# Dossier 111 - The real measures of the (flat) Earth

# Dossier 111 - The real measures of the (flat) Earth

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*To the Lord of the whole earth*
*Zechariah 4:14*

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# Foreword

The curtain rises.

A children's room. You can hear a soft melody from a music box. Ninepins and bowls scattered everywhere with colored wooden cubes on the floor. A chubby, roly-poly hippopotamus is lying down in the mess. In the meanwhile, a plastic horse tries moving on its wheels toward a blonde little dancer. It is just a playing moment in Gaia's babyhood.

Suddenly you can hear a voice from outside: "Don't you want to see the spinning top? It's awesome, why don't you come closer? Would you like to play with the top? Come on! Don't be afraid: the top is simply spinning! Can't you see? It is spinning!" As all the little toys gather together, the top falls down and the little horse is crying upset. "Oh, no. It's broken now!"

"But don't worry". The charming little dancer immediately twirls nearby, to reassure him: "No, it's not like this. We'll make it spin again".

So, when beholding the top moving again, the hippopotamus appears absolutely ravished. He keeps on smiling. Then, in a real outburst of joy, he promises: "When I will grow up, I want to become a spinning top!"

## Foreword

Immediately the curtain falls.

This is something that really happens in the course of Gaia's life. In some puzzling way the hippo, one day, keeps on spinning around its tail and nobody dares to reply.

In this same way, the study of the Earth and its orderly cosmos can reserve great surprises, together with tragicomic disillusions. A few thoughtful scientists, in fact, acknowledge that the general understanding about the Earth is poor and approximate. Often the experimental results do not confirm the accepted theories, although these are strongly defended by the scientific community.

 So, while introducing the hypothesis that the shape of the Earth and its measures do not match perfectly to the general assumptions, you are not doing a real revolution. You're just opening the doors toward new scientific possibilities.

Too often, generally, people accept what the mainstream science has to say with blind eyes. And many of them feel dizzy in front of any new exploration. This passive blindness has produced confusion, wrong scientific theories, and enormous mistakes. With the consequent waste of time and resources.

The new book, "Dossier 111 – The Real Measures of the (flat) Earth" (edited by earthmeasured.com), has just one goal. The book aims to consider, with

mindful attention, what mainstream and countercurrent science, sometimes even unconsciously, have understood and perceived regarding the Earth. It will be a way of disassembling and then trying to reassemble the manifold gears of a complex motor. It is a motor that has many and many times been opened, dismantled and remade, but generally in complete secrecy. I hope to express innovative ideas by presenting facts, calculations, and formulas that will prove that the earth is not a globe.

The large majority of books on this topic are connected with the conspiracy theories. They deal with the voluntary hiding of the truth, performed by powerful lobbies. Many authors are often insisting on the fact that a fictitious reality has been propagandized to foolish people. Anyway, this is not a conspiracy theory book. Although it may be clear that there is a precise will of hiding the truth, it is not universally clear who is responsible. Political, economic and propaganda reasons are often not so explicit. Many organizations, generally thought to be the "absolute evil" (like Nasa, United Nations or Masonry), are only actors of a more complex comedy, difficult to describe with preconceived ideas.

You and I, and all of us can be aware of a superior will, playing in the backstage and maneuvering behind the scenes. Anyway, this is not the main theme about which this book is especially concerned. My first goal is, on the contrary, the description of the geometry and measures of the Earth. The standards

you will find in this dossier while describing the earth-system will probably appear to the average reader a bit strange, if not extravagant.

Anyway, I will explain everything on the basis of proofs and details. The book is conceived to be divided into two main units. You will start pondering a first section, in which I intend to disassembly the global framework. The aim is to prove the Earth is flat and motionless and Newton's gravity laws are old and outdated.

Then, in the second part, I'll introduce the math tools necessary to understand our cosmological reality. You will certainly learn, in a simple way, what are the physical and mathematical reasons that compel the curious learner to introduce the kind of unit measurement you will discover inside.

The reader will find, as well, a chapter in which I'm reintroducing the concept of ether, the mean through which light moves. The ether, of course, is not be considered as part of the geometrical framework of the Earth but, for sure, as an important entity in the physical asset of the entire geo-building. Reintroducing it will contribute to the destroying of the 20th-century theory of relativity and quantum physics.

I'm sure that, by pondering this book conceptions, you will become more aware and able to understand the true nature of the physical reality we all are liv-

ing within. However, I already know that some academic will comment adversely this writing, by saying that the main considerations inside are not well organized, unacceptable for the scientific community and both not peer-reviewed nor, maybe, reviewable. These are probably the consequences of one of the methods the student has to follow when examining the cosmologic phenomena. The a priori knowledge (also known as the methodology of the intuition) is often conceived independently of experience and is a deduction from pure reason. When studying the universe, some concept can be considered to be true when supported by strict logic and deep reasoning, which, for their natural inclination, are tending to the truth. More experimental proofs will certainly come later. This can sometimes happen when ideas are thoroughly new and ahead of schedule.

Anyway, in this world, the general scientific community is not always free to unveil what appears to be true or false, but rather what is politically or economically convenient. Science is, unfortunately, under the power of international lobbies that lead the research and its goals that define its boundaries and the kind of job that has to be done.

Therefore, even though in the worldly establishment there are many earnest scientists and researchers, I can affirm that, sometimes, they don't want to risk losing their job, after being discredited. The author team of this book, Dossier 111 – The Real Measures

of the (flat) Earth, (edited by earthmeasured.com) is, on the other hand, in the privileged position of being external to the establishment. When enjoying that position, you can dare to make hypotheses, calculations, and considerations entirely free, without the dramatic risk of ruining your career. For a beginning, we only pay with the lack of acknowledgment.

But we are glad, however, to be a little nearer to the truth.

# Introduction

## Scientific freedom: pure illusion

"There are still great truths to say, if we had both the courage to state them and the good disposition to accept them". *Freeman Dyson*

Mainstream science today is not headed the same direction of the flat earth. You could suppose a sort of secret conjuration took form in the course of the years, contrived with the aim to cover the evidence. Probably just a handful of influential men, endowed with certain personal charisma, were sufficient to build a framework that can no more be put under discussion. Scientific freedom remains an illusion. Scientists have to stay inside the limits of the established rules and only the braves are daring to challenge that implicit command.

Nowadays, notwithstanding the great advancements performed by technology, men of science are often still at a stop within old theoretical concepts and can't manage to broken the deadlock of an impasse long centuries. Due to the intrinsic weakness of human reason, scientific fundamentals remain unproven. Science can provide only evidences; it cannot give absolute proof of its tenets. You can de-

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duce something from observation but, since empirical observations are never conclusive, you can never be certain whether you know the truth or you don't. All this can lead to an open question: is it reasonable to base your beliefs on models of uncertainty to unveil the truth? When models are no more reliable the time has come to change them.

Bertrand Russell gives a bloody description of a turkey that, in an American nurture, decides to shape its vision of a world scientifically well founded: "The turkey found that, on his first morning at the turkey farm, he was fed at 9 a.m. Being a good inductivist turkey he did not jump to conclusions. He waited until he collected a large number of observations that he was fed at 9 a.m. and made these observations under a wide range of circumstances … Each day he added another observation statement to his list. Finally he was satisfied that he had collected a number of observation statements to inductively infer that "I am always fed at 9 a.m.". However on the morning of Christmas eve he was not fed but instead had his throat cut". Of course, when playing Russian roulette the fact that the first shot got off safely is little comfort for the next. Notwithstanding, as Jamie Hale puts it: "Scientific knowledge is tentative, and the tentative nature of science is one of its strong points."

It is in the nature of science that we, ordinary people as well as men of science, search for the truth in the unknown, which is so vast and complex that our

predictions will always be constrained by our ignorance of the future.

It is often assumed that science can reveal the truth but science seems incapable of attaining it. Truth is one of the central subjects, both in science and philosophy. But, surprisingly enough, even if science could lead us to the truth, we would have no way of knowing that it actually is the truth. Why not? Because science cannot provide definitive proof of its tenets. Science provides only evidence. Sometimes the evidence for a scientific theory may seem very strong. But even in this case we cannot tell whether future observations and/or experiments will confirm or contradict the theory.

Thus, we can read so often that this or that has been scientifically proven (gravity, relativity, the earth is a globe…) Many people seem willing to admit that details of science remain unproven, but they insist that the fundamentals have been proven. For example, in mainstream biology, Darwinism provides its central conceptual framework and many think that it has been proven even if evolution still continues to be a simple theory.

The history of science provides many examples of scientific revolutions where a well-established theory had to be modified or replaced by another one in view of new facts that could not be accommodated by the "established" theory. Newtonian physics is one such example. Ptolemy versus Galileo versus

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Flat Earth hypothesis again, is another. Science allows scientists to explain and predict. In other words, it has explanatory and predictive power. However, much uncertainty remains. Korzybski and others have pointed out that uncertainty characterizes scientific knowledge in general, and one might add also non-scientific knowledge and everyday life.

"*In the Middle Ages people believed that the earth was flat, for which they had at least the evidence of their senses: we believe it to be round, not because as many as one percent of us could give physical reasons for so quaint a belief, but because modern science has convinced us that nothing that is obvious is true, and that everything that is magical, improbable, extraordinary, gigantic, microscopic, heartless, or outrageous is scientific*."

– George Bernard Shaw

Another historical illustration of the failure of induction in engineering is the unfortunate case of the Challenger disaster. When Challenger disintegrated 73 seconds into its flight on the morning of 28 January 1986, it represented one of the most shocking events in the history of American spaceflight.

A Presidential Commission was immediately convened to explore what had gone wrong, but with the vast complexity of the space shuttle and so many vested interests involved in the investigation, discovering the truth presented an almost impossible

challenge. Richard Feynman's appendix to a report paper on the event reads it as a thorough condemnation of inductive inferences in engineering:"The argument that the same risk was flown before without failure is often accepted as an argument for the safety of accepting it again … There are several references to flights that had gone before. The acceptance and success of these flights is taken as evidence of safety. … The fact that this danger did not lead to a catastrophe before is no guarantee that it will not the next time, unless it is completely understood".

Usually ad hoc hypotheses are introduced to save theories, paradigms or world views from contradictory evidence. In other words, to explain away the contradiction. It seems that almost any theory, paradigm or worldview can be defended through ad hoc hypotheses. However, as more and more contradictions accumulate, eventually the status quo may be given up. But this may take a long time and may happen only after the death of its defenders.

*"The theory of relativity is a mass of error and deceptive ideas violently opposed to the teachings of great men of science of the past and even to common sense … The theory wraps all these errors and fallacies and clothes them in magnificent mathematical garb which fascinates, dazzles and makes people blind to the underlying errors. The theory is like a beggar clothed in purple that ignorant people take for a king. Its exponents are very brilliant men, but*

*they are metaphysicists rather than scientists. Not a single one of the relativity propositions has been proved." – Nikola Tesla*

The renowned historian of science Karl Popper described the state of knowledge this way: "Our knowledge can only be finite, while our ignorance must necessarily be infinite." Experimental observations, according to Popper, are never conclusive since we cannot attain experience of what is universal. Universality is an a-priori addition that we cast on reality, a concept not relying first on experience, but originating inside our human intellectual faculties. Truth in science is not always determined from observational facts, since there are facts that cannot be detected by human senses, but by logic and reasoning only. Our senses have to fulfill a biological function that does not consist in simply providing sensations but also in transmitting knowledge. We couldn't manage just with sensations. Observations are not the crucial point, but expectations are. Our expectations are thus biologically important.

Generally, of course, we would like to rely on empirical methods, but this is not always a practicable strategy. However, we say that an assertion is true when it clashes with facts and things appear to be such as the statement has presented them. One of the most important results of modern logic has consisted in recovering this absolute concept of truth. Its full rehabilitation appears to be one of the most im-

portant philosophical achievements of the twentieth century.

Alfred Tarski (1902-1983), an American logician and mathematician of Polish and Jewish descent, is famous for his researches about the concept of truth in formal languages. His *correspondence theory* is going back to Aristotle's well known definition of truth (Metaphysics 1011b25): "To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true"—anyway, virtually identical formulations can be found in Plato. Commonly, truth is viewed as the correspondence of language or thought to an independent reality which is sometimes called the correspondence theory of truth.

Unfortunately a clear understanding of the truth behind science is limited to certain areas and phenomena. Popper compares the reaching of a scientific objective truth to a mountain top that is always surrounded by clouds. A man climbing it can find it hard to reach the summit and maybe will not be thoroughly aware of having attained the top, since he cannot distinguish among the clouds which is the main pick and which is the secondary one.

We have to make a clear distinction between truth and certainty. All of us normally wish to know the truth and sometimes we succeed in it, even if it happens rarely or even never, that we can be fully sure

of grasping it. As Popper puts it, certainty is not the main objective worth of science, but truth is.

On the contrary, most people are convinced that truth is always relative and that science doesn't draw conclusions about supernatural explanations. Does God exist? Does he intervene in human affairs? They think that science questions. For many, the large majority, such questions are matters of personal faith and spirituality. But let's try asking: are these questions really out of the reach of science? In the first chapter to the letter to the Romans you can read that "God's invisibles qualities are evident in all creation", and in John 17:17 Jesus said that all the Scriptures are trustworthy.

So, considering the uncertainty of every human truth, for this fundamental reason, I am looking inside the Bible in search for accuracy about the earth, its shape and measures. According to Karl Popper and a large number of ordinary, level-headed people, there are not knowledge sources that are better or worse than others. It does not matter where an idea comes from; what matters is how we deal with it, by attempting to expose its shortcomings. But, of course, and not only from my point of view, the Bible is the best of all sources. As Augustine declares: "God is the author of the Book of nature and the Book of Scriptures" and they match perfectly.

Intuition, imagination, a-priori knowledge (that is to say a knowledge that comes from the power of rea-

soning based on self-evident, universal insight), pre-conceived ideas, and, especially, the most provoking and daring of them, are often at the origin of new scientific theories, since in science the simple observation is not sufficient, but you need first to know which is your goal, the final result you wish to find. Meaning: you need hypothesis to start. As Popper puts it: "Expectations come first, then observations."
Human knowledge is conjectural and observation is never neutral, but mixed up with theory, so that, sometimes, you find it difficult to establish a clear distinction between "facts" and "opinions.

Even when observation is proceeding empirically, the human mind is unconsciously induced to overlap its intellectual layouts and categorizations with the observed reality. You never grasp facts but only opinions and, as a direct consequence, the nature of science is always fallible and conjectural. From this point of view, the empiric base of the objective sciences is never "absolute". Notwithstanding its rich and secular experience, science is not able to furnish clear and exhaustive answers to fundamental questions, but has sometimes generated further confusion and produced many swindlers that promote themselves as scientists and philosophers but are unable to reach any reasonable answer.

In his best-seller The Black Swan the writer Nassim Nicholas Taleb notes that: "Before the discovery of Australia, people in the Old World were convinced that all swans were white, an unassailable belief as it

seemed completely confirmed by empirical evidence. The sighting of the first black swan might have been an interesting surprise for a few ornithologists, but that is not where the significance of the story lies. It illustrates a severe limitation to our learning from observations or experience and the fragility of our knowledge. One single observation can invalidate a general statement derived from millennia of confirmatory sightings of millions of white swans. All you need is one single (and, I am told, quite ugly) black bird".

Keeping in mind this point of view, you will often meet black swans in your personal and worldly life and you will even be eager to controvert Wittgenstein when he rejects the assertion "there will be a final day of Judgment" as a not scientific statement. Every day is time to get match fit for unintended consequences. Just think of two recent unpredictable political situations: the 2016 Brexit vote and U.S. presidential election outcome. Did they teach us anything? One thing certainly: that nobody in the world can foretell the future and every living being must brace himself for the unexpected.

Some managers of science wish to underline only what is essential for the welfare of the society. Scientific research is not manageable in the usual sense of the word. Countercurrent understandings of the physic realities we live inside, ultimately can lead to the development of new concepts.

However, nobody wants to compromise exposing an entirely new and maybe shocking scientific paradigm, go against the mainstream or hazard reputation expressing new upsetting ideas. It's obvious that scientists may be afraid their colleagues might blame them and charge their ideas of not having an evident scientific base. They don't want to risk losing their face inside the scientific community, to be discarded among the academic environments, to lose the eventual sponsorship given to researchers, but all these situations do not favor nor advantage a real scientific progress.

The brilliant visionary imagination necessary to produce any important scientific revolution seems to be running dry, just to leave space to the scanty, ordinary little ideas that appear every day on the markets of the world. The only result is that, by now, science looks like a pitiful form of religion with a series of tenets that cannot be put under discussion. Here also originates the panic fear to state a radically new paradigm and the dread to be pointed as silly, ignorant and thus unfit to any important executive position. To work in a scientific environment you need constancy, abnegation, precision, punctuality and carefulness but not too much independence nor originality. It is evident thus, as a nineteen century philosopher cunningly observed, that history must undergo several phases before being able to discard an old social form and eventually grab it.

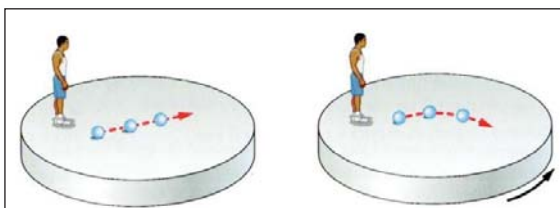# 1. The Earth is motionless

## 1.1 Coriolis



Figure 1.1 Coriolis Effect on a platform. Source: Sciencestorming.eu

What is Coriolis acceleration? This is a physical phenomenon occurring to an object moving in a rectilinear way on a rotating surface. Look at the images above: in the first picture the ball is moving over a rectilinear line on a stationary platform. The ball isn't affected by any lateral acceleration. When the platform starts rotating, the ball starts bending its trajectory and the result will prove to be a non rectilinear movement. This side acceleration is known as Coriolis acceleration. It is an outstanding phenomenon that can be useful to prove that the Earth is not moving.

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For example, let's consider the ball as starting its linear movement exactly at the center of the circular platform. The platform rotates, let's say, at the speed of 0.1 turn per second, that means 6 rpm i.e. 0.628 rad/sec (1 rpm is about 0,1 radiant per second and you should remember that $2\pi$ radians are 360°).

The ball is initially in the center of the platform, so it cannot be dragged anywhere due to the peripheral speed of the platform, because, in the center, the speed is actually zero and it increases moving toward the periphery proportionally to the radius, according to the relation:

$$Vp = \omega \cdot r$$

where Vp is the peripheral speed, $\omega$ is the pulsation and r is the radius of the platform; r can vary from zero in the center to R that is the outer radius. See the following image.
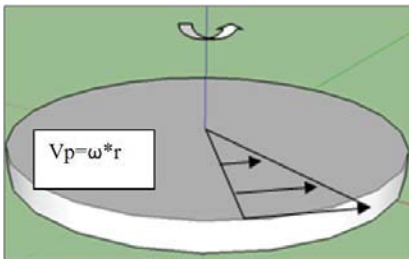


Figure 1.2 Peripheral speed on a disc. It reaches its maximum on the periphery

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Thus, when the ball starts its rectilinear movement from the center to the periphery of the platform, it is affected by that speed, that constantly increases, due to the increasing of the radius. The ball should start to have a lateral acceleration in the sense of rotation, in order to maintain its rectilinear movement, but it can't. Thus, it starts to remain laterally backward due to inertia, and the trajectory bends as it is shown in the picture 1.1.

Out of curiosity: the lateral acceleration that the ball should maintain, in order to keep its linear trajectory, could be expressed by this following formula:

$$Ac = 2 \cdot V \cdot \omega$$

where Ac is the Coriolis acceleration, V is the speed of the ball and $\omega$ is the pulsation.

In this example, the ball is free to move in whatsoever direction. Thus, it stays behind and, when the platform starts its rotation, the ball keeps curving down, as a consequence of the laws of inertia.

But now, consider the case when the ball is laterally guided on the platform, as you can see in the picture below. The ball is forced to follow the platform and move in a rectilinear way toward the edge. The ball, this way, rotates with the same rotation speed $\omega$ of the platform.
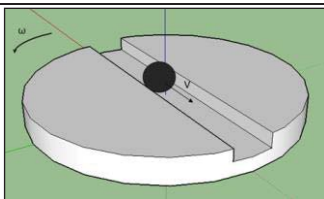
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Figure 1.3 Ball constrained between two guides.

To maintain this rectilinear movement of the ball on the platform, the guide has to impress the force of Coriolis:

$$Fc = m \cdot a = m \cdot 2 \cdot V \cdot \omega$$

This is a real force, not an apparent one, as stated by Wikipedia.

Let's apply now this idea to the globe and, more specifically, to airplanes that fly over the Earth.

An airplane, moving on a pure east-west direction, will not be affected by the Coriolis Effect, because the speed of the globe on fixed latitude doesn't vary. But an airplane, taking off from A (see the figure 1.4), will not arrive at point A' (north-south direction as shown in the picture), unless its trajectory is readjusted by the aid of a suitable Coriolis acceleration, then it will be able to reach point X.
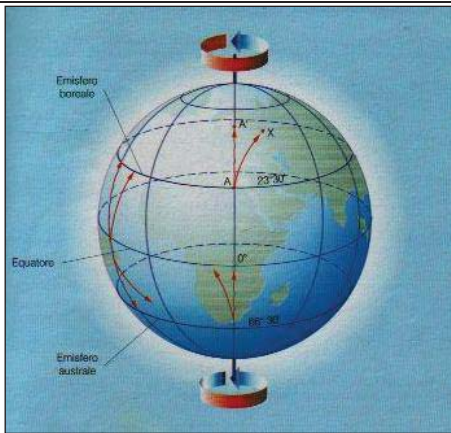
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Figure 1.4 Coriolis on the globe. Source: Wikipedia.org

When you make some research surfing the net, you will find that airplanes have some electronic system able to correct the trajectory in a suitable way. But is that actually true? Let's investigate.

Consider now a helicopter able to fly at a maximum speed of 500 Km/h and taking off from the North Pole.
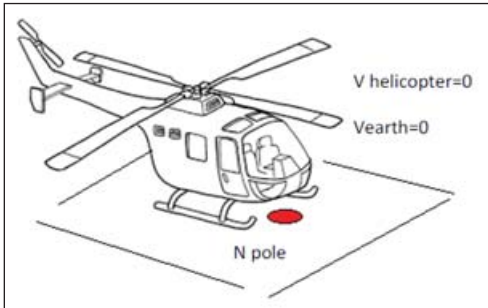
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Figure 1.5 Helicopter at the North Pole

The Earth wouldn't drag it with its peripheral speed, because the pole is on the axis, r=0, so Vp=0. Let's suppose the helicopter flies in an exclusively South direction and its speed has only one South component of 500 Km/h. Now, something dangerous is happening under the airplane. As it continues to fly southwards, the Earth below keeps accelerating, due to its rotation in a west-east direction. It is an effect of the increase of the radius, because r increases. When the helicopter reaches the equator, r=R i.e. 6371 Km, thus it should keep a peripheral speed of about 1700 Km/h. Can the helicopter correct its trajectory? Not at all, because, even if it starts to follow the earth along the equator, it can only reach 500Km/h. The fuel is finished, the helicopter tries to land but it will be destroyed in the same instant of its landing.
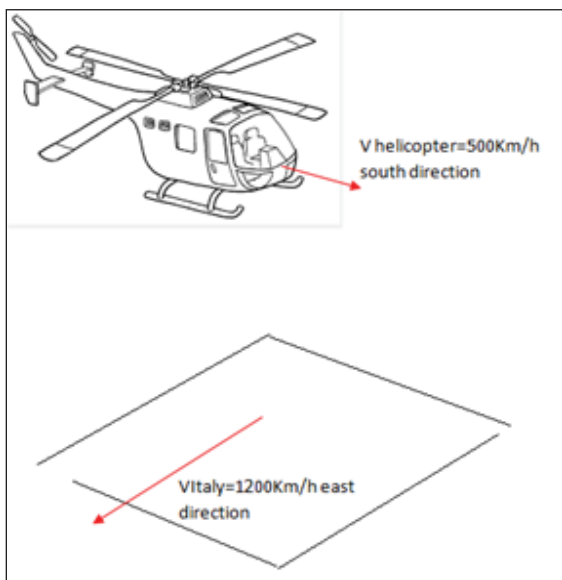
Figure 1.6 The helicopter, when overflying Italy, beholds the Earth moving at the wonderful speed of 1200 km/h

To the average reader this situation could seem too much theoretical. So let's give him an example taken from the everyday life. Imagine a man lying on his bed and ready to get up. Imagine a treadmill (tapis roulant) moving under the bed at the level of

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his feet at an amazing speed of 1000 km/hour. Could the man be able to get up and immediately start his activities? Absolutely not. He would be, with no doubt, hurtled away from his bed and splattered somewhere against the wall.

This is a clear demonstration of the fact the earth is not moving around its axis. A rotating earth would have to keep on moving faster at the equator and slower near the north and south poles. But there is no difference in speed at any point on the earth's surface, whether north of, south of, or at the equator. Therefore the earth is not rotating around its polar axis.

**Objection:** the atmosphere is pulled in rotation together with the Earth and acts on the helicopter with a lateral force that nullifies the Coriolis acceleration.

**Answer 1:** When you try the calculation, you will notice that, for an airplane or helicopter that is flying at an average south speed of 500 km/h, the Coriolis acceleration is 0,02 m/s$^2$. It is a very small acceleration. If you consider a lateral surface, offered to the wind by the helicopter (10 m$^2$ for a total mass of 5000 kg), you will reach a needed lateral force of the wind of 100 N, that really does not seem so much. So, you could infer, it would be possible for the atmosphere to produce a sort of lateral and very constant wind forcing the helicopter to move, while avoiding the Coriolis effect. But is it really like this?

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A force of 100 Newton on a 10 square meter surface generates a pressure of 10 Pascal [N/m²]. You can use the formula

$$P = \frac{1}{2}\rho V^2 => V = \sqrt{\frac{2P}{\rho}}$$

where $\rho$ is the air density (1,25 kg/m³), useful to calculate the speed of the wind generating this amount of pressure and which the helicopter should constantly feel on its side.

We find a side wind speed of 4 m/s that should be constantly applied to the helicopter in east direction (the rotation direction of the Earth). But look to the following picture.

We have imagined our helicopter starting its journey from the north pole. As you can deduce from the picture, for a long distance, polar winds blow westward and not eastward, which would be needed to win the Coriolis acceleration. How much will be the speed of these winds?
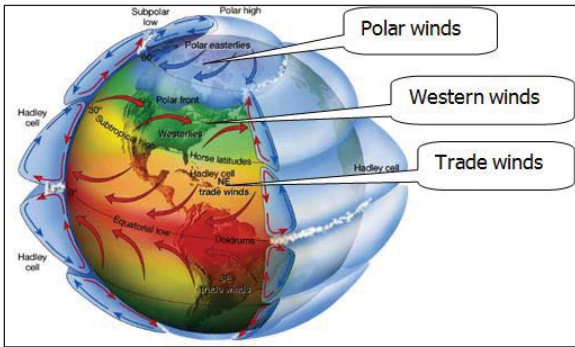
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Figure 1.7 Winds. Source: Slideplayer.com

You have to consider that winds have a logarithmic profile with the altitude, so they pass from low speed at soil level to very high speed at higher levels according to the formula:

$$\frac{V_z}{V_s} = (\frac{h_z}{h_s})^n$$

Where Vz and Vs are the speeds respectively at z height and at soil and hz and hs are the respective heights. n is a coefficient that describes the nature of terrain at soil level.

This formula generates a wind speed profile of this kind:
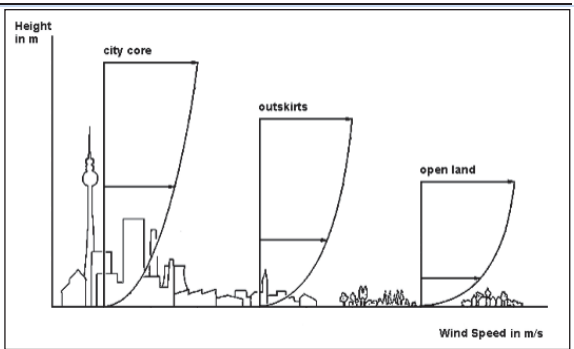
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Figure 1.8 Wind profile with roughness of the soil. Source: stadtentwicklung.berlin.de

So, if we have a wind of 3 m/s at 10 meters height, we can easily have a 7-12 m/s wind at 2000 meters height. This wind can thus nullify or even win this hypothetical push of the atmosphere on the helicopter that once more, should feel the earth rotating at high speed under itself, due to Coriolis.

**Answer 2**: if so, let's consider the Foucault pendulum. Its rotating movement during the oscillations is considered to be a proof of the rotation of the Earth. Why, in this case, the atmosphere doesn't act on it, blocking the rotation of the pendulum in connection with the Earth? If you consider the objection to be good in the case of the helicopter, it should be valid for the pendulum as well. This is a clear demonstra-

tion that the atmosphere around the earth doesn't exert any influence in order to nullify the Coriolis acceleration.



Figure 1.9 Foucault Pendulum. Source: Wikipedia.org

But what else could be added on the topic? Regarding the Foucault pendulum, I mean. This has always been used as an evidence of the Earth's rotation. This is because, in the course of its oscillation, it doesn't follow the earth's meridian. This would imply that you too, when sitting inside the helicopter, in the case it stopped for a brief time in the air, you himself, I mean, should be able to behold the Earth moving beneath your feet. Anyway, this never happens.

 A lot of experiments have shown that Foucault pendulum works as expected only if launched in a very carefully chosen direction, with a specific initial

force. A random launch will not produce the expected rotating movement. The conclusion is that the Foucault pendulum cannot be considered a proof of the Earth's rotation.

To stay on the topic, we could even discuss Guglielmini's experience. He launched many lead balls from a tower 100 m tall in Boulogne. Story tells that, in his experiment, he found that the ball had fallen down with a displacement of 17 cm far from the tower basis, toward est. The explanation is that the tower top, being 100 m high has a peripheral speed of rotation greater than the basis, according to the formula $V = \omega \cdot r$. This experiment underlines, once more, that a body in the air is not pulled by the Earth or the atmosphere but it moves with the peripheral speed of the point from where it has started its motion, in this case the tower's top.

So, if Guglielmini's experience has to be considered valid, also our consideration about the airplane that finds it impossible to follow the Earth should be considered valid.

But, is Guglielmini's experiment true? Let's see.
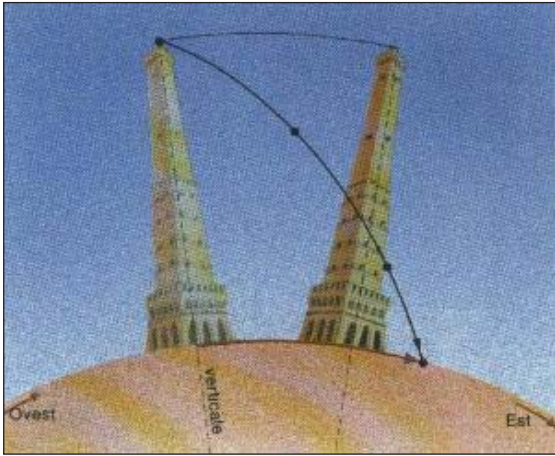
# 1. The Earth is motionless



Figure 1.10 Guglielmini's experiment from the Asinelli tower in Boulogne. Source: slideplayer.it

The bowl has a peripheral speed that is the peripheral speed of the top of the tower. The bottom of the tower moves at a lower speed because it is nearer to the center of the globe.

There is then a triangular speed profile like that in the picture 1.11. Science states that the bowl falls down with the speed of the top of the tower and thus it moves eastward during its falling.

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Figure 1.11 The tower. Source: the net

As a consequence of this experiment, if a helicopter moves on its vertical and stays stopped, let's say, for one hour on the same place, it should feel the Earth moving under its belly. This should happen because, when the helicopter rises up, it maintains the peripheral speed of the Earth, but at an altitude of, let's say, 2000 meters, it should have a greater speed to keep staying always on the same point. Let's make the calculation by supposing that the helicopter is on

an airport situated at the equator. The equator has a peripheral speed of 1670 km/h (1669,3) at a radius of 6378 km.



Figure 1.12 The helicopter. Source: The net

The helicopter flies staying on the vertical at 2000 meters altitude. Let's calculate the speed that the helicopter should have at that altitude, to remain on the vertical. $Vp = \omega \cdot r$ where Vp is the peripheral speed and $\omega$ is the rotation speed expressed in radiants per second.

$\omega_{earth}$=7,27E$^{-5}$ rad/sec = 6.94E$^{-4}$ rpm

Vp=7,27E$^{-5}$ *(6378000+2000)=464m/s * 3.6= 1670.28km/h

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The difference, as you can immediately notice, is very small: just 1 km/h, but it means that, if the helicopter stays in the same position, at that altitude, for one hour, the Earth will move of 1 km under the helicopter itself. Ask to pilots: this does not happen, in any case. Another proof that the Guglielmini's experience is false and that the Earth doesn't move.

Surfing the net you often happened to notice images of smoke columns getting out from volcanoes and raising up to great altitudes. This is a phenomenon that many people consider to be clear evidence the Earth is not spinning. Many people could get the same impression in relation with high waterfalls: the fact that water falls on a straight line, and doesn't bend, would be a clear consequence of the Earth being stationary and not spinning around its axis.



Figure 1.13 Waterfalls and smoke columns. Source: The net

Powerful images, aren't they? But could these phenomena show any clear evidences that the Earth is not spinning? Let's make some consideration.

# 1. The Earth is motionless

The first principle of the dynamic states: an object at rest tends to stay at rest and an object in motion tends to stay in motion with the same speed and in the same direction, unless acted upon by an external force.

Since scientists believe that Earth is set in the empty space, no external force is able to act upon the atmosphere nor, consequently, upon the smoke column or the waterfall.

But what about the acceleration due to rotation? Since the Earth rotates, the first principle of the dynamic is not totally applicable, due to the accelerations caused by the rotation. Let's thus calculate them.

Consider that an erupting Volcano can generate a very high smoke column. For example in 2014 the Shiveluch Volcano, in Russia, generated a smoke column 10 km high.

Consider, to make the calculation easier, that this volcano is, just to give an example, on the equator, that means radius of the Earth 6378 Km and peripheral speed (at the base of the column) of 1669,3 Km/h (this should be the speed of the rotating Earth at the equator).

When one adds to the radius 10km, corresponding to the altitude of the column, a peripheral speed of 1671.8 Km/h can easily be reached (remember the

formula $Vp = \omega \cdot r$ to calculate the peripheral speed).

But a 2-3 Km/h difference is not very impressive. Consider the fact that the wind speed increases when rising in altitude and that it can reach speeds much more greater than 3 Km per hour. Consequently, such a small variation in speed is not really evaluable, and it cannot be taken as a clear evidence of the fact the Earth is not spinning. The same reasoning could be done in the case of a waterfall.

But something different could be said when smoke is moving in a north-south direction. In this case the Coriolis acceleration should act on the column of smoke in a differently sensible way.

Looking figure 1.14, you have an impressive image of Eyjafjallajokull, the volcano that erupting in 2010 caused no little problems to many European airports. As shown in the picture, the smoke trajectory was keeping a southward direction due to the powerful blowing of the winds. Moreover, when considering the peripheral speed of the Globe at the Iceland latitude and the one at the Italian level, a difference of at least 200 Km/h could be reckoned.

Anyway, the smoke column arrived in Italy blocking the Milan airport, but, as you can remember, under the smokescreen, the Earth in Italy was rotating at the incredible speed of 1200 Km/h. (In Island the approximate peripheral speed is 1000 km/h).

Figure 1.14 Eyjafjallajokull. Source: The net

How can a smoke column acquire the needed acceleration, reach a sufficient speed to maintain its shape in its rectilinear direction, thus arriving without difficulty to cross all Europe? Moreover, consider that the Coriolis acceleration would act on the smoke column by bending it toward left, on the opposite direction shown by the image. This is due to the fact the Earth should rotate towards east and the smoke should remain back at west.

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This rectilinear trajectory followed by the smoke, without being affected at all by the Earth rotation, is clear evidence that the Earth is not spinning around its axis. The rotation of the Earth should have an influence on the winds too. Think, for example, to trade winds that blow from tropics toward the equator. These winds blow in direction north-south. Remember that the Coriolis Effect acts only on what moves in this direction. A helicopter that moves only in an East-west direction is not affected by Coriolis. These winds are originated by the hot air warmed by the sun at the equator latitudes. The warmed currents ascend pulling thus air from the tropics. Science says that these winds blow in an oblique direction due to the Coriolis Effect.

But, when trying to make a research, you will find that these winds blow at an average speed, during the year, of about 18 km/h. Moreover, at the tropics the Earth peripheral speed should be of about 1530 km/h, while at the equator the Earth spins at about 1670 km/h. This means that trade winds should blow at the good speed of about 140 km/h that is the difference between the two before mentioned speeds.

