# Structural Cosmology: Model of Cosmos

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## The living Universe: Relativity and Balance—(The born of a Theory)

# **History and content**

The birth of my cosmic theory was produced in 1968 during the revision and study of the structural elements of atoms.

In that occasion I sense that a clear explication for the Cosmos formation was its structuring in exponential units through of a new dimension, through the fourth dimension.

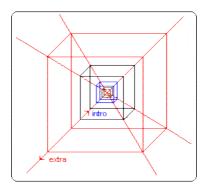
I understood that atoms and star are equal en all their compounds, foundations and characteristics, being at the same time two levels inside this dimension, and so, many others levels of this fourth dimension should exist.

This way, atoms will be composed by other small units that are sub-atoms. In the same way stars should unite among them to form other superior units, which are super-stars and so forth until the infinite.

Then, starting from this basic idea, during a lot of years I was dating, structuring and giving form to this theory until get in 1992 a nearly complete explication and definition of the cosmic elements, their adjust and parameters.

The first explication and exposition to the scientific statements was in 1975 with the title of The Universe alive: Relativity and Balance in which I already pointed the first conclusions as they can be the cosmic organization though the fourth dimension of which we can see a representative drawing (Tetracoor) that is show below.

In this drawing it can be observed as a concentric direction intro-extra exists, which goes from the infinitely small to the infinitely big in exponential levels, in such a way, that many units of the same level can unit to form another superior unit in the superior level (i.e. many atoms can unite to form a star).



**Tetracoor** 

In this publication already was explained in how gravity or Cosmos energy consists, considering it as the space and time union to form one alone element: Energy.

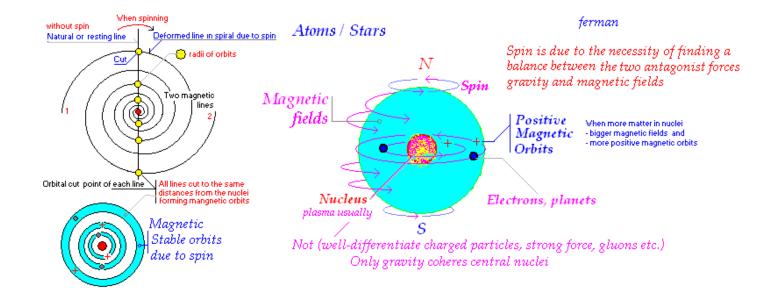
Also it is explained how this energy alone act en concentric direction, and so, the energy points and later matter are created.

Other question that was resolved in this first publication is the existence and explanation of the magnetism foundations.

Magnetism was and is explained in this theory, as force for the redistribution of energy through space with object of casting this energy into the same proportions in any place of the space.

In the same way, it was explained as any change in the energetic balance in the space produces la actuation of the magnetic force with object of rebalance the states of balance of energy in the space again.

Till here, the summary of the publication of 1975, which later was enlarged in 1992 and published starting from then as Structural Cosmology.



## **Structural Cosmology: Development**

As it can be verify in the development of these chapters of cosmology, this is a unification theory because all its postulates are useful so much for the micro-cosmos as for de macro-cosmos.

This way, any force in the micro-cosmos are de same in the macro-cosmos and the formulas for measure circumstances of particles and their energy are also de the same ones that when we measure the characteristics of stars.

In such a way, this theory considers the existence of TWO UNIQUE FORCES in the Cosmos, which are: GRAVITY, as action force of the cosmic energy with concentric direction, which attracts and accumulates masses and energy.

And the antagonistic one, THE MAGNETIC FORCE as resultant in the accumulations of masses and whose action is to the redistribution of masses and energy for the space until getting the energy balance in the same one.

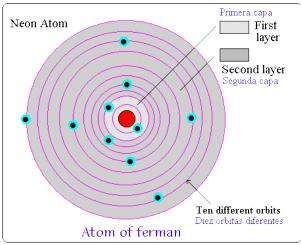
\*\* From these characteristics we can deduce the cosmic property that is its UNIFORMITY, which is present in any place and level of the Universe.

Likewise, this theory denies the existence of particles with differentiated properties, being these simple matter pieces with capacity of creating gravitational and magnetic fields around them.

The magnetic fields of each particle or material accumulation are those that create orbits, maintaining around each great particle to other smaller ones (stars to their planets; planets to their satellites; atomic nuclei to electrons; electrons to neutrinos; galactic structuring, etc.)

In this site, my works that have been published in other books as can be Structural Cosmology, model of atom, spherical molecules, etc. are exposed.

I start here with a study of the cosmology structuring and the creation of gravitational systems (atoms, stars) as the material units in which the Cosmos is structured.



**Atom Model of Ferman** 

My model of atoms is agree and integrate to any other postulate that describe the atomic structure as those of Rutherford, Bohr, Pauli and Einstein as for his ideas on the deformation of space-time near of the great accumulations of matter.

Nevertheless my atom model is against almost all the postulates of the quantum mechanics.

But my atomic model also contributes great quantity of new ideas and structural characteristics in atom, which embraces from the birth of energy, gravity, magnetism, matter and its transformation in gravitational systems such as atoms and stars until the study of the structuring of atomic nuclei, formation of orbits, structuring of gravitational layers, forces that manage the atom, atoms measures, effect of gravity inside and outside of atoms, etc.

In this work I will try to explain how the atom is from my point of view, beginning with the own structure of matter and its posterior transformation into gravitational systems as they can be atoms.

In my Cosmological studies I have reached the conclusion that we can consider to space and time as primary elements in the Universe structure.

Therefore we will begin accepting that as much space as time are the basic principles of the Cosmos, and starting from here, we will go making the assembly of the Cosmos structure.

## Space + Time = Energy

Space is a basic principle of the Cosmos whose main characteristic is the extension, place, scenario where the cosmic creativity will take place.

Time is the other basic element of the Cosmos and it is manifested as continuous rectilinear movement, successive exchange of each one of its points for the previous one.

Now then, the space and the time by themselves could not build anything in the Universe. They need of their union to be able all the creativity that we know take place.

So the creative action of the Universe unites space and time in a single element, and starting from here, its natural characteristics and properties make that the Cosmos begins to be developed and to work for itself with incredible effectiveness.

When space and time unite, each one of them contributes their properties and characteristic to this union. The result is that the time moves in straight line through space, or if we want, space is moved in all and each one of its directions although always on straight line.

Now then, what it is and how could we call to this new resultant cosmic element in which the space-time is acting jointly?

Because it seems clear for their properties; this element is the cosmic energy, that is to say, movement capacity in all the places of space.

This way the cosmic energy is space and time acting jointly and giving their properties and characteristic to this new element, to energy.

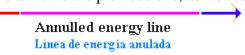
The following step would be how the energy can constitutes or to be condensed into matter and to build such gravitational systems as atoms and stars.

As we will see it is consequence of the properties of the tetra-dimensional space that ends up giving to matter this property.

#### **Energy points**

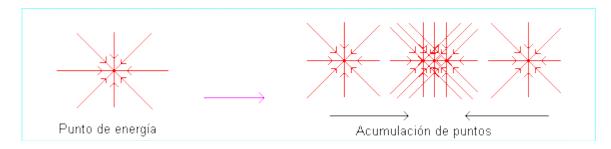
When space and time melt to form energy, the emergent energy lines logically are manifested by the whole space and in all directions.

At first, it seems that all the lines of the cosmos energy would be balanced some to other and they would be annulled since whenever a line exists in a direction and sense, another line will also exist in the same direction and contrary sense that would annul to the previous one, as we see in the drawing.



likewise we see that each line would have total autonomy and it could never unite neither to be added with other since each one would occupy different place in the space.

However a direction exists in which not alone the energy lines are not balanced neither they are annulled, but rather they can be added and to compose groups of energy lines. This is the concentric direction on any point of space.



In this direction all the energy lines that go to any point of the space, when going concentrating on this point, they go being added forming an authentic energy group or energy point, which takes their own autonomy and can separates from the energy lines that go in contrary sense. This way this accumulation of energy lines creates energy points in the space with autonomy to take their own movement.

#### Gravity

Once created the energy points these have the property of being attracted mutually because the energy lines that compose them aim directly to the centre of this group or energy points.

This occurs due to the energy lines are in fact continuous movement toward a certain direction, in this case toward the energy point centre. Therefore toward there they will try to crawl to any other energy point that is in their proximities.

So to these energy lines with concentric direction is to what we call GRAVITY.

Therefore gravity is not more than the cosmic energy in its concentric direction when it forms energy points, or as we will see later, when it forms matter and gravitational systems.

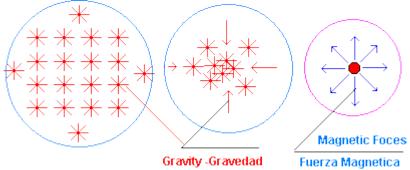
We see therefore that in the Cosmos all the points of space can have the capacity of forming energy points and all these energy points will try to be attracted mutually to form group of points of much more energy. And this is really what happens in the Cosmos, that the energy points are attracted forming conglomerates of energy points every time bigger.

However, starting from here, a very important thing begins to be developed in the Cosmos.

The places where these energy points were situated now are empty and it provokes an imbalance in the energy allotment through the Cosmos that cannot last without solution.

#### Magnetic force or magnetism

As we have said, when many energy points -that were next in one sector of space- unites to form a single conglomerate of points, the space around this resulting nucleus is empty of energy.



This circumstance of a central nucleus and empty space of energy to its surroundings creates an important imbalance in the energy distribution for the space. It is because when being united the whole space to whole

time, the resulting energy will be distributed in the same proportion through the whole Cosmos.

For it, when being created these nuclei with more energy than the middle in the Cosmos and semi-vacuum to their surroundings with much less energy of the one than it should have, a pressure force take place that tries of distributing the energy equally to be able to re-establish the half energy that all space must contain. So, this rebalance force of energy in the space is the Magnetic Force or Magnetism.

So we have a force that joins and coheres masses that is gravity and another force of pressure from the Cosmos in the contrary sense that tries distribute the energy equally again, which is Magnetism.

#### **Gravitational Systems**

As we have already seen, a great dilemma is presented in the Cosmos:

Gravity -due to the concentric direction of its energy lines- tries and gets to bring near and coheres the energy points through the space.

As consequence of this imbalance in the energy allotment, the Cosmos reacts with a force of pressure for the redistribution of this energy for the whole space.

These two antagonist forces are able to reach an agreement so that maintaining united and cohesive the masses, at the same time is possible get an allotment of energy points and this way to recover a half density of energy in the whole system, similar to the one that the Cosmos has in whole.

This is gotten by means of the creation of the gravitational systems.

These systems on a central nucleus of great mass and orbital rotating around this nucleus consist, all which united by means of the gravitational and magnetic fields that this nucleus produces forming this way a single homogeneous group of energy and forces.

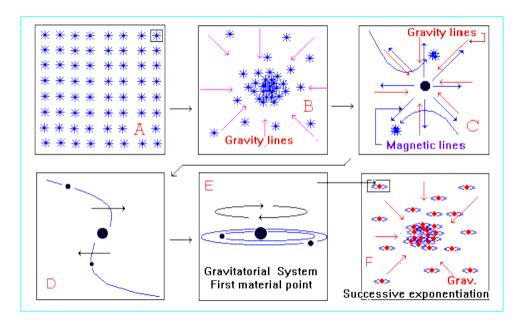
In this group or gravitational system, magnetism (electromagnetism or interior magnetism) takes charge of redistributing the orbital ones, fixing their distance and determining the quantity of these to get the appropriate volume of the system.

This case, if there was lack of energy to rebalance completely the gravitational system, magnetism (weak forces or external magnetism) will take charge of acquiring small material and energetic particles until getting the total balance of the system.

Now then, to understand the construction of the gravitational systems appropriately it is necessary a bigger amplification of the concepts and form of structuring of this systems.

Therefore we will make it a little more attentively.

7



D.- The spinning of the matter accumulations (nuclei, particles; Astros, stars, planets, etc.) is due to the antagonist pair of forces gravity-magnetic force that all great matter accumulation takes implicit. In the drawing we see the creation of energy points A and as later these are attracted and unite forming the gravitational systems (B, C, D and E). Then the gravitational systems unite forming in exponential order the fourth dimension F.

