



ADVANCED TECHNOLOGY AND RECENT DISCOVERIES WITHIN THE GREAT EGYPTIAN PYRAMID CHEOPS

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INTRODUCTION

Currently, the numerous archaeological discoveries of ancient civilizations have created a monumental dilemma for the secular scientific field of archaeology and archaeologists that insists on replacing the biblical account of creation with a belief in Darwinian evolutionary theory. Interestingly, a principal component of that dilemma is the level of intelligence and capabilities of ancient mankind. A basic premise of evolution states that humans evolved from an animal with *minimal intelligence* and have progressed to modern mankind with an advanced level of intelligence. Contrary to this viewpoint is the biblical account of mankind that clearly states Adam and Eve were created with a *high level of intelligence* in order to subdue and rule over the earth (Genesis 1:28).

These divergent viewpoints present a thought-provoking dilemma to secular science and archaeologists. Either man has evolved from an animal and has slowly acquired a high level of intelligence over many thousands of alleged years, or man was *originally* created with a high level of intelligence that should be evident to archaeological examination. However, when advanced ancient technology, such as the technology that is evident in the Great Pyramid of Cheops is examined, it is not surprising how this technology unmistakably demonstrates that ancient technology was advanced far beyond the alleged

evolutionary simplicity of ancient mankind. Moreover, it also substantiates the validation of the biblical account of mankind being created with advanced intelligence. Although Cheops has been an archeological enigma that has masked many of its mysteries for thousands of years, there have been some recent discoveries that have shed additional information and evidence on its identity.

With these thoughts in mind, let's focus on what is undoubtedly the most recognizable and apparent dilemma to secular science and archaeology, the Great Pyramid of Cheops/Kufu (hereinafter known as Cheops).

CHEOPS

Of all the megaliths on earth, the most well-known are the giant pyramids in Egypt, and although about 4,500 years old, some still remain in fairly good condition today. The largest of the Egyptian pyramids is Cheops that was inspired, built and completed in 2560 BC by Pharaoh Khufu of the 4th Dynasty.¹ Until the 19th Century, it was the tallest building in the world and is the last remaining survivor of the famous *Seven Ancient Wonders of the World*.² Even in modern times, Cheops remains as the largest, most precisely built, and most accurately aligned building ever constructed by any civilization (Figure 1).³



Figure 1. Giant Pyramid Of Cheops

One of the most perplexing mysteries of Cheops is how it was completed in 2560 BC by an alleged *“simple farming community that did not have the wheel or pulley and used simple farming tools”* as graphically stated in Figures 2 and 3.

THE PENGUIN HISTORICAL ATLAS OF ANCIENT CIVILIZATIONS

The excavations of Jericho, identified as Tell es-Sultan in Palestine, revealed the remains of this round tower which dates to 8000 BC. Jericho is one of the oldest known settlements in the world, dating back more than 10,000 years. Although Jericho is often mentioned in the Bible, archaeological evidence does not support the biblical chronology of events.



organization. The characteristics of any society can be compared objectively to this list, which is free of value judgements. We would not expect bands or segmentary societies to display more than a couple of these characteristics; a chiefdom might display around half of them, but a civilization should display all, or at least most, of those characteristics. We would then be justified in describing a society as a civilization, no matter how unpleasant we may find its values.

Many theories have been advanced to try to explain the emergence of civilization, some of which can readily be dismissed. Civilization did not arise because of any mental or physical evolutionary changes in humans themselves. Physically modern humans evolved between 120,000 and 100,000 years ago and such changes as have occurred since are superficial adaptations to climate or are the result of changes in nutrition and lifestyle – and are potentially reversible. Early farming peoples around the world were always much shorter and less robust than their hunter-gatherer forebears. This was the result of arrested growth during childhood, resulting from malnutrition during periodic harvest failures. Improved diet in modern industrialized countries reversed this shrinking tendency, and in the 20th century each generation was taller than the last.

Mentally fully modern humans probably evolved between 50,000 and 40,000 years ago, when art, body ornaments and other material evidence of symbolic thought began to appear in the archaeological record. The immense scientific and technological accomplishments of the present day are not, however, evidence that human mental capacities have gone on evolving. Present day hunter-gatherers or people who live in surviving stone-age farming societies, for example in the New Guinea Highlands, are not less intelligent than people who live in industrialized, high technology societies. In fact, there is some evidence that the reverse may be true: modern industrialized societies promote the development of narrowly specialized skills above general intelligence.

Perhaps surprisingly, technological innovation does not seem to have been a critical factor in the emergence of civilization. Most of the technology on which the Old World civilizations depended had been developed hundreds, or even thousands, of years earlier. Even advanced techniques, such as the lost-wax method of bronze-casting, iron-working and shipbuilding, were not the exclusive preserve of civilized societies. The civilization of ancient Egypt illustrates this point very clearly: The pyramids of the Old Kingdom Period (2649–2150 BC) were built without knowledge of pulleys or the wheel, using stone tools and soft copper chisels. Egypt's was essentially a stone-age civilization, dependent on technology that was no more advanced than that used by the contemporary small-scale farming societies of northwest Europe. Most of the early civilizations of the Americas were based on simpler technology still, as they lacked metal tools of any kind.

The Transition to Farming

The critical factor in the emergence of the first civilizations was the transition from hunting and gathering to the farming way of life, which allowed population increases and the accumulation of surpluses ('wealth'). The numbers of hunter-gatherers are limited by the productive capacity of the natural environment, and they need large territories to support them. Except in very rich environments, the Pacific coast of North America for example, settled life is impossible. As a rule, hunter-gatherer populations are dispersed and of low density. Estimates suggest that the maximum global population that could be supported by hunting and gathering might be less than ten million. Farming began to free humans from the constraints imposed by the natural environ-

Figure 2. The Ancient Egyptians Allegedly Did Not Have The Pulley Or The Wheel

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Carving Wood and Bone

ALTHOUGH THIS PERIOD is called the Stone Age, wood, bone, antler and ivory were just as important for making tools and other implements. Not only could these materials be carved and shaped by stone tools, but bone and antler hammers and punches were used to shape the stone tools themselves. By using these implements, better cutting edges and finer flakes of stone could be achieved.

Antler, bone, wood and ivory had many different uses. Antler picks were used to dig up roots and chip out lumps of stone. Antlers and bones were carved into spear-throwers and, along with ivory, were used to make needles, fish

hooks, harpoon heads and knives. Wood was used to make the handles and mounts for spears, harpoons, axes, sickles and adzes, which were tools used for shaping wood, as well as to make bows and arrows. The shoulder blades of cattle were made

into shovels, while smaller bones were used to make awls to punch small holes.

Smaller bones were also used to make fine whistles and little paint holders. All these materials were often beautifully carved with animals and fine decorative patterns.

SPEAR-THROWER

This carving of a reindeer's head is probably part of a spear-thrower. Wood, bone and antler all have natural cracks and flaws in them. Prehistoric carvers often incorporated these into the design to suggest the animal's outline, as well as particular features, such as eyes, mouth and nostrils. Engraved, or carved, pictures in caves also often make use of the natural form of the rock.

ADZE

An adze was a bit like an axe, except that its blade was at right angles to the handle. The flint blade on this adze dates from about 4000 B.C. to 2000 B.C. Its wooden handle and binding are modern replacements for the originals, which have rotted away. Adzes were swung in an up-and-down movement and were used for jobs such as hollowing out tree trunks and shaping them to make dugout canoes.

AXE

Early farmers needed axes to clear land for their crops. An experiment in Denmark using a 5,000-year-old axe showed that a man could clear about 2½ acres of woodland in about five weeks. This axe head, dating from between 4000 B.C. and 2000 B.C., has been given a modern wooden handle.

Figure 3. Simple Tools Allegedly Used During The Time Of The Ancient Egyptians

It is important to remember that the focus of Figures 2 and 3 is the emphasis that modern secular archaeology places on the perception of *ancient means primitive*, yet the archaeological remnants of ancient technology in Egypt (and also many other areas in the world) clearly refutes this ideology. Part of this dilemma among academics is a persistent barrier in their beliefs resulting in their unwillingness to consider ancient civilizations as being advanced. So, let's begin to explore Cheops by considering:

- Debatable Considerations
- Technology
- A Brief History
- Interior Components
- Purpose Of Cheops
- Recent Discoveries

DEBATABLE CONSIDERATIONS

Tombs

The Egyptian pyramids are products of a society that is known to have put a great deal of emphasis on death, the afterlife, and a belief that a pharaoh was an intermediate between the people and their gods. Therefore, it is not surprising that these large and mysterious edifices have been labeled as tombs for the pharaohs. While it is known the Egyptian Dynasty lasted from 3150 BC (1st Dynasty) until it was annexed by the Roman Empire in 30 BC, the "*funerary theory*" proposed by Egyptologists has been around for quite some time and has become an unquestioned belief for academics and laypeople alike. Cheops was simply the grandest form of one of these alleged tombs, but was looted beginning around 820 AD. This supports the fact that tombs (particularly the pyramids) were looted resulting in the pharaohs of the 18th - 20th Dynasties (1539-1075 BC) locating their tombs in the Valley of the Kings.

However, common sense and current evidence does not totally support the tomb and/or funerary theory for two primary reasons:

- As previously discussed, it is known that tombs were looted, including Cheops. However, while looters would take any items of worth, it is highly doubtful they would take a decayed corpse
- No Egyptian pharaoh has ever been found in a pyramid. In 1975, U.S. Egyptologist Dr. Mark Lehner, Head of Ancient Egypt Research Associates, stated – "*no burial has ever been found in any pyramid in Egypt.*"⁴ The fact that about 118 pyramids have been identified in Egypt practically negates the funerary theory

Construction

Cheops was completed in 2560 BC and is part of a complex of 3 large pyramids in the Giza Necropolis that is located near modern Cairo, Egypt. Cheops is the largest of the three primary pyramids and is part of its own complex that consists of Cheops and 3 small pyramids. Cheops was commissioned by Pharaoh Kufu and designed by the second most powerful person in Egypt, Kufu's nephew, vizier Hemiunu who was also the final architect of the project. It is believed that it took 20,000 workers and 20 years to complete Cheops.

Much debate has been centered around how Cheops was constructed and by whom. While some theories point towards slave labor, there is a growing body of evidence that the Egyptian people were the primary work force. How Cheops was constructed is still a matter of continuing debate, as archaeologists cannot confirm exactly how Cheops was constructed.

Accuracy

As previously mentioned, Cheops is the largest, most precisely built and most accurately aligned building *ever* constructed in the world. As a result, it is obvious that Cheops was conceived and constructed with machines and technologies that were clearly very advanced, even when compared to the efforts of modern technologies. Remember that much of the accuracy used by the Egyptians was not realized until modern day technologies, such as Metrology (the modern science of measurement), were employed. Respected builder and architect James Hagan (who designed Walt Disney Shopping Village in Florida, Sanford Stadium in Atlanta, and the MARTA Five Points Central Station in Atlanta) has stated that – *“it would be impossible to build the Great Pyramid today using modern building methods, and, therefore, impossible by primitive methods.”*⁵

This is why it is amusing when intelligent men and women (along with the History, National Geographic, and PBS channels) propose that the pyramids and other ancient Egyptian artifacts were created using elementary hammers and copper (a soft metal) chisels. Additionally, and in keeping within the central focus of this discussion, there is no evidence to support the speculation that a civilization for one brief period of time, could produce works that are so advanced they would be considered brought from space (ET life) to the members of a society.