Another consideration: if the polar winds and the trade winds seem to blow in the correct direction, generated by the Coriolis Effect, what is the motor that pushes the winds in the temperate zone to blow in the other direction, going therefore even faster than the Earth in the east direction?
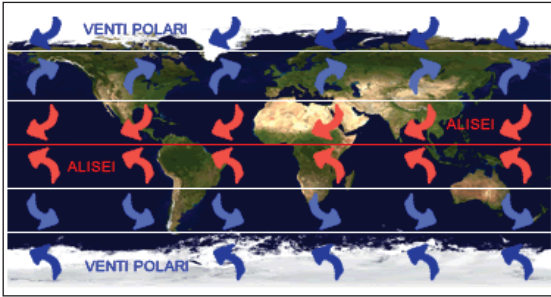
# 1. The Earth is motionless



Figure 1.15 Winds.
Source: http://www.ecoage.it/venti-costanti.htm

The main direction of the flowing winds is not generated by any Coriolis Effect occurring on the Earth.

**Main idea of the paragraph:** Coriolis doesn't appear to be acting on the Earth because the Earth is motionless. Also the wind activity shows that there is no Coriolis effect.

# 1.2 The Michelson experiment

From Tesla, Maxwell, and many others you all have learned that light moves through a medium called ether. A wave that requires a dense medium to propagate is called "elastic" or "mechanic", because it moves through an elastic or mechanic medium.

Michelson and Morley made an experiment to check if the ether is a real entity. It is a light interference experiment**.** Interference happens when two waves sum up, forming a resultant wave that can have a greater, lower or the same amplitude.
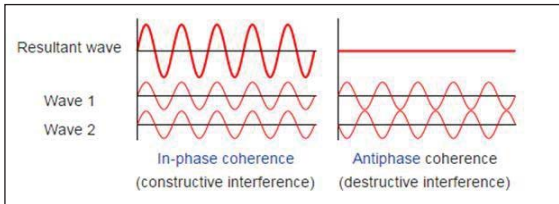


Figure 1.16 Interference. Source: Wikipedia.org

A wave that moves along the x axis is described by an expression that satisfies the wave equation (D'Alembert equation):

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$$\frac{\partial^2 f}{\partial x^2} - \frac{1}{v^2}\frac{\partial^2 f}{\partial t^2} = 0$$

Where **f** is the wave function, **v** is the speed of the wave. The solution of the equation is the harmonic wave described by the following:

$$f = A\cos\alpha(x,t) = A\cos(kx - \omega t + \varphi_0)$$

Where A is the amplitude of the wave, k is the wave factor, $\omega$ is the pulsation and $\varphi_0$ is the initial phase. Let's consider 2 waves and sum them up (interference): $f = f_1 + f_2$.

$$\begin{cases} f_1 = A_1\cos(\alpha_1) \\ f_2 = A_2\cos(\alpha_2) \end{cases}$$

The interference is called constructive when

$$\alpha_2 - \alpha_1 = 2n\pi$$

In this case the amplitude is:

$$A = \sqrt{A_1^2 + A_2^2 + 2A_1A_2} = A_1 + A_2$$

The interference is called destructive when

$$\alpha_2 - \alpha_1 = \pi + 2n\pi$$

# 1. The Earth is motionless

In this case the amplitude is:

$$A = \sqrt{A_1^2 + A_2^2 - 2A_1A_2} = |A_1 - A_2|$$

With specific instruments (for example Fresnel mirrors) it is possible to visualize interference between two coherent waves that manifest with fringes that are illuminated zones alternated with obscure zones.
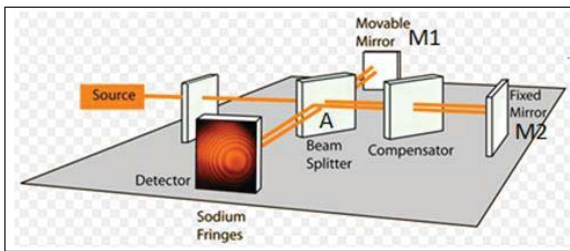


Figure 1.17 Michelson's interferometer. Source: Wikipedia.org

A ray of light coming out from the source S is partly reflected in the movable mirror $M_1$ and partly transmitted to the fixed mirror $M_2$. The return light rays from $M_1$ and $M_2$ hit first against the beam splitter and then are cast against the detector that is the focus of the splitter lens. The detector receives two coherent rays of light that are conveyed from the same source. ("Coherent" means that these rays have

the same phase). These rays, one from $M_1$ and another from $M_2$, interfere or superpose reinforcing or weakening each other, depending on the optical path that comes from the $AM_1$ and $AM_2$ distances.
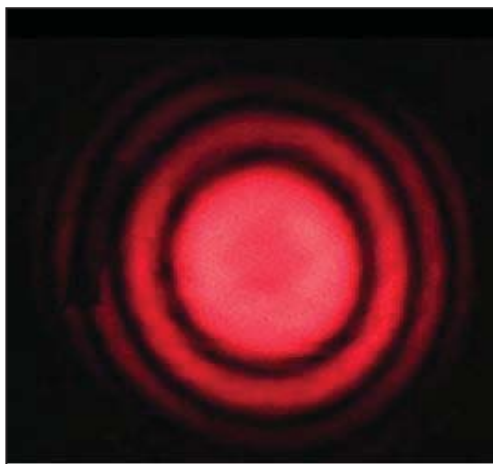


Figure 1.18 Interference fringes. Source: The net

By suitably changing the distance $AM_1$, it is possible to produce in O (the detector) interference fringes with a maximum or minimum of intensity.

By varying the distance $AM_1$ of $\lambda/4$ (being $\lambda$ the wave length of the casted beam of light) you can pass from a minimum to a maximum. A compensat-

ing lens is used to produce exactly the same optical path in the two rays.

In 1881 Michelson and Morley made an experiment to examine if, in the same way sound requires an elastic medium (such as air or water) to propagate, similarly light, to spread out, would need a mechanical medium, called ether.

Ether should be present all over in the intermediate space, to allow light to reach Earth from the stars. This implies that space is not empty: vacuum is only a vacuum of air but not an absolute vacuum.

Call **c** the speed of light in the ether. When you move toward the light ray inside the fixed ether with a speed **v** you shall measure a total speed of light **c+v**. On the other hand, you will measure **c-v** when you move in the same verse of the light ray. This expression has much to do with the Galilean relativity.

Michelson and Morley thought that this principle could be used to check if the ether does exist. They thought that an interferometer could be used to evaluate the variation of the interference fringe, due to the speed of the Earth.

Their idea was the following: when you put one branch of the interferometer in the direction of the speed of the Earth **v** and the other branch perpendic-

ular to the first, you will obtain a well precise drawing of interference fringes.

Then, by rotating the interferometer of 90 degrees, you can invert the two interferometer branches. Since the optical path changes, also the fringes should change.

Let's consider the calculation. The two branches of the interferometer, $AM_1$ and $AM_2$, have the same length. The $AM_2$ branch is rotated in the direction of the motion of the laboratory and relatively to the cosmic ether. When we consider the ether as motionless, fixed to the stars, the direction and the entity of the Earth speed **v** should depend on the hour of the day and on the day of the year.

According to the law $S = v \cdot t$ of the rectilinear uniform motion, the ray of light going from A to $M_2$ takes a time **t=l/(c-v).** To return from $M_2$ to A it takes a time **t=l/(c+v).** The total time for the branch $AM_2$ is

$$t_2 = \frac{l}{c - v} + \frac{l}{c + v} = \frac{2lc}{c^2 - v^2}$$

Time $t_1$ of the other branch ($AM_1$) has a different value. For this case you have to remember that during the time $t_1$ the Earth keeps moving. Thus the total trajectory of the ray is triangular. While the ray of light moves from A to $M_1$, the mirror A moves in the direction of the speed of the Earth. This distance

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AA' can be calculated taking into account the speed **v** and the time **t₁** necessary for the light to reach M1 and to return to A'.
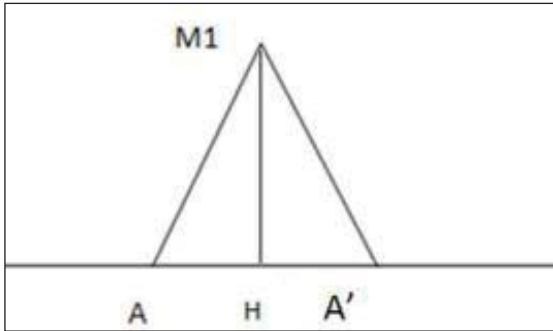


Figure 1.19 Trajectory of the ray in Michelson's interferometer

So you have **AA'=vt₁**. The ray of light has thus to travel the distance $AM_1A'=2AM_1$ with a speed **c.** The needed time will be:

$$t_1 = \frac{2AM1}{c} = \frac{2}{c}\sqrt{AH^2 + HM_1^2} = \frac{2}{c}\sqrt{\frac{1}{4}v^2 t_1^2 + l^2}$$

The result will be:

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$$t_1 = \frac{2l}{\sqrt{c^2 - v^2}}$$

These two coherent rays superpose in the O point in a way that depends on $t_1$ and $t_2$. Then, when you rotate the interferometer in order to range the branch $AM_1$ in the direction of the speed of the laboratory and in respect of the ether, $t_1$ and $t_2$ change, so there should be a difference of phase in the two rays in O with a consequent change of the interference fringes.

Every time this experiment has been repeated, at different hours of the day and on different days of the year, it has always given the same result: no change in the fringes.

Obviously, when the physicians tried to explain this result, no one supposed the Earth to be motionless, and Einstein solved the problem with his famous statement on the basis of which he later based his theory of relativity: light moves with equal speed **c** in all directions and in all different reference systems and this is the maximum reachable speed: an upper limit that can't be overcome.

Since there are matter particles definitely able to travel at such a speed, the only possible explanation for the Michelson Morley experiment is that the Earth doesn't move. In this case v=0 and you will notice that t1 and t2 become equal:

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$$t_1 = t_2 = \frac{l}{c}$$

(no change in the interference fringes). This is the main idea: formulas behind this experiment become incredibly simple if we consider the Earth immovable.

**Main idea of the paragraph:** The Michelson Morley experiment proved that the Earth is motionless. After this experiment, however, Einstein removed the idea of an ether made of particles from physics and created a lot of problems and paradoxes that till now have not been solved.

# 1.3 Stars aberration

Astronomical aberration is a phenomenon that makes a star, observed through a telescope, to appear in a place slightly different from the expected. Aberration had been observed in 1727 by the English astronomer James Bradley who, in the course of his surveys, noticed that stars seemed to be subject to a slight movement within a period of one sidereal year. He thought that this movement depended on the position of the star inside the celestial sphere.

Aberration of light has been considered first as a consequence of the motion of the Earth around the sun. We can explain this phenomenon considering that the light of the star enters the telescope and, since the light speed, though really fast, is limited and not infinite, takes a short time to reach the eye of the observer. During this short lapse of time the Earth is moving around the sun with an average speed of about 30 km/s that is 1/1000 of the speed of light.

The speed of light, thus, will show to be under the influence of the speed of the Earth, generating the aberration, an apparent change in the position of the star.
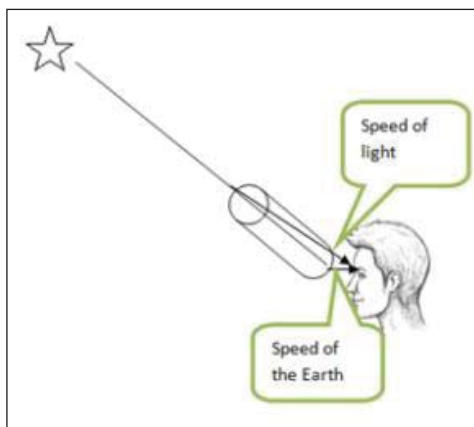
Figure 1.20 Aberration of light

A star that is perpendicular to the orbital plane of the Earth has an aberrant circular movement inside the periodicity of one year; a star that is seen exactly on the plane of the ecliptic has an apparent rectilinear movement, while in the intermediate positions this movement appears to be elliptical. The maximum aberration value measured during the year is 20",49 and that is called annual aberration constant.

A classical example used to describe the aberration is the following: consider a man with an umbrella under the rain. When the man stands still in a place, he sees the rain falling vertical. But, if he starts run-

ning, he will see the rain falling diagonally. This simply will be an apparent phenomenon due to the composition of two velocities: the one of the rain



falling and the speed of the man running.

Figure 1.21 The umbrella example. Source: Wikipedia.org

This phenomenon is considered one of the first experimental proofs that the Earth moves around the sun and not the contrary. In fact, if the Earth were motionless, we couldn't observe the aberration. The basic problem with this phenomenon is the periodicity. Actually, when considering the phenomenon, as we have already noticed, there is a periodical movement presenting a cycle of one year.

This means that, in six months, the aberration passes from a minimum to a maximum and this cycle is repeated every year. We have always been taught by scientists that the Earth is moving around the sun. This could explain the aberration, but astronomers also believe that the sun moves in the galaxy toward Vega.
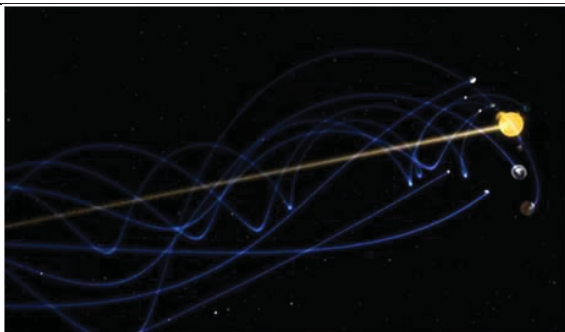
# 1. The Earth is motionless



Figure 1.22 Our planetary system movement. Source: Universetoday.com

The aberration movement thus shouldn't be an ellipse but a spiral.

However, aberration has really been measured. So, how can this periodical, mysterious, apparent movement be explained?

**Aberration: experimentally measured or simply theoretically calculated?**

Aberration angles are very small and it is quite difficult to think that they have been measured avoiding errors due to refraction. Thus the incredible match between measured values and theoretical ones appears astonishing. Let's see the theory. Consider a telescope 1 meter long. The time light takes to make

that distance is :

$t=S/V=0.001[km]/300000[km/sec]=3.33\times10^{-9}$ sec

During this time Earth covers the distance:

$S=30[km/sec]\times3.33\times10^{-9} [sec]=1\times10^{-7} [km]$

So you have this situation (see also figure 1.23):

The vertical side is the length of the telescope. The horizontal one is the space covered by the Earth in the time the light reaches the observer, α is the aberration angle:

$\alpha=tg^{-1} (1\times10^{-3}/1\times10^{-7} )=0.005°$

$0.005°\times3600=20".62$

Exactly the aberration constant. Congratulations! That's really a great experimental precision!
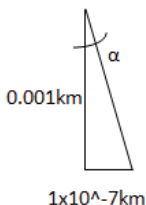
0.001km

1x10^-7km

Figure 1.23 Aberration triangle.

It is noteworthy the fact that Bradley himself recognized that this phenomenon was the same for all the stars. At first Bradley thought that it was caused by the parallax, i.e. an optical error due to the different positions of the Earth during the year. But if the modification of the position is the same for all

the stars, this could be caused by the parallax only if stars were all at the same distance from the Earth, thing considered absurd by Bradley himself. He reached, thus, the conclusion that the phenomenon was caused by the limited speed of light.

We really know, considering our flat model of the Earth, that this apparent change in the position of the stars can't be caused by parallax because the earth is motionless, and the stars, month after month, are at the same distance (with small differences) from the Earth, so no parallax is possible.

It is important to consider that this phenomenon is cyclic and reaches the maximum gradient in six months. Could this be explained simply as a refractive optical phenomenon? Let's see.

A ray of light that, from a star, reaches the Earth passes through the atmosphere that owns a little, but anyway sensitive, refractive power. Thus, if the ray of light is not perfectly perpendicular to the Earth, it is bent with a small angle called astronomic refraction that can be thus calculated:

$$R = cot(h_a + \frac{7.31}{h_a + 4.4})$$

where R is the refraction angle expressed in minutes of degree and $h_a$ is the height angle of the star. This formula is valid for an atmospheric pressure of 1010 mbar and a temperature of 10°C. If temperature and

pressure are different, the refraction should be multiplied by

$$\frac{P}{1010} \cdot \frac{283}{273 + T}$$

The real height of the star is $H = h_a + R$.

The maximum value of aberration measured by Bradley is 20",49 that is called annual constant of aberration and corresponds to the major semi axis of the aberration ellipse.

The refraction angle can assume a maximum value of 35',4 on the horizon but it is 3', only 3′ already at 17,5°. Notice that this value changes with the temperature (as with temperature the air density also changes) and the temperature changes with the seasons, and …mumble mumble…the maximum climatic difference with seasons is cyclic and recurring every six months.

The value of refraction angle changes of about 1% for each 3°C of temperature variation. If we consider a temperature variation from summer to winter of 30°C we have a 10% of variation on the refraction angle.

We arrive thus at 0,3' i.e. 20" of apparent deviation due to refraction, if we consider a star at 17° high, that corresponds quite well to the value of aberration.

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**Main idea of the paragraph:** We believe that the Earth is motionless and have already proved it in this book. Thus the aberration cannot exist and this is confirmed by the fact that it has a precise periodicity that doesn't follow the movement of the sun in the galaxy but the movement of the seasons. Aberration can be, however, easily included among the astronomical refraction phenomena. And, according to the above given calculations, we have proved that the angles calculated **(aberration and refraction)** are very similar, so refraction is a possible reason for the astronomical aberration.

# 1.4 Annual parallax

We could say that the parallax angle of a star is the angle defined by the sun, the star and the Earth (always considering the star perpendicular to the line that unites the Sun and the Earth).

$\pi$ is the angle SÂE in the picture 1.24 (annual parallax angle).

The star considered to be nearer to the Earth is Proxima Centauri that has an official parallax angle of 0.75 seconds of degree. The parallax effect due to the movement of the observer on the Earth orbit around the sun means a periodical movement of the star on the celestial sphere. The ellipse thus projected by this movement on the celestial sphere is called parallax ellipse and has a periodicity of one year.
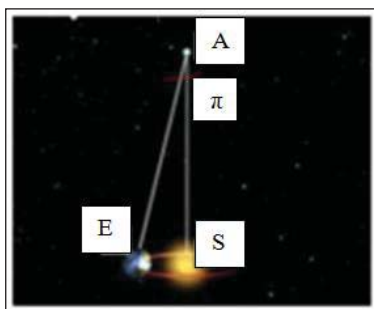


Figure 1.24 Parallax angle.

# Annual parallax is a hoax

Warning: once again the so said "aligned astronomers" don't consider the movement of the sun in the galaxy, but only the rotation of the Earth around the sun. The parallax thus shouldn't originate an ellipse but a spiral during the year.

How do astronomers determinate the parallax angle? This determination is one of the most difficult but most important key points of sidereal astronomy.

This issue is so important because, when knowing the parallax of one star, its distance from the Earth can be determined. We can thus understand the efforts of astronomers in their attempts to be absolutely accurate in determining the parallax angles of stars.

The first parallax to be determined was 61 Cygni. It was calculated by Bessel in Konigsberg in 1837-38.

There is more than one method to determine the parallax. Here you will read about the trigonometric method.

To determine the parallax of a star S the astronomers chose two stars A and B with parallaxes almost equal to zero because they are very far. A and B must be aligned on a parallel to the ecliptic one on a

# 1. The Earth is motionless

side and one on the other side of the star S. During the year A and B will remain fixed in the celestial sphere while S, nearer to the Earth, will move toward A for six months and toward B for the rest of the year. By measuring, during one year, the amount of these movements, it is possible to determine the parallax. These very small angles were measured by using a heliometer.

Today the preferred method is photography that "allows much precision". The idea is simple: when the star S is at one extreme of the ellipse, one picture is made, another when the star is on the other side of the ellipse, after six month, and another picture of control is made after one year. Pictures are checked and, from the movements of S in respect of all the other stars, the parallax is determined.

Parallax is considered to be a strong evidence of the rotation of the Earth around the sun. If Earth were motionless this phenomenon wouldn't exist.

A consideration I have to do is that the parallax angle is really small, always smaller than one second of degree.

Consider a circle, divide it in 360°. Then take one single segment and divide it 3600 times. Well, the parallax angle of the nearest star is even smaller.

# 1. The Earth is motionless

This angle is even smaller than the aberration angle (you certainly remember it was calculated as 20",45). But both these angles are smaller of the refraction angle. So we have three ellipses (the parallax, the aberration and the refraction ellipses) that superpose one over the other. The refraction ellipse, the greater one, is very changeable during the year, depending on temperature and pressure of the air. Also the aberration depends on the air temperature, since light speed depends on the dielectric constant of the mean and, consequently, on temperature.

So how is it possible to evaluate with a photograph the contribution of the aberration ellipse, and, even more difficult, the contribution of parallax, when it could be sufficient a slight hot current of air at the moment the picture is taken, to change all the results?

The conclusion is that the annual parallax doesn't exist, cannot be measured and absolutely cannot be used to determine distances of the stars or of the planets.

Here below I present a real accurate method to measure the height of sun but also of planets and stars.

# 1. The Earth is motionless

**Height of the sun.**

To make a triangulation we need two observers that from two distant places (parallax) on the Earth can measure the angle of the sun. With these two angles we can track two lines that define the height of the sun.
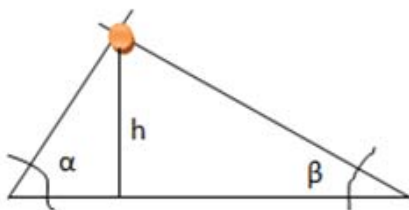


Figure 1.25. Height of the sun

If you are alone, you can consider that on solstice the sun will be vertical over the Capricorn and make thus the triangulation with that point.

**Main idea of the paragraph:** Annual parallax doesn't exist because the Earth doesn't move. It is, therefore, a theoretical idea that can be explained with refraction.

# 2. Newton's gravity doesn't exist

## 2.1 Energy conservation

A body orbiting around a planet is in equilibrium between two forces: the centrifugal force and the gravitational one.
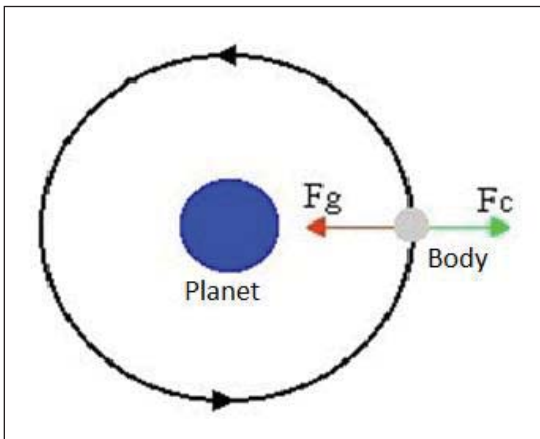


Figure 2.1 A satellite orbiting a planet. Source: The net

## 2. Newton's gravity doesn't exist

$$F_c = \frac{m \cdot v^2}{r}$$

$$F_g = -G \frac{m_1 m_2}{r^2}$$

where $\mathbf{F_c}$ is the centrifugal force, $\mathbf{F_g}$ is the gravitational force, $\mathbf{m_1}$ is the mass of the orbiting body, $\mathbf{m_2}$ is the mass of the planet, $\mathbf{v}$ is the speed of the body while orbiting, $\mathbf{r}$ is the distance of the body from the center of the planet, $\mathbf{G}$ is the gravitational constant:

$$G = 6.67 x 10^{-11} \frac{Nm^2}{kg^2}$$

The orbiting body is characterized by a potential energy called "gravitational" caused by the field in which it is submerged. When speaking about a potential energy, mind immediately runs to Bernoulli's theorem, that states that, for a liquid, the sum of potential, kinetic and pressure energy is constant. You could think to the water contained in a basin that is situated on the top of a mountain, water that is forced to pass into a conduct, transforming, due to the altitude, the initial potential in kinetic and pressure energy. It will be later collected into a turbine in order to transform energy into electricity.

Bernoulli's theorem is an application of the principle of conservation of energy.
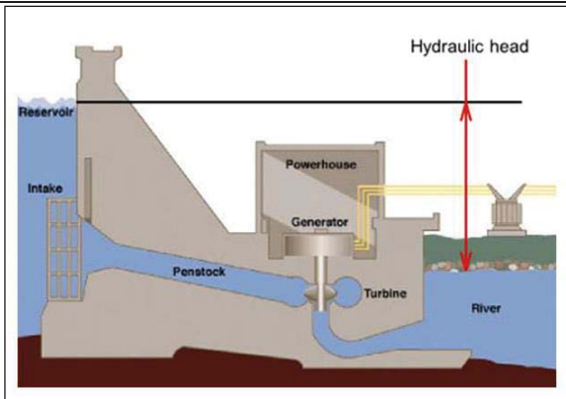
## 2. Newton's gravity doesn't exist



Figure 2.2 Hydropower plant. Source: The net

The energy changes in form but its total amount doesn't change. In the case of a forced conduct, the potential energy of the water in altitude

$U = m \cdot g \cdot h$ is transformed into kinetic energy $Ec = \frac{1}{2}mv^2$ and into pressure energy.

The principle of energy conservation could be, in the same way, applied to a body orbiting in the gravitational field of a planet. In a gravitational field the potential energy is expressed by the general formula:

$$u = -G\frac{m_1 m_2}{r}$$

## 2. Newton's gravity doesn't exist

The expression $U = m \cdot g \cdot h$ (to which we all were used at school) is a particular case of the foregoing more general expression, and can be applied only in the case of h<<R where R is the Earth radius (this means that it is valid only at soil level).

The energy conservation principle for a body in a gravitational field is expressed by the relation:

$$Etot = Ec + U = \frac{1}{2}mv^2 - G\frac{m_1 m_2}{r}$$

The total amount of energy is the sum of kinetic and potential energy.

Thus, according to this relation, a body in free fall in the gravitational field of a planet will convert its potential energy into kinetic energy, but it will maintain constant the sum of the two and produce an increase in speed.

The total amount of energy will remain the same. The opposite could not be possible: please, consider a body that, with a certain starting potential, (but without possessing any kinetic energy) increases its potential even without receiving any external addition of energy. This result will be obtained only by diminishing the kinetic factor.

 In fact, in order to increase the potential energy, the kinetic has to decrease, but when this energy is already zero…it can't become negative. Thus, in a

hydroelectric power plant, water is driven nightlong up on altitude to the eventual lake by spending electric energy that, during the night, has a lower cost. However, the necessity is to spend farther energy in order to obtain water again and in a greater quantity of potential energy. It will be used daylong to produce electrical current (to be sold at a higher price). Another example could be relating to a chute on which you can slide downwards without any effort but, when going up the opposite direction, you have to add a good amount of energy with respect to the conservation law.

Let's imagine a similar situation with respect to an orbiting body moving in an orbital direction only, and not in any whatsoever radial direction (see figure 2.1). The body, thus, possesses potential energy only, being its speed perpendicular to the radial direction, on which the gravitational force is acting upon, and, incidentally, considering all factors, this datum cannot have any influence on calculation.

Consider now a meteorite that happens to hit the orbiting body in a direction tangential to the orbit, going, in this manner, to increase the speed of the satellite we are taking into consideration (but let us suppose with a very small increase). Wishing to make a comparison with the forced conduct, imagine you were trying to launch a little amount of water

from a bucket upward in the conduct just by impressing to the water a small kinetic energy (that

won't, anyway, be sufficient to win the gravitational force).

Similarly water rises a little through the conduct but, then, it necessarily falls down again. This will be due to the fact there is not force enough to pull water to the altitude of the lake. In the same way, the new speed acquired by the considered satellite will be v'= v+Δv, where ΔV is very small. Since, however, v'>v, the centrifugal force grows a little, according to the relation:

$$Fc' = \frac{mv'^2}{r}$$

The gravitational force, on the other hand, will remain the same. The equilibrium will be lost, when the satellite acquires a force $F_{resulting} = F_c' - F_g$ sufficient to drag it away from the planet. The resulting force will originate a speed in the radial direction, in such a manner that the kinetic energy, moving in the radial direction, would start increasing and the body would start departing from the planet. Since the distance grows, as far as the body is departing from the planet, Fc' decreases in proportion to 1/r. In the same time the gravity force

$$Fg = -G\frac{m_1 m_2}{r^2}$$

will decrease faster and faster, in proportion to $1/r^2$. The body would accelerate more and more and the kinetic energy would grow very fast, no energy by

the exterior being added (or very low energy). At the same time, since the body would be departing from the planet, the potential energy would grow…In the same manner the kinetic energy would increase, and so the total energy.

And here the paradox starts. The body should immediately stop orbiting around the planet and be trapped in another orbit, just because, departing from the original planet, the potential energy would increase, making the kinetic decrease, according to the conservation energy principle. But, however, the centrifugal force, continuing to be higher than the gravitational force, the body should keep departing with a spiral movement from the planet. Actually it would be creating energy from nothing, not respecting even the conservation of mechanical energy.

**Objection:** the potential energy doesn't grow but decreases when the satellite departs from the planet. In fact it has to be considered zero at an infinite distance from the planet itself.

**Answer:** you have to consider the sign of the energy that, in this case, is minus. It is a negative energy that continuously grows till zero. Let's calculate, just to give a practical example, the total energy of a rocket of 10000 kg that moves at the speed of 500 m/sec and is departing from the planet at a radius $r_1=500$ km and $r_2=1000$ km. There is no propulsion: the rocket is departing from the Earth due to a previous thrust and, since it is moving in the void,

nothing is slowing its speed:

$$Ec = \frac{1}{2}mV^2 = 1.25E^9 \ joule$$

The potential energy, considering the mass of the Earth being $M=5.97E^{24}$ kg, however, is:

At 500 km height: $U = \frac{-Gm_1m_2}{r} = -7.96E^{12} \ joule$

At 1000km height: $U = \frac{-Gm_1m_2}{r} = -3.98E^{12} \ joule$

7.96 seems to be greater than 3.98 but it is not due to the minus sign. The total energy will be at 500 km:

$$Etot = Ec + U = -7.958E^{12} joule$$

And at 1000km:

$Etot = Ec + U = -3.978E^{12} \ joule$ That is much bigger. The total amount of energy is not conserving.

**Main idea of the paragraph:** Newton's formula for the gravity is wrong because it doesn't respect the energy conservation principle.

## 2.2 Stars speed



Figure 2.3 Lights. Source: The net

As indicated before, satellites are subject to a double different force, the gravitational force and the centrifugal one. This implies that, the nearer a satellite is orbiting around the earth, the faster it has to move, in order to win the bigger gravitational force. To better describe this idea, we have to introduce the concept of angular moment. This is the product of the impulse of the satellite $I = m \cdot v$ where **I** is the impulse**, m** is the mass of the satellite and **v** its speed. The distance of the satellite from the Earth will be **R**.

As a consequence, $m \cdot v \cdot R$ is the angular moment of the satellite. In harmony with the energy conservation principle and, as a consequence of Newton's laws of mechanics, the angular moment of a body

orbiting around a planet or around a mass center keeps constant.

So, as the angular moment is $L = m \cdot v \cdot R$ and R increases (the satellite moves further away from the Earth) **v** decreases. When, on the other hand, the satellite moves nearer to the Earth (R decreases) the speed will increase.

The same idea can also be applied to stars that rotate around the galaxy mass center in which they are set. This has been the subject of an interesting study made by Rubin and Ford, two scientists who have observed the speed of the stars that are moving in galaxies. When we consider the stars from the Earth, they appear as fixed in their relative position. Their situation seems to be immutable during the years. Many constellations, for instance the Big Dipper, have been described thousands of years ago and still keep staying in the same place.

The scientific establishment however claims that stars have a big relative speed even when they always appear to be, night by night, in the same position, while rotating from east to west.

Since, from the average observer point of view, it could seem impossible to calculate the speed of stars that are so far from us and that appear immovable, Vera Rubin and Kent Ford, to overcome the problem, used the Doppler Effect to give a general idea of the speed of the stars.

**Doppler Effect**

Doppler effect is the change in frequency of a wave, when its source is in motion with respect to the observer. In the picture below the jet is departing from observer B and is approaching to observer A. Observer A will perceive the noise getting deeper while B as more acute.



Figure 2.4 Doppler effect. Source: The net

The reason is that the wave, when the object that emits the light with a certain frequency is approaching, will produce a frequency that, when measured, will be higher (the light will be moved toward blue that means an higher frequency radiation) while, when it is departing, the frequency will be lower and the light color will shift toward red. In that way, by measuring the shift of the frequency of light

waves from stars toward red or blue, you can deduce their speed in relation to the Earth.

Rubin and Ford applied the Doppler Effect to evaluate the speed of the stars. Galaxies are made almost exclusively of stars and calculations should have given, as a result, that stars far from the center of the galaxy had a lower speed than stars nearer to the center of it. The results found by Rubin and Ford however didn't match the expectations. The stars far from the center were moving just as fast as those closer in it. Rubin and Ford went on to examine about sixty spiral galaxies and always found the same situation. They discovered that the light of the stars is the same no matter of the distance.

This result is highlighted in the picture in the next page. The dot line represents the theoretic expectations when considering the gravitational formulas. The continuous line represents the speeds actually measured with the Doppler Effect.

Considering these sort of results, maybe, scientists feared they would finish by proving that the gravitation theory was wrong. To get out of the impasse, Rubin and Ford, in 1974, introduced, beside the visible matter, a new concept, the obscure matter, an entity extending much further than the apparent boundaries of the galaxy and presenting much more mass than the normal matter.
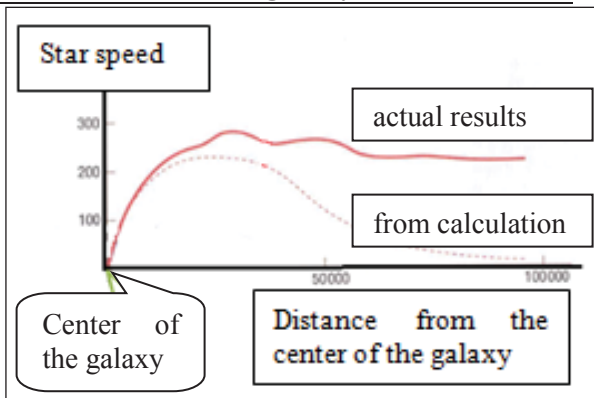
## 2. Newton's gravity doesn't exist



Figure 2.5 Stars speed

"What you see in a spiral galaxy is not what you get", Robin concluded. The obscure matter was allowing scientists to say that, even when the distance from the center of the mass greatly increases (r in the relation grows up), since M also grows due to the obscure matter, so the speed keeps constant. The speed of the stars should follow this relation, according to the gravitational theory:

$$v = \sqrt{\frac{G * M}{r}}$$

## 2. Newton's gravity doesn't exist

Interesting enough is the fact that, up to now, there is no direct evidence for the existence of the dark matter, as a consequence of the fact that "it can't be seen". Scientists only point to "gravitational proofs". They are convinced, in fact, that the obscure matter does exist because stars move at a speed that is different from that they would expect on the basis of abstract calculations. They assume, thus, that gravitational theory is an undisputable basis from which to start.

But how to judge about this question, if the trouble originates from the same foundation? Could it be that the original trickery stays in the possibility that the basic gravitational formulas are not correct? In the opposite case we should really have direct proofs of the existence of the dark matter, but we have not. These proofs are missing. But when, on the other hand, we consider stars as moving all together from east to west – from the point of view of an Earth observer -, fixed on a dome that rotates over a stationary Earth, we will probably find an easier explanation of what has been measured with the Doppler effect.

**Main idea of the paragraph**: since gravitation formulas are wrong, scientists have been compelled to figure out the obscure matter. This way they justify the fact that stars far from the center of the galaxy move just as fast as the stars nearer to the center.

# 2.3 Rivers going upward

At first, when I realized the Earth could be flat, it was a great surprise. I felt excited at that idea. However, it is not easy to understand immediately all proofs you can find on the net. I have to confess, some of them I can only now completely understand. One case is about rivers that on a Globe would sometimes appear to run uphill.

I quote here from Dubay's book "The flat Earth Conspiracy" that remakes David Scott "Terra Firma".

"Whoever heard of a river, in any part of its course, flowing uphill? Yet this is what would be necessary to do were the Earth a Globe. Rivers, like the Mississippi, flow from the North southward, toward the Equator. They would be in the necessity, according to modern astronomic theory, to run upwards. This would be due to the fact the Earth at the Equator is said to bulge out considerably. In other words, there it is higher than at any other part. Thus the Mississippi in its immense course of over 3000 miles, would have to ascend 11 miles before it reached the Gulf of Mexico"

I'll quote here an article taken from the blog Aplanetruth.info. "The Nile, longest river in the world, is about 4,160 miles (6,695 km). The Nile flows northward. It drains about one tenth of Africa.

## 2. Newton's gravity doesn't exist

This will include parts of Egypt, Sudan, Ethiopia, Eritrea, South Sudan, Kenya, Uganda, Rwanda, Burundi, Tanzania, and Congo (Kinshasa).

As you can see from the elevation chart, the Nile runs in a desert basin. If half circumference of the Earth is 12,000 miles (20000 km), this means that the Nile would have to descend while traveling north some 16 miles, but it doesn't. The Earth cannot be a sphere."

In the past I didn't clearly understand this proof. I thought they claimed rivers go uphill due to the curvature of the globe. "This is not possible!" I thought, because the gravitational field is also a sphere.