#### Formation of the gravitational systems

When a union of energy points takes place in some place being empty the space of its surrounding, it is born a pressure force for energy redistribution that we have mentioned already, magnetism.

The two antagonistic forces, magnetism and gravity make the energy nucleus rotates on itself (spin).

Although the nucleus rotates, the lines and fields of gravity and magnetism cannot make it to the same speed to be almost limitless its longitude and reach.

In such case only the fields that are very next to the nucleus are able to continue to this speed, the more distant fields alone can try to continue them and when not being able get it, they are deformed spiral way taking the whole system similar form like tornados or whirls.

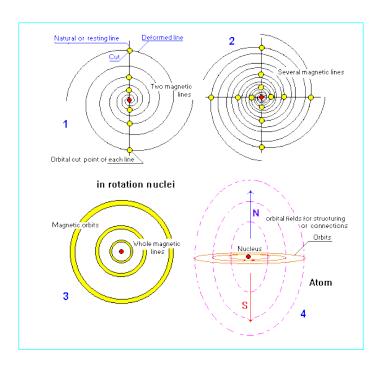
Therefore if we could see the magnetic and gravitational fields around a matter nucleus that rotates in spin, we would see a figure similar to which we are accustomed to observe in the hurricanes or tornados and as we will see later on, the characteristic of North-south polarity is also due to this spin or turn of the central nucleus.

Now then, once we have the gravitational and magnetic fields rotating in whirl form, we realize that these fields of force are really deformed because as we said, the natural distribution of the Cosmos energy is in rectilinear form and not forming spirals as it happens in the gravitational systems.

Then in the gravitational systems the lines and fields of force so much gravitational as magnetic are really deformed. But in all places of the systems?

Because the experience seems to point out us that it is not this way, but some distances or orbits exist around the central nuclei in which the magnetic and gravitational fields are not deformed.

#### **Orbital Cuts**



The orbital cuts are those distances on the equator of turn of the central nucleus where the gravitational and magnetic fields cannot be considered deformed.

This distance on the equator is where the spiral is cut with its natural radius in each one of its turns.

This way if a point anyone on the surface of the central nucleus produces a magnetic line or gravity line and that line is deformed in spiral due to the spin of this nucleus, we can observe as when the spiral line gives a complete turn to the nucleus, this will coincide another time with the point that produces it.

Because well, on this position we can consider that the line is not deformed when coinciding its position with the one that would have in case of not deformation.

So, the energy lines in spiral every time that they give a turn they are located in their position of not deformation again, that is to say, the position that they would have of not being deformed.

Therefore we can consider that alone in these points it is where the space-time has its natural situation, because as we know the energy (space-time) always treat to spreads in straight line.

The orbital cuts are therefore the distances or positions of balance of the magnetic and gravitational fields, and it is to where they drive to the orbital ones (electrons, planets) to form the gravitational systems.

So, the orbits of the gravitational systems (atoms, stars) are determined by the orbital cuts.

The magnetic force or magnetism impels to the orbital ones to be located in these created orbits.

On the other hand the gravitational fields instead of orbits they create gravitational layers which are much wider because the gravity diminishes with the square of the distance and the magnetism doesn't make it inside the atom or gravitational system.

#### Magnetic orbits and gravitational layers

Like we have mentioned, gravity diminishes relatively to the distance square in relation to the central nucleus; on the contrary magnetism is relative at this distance.

Therefore we would have that the gravitational layers would be much wider than the magnetic orbits, mainly the external ones.

For it the gravitational layers will contain more than a magnetic orbit, question that varies from 2 for the inferior layers to 32 for the external layers.

That is to say, they would be 2,2,8,8,18,18,32,32.

We observe there is repetition of layers with the same number of orbits, but we will explain this later.

Here we will revise the influence of the magnetic orbits and gravitational layers in the gravitational systems. Magnetic orbits

Like we said, the volume of an atom is measured till the situation of its last electron, in such a way that if an atom acquires an electron this atom increases its volume and if this atoms losses an electron then its volume diminishes.

As we will see later on when treating Law of Universal Balance, the energy that must contain a gravitational system is determined by the volume of that atom. Therefore it is very important to keep in mind that the measured volume until the last electron is who will give us the quantity of energy that the atom has to contain.

## Gravitational layers

The gravitational layers also exercise influence in the taking or capture of the orbital ones (electrons, planets) but with much less intensity than the magnetic orbits.

The main mission of gravity is to cohere nuclei and therefore the whole gravitational system; to provide the appropriate speed to the orbital ones; and like we have said the capture of orbital ones to complete their layers, when the magnetism allows it.

#### Atomic valencies

When the gravitational systems rotate on themselves, the gravitational fields that surround them form the gravitational layers.

These gravitational layers (the same as the magnetic orbits) have the characteristic of trying to be completed or to be stuffed with all the orbital ones that need.

Because well, in this consist the atomic valence, on a force for the acquisition or capture of orbital ones (electrons) until being able to complete their external layer.

Therefore, if an atom to be completed needs to acquire one or more electrons, this atom will exercise a force of attraction on the electrons that are in its proximities. On the contrary sense, if the atom has surplus electrons for completing their layer external, this atom will give easily these electrons to another atom that needs them.

We have seen that the gravitational layers have to contain certain number of magnetic orbits in which the orbital ones are located. The number of orbits that contains each layer is of 2,2,8,8,18,18,32,32 and therefore when in an atom lacks electrons to complete any layer this atom tries to acquire them from other atoms. The valence will be therefore the number of electrons that lacks or have more than enough to complete the layers.

### Rebalance forces of systems

As we have just seen atoms have two types of forces to get their balance state always in relationship to the number of orbital that contain:

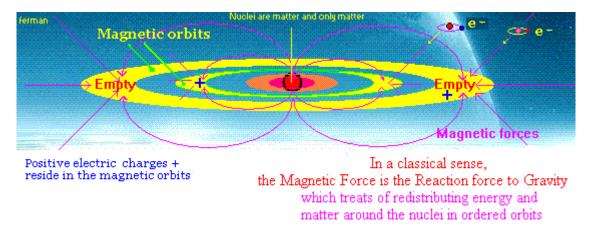
Electromagnetic forces and

Forces of gravitational layer (Valency)

----The first one is the most potent because of this depends the real balance of the gravitational system or atom in this case.

This force is exercised from the orbits, which are created and defined by the magnetic fields of the system. This force is of an enormous potential because it manages the whole balance of the atom, in such a way that if a solitary atom loses or wins an electron, immediately the whole magnetic system of the same one will procedure to rebalance the system acquiring or giving energy and particles to get its adequate density of energy.

Therefore, the electromagnetism of mid potential takes charge of completing the active orbits of atoms acquiring or giving electrons.



----The second force (valency) -of gravitational type- tries to complete the external layer of the atom giving or acquiring electrons. Nevertheless, their potential is much smaller that the electromagnetic one.

Then we could think that if their potential is smaller than the electromagnetic one, maybe it won't have any possibility to act.

However circumstances are given in which the gravitational potential can act without contravening to the electro-magnetic potential.

This circumstance is given when two or more atoms unite to form a single compound or molecules. In such a case, some atoms give electrons and other accept them, completing on one hand the longings of stuffing layers and on the other hand magnetism is satisfied when being intact the half density of energy of the whole molecules because the volume that some atoms lose in the cession is won in the acquiring atoms, lasting the middling density of energy.

#### Law of Universal balance

With reference to our study on the gravitational systems as atoms and stars, we could express the Law of Universal Balance in the following way:

"All the gravitational systems (atoms, stars) tend to have the same energy density, which is the half energy that the own Cosmos has."

It is because of the space and time union creates the cosmos energy and therefore in all the places of space the same quantity of energy should exist.

As we have seen this is not this way and the own nature of the space provides energy the capacity of meeting and melting energy points, it is logical that due to this imbalance a force of rebalance of energy should be born to get again the adequate quantity of energy in the Cosmos.

Therefore, magnetism in its intent of redistributing equality of energy through space it builds the orbits of the gravitational systems and situates in them to the orbital ones.

Then magnetism measures the energy density of the new or reformed system and it takes charge also of to give or to acquire energy particles to finish with the possible imbalance that still could subsists in the system.

So summarizing, the gravitational systems are built firstly by accumulation and cohesion of matter carried out by the gravity or cosmic energy in their concentric direction.

Then, the nascent magnetism of this material accumulation captures and maintains the orbital ones in its adequate place and also acquires the necessary energy to maintain in balance the systems, that is to say, to maintain the half density of energy that all atom (or star) should have.

In this sense, when acting each atom with its own magnetic potential according to its magnitude, it makes that the emissions and receptions of energy are different in each atom, and due to this, we can notice different spectra of emission and reception of energy.

Therefore, it is the atom in whole the one that captures and emits energy.

#### **Central nucleus**

Although in principle we couldn't take it as an important topic, the study of the nucleus can be interesting because traditionally it has been believed as container of numerous and different particles and every day it seems to obtain new of these.

So the first question to explain is that according to my cosmic model, the central nucleus is not compound for any type of differentiated particles, alone matter exists.

An example with which we can understand it is observing stars. There are not particles, only simple matter exists. In a same way, atomic nuclei neither have particles as gravitational systems that are; only matter contain

Also so much in atoms as in stars the magnetic fields are those that determine their orbits and those that locate and maintain to the orbital ones (planets and electrons).

But of what is this matter made?

Because of sub-atoms like we will already see when we study the fourth dimension.

To say, the same thing that stars are formed by similar and inferior units as they are atoms; atoms in turn are formed by other inferior units which are the sub-atoms.

We also observe as atoms mustn't have necessarily the mentioned electric charges in their nuclei neither in the orbital ones, because as we have said the magnetic fields take charge of distributing the orbital ones in their corresponding orbits and to give them when other more important magnetic fields can snatch them. It can also happen in the relationship among atoms when an atom with its own magnetic field helped with the power of its gravitational field tries to stuff any layer (valency). This case it is able to snatch to another atom an electron if this other atom also cooperates with its gravitational field that tend to gives an surplus electron to complete is last layer.

In these cases the final magnetic imbalance is compensated with the mutual union of both atoms forming a single group or molecule.

#### **Electric charges**

Nuclear particles charged electrically don't exist, nevertheless atoms in whole or independent material particles (pieces of matter) can be charged electrically.

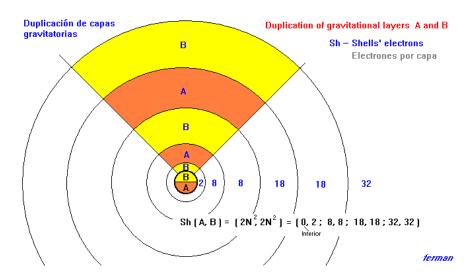
And what is an electric charge? Because a state of energy imbalance in a gravitational system or in a particle. If a gravitational system (atom, star) or particle (great size) has more energy than the middle of the Cosmos, the system or particle will be positively charged and if they have less energy of the cosmic stocking it will be negatively charged.

This way if to an atom in energy balance remove an electron, then this atom will have diminished its volume and it will almost conserve all its previous energy. In this case the atom will have more energy density than the stocking of the Cosmos and it will be positively charged.

If on the contrary an atom acquires an electron, its volume it will increase and its energy won't change too much, being with a half density of inferior energy than the Cosmos. In this case atom will be negatively charged and it will need to give the electron that he has more than enough to stay again in balance. Equal happens in particles.

If we destroy an atomic nucleus and of it great quantity of particles are produced, we will have that according to the dimensions of each one of them - so of positive their potential will be. But it will also happen that the big particles in turn will be able to develop strong magnetic fields and magnetic orbits to their surroundings and to proceed to acquire other smaller particles as companions forming small systems which can become negatively charged particles if their companions make them have smaller density of the stocking of the Cosmos (i.e. The case of electrons with accompanying satellites).

#### **Duplicity of layers**



In the drawing we have the central nucleus of a gravitational system with their faces A and B with reference to any point of the exterior.