TECHNOLOGY

Now, let's take a look at *some* of the technology (in no particular order) that was incorporated in Cheops:

- 2.3 million gigantic limestone blocks were cut out of quarries, dressed, transported, and fitted together on the building site to within the nearest 1/100-inch (.010)
- While the majority of the pyramid was constructed of limestone, the exterior of the pyramid was encased in white casing stones of a softer type of limestone (Tura limestone) that hardened when exposed to air. The stones were finished to a highly polished and smooth surface that was designed to reflect the sun's rays. Figure 4 illustrates a few of the remaining casing stones



Figure 4. Polished White Casing Stones

- The white casing stones weighed between 16 to 20-tons each, were flat with a sloping front and with a mean variation of 1/100-inch over an area of 35-square feet (size of each block). Fitted together (Figure 5), the blocks maintained a gap of 0 to .020-inch that is comparable to the thickness of a fingernail. Modern quarries typically maintain tolerances of about 1/4-inch

- The amount of accuracy of over 144,000 casing stones is equal to most modern optician's straight edges and/or the precision that is found in modern machine shops, but not on modern building sites

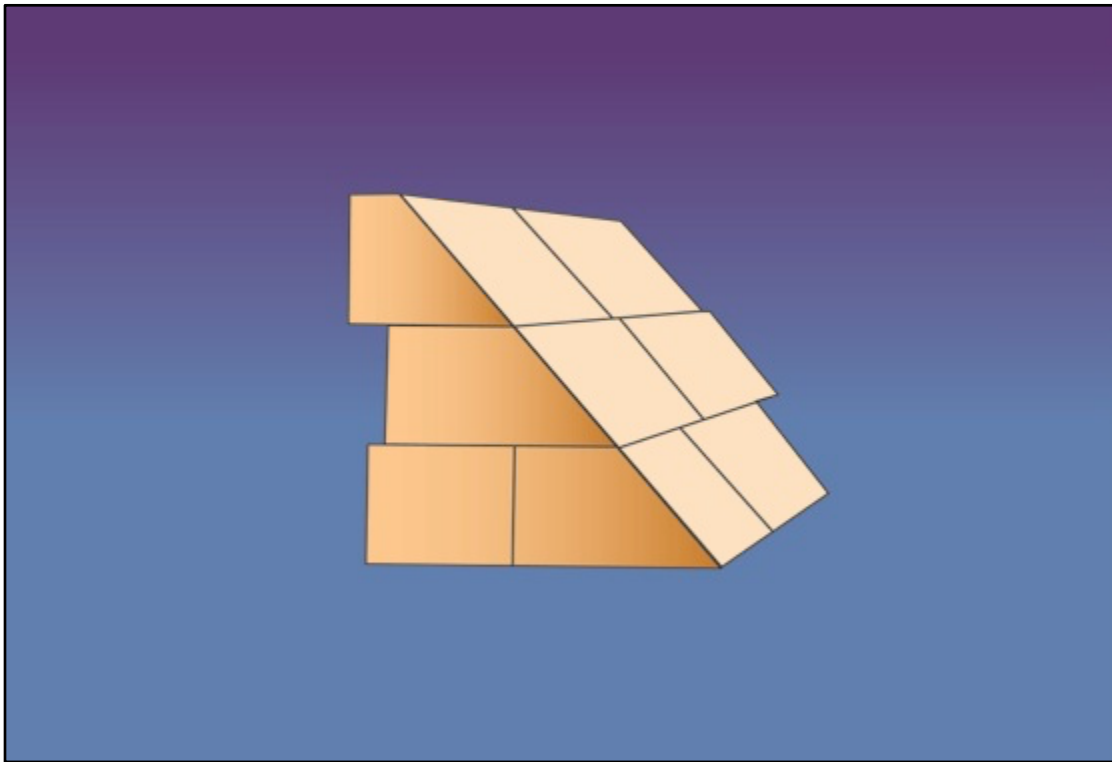


Figure 5. Fitted Casing Stones

- It is believed the capstone at the top of the pyramid was sheathed in gold and would have added to the brilliance of the sun's rays striking the pyramid. It is also thought that the reflected sun's rays from the polished white exterior casing stones would have been visible from the moon
- Using today's technology, modern stonecutters have estimated that it would take at least 27 years to quarry and deliver the stone for the pyramid
- The meridian running through the pyramid divides the continents and oceans into two equal halves
- The centerline of the pyramid lies at the center of gravity of the continents
- The area of the base of the pyramid divided by twice its height gives the mathematical figure of Pi (3.14)
- The north/south axis is aligned to within 0.15-degrees of true north/south. As the ancient Egyptians did not have the North Star as a guide like we do today to true north, one of the only ways for them to have constructed Cheops with such accuracy would have been to use complex algorithms

- The northern face is perfectly aligned to true north, the eastern face perfectly to true east, the southern face perfectly to true south, and the western face perfectly to true west
- The error of the pyramid sides only deviates from true of less than 0.015%, considered incredible accuracy for any building in any era
- There is a difference of less than 8-inches between the shortest and longest side of the pyramid, an error of less than 1%
- Cheops is more accurate in alignment than the modern-built Meridian Building at the Greenwich Observatory in London
- The base of the pyramid covers 13 acres and is level to within 7/8-inch over the entire thirteen acres which is an error rate of .001-inch in one foot
- Some type of cement was used between the blocks (which makes a bond stronger than the blocks) of which the exact composition is still unknown today
- The larger blocks of red granite used for the *alleged tomb area* within the pyramid weighed about 70 tons each and came from a quarry in Aswan, 500 miles away
- Egyptologists believe it took about 20 years to construct the pyramid. Therefore, if there are 2.3 million blocks from 15 to 18-tons each, and if masons worked ten hours a day, 365 days a year, they would have had to place 31 blocks per hour or one block about every two minutes
- It is commonly alleged that building the pyramid required ramps up the sides so blocks of stone could be dragged up the ramps and placed into position. However, the Egyptology Department at Oxford University has calculated that to build an inclined plane to the top of the pyramid at a gradient of 1 in 10 would have required a ramp 4,800 feet long and more than three times as massive as the pyramid itself
- The pyramid contains more stone than used in all the churches, cathedrals, and chapels built in England since the time of Christ. Also, 30 Empire State buildings could be constructed from the 2.3 million blocks of stone and a wall three-feet high and one-foot thick could be built across the United States and back using the amount of masonry in Cheops. As a feat in masonry, it was not matched until the construction of Boulder Dam in 1931-1936
- At one time, some pyramids had immense swivel doors (Figure 6) to allow access into the interior. These doors were undetectable because they fit so perfectly into the openings within the pyramids. The swivel door to the interior of Cheops weighed 20 tons, yet was so well balanced that one person could easily open it by a single hand



Figure 6. Remains Of Entrance Opening And Interior Swivel Door

A BRIEF HISTORY

Even though the preceding facts are extraordinary – some of which are beyond the scope of modern construction methods – there is another fascinating item that is unique to Cheops. Even though the pyramid was completed in 2560 BC and remained relatively secure for about 3,300 years, a Caliph named Al Ma'mun constructed a tunnel from the exterior to the interior of the pyramid in 820 AD. Today, it is not known if the location of this tunnel was deliberate or accidental and/or if Caliph Al Ma'mun was a tomb robber attempting to access the interior of the pyramid. Nevertheless, his tunnel was successful by intersecting one of the hidden passageways in the interior that led to the additional discovery of numerous unexplained passageways and chambers within the interior of the pyramid (Figure 7). The overriding focus of the subsequent discovery of the pyramid's interior is the fact that the precision, complexity and design of the passageways and chambers is *not* what is found for burial/funerary purposes and have remained largely unexplained by secular archaeologists and science since their discovery.

INTERIOR COMPONENTS

Before we continue with scientific evidence that tends to support the *speculated* purpose of Cheops, let's use Figure 7 to define the various labeled components of note that have baffled scientists and archaeologists for years:

- A. Al Ma'mun's tunnel
- B. Original hidden entrance
- C. Descending passage
- D. Subterranean chamber
- E. Well shaft
- F. Grotto
- G. Ascending passage
- H. Granite plugs
- I. Grand gallery
- J. Antechamber
- K. King's chamber
- L. Queens chamber
- M. Southern shafts
- N. Northern shafts

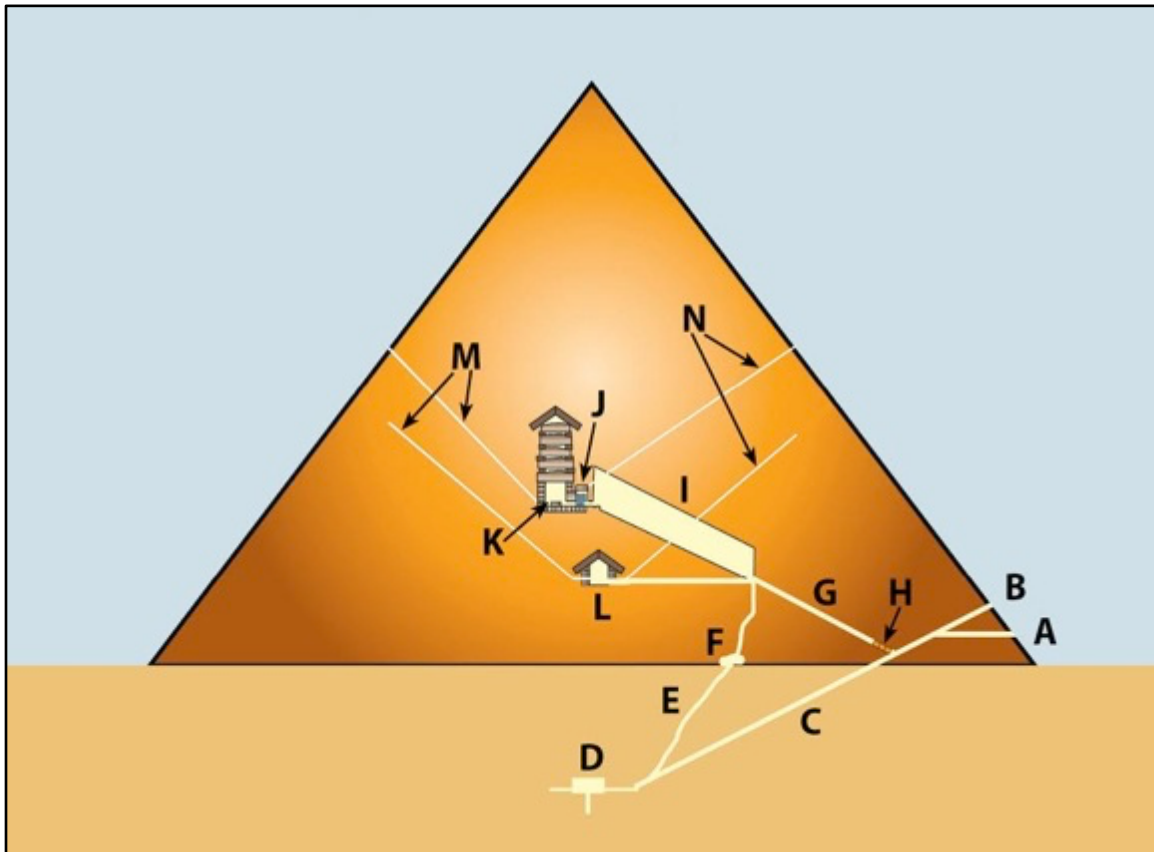


Figure 7. Unexplained Interior Passageways And Chambers For A Tomb

The following research is primarily taken from the book *The Giza Power Plant – Technologies of Ancient Egypt*, by Christopher Dunn, who ranks among the top researchers on this subject, with additional information from Sir Flinders Petrie, Edwards Professor of Egyptology in University College, London, and resonance tests performed by Mr. Tom Danley, an Acoustic Engineer and Consultant to NASA:

A. Tunnel:

Caliph Al Ma'mun's tunnel (often referred to as the "robber's tunnel")

B. Entrance:

The original entrance that was sealed at the conclusion of construction and was not detectable from the exterior. It was subsequently found from the interior

C. Descending Passage:

This passage angles downward at 26-degrees for 350-feet underneath the pyramid, into bedrock, and travels from the original entrance (B) to an underground room called the Subterranean Chamber. The entire length of this passage only has an error of .25 inch of being perfectly straight. The first 150-feet of the passage is within .020 inch of being perfectly straight

D. Subterranean Chamber:

A large room underneath the pyramid that was unfinished. Its purpose is unknown

E. Well Shaft:

A small shaft connecting the bottom portion of the Grand Gallery to the Subterranean Chamber. The shaft is about 200-feet long and passes through a small cavern known as the Grotto. Its purpose is unknown

F. Grotto:

A small cavern accessed by the Well Shaft. Its purpose is unknown

G. Ascending Passage:

The Ascending Passage travels upward for 125-feet and at 26-degrees from the Descending Passage to the junction of the Horizontal Passage to the Queens Chamber and the entrance of the Grand Gallery. The dimensions of this passage are 4-feet wide and 3.5-feet high

H. Granite Plugs:

Three plug-blocks of red granite are positioned in the Ascending Passage at the beginning portion of the junction of the Ascending Passage and the Descending Passage. Their purpose is not entirely clear

I. Grand Gallery:

The Grand Gallery is one of the most mysterious passages inside the pyramid. At the bottom of the Gallery is a passageway leading to what is termed as the Queens Chamber (L). From the relatively small Ascending Passage, the Grand Gallery opens to a passageway that is 29-feet high by 7-

feet wide, is made from red granite (not limestone), and travels upward for 156-feet at a 26-degree angle. Of particular interest are ramps on either side of the Gallery that contain twenty-seven pairs of slots (one on either side of the ramps for one pair) that travel the length of the Grand Gallery and are visible in Figure 8. Also, there are two additional construction features worthy of mention. First, a slot or groove has been cut into the junction of the second/third granite layer of the wall and are located above each slot in the side ramps. Second, a ratchet-style ceiling that is composed of overlapping tile-like stones that are tilted to face towards the top of the Grand Gallery



Figure 8. Grand Gallery With Side Ramps And Slots

J. Antechamber

The Antechamber is a short horizontal passageway that connects the top portion of the Grand Gallery into the Kings Chamber and also contains three slab-like granite slabs that can be raised or lowered via wooden rollers and ropes in the Antechamber (called Lohner's Rope Roll). Vertical slots in the opposing walls guided the slabs vertical movements. Wooden rollers for the ropes were held in place by half-round grooves above the slabs

K. Kings Chamber

The Kings Chamber is a primary focal point of the interior of the pyramid and is located about 175-feet above grade level. As there are multiple interconnected workings of the Kings Chamber, refer to Figure 9 as we summarize the noteworthy construction and notable components:

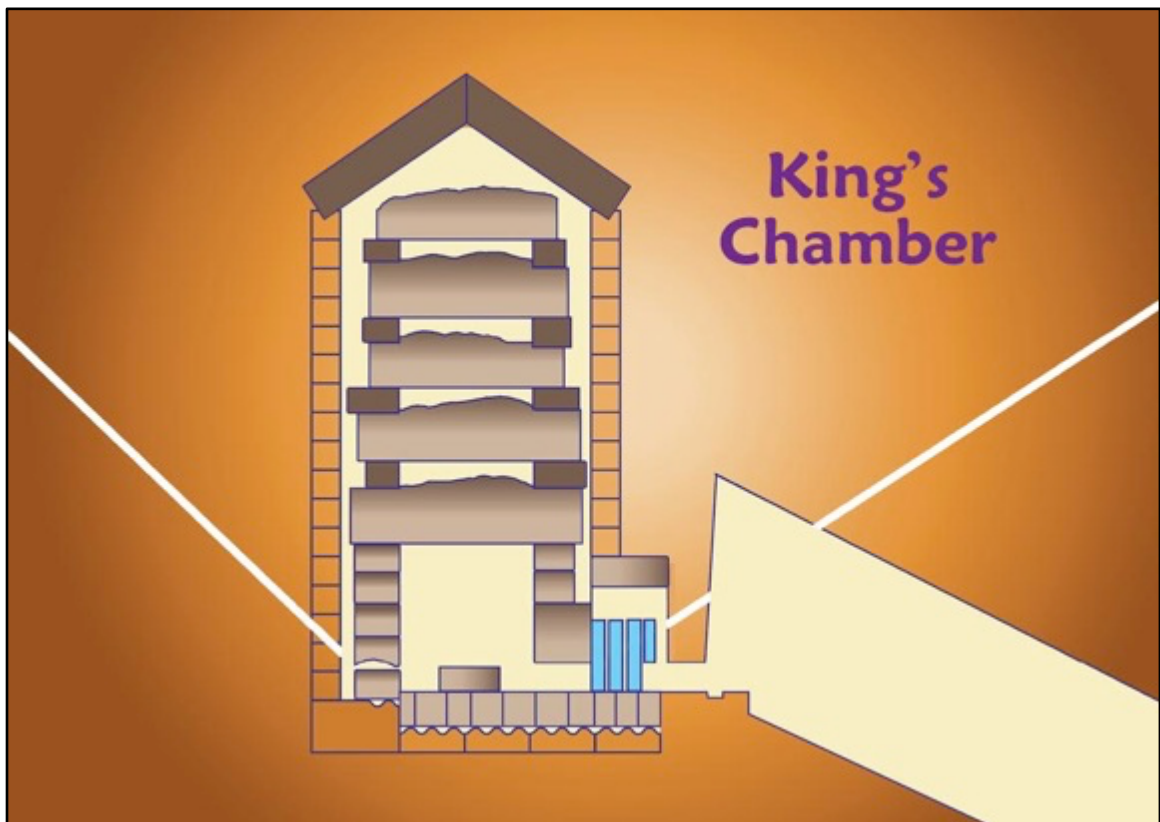


Figure 9. Kings Chamber

- While the pyramid used limestone blocks for the majority of its interior stone construction and the exterior casing stone facing, all of the interrelated portions of the King's Chamber (and the Grand Gallery) were constructed out of red granite from Aswan quarries that are located 500 miles away from the pyramid

- The granite blocks used for the walls and floor of the chamber actually sit on corrugated rock nodes that are similar to an egg carton (determined by acoustical analysis). This results in the entire complex being freestanding from the limestone masonry around the chamber and also guarantees that the King's Chamber is free to vibrate at a specific resonate frequency that has been determined to be the F# chord
- Above the Sarcophagus in the King's Chamber are five vertical rows of red granite beams for a total of *43 beams weighing up to 70 tons each!* Each row of beams is separated by a space that a person can crawl between
- The beams are suspended at only their ends and can react to induced motion and freely vibrate
- Each beam has been hand-carved to resonate at the *same* frequency. That frequency is the same as the Kings Chamber, the frequency of an F# chord



Figure 10. Kings Chamber Sarcophagus (coffer)

- The granite box in the chamber is commonly referred to as the Sarcophagus (or coffer), and weighs an estimated 70-tons (Figure 10). The interior of the box was *hewn* out of a single block of *solid red granite* and is

- a process that is not accomplished by modern quarries. As an example, when questioned, four American precision granite manufacturers stated they could not achieve this kind of work. Instead, they would create this type of a Sarcophagus in five pieces (four sides and bottom), ship them to the customer, and then attach them together on site. *Note: Earlier tomb robbers broke the corner of the Sarcophagus in Figure 10*
- High-speed machine tools were used inside the granite Sarcophagus (apparent from remaining machine/tool marks). One type of tool that was used – and is clearly evident – were tube-drills used to hollow out the interior of the Sarcophagus.⁶ This is referred to as “*trepanning*.” To grasp the significance of that statement, let's briefly look at how the Egyptians powerfully used this system. In order to hollow out the interior of the solid granite box, masons drilled systematic holes (cusps) around the area to be removed with 18-inch hollow-core tubular-drills (Figure 11).⁷ After tubular drilling the appropriate area of the box, cores and webs would remain and need to be removed. Following their removal by breaking, any irregularities would then be *machined* away until the interior surfaces were *perfectly flat*. As a result, the walls and floor of the Sarcophagus was

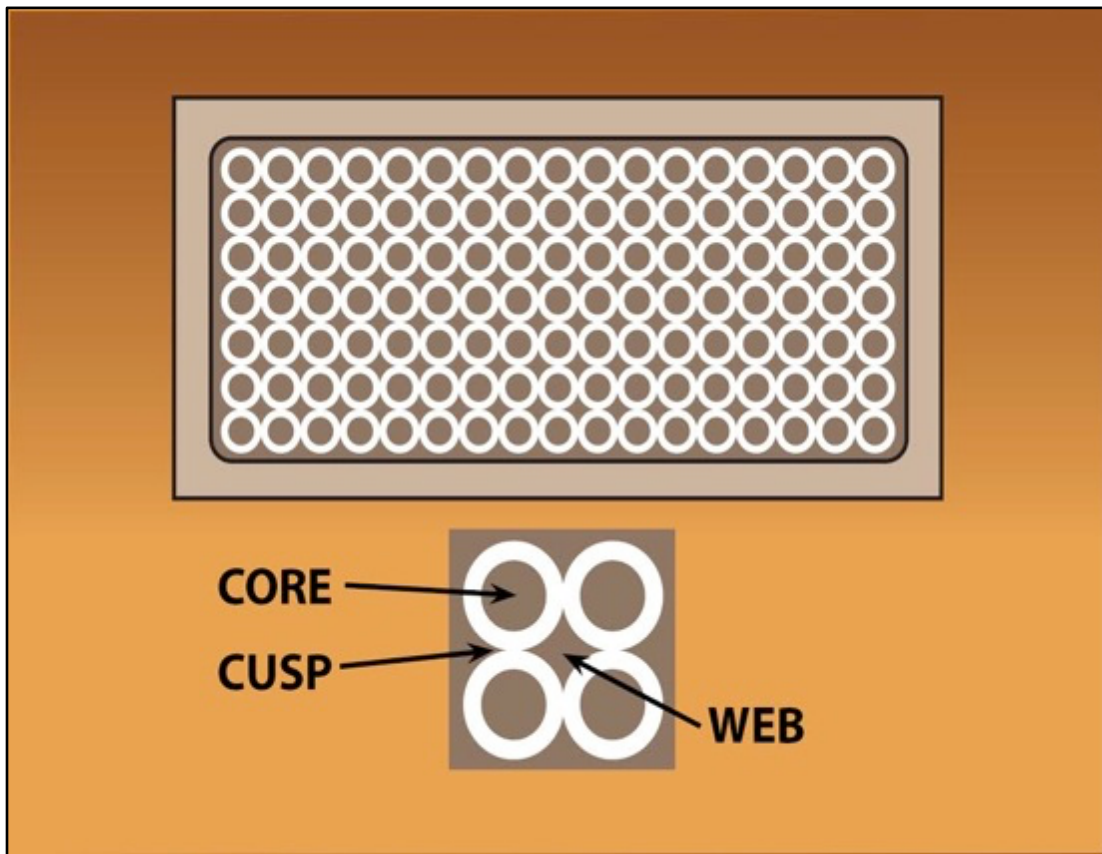


Figure 11. Egyptian Trepanning

finished to an accuracy that modern manufacturers reserve for precision surface plates. Drills that left spiral-grooves on cores that were cast aside by workers and left outside the pyramid indicate that the feed-rate of the Egyptian tubular-drills was .10-inch per-revolution of the drill and are visible in Figure 12. To keep this in perspective, the feed-rate of modern drills is .0002-inch per revolution. This indicates that the ancient Egyptians drilled into granite with a feed-rate that was *five hundred times greater (or deeper per revolution of the drill) than modern drills* which is an astounding comparison between the capabilities of ancient Egyptian masons and modern masons