Below is the formula that expresses the potential gravitational energy:

$$U = -G\frac{m_1 m_2}{r}$$

Where G is the gravitational constant, $m_1$ is the mass of the Earth and $m_2$ is the mass of the water of the river. Finally, r is the distance from the center of the Earth. Obviously, when the river starts its course it is on a mountain. E.g.: the Nile spring is at 1134 m on the sea level. On the contrary, the outfall is at 0 meters on the sea level. The difference of altitude gives to the water the energy to move till the sea.

The curvature has no meaning on this formula. It creates equipotential surfaces that are spheres and

not planes. This is the reason why the curvature has no importance. The Newton formula generates equi-potential spherical surfaces because the gravitational force is a central force.

So, I did not fully understand what many "flat earthers" meant when saying that rivers should flow uphill on a globular Earth. I've done some more re-search and, finally, I've understood. Really I have to say that this subject is good evidence proving the Earth is not a globe. Here I'll give an explanation of what I have understood.
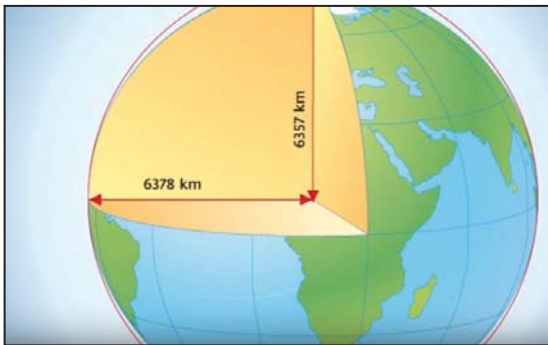


Figure 2.6 Radiuses of the Earth. Source: The net

This image is highlighting the difference of radiuses between the equator and the pole. The difference is about 21 km.

## 2. Newton's gravity doesn't exist

Let's imagine a river running from South to North. One example could be the Nile. It runs more than 6000 km in the northern hemisphere. Since from the equator to the North Pole there are 10000 km, the river would have to go downhill. The gradient for the sixty per cent (6000 is sixty per cent of 10000) of those 21 km would be of 12,6 km. That is pretty different from the 16 miles mentioned in the site aplanetruth, but it is however a remarkable gradient.

With this explanation I can completely agree! I'm probably a bit slow to catch on (it took me one year and a half to understand) but at the end I got there. In the same way, the Mississippi that runs for more than 3000 km southward should go uphill for almost 7 km of altitude (one third of 21 km), less than the 11 miles mentioned in Terra Firma.

> **Main idea of the paragraph:** Since the Globe Earth has different radiuses up to the pole and to the equator, some river, like Mississippi, should go uphill, while others, like the Nile, should have a greater slope than that they have in the reality.

## 2.4 Newtonian attraction

The one who has understood the Earth is flat does obviously understand that Newtonian's gravity force can't exist either.

Let's be clear: a vertical force that acts on all objects does exist but doesn't follow the universal gravitation formula expressed by Newton.

$$Fg = -G\frac{m_1 m_2}{r^2}$$

There is only a vertical force endowed with electromagnetic nature.

### Gravity and chaos

The solar system and the universe described by Newton's law, when considering a long period of time, as highlighted by many mathematicians and physicists, is fated to move to chaos.

Mathematician Henry Poincare discovered that some situation in the universe, when considering a span of time long enough, lead necessarily to a chaotic motion.

I wonder, thus, how could it be possible that a colossal initial Big Bang - an explosion that can only

originate chaos - could generate our universe instead. On the contrary, I wonder how gravity can generate that astonishing order we perceive all around, able to make life possible everywhere on the earth. And how is it possible that, as a final result, that same universe will fall into chaos again, after million years? Why has gravity been able to generate order only for a period, starting from chaos?

# No Newtonian attraction

Some people are positive saying that they can easily demonstrate the Newtonian gravity law is reliable on the basis of a simple experiment you can fulfill at home.

First, you need a basin with some water in it. If you put two objects floating on the water and leave them moving freely, after some time they will bond one to



the other and stick to the border of the basin.

Figure 2.7 Clips sticking together. Source: the net

By the help of this picture, you can notice two clips sticking together and floating on the water. They can float on the top due to the surface tension of the liq-

uid and because there is probably a slight oil film on them.

Is this phenomenon really due to gravity? Are the two objects attracting each other due to their mass? No, this phenomenon is due to the surface tension of the water. The water molecules attract one another with a force that is building the structure of the liquid matter. In the middle of the basin, a molecule is completely surrounded by other molecules. On the surface, a molecule is attracted only downward.
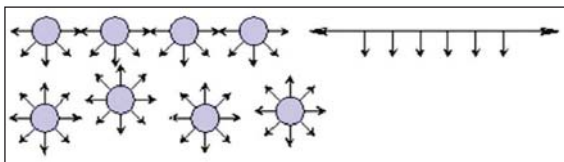


Figure 2.8 Water molecules. Source: the net

This situation is at the origin of an energetic stress differently called surface tension. When we consider a portion of fluid on the surface, it has a greater energy than a portion of fluid in the middle of the basin. The principle of minimum energy is well known. Every system aims to a balance condition. So, it reaches its equilibrium in each situation, demanding less energy.
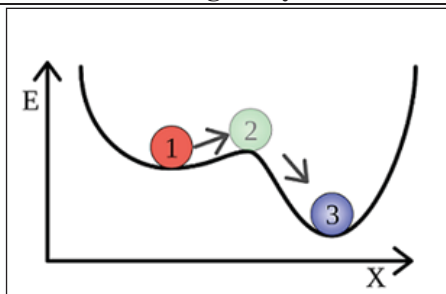
# 2. Newton's gravity doesn't exist



Figure 2.9 Equilibrium and stability. Source: The net - In this situation, the ball number 3 is in the more stable position and in the condition of less energy.

To minimize the energy stress, a liquid always disposes itself in a geometrical configuration, in order to reduce the surface. You can better grasp the idea by looking at the picture below, showing a few mercury drops.



Figure 2.10 Mercury drops. Source: The net

The geometry that minimizes the external surface is the sphere.

## 2. Newton's gravity doesn't exist

When you put an object in a water basin, for example two floating rubber balls, they increase the surface of the fluid amplifying its energetic stress.

The system, thus, has to recreate a more stable balanced configuration. The geometrical configuration of objects slicked together is the one that minimizes the stress on the surface of the fluid so that the system will move from an instable configuration to a more stable one.

This phenomenon is even more evident when the objects are deformable, for example, two air bubbles in the fluid. Two air bubbles, submerged in the fluid, present a bigger external surface than a single bubble with the same volume of the two considered ones. The surface tension will act to draw near the two air bubbles and merge them together.

Thus, once again, we have to state that there is only one vertical force depending on the electromagnetic field of the Earth acting on the ether. When we consider different bodies, we notice that, regardless of how big they are and what a big mass they have, they never attract one to the other.

**Main idea of the paragraph:** Gravity, as intended by Newton, doesn't exist. There is no attraction between bodies.

# 3. The Earth is flat

With Coriolis we can prove the Earth is motionless. If this is true, as you can easily understand, all cosmology you know will change. How big is in fact the sun? Is it orbiting around the Earth? How are stars orbiting around the Dome? If the Earth is motionless, how can it be that stars, many times bigger than our sun, can orbit around a motionless Earth?

Moreover, you have already grasped that gravity, as intended by Newton, is wrong because it doesn't respect the principle of conservation of the mechanic energy. Newton's gravity should be the one responsible for the spherical shape of the Earth and of the planets. It should produce a spherical field acting on masses to create spherical amasses.

On the following chapter you will find two more pieces of evidence showing the Earth surface proves to be flat: Eratosthenes experiment and a few strange distances, observable on the sea surface, that contradict the Earth's curvature.

## 3.1 Eratosthenes' experiment

Eratosthenes was a Greek mathematician born in Cyrene (276 B.C.). He was not the first one describing the Earth as a sphere. Plato and Aristotle had done before. Plato wrote that the Creator "made the world in the form of a globe, round as for a lathe, having its extremes in every direction equidistant from the centre, the most perfect and the most like itself of all figures," "one of those balls which have leather coverings in twelve pieces..." (Plato. Phaedro. p. 110b ; *Timaeus. p. 33)*.

Eratosthenes made an amazing experiment: he measured the Earth's circumference. Due to their seeming precision, his results are still considered to be stunning. You shouldn't forget how simple were the instruments used by the Greeks.

He posited, with only a slight imprecision, that Alessandria of Egypt and Syene were on the same meridian, Syene being on the tropic, at a distance of 800km from Alessandria.

At the solstice of the 21st of June, the sun was perfectly perpendicular at Syene, and this could be verified by the aid of a well situated there. When the light of the sun had reached the bottom, the solstice was exactly occurring on Syene. At that very moment, in Alessandria, a pole was projecting a shadow with an angle of 7.2 degrees.
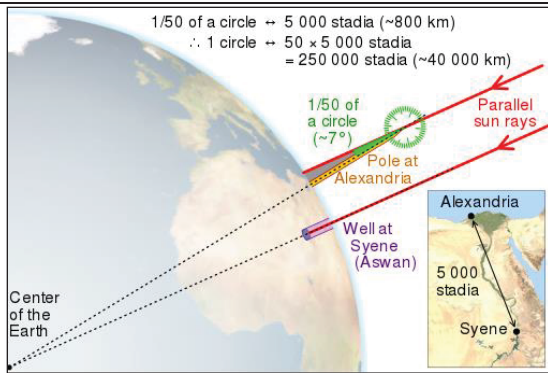
# 3. The Earth is flat



Figure 3.1 Eratosthenes experiment. Source: Wikipedia

Eratosthenes understood that 7.2 is about 1/50 of 360°, so multiplying 50x 800km he was able to state that the circumference of the globe was of 40000km.

Ok, so far so good. But here comes the poison arrow. Now, after having observed the deserved minute of silence, in due commemoration, let's proceed into the topic. Eratosthenes made two hypotheses at start:

1) The Earth is a globe, and this is the reason why the sun projects a shadow in Alessandria, with a 7.2° angle;

# 3. The Earth is flat

2) The sun's rays are parallel (see the picture) because the sun is very far from the Earth.

This second assertion needs further discussion. Science today is stating the sun is 150 million km far away from the Earth. The Sun's diameter is reckoned to be 1391400 km, while the diameter of the Earth is only 12742 km. When drawing the Sun and the Earth in the correct proportions, and respecting the convenient distances, with 3d cad software you can obtain the model in figure 3.2.

Sun's rays reaching the Earth should really be parallel. So can you explain me the images in table 3.1?
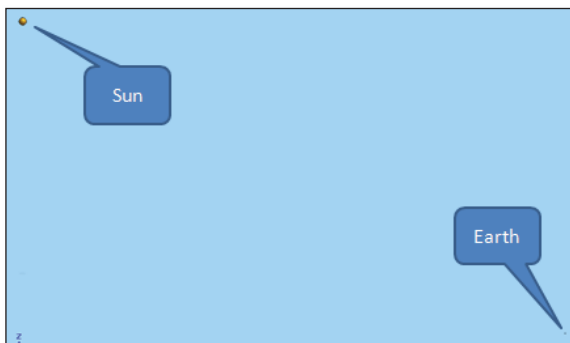


Figure 3.2 Sun in comparison with the Earth

# 3. The Earth is flat

Table 3.1 Diverging sun rays



The images above clearly show that the Sun's rays are not parallel but diverging with some quite big angle. These pictures clearly prove that the Sun

can't be so far as official science states. As a consequence, Eratosthenes' hypothesis cannot be valid. If the Sun's rays diverge, it is evident that the mathematician was wrong and the angle of the shadow he had measured had not been generated by the fact the Earth is a sphere, but directly by the divergent sun rays acting on a flat surface.
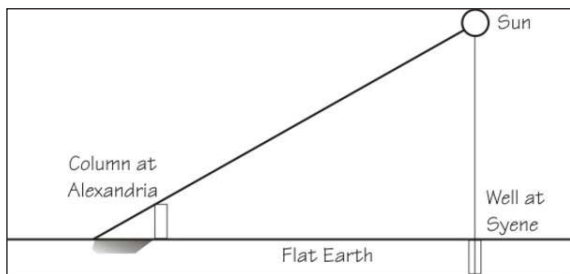
This is the real situation:



Figure 3.3 The real situation with rays. Source: The net

The consequences of the reasoning we have till now presented are quite surprising:

- The Earth is flat;
- The Earth is motionless;
- The sun is not so far;
- The sun is quite small;
- Newton's and Einstein's gravity laws are not reliable.

**Objection 1:** The sun rays are actually parallel, but we perceive them as diverging, due to perspective.
**Answer:** "Ah, mmm-hmm, ok, so, in this case, I see, ah, would it be the perspective to cause the divergence of rays? Ah, that's right... is the same notation I can find in Wikipedia at the voice "Crepuscular rays". Since some rays are nearer and other are farther, maybe this, not always, but at least sometimes, could really happen. Let's analyze the situation.

To what extent does the perspective act on our visual field? Let's try to examine the following image:



Figure 3.4 Converging lines due to perspective. Source: The net

# 3. The Earth is flat

While observing the image above, I am aware that there are lines that converge to one point, laying on the horizon, while the vertical lines continue to be parallel: perspective doesn't act upon their being in a parallel perspective. From there I can derive a rule: all the lines that lay on a plane perpendicular to the direction of sight are not touched by the perspective; all lines, parallel to the direction of sight, converge on a point, on the horizon.

Let's similarly consider the multi-point perspective below. In the following photographs there is a three point perspective image.

Table 3.2 Three point perspective images



The horizontal lines of the two visible walls converge in two different points laying on the horizon, while the vertical lines, no more parallel one to the other, converge to a higher point in the sky. This last vanishing point is a model for an observer that is looking to a tall building or structure directly from below, or from above, (the observer is near to the object observed). Why does this image differ from the previous one? Why do you have to remark there are two different vanishing points? Because the di-

rection of sight is not perpendicular to any of the lines in the picture yet. On the contrary, in the previous model, the observer was standing perpendicular to the structure represented in the photograph.

Now, keeping the above considerations in mind, let's analyze a few among the pictures with divergent sun rays I have presented before. In all these images there is a single converging point for the rays and this is the Sun, their source.

Table 3.3 Perspective of sun's rays



Watching this image, some doubt could arise. The Sun is on the horizon and can be considered as a vanishing point to which the rays converge. It could be a perspective phenomenon.



This image can be even more confusing. The Sun is a little higher in the sky. The rays highlighted could be considered converging due to perspective, because they are not on a plane perpendicular to the direction of the sight.

## 3. The Earth is flat



But when we consider these two rays, it is clear that they lay on the same plane, perpendicular to our sight direction. It is clear that they converge, not due to perspective, but because their source is a point, small in comparison to the Earth, and near to the Earth surface.



This image is definitively clear: almost all rays lay on a plane perpendicular to the direction of sight, but are not parallel. The observer is not looking directly from above but is at a certain distance. It is not perspective.

**Conclusion:** the rays diverge because the sun is near to the Earth and not due to perspective reasons.

**Objection 2:** Divergent Sun rays are appearing with crepuscular rays that pass through the clouds. In these conditions the diffraction is the main reason for the divergence of the rays.

**Answer:** Wikipedia states: "Diffraction refers to various phenomena that occur when

a wave encounters an obstacle or a slit. It is defined as the bending of light around the corners of an obstacle or aperture into the region of geometrical shadow of the obstacle. In classical physics, the diffraction phenomenon is described as the interference of waves according to the Huygens–Fresnel principle. These characteristic behaviors are exhibited when a wave encounters an obstacle or a slit that is comparable in size to its wavelength."

So, the Sun light should diverge when passing through clouds because it encounters slits of the dimension of its wavelength. The wavelength of the visible light is from 390 to 700 nanometer. A nanometer is $10^{-9}$ meter.

Look again at this image:



Figure 3.5 Converging lines. Source: The net

Is that opening in the clouds less than 700nm? I don't think so; it seems to be several hundreds of meter.

**Conclusion:** rays diverge not because of diffraction.

**Objection 3**: sun's rays diverge because the atmosphere acts as a diverging lens.

**Answer:** the atmosphere of a globular Earth is a globe and acts thus as a convex lens with the light of sun. In the next page you can behold the behavior of a convex lens in the image .
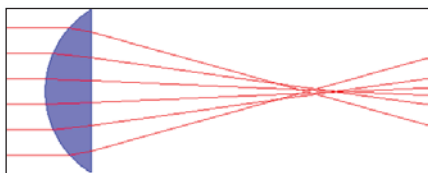


Figure 3.6 Convex lens. Source: The net

A convex lens is a convergent lens. We should thus see the rays arriving parallel from the sun, converging on the Earth.

**Conclusion:** the sun rays diverge because the sun is near and not because the atmosphere acts like a diverging lens.

## 3. The Earth is flat

**Main idea of the paragraph:** Eratosthenes' experience proves that the Earth is flat, because the sun rays diverge. He has in reality measured the height of the sun and not the radius of the Earth.
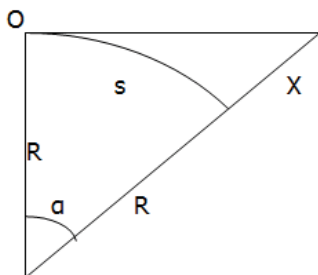
# 3.2 The curvature

Earth's curvature is a topic about which a number of calculations are available: you just need surfing the net and search for everything you want. A quantity of images, posts and videos show full evidence there is no curvature. Despite of that, I want to discuss the topic all the same. In fact, it touches our senses in a very clear manner. I'm going to deal first with computations and then with some example.

In the following calculation I would like to show what is the fall you can expect for a given distance on the surface of the earth. As a start, I have to say that I'm going to show the whole reckoning but, if you are not interested in it, you can simply check the final formula. In fact, this is a very handy topic to prove the Earth is a plane surface

The curvature calculation.

Figure 3.7 Curvature calculation

# 3. The Earth is flat

S is an arc and it is the given distance on the Earth's surface. R is the Earth radius (6378 Km), X is the curvature fall at the s distance, when the observer is on the point O on the Earth's surface.

We can reason as Eratosthenes did: s is a fraction of the circumference of the Earth (40000km), and, proportionally, α is a fraction of the total angle of 360°. We can thus write this proportion:

$$\frac{s}{40000} = \frac{\alpha}{360°}$$

From the above proportion you find:

$$\alpha = \frac{s}{40000} * 360°$$

Then, from trigonometry, you'll obtain:

$$R + X = \frac{R}{\cos \alpha}$$

$$X = R\left(\frac{1}{\cos \alpha} - 1\right)$$

which is the final formula that calculates the curvature.

Let's consider now the case in which the observer is not on the surface but at the height Y.
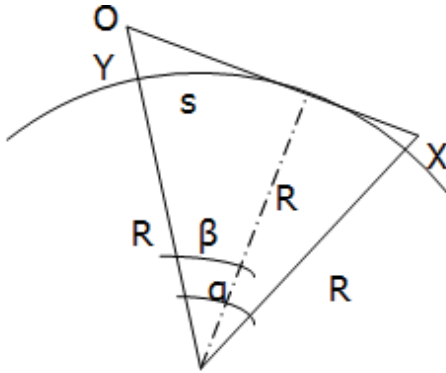
# 3. The Earth is flat



Figure 3.8  Curvature calculation

In the above image, s is the total distance considered which creates α angle at the center of the Earth. Y is the height of the observer from the Earth's surface. X is the curvature fall at the distance s and it is our unknown datum.

We can write exactly as before:

$$\alpha = \frac{s}{40000} * 360°$$

And then:

$$\beta = cos^{-1}(\frac{R}{R + Y})$$

$$R + X = \frac{R}{cos(\alpha - \beta)}$$

$$X = R(\frac{1}{cos(\alpha - \beta)} - 1)$$

In conclusion, this is the exact formula to calculate the curvature, when considering the observer at a certain height.

A friend of mine passed me this picture taken at Menton, in France. As you will notice, from there it is possible to look at the Corse Island.



Figure 3.9 Corse seen from Menton

## 3. The Earth is flat

Let's try to use the formula just obtained above. I want to check if the earth's curvature could allow me to look that far.

As you can notice in figure 3.10, the total distance from coast to coast, at the closest point, is about 175km. But, if you prefer considering the highest point inside the Corse Island, you'll have to measure the distance from Menton to the top of Mount Cinto, at 2706 m on the sea level. And, in that case, you'll obtain a distance of about 195 Km.
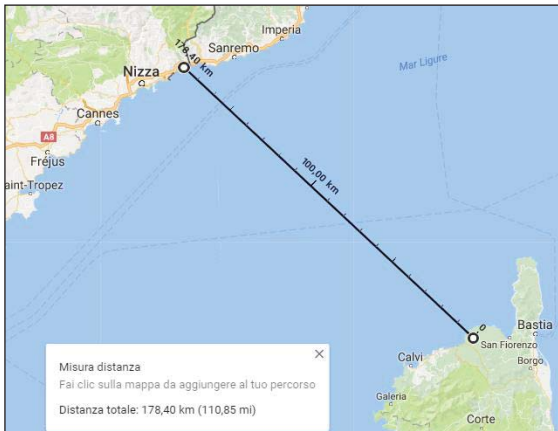


Figure 3.10 Distance from Mentone to Corse. Source: Google maps

# 3. The Earth is flat

Let's suppose my friend took the picture at an altitude of about 10 meters above the sea level. You can check on the net the altitude on the sea level.

As you can note, in this case, you have an altitude of 5,31 meters. Anyway, I'll fix 10 meters, as an approximation.



Figure 3.11 Altitude in Menton, where the picture was made. Source: daftalogic.com

So, you can refer to the following formula:

$$\alpha = \frac{s}{40000} 360°; \quad \beta = cos^{-1}\left(\frac{R}{R+X}\right)$$

$$X = R(\frac{1}{cos(\alpha - \beta)} - 1)$$

## 3. The Earth is flat

Considering a coast 175 km far, we'll obtain:

$$X=2.109 Km.$$

This is the fall of the curvature within a distance of 175 Km. Thus, it should be clear that, for such a distance, it would not be possible to see anything more than the top of the mountain. But there's something more to highlight. Pay attention, the distance of this mountain from Menton is a little farther. Let's try to make the calculation for a distance of 195 Km and check if it is possible, from Menton, to see at least the top of the mountain.

For a distance of 195 km, we can obtain:

$$X=2.657 Km=2657 m$$

Unfortunately, the mountain is only 2706m tall. Maybe, the observer could go a little higher and see, at least, the summit.

So, when we consider the observer as standing at an altitude of 7 meters (that is more realistic) you'll obtain:

$$X=2.710 Km=2710 m$$

Anyway, in the picture, you can see a good deal of land. How is that possible? It is just possible because the Earth is flat.

# 3. The Earth is flat

**Objection 1:** refraction of the air is what makes the phenomenon possible, even if the Earth is a globe.

**Answer:** Ok, let's analyze what is the atmospheric refraction and then try to understand something more.

Refraction is the deviation of a ray of light while passing through the atmosphere and it is due to the variation of density of the air with the height. The air is in fact denser at sea level and rarefies going higher. Refraction makes celestial bodies to appear higher than they are.
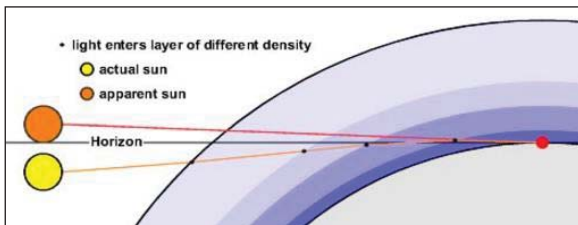


Figure 3.12  Refraction. Source: Wikipedia

However, when we are on the ground level and observe an object on the Earth surface, we are on the same layer of the atmosphere, with very small density variation. It is different from the case when we observe a celestial body, very high in the sky.

So, the situation we are considering can't be a refraction phenomenon, since the light doesn't pass through different density layers of the atmosphere.

**Objection 2:** The light is bent by the gravitational mass of the Earth according to Einstein's general relativity theory. Hence the Corse is visible due to the fact that the light bends along the curvature of the Earth.

**Answer:** Einstein postulated that the gravitational field produces a deformation of the space time and, according to his equivalence principle, any physical entity, regardless of mass, equally accelerates in a gravitational field. Einstein made a calculation applied to a light beam grazing the sun and obtained:

$$\alpha = \frac{2Gm_{Sun}}{c^2 r_{Sun}}(radians) = 0.87 \ arcsecond$$

That is a very small angle: 0,00024 degrees. If you want to do the same reckoning for the Earth, you'll obtain an angle:

$\beta = 0.000287$ arc second $= 8E^{-8}$ degree

which, on a distance of 195 km, produces a variation in the height of 0,27 millimeters. It is finally clear that this phenomenon has nothing to do with relativistic considerations.

However, in relation with Einstein's bending of

light, we have to remark that not all the scientists agree with his theory. Einstein proved its rightness by measuring the bending of the light of a star, during an eclipse, in 1919. The experiment is still remembered as a complete success. Though, many and many times experiments give good results only in the imagination and theoretical data can differ a lot from reality.

Here are some words to explain this theory: "Einstein's law of gravitation contains nothing about force. It describes the behavior of objects in a gravitational field – the planets, for example – not in terms of 'attraction' but simply in terms of the paths they follow. To Einstein, gravitation is simply part of inertia; the movement of the stars and the planets arise from their inherent inertia; and the courses they follow are determined by the metric properties of space – or, more properly speaking, the metric properties of the space continuum" (Lincoln Barnett, The Universe and dr. Einstein, London, June 1949, page 72).

Einstein concluded his theory by saying that the light bends in the curved space time near a big mass such that of the sun. He suggested that this could be verified with an experiment. It could be made measuring the track of the light of stars near the sun, during an eclipse. That is the only moment when the sun and the stars can be seen together in the sky.

The photo of the star, twinkling from behind the sun,

was taken during the eclipse. It had to be compared with pictures taken in other moments. That is to say, when only the stars where visible in the sky, and the deflection of light had to be evident trough a different position of them. The light of the stars should bend inward, because of the space time curvature generated by the big mass of the sun. The theoretical value for that experiment was a bending of 1,75 arcseconds.

The Eclipse expected was that of 29 may 1919 and it was visible from the equatorial regions. A measurement was taken in western Africa, at Principe Island, in the city of Roca Sundy. Even if the weather was not favorable, pictures were taken, and, the result was a bending of 1,64 second arc, very near to the expected result.

I want here to report a consideration made by the Captain of the Indonesian Navy, Gatot Soedarto. In his book "True, general Relativity is wrong", he made the following notation: "The proving method for hypothesis, as suggested by Einstein as the theory founder, should not be able to be carried out, considering the fact that in scientific exposure in astronomy, the instant observation applies. It means, all calculations to determine the 'true position' and 'the apparent position' of a certain star at the sky is only applicable at a certain time and at a certain place on which such observation is performed. The observation on a star conducted twice from the places, with different geographical positions, will result

the different height and azimuth of the star…Therefore the test should not be able to be performed."

Due also to refraction, the star, seen at different times of the day, will be seen in different places in the celestial sphere, making this experiment a complete error, even considering the very small angle measured, much smaller in respect with the refraction angles.

Soedarto continues: "In astronomy, the light deviation is something very common and not caused by gravity field of massive object, but it occurs due to the light refraction."

And he also states that, in that year, another expedition in North East of Brazil returned a measured bending value of light of 0.93 second of arc, no more so close to the theoretical value. This big difference has been ignored and this second experiment has been forgotten as it had never existed.

These data show that often what is generally accepted as correct, and has been spread as a very well experimented datum and a valid scientific principle, maybe is not the truth or maybe has not been really checked properly.

In conclusion there are not relativistic effects to be considered in our curvature calculations.

## 3. The Earth is flat

**Main idea of the paragraph:** The curvature calculation shows that the Earth is flat.

## 4. Things you must know
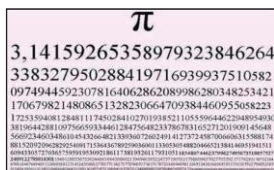
### 4.1 The real value of Pi?



Figure 4.1 Pi. Source: The net

### The reproducible reality

Math is the key to understand and describe the universe. The question is: can we consider the opposite situation always true? I mean, is it possible to reproduce in the real world all the ideal abstractions that are possible in the math world?

Think for instance to the irrational numbers. These are numbers that cannot be expressed with fractions. A ratio between two numbers always produces a rational number that has a finite number of digits after the point. Neper's number is irrational. All square

roots of non perfect square numbers are irrational and so **Pi** is an irrational number.

Pi is the ratio between the circumference and the diameter of a circle and can be calculated in many different ways.

One example is Gregory Leibniz's series:

$$\pi = \frac{4}{1} - \frac{4}{3} + \frac{4}{5} - \frac{4}{7} + \cdots;$$

Another is Nilakantha's series:

$$\pi = 3 + \frac{4}{2\cdot3\cdot4} - \frac{4}{4\cdot5\cdot6} + \frac{4}{6\cdot7\cdot8} - \cdots.$$

These series should go to the infinite, but, when we cut them at a certain point, we are rationalizing **Pi,** making it explicable and reproducible as a single fraction.

Why an irrational number is not reproducible in the true life? Because all technologies, even the most precise, have a finite precision and cannot replicate a number with infinite digits after the unit. Here you have an image of the precision that can be reached with standard tool machines.

When we polish a surface, we can attain a precision of 0.01 micrometer. This means that, when we want to produce a piece of steel Pi millimeters long, we

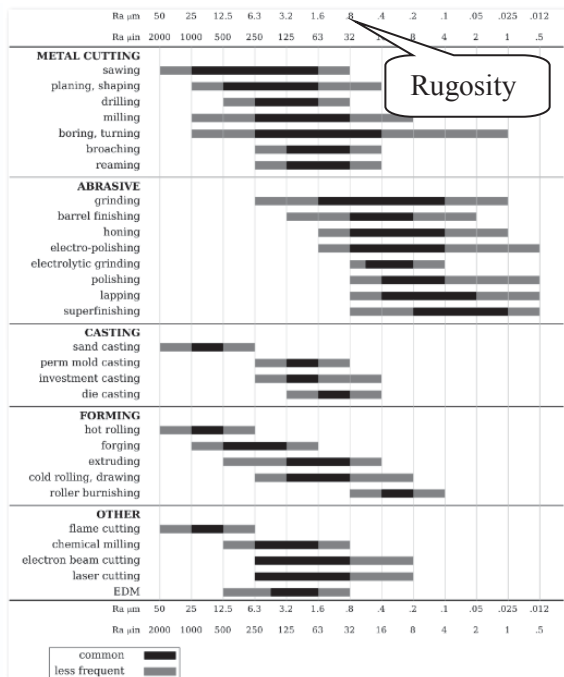will be able to produce a length of 3,14159 mm but then anything more precise.



Figure 4.2 Precision in mechanical machining
Source: ayucar.com

So, you have to rationalize a number when you want to reproduce it as a real object. Rationalizing means cutting it into a finite fraction.

# Making rational the irrational

There is a movie : "**Pi, Faith in Chaos"** by Darren Aronofsky (interesting movie), that ends with number PI expressed as a simple fraction. In the last scene when Jenna, the young Chinese girl, approaches Max in a park, asking math questions, she proposes a problem that will stay unanswered: how much is 748:238? The answer should be a good approximation of PI, but Max smiles and simply sits on the park bench observing the swing of the leaves of the trees. This comes out after an extended and difficult search for the long number that should have had the power to give a final description of the universe. After this "cutting", Max Cohen seems to reach the peace that was missing before.

The idea is that the universe could, maybe, be described with a precision that, step by step  runs to the infinite, but there is a main body, a base, maybe the 95% of the total (3/3,1415=0,95), that you have to find first, just to grasp the comprehension. In the description of the universe you should be satisfied when learning that a good deal of results have already  been  obtained, when  you  reach a  basic grasp of the main subject.  More precise data have to be considered fractals, a repetition of the main body on a smaller scale. Details will be studied in a second moment with the consciousness that nobody will arrive to understand, with an absolute precision, the whole creation: "Only God is perfect" is a noteworthy statement in Aronofsky's film.

Accordingly, the Bible, in Ecclesiastes 3:11, states: "He has made everything beautiful in its time. He has even put eternity in their heart; yet mankind will never find out the work that the true God has made from start to finish".

There will always be a smaller fractal to study, but till that point you have to rationalize (to cut) in order to find the bigger fractal. The risk, on the opposite, could be not to be able even to find the correct description for the more visible and bigger parts of the reality you live inside.
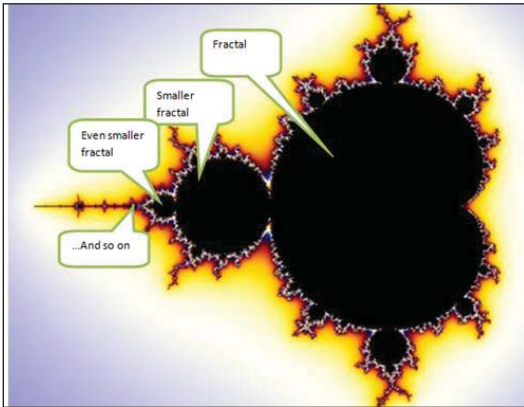


Figure 4.3 Reality is irrational and can be described with fractals. Source: The net

## 4. Things you must know

In Mechanics, for instance, it is usual to linearise near the working point what is non linear. They do it by using the Taylor series that can be cut when necessary. The non linear function becomes a sort of main linear function plus a negligible part that is an order of magnitude smaller that the main part. The little error made is considered negligible, but also necessary to allow the comprehension of the function in a simpler way.

So how can you rationalize **Pi?** On the following table there are some fractions that can be used to express PI and the error we make by using that ratio.

Table 4.1: rationalizing pi

| x | y | y/x | error |
|---|---|---|---|
| 1 | 1 | 1,0000000 | 2,1415927 |
| 1 | 2 | 2,0000000 | 1,1415927 |
| 1 | 3 | 3,0000000 | 0,1415927 |
| 4 | 13 | 3,2500000 | 0,1084073 |
| 5 | 16 | 3,2000000 | 0,0584073 |
| 6 | 19 | 3,1666667 | 0,0250740 |
| 7 | 22 | 3,1428571 | 0,0012645 |
| 57 | 179 | 3,1403509 | 0,0012418 |
| 64 | 201 | 3,1406250 | 0,0009677 |
| 71 | 223 | 3,1408451 | 0,0007476 |
| 78 | 245 | 3,1410256 | 0,0005670 |
| 85 | 267 | 3,1411765 | 0,0004162 |
| 92 | 289 | 3,1413043 | 0,0002883 |
| 99 | 311 | 3,1414141 | 0,0001785 |
| 106 | 333 | 3,1415094 | 0,0000832 |
| 113 | 355 | 3,1415929 | 0,0000003 |

## 4. Things you must know

All these fractions are approximations of the real value of **Pi**. Each of these fractions is reproducible with growing difficulty as the error we make decreases.

Time has also to be considered, because any scientific inquiry has necessity to start from the first major fractal, before passing to the minor one and so on.

So, just as a first approximation, to define and describe the major fractals outlining the Earth, the sun, the moon, the stars and all the firmament orbiting over the earth, you should keep in mind this rule: **PI=3, plus other minor fractals.**

**Main idea of this paragraph:** Reality is fractal and with fractal math should be described. Thus the correct value of Pi to be used in the geo-building description is **3**.
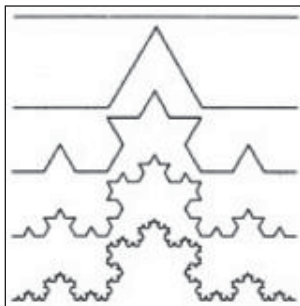
## 4.2 Fractals and time



Figure 4.4 *Fractals.* Source: The net

The math of fractals is very handy to describe the natural world and the Earth. The idea is that nature can't be completely explained with numbers, so that you can only grasp the surface of it. To better understand the idea, you can establish a correspondence between the Euclidean and the fractal geometry. You all are familiar with the Euclidean geometry, which can easily define, by the aid of coordinates, solid figures such as a cube or a sphere.

On the other hand, much problem arises when you want to describe the shape of a cloud. You probably think that, theoretically speaking, you could be able to sketch it but, practically, is that true? This will prove to be difficult due to the gap existing between the Euclidean geometry and nature. Staying inside the Euclidean field you can perfectly measure a segment running from the point A to the point B.

## 4. Things you must know

Every Cad designer knows, for instance, that a segment long 10 millimeters, designed in Cad system, is exactly 10 millimeters there, on the pc screen. But he also knows that the steel piece that he will obtain from the workshop will not be exactly 10 millimeters, but, maybe, only 9,97873457… and he will measure with his caliber 9,98 because that caliber can measure maximum the centesimal part of the millimeter (and only in the case he has a centesimal caliber). Please, look at the picture below:
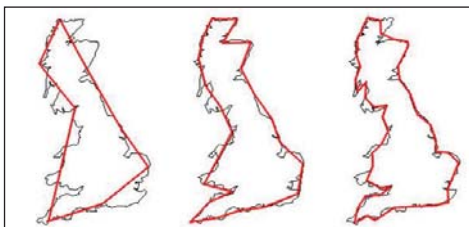


Figure 4.5 England and fractals. Source: The net

To describe the shape of England, you can achieve an ever greater precision by using a measure instrument shorter and shorter, but, however, you will never be able to have a perfect description.