Each one of these faces A and B produces its own gravitational layers. The face B produces the layers b and the face A the layers a.

The gravitational layers of the face A and B is superimposed some on others with repeated number of orbital each one of they: A -- 0, 8, 18, 32 and B -- 2, 8, 18, 32

We have observed that duplicity of layers exists, that is to say, that evens of serial gravitational layers usually have the same ones orbital: 0,2,8,8,18,18,32.

\* We have to note that the first layer doesn't have electrons due to this is situated inside the own atomic nucleus.

In principle this can seem strange and not to be consequent with what one could wait. However a simple explanation exists.

When a nucleus rotates on itself (spin) the fields of gravity that in the same one takes place also try to rotate and they end up being deformed in spiral.

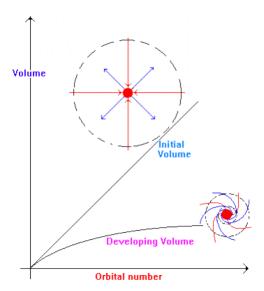
But if we locate ourselves in a certain place on the nucleus or near it and we study the gravitational fields taken place by this great mass or nucleus, we will see that these fields are produced so much by the matter that is next to us as for the matter that belongs to the opposed face of that nucleus.

This circumstance that seemed not to have a lot of importance in the determination of the gravitational fields at first, they really have it.

The reason of this importance in the structuring of the gravitational fields is that with regard to any point of the exterior of the nucleus, the masses of a face of the nucleus circulate or move toward the right and the masses of the opposed face circulate toward the left.

Therefore, in the composition of the gravity layers all the quanta of gravity that circulate toward an direction can be added to give us a certain layer and the quanta of gravity that circulate toward the other direction will give us another layer of same width but with some peculiarities as we will see in the spin topic of orbital. At the moment alone we will take into account that duplicity of gravitational layers exists because each one of the two faces of the central nucleus with regard to any position will give us a layer although it has the same width as for its capacity to contain orbital ones.

## **Cohesion of systems**



In the drawing we see first as it should be the volume that a gravitational system occupy (Initial volume) before proceeding to its spin. And later we see as the energy lines -gravitational and magnetic- are wound in spiral way (developing volume) circumstance that makes this system is deformed and cohered, occupying smaller volume that its initial ones.

We have said the Law of Universal Balance tells us that the same energy density must exist in all the places of the Cosmos.

However in the gravitational systems (atoms, stars) when rotating these in spin, the lines and fields of force so much magnetic as gravitational are deformed in spiral and they are wound on themselves.

As consequence of it, and with regard to the external space, the system shrinks or is cohered occupying less volume, although its energy lines are same in longitude but they occupy less volume to be compressed and wound themselves.

Therefore this deduction would also take to the consideration that the space-time that the systems energy really becomes independent of the exterior space and it can proceed to its deformation.

Anyway what interests us in this chapter is to understand that when the systems go increasing, their size go being compressed and cohering, which takes place -among other things- to the increase of the gravitational potential, increases and compression of the magnetic orbits and gravitational layers, etc. and on the other hand their volume are smaller than the ones that should occupy with regard to the energy that contains. In the chapter on measures of atoms it will see as we include this factor of cohesion in the corresponding formula to find the volume of the gravitational systems.

#### Fourth dimension

I have explained previously that the cosmos energy is only manifested in its concentric direction and for this circumstance autonomous points of energy are created in the space.

Also we have seen that in turn these energy points are attracted on some other forming accumulations of points, circumstance that creates a semi-vacuum space around this accumulation of energy points or nucleus. For this reason the magnetic force is born which creates orbits on those, other smaller energy points (orbital ones) are places to get a more proportional allotment of the energy for the space, forming this way the first gravitational systems.

Now then, these gravitational systems have the same properties and characteristic of the energy points, that is to say, the energy of which they are made (gravity) goes in concentric direction on the central nucleus, and consequently, these first systems also have the property of being attracted mutually among them. So these primary gravitational systems are attracted themselves and they also form accumulations of systems creating central nuclei and their nascent magnetism proceeds to develop orbits again in which it also places to new orbital ones. These systems created in turn unite with others of same dimensions to form superior systems and so forth in exponential order.

Therefore the Fourth Dimension is the one that allows the composition of the Cosmos in energy units or gravitational systems, which can be added with others of same dimension to form a superior unit; these in turn add with others of equals proportions to form another superior and so forth.

The energy points would be added this way in exponential order forming: energy Points, first gravitational systems .... Sub-atoms, atoms, stars, supra-stars..... etc.

## **Strong force = Gravity**

The understanding of the Cosmos structure through the Fourth Dimension makes us also understand that all systems that compose the different steps of this dimension act and have the same properties and characteristic.

Therefore if for us is well-know the properties and characteristic of a star, we will also understand the properties of atoms and vice versa, if we know certain properties of atoms we should also consider that the stars also have these same properties.

One of these characteristics is the call Strong Force of atoms.

This force just as today it is considered doesn't exist. This force in simply gravity.

The problem of the current studies that believe in the existence of a type of space force (strong force) in the atomic nuclei is that they have reached false conclusions with the tests made so much about the interior gravity of atoms as in the exterior the same ones.

These conclusions tell us that the external gravity of atoms is annulled quickly or it is very reduced at short distances. And that the interior gravity regarding to the one that they really have is minimum.

The first asseveration that gravity force of atoms is attenuated quickly, we can discover quickly that it is erroneous since the gravity of galaxies, stars, planets, etc. it will be logically taken place from the gravity of the atomic nuclei, what means that gravity of these atomic nuclei tend to extend until the infinite.

What I think it happens is that the experiments carried out to measure the exterior gravity of atoms drive to erroneous conclusions when not having in mind the circumstances of these experiments, which have been taken out ignoring the situation and the effects produced in the big masses, as can be the Integration Effect that we will study below.

Here we will try to explain the identity of the call Strong Force and that I estimate that it is gravity of the atomic nuclei.

When we say that the gravity diminishes with the square of the distance it would be necessary to keep in mind in what units of longitude we will measure this distance.

If for instance on the surface of the earth we try to measure the distance in millimetres, we have that to a meter above the surface of the earth gravity would have diminished a million times, and if we measure in years light would have that gravity that exercises the earth on Pluto continue being the same one that in the surface of the earth.

Then, in what units should we measure the distances to arrive to a real gravity? Because I think in relative units to the size of the earth, or in other cases, relative to the mass that produces this gravity.

Then, in atoms which units of longitude would be to use? Because atomic units of longitude.

So, this consideration takes us to use relative units to the atomic nuclei to measure the distances in the study of the gravity in atoms.

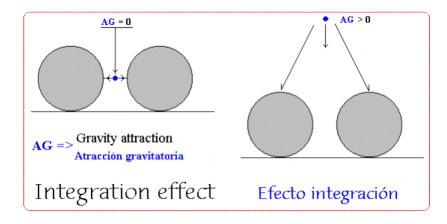
When we will revise the relationship index between atoms and stars, that is to say, between the cosmic level of atoms and our own level, we will see that this index is approximately of 10^23 and therefore the square of this distance until our level will be of 10^46, which will be the value of decrease of gravity from its birth in the atomic nuclei until the level where we are and can measure it.

So in the atomic nuclei where the gravitational fields of atoms are believed, their potential is high and similar to the gravity in the solar nuclei as we will see in the chapter of Equivalence of Gravity among Systems.

Therefore if in our sun the acceleration of gravity would be for example of 300 m/s, on the nucleus of an atom of neon gravity would be also 300 m/s.

It wants to tell that the denominated strong forces it is gravity that measured on the its own sources of birth.

#### **Integration effect**



Many experiments have tried to measure the gravity of the materials on the surface of the earth. The conclusions have been that this gravity is very little.

I understand that the conclusions have been erroneous due to it has been used a "hostile" environment for such gauge.

The same thing that we cannot measure appropriately the weight of a material for example inside water neither we can measure the gravitational attraction among masses inside a potent gravitational field as it is that of the Earth.

The reason is due to the Effect Integration that say us that in an accumulation of masses, all and each one of the quanta of gravity (gravity of each atom) are grouping into a unique resultant, in such a way that any portion of mass can't act by itself but jointly with the other ones.

So, in a great mass as for example the earth, on each point of the space acts in any moment all the forces of gravitation of the mass in such a way that if we bring near two bodies, on them it will always act the resultant gravity of all the mass of the earth and the mutual attraction that could make its own masses won't be noticed.

This integration effect makes that gravity of each atom only acts inside the particular space of this atom (orbital fields) and any gravitational force of any material portion is united to that of the other atoms forming the one mentioned common resultant for all the mass.

Therefore, alone far from the important gravitational fields, it is where one could study the mutual gravity among different body more appropriately.

You can measure the gravity between sun and earth, but not the gravity between two bodies located in some of these big masses.

#### **Equivalence among systems and levels**

Equivalence relation among systems ferman

```
Lineal equivalence = ^{22}6,28 Hidden parameter = ^{12}3,95

Mass equivalence = ^{55}6,28 from our situation

Total mass among systems (Mass equivalence x Hidden parameter) = ^{68}2,48
```

Explained the structuring of the Cosmos in gravitational systems or units of mass, which are regrouped among them to form another superior unit, we can reach the conclusion that in this exponential structuring and between an unit of a certain level and an unit of the superior level (i.e. between an atom and a star) it should have relationship in weight and in volume. And it is really this way it.

According to my calculations the relationship in longitude (i.e. between an atom and an equivalent star) it would be about 6,28 x 10^22 and the relationship of mass would be about 6,28 x 10^55. (In this case it would also be necessary to keep in mind the hidden parameter 3,948 x 10^12 that would represent the weight of the gravitational fields of stars as we will observe when explaining this parameter).

Because well, these relationship coefficients can help us to study any system although we can't measure their dimensions, provided we know the measures of other equivalent to which we apply it the relationship index among systems.

Then we can build a simple formula for it:  $P = Cr \times Pc$ .

In which P would be the particle, body or element of which want to find its measures, Pc it would be the well-known equivalent element and Cr it would be the applicable coefficient according to the relationship among the previous elements.

For example, if we want to know the dimensions of an atom of neon, for we could apply it to the dimensions of our sun -due to it is an equivalent cosmic element- the relationship coefficient among systems.

```
Neon nuleus diamter = Sun diameter / 6,28 \times 10^22
Dnn = 10^9 mts. / 6,28 \times 10^22 = 1,6 \times 10^-14 metres.
Neon nuleus diameter = 1,6 \times 10^-14 m. aprox.
```

With the weight we can make the same operations and to obtain approximate results among the different levels of the fourth dimension.

## Equivalence types among nuclei

We have seen the equivalence existence among systems regarding the volumes and weights.

However other equivalence types exist to which I would divide in two groups.

Exponential equivalence and Equality of Equivalence.

- ----The first one tells us that among systems of different exponential levels through the fourth dimension an equivalence exists, which we can get multiplying (or dividing) the well-known dimensions of a certain element for the equivalence coefficient among systems.
- \_This is the case in the gauge of weight, volume, space, time and quantity of contained energy among systems.
- ----The Equality of Equivalence tells us there are elements or parameters among systems that are same and they have the same value independently of the system that we are studying.
- \_This is the example of the speeds, accelerations and potentiality (density) of the gravitational and magnetic fields of all and each one of the systems of the Cosmos.

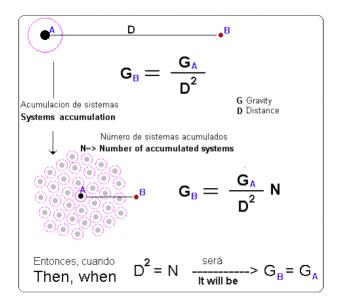
It is it because in the speeds, accelerations, and potentiality of the fields as much space as time intervene and conform these elements, and so, their relationship will always give us the same value for all the systems.

This way the speed of light, of the planets and electrons, atomic particles and meteorites, etc. are same because these speeds will be similar when increasing the space and time in the same proportion.

Equal happens with gravity that will be of same value in a star that in the nucleus of an equivalent atom, for example in our sun and in the nucleus of a neon atom.