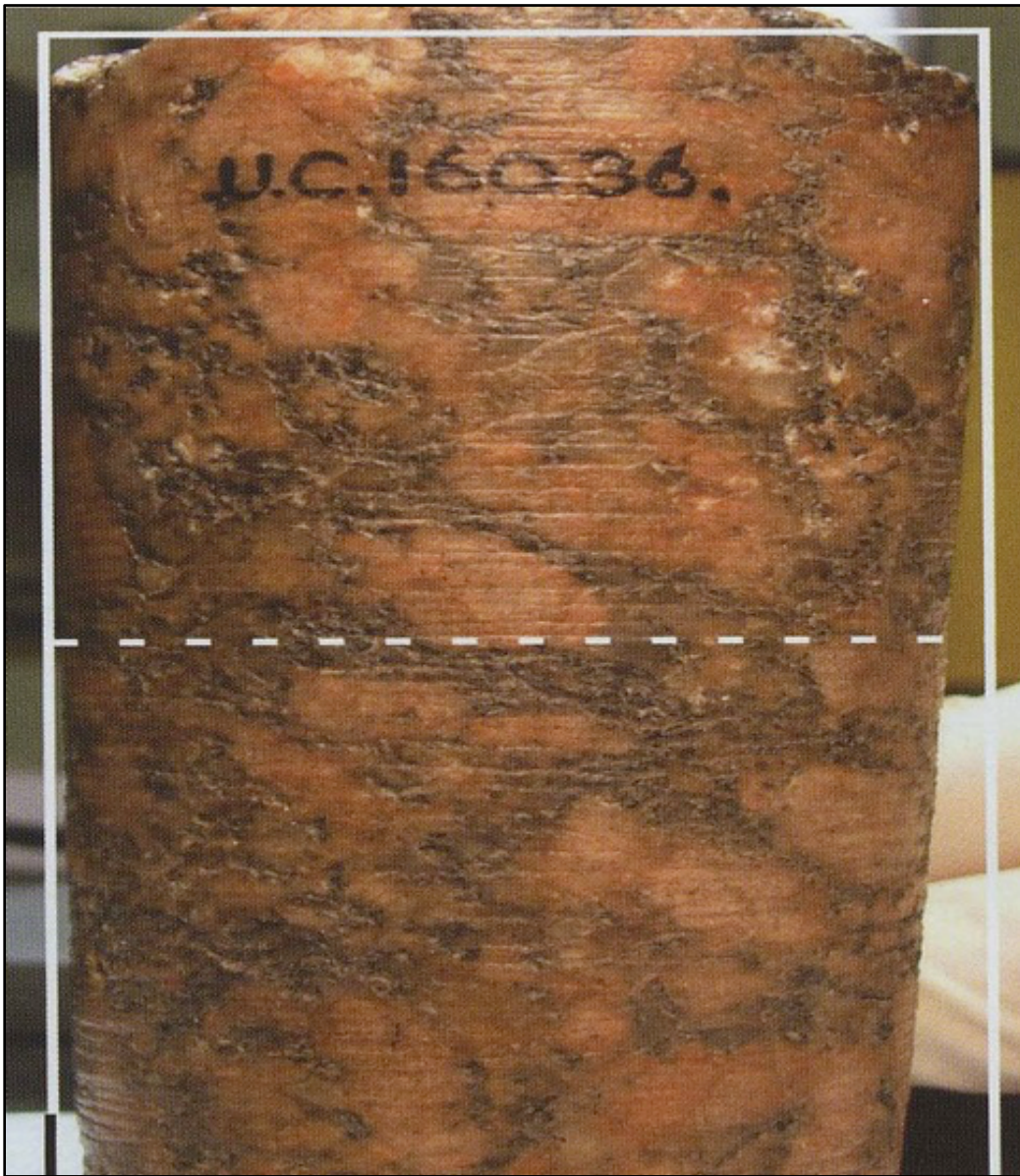


Figure 12. Core With Cylindrical Feed Marks

- When contemplating the ability of ancient Egyptian masons to surpass the abilities of modern masons to drill and finish granite to unbelievable specifications, the application and use of modern *ultrasonic vibration machining* is the only method that satisfies this logic from a technical and modern viewpoint. By definition, ultrasonic vibration machining is a process that removes material from the surface of a part through high frequency (19,000 Hz – 25,000 Hz), low amplitude vibrations of a tool against the material surface in the presence of fine abrasive particles (that separate the tool from the work surface). This process is the best choice for working with hard materials such as granite
- As an additional consideration, remember that sophisticated tools would also need some type of an appropriate power supply for the tools/machines although there have never been any artifacts of this consideration that have been discovered

L. Queens Chamber

The Queens Chamber is located below the Kings Chamber, is significantly smaller than the Kings Chamber and was made from limestone blocks only. It is positioned at the same level as the entrance to the Grand Gallery and accessed from a Horizontal Passage that begins from the junction of the Ascending Passage and Grand Gallery. A Southern and Northern shaft also accessed the Queens Chamber

M. Southern Shafts

These are two small shafts on the south side of the pyramid. The upper shaft angles upward from the Kings Chamber to the exterior of the pyramid. An interior mouth at the entrance to the shaft was originally lined with metal and is 18-inches wide by 24-inches high before reducing in size to about 8-inches by 12-inches to the exterior of the pyramid. The lower shaft angles upward from the Queens Chamber but stops about 20-feet short of the exterior of the pyramid and is about 8.5-inches wide by 8-inches high in size. Of particular note, an angled shaft demands a higher degree of technical skill to construct through the pyramid as opposed to a horizontal shaft, so these shafts had a specific purpose

N. Northern Shafts

These are two small shafts on the north side of the pyramid. The upper shaft angles upward from the Kings Chamber to the exterior of the pyramid. The interior mouth was also originally lined with metal, and is about 7-inches high by 5-inches wide. The lower shaft angles upward from the Queens Chamber and also stops about 20-feet short of the exterior of the pyramid

PURPOSE OF CHEOPS

So, if Cheops (and the other pyramids) were not used for tombs as stated by Egyptologist Dr. Mark Lehner, and Cheops was constructed with an inordinate degree of precision along with numerous unexplained chambers and passageways that dramatically exceed the requirements of a tomb, then a logical question is – *what was its primary purpose?* One theory is Cheops was an astronomical observatory, another it was used for geodetic markers, another it was used as a giant water pump for farming, and still another it was used for initiations.

However, as the pyramid is over 4,500 years old and there is a complete lack of remaining verifiable documentation on its method of construction and intended usage, it has been left to scientific observations (by scientists and non-scientists alike) to postulate the intended function of Cheops although virtually all theories are not without varying degrees of fact, controversy, and a potential perceived need to protect specific ideologies. Nevertheless, as there have been numerous theories and definitions that have been applied to Cheops, it must be stated that the following overview is an attempt to explain – in comprehensible terms – its *likely* purpose with a noteworthy degree of scientific credibility.

Before we continue, let's briefly look at two scientific terms that will be used for the balance of this discussion, and define them from a simplistic viewpoint:

Electromagnetic Field

A form of energy that comes from the sun, is transmitted in waves or particles at different wavelengths and frequencies, and is a combination of an electric charge and a magnetic field. This broad range of wavelengths and frequencies takes many forms, such as radio waves, microwaves, infrared waves, visible light, ultraviolet light, X-rays and gamma rays. An electromagnetic field can be expressed in terms of energy, wavelength, or frequency.^{8, 9, 10}

Frequency

Frequency describes the number of waves that pass a fixed place in a given amount of time. We will use the term frequency to also denote sound and vibration, as these three terms are interrelated.¹¹

A current concept with a notable degree of scientific relevance is the “power plant theory” that proposes Cheops was a sophisticated machine that responded sympathetically with the vibrations of the earth and converted that energy into a form of electromagnetic energy. Interestingly, the word pyramid (*pyramidos*) means – “fire in the center or middle.” Although this particular theory is

not without controversy, it is supported by an interesting assortment of thought-provoking observations that can be considered scientifically noteworthy.

Source of Power

First, let's overview the *source of power* that is thought to have supplied Cheops with the necessary energy for its intended operation:¹²

- Scientists believe the center of the earth's core is a circulating mass of molten metal (iron-nickel alloy) and is generating an electromagnetic field around the Earth that can be referred to as the Earth's Electromagnetic Field. Briefly, the space between the surface of the Earth and the ionosphere (50 to 600 miles above the Earth) acts as a closed cavity for electromagnetic waves in the *extremely low frequency* portion of Earth's electromagnetic field (3 Hz to 30 Hz) and is typically referred to as *Schumann Resonances*.¹³ Hertz (Hz) is a derived unit of frequency, is defined as one cycle per second, and was named for Heinrich Hertz who was the first person to provide conclusive proof of the existence of electromagnetic waves
- Although the Earth's electromagnetic frequencies can slightly vary, the fundamental frequency is a wavelength that is equal to the circumference of the Earth and occurs at a frequency of about 7.83 Hz with overlaying frequencies. This can be referred to as Earth's background base frequency, or "heartbeat" which has been detected from space. The frequency of 7.83 Hz is a very low frequency and below the threshold of human hearing which is typically 20 Hz to 20,000 Hz
- If Cheops was designed so it was capable of resonating with the frequency of the Earth's electromagnetic frequency and then be able to use this frequency to produce a form of usable energy, then it would be possible to have a reliable and inexpensive source of energy
- Intriguingly, Cheops is precisely positioned at the center of the Earth's landmass. To achieve this placement required a system of measurements based on the *true spherical dimensions of the Earth*. It should not be surprising that the three key measurements of the Earth (equatorial latitude, Earth's circumference and Earth's polar radius) are exactly incorporated into the dimensions of Cheops. It appears there is a distinct relationship between Cheops and the Earth that is evidenced by the measurements of Cheops and its precise location. Because the same basic measurements of the Earth were incorporated into Cheops, it simplifies becoming a harmonic integer (a whole number, not a fraction) of the Earth
- It is known that an object can draw mechanical energy from a vibrating object if both their resonant frequencies are in harmony and/or identical (all objects have a resonant frequency). This is referred to as a *Coupled Oscillator*,¹⁴ and was graphically demonstrated by the Tacoma Narrows Bridge failure in 1940.