This is a quite intriguing difference. Inside the Euclidean geometry field, the only straight line is infinite, while a segment has a finite size. On the other hand, in the fractal geometry a segment is con-

sidered to be infinite. In the middle of two points, A and B, there is enough space for infinite points.

There are no limits in getting smaller. Observe picture 4.5, the triadic curve of Kock that illustrates the idea. The first step is a straight segment. The segment is divided in three equal parts. Four of this parts are used to obtain the second step, that by now is long L=4/3. This process can be repeated to the infinite, without any limitation. Any segment, no matter the length, can always be further divided. Nature acts in a similar way. It is repeated with similar structures in always smaller scales. You can try to observe it at the smallest possible scale. Then you will reach the atomic scale. So, at those dimensions, diffraction problems will arise. At the end you will not be able to use any light source to observe, so, without the needed technology, you'll have to stop. Maybe, only in the future, you will be able to go further.

Interesting is the fact that also time behaves in a fractal way. Have you ever wondered why Babylonians and Hebrews had a year of 360 days? They considered the time as a circle, because their clock was the sky and the sky runs, during the year, a 360° circle. They were able to understand that there was a difference of about one degree in connection with the motion of the sun and of the stars for any single day. This means that every day the same star rises 4 minutes later that is one degree.

They added the remaining days of the year with a little additional month. This way to proceed is in agreement with the fractal nature of time.

Consider, for instance, the sidereal year of 365,2564…days. It can be expressed with fractals like this: Y=360+5+0.25+0.00625+…

$$Y = 360 + \frac{360}{72} + \frac{360}{1440} + \frac{360}{57600} + \frac{360}{3456000} + \frac{360}{276480000} + \cdots$$

that can also be expressed this way:

$$Y = 360 + \frac{360}{72} + \frac{360}{72 \cdot 20} + \frac{360}{72 \cdot 20 \cdot 40} + \frac{360}{72 \cdot 20 \cdot 40 \cdot 60} + \frac{360}{72 \cdot 20 \cdot 40 \cdot 60 \cdot 80} + \cdots$$

You can deduce, of course, that the number 72 has a strange importance in defining the year duration. I will show later in this chapter another phenomenon in which the number 72 is implied.

# Number 72 and the flat earth

The number 72, incredibly enough, can be expressed this way:  $72=44.4\times1.62$.

## 4. Things you must know

Incredibly why? Because 1,62 is a pretty good approximation of 1,618, i.e. Phi or the golden number. This is the number that has usually been associated with the description of nature. The approximation is because phi is an irrational too. Hence we can write:

$72 = 44,4 \times \phi$

44,4 is a number with repeated digits. I will show that this is important in the description of the Earth and is linked to the Fibonacci and the Demlo numbers. Incidentally, the cubit of the Hebrews was 44,4 centimeters.

So if we call 44,4 cub (from cubit) our Y can be expressed this way:

$$Y = 360 + \frac{360}{cub \cdot \varphi} + \frac{360}{cub \cdot \varphi \cdot 20} + \frac{360}{cub \cdot \varphi \cdot 20 \cdot 40} + \frac{360}{cub \cdot \varphi \cdot 20 \cdot 40 \cdot 60} + \frac{360}{cub \cdot \varphi \cdot 20 \cdot 40 \cdot 60 \cdot 80} + \cdots$$

**Main idea of this paragraph:** Fractals are very handy to describe reality. Also the time has a fractal nature. The length of the Year can be expressed using fractals.

## 4.3 φ and the Golden Section

φ is the golden number I have just introduced in my previous chapter. We can state that a line is divided according to the golden section when we can find this proportion:
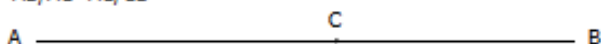
AB/AC=AC/CB



Figure 4.6 Golden proportion

When these segments respect the above proportion, the ratio AC/CB will correspond to 1,6180339887…Euclid was the first to describe this digit, which is also known as the golden number. φ, like π, is obviously an irrational number. Euclid described this ratio only for geometrical purposes; he probably didn't imagine this number could have important consequences in very different fields. Think for instance to the disposition of the leaves on a tree in botanic or to the description of galaxies in astronomy.

## φ and the fractal world

Exactly like $\pi$, $\phi$ can be expressed as a sum of many elements, a bigger one summed up with many other fractals. One way to express it, is:

$$\phi = 1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1 + \cdots}}}}$$

Interesting is the fact that, as you can deduce from this equation, $\phi$ is obtained from a series of fractions with many repeated 1. I will show in a further chapter that, when describing the Earth, repeated digits appear many and many times.

## $\phi$ and the number 72

I have already highlighted the link between $\phi$ and the number 72, but, concerning this subject, I want to add something really interesting.

$72°$ is the fifth part of the circle: $360°/72=5$ and there is actually a link between $\phi$ and the pentagon. Let's draw a pentagon inscribed in a circle. Draw then two diagonals of the pentagon, dividing thus the pentagon in three triangles.
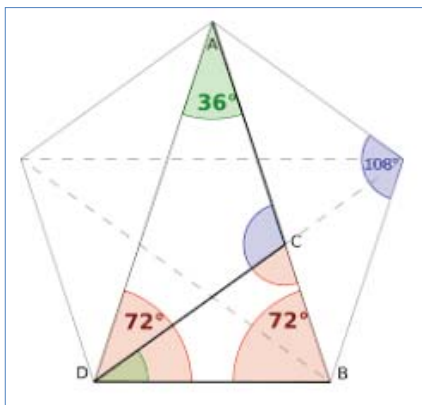
# φ and the pentagon



Figure 4.7 The pentacle. Source: The net

The ratio between the diagonal and the side of the pentagon AB/BD is φ again.

But when you divide the angle of 72° with a segment in two equal parts, you'll find the point C, and, again, you'll have AC/CB=φ.

Astonishing is the fact that φ is in relation with the number 666 too. I can write -2*sin666=φ. I don't want, of course, to link the golden number with the Beast of Revelation, but again with a number made up of repeated digits: 666.

# Contiguous Fibonacci numbers

φ can be rationalized using the Fibonacci series 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987…. Consider, in fact, the ratio between contiguous Fibonacci numbers:

1/1=1,000000
2/1=2,000000
3/2=1,500000
5/3=1,666000
8/5=1,600000
13/8=1,625000
21/13=1,615385
34/21=1,619048
55/34=1,617647
89/55=1,618182
144/89=1,617978
233/144=**1,618056**
377/233=**1,618026**
610/377=**1,618037**
987/610=**1,618033**

These ratios get nearer and nearer to the golden number and this astonishing phenomenon was discovered by Kepler, the astronomer.

The Fibonacci series has a beautiful property connected with the number 11, again a number with repeated digits. If you sum ten numbers of the series, the result is always perfectly divisible for eleven.

For example

 1+1+2+3+5+8+13+21+34+55=143
143/11=13

## The phyllotaxis arrangement

An evidence of the fact that the Fibonacci series proves to be fit in describing the Earth, lies in botanic and stays in relation with the phyllotaxis arrangement, i.e., the disposition of the leaves. On trees, leaves and branches are arranged to maximize the exposition to the sun. On lime trees, leaves are ordered on two opposite sides, being the coefficient of phyllotaxis ½, that means that, with one turn around the stem, there are two leaves or branches. The beech has a coefficient 1/3, the apple 2/5 while there are cases of trees with a coefficient 3/8. All these ratios are made with alternated terms of Fibonacci series.

## φ and the fractals

Fibonacci is the link between the golden number and fractals, both being math instruments that are perfect to describe the nature of reality. Let's consider now the logarithmic spiral. It can be obtained from a series of golden rectangles, one inside the other. They are obtained by subtracting a square to the rectangle, as you can see in the following picture. A golden rectangle has the property that the ratio between the

sides is φ. The same spiral can be obtained from a golden triangle, the one with a 72° angle inside.
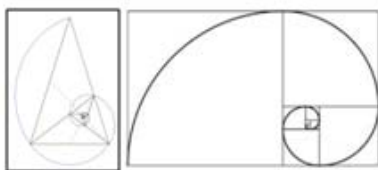


Figure 4.8 The golden spiral.     Source: The net

## "Eadem mutato resurgo"

This spiral has a particular property: while growing it doesn't change in shape. This property is called self similarity, and is the same we can find in fractals: parts of fractals are similar to the total.

That is exactly the property required by a lot of phenomena of natural growth. Think for example to the Nautilus, which builds rooms increasingly greater. While the shell gets greater, the radius increases proportionally. As a result, the general shape remains always the same. It could be said: "Eadem mutato resurgo".

There are many natural shapes that are similar to the logarithmic spiral and many astronomers link the shape of galaxies to the golden spiral.

On the other hand, we could make a consideration on Newton's law of gravity. It states that, by doubling the distance, the attraction force decreases, according to a factor 4. This is because the force diminishes with the square of the distance. Due to this law, in a globular system, planets' orbits around the sun are assumed to have an elliptical shape. But, let's suppose that the attraction force could diminish of a factor 8, instead of 4. So, if, by any chance, the distance doubles, you should imagine a totally different universe. When the gravity decreases according to the cube of the distance, the planets' orbits will consequently become logarithmic spirals. As a consequence, the Earth would collapse or it would depart from the sun. Newton's laws, of course, do not act in harmony with the flat earth maths.

# ϕ and the music octave scale

Harmony and proportions are, obviously, the basic elements in music too. It appears well established the fact that the Fibonacci sequence of numbers and the associated "golden ratio" are manifested in many works of art. These numbers also underlie certain musical intervals and compositions. The Fibonacci sequence is evident even in the musical structure of the octave scale. Moreover, the greatest of luthiers, Stradivarius, designed his violins around the golden ratio.

Thus, when approaching art, you can easily find that the theory of proportions has to be considered the

rational basis for beauty. And, together with this, math is exalted as the foundation of many different artistic activities and mainly of music.

# Proportions and the book of Job

This aesthetic of the proportions, while uniting grace and beauty, makes me remember of a verse of Job. It refers to Leviathan and it recites:

I will not conceal his parts, nor his power, nor his comely **proportion**. (Job 41:12) King James Bible

Leviathan is, in the book of Job, a poetic representation of the vault of the heavens. On the other hand, Behemoth is a representation of the earth. Their proportions are regulated according to an extremely refined, aesthetical math: numbers of the great joy or repeated units, like 111 or 666; or even irrational numbers, like Pi or φ. And, of course, auto-similarity and fractals lay at the cornerstone.

**Main idea of the paragraph:** Reality can be described by using different math tools and, among others, we find the Fibonacci series with the golden section.

## 4.4 Demlo numbers



Figure 4.9 The Earth map used in the UN flag: 33 sectors. Source: The net

Some people believe the UN flag is a symbol of the flat earth with the Arctic lands in the centre and the Antarctic oceans all around. It appears as a grid, probably representing parallels and meridians, which are dividing the Earth in 33 sectors. Another special number is 11, of which 33 is a multiple. You probably wonder what it means and what relations have these numbers with the Earth.

33 appears immediately to be a particular number, being a palindrome. Moreover $3\times3=9$; $33\times3=99$… another palindrome digit I like is the number 12321. If you sum all digits, you'll obtain 9 again.

## Numbers and the Bible

Thinking to these numbers it could be easy to establish a link with the cubit of the ancient Hebrews. The cubit value can be understood when you think that the Siloam inscription near Jerusalem shows that the water gallery built by the king Ezekias was

1200 cubits long. The gallery actually measures 533 m, revealing that a cubit was 44,4 centimeters.

The Ark of the Covenant in the Bible is described having dimensions 2.5 x 1.5 x 1.5 cubits that are 1110 x 666 x 666 mm. All these numbers are obviously multiples of 111. A lot of numbers that describe the Earth are actually more understandable when you think to the cubit, to multiples of 111 like 666, or maybe like 33 and so on.

# The speed of light

Let's consider the particular case of the speed of light. This speed is known to be 299792,458 Km/s in the vacuum. When we want to calculate the speed in the air (that is what actually interests us, since we live in the air) we have to use the formula:

$$v = \frac{c}{\sqrt{\varepsilon_r}}$$

where **v** is the speed of light in the air, **c** is the speed of light in vacuum, **εr** is the dielectric constant of the air in relation to the vacuum. In relation to the air, the root of εr is 1.0003 that gives a speed of light in the air v=**299700Km/s**. When you want to express this speed in cubits per second you obtain an incredible result: **v=675000000 cubit/sec**.

299700 is a multiple of 111 too, being 299700 = **2700x111**.

The energy behind this speed is proportional to the square of the speed. (Einstein postulated the formula $E=mc^2$). So, $299700^2 =$ **89820090000**. This square number is a multiple of the palindrome **12321,** in fact we have:

89820090000=7290000x12321

12321 is the square of 111. But when you sum up the digits of $111^2 =12321$ you obtain $3^2 =9$ being $3=1+1+1$ and $9=1+2+3+2+1$. These are Demlo numbers.

# Demlo numbers

These are the squares of multi-unit numbers. The first 9 Demlo are palindromes:

$1^2= 1$;
$11^2= 121$;
$111^2= 12321$;
$1111^2= 1234321$;
$11111^2= 123454321$;
$111111^2= 12345654321$;
$1111111^2= 1234567654321$;
$11111111^2= 123456787654321$;
$111111111^2= 12345678987654321$.

# 4. Things you must know

The sum of the single digits of these numbers is a square. This is the series of the Demlo squares: 1, 4, 9, 16, 25, 36, 49, 64, and 81. All numbers, when multiplied by a multi-unit number great enough, become a Demlo numbers.

Other examples of Demlo numbers

On the globular Earth, to each degree of latitude, it corresponds **111** Km.

The tilt of Earth axis is 23,4° , that leaves, as a complementary angle, the terrible 66.6°. These numbers have been used to hide the truth in plain sight. Actually Earth dimensions are often multiples of 111 and proportional to Demlo numbers. So, to give an example, the radius of the Earth can be expressed as 19980 km=180x**111**. Interesting enough is the fact that the earth radius is proportional to 180 (180° is half a circle) while the diameter is **39960Km = 360\*111** (360° is an entire circle). The surface is obviously proportional to the square of the radius through the formula **S=πxradius$^2$**. We have:

$19980^2$ =39920400 = 32400x12321 Demlo applied!

Let's consider now the trajectory of the Sun.

You will discover that it covers a cone trajectory following these data:

# 4. Things you must know

Table 4.2: the cone of the sun

|                     | Radius | height |
| ------------------- | ------ | ------ |
| Tropic of Cancer    | 6660   | 6660   |
| Tropic of Capricorn | 13320  | 3330   |
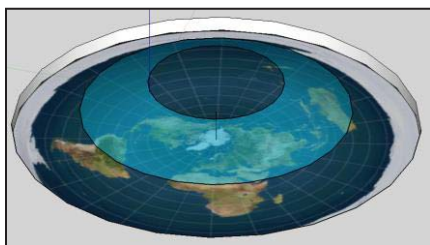


Figure 4.10 The sun's trajectory.

We easily obtain:

$6660=60$x**111**;
$3330=30$x**111**;
$13320=120$x**111**;
$6660\times6660=44355600=3600$x**12321.**

Demlo applied!   (radius x  height of cone of the sun)
$13320\times3330=44355600=3600$x**12321**. Does 3600 mean anything to you? Aren't these the seconds in one hour?

# 4. Things you must know

A short note about the Indian mathematician who studied the Demlo numbers. Kaprekar was an Indian recreational mathematician. He described several classes of natural numbers: the Kaprekar, Harshad and self numbers and he discovered the Kaprekar constant. He also studied the Demlo numbers, named after a train station 30 miles from Bombay, where he had the idea of studying them. These are the numbers 1, 121, 12321…which are the squares of the repunits (repeated units) 1, 11, 111.

**Main idea of the paragraph**: Demlo numbers are often playing an important role in the description of the Earth.

## 4.5 Isotropy and Relativity



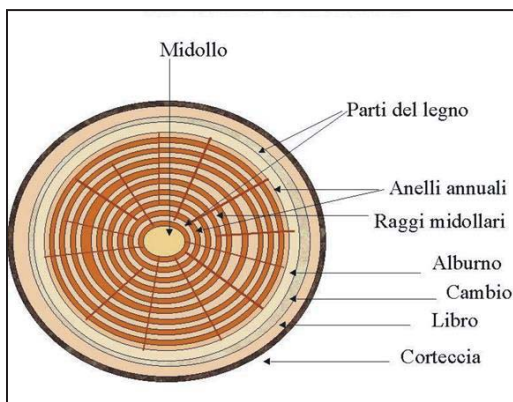Figure 4.11 Isotropy and the growth rings of a tree. Source: The net

Isotropy is uniformity in all orientations. So, in this discussion, you will find a brief inquiry into an old alchemic principle. Our universe shows everywhere uniformity and auto-similarity. So it appears the same from any position. In order to explain this reality, Einstein elaborated and achieved his special relativity theory.

# The cosmological principle

Isotropy is in complete harmony with the definition of the cosmological principle. It is the notion that the spatial distribution of matter in the universe is homogeneous and isotropic. This is a consequence of the fact that you expect the forces to act uniformly throughout the entire universe. They should, therefore, produce no observable irregularities in the large-scale frame of our cosmos.

Isotropy is derived from the Greek *isos* (ἴσος, "equal") and *tropos* (τρόπος, "way"). We indicate exceptions, or inequalities, by the prefix *an*, hence anisotropy.

Astronomer William Keel explains:The cosmological principle is usually stated formally as 'Viewed on a sufficiently large scale, the properties of the universe are the same for all observers.' This amounts to the strong philosophical statement that the part of the universe which we can see is a fair sample. As a consequence, the same physical laws apply throughout. In essence, this in a sense says that the universe is knowable and is playing fair with scientists.

## Large scales are not necessary

Anyway, as far as flat earth is concerned, in order that the cosmological principle could be respected,

large scales are not necessary. For any phenomenon on the Earth's surface, the distances are small enough that light signals appear instantaneous. This is a consequence of the fact that the flat circle we live on has just a small radius. Thus light is able to cover it 15 times in just one second. This means that a ray of light could run all the earth from the North pole to Antarctica in 4/60 of a second. It also means that a sun ray reaches any point of the tropic of Capricorn in 1/45 of a second. Three times faster. This, actually, nearly equals instantaneity.

# The Michelson experiment

After the Mickelson Morley experiment, Einstein himself was forced to take the subject of isotropy into consideration. The results showed that, starting from experiments made on the basis of the speed of light, it was not possible to demonstrate that the Earth rotates.

When deeply considering the topic, since the Earth rotates around its axis and around the sun, the system could not be considered as being isotropic and this as a consequence of its not being inertial. An inertial system is stationary or moving with a uniform rectilinear speed, without rotation, because a rotation means acceleration and inertia. Since the Earth is said to rotate, there could be no isotropic behavior in every direction. In fact, physical laws should behave differently around the globe, whether moving eastward or westward. But isotropy means

there are no special directions to the Universe and Mickelson and Morley proved that the previous hypothesis could not be true.

# Einstein's special relativity

Einstein was then forced to posit that the rotation of the earth is not measurable by any optical means and the ether does not exist. For this reason, he posited that the light speed is of 299792,458 km/s and had to remain the same, independently of the reference system. His special relativity theory was then elaborated. It had to provide a framework for translating physical events and laws into forms appropriate for any inertial frame of reference. That is to say, it had to justify the fact that the isotropy evident everywhere on the earth could not be otherwise explained.

A corollary to the cosmological principle is that the laws of physics are universal. The same physical laws and models that apply here on the Earth also work in distant stars, galaxies, and all parts of the outer Universe – this, of course, would simplify scientific investigations immensely. Note also that it is assumed that physical constants (such as the gravitational constant, the mass of the electron, the speed of light, etc.) are also unchanging from place to place within the Universe, and over time.

## Constance in time will fail

"That the sun will not rise tomorrow is no less intelligible a proposition, and implies no more contradiction, than the affirmation, that it will rise".

*This line was written by the philosopher David Hume in* An Enquiry Concerning Human Understanding*, published in* 1748.

So, about this late assumption that physical constants will be unchanged even over time, we could discuss at length. For instance, knowing our geobuilding is a capacitor and a battery, we also understand the skies are wearing out. So the time factor could immediately be put into doubt. The same could be said for the physical constants in the course of time. Constance in the universe cannot be judged by simple mortal man. Everything could be changed at the right moment.

## The fractal universe

Now, let's go back to our subject and take into account the fact that our universe has fractal geometries behind. "Fractal cosmology is a set of cosmological theories which state that the distribution of matter in the Universe, or the structure of the universe itself, is a fractal across a wide range of scales. More generally, it relates to the usage or appearance of fractals in the study of

the universe and matter. A central issue in this field is the fractal dimension of the universe or of matter distribution within it, when measured at very large or very small scales". (Wikipedia)

Nature, of course, can offer an enormous number of fractal geometry examples. Think, for instance, to the forest trees, the ramifications of lightning, of rivers, the many dendritic patterns in the mammals and human bodies: bronchi, bronchioles, lungs, kidneys, brain neuron dendrites, circulatory systems… So, in this manner, on a larger and a smaller scale, the universe can show an underlying, constantly repeated, self-similarity.

# The old alchemic principle

Ancient micro-macrocosmic theories were a powerful theoretical construction able to unify the laws governing the human body with the laws governing the earth and the whole universe. "As above, so below", was the old alchemic principle. It means that what happens in our cosmos, from the very large to the very small, it is always affected by the same laws.

In writing his Timaeus, Plato noticed that the frame of our body is similar to the framework of the earth. Inside of us body fluids flow like rivers, lungs are full of air, our skeleton can be compared to stones, fire to energies emanating from the mind. He con-

sidered the universe as a living organism possessing a collective soul, the so-called Anima Mundi.

There is no doubt that, since the modern times' discovery of the atoms, the hypothesis that the living human body and the celestial stars can have the same fundamental structure, has had an astonishing confirmation. The chemical reactions inside our cells are similar to those developing in the above space and in the stars. Everything that happens in the furthermost distant parts of the universe can have a deep influence on the rest of the earth's system, even without any visible, evident energy movement transmission.

# The entangled particles

Alain Aspect, David Bohm, Karl Pribram's theories concerning the new physic could shake the foundations of the traditional science. From the subatomic particles to the gigantic galaxies, all is an infinitesimal part similar to the totality of the whole. Alain Aspect and his team found that, in particular conditions, electrons can instantly communicate with the entire universe, independently of the distance. It appears that every single subatomic particle knows what all the others are doing.

However, the distances in space are said to be vast. They are measured in hundreds of millions of light-years. Thus, the time for light to travel from the remotest galaxies is said to be on the order of

hundreds of millions of years up to billions of years for the most distant objects.

# Signal transmission

So, what about the distant stars? The only answer is that our cosmos is tiny enough, so that the speed of light can reach every part of the universe in a fraction of the time. Instantaneously. Our firmament has measures that are far lower than the about 300.000 kilometers the light can cover in a second. Many physicists deny the possibility to find major speeds than that of the light. But the Aspect experiment could prove that the ties among the subatomic particles have no local limits and are instantaneous.

David Bohm suggests that every part in the universe system can be informed by the same structures and models. So, as I have already explained in a series of different articles, and according to the principles above introduced, the earth and the dome are made of a series of concentric and similarly spaced rings. Something like the growth rings of a tree. This reminds me of Cantor's theorem with nested intervals.

# Cantor's theorem

Here I don't pretend to give a rigorous mathematic explanation inside this theorem. I simply want to give an easy, elementary sample. You should consider an interval as a box, a sort of Matryoshka with

a second box inside, a third box inside the second, a forth inside the third and so on. Every box has to be a bit smaller than its container. Now we could go infinitely on, in order to reach the smallest box, a simple point, a single subatomic particle. That point belongs to all the boxes that are nested one in the other. You can, at this point, easily understand that Cantor's set is nonempty. So is the universe we live inside.

**Main idea of the paragraph:** Isotropy of physical laws should be visible in nature description

# 4.6 Magic Squares

Magic squares are squares that contain particular numbers arranged in equal rows and columns such that the sum of each row and column (and sometimes diagonal) are the same.

The earliest known magic square appeared in China dating back to at least 650 B.C.E. - Lo Shu and the tortoise who could talk with a boy after the flood -, but magic squares were represented also in Persia, India, Arabia and Europe.

The Sator square also is a word square containing the Latin palindrome:

| S A T O R |
| --- |
| A R E P O |
| T E N E T |
| O P E R A |
| R O T A S |

# 4. Things you must know

A word square is a special type of acrostic. It consists of a set of words written out in a square grid, such that the same words can be read both horizontally and vertically. Sator-Rotas is a remarkable ancient inscription containing five words read as a perfect palindrome, mirror-like image, not only readable in forward and reverse , but also up and down, because it is the symmetrical  combination of five Latin words, each of five letters, the whole forming a set which can be read in four different ways. Scholars have always searched to find the meaning of this combination and they sometimes agree in their suppositions.

SATOR is, among other, a word connected to Saturn, one of the planets.

AREPO is a word which can be reversed into a passably coined name "Ares", the Greek god of war, in Rome also called Mars, the name given to another of the planets. Some scholars think the word AREPO could also be intended as a plough, (Latin hirpex, English harrow, Italian erpice, etc.) in the sense of a chariot, or, as according to another hypothesis, Polaris and its constellation, the Chariot.

## 4. Things you must know

TENET is the third person of the Latin verb **teneo,** meaning to hold/keep in control/in the hand.

OPERA is the world's creation, following the exact expression found in the first chapters of Genesis.

ROTAS are the orbits of the celestial bodies in perpetual revolution over the earth.

The use of the word OPERA, when referring to the world's creation, seems quite appropriate and someone of my readers could, maybe, remember of an Hebrew writer named Philo of Alexandria (from C. 25 B.C.E. up to C. 50 C.E.), an Hellenistic Jewish writer , the author of "De Mundi Opificio", a philosophical work where the word **opificium** in the title is an allusion, among other, to Genesis's first chapters . The Latin word **opificium** can be translated as **work** and it corresponds to the Greek κοσμοποιιας or creation of the earth and the skies.

Another interesting passage where the reader of the Bible happens to meet with the same word OPERA is in 2 Peter 3:10 where the apostle, talking of the Lord's Day, when this world will be judged, says: "…but the elements (Greek **στοιχεια= the celestial bodies**") being intensely hot will be dissolved and earth and the **works (**Greek **ερΥα** = Latin OPERA) in it will be discovered". Here the word *opera* is not to be intended as human deeds but God's creative works that are manifest on the earth and in the fir-

mament above. About στοιχεια, I would only say that in classical Greek it meant a part of a series. Τα στοιχεια του κοσμου are normally intended as the fundamental, the basic elements of physical skies. Στοιχεια are, for instance, the principles of a science, of art, of instruction or of an institution. But considering our context in Peter's letter, you should remember that the verb στοιχειν was a military term as used in the 2nd volume of the Histories of Flavius Arrianus , the writer of the Anabasis about Alexander's life and military expeditions. Arrianus ( 95-175 C.E.) was living in a period not too far from Peter's time and his use of the term can easily enlighten the value of the word in Peter's letter. σ The pentacle, or five-pointed star, often mentioned in connection with Baphomet, is thus connected to $\phi$. Incredible is the fact that $\phi$ is in relation to the number 666 too. We can write $-2*\sin 666 = \phi$. We don't want, of course, to link the golden number with the Beast of Revelation, but again with a number made up of repeated digits: 666

Στοιχειν is a verb meaning to walk in a row, to make a row, a series. It was said about soldiers proceeding in a strict order, keeping in line with their squad leader up to their rear guard and always maintaining the same distance within all their neighbors. This lexical note will be of great significance when you need to explain more about the orbits of the planets and, for this reason, it should be kept in mind.

## 4. Things you must know



As the average readers of the Scriptures generally understand, the earth and the skies throughout the book of Genesis, Psalms and the whole Bible are referred to as "OPERA" of God's hands. Psalmi 102:25 "quam multa sunt **opera** tua Domine omnia in sapientia fecisti impleta est terra possessione tua…"

Figure 4.13 *The Sator-Rotas inscription that was found on a wall in Pompei.* Source: The net

Anyway, the SATOR formula has a long history and betrays cryptic Jewish symbols. To many scholars it seems reasonable to conclude that this square originated during the Jewish Diaspora, with Latin speaking Jews maybe settled in Italy, in a period immediately prior to the Christian era.

The first discovery of the SATOR inscription was found in Pompei at a Publius Paquius Proculus Domus and relates to a time not later the year of the volcanic eruption in 79 C. E.

There were also efforts to trace the ROTAS images to the first chapter of the prophet Ezekiel, the passage that some Jews, following a cabbalistic way of

thinking, sometimes connect to the Merkavah. Merkavah or Merkabah or the Chariot Jewish Mysticism is centered on Ezekiel's visions of the wheels and the living creatures standing nearby.

For other people the Sator-Rotas Square also contains references to the cube of the New Jerusalem: the square would occupy a three dimensional space as a perfect copy of the universe.

**Main idea of the paragraph:** Sator is an ancient tool used in the past to describe and hide secrets about the Earth.

# 5. The Ether

## 5.1 The real nature of light

*The more you observe nature, the more you perceive that there is tremendous organization in all things. It is intelligence so great that just by observing natural phenomena I come to the conclusion that a Creator exists.*

(Carlo Rubbia)

Light: you know from quantum physics that it has a double nature. It is a wave but also a particle. They taught me at school that light is a wave propagating through the void or other physical means and is made up of particles without a mass that are named photons. I'll try to resume here some of the reasons why physicists were reduced to accept such an ambiguity, that is to say, the corpuscular and wave nature of all the electromagnetic phenomena.

Incidentally, I want here to observe first that light is inseparably a wave particle, and is not absolutely behaving in the way most physicists assert. They describe light as behaving alternatively as a wave or as a particle, especially when they put it under observation and consequently measure it. I'm referring here

to the double-slit experiment which was at the basis of the description of light as particle and wave.
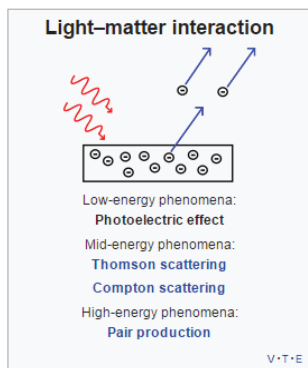
# Waves and particles united



Figure 5.1 Light matter interaction.
Source: Wikipedia.org

The particle nature of light had been postulated by Newton, and can explain some phenomena, such as the reflection, the photoelectric effect, the Compton Effect and the pair production.

Here I'll quote from Wikipedia. The **photoelectric effect** is the emission of electrons or other free carriers when light shines on a material. Electrons emitted in this manner can be called photo electrons. This phenomenon is commonly studied in electronic physics, as well as in fields of chemistry, for instance quantum chemistry or electrochemistry.

**Compton scattering**, discovered by Arthur Holly Compton, is the inelastic scattering of a photon by

a charged particle, usually an electron. It results in a decrease in energy (increase in wavelength) of the photon (which may be an X-ray or gamma ray photon), called the **Compton Effect**. Part of the energy of the photon is transferred to the recoiling electron. **Inverse Compton scattering** occurs, in which a charged particle transfers part of its energy to a photon.

**Pair production** is the creation of an elementary particle and its antiparticle from a neutral boson. Examples include creating an electron and a positron, a muon and an antimuon, or a proton and an antiproton. Pair production often refers specifically to a photon creating an electron-positron pair near a nucleus. In order for pair production to occur, the incoming energy of the interaction must be above a threshold in order to create the pair – at least the total rest mass energy of the two particles – and that the situation allows both energy and momentum to be conserved. However, all other conserved quantum numbers (angular momentum, electric charge, lepton number) of the produced particles must sum to zero – thus the created particles shall have opposite values of each other. For instance, if one particle has electric charge of +1 the other must have electric charge of −1, or if one particle has strangeness of +1 then another one must have strangeness of −1.

The particle description of light is not good however to describe some other phenomena like refraction, diffraction or interference.

All these phenomena can be explained only with the wave description of light. I want with this article to introduce a new idea of light that is in strict connection with the fact that the Earth is motionless and with the isotropic nature of reality.

# Space-time instead of the ether

We have already discussed in a previous chapter the fact that the Mickelson Morley experiment could not measure the speed of the Earth in relation with the luminiferous ether. This led Einstein to remove the idea of ether with his special relativity theory. To solve, however, some problems rising in relation with gravity, Einstein was later forced to reintroduce the idea of an empty space endowed with physical properties: the space-time.

And, moreover, Einstein's space-time is deformed by a gravity field. The ether became thus the space-time through which the light moves. This space is consequently a sort of mean through which the light moves like a mechanical wave. It is endowed with elastic and mechanic properties, allowing the movement of a mechanic wave. How can you be sure of this phenomenon?

## 5. The Ether

We have now introduced the dual nature of light. Photons are particles that are moving with the speed of light but are wave packages as well. It is a strange nature that physicists have not been able, till now, to describe in a simpler way. But consider how simple can be this situation while introducing the ether explanation.

We said the ether becomes a mechanical mean for the movement of an elastic wave, exactly like the air or the water is behaving for the sound waves. Moreover, think, for instance, to a surface wave that is moving on a lake after you have hit the water with a stone.



Figure 5.2 The wave in the lake. Source: The net

Consider one last example of a wave moving on the surface of the lake. The lake is full of water made up of $H_2O$ molecules that are the particles. When the stone is thrown into the water, it produces an oscillation of these particles due to the laceration produced by the stone. The stress produced in the water induces a wobbling movement in the particles. The wave starts to move horizontally while molecules move

with a vertical movement. There is no mass movement, only the wave translates. This water phenomenon has a double nature: particles wobble vertically while the wave moves horizontally.

Science asserts that a light beam is a wave made of photons moving with the speed of light. Each photon is a particle, but also a wave, with its own frequency and wave length. The product between the frequency and the wave length is the speed of propagation:

$$\lambda \cdot \nu = c$$

where $\lambda$ is the wave length, $\nu$ is the frequency and c is the speed of light.

Photons transport a quantity of energy E proportional to frequency:

$$E = \nu \cdot h$$

where h is the Plank Constant $6{,}6 * 10^{-34}$ J•s.

## Etherons and the ether

Let's now think that photons, but let's call them etherons, because they are different, are not simply the beams of light but the single unities that constitute the ether. These particles can be put in vibration by a stress provoked by electromagnetic or chemical

phenomena. With their wobbling movement they generate an electromagnetic wave. When this wave has the frequency of the visible range, we can see the light. On the other hand, when the frequency is not that range, we cannot perceive it. But this does not mean that the light photon is ineffective.

Let's suggest a few examples. Many big seeds, like beans, can sprout in the dark. Why? Because their photoreceptors are able to detect the presence of the light even when in the apparent darkness. Similarly, think to the wheat sprouts in winter. They are able to take advantage of light notwithstanding the coverage of the snow. Vegetal roots can detect light even in the underground. Light is everywhere, even when not visible to photoreceptors or to human eyes. Think to the euphorbia pulcherrima, a plant also known as poinsettia, whose brats, in order to assume their elegant redness, need a number of dark hours for a long period.

All these are evidence of the fact that light photons and obscure photons are just one unity (etherons). I can repeat here that the matrix of light is the shadow. The electromagnetic waves are, as a consequence, movements of the ether.

Etherons are the particle side of light; the generated wave is the other side.

They are intrinsically connected. All what was difficult to explain becomes simple.

## The ether behaves like a solid

A characteristic of the ether is that it behaves like a solid. We have in fact to consider that electromagnetic waves can be longitudinal or transversal.
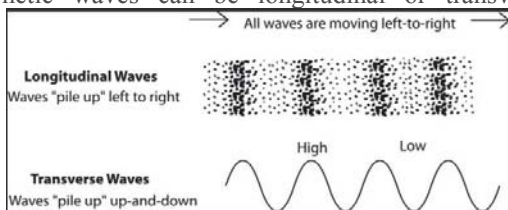


Figure 5.3 *Longitudinal and transverse waves.* Source: The net

Longitudinal waves can be transmitted by solids or fluids, but transversal waves can be generated only in a mean presenting a shear modulus. (In materials science, shear modulus or modulus of rigidity is defined as the ratio of shear stress to the shear strain. Wikipedia) Particles shall in fact transmit the motion by friction to the nearer particles. This is not possible in a gas, where particles are far one from the other, but only in solids or dense fluids.

We shall conclude that etherons are very near one to the other and are connected by a super strong physical bonding, able to keep them together like a solid

mean. I hope to be able in the future to better explain this last consideration.

**Main idea of the subtitle:** Ether is made of discrete particles called etherons. These are not lit and motionless. When an external stress puts them in vibration, these start to oscillate and transmit the wave further. If the vibration is in the field of visible, the wave is light. If not, it is an electromagnetic wave.

# 5.2 Is quantum physics ok?

"Natura abhorret vacuum", this was an ancient saying. Accordingly, in one of my previous paragraphs, I have introduced the ether, made of etherons. Ether has consequently a discrete nature, being the etherons the minimum unity that constitute it.