We will put a demonstration of how this circumstance can be measured among a grouping of atoms and the star that build it.

#### Gravity equivalence among systems



In the drawing it is demonstrated that the gravity in the atomic nuclei is similar to the gravity of the stars. In the drawing, A represents an atom that could be located in the centre of the solar nucleus in formation, and B would be the distance in which the surface of this solar nucleus would be located later.

I need clarify that N represents a relative number and not to an absolute number of the inferior units to form the superior nucleus because not all the atoms are placed at the same distance of the surface of the built nucleus.

On the other hand, D will always be taken in atomic units (1/10^23), because they are the relative units to the gravitational performance of the atomic nuclei.

As we see in the drawing, the gravitational forces (in density or gravitational acceleration) they are same in all the equivalent systems, that is to say, the gravitation force on our sun is similar to the gravitation force on a nucleus of neon.

This is because the gravity force is relative according to the distance to that it is measured from the production source and being minimum the distances in the atomic nuclei, are enormous the gravitational forces that there exist.

In the drawing we put as example an accumulation of atoms, but equal could be an accumulation of stars:

- --Firstly we have an atom with unknown gravitational force Ga.
- --With object of creating the nucleus of a star, we take a distance Gb from the centre of this atomic nucleus toward where it could be the star's surface.
- --We put the formula later to see the gravity in Gb.
- -- Then we proceed to accumulate atoms until arriving to the creation of the solar nucleus.
- --And we see according to the applied formulas that arrived a certain number of component atoms in the solar nucleus, on the surface of this nucleus you get the same gravity potential than in the nucleus of the atoms.
- --So knowing the gravity in the nucleus of the solar system, we will also know the middling gravity of the atomic nuclei.

# UMMA Unidad matemática de masa atómica

Mathematical unit of atomic mass

ferman

lidrógeno \_hydrogen

UMMA = 
$$\frac{4}{3}\sqrt[3]{2}$$
 =  $\frac{4}{3}\pi^2 R_{cm}^3 = 1.679894 \times 10^{-24} g$ .

Several parameters can be good us to try to measure the dimensions of atoms, such as: Unit of atomic mass, atomic volume, porosity coefficient, inter-atomic vacuum, etc.

One of these indispensable factors is the unit of atomic mass, which has been established in 1,66 x 10^-24 grams and on this we measure the other parameters in atoms.

Now well, taking in mind the Law of Universal Balance that tells us that all the gravitational systems tend to have the same energy density, we could use the simple physical law on the relationship among weight W, volume V and density D to establish the measures of atoms.

$$W = V \times D$$

Then, like we will see we will arrive to the final formula also considering the cohesion (ch) that all the gravitational systems have according to their dimensions.

$$W = V \times D(ch)$$

-- Diameter of atoms.

To find the diameter of atoms we use the simplified formula of the drawing (cube of the radius of atom = 0,126 by square root of their atomic weight).

This formula is gotten by means of the application of two principles or characteristics in the formation of the gravitational systems, in this case of atoms:

- 1 The first one is the application of the law of universal balance that tells us that all the gravitational systems (atoms, stars) tend to have the same density of mass or energy. You can apply this way the simple formula of Weight = volume x density.
- 2 In second place, and as we have seen in the cohesion of systems, as the gravitational systems go increased their size, their gravitational and magnetic lines -although conserving their lineal dimensions- go winding on themselves in spiral way cohering and occupying less volume in the space.

With these two premises you can get a general formula:

Weight = volume x density-cohesion

(AW x uM= 4/3 Pi. R3 x Pi. Square root. AW) that drives us to the formula of the dwaing: R3 = 0.126 x Roof square of AW x  $10^{-30}$  m.

In which AW is the atomic weight.

uM the unit of atomic mass (by my formula 1,679894 .... x 10^-24 g.)

# UMMA Unidad matemática de masa atómica

Mathematical unit of atomic mass

terman

UMMA = 
$$\frac{4}{3}\sqrt[3]{2}$$
 =  $\frac{4}{3}\pi^2 R_{cm}^3 = 1,679894 \times 10^{-24} g$ .

And R the radius of the atom to measure.

With this formula it is very easy to obtain the radius of any atom. Later on we can compare it with the separation among atoms and to discover many characteristics of the periodic chart of the elements. For example, near to the saturation of the gravitational layers (2,10,18,36,54,86) the atoms keep a lot of bigger separation among them (Inter-atomic vacuum), what means that the saturation of these layers gives a strong repulsion among atoms.

This formula also can be:

# URA Unidad de Radio Atómico Hidrógeno Jerman Unit of Atomic Radius $\pi^2 R^3 = \sqrt[3]{2} = 1,259921$ $R^3 = 0,12766$ $R_{\text{URA}} = 0,503523 \times 10^{-10} \text{ m.}$

To obtain the atomic radii URA 
$$\times \sqrt[6]{Aw}$$

(e.i) Ejemplo: Osmio (osmium)

Radius Osmium = 
$$0.503523 \times 10^{-8}$$
 cms.  $\times \sqrt[6]{190}$  =  $0.503523 \times 10^{-8} \times 2.40 = 1.20 \times 10^{-8}$  cms.

**Note.-** The formulas that we use to measure the dimensions of the gravitational systems are not useful among isotopes of oneself element because in this case the cohesion produces a decrease of the diameter of atom and when not capturing other orbital ones, this diameter is reduced.

Element Noun Atomic weight Density Weight x10-24 gs. C .Porosity Separation Dia.meter

#### Atomic dimensions table.

IJ

238

Uranio

18,700

395,08

0,70

2,76

2,49

			8					
	Li	Litio	7	0,535	11,62	0,72	2,79	1,37
ı	Na	Sodio	23	0,968	38,18	1,33	3,41	1,68
ı	K	Potasio	39	0,856	64,74	2,54	4,23	1,84
ı	Rb	Rubidio	86	1,532	142,76	3,12	4,53	2,10
ı	Cs	Cesio	133	1,879	220,78	3,93	4,90	2,26
ı	Be	Be rilio	9	1,848	14,94	0,27	2,01	1,45
ı	Mg	Magnesio	24	1,738	39,84	0,77	2,84	1,70
ı	Ca	Calcio	40	1,550	66,40	1,44	3,50	1,86
ı	Ba	Bario	137	3,510	227,42	2,17	4,01	2,27
ı	Ra	Radio	226	5,000	375,16	2,52	4,22	2,48
ı	В	Boro	11	2,460	18,26	0,25	1,95	1,50
ı	Al	Aluminio	27	2,781	44,82	0,54	2,53	1.74
ı	Ga	Galio	70	5,904	116,20	0,66	2,70	2,03
ı	In	Ind io	115	7,310	190,90	0,87	2,96	2,21
ı	C (	Carbono	12	2,267	19,92	0,30	2,07	1,51
ı	Si	Silicio	28	2,330	46,48	0,67	2,71	1,75
ı	Ge	Germanio	73	5,232	121,18	0,78	2,85	2,04
ı	Sn	Estaño -	119	7,310	197,54	0,90	3,00	2,22
ı	P	Forforo	31	1,823	51,46	0,94	3,04	1,77
ı	As	Arsénico	75	5,727	124,50	0,73	2,79	2,06
ı	гSР	Antimonio	122	6.697	202,52	1,01	3,11	2,23
ı	Bi	Bis muto	209	9,780	346,94	1,19	3,29	2,44
ı	S	Azufre	32	1,960	53,12	0,90	3,00	1,78
ı	Se	S e le nio	79	4,810	131,14	0,91	3,01	2,08
ı	Te	Tehro	128	6,240	212,48	1,14	3,24	2,25
ı	Br	Bromo	80	3,119	132,80	1,42	3,49	2,09
ı	I	Yodo	127	4,940	210,82	1,42	3,49	2,24
ı	Fe	Hierro	56	7,900	92,96	0,40	2,28	1,96
ı	Ni	Niquel	59	8,800	97,94	0,37	2,23	1,98
ı	Cu	Cobre	63	8,900	104,58	0,39	2,27	2,00
ı	Mo	Molibden	96	10,280	159,36	0,52	2,49	2,14
ı	Pd	Palad io	106	12,023	175,96	0,49	2,44	2,18
ı	Ag	Plata	107	10,500	177,62	0,56	2,55	2,18
ı	W	Wolframio	184	19,250	30.5,4.4	0,53	2,51	2,39
	Os	Os mio	190	22,610	315,40	0,47	2,41	2,40
	Ir	Iridio	193	22,650	320,38	0,47	2,42	2,41
	Pt	Platino	195	21,500	323,70	0,50	2,47	2,42
	Au	Oro	197	19,300	327.02	0,57	2,57	2,42
	Hg	Me rcurio	201	13,600	333,66	0,82	2,90	2,43
	Рь	Plomo	207	11,600	343.62	1,00	3,10	2,44
	Ac	Actinio	227	10,070	376,82	1,25	3,34	2,48

#### Similarity and Equivalence between Atoms and Stars

A very important question to keep in mind is the equivalence and similarity among the gravitational systems, in this case between atoms and stars.

For it, whenever we want to know the characteristics of some of them, we can make it seeing the characteristics of all the gravitational systems.

This way for example, knowing to atoms and their properties, we can suppose that all stars also have to have planets to their surroundings; that the number of planets is relative to its solar mass; that the distances of these planets from its solar nucleus are also perfectly defined as we see next; that the planets are attracted and they stay in its place (orbit) for action of the magnetic fields of the suns, etc.

#### **Measures of stars**

The same formula used to obtain the measures of atoms can also use it for measuring stars but we can also use another type of formulas in which we use exponential units of mass and radius relative to stars. Firstly we will see the formulas to obtain parameters in the gravitational systems, mainly in the solar systems, using units of mass uM and units of radius uR.

#### Hidden parameter

In stars we can also use the general formula: Mass = 4/3. Pi.. R^3 x Pi. square root of M/uM (kg-dcm) applying the Hidden Parameter (x 10^12).

The Hidden parameter. –

Many times a relationship parameter arises among systems that it doesn't seem well defined. This happens mainly when we are relating the properties of atoms and stars and we meet with a difference of density among them too considerable (10^12) that which makes us doubt of the Law of Universal Balance. The reason is it that the gravitational fields weigh the same as matter due to, which is also a gravitational field (we keep in mind that atoms that we weigh are almost empty) and when being we inside the solar system we alone measure the mass of atoms of the solar nucleus, but not the total weight of the solar system (including its gravitational fields)

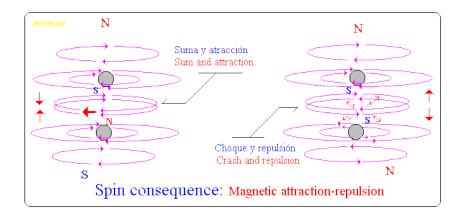
Therefore the interior space that we call empty, it is really a gravitational field made up of energy lines that have weight according to its density and extension.

Therefore, the weight is a force of gravitational attraction, but not among masses as commonly we think, but between the all gravitational forces of a system or material.

Consequently the formula to measure the magnitude of stars in relation to its real weight would be:

masa. 123,948 = 
$$\frac{4}{3}$$
.  $\pi$ .  $R^3$ .  $\pi$ .  $\sqrt{\frac{M}{uM}}$  Kg. / dcms

#### North-south polar direction



In the drawing it is shown as the turn of the central nuclei of a system create in the energy fields that surround it a deformation in spiral form in such a way that when we bring near two turning systems, these attract themselves to form a single system if they rotate in the same sense, or in the event of rotating in contrary sense, they are repelled and change their position until getting the same turn position among them to be able their union.

When any body or element (matter, energy fields, etc.) rotates on itself (spin) this circumstance produces certain consequences on the bodies or elements that are situated around them.

The first and main consequence, which is revised in this chapter, is the incitement to the rotation and deformation of these elements that are situated around them, which are induced to rotate by these bodies o central nuclei.

Example of it can be the air that is near to the hurricane eye; the air or liquid that could be near a material piece in rotational movement on itself (spin); the magnetic and gravitational lines that surround a star, planet, atomic nucleus, electron, etc.