This is also why marching soldiers are cautioned to break stride on a bridge in case they match the bridge's frequency of vibration (known as mechanical resonance)

- Current acoustic data tends to support the theory that Cheops was designed and then constructed with a sonic purpose to respond sympathetically with the fundamental frequency of the Earth's electromagnetic field and was supported by Tom Danley, an Acoustics Engineer with NASA. Using highly sophisticated equipment in the Kings Chamber and in each of the air spaces between the granite beams above the Kings Chamber, he commented as follows – *"I found some very low frequency sound resonances which start at a few Hz and go upward to 15-20 Hz or so. At least some of these were the same low frequency resonances I excited with my sweep, but not all of them. This sound was present even if everyone is silent. I crunched the results of the measurements, and they were sent to a musicologist that was part of the staff. As mentioned, he identified that there was a pattern of frequencies which roughly form an F# chord. Not all the resonances fell in the right place but many did, and some repeated the pattern for many octaves. In other words, it was roughly tuned to F# over many octaves"*¹⁵
- These sonic experiments indicate that the Kings Chamber and the Sarcophagus (all made from red granite) are capable of resonating at the frequencies that create an F# chord. Remember that the F# chord is a triad that is comprised of F#, A# and C# chords so there are multiple sub harmonic frequencies that comprise the F# chord. Interestingly, it is well known that the Sarcophagus in the King's Chamber is tuned to A=438 Hz. Musicians such as flautist Paul Horn have recorded this frequency and have made music with it. To hear the pyramid chords, Google the YouTube video – *Inside the Great Pyramid – Paul Horn*
- If our discussion to this point has merit from a scientific perspective, then it must be concluded that Cheops was not primarily designed and constructed as a tomb but as a highly sophisticated machine that would be capable of responding sympathetically with the Earth's fundamental frequencies

Design and Construction

Next, let's look at how Cheops was *designed and constructed* to be able to respond sympathetically with the Earth's fundamental frequencies and turn them into a form of usable energy:

- As a starting point, remember that unlike the limestone blocks that were used in a majority of the pyramid, the Kings Chamber, Sarcophagus and Grand Gallery were completely constructed of red granite. This type of granite is comprised of at least 55% quartz crystals. Quartz crystals have the ability to *convert* mechanical energy (vibrations) into an electromagnetic energy at the frequency of vibration, and is known as the *Piezoelectric Effect*.¹⁶ The word

piezoelectric is derived from the Greek word *piezen* meaning to press or squeeze and *piezo*, which is Greek for push. The piezoelectric effect is the ability of certain materials (i.e., quartz crystals) to generate an electric charge in response to applied mechanical stress, such as pressing¹⁷

- It is important to state that quartz crystals do not create energy they just convert one kind of energy into another. Alternately compressing and releasing quartz crystals by a vibrational (frequency) type of energy will convert this energy into an electromagnetic energy (Figure 13). Remember the old crystal radio receiver/crystal set from the early days of radio that only used power from received radio signals?

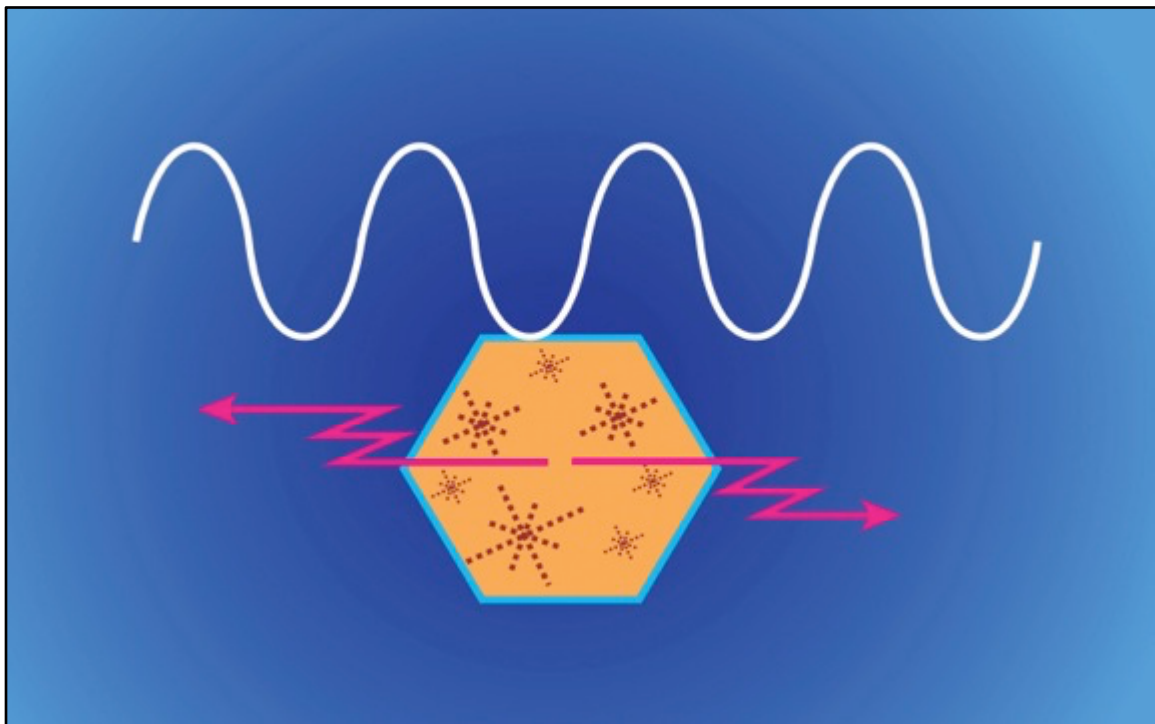


Figure 13. Piezoelectric Effect

- Specifically, the 43 red granite beams located at the top of the Kings Chamber weigh 70-tons each and are suspended at their ends so the beams are free to vibrate. This was accomplished by selectively removing material from each beam (evident on the top portion of each beam) so it vibrates at the right/same frequency
- The result of the complete use of red Aswan granite in the Kings Chamber components (and Grand Gallery) are thousands of tons of red granite that were capable of resonating in harmony with the fundamental frequency of the Earth, the dominant F# chord. Remember that the entire Kings Chamber

components are purposely freestanding from the surrounding limestone masonry in the pyramid (see Figure 9)

Usable Energy

Now, let's look at how it appears that Cheops was designed and constructed to respond sympathetically with the Earth's frequencies and *turn it into a form of usable energy* (see Figures 7, 8, 9, 10, 13, and 14). If Cheops was specifically

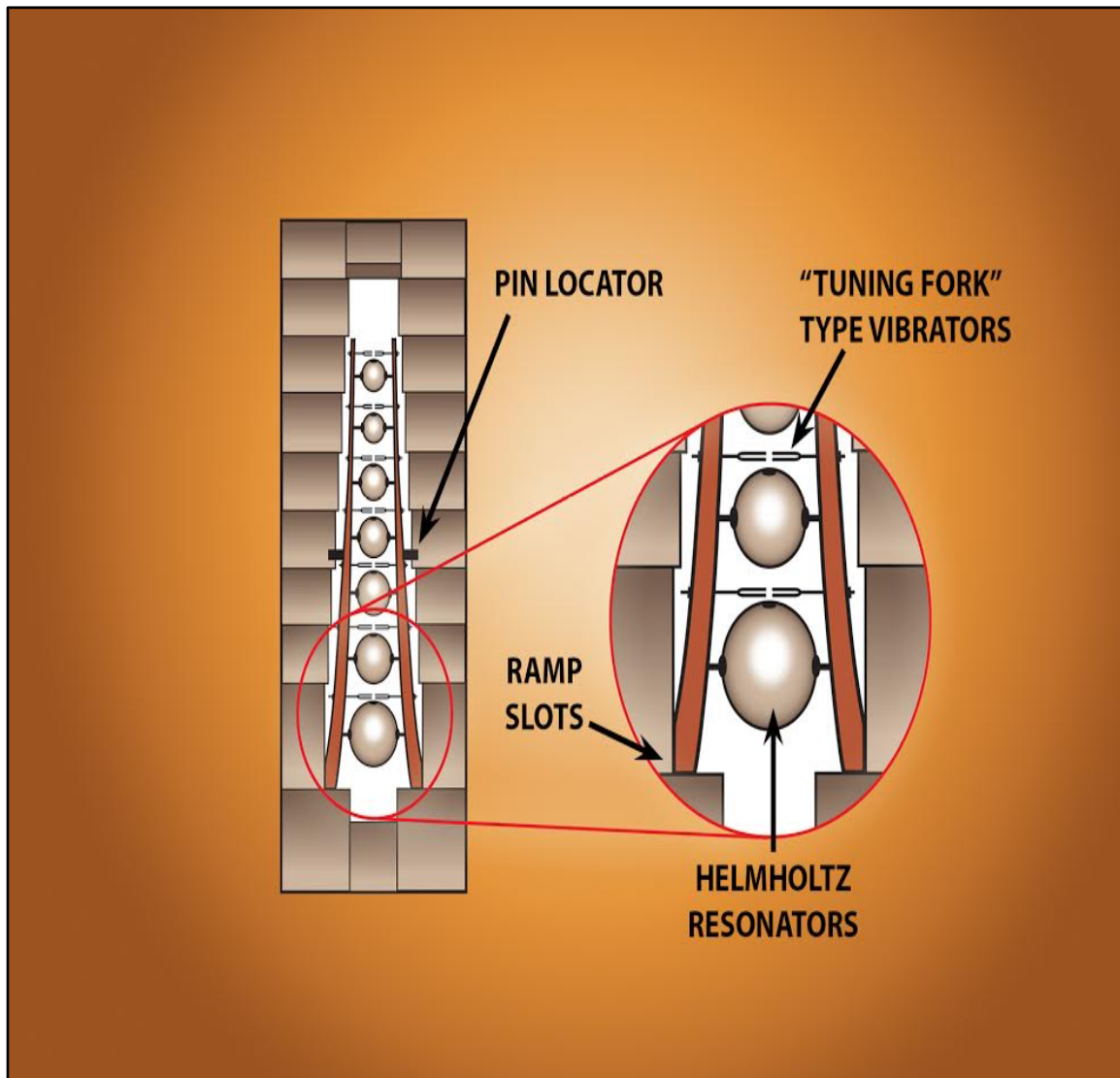


Figure 14. Resonator Assemblies

designed (precision, location and mathematically) by the Egyptians to act as a coupled oscillator with the Earth, the Earth's frequencies would flow through the pyramid. However, the Egyptians designed a network of passageways and chambers to significantly *channel and amplify* those frequencies into a usable frequency and a resultant type of energy within the pyramid before being

transferred to the exterior of the pyramid. The following points are a brief explanation of how that could have been accomplished by its interior configuration:

- The Grand Gallery was not only specifically designed to direct the Earth's frequencies upward into the Antechamber and then into the Kings Chamber, but based on remaining evidence it is thought the Grand Gallery had resonators installed (remember the slots in the opposing side ramps, grooves in the walls above the slots in the ramps and the ratchet style ceiling in Figure 8) to amplify and convert the lower frequencies into the appropriate frequencies while directing them into the Antechamber/Kings Chamber. Although the original contents of the Grand Gallery were likely removed by Caliph Ma'mun in 820 AD and later explorers, there are mounting points that could have been used for 27 pairs of resonator assemblies consisting of vertical wooden shafts anchored in the ramp/slots and stabilized by the pin locators in the vertical walls that are visible in Figure 14. These wooden shafts would have supported and anchored tuning forks and vases that were used as Helmholtz Resonators



Figure 15. Residential Vase Or A Resonator?