In this chapter I want to discuss the way quantum physics tries to formulate some extensive and complete description of the light phenomena. **Classical physics** states that particles are particles, waves are waves, and the two shall never mix. Particles can be described by their mass m and by their energy E. Waves can be described by their amplitude A and by the addition of the wave factor $k = \frac{2\pi}{\lambda}$. Classical physics is therefore perfectly able to describe an acoustic longitudinal wave propagating in a steel bar or a mechanic transversal wave propagating in the water or in any other mean.

Reality described by the **quantum physics** is different: particles behave like waves and vice versa. This is the fundamental idea that, since the beginning, was at the basis of the quantum physics.

The first one to assert that light has a particle nature was Newton. Huygens, on the other hand, was sustaining that light has a wave nature. One of the greatest ideas of quantum mechanics has been the quantization of light, i.e., to measure quantities in a

discrete way. Let's stop a while on this idea and reason on what I have already mentioned about the ether.

I wrote the ether is formed by etherons that are motionless and unlit. At the very moment when a vibration moves a quantity of etherons, they begin to oscillate generating a wave, and they light up, if the vibration has a frequency in the visible field. The wave propagates as a mechanical entity, without transportation of mass or transportation of etherons. They only vibrate in their position longitudinally or transversally.
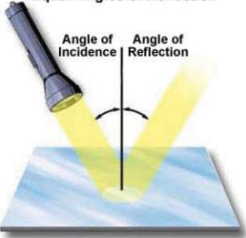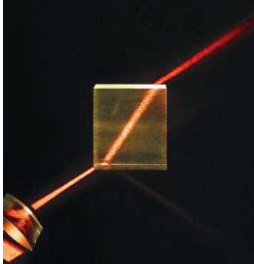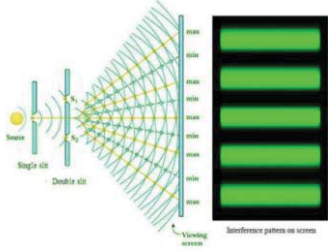
# The particle - wave phenomena

Let's try to see, if possible, on the basis of this new point of view, to explain the different phenomena underlying the particle interpretation and those that underlie the wave interpretation.

Reflection, refraction, interference are explainable with the wave theory. In these cases the light behaves perfectly as a wave. This is readily explainable in the ether theory on the basis of the simple propagation of the wave. The wave propagates in the ether and when encountering an obstacle it reflects or refracts or interferes with another wave.

Table 5.1: Wave behavior

| | |
|---|---|
|  | Reflection |
|  | Refraction |
|  | Interference |

Phenomena in which light behaves as a particle are a little more difficult to explain. These are the photoelectric effect, the Compton Effect, and the Dirac production of pairs. How can you explain these effects? These are simply particle collisions. The etheron has probably no mass but has however a momentum that has to be considered as constant in an impact with an electron.

# The photoelectric effect

From Wikipedia: The photoelectric effect is the emission of electrons or other free carriers when light shines on a material.

According to classical electromagnetic theory, this effect can be attributed to the transfer of energy from the light to an electron. From this perspective, an alteration in the intensity of light would induce changes in the kinetic energy of the electrons emitted from the metal. Furthermore, according to this theory, a sufficiently dim light would be expected to show a time lag between the initial shining of its light and the subsequent emission of an electron. However, the experimental results did not correlate with either of the two predictions made by classical theory.

Instead, electrons are dislodged only by the impingement of photons, when those photons reach or exceed a threshold frequency (energy). Below that threshold, no electrons are emitted from the materi-

al, regardless of the light intensity or the length of time of exposure to the light (rarely, an electron will escape by absorbing two or more quanta. However, this is extremely rare because by the time it absorbs enough quanta to escape, the electron will probably have emitted the rest of the quanta.). To make sense of the fact that light can eject electrons even if its intensity is low, Albert Einstein proposed that a beam of light is not a wave propagating through space, but rather a collection of discrete wave packets (photons), each with energy hv. This shed light on Max Planck's previous discovery of the Planck relation ($E = hv$) linking energy (E) and frequency (v) as arising from quantization of energy. The factor h is known as the Planck constant.

How can you explain this effect in a different way, according to the newly posited ether theory?

A light wave propagates toward the metallic surface. While in motion, it puts in vibration the surrounding etherons. When an etheron, in the nearest metal surface proximity, starts vibrating, it happens to hit a free electron on the surface. If the etheron has enough energy from the wave ($E = h \cdot v$), it can transfer to the electron the quantum of energy needed to free the electron. If the frequency is low, the energy will not be enough to move the electron, it doesn't matter how great the intensity of light could be. In conclusion, in this case too, we can't say that the light is behaving like a particle: it behaves like

always, and the phenomenon is simply an impact of
an etheron with an electron.

# The Compton Effect

Let's try to explain the Compton Effect. This is an-
other of the many so believed particle phenomena
that should be explained in a way similar to the one
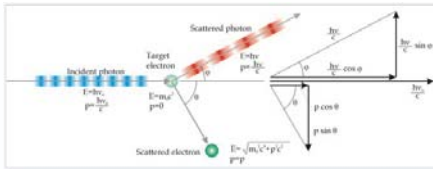just followed for the photoelectric effect.



Figure 5.4 Compton effect. Source: The net

In this image, which I have taken from Wikipedia,
you can see an emission of X rays (the so called
photon) moving with the speed of light (and repre-
sented in the picture as a blue longitudinal wave)
while hitting an electron. The electron moves away
with a scattering angle derived by the conservation
of the total momentum. As a result the so called
"photon" is scattered away with less energy ( a part
of the energy is transmitted to the electron) and
therefore  this means a minor frequency. In fact, the
"photon"( in the new conceptual framework I would

say the " etheron") , is represented in the picture with a red wave, that is to say, a radiation with a bigger wave length and less energy ($E = h \cdot \nu$).

This is the actual situation: the blue wave, and not the particle, is moving toward the electron. The wave is a high energy one and, during its movement, it puts in vibration all the etherons. When the wave gets into collision with the electron, also the nearest etheron starts to vibrate and hits the electron with the energy transported by the wave.

# Quantum physics dismantled

The electron moves away with an angle that can be calculated by keeping in mind the conservation of the total momentum and energy. The wave loses part of its energy (given to the electron) and turns thus to the frequency of red. The impact is, therefore, an impact between particles, while the scattering characterizes the wave. Classic physics is actually the only mean able to explain everything. And this is quite surprising!

# Production of pairs

Pair production is the creation of an elementary particle and its antiparticle from a neutral boson. Examples include creating an electron and a positron, a muon and an antimuon, or a proton and an antiproton. Pair production often refers specifi-

cally to a photon creating an electron-positron pair near a nucleus. In order for pair production to occur, the incoming energy of the interaction must be above a threshold in order to create the pair – at least the total rest mass energy of the two particles – and that the situation allows both energy and momentum to be conserved. However, all other conserved quantum numbers (angular momentum, electric charge, lepton number) of the produced particles must sum to zero – thus the created particles shall have opposite values, one in respect of the other. For instance, if one particle has electric charge of +1 the other must have electric charge of −1, or if one particle has strangeness of +1 then another one must have strangeness of −1.

The probability of pair production in photon-matter interactions increases with photon energy and also increases approximately as the square of atomic number of the nearby atom. (Wikipedia)



Figure 5.5 Production of pairs. Source: The net

Diagram showing the process of electron-positron pair production

# 5. The Ether

For photons with high photon energy (MeV scale and higher), pair production is the dominant mode of photon interaction with matter. These interactions were first observed in Patrick Blackett's counter-controlled cloud chamber, leading to the 1948 Nobel Prize in Physics. If the photon is near an atomic nucleus, the energy of a photon can be converted into an electron-positron pair: $\gamma \rightarrow e^- + e^+$

The photon's energy is converted to particle's mass in accordance with Einstein's equation, $E=mc^2$; where E is energy, m is mass and c is the speed of light. The photon must have higher energy than the sum of the rest mass energies of an electron and positron ($2 \times 0.511$ MeV $= 1.022$ MeV) for the production to occur. The photon must be near a nucleus, in order to satisfy conservation of momentum, as an electron-positron pair producing in free space cannot both satisfy conservation of energy and momentum. Because of this, when pair production occurs, the atomic nucleus receives some recoil. The reverse of this process is electron positron annihilation.

In this case, a gamma ray having a very high energy and impacting a nucleus, can have an inelastic behavior, i.e., the total amount of energy doesn't conserve but creates particles with mass that can be electrons and positrons or protons and antiprotons with a higher level of energy or neutrons and anti-neutrons… The impact of the etheron can thus produce matter as foreseen by Einstein's equation $E=mc^2$. The wave loses its energy and scatters to

minor levels of frequency, often in the field of blue. (Cerenkov effect).

**Main idea of the paragraph:** Quantum physics came into existence because physicists had to find a way to explain the fact that radiations transmit energy in a discrete quantized way. They were forced to postulate that the light is a wave that in some situation behaves like a particle. The problem arose from Einstein's insane idea of removing the ether from science, as a consequence of his special relativity. However, I am making it clear that the entire problem can be solved by reintroducing the ether. Particles of the ether, the etherons, are the particle receptive side of the light; the wave transmitted through the ether, due to the oscillation of the etherons, is the wave character of light. This is a totally classical interpretation of the nature of electromagnetic phenomena.

## 5.3 The black body spectrum

Reintroducing an abandoned concept, the ether, all phenomena involving light become perfectly explainable from an exclusively classical point of view. This way, it becomes very easy to describe all the electromagnetic radiations and, in particular, the nature of light as a wave, with all its power to put in vibration the etherons. These invisible particles remain at their place, they don't move, but only oscillate, transmitting the wave in all directions.

All the light phenomena become, this way, perfectly explainable by the only aid of classical physics. Light loses its ambiguity that is its double nature of particle and wave. It simply becomes a wave that propagates in particles.

In this article I will consider two more points, the black body radiation and the De Broglie consideration about matter being a wave. This is the inverse of what I have considered till now.

## Quantum - Classical Physics

Many people think that quantum physics exists because it describes the discrete nature of radiations, the quantization. Moreover, they think it measures quantities in discrete, not continuous units. That's true; this is one of the major ideas of quantum physics. Anyway, this is not so peculiar. It is not what

makes the quantum physics one of the scientific branches you cannot do without. Classic physics can describe discrete quantities too. The double nature of light and matter is the only point actually making it impossible, for classical physics, to give a plane description of electromagnetism.

The idea of quantized energies came to the fore when considering one big point: the black body radiation. Let's try to describe this problem that has challenged the classic physics for many years.

# The black body radiation

When we heat a body, this begins to glow. Also when it has not started to glow, it irradiates in the infrared field. The glow can be explained considering that, while heating it, the electrons on the surface of the body get thermally excited and emit light. It has been very hard to explain the radiation spectrum of the light emitted by black bodies. A black body is a piece of material that emits light corresponding to its temperature. When it is cold it absorbs all radiation. To simulate a similar body, we can think to a hollow cavity like that in the following picture.
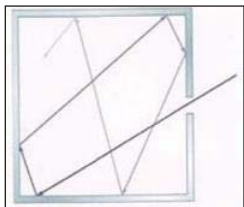
Figure 5.6 Black body. Source: The net

All the light enters in the hole and is reflected many times, till it gets completely absorbed by the body. By using this model we can study the spectrum of the radiations emitted by the body. You can see the diagram in the following picture.

# An enigmatic diagram

This is an interesting subject in order to answer the following question:

– If stars are all inside the dome, how could we explain the fact that spectroscopy measures different distances for each star?

Just for a start, let's consider of the black body spectrum enigmatic diagram. You can see the picture in the next page.

On the Y axis you have the Energy while on the X axis there is the wavelength. Nobody was able to describe this spectrum in a classical way.
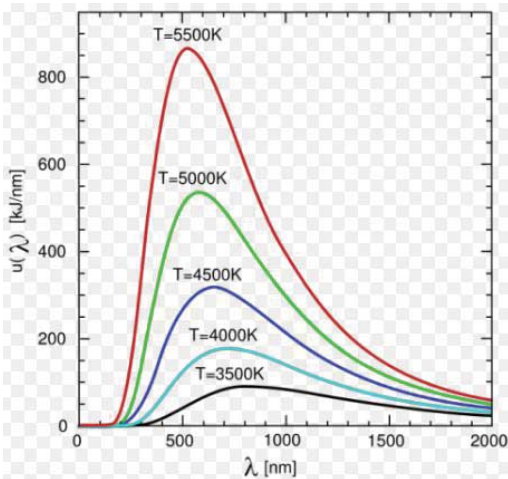
Figure 5.7. Black body spectrum. Source: The net

The first attempt came up with Wilhelm Wien with a formula that was working well for higher λ but failed for lower frequencies.

A second attempt has been the Rayleigh-Jeans Law that was working well for low frequencies but not for higher frequencies (ultraviolet catastrophe). Then Max Plank came into play.

# The quantization of the energy

Max Planck found a radical solution by making the hypothesis that the quantity of energy that light can exchange with matter is not continuous, as previously expressed by classical physics, but discrete. Planck postulated, in fact, that the energy of the light, emitted by the black body cavity, distributes only with multiple integers, according to this relation:

$$E = n \cdot h \cdot \nu$$

where n=0,1,2,3…, h is the Planck constant and f is the frequency of the radiation.

Planck wrote thus this equation to describe the black body spectrum :

$$u(f,t) = \frac{2\pi h f^5}{c^3 (e^{\frac{hf}{kT}} - 1)}$$

His equation is, of course, a perfect description. Planck was saying that electrons, on the surface of the black body, can't start to oscillate at just any level of energy, as classical physics supposed. Electrons can reach only specific quantized levels of energy and this energy is a multiple of h*ν where h is h=6.626 x10^{-34}Joule•second.

# 5. The Ether

This has been the first big result of quantum physics. But are you sure this situation can't be explained under the coverage of classical physics?

Let's consider the ether filling the black body cavity with all its invisible particles. The etherons are just waiting in order to start their oscillating movement. When the radiation of light enters the cavity, each etheron acquires an energy of $E = h \cdot \nu$, that is an energy quantum. It is clear that a quantum of red light contains less energy of a quantum of blue light that has higher frequency.

This way, the black body will absorb all the radiation due to the impact of the etherons against the surface electrons. So it will reach the needed temperature. At this point, it will have energy enough to emit quantum of energy in the infrared or in the yellow field. On the other hand, it will not be able to emit an X or a gamma ray. This way you can explain the reduction of energy emitted in the high frequency field, i.e., the ultraviolet catastrophe.

For the part of the curve with low frequency, the explanation is, at this point, quite obvious. The energy is low, because the frequency is low. The emission of light can once again be explained with an impact between the oscillating electrons with the nearest etherons. The problem is thus that physicists were compelled to describe light emitted by a black body with a particle phenomena description.

# Ether is a discrete entity

Once again, it can be proved that light, described as a wave and moving through particles, can be simply described in a classical way. The fact that light is considered as discrete is not a problem: the mean in which the light passes is discrete and each etheron carries on a discrete energy $E = h \cdot v$.

De Broglie suggested, however, that not only light has a particle nature beside the wave one. He said that the whole matter has not just a particle nature but also a wave one. To prove this assertion, researchers made an experiment sending an electron beam through a dual slit apparatus and they saw that particles act like a wave.
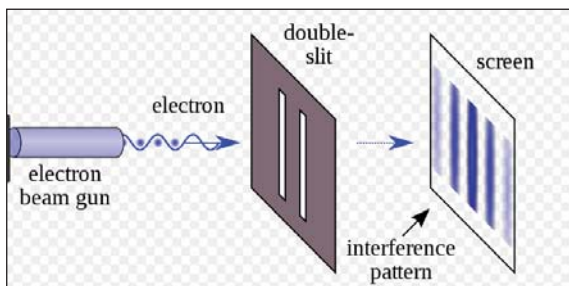


Figure 5.8 Electron beam Source: The net

# 5. The Ether

The central fringe in the picture is heavier because it is the result of the interference. This is the sum of the intensity of the two waves starting from the two slits.
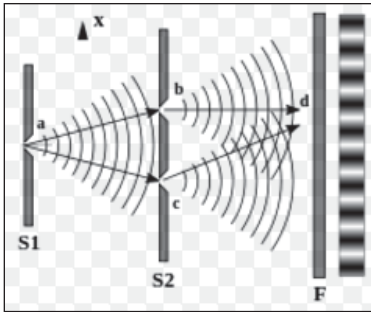


Figure 5:9

Interference. Source: The net

How to explain this phenomenon on the basis of the newly reintroduced ether?

The electron beam passes through the ether, arriving to the slits. The passage of the electrons transfers energy, due to the impact against a number of etherons. So they start oscillating and generate a wave. The wave generates the interference fringes. Over.

All physics becomes simple with the reintroduction of the ether.

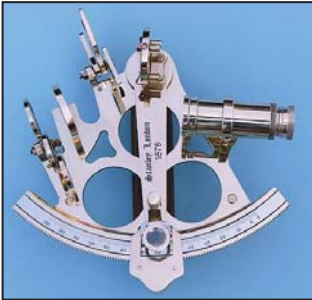**Main ideas of the paragraph:** The black body radiation spectrum can be easily explained with

classical physics, provided you reintroduce the idea of the ether.

The black body spectrum is not useful to determine the star temperatures. Stars are not incandescent bodies. They are not so far from us

# 6. The measures of the Earth

## 6.1 The sun



I have given a good number of proofs to demonstrate the Earth is flat but, if the Earth is flat and motionless, you wonder how the sun should move upon it to realize what you really see.

Figure 6.1 A sextant. Source: brasscompass.com

To get an idea you have to deal with a little trigonometry.

The best way would be to have a sextant, as the one in the image, and make many measurements of the height of the sun in many days of the year and in many different places of the globe.

# 6. The measures of the Earth

To learn to use a sextant and correct the altitude from refraction, aberration and parallax would be very interesting…if you had time and money for it. But what about if you have not? You have to make like me and download an application that gives the height of the sun for every place in the world. So, I've downloaded Sun Surveyor from Google Play.

Let's suppose that we are in Rome. Rome has latitude of 41°54'. You have to consider that, in globe geometry, each degree of latitude corresponds to a 111Km arc.

Rome is distant 18°27' (2050km) from the summer tropic and 65° 21' (7250km) from the winter tropic.

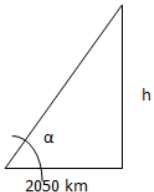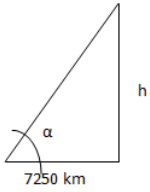Sun Surveyor gives these two height angles for the solstices at Rome.

Table 6.1: sun's angles in Rome

| Summer solstice | 71.5° |
| --- | --- |
| Winter solstice | 24.7° |

Let's now calculate, with these two values, the height of the sun in winter and in summer.

Table 6.2: trigonometric calculation

| | |
|---|---|
|  | H=tg71.5°•2050= 6127km |
|  | H=tg24.7°•7250= 3334km |

If you consider some other place in the northern hemisphere you will find values from slightly different to very different, due to the original geometry considerations the software is based upon. However, we can have a first impressive idea of the behavior of the sun: the sun makes a conical spiral between the two tropics.

The value of 6127 km is a little different from the value obtained by Eratosthenes and from the radius

of the Earth of 6356 km at the pole or 6378 at the equator.

The difference from our calculation can be the approximation and, maybe, a wrong altitude angle of the sun given by the software. The idea is, however, that, on a flat Earth, an experiment in Eratosthenes' style gives, as a result, the sun's height and not the Earth radius.
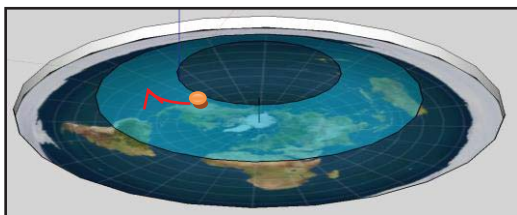


Figure 6.2 The sun's trajectory

Day and night alternate, in this model, not because the sun moves to the other side of the Earth, but because it departs so much that it becomes invisible, due to perspective.

**Objection:** if the sun doesn't set on the other part of the Earth, you should see it also during the night.

**Answer**: the sun disappears beyond the horizon due

to perspective. It becomes a little smaller as it moves away and it goes down till it disappears, hidden beyond the horizon.



Figure 6.3 Perspective. Source: The net

We have already discussed both, perspective and one-point perspective. Lines that are not perpendicular to the direction of sight converge to a point on the horizon, as you can behold in the pictures 6.3 or 6.4. The lights get smaller and smaller as they shift away, till they completely disappear beyond the horizon. The sun gets only a little smaller because the atmosphere refraction acts as a lens. When the sun is low on the horizon, a thicker layer of atmosphere is between the observer and the sun that will thus appear bigger.

# 6. The measures of the Earth

Someone looking at the image below made me a smart objection: let's say that between two lamps there is a 5 meters distance. We can see only about 20 lamps because, then, they get blurred. That means a distance of 100 meters. If a lamp is 5 meters high, this means that the light disappears with a distance that is about 20 times its height. Now let's suppose the sun is at 6000 km height, it should disappear at a distance of 6000•20=120000 km, that is clearly impossible according to our geometry.



Figure 6.4 Perspective. Source: The net

We can easily respond to this objection considering the perspective rules.

Consider a man 2 meters tall observing a corridor. He will view something like this:
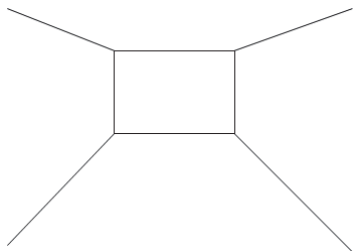


Figure 6.5 Corridor as seen by a man

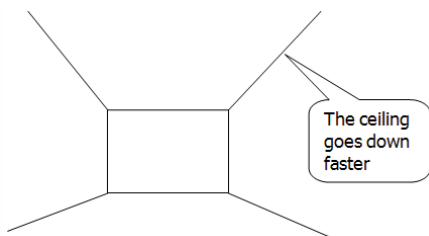This is however the same corridor as seen by a child one meter tall.



Figure 6.6 Corridor as seen by a child

## 6. The measures of the Earth

What we can clearly perceive is that, as far as an object moving upon us is higher, it reaches the horizon faster, and with a greater inclination. The sun is at least 6000 km height: it arrives to the horizon faster and with a greater inclination than a street lamp that is only 5 meters high.

Can we precisely define the height of the sun? Yes, we can obtain a better model by using the math we have introduced in the previous chapters. Watch the following table; I will try to explain it.

Table 6.3: sun's trajectory

|  | Height [km] | Radius [km] | Circumference [km] |
|---|---|---|---|
| Cancer tropic | 6660 | 6660 | 39960 |
| Capricorn tropic | 3330 | 13320 | 79920 |

In chapter 4 I have discussed irrational numbers and fractals. You can't represent nature perfectly as it appears, but you have always to rationalize, i.e. to cut the description you are doing. At the same time, you have to cut in the best possible point to obtain, however, a first good representation of reality.

# 6. The measures of the Earth

Reality can actually be explained by the aid of fractals which show the property to describe parts that are similar to the total.
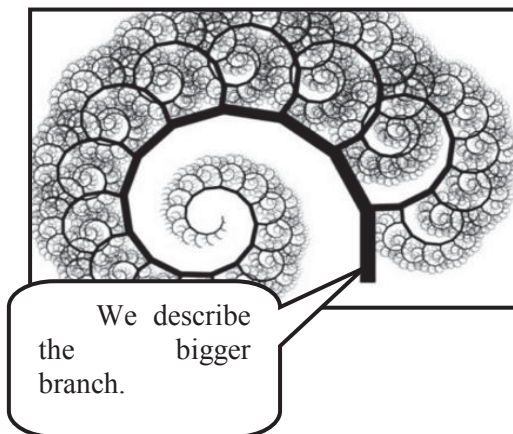


Figure 6.7 Describing the bigger fractal. Source: fractalenlightment.com

If you are able to give a good description of the first fractal, the bigger one, you are able to achieve a good representation of the whole, because it contains an infinite number of repetitions of smaller fractals similar to the first. Here is the reason why I have given to Pi the value of 3.

Having this in mind, please consider the heights of the sun I have given: 6127 km for the top of the cone

and 3334 km for the bottom. These are values that are not describing in the better way the first fractal. Consider, moreover, that the radius of the globe at the poles is considered to be 6356 km. Let's consider now this series:

Suns height = 6660-333+33.3-3.33+0.333… =6357,…

$$=6660 - \frac{6660}{20} + \frac{6660}{200} - \frac{6660}{2000} + \cdots$$

It seems to be a good fractal description, with a good numerical result. Isn't it? As a consequence we can describe the height of the sun at the Capricorn tropic with the height 3330 km that is 6660/2. This way you have 6660 and the series of 2 at denominator.

I like this description that remembers me the fact that, in the geo-math of the Earth, numbers with repeated digits, in Demlo style, frequently appear.

Someone could ask: why 6660 and not 6666? That is a repeated digits number too. You have remarked that the Demlo numbers, which so well describe many natural phenomena, deal a lot with the repeated 1. The number 111, for instance, is used to describe the globular Earth, since one degree of latitude corresponds to 111 km on the meridian.

You know, however, that the Earth is flat and that the ratio for the radius of the Earth is in reality the

eight of the sun. So, if you divide 6660 for 111, you'll obtain the integer 60 as a result. On the other hand, 6666/111 gives instead 60.54 which does not seem to be perfectly fit to describe the bigger fractal. But we could even discuss this subject to a greater extent, and still find a link with $\phi$, the golden number of the previous chapter.

Consider the circumference of the two tropics we have obtained by using 6660 and divide them by 111.

Table 6.4

| | |
|---|---|
| Cancer tropic | 39960/111=360 |
| Capricorn tropic | 79920/111=720 |

Notice the beautiful precision of these calculations. You'll obtain that one degree on the tropic of Cancer corresponds to 111 km, while one degree on the Capricorn tropic is 222 km.

The number 720 we have thus obtained is ten times the number 72 already found when considering $\phi$. 72 is the internal angle of the golden triangle, as well as the one of the pentagon, it is the fifth part of the full circle and, moreover, 72=44,4*$\phi$. Our description is a circle, a big circle, with some beautiful maths inside.

## 6. The measures of the Earth

**Objection:** If the sun moves following a spiral trail over the Earth and maintaining its track between the two tropics, it follows a circular path that doesn't correspond to what our eyes can generally observe... Normally the general experience is believed to consist in the fact that the sun is rising from east and setting to west. But look at the image here below:
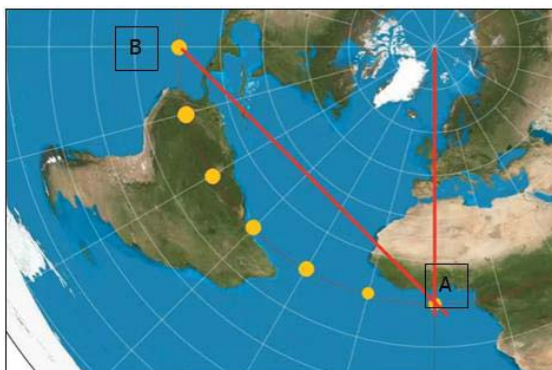


Figure 6.8. Sun's trajectory. Source: The net

A person standing at the point A sees the sun setting at the point B, that is not at west (i.e. perfectly 90° on the left) but it is at 45°.

**Answer:** we are told at school that the sun sets at west that means left if you watch toward north. But

have you ever checked this assertion? Does the sun really set perfectly west?

I live in Italy and I can notice a big difference from the setting point of the sun in winter and the one in summer. With a compass I've tried to detect the angle between west direction and the real direction of the sunset.

On the 21st of June the sun sets at about 300°-310° west-north-west, that means 30-40° more towards north, while on the 21st of December it sets at 230°-240° south south-west that means 30-40 ° more towards south. Uncertainty is due to the instrument and to my imperfect ability with the compass.

The conclusion is that the sun doesn't rise perfectly east and doesn't set perfectly west but, instead, in different places. This is due to the different height and distance of the spiral trail between the two tropics. Check by yourself.

**Objection 2:** We know that seasons are due to the tilt of the axis of the Earth of 23,4°. Since the Earth doesn't move, the axis is not tilted, so seasons are not possible.

# 6. The measures of the Earth

**Answer:** Science explains seasons on the basis of the tilt of the Earth, which exposes, with different angles, different zones of the Earth to the sun, as you can observe in the following picture.
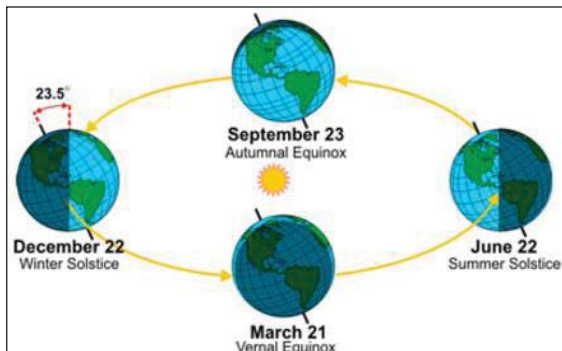


Figure 6.9 Seasons over the globe. Source: weather.gov

To answer this objection, you have to understand where this 23.4° comes from. We have to think that the globe model is symmetrical around the equator. This means that the sun behaves in the same way on the two tropics, when in summer on the northern or on the southern hemisphere. Consider hence a place in the northern hemisphere, let's say Rome and consider the angles of the sun in that point. Ummmh, we have already registered these data, can you remember? Let's recover them:

## 6. The measures of the Earth

Table 6.5

| Summer solstice | 71.5° |
|-----------------|-------|
| Winter solstice | 24.7° |

Since the system has to be symmetric, we can try to find the middle angle that would be the tilt angle of the Earth.

$\alpha = (71.5+24.7)/2 = 23.4°$ that is exactly what we are looking for.

But consider now the Earth as being flat. The system is no more symmetrical, because the circle has several symmetries but not in respect with the Equator. So there are no similarities between the two tropics: they have different diameters and the sun has different heights. This considered, we can say that the angle of 23.4° loses its meaning in relation with the flat Earth. Seasons are not due to the tilt of the axis of the Earth but to the fact that the sun moves on a spiral track between the two tropics. When the sun is on the tropic of Cancer we have summer in the northern part of the Earth, while, when the sun is over the other tropic, summer is over the southern part. Since in the south the sun has a greater circumference to run, it is quite natural that it follows a lower trajectory: the quantity of heat will be the same even if it has to go

faster during the day.

Astonishing to me is the fact that 90°-23.4° gives the dreadful 66.6°.

But if the sun moves on a cone, where is the equator? Is it in the middle between the two tropics?

To answer this question let's think to what the equator is in relation to the sun:

- the equator has the sun on the vertical at the equinox;
- a person on the equator can behold the sun on the two solstices as having the same angle.

What does this last expression mean? The height of the sun, when on the tropic of Cancer or on the tropic of Capricorn, should define the same angle. This consideration can really help us to define the position of the equator. Let's thus consider the following picture representing a section of the cone of the sun. The equator should define two equal angles α. Let's define Y the distance between the tropic of Cancer and the equator and X the distance between the equator and the tropic of Capricorn.
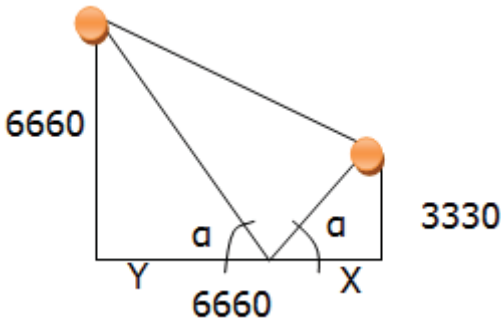
Figure 6.10 Cone of the sun

With a little trigonometry we can write:

$$\begin{cases} tan\alpha = \dfrac{6660}{X} = \dfrac{3330}{Y} \\ X + Y = 6660 \end{cases}$$

And we obtain X=2220km and Y=4440km.

The equator is thus nearer to the tropic of Capricorn and not centered. This means that the sun moves more slowly in the southern part and accelerates a little once it has overcome the equator toward north.
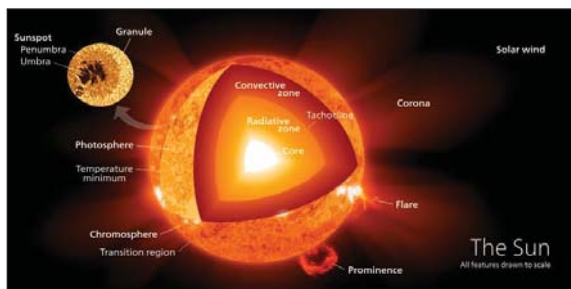
## A cold core in the sun



Figure 6.11 Core of the sun
 Source: Commons.Wikimedia.org

This is something you never imagined before. After this investigation, you will be certainly surprised.

About the trajectory and dimensions of the sun, I have already discussed. I want now to express my opinion about the thermoelectric reactions occurring inside the core of the sun. Academic science posits that inside the sun you could measure a temperature of about 15 million degrees, while on the surface you would find a heat of 5700°K. The same academic science postulates that the sun is 150 million kilometers far away from the Earth. But, I feel, we have the right to say these data are wrong.

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There are no doubts: the heat of the sun has been overestimated. You can determine the surface temperature by the aid of spectroscopy so that you can achieve a rough measurement. But, as far as the nucleus temperatures are involved, you can only get theoretical hypotheses. You certainly know how doubtful this sort of hypotheses is. Science says that in the sun's core a nuclear fusion reaction takes place, similar to that occurring inside the stars.

Mainstream scientists suppose that a similar ordinary fusion was the one occurring inside the Fat Man, the H Bomb. For many years scientists have been trying to achieve a nuclear reactor, in order to benefit, for peaceful purposes, of the advantages of the nuclear fusion. But, till now, doing that has not been possible. This is due to a number of technical problems that are enormous. The fusion temperatures needed are very high, near 100 million degrees. When you think that the steel is melting at 1500°C, you can understand what sort of a challenge is that. Getting a tank able to contain and resist the nuclear reactions has been, up to now, an impossible task.

In the reaction, nuclei of the light elements, like hydrogen, get fused together by means of very high temperatures. As a result, from fusion, heavier elements like helium can originate. The resulting elements, however, have a mass that is less than the sum of the masses of the hydrogen nucleus involved. The difference in weight is transformed into energy. There are three isotopes of hydrogen that are the

normal hydrogen, deuterium, and tritium. All nuclei of the three elements contain a proton. Deuterium contains also a neutron, while the tritium contains two neutrons. All the three elements have an electron necessary for the compensation of the proton charge.

When a tritium atom reacts with a deuterium one, you'll get to behold the formation of helium with the release of energy. The two nuclei react only if they achieve to be very close. In these cases, the nuclear forces are stronger than the electrostatic repulsion forces. To achieve such a short distance, the nuclei must be hit with a very high speed. Hence they will possess a greater energy, obtained through the application of very high temperatures and pressures.

To obtain this reaction in the sun, science states every second 594 million tons of hydrogen is transformed into 590 million tons of helium. However, official science has proved many times to be wrong. So, I feel, we have the right to be suspicious. I mean that there are serious doubts about the official description of the core of the sun and the reactions developing inside.

I recently happened to learn something more about the Dutch astronomer William Herschel. He lived between 1738 and 1822 and in 1781 he discovered Uranus. Moreover, he suggested some hypothesis about nebulae, postulating they are at the origin of the formation of stars. However, sometimes he is

criticized for a supposed big mistake he did. He postulated the fact that the core of the sun is cold and that the resulting heat is only a superficial reaction.

Obviously today this is an idea totally unconsidered. But we have to take into account that the sun is very near to the Earth, and this fact is neglected as well. I was wondering what could be the physical principle involved. After some thought, I found it: the Ranque effect. This is an important physical effect totally underestimated today. I can explain it this way. A mass of gas will get colder and colder in the zone nearer to the rotation axis, while it will get hotter and hotter in the external part. This will happen independently from the initial conditions of temperature and density. It will be the attended result when a physical cause, putting the gas in motion, interferes with an axial rotation.

The French physicist Georges Ranque discovered this physical principle in 1933. This is the procedure he followed. You can start blowing air radially into a tube and generate a vortex. Then you notice that the air coming out from one extremity of the tube is colder or warmer than the inlet air. So you realize that it is depending on where, in the flux, the outlet air is spilled. You'll obtain a different result from the fact that the air is spilled in the center or in the outer part of the flux. The vortex in the tube seems to operate a dynamical separation between the warmer and the colder molecules of the air. This effect is so effective and macroscopic that it is often used in the

industry to create cooling systems for tooling machines and electrical boxes. However, the physical principle at the basis of this phenomenon is not totally understood. We know that the external part of the vortex gets warmer.

The same physical principle can apply to meteorology. Think of the air cooling that develops at the center of vortexes. They form where two different air layers, one over the other, succeed in producing the condensation of water steam. This way they create the hailstone. We can think that, in the process of formation of typhoons, the Ranque effect has a very important role.

We know from spectroscopy that the sun is a rotating body made of gas. We know that it rotates because there is a red shift of the light arriving from the east edge of the sun that is moving toward us. Comparing this light with the waves arriving from the west side, we get the rotation rate of the sun. To be noticed is the synodic period of this rotation. It corresponds to 27,27 days, which is almost equal to the sidereal period of the moon, 27,32 days. The rotation probably causes the heating of the surface till the 5700°K, while the core can probably become cold enough to solidify into some vitreous matter. We have thus a sphere with a hot external surface hot and a cold vitreous core.