In all these cases the surrounding elements intent follow to these central nuclei in its rotation, and when not being able to make to the same speed due to its great extension, alone a deformation in spiral way of these surrounding elements or energy fields takes place.

Because well, if we try to unite two bodies rotating in spin, we will see that the turn direction of the deformed elements and its resulting forces will make that these forces are summed or attracted themselves if they rotate in the same sense, or on the contrary way, they are repelled or rejected themselves if they rotate in contrary sense.

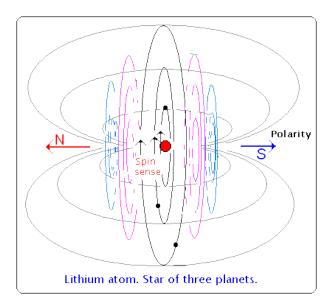
The reason is quite clear as you can see in the drawing: If the nuclei rotate in the same sense N\_S they can attract or unite mutuality because of their force lines go in the same direction and sense. But if these nuclei rotate in contrary sense N\_N, the lines of force collide among them, and so that, the rejection among nuclei will take place.

So, the spin movement produce the polar direction North-South due to the direction that the surrounding elements and fields of forces take.

In the same way, magnets are the result of the polar N\_S alignment of the atoms that compose any adequate material, producing a unique polar direction for the whole material.

Beside this circumstance, in the bodies or nuclei in rotational movement another type of consequences take place, such as magnetic orbits creation, gravity layers creation, orbital cuts, etc., which you can see in other specific chapters of this website.

#### Spin y polarity in star and atoms



In this chapter we see a gravitational system rotating and in it we observe the sense of their rotation on itself (spin) and the polarity resulting due to the attraction or repulsion that the gravity and magnetic lines produce on other near systems in the following way:

- \_\_The N-S alignment produces attraction and union among gravitational systems, and
- \_\_The N-N alignment produce repulsion and turn to get the appropriate union N-S.

North Pole or South Pole?

---As we have seen previously, all planets rotate around its sun in the same direction that sun makes.

However, in the rotation question, each one makes it according to the gravitational layer where it.

This question that sometimes arises, as in the case of Uranus or Venus, is of simple deduction because the magnetic poles are physical properties of planets and it is due to the semi-tangential direction that the magnetic and gravity fields take when rotating the planets on themselves (spin).

(They are similar cases to the direction that the wind or water take if form of whirl or tornados).

So, the question can be resolved easily:

This way, if we are located in a Pole and the planet rotates toward our left, we are in the North Pole and if the planet rotates toward our right we will be in the South Pole.

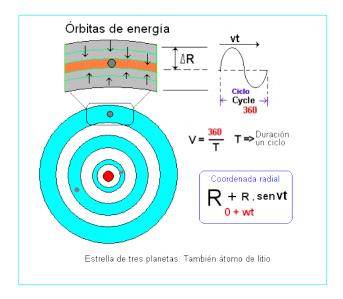
#### Magnets.

On the other hand, magnetos are formed for the alignment of most of atoms of a material in an only polar direction N\_S, taking the whole material this resultant polar direction.

In the previous drawing we observe (in green) the lines of magnetic polarity that the rotation of the magnetic orbits of each gravitational system produces. Each orbit produces a line of this type.

Now well, when in a appropriated material all the atoms of the same one join in the sense, the sum of all these lines of polarity create to the magnetic lines that we observe in an magneto, which go from pole to pole.

#### **Energy orbits**



In this drawing we represent to the magnetic orbits that here I will call "energy orbits" • that in a wide band of energy consists, which captures and treats of conducing to its centre to any necessary orbital (planet, electron).

Inside the energy orbits, two types of movements of the orbital ones exist.

The main movement type is the circular one, describing an orbit around the central nucleus.

The second is an oscillatory movement toward inside of and outside of the orbit, that is to say, an increment of the turn radius and whose frequency is usually much smaller that one of the circular movement. In the drawing the formula of radial coordinates is shown, just as it explains in my works on this topic and where we take R as radius, LR it is the increment of the radius of the second movement type, which is represented by the function 0+wt.

#### **ENERGY ORBITS: Orbital oscillation**

This study-summary on the energy orbits can be considered as an approximate simile to the concepts of quantum mechanics regarding to the harmonic oscillation of particles, but considering the distribution of electrons (and planets) in radial orbits around the atomic nuclei following therefore the distribution of radial coordinates and not of Cartesian coordinate as the quantum mechanics makes.

Therefore, orbital ones (electrons, planets, etc --we will call particles--) rotate around its central nucleus in stable orbits, which are created by the magnetic fields of these nuclei.

Now then, inside these established orbits, the particles don't always move at the same distances of the nucleus, but rather they can have certain flexibility or periods of oscillation between an interior part of the orbit and another external one, that is to say, between a maximum distance from the nucleus and another minimum distance of the same one.

Therefore we can accept that in bigger or smaller measure, all particles oscillate inside its corresponding orbit between a maximum and a minimum of distance to the central nucleus.

The orbits are magnetic fields that try to drive particles to the centre of this orbit, and if for any reason of speed, weight, crashes with other particles, etc. these particles move toward inside or outside of the orbit, this orbital fields impels particles toward the orbit centre again, creating an oscillation that can last a lot of time.

Therefore so electrons as planets (particles) have two external movement types, which are the turning movement around the nucleus and the oscillatory or harmonic movement toward inside and outside of the orbit.

In this case, the **orbital oscillation** can be one reason of the climatic changes in planets (glaciations mainly) due to the cyclic approach to its stars.

In the drawing we can also see the formula, by mean of radial coordinates, to obtain the particle position in any moment.

Width (AR). The oscillation width depends so much of the characteristics of the orbits, as of the characteristics and circumstances of the particles that oscillate inside these orbits.

We can say orbits are different in any gravitational system (atoms, stars, etc.) depending on the number of orbits that they have and keeping in mind that the nearest orbits to the nucleus are more narrow and the most distant wider, being therefore the most distant and wider of more oscillation width and the nearest of less oscillation width.

Inside the characteristics of the particles (electrons, planets, etc.) we can consider their mass and speed. As for their circumstances we should keep in mind their speed and initial direction, increase of mass for assimilation of other particles, direction and forces of the crashes with other particles, etc.

**Classes of harmonic oscillations.** Considering the properties and characteristic of orbits and particles we can accept that each particle can have different oscillation types at the same time.

In the first place we would have a main oscillation (harmonic main) that would be the initial oscillation in the constitution of the orbit that would describe an ellipse with near period to a complete revolution.

We would also have a secondary harmonic that would be of very long period and it could be considered as a pure harmonic, which would take place for resonance of the own magnetic forces that constitute the orbits. In third place we would have the harmonics taken place by nuclear changes, changes of the particle, crashes with other particles, etc.

Each one of these harmonic would be also more or less wide according to the orbit in which is developed (nearer-less width; more distant-more width)

#### Situation of orbital ones.

#### Formula for atoms

$$r = \frac{R}{\left(\frac{\pi}{2}\right)^{N-n}}$$

$$R = 0.126 \times \sqrt[3]{Aw} \times 10^{-30}$$

$$R = 0.5 \times \sqrt[6]{Aw} \times 10^{-10}$$

$$r = \frac{0.5 \times \sqrt[6]{Aw} \times 10^{-10}}{\left(\frac{\pi}{2}\right)^{N-n}}$$

As we can see in the lateral drawing, electrons rotate around the atomic nuclei and their distance (r) from these nuclei can be determinate by mean the formulas exposed in the drawing.

The first formula is simplified and here (R) is the atom radius, and off course, the radius (r) of the last electron.

Laterally we can see the formula for the radius atom (R), which is exposed and explained in following. An finally we can see the total formula including the (R) parameters.

In these formulas (Aw) is the atomic weight, (N) is the number of electrons that this atom has; (n) is the situation number of the electron that we have measuring. Distances are measure in metres.

An important question to keep in mind is that electrons make about 10<sup>14</sup> laps per second and this way we can't know in what lap position is in any moment because this electron occupies during a second all the positions many times, (10<sup>14</sup> times).

Against the radius we can know it by mean of these formulas.

On the other hand, rotation of electrons like planets are not in contradiction with any physical law because:

- 1.- The magnetic fields that any nucleus produces around it are those that attract and maintain electrons in their orbits.
- 2.- Later on, the gravity fields are those that give electrons their adequate velocity to get the accurate balance.

#### Formula for stars

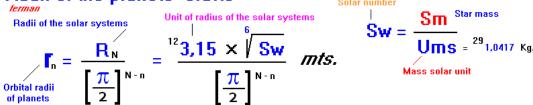
## Formulas for stars terman

Mass of star 
$$\times$$
 coefficient  $=$  Volume  $=$  X Density

Sm  $\times$  Lcf.  $=$  4/3  $\pi$  R<sup>3</sup>  $\times \pi$  Sw

Star radius  $=$  Star radius Star radius Star radius Star radius Star radius  $=$  Star radius Star radius Star radius Sw  $=$  Star radius Sw  $=$  Star radius Star radius Sw  $=$  Star radius Star radius Sw  $=$  Sw  $=$  Su  $=$ 

# Radii of the planets' orbits



In the same way that electrons, planets distance from the nuclei of stars ( rn ) can be obtained using the anterior formula, where the parameter of star are exposed.

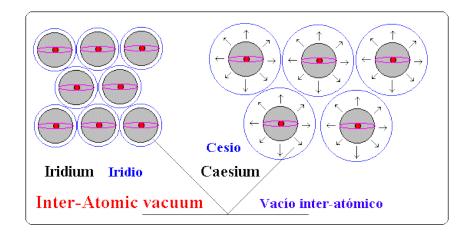
An important question to take in mind is that "so much in electrons as in planets the obtained distances by mean of these formulas are always middling distances, due to this theory is against the quantum number". So between an atom or star and another one always some size difference exists. Including between the same type of atoms.

At the same time orbital ones (electrons, planets) have harmonic oscillation (maximum and minimum) inside their orbits.

As we can deduce from these formulas, when stars have many planets, the nearest can be absorbed into the solar nuclei.

The same occur in atoms, where the interior electrons also can be absorbed into nuclei. Surely atoms and stars don't pass of 30 orbital ones.

#### Inter-atomic vacuum



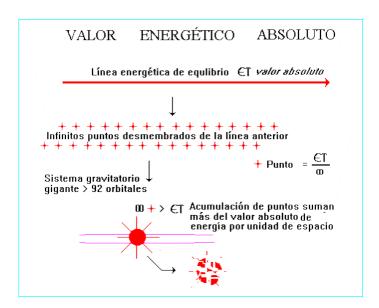
In this drawing two atoms (Iridium and caesium) are represented in which we can appreciate the great difference that there are in their inter-atomic spaces.

It is due to in the atoms the saturation of its external layers produces a great repulsion among the atoms. Therefore, those atoms that have complete their external layers (noble gasses) are repelled themselves in great measure and their normal situation is the gassy state.

This repulsion among atoms goes diminishing as the proximity to the saturation state goes away. For this reason the atoms next to the saturation (p.e. Fluorine, chlorine, caesium, etc.) have certain repulsion. On the contrary sense, those that are far from the saturation as the central ones in the periodic chart (p.e. Osmium, iridium) not much inter-atomic vacuum leaves among them.

Apart from the anterior parameters in the dimension of atoms chapter studied, in materials and molecules we can consider the parameter of inter-atomic vacuum that consist in a property for which all atoms are situated to certain distance some from other depending on their gravity and magnetic fields. This distance in lineal way will be the difference between separation and diameter of atoms (Separation-diameter). So much separation among atoms as their inter-atomic vacuum are propitiated by the magnetic and gravity fields. Gravity field influence in the saturation of layers and in the separation of atoms (and inter-atomic vacuum), being great this vacuum in positions next to the saturation values. (2, 10, 18, 36, 54, 86). Magnetic fields create atomic orbits and build and support dimensions of atoms (diameter), and fit each electron in its orbit. Inter-atomic vacuum seem to be maintained in the saturation of layer, He, Ne, ClH, OH2, NH3. Although in the atomic bonds, inter-atomic vacuum disappears for building these atomic bonds. ---Inter-atomic vacuum also influences in the crystalline or amorphous states: When a element has a lot of inter-atomic vacuum its state is more amorphous. When a element has little inter-atomic vacuum its state is more crystalline breaking easily. This is due to when atoms are near among them, they have to align themselves following the N-S direction of each atom. When atoms are far ones from other, they already don't have to maintain this static position due to here the magnetic fields are weaker.