- A Helmholtz Resonator¹⁸ is designed to respond to frequencies and also maximize the energy from the frequencies. A common example of a Helmholtz Resonator is a hollow sphere with a round opening about 1/10 to 1/5 the diameter of the sphere. The sphere in Figure 15 is currently on display in the Cairo Museum, Egypt, and is made from granite with two *machined Gudgeons* on either side that seem out of place on domestic pottery but could act as mounting points for a resonator – although this is speculation. Not surprisingly, the sphere is so flawlessly turned (exterior and interior) that the entire sphere balances perfectly when placed on a glass shelf with only the round-tipped bottom that is no bigger than the size and shape of the tip of a hen's egg. This requires that the entire sphere have a symmetrical wall thickness without *any* error. This kind of skill is considered incredible in granite and extraordinary craftsmanship, even today
- As frequencies traveled upward thru the Grand Gallery, the tuning forks would vibrate (at the appropriate frequency). The Helmholtz Resonators would then draw energy from the vibrating tuning forks and *increase* the energy from the tuning forks. Interestingly, over 10,000 basalt spheres/vases of igneous rock with the approximate shape and dimensions of the aforementioned resonator specifications have been found underneath the Step Pyramid of Zoser at Saqqara. Additionally, several examples are also currently displayed in the Cairo Museum in Egypt that display clear evidence of machining. Examples can be viewed by going to Google – *Ancient Egyptian Stone Technology – Lathe Turning – Spirit and Stone*
- The collective design of this system ensured the Earth's frequencies were *raised and amplified* through a series of harmonic steps into specific frequencies in the Grand Gallery, and then directed into the Antechamber before entering the Kings Chamber. To enhance this process, the Grand Gallery narrows (or constricts) as it approaches the Antechamber in addition to the ratchet-style ceiling tiles that are angled upward and towards the Antechamber
- The configuration of the Antechamber served as a type of acoustic filter as the three stone slabs (baffles) could be raised or lowered to minimize and/or filter out incorrect frequencies/harmonics, allowing only the desired frequency or harmonic of that frequency to enter the resonant chamber of the Kings Chamber. The frequencies that did not coincide with the dimensions between the stone slabs/baffles and passageway would be filtered out, thereby ensuring that no interference frequencies would enter the resonant King's Chamber to reduce the output of the system
- If the correct frequencies were directed into the Kings Chamber and then up into the cavity with the aforementioned 43 red granite beams, and these frequencies were the same frequency as the resonate frequency of the beams

and the red granite walls and floor of the Kings Chamber, all of the red granite in the Kings Chamber would be compressed and decompressed by this fundamental frequency, causing the quartz crystals to oscillate and create an electromagnetic energy due to the piezoelectric effect

- The gabled shape (45-degree slope from the vertical plane) of the top portion of the area over the red granite beams would have directed the electromagnetic energy produced from the oscillating beams downward towards the Sarcophagus that would have collected the energy
- In summary, with the electromagnetic energy being directed and collected into the Sarcophagus, it would have then been directed to the Upper Southern Shaft that terminated outside the pyramid. Not surprisingly, there is an opening in the south side of the Sarcophagus that is perfectly aligned with the interior opening of the Upper Southern Shaft. This alignment would have directed the energy from the Sarcophagus towards the receiving end of the Upper Southern Shaft and out of the pyramid
- As many of the exterior limestone blocks have been removed by subsequent empires (Ottomans, Romans, etc.) that have defaced and damaged the exterior of the pyramid (where only a few of the original casing stones remain), it is unknown how the energy was collected and used outside the pyramid

System Operation

Finally, let's discuss the function of the Queens Chamber and how it is hypothesized it allowed this *system to operate at maximum efficiency*:

- Within the pyramid, the vibrating mass of quartz-bearing red granite influences the gaseous medium contained within the system components. Initially, this would have been common atmospheric air and any related contaminants and inherent instabilities
- To maximize the system, the Egyptians considered it necessary to replace the unreliable atmospheric air with a stable gas that would fill the necessary passageways and chambers, and would also be able to resonate and *amplify* in harmony with the entire system
- It appears that hydrogen gas¹⁹ was used to replace the interior atmospheric air due its ability to maintain a consistent resonant frequency and also amplify the electromagnetic energy. Hydrogen is the simplest gas and is comprised of atoms with one proton and one electron per atom. Notably, hydrogen gas is the most abundant chemical substance in the universe and is also responsible for the emission of electromagnetic energy in the universe²⁰
- The necessary hydrogen gas was generated by a chemical reaction in the Queens Chamber where it is believed that a dilute solution of hydrochloric

acid and hydrated zinc chloride were introduced at a pre-determined metered rate

- Figure 16 illustrates the Southern Shaft entering the chamber by way of a *pre-determined orifice* that metered the correct amount of hydrochloric acid into the chamber. The same type of orifice was also discovered entering the Queens Chamber from the Northern Shaft. Remaining corrosion, discolorations, and stains supports the premise that the Southern Shaft was used for a dilute solution of hydrochloric acid and the Northern Shaft was used for the hydrated zinc chloride solution

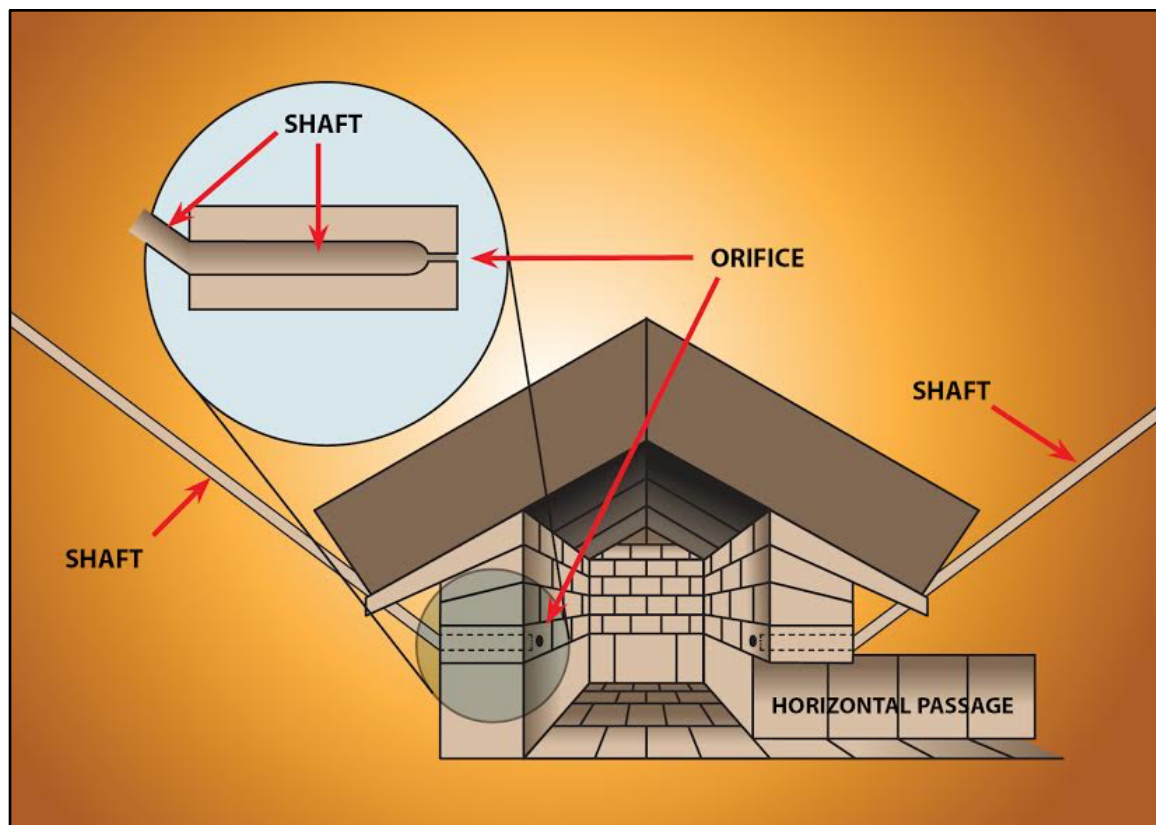


Figure 16. Queens Chamber

- Additional evidence that the aforementioned chemicals were used in the Queens Chamber to produce hydrogen gas can be reinforced by past and current observations as follows:
 - Early pyramid explorers readily detected an *overwhelming foul odor* in the Queen's Chamber. This was likely a result of the chemical reactions that had previously occurred there
 - The presence of salt encrustation on the walls of the Queens Chamber, Horizontal Passage and lower portion of the Grand Gallery. Salt can be a natural by-product of the reaction of producing hydrogen gas. Also, when

- the hot hydrogen-bearing gas reacted with the calcium in the pyramid's walls, salt would have been formed on the exposed surfaces
- Flakes of white mortar exuding from stone joints inside the Queen's Chamber. This was determined to be calcium sulfate, another by-product of hydrogen reacting with the mortar between the blocks of limestone
 - The bottom portion of the Southern Shaft was heavily corroded and was detected by the various robot exploratory teams. The acidic solution of hydrochloric acid would have eroded the limestone shaft
 - A dark staining in the Northern Shaft that indicates the use of two different chemicals (i.e., hydrated zinc chloride – ZnCl_2)
- The key to utilizing the resident hydrogen gas (with the configuration of this system) to produce a usable power was the specific introduction of electromagnetic energy of the correct amount (amplitude) and frequency. This was achieved by introducing exterior electromagnetic energy (that is constantly bombarding the Earth) into the Kings Chamber from outside the pyramid via the Kings Chamber Northern Shaft (see Figure 9) where it is guided directly towards the Sarcophagus in the Kings Chamber²¹
 - As a result, the resident hydrogen gas in the Kings Chamber would experience a significant electromagnetic stimulation, having the effect of exciting the hydrogen atoms and raising them to a higher energy state. However, this is an unnatural state for hydrogen atoms and they will – in time – fall back to their *ground state* (lowest allowed energy level) releasing a packet of electromagnetic energy
 - Interestingly, the ground state can be stimulated to fall back to ground state through the action of an input signal (another packet of energy) that is of the same frequency. The end result is that the exterior electromagnetic input signal continues its path after stimulating enhanced emissions from the hydrogen atoms and also carries the energy released by the stimulated atoms with it. The Kings Chamber Northern Shaft was the conduit (or waveguide) that transferred exterior electromagnetic energy into the Kings Chamber, further stimulating the hydrogen atoms. Not surprisingly, the Northern Shaft has dimensions that closely approximate the wavelength of electromagnetic energy emitted by atomic hydrogen in the universe
 - The concavity of the pyramid (see Figure 20) *could* have had the effect of focusing exterior electromagnetic energy upon the north face of the pyramid to the center of the concave surface which in turn would refocus the energy into the Kings Chamber Northern Shaft (wave guide), into the Kings Chamber, and directly upon the north face of the Sarcophagus
 - The Northern Shaft was located to direct the electromagnetic energy onto the granite Sarcophagus. Measurements indicate that the north and south walls

of the Sarcophagus were finished to produce a *concave surface*. This would have the effect of spreading the electromagnetic beam passing through the Sarcophagus. The spreading beam would have increased the area of its interaction with the *energized* hydrogen atoms, further stimulating the emission of energy²²

- Following a straight-line north to south through the Sarcophagus leads to an opening in the Southern wall of the Kings Chamber that closely resembles a receiver for microwave energy. The stimulated energy in the Sarcophagus would have been directed into the opening in the Southern wall of the Kings Chamber and to the outside of the pyramid
- As previously mentioned, the exterior of the pyramid has been stripped of its exterior casing stones by numerous conquering civilizations that has destroyed all evidence of how the energy in the Southern Shaft was collected and used

RECENT DISCOVERIES

As previously mentioned, Cheops was completed in 2560 BC. However, as Egypt lost its influence and power, the exterior capstones began to be removed for other building projects. The pyramid fell into decline after the Roman occupation of Egypt in 30 BC until Napoleon's Egyptian Campaign of 1798-1801 when he introduced his team of scholars and scientists to document ancient Egyptian culture and monuments. Napoleon's work attracted others to conduct their own excavations, often without any scientific and/or archaeological merit. After Napoleon's campaign ended, notable scientific investigations of Cheops languished for about a hundred years until modern scientific and archaeological interest began to be revitalized.