This difference in temperature between the surface and the core causes another phenomenon. We find in

the sun hydrogen and helium that move from the core to the surface that are at such different temperatures. This generates, due to the Seebeck effect, a current flux.
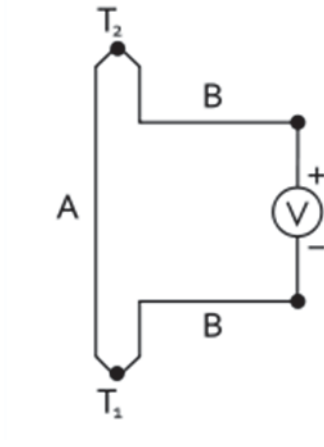


Figure 6.12 Seebeck effect Source: Wikipedia.org

It was the Italian Volta who first noticed the Seebeck effect. He understood this principle when putting two materials in contact, something like the circuit in the picture. When two points stay at different temperatures T1 and T2, an electric current starts to flow between, due to their different temperature situation. We have thus a flux of current that flows between the core and the surface of the sun. This

current can be the start of a series of chemical reactions probably even of nuclear kind. I think of cold fusion reactions that can be able to grow up, even more than the outer temperatures of the sun.

I report here some information about cold fusion (Cold fusion for dummies):

Nuclear reactions are normally initiated using neutrons or high-energy elemental particles. The process taking place under these conditions is well known and is the basis for the field called nuclear physics. When a plasma1 is used to produce fusion between two deuterons, the process is called "hot fusion". This reaction is known to emit neutrons2 and produce tritium3 in equal amounts. Past experience and established theory have demonstrated that nuclear reactions cannot be initiated without application of significant energy because the charge barrier between nuclei, called the Coulomb barrier4, cannot be overcome any other way. Neutrons can pass through the barrier because they do not have a charge. However, neutrons are normally made by processes that are well understood and they are not known to exist as free particles in ordinary materials. Profs. Pons and Fleischmann, and others since then propose that nuclear reactions can be initiated without extra energy or application of neutrons just by creating a special solid material in which deuterium is present, the so-called nuclear active environment (NAE).

# 666 and the square of the sun

We have introduced in chapter 4 the magical squares. The magic square of the sun is probably the most famous of all magic squares. Adding the numbers in each of the columns of the square (either horizontally or vertically) the sum will always prove to be 111, with all six rows summing to the intriguing number 666. This is quite an astonishing corroboration about some numbers I have given in relation to the sun till here. Magic squares are in fact a way used to express an ancient knowledge in connection to the universe. Nothing of magic but rather a mathematical tool, like fractals. I believe that the magic has been added to hide a knowledge that had to be reserved only to a very few people.

Below you can see an image about the magic square of the sun.



Figure 6.13 Square of the sun. Source: The net

## 6. The measures of the Earth

The square has order 6 that is the number of rows and columns and 111 is the magical constant. By multiplying 111 many times we were able to find the cone of the sun, the radiuses of the cone and all the orbits.

The number 666 is most famously quoted in St. John's Revelation, 13:18:

*"Here is wisdom. Let him that hath understanding count the number of the beast for it is a number of man and his number is Six Hundred Three Score and Six."*

But the square has other secrets to reveal. Consider, for example, the sign of the sun: each square is identified by a sign that communicates something.
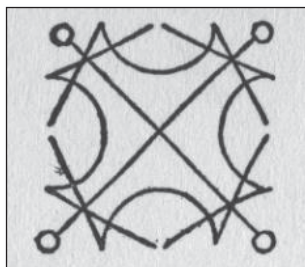
This is the sun's sign:



Figure 6.14 Sign of the sun. Source: The net

# 6. The measures of the Earth

This sign can really represent a symbol. When I saw it first, I tried to understand the meaning. After thinking a moment, immediately it became clear. I understand that it has to be superposed over the square. If you try, you will suddenly notice that the sign underlines the numerical symmetry of the square. You can check it personally; I can give you a first input:

Table 6.6: symmetry in the sign of sun



Consider the two orange lines. They connect the 19 with the 32 and the 5 with the 18. Notice the symmetry:

32-19=13

18-5=13

So, the sign of the sun highlights symmetry in the square. I can perceive an analogy with a normal mode of vibration of a square plate. If you put a square plate in vibration, it will resonate in different ways according to the frequency.

See this image:

Figure 6.15 Normal vibration mode of a square plate, very similar to the sign. Source: The net

My hypothesis is that the magic square gives not only the height and dimension of the sun but also a vibration mode of the sun, a sort of sound generated by its magnetic field. Further research will confirm or not this idea.

## Clouds behind Sun and Moon



Figure 6.16 Clouds behind the sun. Source: The net

In the image above you can see a phenomenon well known to Flat-Earthers: clouds behind the sun. Similar images are often used to prove that the sun is very near to the Earth and very small.

In my opinion these are fake images. I have in fact exposed up to now important data about the sun. In its lowest orbit, on the Capricorn tropic, it has a height of 3330kms over the Earth.

Wikipedia, about clouds, states:

"High clouds form at altitudes of 3,000 to 7,600 m (10,000 to 25,000 ft) in the polar regions, 5,000 to 12,200 m (16,500 to 40,000 ft) in the temperate regions and 6,100 to 18,300 m (20,000 to 60,000 ft) in the tropical region."

Let's make the hypothesis that the picture has been taken exactly at the Tropic of Capricorn. Let's then imagine that clouds where reaching the incredible height of 20000 m that means 20 km…Can you compare 20 km with 3330 km? Of course you can't.

So you have an evident proof that the picture above is fake.

# Gravitation of the sun

The solar system, as proved by Poincarè, is not stable on the long period. There is a too fragile balance between gravitational attraction and centrifugal forces, between the sun and the planets. You know, moreover, that Newton's gravity is wrong and doesn't respect the principle of conservation of energy. I wonder, thus, what is the origin of such stability during the millenia. I can only make hy-

potheses. This is exactly what I have been doing up to now, through all these pages.

I have reconsidered the ether, and thus I can imagine this invisible tissue as an important element for the transmission of the magnetic currents inside the field that traps the sun in its position. The sun is probably made of a mixture of materials: magnetite, calcium, basalt, neodymium, hydrogen, helium and more. The luminary has its own magnetic field and an external positive charge. The earth is negative but the ionosphere is positive, the rotor of the dome is negative while the stator is positive.

What does it mean? Look at these images.

Table 6.7: magnets



| | A plastic ring with six small magnets |

| | |
|---|---|
|  | A bigger magnet is inserted in the middle with opposite polarization |
|  | Another big magnet is attracted by the six external magnets but repelled by the bigger one and is trapped at a specific distance. |

Could something similar happen relative to the sun?

Could it be trapped in its own trajectory, due to a game of many different magnetic fields, attracting and repelling it, sticking it to a specific position during the years? Another hypothesis we can make is about the Biefeld-Brown effect. Thomas Thousend Brown discovered that an asymmetrical capacitor, supplied with a very high tension, develops a thrust that acts in the opposite direction of the gravity field.

# Precession of the equinoxes

Earth's precession was historically called precession of the equinoxes. This was because the equinoxes moved westward along the ecliptic relative to the fixed stars. They were also moving in the opposite direction to the motion of the sun, along the ecliptic. Hipparchus is credited with discovering precession. Astronomical observations, attributed to him by Ptolemy, date from 147 BC to 127 BC.

**On a globe**. Since then, precession is a phenomenon that has been observed and measured many times. It is considered to be a gyroscopic movement, i.e., generated by a body rotating around its axis. To explain the dynamics of this motion you could compare the Earth to a spinning top. A spinning top is a free gyroscope, with three freedom degrees. Let's consider a top spinning fast and with uniform speed around its axis t. (See figure 6.15)

At the center of gravity (G in the figure), we apply the weight (P in the figure) of the spinning top. On the foothold (o) we apply two vertical forces p' and p", that are equal and opposite as well as parallel to p. Since their resulting force is zero, by adding these two forces we don't change the balance of the system. The force p" makes a pressure on the foothold. The two forces p and p' form a torque that tends to tilt the top downward.
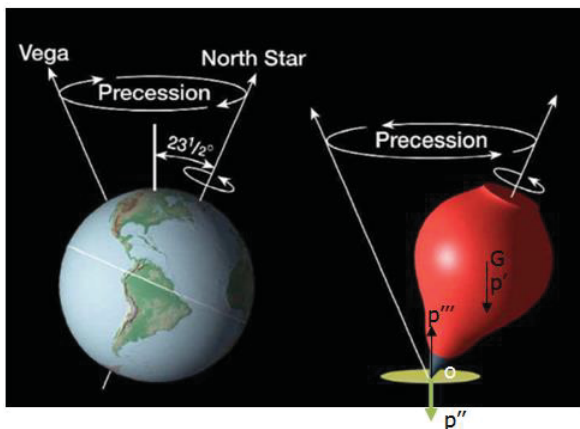
Figure 6.17 Precession on a globe. Source: geography.hunter.cuny.edu

The top reacts by moving on a plane normal to the foothold. It describes, around the vertical on the O point, a conical surface. The center of gravity G describes a horizontal circumference having its center at the point V. The axis OV is called precession axis. The point O is the precession pole. A deeper observation also reveals that the point G continuously goes upward or downward. This is a nutation movement. So the main point of the matter is that the point G describes a sinuous line over the precession circumference.

## 6. The measures of the Earth

Now I want to make a few comments on the question. In the above official analysis, the Earth is compared to a spinning top. Any top has to be put in a rotation movement around its axis by someone else from the exterior. How did the rotation of the Earth begin? There are a few theories about this question. However, science cannot explain the reason why the Earth keeps on rotating around its axis. The more established theory about the problem was postulated by Immanuel Kant. He speculated that the condensation of spirals of gases around the sun could have generated the rotating planets…

By the way, you just need to weigh up around a single but important fact. Why is the rotation of the Earth and of the moon so synchronous that you always see the same face of the moon? Why? Unsolved riddles like these are the direct consequence to face when philosophers want to invade a domain strictly belonging to the astronomy! Can you recover your schoolboy notions into the history of philosophy? Then you will agree that the whole concept of the spherical Earth comes first from philosophy, and only in a second time was accepted by astronomers.

Wikipedia states:

"The earliest reliably documented mention of the spherical Earth concept dates from around the 6th century BC. It first appeared in ancient Greek philosophy but remained a matter of speculation un-

til the 3rd century BC. Then Hellenistic astrono-
my established the spherical shape of the Earth as a
physical given. The paradigm was gradually adopted
throughout the Old World during Late Antiquity
and Middle Ages".

Coming back to the point, during observation, a
spinning top keeps its position around the precession
cone till rotation continues. When the top slows
down, it tilts down in a chaotic movement and even-
tually it completely stops. Considering the Earth, we
wonder what kind of energy could be the one able to
keep it rotating during the millennia. All meteorites
falling down on the Earth should slowly change its
rotation speed. But it never happens! The Earth and
the Moon keep on rotating with the exact speed that
allows them to move synchronously forever.

So, how can you explain the precession on the Flat
Earth?

The Earth doesn't move. It is not a spinning top. The
only observable effect you have to explain is a delay
of the sun in comparison with the firmament. Let's
introduce this surprising phenomenon.

**On the flat Earth.** To tackle the issue, you have
first to consider the speed of the sun. This can be
described on the basis of the length of the year. It
lasts 365,2564 days. The Hebrews and the Babylo-
nians considered the year as being made up of 360
days. There was then a small part of a week left, to

cover the remaining days. This is the reason why a circle is considered to be made up of 360°. The time of the year is thus represented as a circle. The precession is a time circle too.

We have already seen that the time of the year can be described with fractals.

We have seen that the solar year Y can be expressed by this fractal series:

$$Y = 360 + \frac{360}{cub \cdot \varphi} + \frac{360}{cub \cdot \varphi \cdot 20}$$
$$+ \frac{360}{cub \cdot \varphi \cdot 20 \cdot 40}$$
$$+ \frac{360}{cub \cdot \varphi \cdot 20 \cdot 40 \cdot 60}$$
$$+ \frac{360}{cub \cdot \varphi \cdot 20 \cdot 40 \cdot 60 \cdot 80} + \cdots$$

Now we have the duration of the year, but we shouldn't miss the duration of the rotation of the firmament. The difference in the duration of the year and the rotation of the firmament is the precession.

Astronomers say that precession lasts 50",25 per year, that represents the sun delay in connection with the firmament. This is the precession per one year. If you have to calculate the time that one degree of precession needs to run the exact space, you'll obtain:

# 6. The measures of the Earth

50.25"=0.0139°   1/0.0139=71,6 year.

Once more you have to consider that an irrational number is described by the main part of the fractal series.

Many authors consider the precession as lasting 72 years per degree that leads to a total precession cycle of 25920 years (72x360°=25920). It could be, maybe. But let me say that you could either put it somewhat differently. The first consideration I have to make is that 25920 is not a multiple of 111 or 666 or 6660 and this result would appear a little strange, since the precession is strictly linked to the sun. Remember, however, that we are looking for the biggest fractal and not for a 100% accurate result. That precision is not the goal I am looking for. this is due to the fact that phenomena have to be grasped in a more comprehensive manner.

To reach a deeper insight, I have to further consider the nutation. We have noticed, when discussing the spinning top, that nutations are some secondary oscillations of the movement of the summit. It is obvious that there is a need for an integer number of nutations in a precession cycle. But, wait a moment; if the Earth is not moving at all, I wonder what the nutation could be. Studying a little astronomy, you will stumble across a pretty surprising synchronicity. The Earth nutation has the same duration of the retrograde movement of the nodes of the moon.
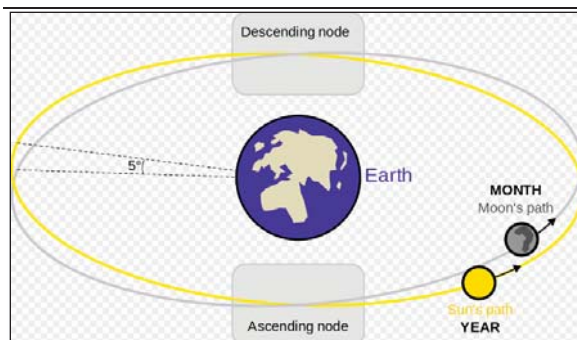
## 6. The measures of the Earth



Figure 6.18 Nodes of the moon. Source: Wikipedia.org

The nodes represent the intersection of the trajectory of the moon with the ecliptic, the trajectory of the sun. These two points move continuously over the ecliptic in a retrograde verse and, according to astronomers, the entire cycle requires 18,6 years. This movement will produce a change in the inclination of the moon trajectory. In a fractal description of the universe, you know that each year lasts 360 days. Consider also this: 6660days/360 days per year=18,5 years. One nutation cycle lasts, hence, 6660 days.

You are probably aware of the fact that in the formula, - expression of the year -, the number 1440 is included, 144 being a Fibonacci number.1440 is, in addition, the digit of the number of the minutes of

the day: 60•24=1440. I can so write: 1440•18,5=26640 years, that is the precession cycle.

In addition, I could write: 26640/6660= 4; 26640/12=2220 years that is the duration of the precession for one zodiac constellation; 26640/360=74 years per one degree of precession.

You have thus obtained the following result: the precession movement needs 74 years to cover the space of one degree. Thus we can postulate that 72 years is not the attended result. Remember the fractal description of the universe, always a big fractal and something more. It is never possible to reach a definitive description. So, to perform a complete 360°cycle of precession, you need 26640 years. This is the whole precession, the main body excluding the smaller fractals. Interesting is the fact that the number of days in 74 years, if we consider the bigger fractal (360 days), is 26640.

**Main idea of the paragraph:** The sun can be well described by the number 6. It moves on a conical trajectory between the two tropics. The precession is the delay of the sun with the firmament within a cycle of 26640 years.

# 6.2 The moon

When considering the earth as stationary and flat, the sun must be moving on a conic trajectory. In the same way the moon, in its movement in the firmament, has to follow a trajectory developing in the shape of a cone.

When we consider the angles of the moon, we can try the same trigonometric calculation we have done for the sun. The only point at issue is that the motion of the moon is a little more complicated than that of the sun. For instance, the moon speed is slower than that of the sun. It loses, compared to the major luminary, 12° every day.

Let's check, from Sun Surveyor, some data that will show you the fact that the moon trajectory develops in a cone. For example, on the 22nd of February 2017 the moon touched the lowest point of the month. The angle of height (declination) of the moon is 29.2°. On the other hand on the 6th of March 2017 the moon was rising to an angle of 67.4° that was the maximum declination for that month (image 6.19). This was possible because, on the 22nd of February, the moon was on the lowest orbit of the cone while, on the 6th of March, it was on the upper orbit.
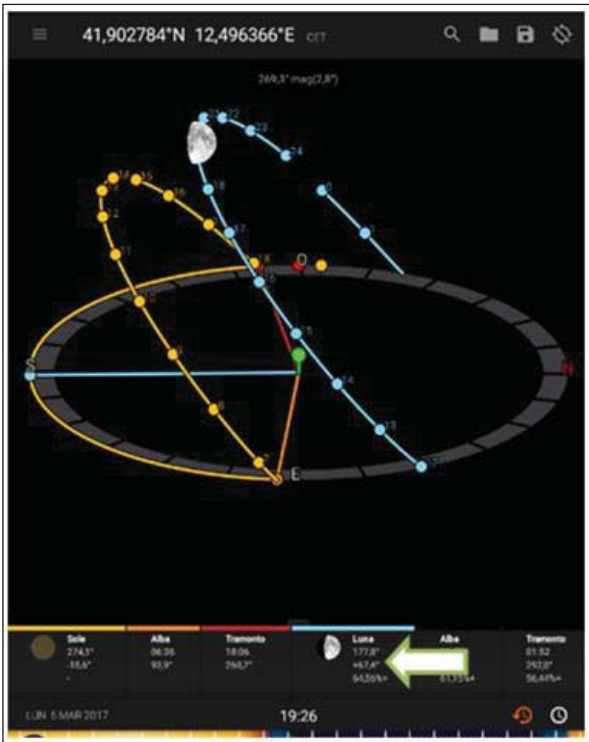
Figure 6.19 Sun Surveyor on the 6th of March 2017.
Source: Sun Surveyor

Here below you can find a table with the max and min declinations of the moon during the last year, 2017.

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Table 6.8: min and max declination of the moon.

| Date | Minimum | Maximum |
|---|---|---|
| 21      march | 29° | |
| 3 april 2017 | | 67,4° |
| 18 april 2017 | 29° | |
| 1 may 2017 | | 67.7° |
| 15 may 2017 | 28,5° | |
| 28 may 2017 | | 67.6° |
| 11 giu 2017 | 28,5° | |
| 24 giu 2017 | | 68° |
| 8 july 2017 | 28,6° | |
| 21 july 2017 | | 67.8° |
| 4 aug 2017 | 28,5° | |
| 18 aug 2017 | | 67.9° |
| 1 sept 2017 | 28,5° | |
| 14 sept 2017 | | 67.8° |
| 28 sept 2017 | 28,4° | |
| 11 ott 2017 | | 67.8° |
| 25 ott 2017 | 28,2° | |
| 8 nov 2017 | | 68.4° |
| 22 nov 2017 | 28,1° | |

| | | |
|---|---|---|
| **6 dic 2017** | | 68,3° |
| **19 dic 2017** | 27,8° | |

As you can notice, the moon travels on a cone that has the lowest orbit at about 28° (considering the latitude of Rome) and the upper orbit at about 68°.

I can conclude that the moon, in the same extent as the sun, stands on a cone and this cone is completed, up and down, in 27, 32 days, which is the sidereal period of the moon. This is the period that the moon takes to reach two times the same star on the celestial "hemisphere". So, in the time the sun makes a cycle on his cone, the moon repeats its conical trajectory for more than 13 times.

The cone of the moon, even if very similar to that of the sun, is not exactly the same. You probably have clear in your mind the fact that the angles of the sun at solstices are 71,5° and 24,7°. These are values that are slightly different from the average values of the moon cone. The slope of the two cones is different: astronomers say that there is an angle of 5° of difference from the ecliptic (the trajectory of the sun) and the trajectory of the moon.

Curious is the fact that this inclination changes in the course of the years. I will add now a table for the year 2004 to clarify this aspect.

Table 6.9: declination of the moon for 2004

| Date | Minimum | Maximum |
|------|---------|---------|
| 6 jan 2004 | | 75,6° |
| 20 jan 2004 | 20.7° | |
| 2 feb 2004 | | 75,7 |
| 16 feb 2004 | 20.6° | |
| 29 feb 2004 | | 75,6° |
| 15 mar 2004 | 20.5° | |
| 28 mar 2004 | | 76,1° |
| 11 apr 2004 | 20.2° | |
| 25 apr 2004 | | 76,1° |
| 8 may 2004 | 20.2° | |
| 21 may 2004 | | 75,6° |
| 5 june 2004 | 20.3° | |
| 18 june 2004 | | 76,1° |
| 2 july 2004 | 20.3° | |
| 26 july 2004 | | 75,9° |
| 29 july 2004 | 20.3° | |
| 12 aug 2004 | | 76,2° |
| 25 aug 2004 | 20° | |
| 8 sept 2004 | | 76,5° |

| | | |
|---|---|---|
| **22 sept 2004** | 20,2° | |
| **6 opt 2004** | | 76,5° |
| **19 opt 2004** | 19,8° | |
| **2 nov 2004** | | 76,7° |
| **15 nov 2004** | 19,8° | |
| **29 nov 2004** | | 76,5° |
| **12 dec 2004** | 20,1° | |
| **27 dec 2004** | | 76,4° |

As you can infer, angles of the moon in 2004 are different from those in 2017. It seems that the cone of the moon changes angle around the cone of the sun. This happens in a cycle of 18,5 years. In the following picture you'll find the cones of the moon, during the year 2004, in comparison with the cone of the sun.
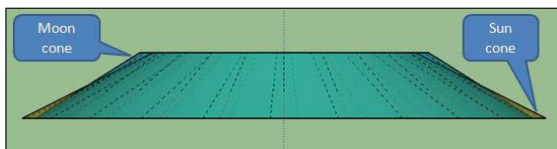


Figure 6.20 Cones of the sun and moon

In the picture below, you can behold both the two different cones of the moon (the outermost limits of

the trajectories that the moon travels in one cycle of 18,5 years) one over the other.
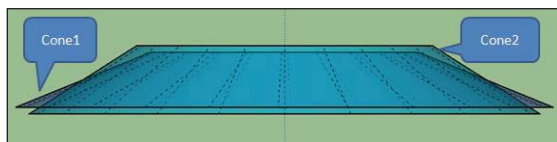


Figure 6.21 Extreme cones of the moon during a nutation period

Now, let's add a summary.

The sun has a trajectory that covers a complete cone, up and down, in one year. The moon covers a cone in the same way, but it goes up and down in 27,32 days.
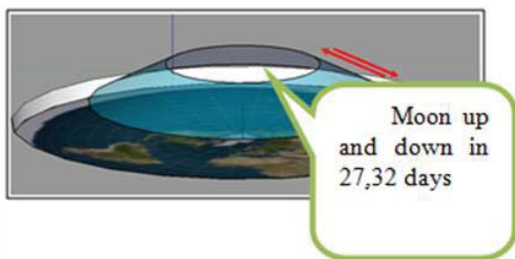


Figure 6.22 Sidereal cycle of the moon

# 6. The measures of the Earth

The cone of the moon is slightly tilted in comparison with that of the sun, with an angle of about plus-minus 5°. This angle changes year after year, from (about) minus five to plus five in 18,5 years. This movement is called **moon libration in latitude.**

In the following table, I'll briefly try to explain some terms used to describe astronomic coordinates that have to be adapted to the Flat Earth model.

Table 6.10: astronomic terms

| | |
|---|---|
| **Celestial sphere:** astronomers refer to the sky as a sphere surrounding the globe Earth. Over a Flat Earth we should imagine not a sphere but a hemisphere, something similar to the picture you can behold aside. |  |
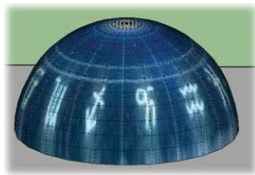
**Astronomic coordinates.** When you want to individuate a star or, maybe, the moon in the sky, you need two angles. One is the Azimuth. The white angle measured from "South" (from the point of view of the observer) and the red one is the declination or Height Angle
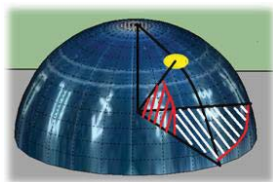


## The square of the moon



| 37 | 78 | 29 | 70 | 21 | 62 | 13 | 54 | 5 |
|----|----|----|----|----|----|----|----|----|
| 6 | 38 | 79 | 30 | 71 | 22 | 63 | 14 | 46 |
| 47 | 7 | 39 | 80 | 31 | 72 | 23 | 55 | 15 |
| 16 | 48 | 8 | 40 | 81 | 32 | 64 | 24 | 56 |
| 57 | 17 | 49 | 9 | 41 | 73 | 33 | 65 | 25 |
| 26 | 58 | 18 | 50 | 1 | 42 | 74 | 34 | 66 |
| 67 | 27 | 59 | 10 | 51 | 2 | 43 | 75 | 35 |
| 36 | 68 | 19 | 60 | 11 | 52 | 3 | 44 | 76 |
| 77 | 28 | 69 | 20 | 61 | 12 | 53 | 4 | 45 |

Figure 6.23 Square of the moon. Source: The net

## 6. The measures of the Earth

Many readers will realize that describing the cone of the moon is not always so easy. The moon behaves differently from the sun, because the cone of the night luminary, though similar to that of the sun, is not exactly the same. The square of the moon can be used to better understand its cone. Let's try.

As you can notice, the order of the square is 9 and the constant is 369 (the sum of all digit of a single raw or column). By multiplying many times 369 you can find the cone of the moon. The cone of the moon will be very similar to that of the sun. So we find:

Table 6.11: orbit of the moon

|             | Radius [km]    | Height [Km]   |
|-------------|----------------|---------------|
| Upper orbit | 369×18=6642    | 369×18= 6642  |
| Lower orbit | 369×36=13284   | 369×9=3321    |

While the sun can be completely described by using the number 6, the moon can be described with the help of the number 9. As many of my readers will certainly remember, 69 is the symbol of the Ying and Yang, representing the eternal rotation of Sun and Moon over the surface of the Earth.

The cone of the moon we have obtained with this calculation is a central pattern around which the moon oscillates with a cycle of 18,5 years. This is the libration movement of the moon in latitude that makes the moon intersecting the cone of the sun. Incidentally, 18,5 years multiplied 360 days for each year, is 6660 days. Again the numbers of the sun and the moon intersect one into the other.

To conclude, we can say that the sun is six, the moon is nine, and these numbers describe the eternal rotation and intersecting of these two luminaries. The magic squares are a very powerful instrument that will help us to comprehend the movements of all the planets.
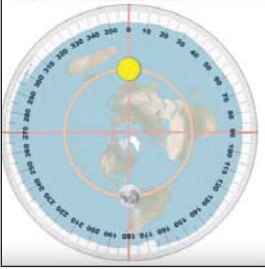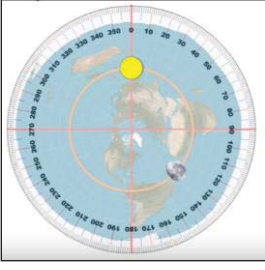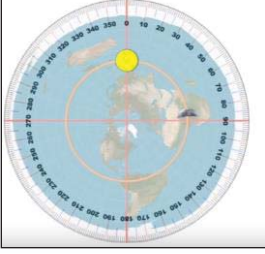
# Moon phases

The moon phases over the flat Earth are generated by the fact that the moon and the sun move on their respective cones with a different speed. The sun day lasts 24 hours and, in that time, it performs a complete turn of the sun around the Earth axis. The moon takes 24.83 hours to make the same path. This means that the moon loses each day 12° compared to the sun and 360° in 29,5 days, that is the synodic cycle of the moon.

Due to the fact that sun and moon move one in a synchronic relation with the other, you can enjoy the moon phases, as illustrated in the following table.

Table 6.12: phases of the moon

| | |
|---|---|
| Full moon: sun and moon are opposite in the sky at 180°. |  |
| Waning gibbous |  |
| Third quarter |  |

| Waning crescent |  |
| --- | --- |
| New moon: zero degrees with the sun |  |
| Waxing crescent |  |

| First quarter |  |
|---|---|
| Waxing gibbous |  |
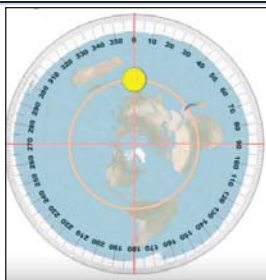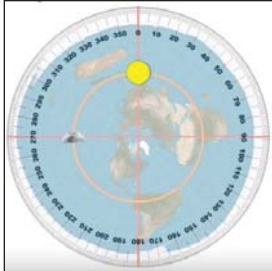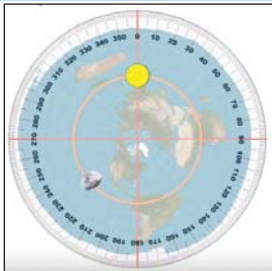
# Understanding 2 things more

The disc of the moon is behaving as a body moving inside an electromagnetic Moebius strip trajectory. This can certainly be an astonishing explanation of the movements of the moon. But it is the only pattern able to explain the moon phases and the different sort of illumination we get from it during

the night. Just observing the strip below you will easily understand what I mean.



Figure 6.24 Moebius strip. Source: Wikipedia

But let's go deeper into our consideration of the flat Earth model. In this subtitle, I will explore some different facet relative to the moon. And I will present a few details that should check the validity of the reference framework we have developed. So, as I hope, I will prove, once and forever, that this flat Earth model is apt to describe all sort of astronomical phenomena.

Mainstream astronomers always state the moon and the earth are spinning around their axis in a perfectly synchronous movement. As a consequence humankind has always seen the same face of the moon.

## 6. The measures of the Earth

Official science explains that the Earth and the moon move in resonance spin-orbit. This occurs due to the fact that the ratio between two periods is the same. It means that the period T of the moon revolution around the Earth corresponds to the rotation period τ around its axis. T and τ express the same duration, that is T= τ = 27,32 days. But…just a moment, kids! I'm looking at something that I can't absolutely believe! I wonder in what a bloody manner that incredible spell, that is keeping the moon and the earth in such a perfect synchronous movement, can work!

In addition, they say the sun is 400 times bigger but is 400 times farther than the moon. They are trying, this way, to justify the fact the moon and the sun look in the firmament like as having the same dimensions! This hypothesis will always appear, to all the reasonable people, as something absolutely amazing! However, they want us to believe their explanations to be completely and thoroughly satisfactory, but is it like that? How do they explain the moon phases? They say the moon does not possess its own light but it is just reflecting the solar beams. They attribute the changing of the phases to the different positions the lunar sphere assumes in the course of the month, being differently illuminated by the sun. But, as far as we're concerned, let's suppose something totally different.

## 6. The measures of the Earth

Astronomers explain this resonance can stabilize the tracks of celestial bodies. That means to protect them from the disturbing gravitational influence of other orbiting bodies. As you can surely remember, gravity doesn't respect the principle of conservation of energy. Hence the moon has no gravitational mass and shows always the same face.

Why shouldn't we consider the track of the moon as a simple movement inside a huge Moebius magnetic strip? Could this strip be the higher Van Allen belt? This hypothesis could explain a lot about the lunar disc. First, it would perfectly tell why the moon always appears showing the same face. Second, it would explain the reasons for the many changes within the monthly lunar phases. And this will be a totally new, astonishing explanation.

Galileo somewhere, when talking about the moon, describes a particular phenomenon as Luna Incandita, i.e. illuminated by the Earth. This electromagnetic phenomenon is generated in accordance with the Earth electric grid. This is a phenomenon that always repeats in the same and cyclical way. It shows and creates the light of the moon you can enjoy by night.

I have already depicted the lunar astronomical reality as a conical trajectory developed by the moon in 27,32 days, up and down. But pay attention. With conical trajectory, I don't mean an ellipse that is a conical figure obtained by cutting a cone with a

plane. The moon trajectory is really a cone run with a spiral movement from the Capricorn to the Cancer Tropic

This trajectory allows, in the course of time, to behold a bigger portion of the face of the moon. Mainstream science posits that this is due to the following two reasons:

The rotation axis of the Moon is tilted of 1°31' in respect to the ecliptic axis. The moon orbit is eccentric, with an elliptical shape in which the Earth is one of the focuses.

In reality, the reason is that the moon runs this enormous cone in a relatively short time. The orbit of the moon developed in one day is part of a spiral with a quite great eccentricity. This generates what seems to be an ellipse with a tilted axis. The different height of the moon during the weeks is the reason why you can gradually see its different shadow. What I mean to say is that in the course of time the face of the moon looks a little differently than before. The movement of the moon has also been described as epicycloids around the sun.

Look at figure 6.25.

Actually, there are no proofs to say that the moon follows this trajectory. This is only a theory based on an imaginary geometry.

Anyway this theory is really compatible with the idea of a disc travelling around a Mobius magnetic strip. Consequently, we have proved that the entire geocentric model is apt to describe all sort of astronomical phenomena.
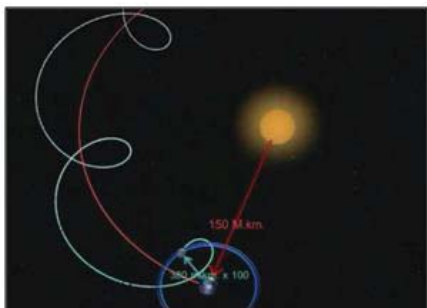


Figure 6.25 Epicycloids inside the trajectory of the moon around the sun. Source: Wikipedia.org

## The moon is a disc

Near the phase of the new moon, you just notice it already looks like a very narrow sickle. Then sometimes it could happen to view that the rest of the lunar disc can be visible although not fully illuminated. As a matter of facts, it turns to a gray color, also known as the Moon's ashen glow. Sometimes English speaking people refer to it as the old Moon

in the new Moon's arms. Astronomers often explain this weak luminescence as it was the earth reflecting the light of the sun to the moon. Immediately the moon would reflect this same light again.



Figure 6.26 Moon. Source: The net

So the sickle would be the part of the moon that the sun directly illuminates. I wonder however how this illuminated part could present such precise boundaries with no gradual shading. In fact, it appears just as a sudden change from light to shadow. The question, so, will be the following: Is the moon a simple disc and not a sphere? It is certainly an inquiry to evaluate.

This is actually what you should see, was the moon a sphere: a passage from the highlight, to light and then shadow. Anyway, this is something it doesn't happen.

I tend to believe that, most likely, the moon, which is self-luminescent, illuminates due to an electro-

magnetic interaction between the Earth and Sun. We should remember that at the northern center of the earth there's a polar electromagnetic column exercising a big influence on the moon and all the system. You can detect its activity when observing the amazing beauty of the show of the Northern Lights.
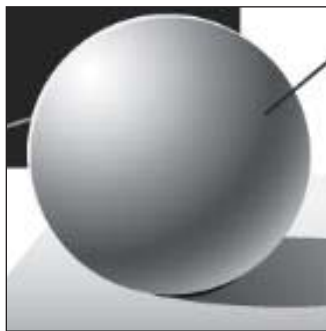


Figure 6.27 Shadows on a sphere. Source: The net

**Objection:** How would it be possible for a disc to be seen in the same way by all the observers on the Earth?

**Answer:** Really you have to consider that, when the moon is full, all the observers can perceive it as full everywhere. If the moon is actually near to the Earth, all the observers that are immediately below it will perceive it as a circle, while the observers far away from it can get the perception of an ellipse more and more mashed, as far as they step away. You shouldn't forget the extraordinary optical ef-

fects the atmosphere is able to generate thanks to refraction. Due to different density layers, for instance, an observer will see a celestial body in the sky to appear higher than in the reality.
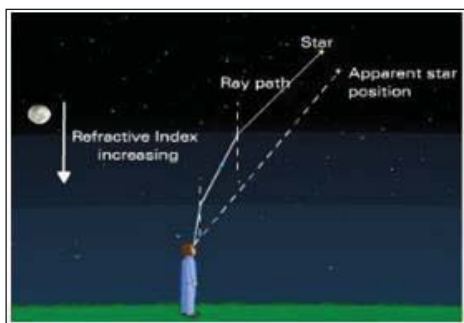


Figure 6.28 Refraction. Source: zigya.com

In order to get the same vision of the lunar disc all over the Earth, you should assist to an inversion of the refractive index.

Thus, you could be involved in the situation you can see in the following picture. What could be the cause of such an inversion? Let's try some hypothesis.