#### **Energy: Absolute value ET**



The relative or absolute value of the energy that is distributed through the Cosmos is an important factor that we should revise because of it the stability of the gravitational systems can depend.

When uniting space and time to structure the Cosmos, it is logical that they must make it in a certain proportion in such a way that if we take any line of the resulting energy, this line would have a certain energy potential that it would be the same one in all the places and lines through space.

That power would depend on the proportion or quantity of time that are united to space and at the same time it gives us the capacity of movement of this time through the space, that is to say, the maximum speed that any crawled object by this energy potential could take.

This way if an energy line was able to impel and to get that an object reaches maximum acceleration C starting from cero, then the absolute value of the energy line would ET.

As we have seen for experience that the maximum speed that can get an object is c, (light, photons), then we should think that the absolute value of the energy is something superior, that is to say C.

Then the absolute value ET of the energy can give us a maximum speed of C.

Now then, when in the Cosmos beginning the different points of space became energy points and they took their own autonomy, they had to subdivide each one of the lines that composed them in quasi infinite parts, taking each one of these subdivided lines an infinitesimal of the energy potential and therefore an infinitesimal of the capacity of acceleration that each line took in its birth.

Then the sum of the lines that converge in each point would add its infinitesimal potential and they would form an energy point with a potential something bigger but very far from the absolute potential of energy. Now then as the energy points go accumulating some after other, this accumulation will hold so quantity of energy points that its energy potential would end up approaching to the absolute value of the energy. Now well, in this circumstance "near" to the absolute value of energy (between ET and ETx250) it is where the gravitational systems are produced.

This is due to with so much energy potential, the maintenance of the half density of energy is essential and so it is where magnetism truly acts to create the gravitational systems, which take in charge the regulation of volumes with relation to the mass of the system.

With a little less potential, magnetism also acts forming the particles with companions, similar to small gravitational systems.

Then we can suppose that when groupings of energy points (Also gravitational systems) exist and the accumulated energy potential arrives to the absolute value ET it is when this energy potential begins to care about the balance of energy, proceeding to the formation of new gravitational systems with their nuclei and orbital ones to their surroundings to conserve the half level of energy in the Cosmos.

And it is when the gravitational systems are built, those which nevertheless have a margin of limitless growth that when it is overcome the systems self-destroy composing other smaller systems that are inside the required margins, as we see in the following chapter.

#### Magnitude of the gravitational systems

In the previous chapter we revise the absolute value of the energy and we reach the conclusion that this value determines the magnitude of the gravitational systems because near to this value it is where these systems are built.

The reason seems to be clear. It is logical that when a matter accumulation comes closer to the absolute value of energy it means that if we continue increasing this value, an imbalance will take place in the equality of distribution of energy through the Cosmos.

Therefore starting from here this material accumulation will produce magnetic fields that will proceed to the creation of orbits and the capture in turn of orbital ones to form the new gravitational system with object of increasing the volume and to diminish the half density of energy.

Then near to the absolute value of energy ET is where the gravitational systems are created to get the half density of energy.

But until where can go growing a gravitational system?

In fact, until the gravitational system surpasses the absolute value of energy ET clearly.

Although the formation of gravitational systems with orbital rotating in their orbits impedes a quick imbalance in the half density of energy that they contain, the imbalance ends up taking place in reason of the own nature of the system, in which the energy lines go concentrating toward its centre or nucleus.

In this case a moment arrives in the one the energy density in the proximities of the nucleus surpasses a lot the absolute value ET, although in the totality of the system it doesn't happen the same thing.

This circumstance makes that when surpassing the energy its absolute value, the gravitational system becomes inoperative because starting from this absolute value the energy cannot produce bigger speed and therefore neither bigger acceleration, that is to say, an increase of the energy doesn't produce sufficient effect of cohesion among the nuclear masses.

On the contrary, magnetism continues increasing their potential toward the energy allotment getting a moment in that the magnetic force surpasses to the gravitational force and the system explodes for magnetic action.

This is what happens in the big gravitational systems such as atoms (uranium) and big star (supernovas). So when the gravitational systems surpass the absolute level of energy clearly, these explode producing new smaller systems which already complete the required dimensions inside the absolute level ET.

#### Cosmos elements

#### SPACE AND TIME

space and time are primary cosmic elements and they are distinguished to have each one of them much defined physical properties.

To be primary elements we don't have many epithets to explain them and almost always their properties and characteristics are defined by their own name.

- ---Space is an element whose properties are extension, place, site, etc.
- ---Time is another primary element whose main property is the rectilinear movement, constant exchange among its serial points, etc.

#### **ENERGY**

Energy has its origin in the union of space and time in a single group, having this group therefore the properties of both primary elements, to know, Energy is time moving through space.

Energy, as we have said, is annulled itself in all the parallel direction because when an energy line in a sense exists, on it, another line in contrary sense always exists being annulled its performance.

However, a direction where energy is not annulled exists: The concentric direction.

And non-alone energy is not annulled in its concentric direction on any point of the space, but rather to go all these energy lines regrouping and adding progressively in direction to this point, they form energy points in the space that in turn can be regrouped with other energy points forming agglomerating of these points.

#### **GRAVITY**

Gravity is simply the energy lines in its concentric direction on any energy point or matter.

Gravity is given so much in energy points as in the accumulation of this energy points that form matter and other gravitational systems as atoms, stars, etc.

**MAGNETISM** 

When a grouping of energy points takes place, to its surroundings an empty space is produced, being created an energy imbalance between the energy nucleus and this empty periphery.

To compensate this imbalance a force of energy redistribution is born from this central nucleus toward the empty periphery.

To this force of energy redistribution we call Magnetism.

When not allowing gravity to redistribute energy for the empty periphery, magnetism acts spinning to the central nucleus to create orbits where small orbital ones are place, getting this way that there is distributed matter for the whole system and so, the resultant imbalance is minimal.

Although the magnetism is the same, to be able to study it better, we can divide it in category according to its power and according to the elements on that the magnetism acts.

Therefore we will divide magnetism in: Magnetism of high intensity, of middling intensity and of low intensity.

- --- Magnetism of high intensity would be the one that acts on the big energy agglomerates or mass that surpass the absolute value of energy. They are destroyed by this magnetism of high intensity.
- ---Magnetism of middling intensity or electromagnetism, is that organizes and builds orbits around nuclei and that attracts or repels to the necessary orbital ones to be able the appropriate balance in the gravitational systems (atoms, stars, etc.).

The electricity is therefore a consequence of this type of magnetism of middling intensity.

---Magnetism of low intensity will be the one that organizes gravitational systems forward its total balance of energy or mass, to know, this magnetism type attracts or repels to small material bodies (in atoms, heat) to get a total balance of the system. But we repeat again that magnetism is the same one and with the same purpose (to balance the systems), only this acts on different elements.

We could consider magnetism as the opposed face to the energy. And magnetism usually behaves this way through the space when treating to redistribute and to break the groups that energy builds.

Nevertheless, from a physical point of view what interests us is its capacity to produce movements on other magnetic fields, to my to understand, becoming in the main physics force in the movements of masses in the space and in all the creativity of the same one (always in combination with the energy, of course)

#### **MATTER**

Matter is simply the energy organized in gravitational systems, which are impenetrable for other gravitational systems and therefore it gives sensation of impenetrable and stable element.

Atoms are matter units and they seem to be impenetrable for our atoms when we touch them.

A star is another superior unit of matter and impenetrable for other stars, and so forth. Therefore and as we have said previously: **matter is alone "packed energy"** 

# About the big-bang theory

"One of the Cosmos' characteristics is that through it and in different places of the same ones, continuous big-bangs are producing, and at all the levels of the same one."

Big-bangs takes place this way to very high levels (of space-time and energy) as it has been ours, the one that produced our galaxies with its explosion.

But big-bang phenomena also take place in the inferior levels, as it happens in stars (supernovas explosion) or at atomic level as the explosion of the big atoms (uranium).

Our big bang was consequence of an explosion in an extra-star of great dimension.

Why these explosions occur?

Because when in the biggest gravitational system (atoms, stars, extra-star, etc.) its relative mass surpasses the absolute value of energy (superior acceleration than c or speed of light near its nucleus) the magnetic potential for distribution of mass surpasses to the gravity force and the system explodes.

In our level, many other explosions should take place continuously, but very far from us where the matter and circumstances allow it.

So, this cosmic model doesn't agree with the most of the postulates on which the theory of the Big Bang is based.

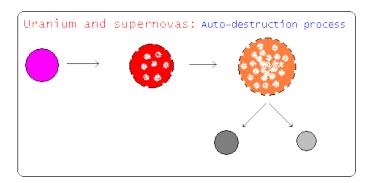
--- This model is agree:

As for that our galaxies have a common birth in the same place of the space and that in this place an important cosmic event took place (maybe a great explosion) in which by mean of magnetic action, great quantity of matter was expelled, some of which was made in form of galaxies groups.

- --- This model doesn't agree with the most of the deductions or statements on the nature of the matter or energy that existed before this explosion: So, my theory doesn't agree in this place alone concentration of pure cosmic energy exited, and that after this explosion this energy would become atomic particles and later on into atoms.
- ----Therefore, this cosmic model bet for the following explanation:
- \_\_When the great explosion of our extra-star takes place, it was not concentrated pure energy what existed in this place, but rather stars, atoms, material particles etc. and the whole cosmic matter was already formed. Therefore, many of our stars could already exist before the great explosion happened.
- \_\_"Our" great explosion was due to the big growth of the superior gravitational system (extra-star) where our stars were concentrated, which ended up surpassing the balance limits, making explosion and discharging to great quantity of matter of all type among which are our galaxies groups.
- \_\_When this superior gravitational system made explosion, most of the matter would become in two other smaller extra-stars, which would be already inside the limits of magnetic balance. On the other hand, smallest matter pieces would be expelled violently and they would become galaxies.

When I say "our" explosion, it means that continuously many cosmic explosions (similar to ours) are taking place in all and each of the cosmic levels.

#### **Black Holes and Neutron Stars**



My cosmic theories are against the existence of the black holes as well as of their singularities and of the stars of neutrons.

The reason is very simple; the Law of Universal Balance, which say that: The Cosmos tend to have the same energy density in all the places of the same one.

For this it is magnetism, a force of redistribution of masses and energy which tries to maintain this middling density of energy through the whole space.

Now well, when a great accumulation of mass that can end up surpassing the absolute value of energy happens in the space, a magnetic force of high intensity acts on this accumulation of masses until to destroy it and to divide it in other smaller two masses that are already inside the allowed level of energy, which doesn't represent a great energy imbalance in the space.

And this happens so much in atoms (uranium) as in stars (supernovas).

Therefore the possibility of the existence of the black holes according to this theory is null practically. When a great star acquires a quantity of mass that makes it surpass its absolute level of energy, in its nucleus such a high degree of magnetic potential (energy redistribution through space) have been developed that this nucleus goes expanding more and more, finishing with the explosion of same one that usually becomes smaller two new stars which are already inside the required energy balance.

In a same way it is not possible the existence of stars of neutrons, since these would not be composed by atoms but for neutrons intimately united and without orbital ones. It would require a great energy concentration that would surpass the absolute level of energy in these stars, which goes also against the Law of Universal Balance: The same energy density en all place of the space.

Now well, with all probability in the centre of the galaxies some space quasi-empty that represents the central EYE of the galaxy must exist, (similar to what happens in the hurricanes and in any vortex type) which will be represented by an empty central nucleus on which will rotate the whole galaxy.

This central nucleus or eye of the galaxy could also be considered as a type of black hole, but very different from the one that the physicists describe us at the moment, since this space should be almost lacking of stars, been alone empty space.