To advance to more modern times, let's look at five notable discoveries that have exposed additional enigmas of Cheops:

One

Sir William Matthew Flinders Petrie is credited for being the first to professionally use modern systematic methodology in archaeology and preservation of artifacts, particularly with his excavations in Egypt. His investigations began in 1890 AD as he professionally excavated Cheops, and as a result, the British Archaeologist set the standard for archaeological operations in Egypt and Giza. Much of his work is credited with discovering the exactness and technical aspects of Cheops and his over 30 books on Egyptian culture, religion and pyramids detail much of his work along with the Petrie Museum of Egyptian Archaeology in London that ranks among the world's leading

collections of Egyptian and Sudanese materials (see Figure 12 for an example of his findings).

Two

Christopher Dunn, a British and American Master Craftsman, Machinist, Toolmaker and Advanced Engineer and Laser Operations Manager, began to advance Petrie's archaeological work on Cheops in 1977, and has continued for well over 30 years. After visiting Giza numerous times, often with machinist tools that allowed precise measurements of various components of Cheops, he advanced a theory in the published 1998 book *"The Giza Power Plant: Technologies Of Ancient Egypt"* which describes in intricate detail that Cheops was a holistic energy device that was harmonically coupled with the Earth. Some of the revelations of Dunn's research have been published in numerous articles and books, and were also featured on television programs such as the Travel Channel, the History Channel and the Discovery Channel. Dunn's second book *"Advanced Engineering In The Temples Of The Pharaohs"* was published in 2010 and revealed previously overlooked magisterial characteristics of Egyptian architectural and manufacturing brilliance, particularly in granite.

Without a doubt, the aforementioned publications, television appearances and associated research has illuminated the capabilities of the ancient Egyptians that often surpassed our modern abilities. From a machinist's perspective, Dunn views Cheops from the perspective of *how*, whereas archaeologists primarily view Cheops from the perspective of *age*. While his reverse engineering conclusions as applied to Cheops may be debatable, they do have a measure of scientific merit and bear careful consideration with the unexplained evidence that he has meticulously illuminated. Interestingly, his predictions regarding future discoveries in the Northern and Southern Shafts that emanate from the Queens Chamber appear to have merit and are explained in the next section.

Three

In 1872, Waynman Dixon, a British explorer, discovered a small shaft in the south wall of the Queens Chamber by enlarging a small crack that exposed the Southern Shaft. A similar shaft was subsequently found in the north wall of the Queens Chamber a short time later. While the shafts that originate from the Kings Chamber travel to the exterior of the pyramid, the shafts from the Queens Chamber terminate about 20-feet before the exterior. Interestingly, the interior configuration and potential contents of the two shafts that emanate from the Queen's Chamber mystified scientists for years – until 1993.

southern shaft

In 1993, Rudolph Gantenbrink, a German robotics engineer, constructed a miniature robot, named Upuaut II (meaning opener of ways) that was capable of

exploring the Southern Shaft. Traveling up the shaft, the robot came to a stone partition with two protruding tapered metal pins in the stone and a visible small opening in the lower right-hand side of the partition (see Figure 17). This limestone partition was subsequently named "*Gantenbrinks Door*" although it is not a door, just a stone partition. Further exploration abruptly ended.



Figure 17. Gantenbrinks Door

In 2002, another miniature robot named iRobot (or Pyramid Rover) was able to travel up the same shaft and penetrate *Gantenbrinks Door* with a masonry drill in order to view the area behind the partition with a special endoscopic camera that was part of the robot. The results indicated another partition behind Gantenbrink's Door, and shortly thereafter, another miniature iRobot (Djedi Project) again traveled up the Southern Shaft and was able to look behind *Gantenbrinks Door* with a marginally increased level of visual acuity (that can still be dramatically improved). The following items of interest were discovered:

- The backside of the metal pins is looped with the end of each loop disappearing into the limestone block (likely for stability)
- The metal pins are isolated from the limestone block by a tar-like sealant which can also be seen on the top portion of the pins in Figure 17

- There appears to be a corrugated line/object along with some red painted symbols between the two partitions. These items need further study to determine their significance
- The presence of a 1"x 4" rectangular shaft between the two partitions that indicates a vertical shaft leading to another portion of the pyramid

In Figure 17, the action of dilute hydrochloric acid eroded the metal pins over time. Because the upper portion of the pins were submerged in the chemical for a shorter period of time (the chemical would typically be receding), the lower portion is eroded more than the upper portion and resulted in a visible taper of the metal pins along with an ultimate failure of the left pin.

northern shaft

Soon after the exploration of the Southern Shaft in 2002, the rover team also explored the Northern Shaft with the iRobot that was able to travel up the shaft to a limestone partition similar to the limestone partition in the Southern Shaft. For a second time, the robot discovered two protruding tapered metal pins in the stone partition although both pins appear to be fully intact (Figure 18) as compared to the left pin in Figure 17. Currently, the area behind this stone partition has yet to be penetrated and viewed similar to the Southern Shaft.

In Figure 18, although both metal pins in the Northern Shaft also have a visible taper for the same reason as the pins in Figure 17, only the metal pin on the left side is coated in a white substance. Because the Northern Shaft contained a hydrated metal such as a hydrated zinc chloride solution, the left pin appears to have been electroplated which is a predictable reaction considering that if the pins were electrically charged, electricity flows from a cathode (+) to an anode (-). This process would deposit zinc on an anode, which is called electro-deposition or electroplating.

implications

So, what are the potential implications of the recent discoveries in the Southern and Northern Shafts that are plainly visible in Figures 17 and 18? While explanations by the secular archaeological community and Egyptian Egyptologists are ambiguous at best, the visible configurations of the Queens Chamber Southern and Northern Shafts appears to support the premise that these shafts were used to supply chemicals to the Queens Chamber to produce hydrogen gas. To underscore that premise, refer to Figure 19 and let's take a closer look at the upper portion of the Queens Chamber Southern Shaft as it has received the most investigative scrutiny and appears to resemble a simple *fluid switch*:²³

- As previously mentioned, the Southern Shaft contained a dilute solution of hydrochloric acid that was used with a hydrated zinc chloride solution from the Northern shaft to produce hydrogen gas within the Queens Chamber and Cheops



Figure 18. Metal Pins In Northern Shaft

- The dilute solution of hydrochloric acid was likely supplied (and resupplied) to the shaft through the small opening in the lower right-hand side of the partition
- To maintain the proper fluid level in the shaft, the two insulated protruding metal pins (electrodes) in the stone partition would have been electrically charged (the Egyptians had the technology of electricity) and act as a simple fluid switch
- When the fluid level was at the correct level and contacting the metal pins, there would have been continuity between the pins. Conversely, when the fluid level dropped so the pins were above the fluid level, contact would have been lost, signaling the need for more fluid

At this point, a relevant question would be – *where are the essential passageways that would contain the necessary electrical wires for the metal pins and also*

be able to resupply the necessary chemicals? On pages 31-32 we discussed the discovery of a small opening to a vertical shaft and red symbols/corrugated line/object behind Gantenbrink's Door that was discovered by the Djedi Rover. Although these items can be the final missing links to this mysterious puzzle (*hence the question mark between the stone partitions in Figure 19*), their validity is dependent on future discoveries which to date, have been suspended.

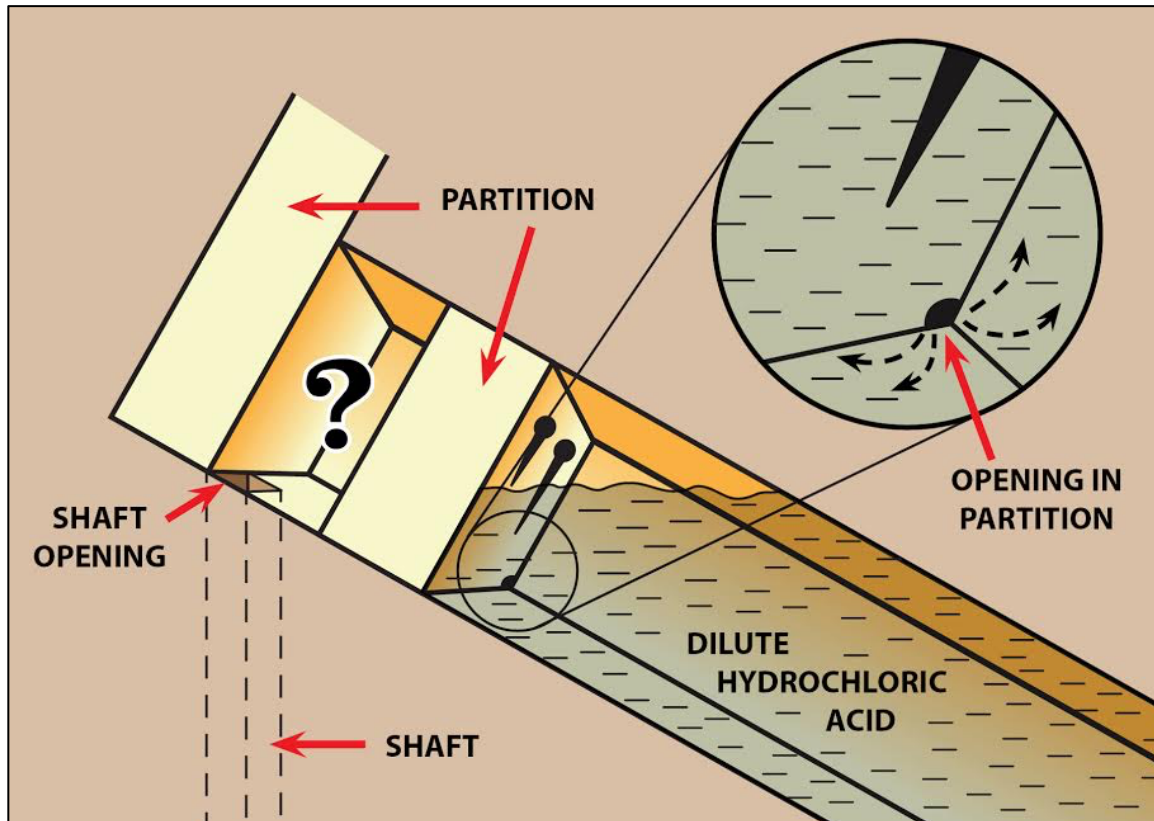


Figure 19: Queens Chamber Southern Shaft Elements

Four

Most viewpoints of Cheops are based on the perception that the pyramid has four sides, which is what all photographs that are taken from any ground position indicate. Actually, Cheops is an 8-sided pyramid and is the only pyramid with this configuration.²⁴ Each of the pyramid's four sides is subtly and evenly divided from bottom to top by imperceptible concave indentations that have been measured at $\frac{1}{2}$ to 1-degree and is referred to as concavity. This unexplainable feature was illustrated in *La Description de l'Egypte* in the late 1700's and then by the British Archaeologist Flinders Petrie in *The Pyramids and Temples of Gizeh* in 1883. However, in 1980 a British Air Force pilot, P. Groves, was flying over the pyramid and accidentally noticed the concavity. He photographed the pyramid from the top that clearly clarified the 8 sides. The

photo in Figure 20 was taken by the IKonos satellite (a commercial earth observation satellite) and can only be seen under specific conditions as stated below:

“One unusual feature of the Great Pyramid is a concavity of the core that makes the monument an eight-sided figure, rather than four-sided like every other Egyptian pyramid. That is to say, that its four sides are hollowed in or indented along their central lines, from base to base. This concavity divides each of the apparent four sides in half, creating a very special and unusual eight-sided pyramid; and it is executed to such an extraordinary degree of precision as to enter the realm of the uncanny. For viewed from any ground position or distance, this concavity is quite invisible to the naked eye. The hollowing-in can be noticed only from the air, and only at certain times of the day (dawn and dusk on the spring and autumn equinoxes). This explains why virtually every available photograph of the Great Pyramid does not show the hollowing-in phenomenon, and why the concavity was never photographed until the age of aviation”

The Egyptian Pyramids: A Comprehensive, Illustrated Reference, J.P. Lepre

At this point in our discussion, a logical question would be “to what purpose was the concavity incorporated into Cheops? Archaeologists and secular scientists will readily admit that its purpose is unknown. However, the concavity appears to be an applicable verification for the concept of Cheops as a potential electromagnetic power plant as follows:

“This concavity has the effect of focusing the microwave energy incident upon the north face to a reflector, which, in turn, refocuses the energy into the Northern wave guide (upper Northern Shaft into the Kings Chamber). The theory has it that the electromagnetic field out of the northern wave-guide is then incident upon the north face of the coffer (Sarcophagus), which will have the effect of a microwave lens upon the field.