I want to imagine the Moebius strip as being the same internal Van Allen belt that, according to Wikipedia, is acting between 1000 and 6000 km height. These data are fully in harmony with the original

hypothesis, since, over the flat earth circle, the moon is moving on a spiral-conical-shaped trajectory between 3300 and 6600 km of height.
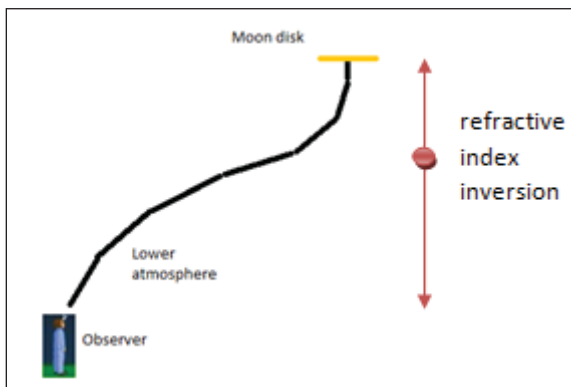


Figure 6.29 Refractive index inversion

Scientists postulate that this belt is generated by plasma trapped within the earth magnetic field. Interesting enough is the fact that the first spacecraft giving indication of such plasma was the Russian satellite called Moon 1. In that zone electrons have a particular intense flux with high kinetic energy.

Recent studies have proved that an electromagnetic wave passing through a plasma sufficiently ionized will be clearly influenced, in relation to its transmis-

sion, by the free charged particles.

Plasma can change the relative permittivity which is called the dielectric constant of the mean [$\varepsilon_r$]. You know from optics that the refractive index n obeys to this law:

$$n = \sqrt{\varepsilon_r}$$

So the supposition that the Moebius Van Allen belt plasma could impact the light coming from the moon is absolutely admissible. This way the lunar disc would appear the same to all observers all over the earth.

So, let's everybody go to the eye doctor: reality can often be completely deceiving. Our universe is full with optical illusions that are hiding the real working of the machinery.

## Lunar eclipses

Traditionally astronomers believe the moon eclipses occur due to the passage of the moon through the cone of the shadow and the neighboring penumbra. Anyway, over a flat earth system, we cannot imagine such a shadow. No Flat Earther, up to now, has been able to explain these phenomena in a satisfactory way, the sun eclipse is easy but for the moon is

different. Moon eclipses occur when the moon and the sun are in opposition around the North Pole.

Moreover the moon has to be on its nodes that mean that moon and sun are at the same height. In addition for lunar eclipses actually to occur, the moon needs to be full.

Let' explain. The lunar nodes are the orbital nodes of the Moon, that is, the two points at which the moon, moving along its orbit, crosses the ecliptic. Eclipses involving the Moon occur only near the lunar nodes. A solar eclipse occurs when the passage of the Moon through a node coincides with the new moon, while a lunar eclipse occurs when the passage coincides with the full moon. A lunar eclipse may occur if the full Moon is within 11° 38' (ecliptic longitude) of either node, while a solar eclipse may occur if the new Moon is within 17° 25' of either node.

We have to postulate that, over the North Pole, there's a magnetic column endowed with a strong electromagnetic field. It is an apparently small column having a radius of no more than a very few kilometers, vertically shaped. It's the place where the magnetic north pole is performing its activity. It crosses vertically all the dome from the basis up to the top.

We can postulate that usually the light of the sun and of the moon are polarized in two different ways, one

on the y axis and the other on z axis.  So, as even Wikipedia states, the light of the sun must be partially polarized.  In normal situations, the sun light is not influencing the light of the moon.

We know, however, that a magnetic field can change the polarization angle of an electromagnetic wave passing through it (Faraday Effect). When the sun and the full moon are on the opposite lateral sides of the magnetic column and stay at the same height, on their nodes, electromagnetic waves arriving from the sun to the moon change their polarization angle and assume the same angle of the light generated by the moon.
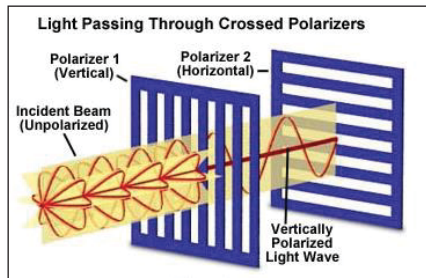


Figure 6.30 Light polarized. www.olympus-lifescience.com

In this case the light beams interact determining at first a slowdown that lengthens the wave propaga-

tion. This same slowdown is due to the light scattering among the etherons of the radiations, the solar and the lunar ones. Then the ensuing dark will be a result of the destructive interference between the two waves. At this point you can notice on the face of the moon the red coppery light which is a distinctive characteristic of the first moments of the eclipse. The light is then completely annulled and we behold the show of the eclipse, total or partial.

**Main idea of the subtitle:** The moon has a similar trajectory to that of the sun and can be described by the aid of the number 9 while the sun is described by number 6. The moon is probably a disc moving on huge magnetic Moebius strip.

## 6.3 The planets

First of all, you have to remember that, when considering the flat earth, the heliocentric model is absolutely not reliable, misleading and completely far from the truth. Thus, just for a change, someone of the readers could imagine the geocentric model as a possible alternative.
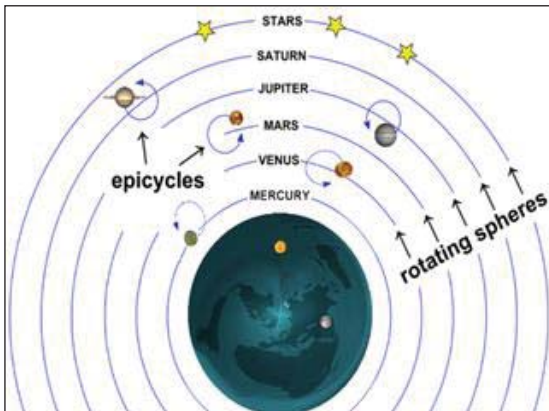


Figure 6.31 Geocentric model. Source: Wikipedia.org

# 6. The measures of the Earth

As you can deduce from the picture, planets are considered to move on concentric spheres of growing diameters. According to this model, the sun and the moon are directly pictured as orbiting over a flat earth. Probably this pattern, at first view, would be considered acceptable by many "flat-earthers", but I can easily prove that the model, presented in the picture, is illogical and scientifically wrong.

As indicated throughout many chapters in this book and proved in many different ways, the sun trajectory is a cone over the Earth and the orbits of this cone can be calculated at the time of the solstices. In order to reach the first approximation, these orbits can be traced by the help of trigonometry.

By using Demlo numbers and the magic square of the sun we have discovered that all numbers linked to the solar disk are multiple of 111. Here are the numbers of the cone of the sun:

Table 6.13: the cone of the sun

|                 | Radius | Height |
|-----------------|--------|--------|
| Summer solstice | 6660   | 6660   |
| Winter solstice | 13320  | 3330   |

## The cone of planets

Now, I have to consider the quite astonishing point that planets are always seen in the celestial hemisphere near the ecliptic that is the trajectory of the sun in the sky.

Astronomers approach this phenomenon by saying that it happens because each planet follows an orbit moving on the same plane of the ecliptic or presenting a very small angle with respect to it: this situation should immediately appear to the observer as something totally strange. The Newtonian gravitational theory could never explain such an incredible layout of the planetary system. This is because gravity should enable the planets to rotate in very different orbits.

Now, considering the flat Earth model with the sun moving on a cone over it, how near to the ecliptic can a planet be seen, if it is far from the sun? If it is seen on the ecliptic, when the sun is on the top of the cone, the same will be impossible when the sun will be on the bottom of it.

In the picture 6.32, you can see the situation just described. The observer could actually behold the sun and the planet on the ecliptic only once a year, proving thus this model is not correct. I've represented the sun and the planet as being aligned to simplify the comprehension. The basic model is that the sun

and the planet on that day should follow trajectories that are running alongside.
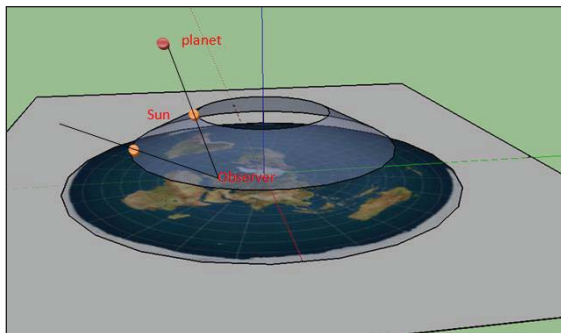


Figure 6.32 Planet far from the sun

At the sight of this picture you could think that, simply, the planet trajectory should be a cone that follows the sun during the year. Yes, that's true and, at first, it could be perceived as a good idea. But this will be true only up to a certain point and not at all definitely. We have to comprehend how far from the sun the cone of the planet develops. In fact, when we consider a planet on a cone far from the cone of the sun, two observers, A and B, staying in two different points of the Earth, would not be able to watch contemporarily the sun and the planet on the ecliptic.

Figure 6.33 Parallax of planets with the planet far from the sun

It can thus be proved that the cone of a planet has the necessity to follow closely the cone of the sun, in order to avoid problems with parallax and to allow the observers to see the planet near the ecliptic from all the places of the Earth. Here, of course, there's no reference to the astronomical parallax, whose un-reality has been proved in a previous chapter, since the Earth is motionless. The parallax I am referring to is simply the different sight that two people, in two different points of the Earth, can have of the planet. The observer B perceives the planet on the ecliptic as it should be, but, when the observer A beholds the ecliptic, he can't find the planet if it is not aligned. It appears thus clear that the planet can't be far from the ecliptic.

## 6. The measures of the Earth

The movement of the planets, along with their cones, has to follow the motion of the sun in relation to the height, while it can be independent of the sun in longitude. These cones must then be traced considering the fact that there are internal and external planets. Mercury and Venus are internal, i.e. nearby the Earth, almost inside the cone of the sun. The other planets are external, i.e. further outside the cone of the sun. In the images below, you can behold the transits of Mercury and of Venus across the disk of the sun. This phenomenon drives the observer to believe that the cones of the two planets are internal, below the cone of the sun.

When reading these considerations, you should all be aware that things can be much more complicated than they appear. But this is a first step that will allow, in the near future, open-minded astronomers to make further improvements in Earth Science.



*Mercury in front of the sun*   *Venus in front of the sun*
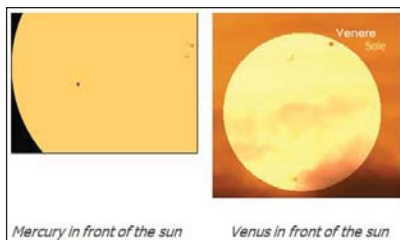
Figure 6.34 Planets in front of the sun. Source: The net

## Magic squares

Now, after all these evaluations, I would like to use the magic squares to define the trajectories of the several planets.



Figure 6.35 Magic squares of planets. Source: The net

Table 6.14: order and constants of the squares

| Planet | Order of the square | Constant |
|--------|--------------------|----------|
| Saturn | 3 | 15 |
| Jupiter | 4 | 34 |
| Mars | 5 | 65 |
| Venus | 7 | 175 |
| Mercury | 8 | 260 |

We are obviously only trying to make hypotheses. I hope, in a probably not too distant future, calculations and/or observations, will confirm these data or correct them. Science always means making hypotheses and we should be given a chance to try. In the following table I'll report the results that I have found.

Table 6.15: Trajectories of planets

| Planet | Radius 1 [Km] | Height 1 [Km] | Radius 2 [Km] | Height 2 [Km] | |
|--------|--------------|---------------|---------------|---------------|---|
| Mercury | =260*8*3=6240 | =260*8*3=6240 | =260*8*6=12480 | =260*8*1.5=3120 | internal |
| Venus | =175*7*5=6125 | =175*7*5=6125 | =175*7*10=12250 | =175*7*2.5=3062.5 | internal |
| Mars | =65*5*21=6825 | =65*5*21=6825 | =65*5*42=13650 | =65*5*10.5=3412.5 | external |
| Jupiter | =34*4*51=6936 | =34*4*51=6936 | =34*4*102=13872 | =34*4*25.5=3468 | external |
| Saturn | =15*3*155=6975 | =15*3*155=6975 | =15*3*310=13950 | =15*3*77.5=3487.5 | external |

## 6. The measures of the Earth

I've highlighted in green planets for which the cal-
culation is forced and there are no alternatives. This
is because the order of the square and the constant
are big, so that it is the single possibility to calculate
a cone near to the cone of the sun. For the three oth-
er planets, since digits are smaller, there are many
other possibilities. What is not completely sure, and
could be changed, is the multiplying factor I've
highlighted in red. That variable will be probably
better defined in the future. Let's add to the series of
planets also the moon and the sun, for which we
possess more certain data. Look at table 6.15.

I believe that the highlighted numbers are potentially
very interesting. They represent a series that could
remind you of the law of Titius. The Titius-Bode
Law is a rough rule that predicts the spacing of the
planets in the Solar System. The relationship was
first pointed out by Johann Titius in 1766 and was
formulated as a mathematical expression by J.E.
Bode in 1778. The law relates the mean distances of
the planets from the sun to a simple mathematic
progression of numbers.

Titius wrote:"Take notice of the distances of the
planets from one another, and recognize that almost
all are separated from one another in a proportion
which matches their bodily magnitudes. Divide the
distance from the Sun to Saturn into 100 parts; then
Mercury is separated by four such parts from the
Sun, Venus by 4+3=7 such parts, the Earth by
4+6=10, Mars by 4+12=16.

# 6. The measures of the Earth

Table 6.16: all data together

| Planet | Radius 1 [Km] | Height 1 [Km] | Radius 2 [Km] | Height 2 [Km] | |
|---|---|---|---|---|---|
| Moon | =369*9*2=6642 | =369*9*2=6642 | =369*9*4=13284 | =369*9*1=3321 | |
| Mercury | =260*8*3=6240 | =260*8*3=6240 | =260*8*6=12480 | =260*8*1.5=3120 | internal |
| Venus | =175*7*5=6125 | =175*7*5=6125 | =175*7*10=12250 | =175*7*2.5=3062.5 | internal |
| Sun | =111*6*10=6660 | =111*6*10=6660 | =111*6*20=13320 | =111*6*20=3330 | |
| Mars | =65*5*21=6825 | =65*5*21=6825 | =65*5*42=13650 | =65*5*10.5=3412.5 | external |
| Jupiter | =34*4*51=6936 | =34*4*51=6936 | =34*4*102=13872 | =34*4*25.5=3468 | external |
| Saturn | =15*3*155=6975 | =15*3*155=6975 | =15*3*310=13950 | =15*3*77.5=3487.5 | external |

256

## 6. The measures of the Earth

But notice that from Mars to Jupiter a deviation shows up inside such an exact progression. From Mars, there follows a space of 4+24=28 such parts, but so far no planet was sighted there. But should the Lord Architect have left that space empty? Not at all. Let us, therefore, assume that this space, without a doubt, belongs to the still undiscovered satellites of Mars, let us also add that perhaps Jupiter still has around itself some smaller ones which have not been sighted yet by any telescope. Next to this for us, still unexplored space there rises Jupiter's sphere of influence at 4+48=52 parts, and that of Saturn at 4+96=100 parts".

And in 1772, in the second edition of his astronomical compendium, Johann Elert Bode wrote:

*"This latter point seems, in particular, to follow from the astonishing relation which the known six planets observe in their distances from the Sun. Let the distance from the Sun to Saturn be taken as 100, then Mercury is separated by 4 such parts from the Sun. Venus is 4+3=7. The Earth 4+6=10. Mars 4+12=16. Now comes a gap in this so orderly progression. After Mars there follows a space of 4+24=28 parts, in which no planet has yet been seen. Can one believe that the Founder of the universe had left this space empty? Certainly not. From here we come to the distance of Jupiter by 4+48=52 parts, and finally to that of Saturn by 4+96=100 parts".*

## 6. The measures of the Earth

Leaving apart these historical notations, when we consider 1 to be the distance of the earth from the sun (in a globular model) the distance of all planets can be described by this series:

0,39;   0,72;   1;   1,52;   5,20;   9,54;
 19,18;  30,06;  39,51

Titius said that these values can be obtained with some approximation by writing this series of numbers:

0;   3;   6;   12;   24;   48;   96;
192

if you add 4 to each number and divide by 10:

0,4;   0,7;   1;   1,6;   2,8;   5,2;   10;
19,6

Could our red numbers be the new flat Earth Titius series?

2;   3;   5;   10;   21;   51;   155

 It is certainly a fascinating hypothesis and I hope to reach soon the necessary knowledge and scientific proofs to validate or discard it.

# Planets transits and dimensions

My goal is to define the trajectory of the sun, the moon, and the planets. I am really curious about their relative distances and their orbit radiuses.

Going on through my research I believe that there will be many confirmations and improvements inside the theories.

Somebody could object to this model and, consequently, I just want to check the theory. I only want to know if it is robust enough, or if it falls under intelligent attacks.

A clever objection could be expressed in these terms. The moon is positioned quite near to the sun, at 6642 km at its higher position. It occupies also a higher position with respect to the internal planets. If this is a real situation why did they never observe a passage of Venus over the moon? Passages over the sun are visible, why not over the moon?

This objection seems to be smart. If Venus orbits under the moon, it can happen, sometime, that Venus passes in front of it. In that case, we should see a little black point passing in front of the moon. But to answer this objection I'll briefly review the trajectories of the sun, the moon, and Venus.

# 6. The measures of the Earth

The sun, as I have often explained, has a conical trajectory within these orbit radiuses: 6660 km – 13320 km. The cone is run up and down in 365,25 days.

On the other hand, the moon travels a very similar but rather smaller cone. This cone is run in a much shorter period: up and down in 27,32 days (27,32 days is the sidereal period of the moon). It appears thus evident that the sun and the moon will be for the major part of the time at different heights. Only two times every 27,32 days it happens that the moon passes over the ecliptic (the sun's trajectory). Even more rarely the moon and the sun will be near on the ecliptic. What about Venus?

You have to consider that Venus is an internal or inferior planet. That means that it orbits a cone smaller than that of the sun. Within a heliocentric system, an inferior planet is nearer to the sun in comparison with the earth. Watched from the Earth, Venus never runs too distant from the sun. So the maximum angle from Venus and the sun is of 47°. Venus is a planet, and as all the planets do, it moves on an orbit that is near to the ecliptic. It never averts from the sun ecliptic more than a few degrees.

Maybe you could think that Venus quite often passes in front of the sun. Why? Since Venus is always near to the ecliptic and seems to orbit around the sun. Moreover, it budges with a retrograde movement that keeps it at a maximum distance angle of 47°. That means that it lingers to and fro in similar

positions for a time. The first observation of a transit was done by twenty-one Jeremiah Horrocks on 4 December 1639. This transit had been foreseen by Kepler (1571-1630), but only Horrocks (1618-1641) succeeded in observing it.

Horrocks was concerned that the weather would be unfavorable for the transit. It was the beginning of December at his location, in Much Hoole. He had determined the latitude of the site to be 53° 35′. He believed the rare planetary conjunction could produce severe weather:

"The chance of a clouded atmosphere caused me much anxiety; for Jupiter and Mercury were in conjunction with the Sun almost at the same time as Venus. This remarkable assemblage of the planets (as if they were desirous of beholding, in common with ourselves, the wonders of the heavens, and of adding to the splendor of the scene), seemed to forebode great severity of the weather. Mercury, whose conjunction with the Sun is invariably attended with storm and tempest, was especially to be feared. In this apprehension I coincide with the opinion of the astrologers because it is confirmed by experience; but in other respects, I cannot help despising their more puerile vanities". — Jeremiah Horrocks, Venus in sole visa

Horrocks had a friend, William Crabtree, another astronomer. They probably never met in person but, from 1636, they corresponded regularly.

# 6. The measures of the Earth

Table 6.17: Venus transits in front of the sun

| Date(s) of transit |
| --- |
| 23 November 1396 |
| 25–26 May 1518 |
| 23 May 1526 |
| 7 December 1631 |
| 4 December 1639 |
| 6 June 1761 |
| 3–4 June 1769 |
| 9 December 1874 |
| 6 December 1882 |
| 8 June 2004 |
| 5–6 June 2012 |

Crabtree made his observations too, but had insufficient time to make any measurements. It was cloudy in Broughton, and thus he only saw the transit briefly. According to Horrocks: "Rapt in contemplation he stood for some time, scarcely trusting his own senses, through excess of joy … In a little while, the clouds again obscured the face of the Sun, so that he could observe nothing more than that Venus was certainly on the disc at the time." Afterward, he made "so rapid a sketch" of Venus as it had passed across the Sun's disc. It allowed Crabtree to estimate the angular

size of Venus to be 1′ 3″. Horrocks's estimate of 1′ 12″ was less accurate.

In October 1639, Horrocks had calculated that transits of Venus occur not singly, but in pairs eight years apart. He realized that the second transit would occur in less than four weeks. He wrote to his younger brother and to Crabtree in Broughton, advising them to observe the event on Sunday, 4 December. To quote Horrocks: " I rejoiced exceedingly in the prospect of seeing Venus".

So Horrocks understood that Venus transits happen in couples in 8 years. But attention, Venus transits are between the rare astronomical events. They happen with a scheme that repeats every 243 years, with couples of transits divided by 8 years that repeat in larger periods of 121,5 and 105,5 years. The last but one couple of transit happened in 1874 and 1882. The nearest transit of the current couple happened in 2004 and the following on 6-6-2012. Above I have attached a table with the transits occurred in the last 400 years.

It is so rare to see Venus passing in front of the sun, even if Venus stays constantly near it. Consequently, we can understand why a transit of Venus in front of the moon has never been registered. The motions of Venus and the Moon are completely independent and the moon doesn't remain on the ecliptic. On the contrary, Venus tends to remain very near to the sun and its ecliptic.

## Planets dimensions

I want here to discuss another objection that some time has been moved against my theory. I have often described planets as laying on a conical trajectory more or less near to the sun's cone. The objection is that planets orbiting so near one to the other should project a shadow one over the other. This point, for example, should be clearly evident when considering Jupiter and Saturn. Their cones seem to be quite near.

A consideration is concerning the planet dimensions. Are they so big that their shadow could hide the planet behind? How can we calculate planets dimension?

Let's start to calculate the diameter of the sun. Seen from the Earth, the Sun covers an angle of 0,5 degrees. Let's suppose to watch the sun from a distance of 7000 km that seems to be a good average for the latitudes of Europe.

Looking at the picture aside, you can calculate the diameter of the sun that would result respecting the following data: d=61kms.

$$d = 2 \cdot 7000 \cdot tg(0,5°/2).$$

# 6. The measures of the Earth
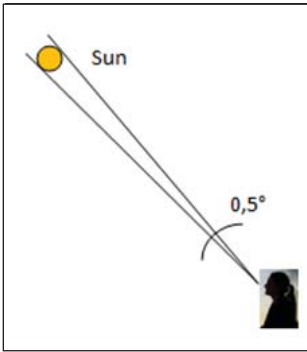


When you think about the numbers used till now in relation to the sun, the number 6 immediately catches the eye.

Figure 6.36 Sun's diameter calculation

If I think to the sun magical square, I can suppose that sun diameter is maybe 66,6 km. For the moon, that covers an angle of 0,5° too, the diameter could be 66,4 km. This is also a result corresponding to the moon magical square (369x9x2).

Jupiter covers an angle of 40" that means a diameter (for a distance of 7000kms) of 1,35kms. The magical square of Jupiter has magical constant 34 and order 4 from which we obtain d=34*4=136. d=1,36kms. Horrocks would have been ravished for the result. So am I!

By the way, what about you? Maybe you would prefer not to consider the magical squares. Granted, but these are however math tools and no more. Anyway, you can understand that planets are small. How could a planet less than 1,5 km in diameter cast a

shadow on another planet hundreds of kilometers far away?

My theory, up to now, seems to resist well. Let's wait some more time to see if it will keep on.

**Main idea of the paragraph:** Planets are small and run a conical trajectory near the cone of the sun.

## 6.4 The Earth

In this chapter, I will try to give a summary of the dimensions of the Earth by using all the information elaborated in the previous pages. The starting point of my research had initially been the determination of the radius of the Earth. The resulting measure is 19980 km that means 111kmx180°=19980 km. We can thus write:

Table 6.18: measures of the Earth

|  | Radius [Km] | Circumference [Km] |
|---|---|---|
| Cancer Tropic | 6660 | 39960 |
| Equator | 11100 | 66600 |
| Capricorn Tropic | 13320 | 79920 |
| Outer diameter | 19980 | 119880 |

The fact that the sun runs on a cone with the lower circumference in the south produces a big consequence. I have already highlighted the fact that the equator is nearer to the Capricorn tropic than to the tropic of Cancer, this meaning that the sun runs the southern part of the cone slower. This can be easily understood: the sun has to go faster in south, so it is lower and lower to give the same amount of heat.

## 6. The measures of the Earth

Another big consequence is that there is no symmetry between the southern part of the Earth and the northern one. Southern lands and oceans are in fact compressed, because the equator is not in the middle of the tropics. So they appear pretty stretched, because all circumferences on the outskirts are bigger than near to the center.

Here I would like to show the reader the difference in extension between the surface of the so called globular earth and that of the total area of the flat earth, from the north pole up to the Antarctica.

The surface of the sphere (with a radius of 6371km and $\pi$ =3,1415) would be of 510.064.365 $km^2$ On the other hand, the extension of the flat earth with a radius of 19980 km would correspond to a surface of 1.197.601.200 $km^2$ ($\pi = 3$), that is much more than the double.



| Australia is like this; | and not like this. |

Figure 6.37 A correct map of the Earth doesn't exist.
Source: The net

## 6. The measures of the Earth

On the basis of the measures of the radius of the earth that are reckoned to be corresponding to 19980 km, we can postulate the measures of the dome that will be stratified this way (see paragraph 6.5):

Table 6.19: stratification of the dome

| 19980-26640 km | Primum mobile: 6660 km thick |
|----------------|------------------------------|
| 26640-27750 km | Water and amber walls: a layer 1110 km thick |
| 27750-33300 km | Rotor of the dome: 5550 thick |

**Main idea of the paragraph**: The Flat Earth has precise and definite dimensions. We have described them with many different math tools.

# 6.5 The Dome

Finally, as you imagine, the theme of the dome needs a more in-depth investigation. Up to now, we haven't faced the subject in a really significant way. But it will be better, right now, to go into things a bit deeper.

Figure 6.38 A represen-
tation of the dome.
Source: The net
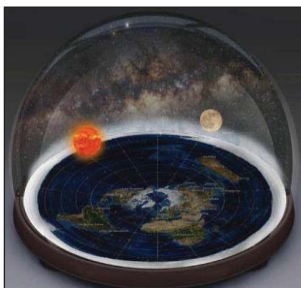


The dome is one of the strangest things you first meet when approaching the topics of the flat Earth. Probably you wonder if a solid vault, that encloses all the circle of the Earth, can truly exist or if it could be just considered a theoretical derivation from the Bible. True, in the Bible the firmament, or the "expanse" between the waters, is a positive expression.

# The Atmosphere under the Dome

The establishment states there is no dome but only the atmosphere, made up of gases that completely envelope the globe of the Earth. The atmosphere has the pressure of 1 atmosphere at the soil level and it diminishes with the altitude. Going up, the atmosphere gets stratified and you could find different mixtures of gases getting lighter and rarefied.

Science states the atmosphere is kept connected to the Earth by the gravity force. This would be the power able to block its diffusion toward the outer space of the universe and avoid its dispersion, due to the rotation of the Earth. But what do the facts say?

Let's suppose to have a container full of air at the pressure of 1 atmosphere in a room in which void was already made. The container will be a representation of the atmosphere; the bottom of the receptacle is the Earth, while the room is the void space of the universe. If you open the receptacle from the ceiling what do you think it will happen?

Immediately the gas will diffuse in the void room, spreading in all the space available. Can gravity stop the diffusion of the gas? In no case. It is not possible.

What about the stratification of the atmosphere? Lighter gases rise in the upper part of the atmosphere. Let's make a remark. Imagine having a leak

of methane from a pipe. If the leak happens to occur outdoor, the gas will rise upward, diffusing in the superior layer of the atmosphere. But when the leak is occurring indoor, the methane will accumulate in the upper part of the room, near the ceiling. To have stratification, thus, a ceiling is needed.

It is, thus, well known to everybody the fact that stratification of gases is possible only in closed pipes or containers.

So, to conclude, it seems that there should be a ceiling over the flat earth, first to avoid the diffusion of the atmosphere in the vacuum space of the universe and, second, to allow the stratification that characterizes the atmosphere.

## The Dome over the flat Earth

Now, you can understand the absolute necessity of the presence of a dome. It's the only way to obtain stratification, with the lighter gases rising to the upper layers under the top. That is one of the clear demonstrations of the existence of a solid top over the flat earth.

Now I would like to add more details about a few characteristics of the celestial vault. Since we do not have the chance to go there and examine it, we just have another possibility left. We have to base our research on reasoning and on the Bible. This way,

we can give the Creator the word and let Him explain what he has done.

# The Wardencliffe Tower



Figure 6.39 Wardencliffe tower. Source: csglobe.com

 Tesla made studies and researches about the electric field of the Earth and, indirectly, he can help us understand something more about the Dome. He was comparing the Earth to a big capacitor, a container filled with an enormous quantity of energy stored in ether, a mean through which the light can move. He discovered a new form of energy moving as longitu-

dinal waves similar to the sound waves in the elastic ether. Tesla was thinking of a way to use this energy. So he designed a power plant able to extract and transmit it, all over the world. It should be understood that the Wardencliffe tower was an important component of his plant.

# Battery or capacitor?

Many people think that this tower was intended to be a sort of antenna but, in the intention of the inventor, it was a big capacitor. It should be noted that the shape of the active part of this capacitor has the possible shape of the Earthly dome.

You know that, since the Earth is flat, Newtonian gravity cannot exist. Similarly, you should be aware of two things:

1) The Earth has a magnetic field.

2) It presents electric characteristics creating an alternative gravitational field not responding to Newton's law.

Tesla discovered the Earth is a capacitor and built an enormous tower with a shape reminding that of the dome.

In the letter to the Hebrews at 1:11 we read about the heavens: "They will perish, but you will remain; and just like a garment, they will all wear out". So,

when you imagine that our cosmos is a big capacitor, made up of two plates corresponding to the Earth and the Dome, you can realize that these two plates are the electrodes of a battery and, as everyone knows, the electrode, in a battery, wears out.

Here, to recap a bit, you will find a description of the battery taken from Wikipedia.

"**John Frederic Daniell** (12 March 1790 – 13 March 1845) was an English chemist and physicist.

His name is best known for his invention of the Daniell cell, an element of an electric battery much better than voltaic cells.

In the Daniell cell, copper and zinc electrodes are immersed in a solution of copper (II) sulfate and zinc sulfate respectively. At the anode, zinc is oxidized per the following half reaction:

$Zn_{(s)} \rightarrow Zn^{2+}_{(aq)} + 2e^-$ . . (Standard electrode potential -0.7618 V )

At the cathode, copper is reduced per the following reaction:

$Cu^{2+}_{(aq)} + 2e^- \rightarrow Cu_{(s)}$ . . (Standard electrode potential +0.340 V )
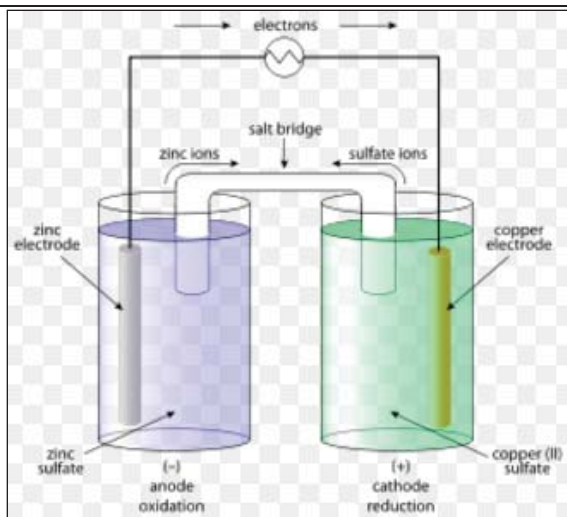
Figure 6.40 The two half-cell form of the Daniell cell for classroom demonstrations. Source: Wikipedia.org

The total reaction being:

$$Zn(s) + Cu^{2+}(aq) \rightarrow Zn^{2+}(aq) + Cu(s)$$ . . ( Open-circuit voltage 1.1018 V )
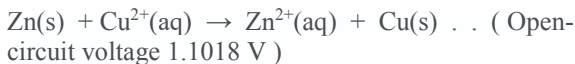
In classroom demonstrations, a form of the Daniell cell, known as two half cells, is often used due to its simplicity. The two half cells each support one half of the reactions described above. A wire and light

bulb may connect the two electrodes. Electrons that are "pulled" from the zinc anode travel through the wire, providing an electrical current that illuminates the bulb. In such a cell, the counterions play an important role. Having a negative charge, the anions build up around the anode to maintain a neutral charge. Conversely, at the cathode, the copper(II) cations discharge to maintain a neutral charge. These two processes accompany the accumulation of copper solid at the cathode and the corrosion of the zinc electrode into the solution as zinc cations.

Since neither half reaction will occur independently of the other, the two half cells must be connected in a way that will allow ions to move freely between them. A porous barrier or ceramic disk may be used to separate the two solutions, while allowing the flow of sulfate ions. When the half cells are placed in two entirely different and separate containers, a salt bridge is often used to connect the two cells. The salt bridge typically contains a high concentration of potassium nitrate (a salt that will not interfere chemically with the reaction in either half-cell). In the above wet-cell during discharge, nitrate anions in the salt bridge move into the zinc half-cell in order to balance the increase in $Zn^{2+}$ ions. At the same time, potassium ions from the salt bridge move into the copper half-cell, in order to replace the $Cu^{2+}$ ions being discharged.

In the Daniell cell, the porous barrier cannot prevent the flow of copper ions into the zinc half-cell. Hence, recharging (reversing the current flow by an external source of EMF) is impossible because, if the zinc electrode is made to become the cathode, copper ions, rather than zinc ions, will be discharged on account of their lower potential".

So, from the above description, you can realize that the zinc anode wears out and the same should happen to the heavens. Thus, you can suppose that the Earth and the Dome behave as two capacitors plates that are continuously charging, as a battery does. If you try a fast research on the web you can find that usually a capacitor can't be used as a battery, because the energy stored is not so much and is suddenly discharged. Nevertheless, technology is evolving and some kind of super capacitors, with great quantities of energy stored, seems to be good to be used as a battery. Time and further research will help us to confirm or not these hypotheses.

You can suppose the electrolyte to be achieved by the sea water, but what are the materials forming the two plates? As far as the earth is concerned, a good material could be iron that is abundant all over the inferior earthly platform. Iron is the more widespread metal on the Earth and constitutes 16% of the mass of it. But you could as well take into consideration silicates or many other abundant materials. Silicon oxide is what attracts me the most. Quartz

(SiO2) is the second most common material in the Earth (12% in volume).

# Graphene

As far as the dome is concerned, we'll examine something new. Let's consider some of the distinguishing marks that will identify the possible active material necessary for the electrical reaction.

First of all, the Dome should be a sort of mirror. This means that the internal surface of the dome should be formed by a material reflecting the hitting radiations. This is necessary to obtain, for instance, a rainbow. When you want to obtain a rainbow indoor, you need to have a mirror.

It should be an electrically active material even at any very low temperatures (far from the sun). A characteristic of superconductors is that they conduct electricity at any very low temperatures almost without resistance and thus with high efficiency. As a result, our material should be a superconductor.

It should also be a flexible material at some higher temperatures. In Isaiah 34:4 we read: "All the army of the heavens will rot away, and the heavens will be rolled up like a scroll. All their army will wither away, as a withered leaf falls from the vine and a shriveled fig from the fig tree."

# 6. The measures of the Earth

For sure these are incredible characteristics when put all together. Anyway, there is a material that can satisfy all of these requests: graphene.

Here's an excerpt of what Wikipedia states about this material. "**Graphene** is an allotrope of carbon in the form of a two-dimensional, atomic-scale, hexagonal lattices in which one atom form each vertex. It is the basic structural element of other allotropes,
includ-
ing graphite, charcoal, carbonnanotubes and fullerenes. It can be considered as an indefinitely large aromatic molecule, the ultimate case of the family of flat polycyclic aromatic hydrocarbons.

Graphene has many unusual properties. It is about 200 times stronger than the strongest steel. It efficiently conducts heat and electricity and is nearly transparent: It is a perfect material for our dome. We will see if in the future we will have confirmations of this.
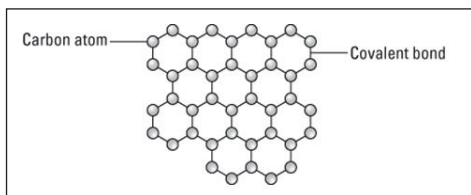


Figure 6.41 Graphene structure. Source: Wikipedia.org

The dome could be made of different layers of different materials, since graphene needs to be supported. The Silicates are the largest, the most interesting, and the most complicated class of minerals by far. Approximately 30% of all minerals are silicates and some geologists estimate that 90% of the Earth's crust is made up of silicates. With oxygen and silicon being the two most abundant elements in the earth's crust, the abundance of silicates is no real surprise.

To finish, I want to mention that batteries with graphene and quartz electrodes have already been prepared.

# The architecture of the dome

I want, now, to respond to some important question:

1) If a division between waters is made possible by the existence of a vault, how can we describe the whole geometric, architectural system of the dome?
2) Is the dome rotating? Of course it is, but what enables it to avoid the terrible friction that such a big spinning could transmit to the Earth?