# Particles and electromagnetic energy

#### **Particles**

"Particles are always matter of more or less size, which can always be split into smaller ones pieces of matter or minor particles. Their properties and characteristics depend on their size, situation and forces that manage them".

So, the subatomic particles are always pieces of more or less size, and as any other matter, they create magnetic fields to their surroundings according to their size.

With these magnetic fields they form orbits where other smaller particles are places, forming the systems of particles: Nucleus locates to electrons; big leptons to its accompanying particles, etc.

When any particle doesn't have its accompanying (o while they don't have it) we can consider magnetically in imbalance state, with positive charge.

This way, if we consider gravitational systems (atoms, in this case) we can frame particles in two well-differentiated situations: Nucleus and periphery or orbital space. Then we will have a great central particle that is the nucleus and many types of orbital particles that rotate around this nucleus. But all these particles are composed of the same type of matter (sub-atoms 10^-79 g.)

---Particles that rotate around the nucleus would be for order from bigger to smaller ones:

First, the main orbital ones (electrons, planets) included their accompanying satellites (Neutrino in atoms, with sizes between 10^-29 and 10^-31 grams)

And later we have an enormous diversity of particles that go from about 10^-31 grams to 10^-79 grams in sub-atoms, all these rotating around the central nucleus. To all these particles we will go giving them name as we go discovering them by means of our instruments of measures and observation. Therefore, apart of their situation, everything depends more on the capacity of our instruments than the reality of this particles, which alone are matter pieces with a magnetic behaviour according to their dimensions.

---The nucleus, on the other hand, is simple matter and when it is destroyed many material particles take place, which can be of very diverse size, similar to the previous ones; their behaviours are also the same, depending on their dimensions and if they have accompanying particles or not.

Their name and framing will also depend on when and how these particles are discovery, measured and observed.

If a atomic nucleus of big dimensions is destroyed, then two big portion of this nucleus is converted into two new nucleus for build two new atoms. The other surplus material is converted into diverse types of particles. (In star the same happens: a great star that explode become into two smaller stars normally)

But besides this simple form of observing particles, we can also study them according to their situation inside of or outside of atoms; according to their dimensions etc.

Therefore we will see some of these groups or forms of framing particles.

#### **Atomic Particles** Ferman Grams Maximum systems 10-22 U 92 Systems' núclei Minimum $10^{-26}$ H 1 systems Leptons Muon Greatest 10 electrons Electric 10 -30 particles Smallest electrons and satellites -31 10 Neutrino field Big calorific particles $10^{-37}$ Calorific particles Small calorific 10 <sup>- 59</sup> particles Big light 10 <sup>-60</sup> particles Light Luninous particles Radio Small light field

In the drawing we see the wide spectrum of particles according to this theory distributes it, with special attention to the dimensions of each particle, exposing a chart in which the different particles that will go being discovered in the future can be fitted.

10-80

As we have previously exposed, between two serial gravitational systems many intermediate particles and body exist, for example:

Between an atom as inferior unit and a star as superior unit, almost infinite types of particles exist, which go from bi-atomic molecules as the smallest ones to the solar nucleus as the biggest one. Equal happens between sub-atom and atom.

To give an approximate number we would say that due to their size it could have up to 10^57 classes of particles.

However, what interests us in any particle really is to know its size and situation, because when this particle is related with other particles or systems, their properties depend of its size.

For this, we will divide particles among systems in two classes according to their situation and size:

#### Stable particles and energetic particles.

- ----Stable particles will be those that compose systems and therefore they are located inside a gravitational system (atoms, stars) balancing it. Therefore they are of scarce interest for our study.
- ----Energy particles will be the same that the stable ones, but for different reasons they can leave the system that contains them and can penetrate in other systems unbalancing them and producing a rebalance process and therefore and energy process.

To these energy particles we will divide in three groups:

Luminous particles, calorific particles and electric particles.

**Luminous particles** will be the smallest ones, all they formed by few inferior units (sub-atoms) and when they are expelled away of a system and move through space they can take next speeds to of light and often they acquire form of disk, type galaxy.

Among these are light particles, radio waves and other radio-energy type.

**Calorific particles** are quite bigger that the previous ones. They have smaller movement capacity and they are broken and absorbed by the superior systems for where they pass.

These particles are usually used by the systems lacked of matter for their total magnetic balance.

**Electric particles** are the biggest among systems and when they are expelled out of these systems they have little movement capacity and they are absorbed or rejected quickly by the neighbouring systems.

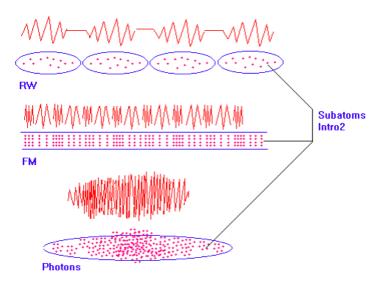
Electrons in their different sizes and magnetic potentiality belong to these particles. We should expose here that almost all electrons have satellites in turn rotating to their surroundings, which can also be considered as

electric particles.

Besides the electric particles, a lot of big particles exist that has capacity of creating important magnetic fields due to their big magnitude.

Now then, we are speaking of free particles inside the gravitational systems. But if for any event a gravitational system is destroyed all these particles can be liberated and divided if they are associate particles (for example electron and its satellites). Likewise if in this event the nucleus of the system is also destroyed, of this multiple nuclear pieces can go out, each one of them with its own magnetic capacity according to its size.

#### Luminous of electromagnetic particles



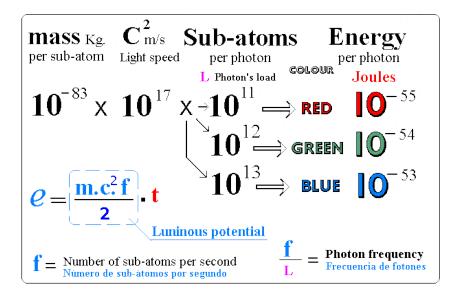
The luminous particles embrace a wide range of elements (all those constituted by mass and energy (due to their speed) at the same time) that go from the weakest radio emissions until the big photons particles. The luminous particles are constituted by packages of Sub-atoms (intro2) that can embrace from a single unit until superior groupings to 10^15 units.

These packages of particles can have disk form (galaxy type) as in photons, ray form as in the emissions of radio of Modulated Frequency and cluster form as in the emission of radio of short wave.

In the drawing these types of packages of luminous particles are exposed.

As it can deduce from the drawing, frequency depends on the quantity of clusters of sub-atoms that we receive for unit of time, keeping in mind that each cluster will give us a wave pick or frequency. Also we can see (red) the sub-frequency that sub-atoms produce.

### Luminous energy and formula



In the superior drawing we see as we can develop the formulas to measure the energy of a luminous source or radio frequency of. (Also particles and objects when changing the light velue c for the speed v of particles)

The formula on following the general rule of kinetic energy in the bodies in movement consists: Eo =  $m.v^2$  / 2.

- --The first thing that it is necessary to keep in mind is the mass of each sub-atom that composes to the luminous particles or photons (or the sub-atoms that compose each cluster or wave of radio frequency). This mass as we already know it is approximately of 10^-82 kg.
- --Later we apply the speed (square of speed of light) that it will be of about 10^17 m/s.
- -- Then the quantity of sub-atoms that a photon contains; about 10^11 units.

Multiplying everything we will have the energy for each received photon; about 10^-53 Joules.

(We don't divide for two because we don't try here to obtain an exact result, but an indicative result).

As for the colours, as we see in the drawing, we consider that they are due to the energy that we receive with each photon, so when the photons are bigger the energy is bigger too, and therefore, the colour more near to the blue.

Similar happens with the speed that photons arrive to us, because if we circulate swiftly toward a ray of light this will hit us with more force (also energy) and therefore with appearance of being nearer to the blue.

Because well, once obtained the energy for each received photon, we multiply this energy for the quantity of photons that we receive per second (frequency) or entirely to find the received total energy.

As we can see in the drawing, for getting a joule of energy we need 10<sup>53</sup> photons about.

On the other hand, if my theory is right, Planck used bigger particles than photons for getting his quantum number h.

#### Frequency f.

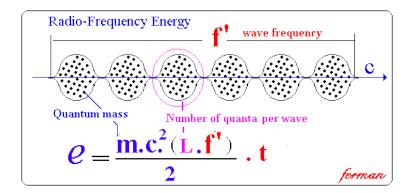
The frequency **f** represents the quantity of sub-atoms that we receive for unit of time. Therefore when we are referring to radio-waves, photons or particles, this term consists of two parameters:

L load or number of sub-atoms for each wave (portion of wave that we receive) or particle and f' will be the frequency of these waves or particles.

 $\mathbf{f} = \mathbf{L} \times \mathbf{f'}$  As we see, this formula for energy (drawing) is valid for waves, particles and objects (changing c for v)

Against, the formula E = h .f (with Planck constant) alone it can be applicable in waves and always with arbitrary character and lacking quantum value ( Due to, as for my theory, quantum mass -sub-atom- is near to  $10^{-79}$  g. and quantum luminous energy is  $10^{-65}$  joules.)

## Development of the luminous energy formula



In this chapter we can see my formula for energy, this case specific to radio frequency. In each wave we have the load or quanta number **L** that compose this wave; **m** represent the mass of any quantum. (The load **L** is the portion or potential of each wave that we receive, as for the used device)

#### Colour and spectra.

As we have seen in the explanation of this theory, as much the gravitational fields as the magnetic and electric charges depend on the magnitude of the systems (atoms, stars).

Therefore atoms in whole are that emit or capture energy.

This way in the case of the luminous spectra of the atomic elements to high temperatures (or in any state) it is the totality any atom that admits energy and emits the surplus energy in each moment.

So each atom will have a capacity or emission force according to the magnetic potential of the same one. Of course this question also depends on the circumstances of temperature, atomic bonds, etc. to which each atom is subjected in each moment.

In the case of the emission of heat and colour, the same thing happens. Although in principle it is the atom in whole that emits energy by means of a type of heat or colour, on this question also influences temperatures, chemical bonds, different types of atoms of a material, etc.

But the high-priority question to keep in mind it that atoms in whole are that emit energy, and not electrons.

## Radiation of matter: Bottom Radiation.

My cosmological theory points and supports the existence of an energy or radiation of subatomic type taken place by the whole matter existent in the Universe.

This radiation is possibly the observed bottom radiation, due to this radiation seems to come from all the places of the Cosmos, the same that my cosmic theory predicts when distributing the cosmic energy and matter through the whole Cosmos in similar proportions and in cluster of matter in the different levels of the Cosmos structuring (atoms, star, etc.)

The radiation of matter is the luminous radiation from the inferior level to the radiation of light that we observe.

We know for this theory that all the cosmic elements have their equivalent elements in any level of this Cosmos.

This way at a superior level to ours, the luminous energy is represented by galaxies.

In our level these equivalent elements are the cosmic rays of high energy.

In the inferior or atomic level they are photons.

And in the subatomic level -in any matter accumulation (atomic nuclei, electrons, particles, etc)-, other type of radiation exists. To this radiation I call it **matter's radiation.** 

This way, and as for their constitution, galaxies are formed by thousands of millions of stars. (About 10<sup>11</sup> stars).

The cosmic rays of high energy will be formed by thousands of millions of atoms. (10<sup>1</sup>1 atoms).

Photons would be formed by thousands of millions of sub-atoms. (10<sup>11</sup> sub-atoms).

And the radiation of matter would be formed by thousands of millions (10^11 of sub2-atoms or intro 2). If we revise the relationship of elements from a level to other, we will see that there will be about 10^57 photons for each cosmic ray of high energy. Also 10^57 sub2-atoms for each photon.

Therefore and adjusting the total energy of the photons that circulate for the space, we have that this energy should be similar to the radiation of matter or bottom radiation. The only variants that we have are the distances in each case of where these radiations come, and therefore the distances that we are from to each focus of radiation and potential of emission of the same one.

