2005 -- Updated - Bull and Cow Mutilations Northwest of Corpus Christi, Texas
• 01/26/2005 -- Final Part 28: UFO Crash/Retrievals: The Inner Sanctum - Stringfield Status Report VI
• 09/06/2004 -- Terry Sherman - 1996 Interview About High Strangeness on Fort Duchesne, Utah Ranch
• 03/26/2004 -- Back Engineering ET Craft
• 02/06/2004 -- Scientists Create and Add Elements 113 and 115 to Periodic Table
• 12/22/2004 -- Part 1: "Reasons Why U.S. Government CAN'T Release Truth About UFOs!"
• 12/10/2004 -- Part 3: "Peculiar Phenomena," V-2 Rockets - and UFOB Retaliation?
• 11/12/2004 -- Strange Metal Pieces from Plains of San Agustin Alleged UFO Crash Site Analyzed.
• 07/21/2004 -- The Apollo Program, Cape Canaveral and UFOs
• 03/17/2004 -- Part 1 - "Horrible Secret" in UFO Crash Retrievals Near Roswell, New Mexico, in July 1947?

Website:

Credits