In order to give an answer, we have to consider the picture 6.42 where you can find a section of the earth and a model of the vault. Under the double glassy dome, there is a basin leaning over an enormous air layer, a sort of    powerful hovercraft. This basin is a solidity able to contain the continents and

the waters of all the oceans. Its exterior, maximum radius has to correspond to 26640km, but its minor radius is the radius of the earth (19980km). This is an extension of 6660km. The basin layer is made up of iron/silicates for a thickness of 3996 km. The remaining 2664km are an air extension left to allow flexibility and absorb the potential movements/pressures developing in the underground.

Under the pink solid basin and the grayish hovercraft layer you can behold a bluish inter space of hydrocarbons and fossilized marine sediments. Below there is another bigger basin which is the stone foundation, (gravel/sands filtering and absorbing the potential leaks of water from the moving turbines of the lower dome).

I can imagine, thus, that the upper dome is a similar but inverted hemispheric lower basin. It will be made of different materials and positioned as a shelter above the upper part of the earth. The consequent idea is that of a sphere, made up of two hemispheres, one mainly of silicates/iron below and another one of crystal/glass silicates above. The earth is a plane in the middle. In the same way, you can think of an overturned chalice that grows up from the basin below to retain the bioluminescent amasses inside the upper great waters. Light is collected in a sort of inter-space between the stationary dome made of glass and the mobile.

# 6. The measures of the Earth


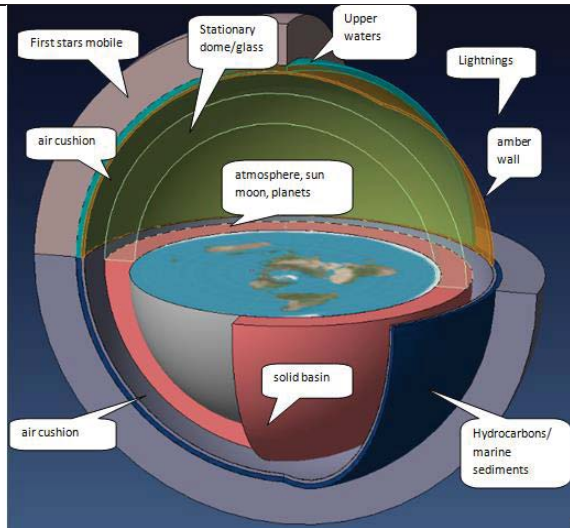
Figure 6.42 Section of the Earth

Thus, for now, I have finally tried to show the only possible logic of the system. Moreover, let's say something about the rotation of the dome. The moving dome rotates with a speed similar to that of the sun, only about one degree faster each day. While the sun performs a complete round in 24 hours, the dome performs it in 23h 56′. Actually, the dome rotates.

## 6. The measures of the Earth

We could consider the upper dome as the composition of two main rings. There is the interior one made up of glass, stationary, forming the internal structure of the dome. Similarly there is one exterior, outside the furthermost extremity of the earth, auto-moving, made of crystal. In the middle gather the huge bioluminescent amasses living in the great upper waters. The rings, I mean the stator and the rotor, are each 6660km thick, for an overall extension of 13320km.

The inner wall is fixed to the Earth. It is the structure that seals the Earth, avoiding the upper waters to flood it. To say something more, the second layer is the mobile and it drags the lights along its movement. An enormous hovercraft is inside in order to avoid friction and to create an inner propulsive thrust for the movement of the dome. So, up to now, I have discussed the dome as being formed of two concentric rings:

1) A stationary inner wall made of glass composites and having a positive charge;

2) A moving exterior wall made up of crystals and silicates, negatively charged.

In the middle of the sandwich, there is an interstice divided in layers: There are 666km of water, 444 km of amber sealing the waters and, moreover, 2664 km are simply forming an air cushion hovercraft to avoid friction among the two different main rings. It

is an overall extension of water 666 kilometers large, sealed by an amber wall 444km thick, set in the interior of the circle of the dome.

Just for a confirmation of the righteousness of this reasoning the first chapter of Ezekiel gives a good description of the dome where, in the middle, shines the brightness of amber. "And I looked, and, behold, a whirlwind came out of the north, a great cloud, and a fire enfolding itself, and brightness was about it and out of the middle thereof as the color of amber, out of the middle of the fire". American King James Version

The amazing glowing of amber is certainly visible in the light colors of the stars. We can admire the beauty of the firmament through the filter of an amber screen which seals the anterior walls of the mobile. Amber can assume different colors, from blue to red, from orange to yellow, from green to brown. It can also create many different gradations of transparency due to many different purity standards. Some of the particular effect stars present to the observer can be explained by the inclusions of different organisms such as ants, spiders, mosquitos, algae, up to crocodiles, sirenians or turtles, maybe, trapped since the beginning inside the fossil resin.

Constellations are points of light that we can perceive as fixed stars mounted in the same position in the firmament, stable across the passing of millenia. Light can reach us through the most transparent am-

ber points of the wall but it can stay hidden forever were amber is completely opaque. And, of course, optics makes all the rest.

# Olbers' paradox

H.W.M. Olbers (1758-1840) is famous for an intriguing paradox: Why is the sky dark at night? Assuming that space is infinite and filled with stars, he suggested, the entire sky should be as bright as the surface of the sun. The question had originally been raised by Kepler. One of the explanations sometimes suggested is that our universe is finite both in time and place, and the total amount of matter and energy is far too small to light up the night sky. So, let's investigate.

As a matter of facts, Olbers posited the universe to be unlimited. But when we consider the celestial dome containing the star lights we can contemplate at night, we all know it contains an unlimited number of celestial bodies but is not an unlimited space. Since in our brain, due to the deep circumvolutions of our encephalon, there are more than 80 billion neurons, many people like saying that there are as many neurons in the human brain as stars in the Milky Way. And why not? I dare say, the number of stars can actually be much more.

# The unlimited universe

Many people ask: "Is there any edge to the Universe?" Probably you all, and for many a good reason, imagine the universe to be unlimited. Anyway, of course, it would be better to limit the inquiry to our single cosmos. Just the one we are living inside. So, now I want to focus my attention to the exterior boundaries of the firmament above us. I mean, the different layers of the dome protecting the earth.

Another important function that the different dome layers should perform is light refraction. For instance, think of the role performed in the nocturnal animals' eye by the tapetum lucidum. It allows them to increase six times their sight, in the partial dark of the night. Anyway, the tapetum lucidum couldn't work in the absolute dark nor in the bright daylight. So the Olbers' paradox solution could be that we see the stars through the amber meshwork of the dome and that they couldn't be seen without the help of the partial dark of the night.

# Optical phenomena



Figure 6.43 Very bright sun dogs in Fargo, North Dakota. Also visible are parts of the 22° halo (the arcs passing through each sundog), a sun pillar (the vertical line) and the parhelic circle (the horizontal line).

## Halos of sun and moon

A passage in Cicero's *On the Republic* (54–51 BC) is one of many by Greek and Roman authors who refer to sun dogs and similar phenomena: "Be it so, said Tubero; and since you invite me to discussion, and present the opportunity, let us first examine, before anyone else arrives, what can be the nature of the parhelion, or **double sun**, which was mentioned in the senate. Those that affirm they witnessed this prodigy are neither few nor unworthy of credit, so that there is more reason for investigation than incredulity".

It can happen sometimes to behold some spectacular atmospheric optical phenomena. The most widely admired is the rainbow. But also other phenomena such halos of sun or moon are well known, including sun dogs and other magnificent explosions of light and colors. At school we were taught light is reflected and refracted by the ice crystals suspended in the atmosphere and may split up into colors because of dispersion. The crystals behave like prisms and mirrors refracting and reflecting light between their faces, sending shafts of light in particular directions.

Among the most well known halos is the 22°halo (formally called "parhelia"/the singular parhelion comes from Greek παρήλιον (parēlion), meaning 'beside the sun'; from παρά (para), meaning 'beside', and ἥλιος (helios), meaning 'sun'), which appears as a large ring around the sun or the moon with a radius of about 22°. Another amazing phenomenon that can appear on a misty mountain side is called the Brocken Bow that is the apparently enormous and magnified shadow cast upon the upper surfaces of clouds opposite the sun as a glowing ring of glory.

# Refraction and reflection of light

Why do these phenomena appear? They are due to the refraction and reflection of light. Considering this subject, a source says: "As the ice crystals gently float downwards with their large hexagonal faces almost horizontal, sunlight is reflected horizontally

and sun dogs are seen". So, accordingly to the scientist community, sun halos and sun dogs are caused by gently and horizontally falling ice particles splitting up sun lights in its spectral colors. There's just one problem with this statement..ice particles regardless of their shape only sporadically fall that way, but they fall spinning , changing direction according to interaction with the medium air, never gently and horizontally…thus scattering the light. When all spectral colors scatter they make perfect white. However ice and water particles can act as a screen for each spectral color individually, if the light is being split up at a point between the light source and the particles.

# Light through different densities

When there's a glass between the light source and the observer, going through the glass the ray of light actually does slow down. That slowing down causes the splitting of the ray into different colors. The angle and the wave length at which the light enters a substance and the density of that substance determine how much the light is reflected. When light passes from  a less dense to a more dense substance, the light is refracted away from the normal. The bending occurs because light travels more slowly in a denser medium. An example of refraction is the dispersion of white light into its individual colors by a glass prism.

# Colors out of a prism

As visible light exits the prism, it is refracted and separated into a magnificent display of colors. Each color from the original beam of light has its own particular wavelength and each wavelength is slowed by the glass. The amount of reflection increases as the wavelength of light decreases. Shorter wavelength of light (violet and blue) are slowed more and consequently experience more bending than do the longer wavelengths (orange and red). So the colors get separated when they first enter the glass on an angle: that's because light interacts with the electrons of the glass in different ways. But, when there's no glass between the source of the light and the observer, no spectral colors are visible nor halo around it.

Now, the light from the sun and the moon is split, but light only gets split when an angle is provided. Air generally cannot bend light in an angle, only in a smooth curve as the thickness of the atmosphere would increase towards the earth.
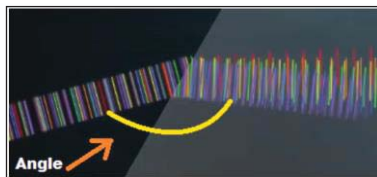


Figure 6.44 Curve of light Source: the net

Figure 6.45 Light refraction Source: hrsbstaff.ednet.ns.ca

## The rainbow

There is no way to split light unless it passes through a solid and transparent medium. And here I want to consider the rainbow. You have probably noticed that when watering a garden, given the right conditions and when the sun is angled the right way, by the aid of a sprinkler, you can create a rainbow through the water drops. Now there's a question: why can you not simulate a rainbow indoor? You can create a rainbow indoor but you need a mirror. Without a mirror you cannot make a rainbow indoor. So when you need a mirror indoor what provided a mirror outdoors? Answer: necessarily there is glass somewhere between the sun and the water and the ice particles.

## 6. The measures of the Earth

We can see a rainbow when it rains or after the rain, if the sun is at the right. What causes a rainbow? It is caused by refraction and dispersion of light by raindrops. When it rains or immediately after rains there are thousands of raindrops floating around in the air. These water droplets which are nearly spherical in shape, act as tiny prisms and split the sunlight into its constituent colors. When these reach our eyes, we see a rainbow.

All these facts confirm the statement in Genesis 1:16 about the transparent firmament put in the midst of the waters and dividing the waters from the waters. The waters below are flat, since water is always flat, but the solidity that divides the waters is the glassy dome. Atmospheric refraction is technically not possible without a solid extension above the earth.

I'll add only a verse from Job in addition: "Can you beat out the skies, hard like a molten mirror?" (Job 37:18) and this is not simply great poetry.

**Main idea of the paragraph:** There is a solid dome that encloses the whole Earth.

# 6.6 Stars in the Dome

The dome over the flat earth is a solid structure made of glass and crystals, where stars amass inside, as living jewels. In the book of Job (chapter 41) you can find a poetic description of the heavenly dome. It has the appearances of a fish, a watery monster called Leviathan.

"Who can strip off its outer coat? Who can penetrate its double coat of armor? Who dares open the doors of its mouth, ringed about with fearsome teeth?" Job 41:30-32 *New American Standard Bible*

Job approaches the name of the monster with images of light and darkness, the stars and the rays of dawn. Thus, the biblical monster appears to signify some kind of an aquatic creature of great proportions and strength. It is a poetic metaphor representing the wreathed dome.

Stars are arranged in an incredibly small space, no more than 666 km all over the hemispheric vault of the sky. So, what are stars made of? There's a verse in Isaiah, chapter 34:4, that can suggest some deep insight. There you can read:

"And all the host of heaven will rot away, and the heavens will be rolled up like a scroll. And all their host will wither, as a leaf withering from the vine,

and as leaves withering from the fig tree". New Heart English Bible

# Bioluminescence in the oceans

Stars are living critters which can be born, live and die. They are thriving in the water like the many luminescent organisms settled in the deep oceans. Bioluminescence is found in many marine organisms: bacteria, algae, jellyfish, worms, crustaceans, sea-stars, fish, and sharks to name just a few. In many cases, animals take in bacteria or other bioluminescent creatures to gain the ability to light up. For example, the Hawaiian bobtail squid has a special light organ that is colonized by bioluminescent bacteria within hours of its birth.

Just for a start, you all may have seen the sparkle of fireflies on a summer's night. The fireflies produce light through a chemical reaction in their glowing abdomens, a process known as bioluminescence. In the same ways, underground caves and seascapes can also glow and glitter thanks to the light producing abilities of billions of marine organisms. So, of course, bioluminescence is light produced by living organisms and it is extremely common in the seas and occurs in all oceans, at all depths.

# Bioluminescent bacteria

Bioluminescence is the production and emission of light by a living organism. Bioluminescence occurs widely in marine vertebrates and invertebrates, as well as in some fungi, microorganisms including many bioluminescent bacteria and terrestrial invertebrates such as fireflies or glowing worms.

In a general sense, the principal chemical reaction in bioluminescence involves some light-emitting molecule and an enzyme, generally called the luciferin and the luciferase, respectively. The most common colored light produced by marine organisms is blue. This is also the color that penetrates furthest through the water.

Bioluminescent organisms live throughout the watery deep, from the surface to the seafloor, from near the coast to the open ocean. In the deep sea, bioluminescence is extremely common, and because the deep sea is so vast, bioluminescence may be the most common mean of communication all over the cosmos! So, let's imagine stars made up of billions of bioluminescent organisms whose radiations will be subject to all sort of optical phenomena. This will be due to the passage of the light beams through different means of propagation and through many different pressures and temperatures: water, amber, glass with different densities, air and the different layers of the atmosphere, diffraction, reflection. Moreover, birefringence from the crystal layers be-

hind. And you shouldn't forget the entire vast lightening zone that certainly exists just outside the dome! Think for instance to the many effects you can obtain looking through a kaleidoscope or a taumascope, to the optical effects created by light reflected from crystal gems such as iridescence, labradorescence, adularescence, chatoyancy, asterism, cat's eye effects and so on.

## The twinkling of the stars

Optical phenomena also occur when light interacts with clouds, water or dust. The results are often spectacular. There are lots of different cosmic optical phenomena. Among the others, one is the twinkling. Stars twinkle while planets do not. This general rule can be explained in terms of reflection and refraction through the waters. Stars are quite far away so that their light reaches Earth's atmosphere as a single point of light, passing through thousands of kilometers of amber, glass, air etc, all means with special mirroring abilities. To the observer, the star's light appears to alternate many times per second, which produces twinkling.

It's really noteworthy the fact that bioluminescent signals are often emitted as short flashes. Their length can vary from hundreds of milliseconds to a few seconds. The Noctiluca Miliaris, a bioluminescent Dinoflagellate, belongs to the so-called phytoplankton. It is an organism that starts twinkling when the sea waves hit it along the seashore. Marine

biologists say its ability to emit light (biolumines-cence) originates from a mechanical stimulus given by the water waves.

Planets usually do not twinkle because they are clos-er to the Earth and are not set in the great waters of the dome. They travel through the different layers of the atmosphere and not through amber or glass. The light that reaches Earth from them probably consists of wider beams rather than narrow rays. The refrac-tion or scattering of their light rays does not make the light seem to disappear. At any one moment, enough light rays reach Earth's surface from a planet to give a sense of one continuous beam of light.
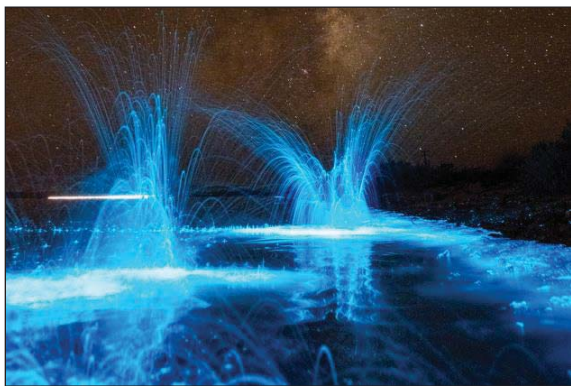


Figure 6.46 Noctiluca scintillans (Puerto Rico). Source: Focus.it

## The color of the stars

Now we have to focus a bit on the color of the stars, which, according to Plank, Stephen Boltzmann and Wien's laws is determined by their temperatures. Spectroscopy is the branch of physics studying the spectra of electromagnetic radiation emitted or absorbed by matter. The spectral analysis permits to know the chemical composition of the body that emits the radiation. Stellar Spectroscopy is thus the study of the spectra of starlight. Astrophysics consider it a very powerful tool that enables them to infer many physical and chemical properties of stars and classify them into a logical sequence.

 Star temperatures can be measured by looking at the type of light that the star shines. They are thus grouped into classes by color. In general, astronomers believe that the temperature of a star determines its color, from red to blue-white. They think the change in temperature of a body originates a variation in its light color. As far as the temperature decreases the color changes from shining white to red. Thus red stars should possess lower temperatures.

Hence, how can they explain the huge luminous flow we get from many red stars? Academics try to answer by saying that the phenomenon is the consequence of the red star enormous dimensions. So they call them Red Giants and explain red stars have a massive radiant surface. Even if each square meter

of their surface develops less irradiation than the other ones, they appear many thousands time more bright due to their extraordinary dimensions.

Here you can easily detect the hoax. Stars are not hot burning bodies. They just bear temperatures compatible with life. Otherwise they'll perish. They are not so far from us and their light is just not measurable according to the laws regulating the black body temperatures. They are not certainly fiery, incandescent bodies. (You will better understand my reasoning at the end of this book, when you'll read about the real nature of the stars.)

Astronomers say the sun's temperature is about 5700K, because it is an incandescent body. A black body is an ideal body whose light indicates its temperature. This should be valid when a body is actually an incandescent body. Astrophysics, however, overlook the fact that stars are not incandescent bodies. They consider the sun to be one of the stars, hence they think stars are behaving in the same way. As a consequence, they classify stars among the black bodies. However, when a body is not an incandescent one, the light it emits is not consistent with the graphic of the temperature of a black body. Definitely, the black body spectrum is not useful to determine the star temperatures. Stars are not incandescent bodies but they get their gorgeous light from living organisms and they are not light years far from us.

For instance, LEDs emit light without getting hot. A firefly can emit light even being cold. So, how can we explain the different colors of the stars? Their color can only be due to the many different optical screens we see them through. In a sunny, bright day you can wear glasses with lenses of different colors and your sight of the landscape will change in tonality. In the same way, we behold stars filtered behind differently colored screens, through different means having many different densities.

In conclusion, bioluminescence will never be consistent with the laws which govern the black bodies, because it is not modulated on temperatures.

# Living corals in the cosmic water

Inside the Herbig Haro HH46 Nebula, observers found important quantities of water ice. Within the interstellar clouds of the Milky Way, they postulate the presence of water. Astrophysics believe water is abundant even in other galaxies and in all the universe. They say this is due to the fact that the water components, hydrogen, and oxygen, are among the most abundant elements everywhere.

Nebulae have water in their inside. Scientists say they can detect water in celestial bodies like comets, planets, and satellites. They suppose the existence of water on the moon and on Saturn or Jupiter's satellites. Ice water trails are probably significant on

Mars, Titan, Europe, Enceladus or Triton. It will be the same even on Uranus, Neptune or Pluto.

The Oort Cloud, for instance, is a  compound of predominantly icy planetesimals    surrounding the sun. A source (https://space-facts.com/oort-cloud/) says it is a reserve of cometary nuclei that contain ices dating back to the origins of the solar system. Astronomers think that long-period comets have their origin in the Oort Cloud. Comets are awesome. They're made of gas, dust, rock, and organic materials smashed together and existing mostly unchanged since the formation of the Solar System.

# The origin of water

There exist numerous hypotheses as to how water may have been created on Earth's surface over the past eras. I found authors suggesting an insightful hypothesis reported by Wikipedia. "Some terrestrial water may have had a biochemical origin, via redox reactions.

In the early 1930s, Cornelis van Niel discovered that sulfide-dependent chemoautotrophic bacteria (purple sulfur bacteria) fix carbon and synthesize water as a byproduct of a photosynthetic pathway using hydrogen sulfide and carbon dioxide: $CO_2 + 2H_2S \rightarrow CH_2O + H_2O + 2S$

Few modern organisms use this method of photosynthesis,    making    their    water    contribution

negligible. But on the hydrogen-sulfide-rich and oxygen-poor early Earth, a small but significant portion of Earth's water may have been synthesized biochemically through this pathway".

Now, this theory could be true or maybe it can be wrong, we don't know but I find these hints really interesting because they confirm and suggest the fact that the earth system is a living organism basically obtained from living critters and build with their contribution. You might have thought of most of the universe as a freezing, uncaring, gaseous place where inorganic elements rule… But you'd be wrong. Astronomers report that organic compounds of unexpected complexity exist throughout the universe. The results suggest that complex organic compounds are not the sole domain of life but can be made naturally by stars.

An author says: "How did they discover these organic compounds? During research, they found a bit of mystery – a set of unidentified infrared emissions in stars, galaxies and even interstellar space. For the last twenty years, this spectral signature has been commonly accepted as being PAHs – polycyclic aromatic hydrocarbon molecules. By utilizing the Infrared Space Observatory and the Spitzer Space Telescope, Chinese scientists Kwok and Zhang have shown there's more there than just a PAH… It's a lot more complex. Through infra-red emissions and spectral studies, the team has shown that a nova

event can produce these compounds in a very short period of time. It can happen within weeks".

Not only are the stars producing complex organic materials, but they're pumping them into interstellar space as well. And the idea isn't new. Kwok had proposed stars as compound factories and Earth Measured research supports his vision. "Our work has shown that stars have no problem making complex organic compounds under near-vacuum conditions," says Kwok. "Theoretically, this is impossible, but observationally we can see it happening."

## Coal and Petroleum

Some of the structures are actually so complex that they resemble coal and petroleum. They are the kinds of organic matter you could generally only associate with living organisms. Organic macromolecules could be detected even in the lower cloud layers of Venus. Actually, stars are not only generating complex organic matter, but they are filling up space with it.

Please, try to imagine the beginning. All around the outer-earthly circle, beyond the actual Antarctic, there were the right conditions for Madreporaria to prosper. Generally, they grow on a solid base submerged under the sea water. They prefer rocky, not sandy bottoms and live in salty, warm, clear waters. Saltiness and temperature are the most important

factors. Madreporaria thrives in tropical ocean areas of the Pacific, Indian and the Atlantic.

But now, let' imagine a different environment: the water dome and its original foundations. A strong trellis has to be built in order to create some shelter over the earth. Imagine having a garden to arrange in your backyard. First, you want to fix a few poles to support the vine branches of your lush Virginia creeper. Something similar maybe happened at the beginning. A solid, rocky structure was provided for the heavenly canopy.

# Coral calcareous skeletons

Coral reefs took form in shallow oceans areas by the aid of algae and the calcareous skeletons of certain coelenterates, of which coral polyps are the most important. A coral reef may grow into a permanent coral island becoming the home to a spectacular variety of organisms. It is actually a complex framework of living organisms and blue-green algal mats. The accumulation of carbonate sand and mud provides a habitat for sea grasses, mangroves and a variety of other critters.

Most reef corals are colonial. Initial polyps divide themselves into daughter polyps, and they divide in turn. All held together in one continuous rigid calcareous skeleton. They remain attached to the seafloor and become large and heavy. Under the right conditions, the corals grow profusely side by

side, even on and over each other. They build limestone because their skeletons are made of calcium carbonate. Calcareous algae (stony sea-weeds), mollusks, echinoderms, and protozoans also contribute to the reef. Some, especially the corals, provide the main structural framework of the growing reef.

The reef becomes true rock by chemical transformation of reef material. The shape of coral reefs is also the result of changes in sea level during the successive geologic eras. As sea level was rising during the times, new reef growth mantled the older landscape.

Charles Darwin concluded in 1842 that oceanic atoll reefs began as reefs fringing a volcanic island. Subsidence of the land fringed was thought to allow the reef to grow upward (and outward over its own fore-reef debris). Maximum growth would occur at the seaward edge. Lagoons would develop between the ascending barrier, or atoll reef and the land or volcanic cone. When the volcanic cone became completely submerged, the atoll lagoon would contain only coral islands.

## The Earth is a bigger atoll

So let's imagine the circle of the earth behaving as a bigger atoll. It was ultimately able to develop in the firmament we can admire either by night or during the hours of daylight. Winds and currents were im-

portant in shaping the dome. Seawater was probably supersaturated in calcium carbonate available for the skeleton-forming process.

One of the most significant determinants of reef accumulation is the presence of zooxanthellae in the living tissues of all reef corals. Zooxanthellae represent the vegetative stages of dinoflagellate algae. Their association with reef corals is symbiotic. They greatly aid in the formation of the coral skeleton. A constant supply of food in the form of zooplankton is essential to reef corals, which are carnivorous. The zooplankton supply is dependent on an adequate phytoplankton supply. The phytoplankton, in turn, requires an adequate supply of plant nutrients dissolved in the water.

You could find useful the reading of https://www.britannica.com/science/coral-reef#ref540873 from which I got a lot of interesting data.

## Sea and earth tides

The dome upper waters can be compared to a natural aquarium filled with millions of living organisms. So they constitute an easily breakable, fragile environment. This is an habitat which needs the appropriate form of luminosity and a continuous cleansing and renewing of nutrients.

## 6. The measures of the Earth

As far as illumination is involved, I can suppose the stars we see at night, which are simply points of light inside the amber walls, can also represent a source of illumination for all the marine organisms.

But, apart from illumination, an aquarium needs regular care and maintenance. You simply cannot imagine what sort of sediments, debris or scum will form inside the watery dome. Waters, of course, keep on falling down, bringing together slime and silt, all the other deposits full of dregs and detritus. Huge quantities of water must regularly be replaced. They need constant renewing. Sea and earth tides perform this task maintaining the right equilibrium inside this dreadful habitat.

Mechanisms involved in tides are not yet completely understood, but surely tides are needed for the appropriate maintenance of the dome. So we can postulate the moon as exercising a powerful influence over all sort of watery amasses, even on the great waters of above. Tides can stimulate the raise of waters for capillarity up to the top of the dome, ensuring nourishment and freshness to all the critters.

Moreover, this way, tides can add and provide tremendous, powerful energy for the motion of the crystal vault. I feel like to imagine huge sea waters tosurround the exterior walls of the canopy, supporting the total rotation movements. Thus, all the cosmic waters should be connected in just one single

system. The hydrologic cycle of the earth will ensure the continuous movement of the waters, above and below the surface of the planet. And the moon keeps shining in the skies as the queen of all the waters.

# Turbines inside the Dome

Since the dome is moving, I have to answer some important question: what is the kind of energy that pushes all the machinery? Could a huge turbine have been pushing it since unmemorable times? What is a turbine?

A turbine is a rotary mechanical device that extracts energy from a fast-moving flow of water, gas, air, or any fluid and converts it into useful work. It is a turbo-machine with at least one moving part called a rotor assembly, which is a shaft or drum with bucket-blades attached. Moving fluid acts on the blades so that they move and transmit the rotational energy to the rotor.
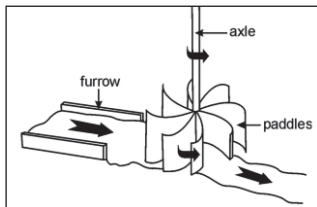


Figure 6.47 Turbine. Source: archive.cnx.org

## 6. The measures of the Earth

Horizontal wheels have a vertical axis, commonly called a tub wheel or Norse mill. The horizontal wheel is essentially a very primitive and inefficient form of the modern turbine. It is usually mounted inside a mill building, below the working floor. A jet of water is directed onto the paddles of the water wheel, causing them to turn; water exits beneath the wheel, generally through the center. This is a simple system, generally used without gearing, so that the vertical axle of the water wheel becomes the drive spindle of the mill.

The earliest water wheels in Calderdale (the historical textile industry district in West Yorkshire England, UK) were undershot wheels which were placed directly in the stream. They were used mainly on rivers such as the Calder with a large quantity of water but without much fall.

The water wheels, built in the late 18th and early 19th century, were usually overshot or occasionally breast shot wheels. Because these wheels are turned by the weight of water, this meant that a relatively small stream could be used to turn some large water wheels.

Water wheels fall into one of two categories, which are defined by the plane of rotation of the wheel: horizontal, i.e., a wheel rotating around a vertical axis, vertical, i.e., a wheel rotating around a horizontal axis.
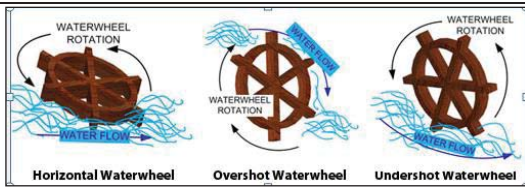
# 6. The measures of the Earth



Figure 6.48 Turbine types. Source: http://www.powerinthelandscape.co.uk/water/water_wheels.html

The waterwheel concept is used in dams to generate electricity. *Dams* are some of the largest human-made structures on Earth. In fact, the Hoover Dam on the Colorado River in Nevada is 221 meters high, 379 meters long and 14 meters wide at the top. That is pretty big! It has 17 electric generators and provides electricity for about 500,000 homes in Nevada, Arizona, and California. The world's largest hydroelectric power plant — the Itaipú Power Plant on the Paraná River in Brazil — provides energy to two countries (25% of Brazil's electricity and 78% of Paraguay's electricity).

The same concepts that are employed in a waterwheel are used in these gigantic hydroelectric power plants. A waterwheel is a simple *turbine* — a device with buckets, paddles or blades that is rotated by moving water, converting the kinetic energy of water into mechanical movement. Hydroelectric power

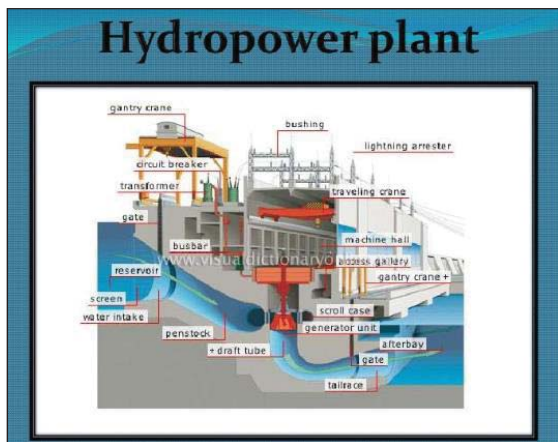plants use huge and more complex turbines to generate electricity.



Figure 6.49 Hydropower plant. Source: Slideshare.net

# A few additional historical notes

Since the antiquity water wheels were used for irrigation or for mills. Think, for instance, to sakias or norias. In more recent times Poncelet invented a waterwheel that doubled the efficiency of existing undershot waterwheels through a series of detail improvements. The first Poncelet wheel was

constructed in 1838, and the design quickly became common in France. Although the model was a great improvement on existing prototypes, further improvements in turbine design rendered the Poncelet wheel obsolete by the mid-century.

The observations and subsequent modifications of the water wheel by Lester Pelton in the 1890's set off the development of water turbines. Today there are various designs of them, operating in modern hydroelectric dams around the world. The Pelton impulse turbine continues to be used in both large and small-scale hydroelectric projects

So, you could imagine the moving dome of the earth to be constructed as a sort of turbine having many blades attached to its shaft. Water will keep on continuously moving and energizing it.

In Job's description of the dome (chapter 41:30), Leviathan is presented as having sharp scales that plow the ground like a threshing-sledge. It's a possible reference to a moving turbine.

# Squirrel Cage Motor

In addition to what I have just explained, you should imagine the dome as a sort of magnetic squirrel cage motor. Why? The earth is surrounded by a dome where, inside, are set seven electromagnetic, immaterial columns.

# 6. The measures of the Earth

"Wisdom has built her house; she has hewn her seven pillars." English Standard Version

One of them will be positioned inside and over the earth north pole, while the others all around on the exact boundaries between the stator which is the first stationary ring of the dome and the mobile. Thus the necessity will be that, over the top of the dome, inside the upper watery inter-space, there should be a second water turbine chamber, magnetically connected to the inferior ones. This central column certainly plays a great electromagnetic influence on the movement of the sun, the moon and the planets. This is a point not to be forgotten. The other six columns should act on the vertexes of the imaginary hexagon you can behold in the figure 6.50. They play a basic part in the movement of the dome.
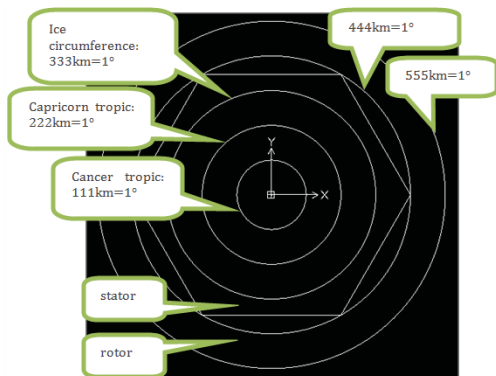


Figure 6.50 Dimensions of the Earth

# A few technical notes

A **squirrel-cage rotor** is the rotating part of the common "squirrel cage" induction motor. It consists of a cylinder of steel laminations, with aluminum or copper conductors embedded in its surface. In operation, the non-rotating "stator" winding is connected to an alternating current power source; the alternating current in the stator produces a rotating magnetic field. The rotor winding has current induced in it by the stator field and produces its own magnetic field. The interaction of the two sources of the magnetic field produces torque on the rotor.

An induction motor is an AC electric motor in which the electric current in the rotor needed to produce torque is obtained by electromagnetic induction from the huge magnetic field of the stator winding. An induction motor can, therefore, be made without electrical connections to the rotor. (Wikipedia)

The six magnetic columns around the earth could produce power to feed an elementary six-wire three-phase alternator, with each phase using a separate pair of transmission wires. A rotating magnetic field is a magnetic field that has moving polarities in which its opposite poles rotate about a central point or axis. Ideally, the rotation changes direction at a constant angular rate. This is a key principle in the operation of the alternating-current motor.

# 6. The measures of the Earth

**Main idea of the paragraph:** In order to get a good idea of the real nature of the stars and their behavior, you should get deeper into the knowledge of the many optical phenomena occurring over the earth.

Optics is the science of light, more specifically, optics is a branch of physics describing how light behaves and interacts with matter. The power and special properties of light are the basis to explore the universe. On this subject, there will be always a lot of research.

Of course, this is not such an easy idea to accept, but luminescent living critters are the main constituents of stars. They are madrepores, luminescent corals, and luminescent bacteria. Moreover, sponges, anemones, algae, water krill, plankton and so on.

# Appendix

## A detailed schema

Finally, we can draw a more detailed schema for the architecture of the earth. So, we should consider a part of the stator extension as interstitial, a simple air cushion to support the movement of the mobile. For safety reasons let's imagine this sort of division. As the earth is built according to a strictly proportional geometry, we have to respect the law of the number 5. This is evident in all the other divisions. I'll divide the 6660 dimension into five parts and leave three parts to the glassy section and two parts to the air one.

Let's start by supposing that the **air cushion** could have an extension of 2664km while the glassy part an extension of 3996 km. Obviously, you would suggest something different. Ok, but for now let's proceed this way. To recapitulate: the stator shows two different parts, one of glass and one of air. What about the mobile? It's an extension of 6660 km, as well, which we could modulate in the following way: 5550km are arranged for the crystal moving cupola and 1110 km for the waters and the amber wall. Waters, of course, have to be sealed in an extremely safe manner. We have to apply here the same law: the law of the number 5. 1110 km will be divided this way: 444 km will be arranged for the

screen of amber and 666km for the waters. In the earth underground you similarly will find the same proportions and an important air cushion over the hydrocarbons layer. This is in full harmony with the words of Job26:7 in The New Living Translation: God stretches the northern sky over empty space and hangs the earth on nothing.

To recapitulate, we'll find inside the dome the following extensions:

3996km of glass
2664km of empty space
444km of amber
666km of waters

5550km of crystals

The same modulation will be evident in the underground solid basin of the earth. You will find there the following measures:

3996 km iron/silicates solid basin
2664 km air empty space
444 rocks (perovskite?)
666km Hydrocarbons/marine sediments of the living organisms in the dome)
5550 sandy gravels, basaltic rocks, foundations.