The diverging microwave field increases the area of its encounter with the excited hydrogen atoms, and have a similar effect upon the field’s amplitude (largeness)”

Journal of Optical Society, Edward Hyman’s Research

Five (refer to Figure 21)

The most recent notable discovery in Cheops was initiated in 2015 when an international group of scientists used a modern technology known as Muography along with Infrared Thermography and 3-D Simulations to envisage the interior of Cheops. Muography is a new imaging non-invasive type of X-ray technology that uses elementary particles, called muons. Muons are generated by cosmic rays from outer space striking atoms in the upper atmosphere of the Earth creating nuclear reactions between primary cosmic rays and atmospheric nuclei. Once the particles fall and pass through different materials, they lose

energy, causing them to slow and decay. However, by using specific emulsion plates, scientists were able to count the number of muons passing through the pyramid. As muons are partially absorbed by stone, any large holes, cavities and/or voids in the pyramid would result in more muons than expected landing on the emulsion plates, thereby generating a pictorial representation of the interior of the pyramid.

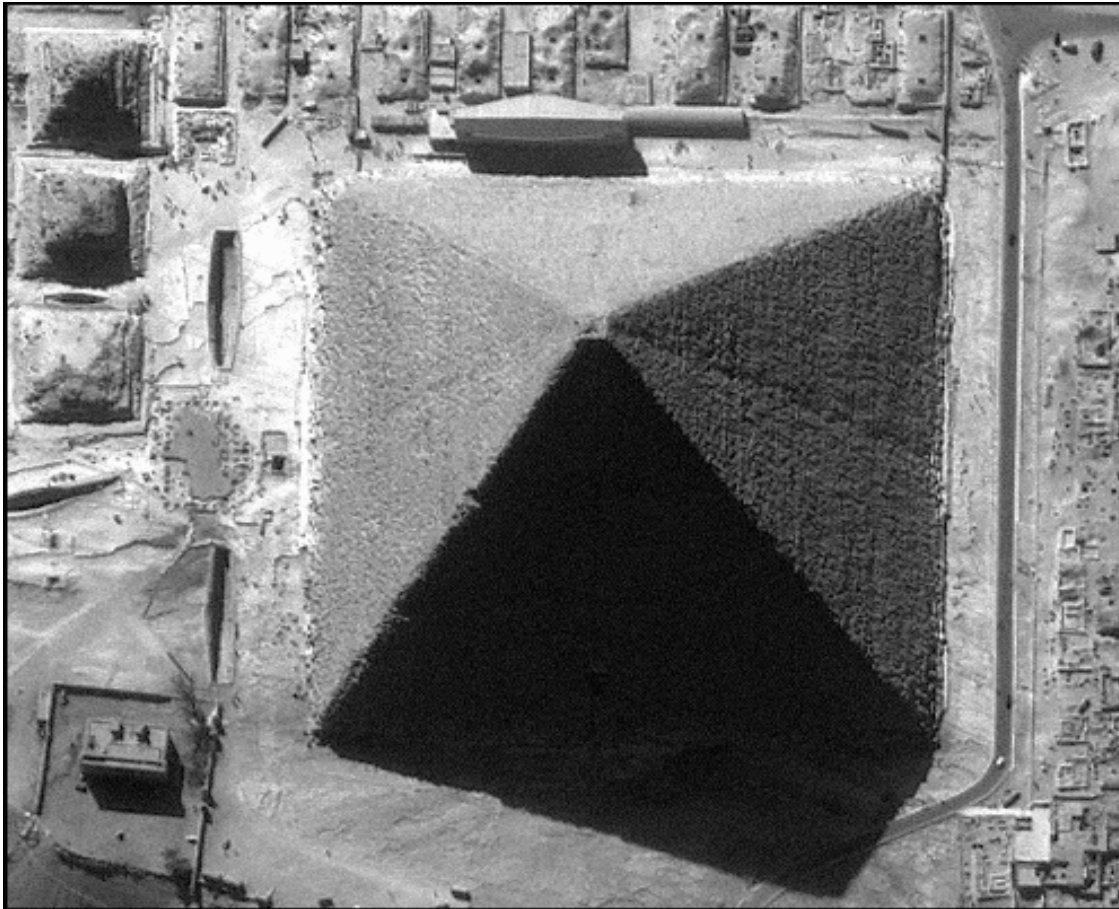


Figure 20. Cheops Concavity

The scientists worked with ScanPyramids,²⁵ the French Heritage, the Innovation and Preservation Institute,²⁶ the Faculty of Engineering of Cairo, and the Egyptian Ministry of Antiquities. In 2016, a team of physicists and engineers discovered what appears to be a small void/corridor behind the chevrons (Figure 6) of the original entrance corridor to the interior of the pyramid. Then, in 2017, a large void was discovered just above the Grand Gallery (Figures 7 and 8) and is estimated to be about 100-feet long and 50-feet high as illustrated in Figure 21. Three teams of physicists and engineers repeated the findings and measurements to validate their findings, and each time the conclusion was the same.

This technology was utilized *“because it’s the pyramid, we can’t touch it,”* as voiced by Mohamed Ismail, a spokesman for the Egyptian Ministry of Antiquities. Therefore, the prospect for further exploration in the pyramid is limited. At this time, the purpose and/or contents of the voids are unknown. The discovery of the two voids help to fuel the mysterious and unknown secrets of Cheops. The results of these discoveries were originally published in Nature magazine in late 2017.

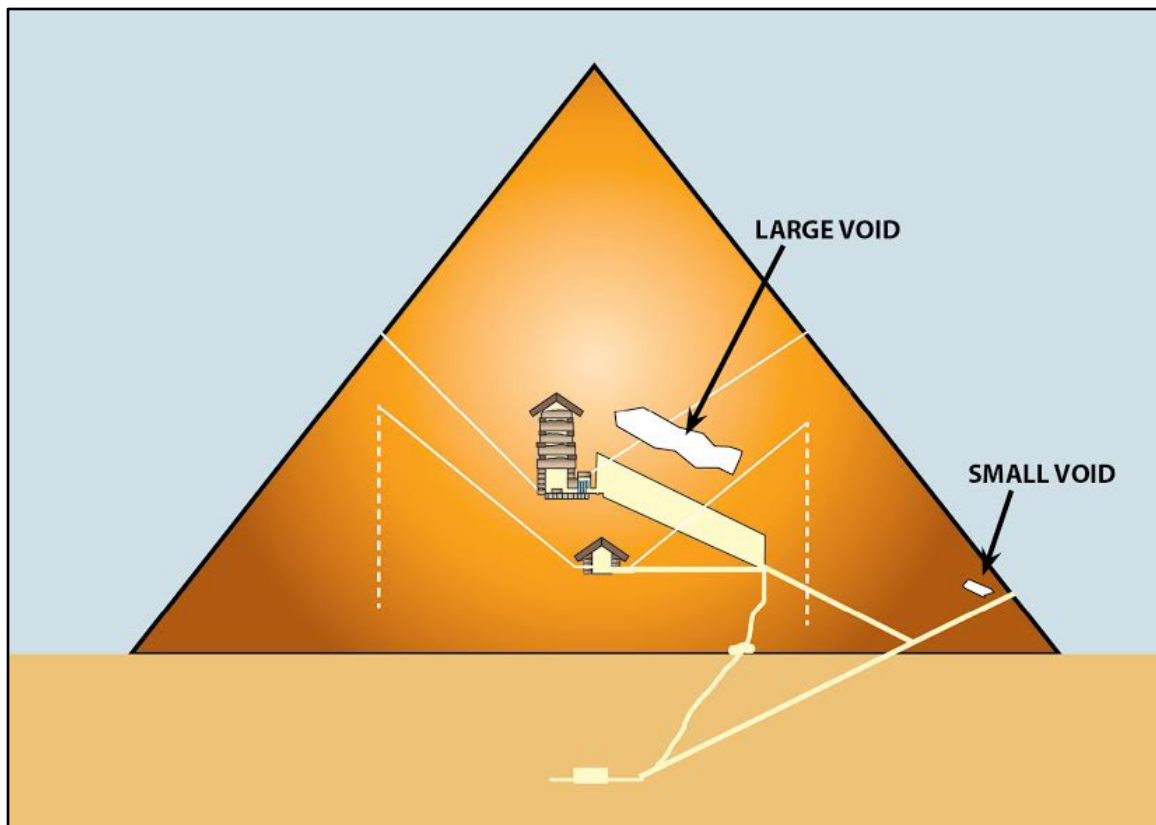


Figure 21. Discovery Of Mysterious Voids In Cheops

CONCLUSION

When opening a history textbook, walking into a museum, or watching any current television program on history, the past is always presented from the perspective of ancient being associated with primitive in concert with an evolutionary past that has steadily progressed from a primitive beginning to the advanced culture of science and the technological achievements of today. It is not an accident that virtually all of the artifacts that are preserved in geological and archaeological displays have been specifically arranged to fit within the secular archaeological view of evolution.

Yet, from the evidences that are plainly observed and known by modern archaeologists (a few of which are summarized in these notes), there is evidence of a different account of past history that is in clear opposition to the biblical account of Creation. This conundrum is typically called “*out of place artifacts*” (OOPARTS) because they do not fit the established pattern of ancient evolutionary history. Instead, OOPARTS direct attention to the existence of advanced technology, a very advanced technology that was present way before modern times. Though these discoveries are well documented, most secular historians would prefer to ignore, discount, or offer creative explanations for OOPART anomalies “*that should not be there – but are.*” As we discussed in our previous programs on January 5, 2016 and February 3, 2016, modern science often uses the premise that alien life has previously visited this Earth with advanced technology. This ideology has also been adopted by secular archaeology to explain how evolving ancient civilizations could have built many of the OOPART artifacts and/or how alien life could have left the required technology here to be used by future generations.

If the dates of ancient technology are carefully examined, it readily becomes apparent that most of the dates are prior to the time of Christ! If the Bible is true, we should find evidences of technology in the past where there should be none according to the evolutionary time scale. Not surprisingly, that is exactly what we find so accepting the biblical account of creation and ensuing history should be simplified. Unfortunately, that is not the case as graphically outlined in Romans as follows:

(18) “*For the wrath of God is revealed from heaven against all ungodliness and unrighteousness of people who suppress the truth by their unrighteousness, (19) because what can be known about God is plain to them, because God has made it plain to them.*

(20) *For since the creation of the world his invisible attributes, his eternal power and divine nature have been clearly seen, because they are understood through what has been made. So people are without excuse. (21) For although they knew God, they did not glorify him as God or give him thanks, but they became futile in their thoughts and their senseless hearts were darkened. (22) Although they claimed to be wise, they became fools*”

Romans 1:18-22

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