The reasons that make me think that the radiation of matter of my theory and the bottom radiation are the same thing would be:

- -First, because the bottom radiation comes from all the directions of the Cosmos and my theory bet for the existence of mass and matter in all directions.
- -Second, because my theory is according to the existent matter in the whole Universe forming matter accumulations (...sub-atoms, atoms, stars, supra-stars..), which could be justified by the observed lumping energy in this emission of bottom radiation.

## **Luminous effects**

#### Calorific effect -- Photo-electric effect

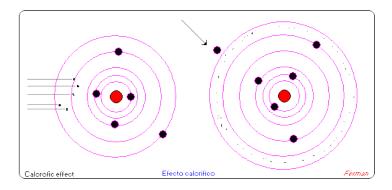
We know the Law of Universal Balance that tells us that:

"All the gravitational systems as atoms and stars tend to have the same energy density".

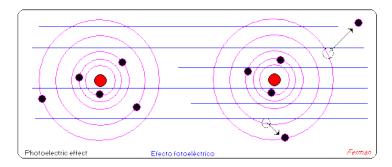
So if we give energy to an atom, this circumstance produce energy unbalanced in it being necessary an energetic readjust. This atom has to increase its volume to assimilate the given energy to maintain the same density of this energy, or to expel energy with object of continuing maintaining the allowed middling energy.

The chosen procedure will be consequent with the characteristics of each atom and of the class and potential of the given energy.

In this summary to facilitate its understanding, I will mention two prototypes of examples that are the photoelectric effect and the calorific effect.



In the photoelectric effect (first drawing) when being atoms inside the pass of a potent source of luminous energy, to which this atom cannot manage due to its speed and autonomy, in this case atom have to expel one or more external electrons and later to pass interior electrons to these external positions, getting with it to compensate the luminous energy in which are immersed with loss of energy in electrons form.



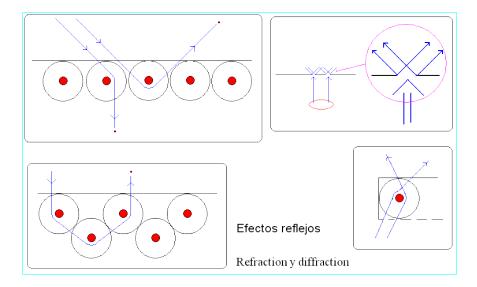
In the calorific effect (drawing 2), atom can manage and absorb the calorific particles that are receiving. Later atom proceeds to acquire an electron from the exterior, increasing its volume and compensating the acquisition of calorific particles with this increase of volume. In such a case the half density is gotten by increase of volume, calorific energy and new electrons at the same time.

Now well, the photoelectric effect type (give electrons) occur very often with calorific energy also. For instance in the incandescent lamps, chemistry reactions, etc.

#### **Reflection effects**

Refraction and reflection are two physical phenomena that light produces when colliding against a surface being reflected so much toward the exterior of this surface as toward the interior of the same one. Contrarily to what it thinks at the moment, my physical theories bet to be a phenomenon taken place by the deviation of the material particles (photons) for the atomic nuclei of the surface where the luminous beam collide.

The direction change that light takes is due to the gravity of the atomic nuclei that make photons bend according to the side for which they leave to the atomic nuclei when photons pass next to these nuclei, as you can see in the drawing 1.



The reflection (frontal) would consist on the same phenomenon but taken place for more than an atom as we see the drawing 2.

This same circumstance would explain the deviation phenomena in grooves of slits (diffraction) when passing a luminous beam, due to the deviation that the edges of the slits that would act as reflective surfaces take place as you see in the drawing 3.

Likewise, this theory would demonstrate that prisms can produce the rainbow of colours that we know because of the different dimensions of the photons would produce different deviation angles due to photons would be more or less influenced by the atomic nuclei according to their mass.

On the other hand, and as for my viewpoints, the Sagnac and Michelson-Morley experiments are according to light or photons can be material particles, which could be influenced by the addition of velocities. For example, in the experiment of Michelson-Morley when being the emission source in movement, the speed of light increases in all the directions, with the following particularities:

In the perpendicular arm the distance is same in both directions and therefore the used time is same too. In the parallel arm to the movement direction, the biggest distance that light cover in this direction and sense is compensated with the smallest distance in the contrary sense and therefore the time of journey is also same.

# **Quantum Mechanics**

## **Errors y predictions**

Quantum mechanics, which very often qualifies to classic mechanics of coarse and lacks of accuracy, contains to my to understand so many errors and absurdities that sometimes is near to ridicule. In this chapter I will try to schematise the errors and the changes that it can take place until ending up becoming in an acceptable and positive method of study.

As you will be able to see, at the end, quantum mechanics will finish explaining the cosmic phenomena almost in a same way as my theory explains the cosmic structuring.

We can consider that the origin of the quantum mechanics takes place as consequence of a surrender in the understanding of the physical laws to submerge in a lot of illogical and incomprehensible supposed behaviours of the physical elements, which to be far from the capacity of confirmation of our senses, many scientists define them without the consideration of their physical reality.

Many are the postulates or erroneous principles on that the quantum mechanics is based, which lead us to some results that as in the case of the distribution of orbital it ends up being truly ridiculous or grotesque.

#### Basic errors.

\*\*\* The basic and main error of this theory is its own essential principle that tells us:

The classic or Newtonian mechanics doesn't work in the micro-cosmos space, but the quantum mechanics that is governed by different mathematical and quantum principles.

This is erroneous and uncertain:

The forces, performances and behaviours of the Cosmos are always the same and they act in a same way in all the levels of the same one.

Apart from this, the other main errors can be:

\_\_\_\_Quantum mechanic compares particles to waves, so that wave mechanical and harmonic oscillation is used to define and to try of understanding the particles movements as if they were waves.

This consideration is erroneous since a particle is not comparable to a wave, because:

- --Particles are material elements or mass that moves completing the physical laws of the masses in such as movement, speed, acceleration, kinetic energy, momentum, etc.
- -- Waves are oscillations or vibrations of any material, more o less fluid, which is usually taken place by an external force. But the material that oscillates doesn't have to have any movement neither displacement and its physical behaviour is also different.

On the other hand, particles can produce waves on the fields of force or matter for where they move, but the produced waves have their own qualities and the matter or particles also have their own.

So, if we compare waves with particles, we can reach the conclusion that particles donâ $\in$ <sup>TM</sup>t move neither, and a so occur many times.

As we see, particles and waves don't have likeness among them, although some can produce to the other ones.

\_\_\_\_The second error to consider in the quantum mechanics is **the acceptance of the Principle of Uncertainty as work element**.

The Uncertainty Principle is inexact from its own birth when accepting as quantum unit to the constant of Planck (h).

This constant is an arbitrary unit of equivalence between energy and frequency. But this constant could have been any other one in which case the frequency would also suffer a change, but nothing else.

That is to say, h is not a natural quantum number, but an arbitrary constant to measure the relationship between energy and frequency. Not between certain and uncertain. Not between real and imaginary. But the Uncertainty Principle also consist on an ignorance principle on what is happening starting from certain limits in the conception of space-time that we possess. That is to say, we refuse to understand and to study what happens really in space, time, speed, and movement starting from certain limit that we call uncertain. Therefore, we establish ignorance as principle. It is not necessary for example to study the real movements of an electron or another particle because it is uncertain. Therefore the existence, creation, movement or speed of a particle can be uncertain, virtual, imaginary..... anything, but not comprehensible and well known.

The third error is **choosing the natural numbers as indivisible quantum numbers.** 

This is not this way, and so much in the formation of atoms, distribution of electrons, measure of speeds of particles etc., exact numbers for the performance and measure of these phenomena don't exist. So between any number and the following one it is possible any formation and execution of physical phenomena. Therefore space, time, energy and matter are not influenced for natural quantum number, but rather they are variable in any proportion and circumstance.

\_\_\_\_The fourth error (the worst) it is **choosing the Cartesian coordinates** for the study and distribution of orbits in electrons.

We know perfectly that the energy and cosmic matter act on centres or nuclei and the forces there produced make rotate these nuclei producing rotational movements and coordinates of radial type and not of Cartesian type.

In this case radial coordinates should have been chosen (in my web Radial Coordinates) with which we would be distributed electrons in circular orbits around the atomic nuclei.

In the same way the Energy Orbits can be structured with application of the principles of quantum mechanics relative to the energy wells, and as I say, in this case they would be called energy orbits. As for the energy orbits, just as my cosmic theory explains, each one of them would be different among them and of course, in each atom.

#### **Predictions**

Keeping in mind the quantity of errors that quantum mechanics contains, it would be necessary to hope its future restructuring, which could be carried out in the following terms:

---Possibly the first thing that can happen is that studious of quantum mechanics reach the conclusion that electrons are not attracted by the nucleus of atoms, but from the energy fields (or "wings") that are created around the atomic nuclei.

It is logical because if they were attracted by the atomic nuclei, then electron would drop on these nuclei where they would finish being located. Then, if electron is caught by energy fields, here will be where the attraction is produced.

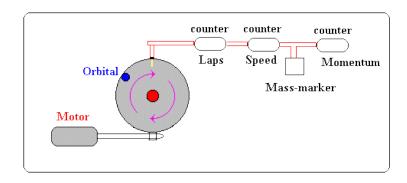
- ----Subsequently the studious could reach the conclusion that these energy fields consist on magnetic energy, which would be the producer of electromagnetism of atoms and of the electric forces.
- ----Later (or before) they could reach the conclusion that these fields of magnetic energy should be produced by the atomic nuclei and they would begin to speculate on what nuclear element produce these magnetic fields.
- ----Surely in this time, any expert could think that the distribution of electrons has been wrong applied and this distribution should have been made in circular form in orbits around the atomic nuclei, just as it is observed in all the well-known cosmic formations. So the studious could say again that Bohr almost was in the certain thing.
- ----In another great advance in cosmology they could end up concluding that it is not necessary the multiple particles existence in the atomic nuclei. Because the same that happens with gravity, the magnetic fields that distribute electrons around the nuclei, also could be produced by matter (like in stars, planets, etc). Therefore alone with matter in the nucleus of atoms is enough to conform these.

Therefore in the atomic nuclei there is matter only, not particles.

And if a nucleus is destroyed, alone pieces or material particles are produced, each one of them with its own capacity to produce gravitational and magnetic fields according to its magnitude. Likewise able to be created their own companions according to their gravitational and magnetic magnitude.

Therefore, in several stages we would have arrived to the acceptance of my cosmic theories and to transform the quantum mechanics into something similar to the reality and not as distant as it is now.

### Certainty principle



### **Certainty Machine**

"Physical uncertainty doesn't exist. What exists is mental uncertainty"

The word physics means "real, certain, existent"

As it is exposed above, uncertainty is not a problem that the physical elements suffer. Uncertainty is a problem that we the human beings suffer when we try to know physical phenomena and we don't have the necessary means for it.

In the drawing a simple device with the one we can make rotate any mass element (from a matter piece until a quark or more) is detailed, and by means of counters we can know the rotations that they have: the laps, speed and momentum that they have in any moment.

If we didn't have counters, when the particle (blue) rotated to several revolutions per second, we would stop to observe it and starting from then its situation would be uncertain.

Uncertain? Yes, uncertain for us because we have leaved to see it. But its physical situation: state, speed, momentum, etc. they last being completely real and certain. Nevertheless, as we have counters that show us, so much its turn frequency, speed, as momentum are known in any moment.

All this demonstrates that the states and physical phenomena don't have uncertainty. The uncertainty is in us when we don't have the appropriate means of measure.

But also, to apply a uncertainty measure on a physical phenomenon it is necessary to know the physical laws that this phenomenon must complete, because otherwise we can be looking for results in the wrong place and in the wrong time.

Therefore, apart from having exposed in the page of quantum mechanics, the most important errors in the uncertainty application would be:

- -- To attribute uncertainty to the physical phenomena and not to us, and
- -- To forget and refuse physical laws when we find results on the physical phenomena and to apply uncertainly elements only.

Therefore uncertainty just as it is treated now, on estrangement of reality consists, diving in an imaginary world in which we don't have to know the physical foundations, and using simply mathematics formulas we can forge an imaginary physics to which some people could understand -they say- with easiness. But clear everything will be an illusion; nothing is real.

Therefore "any resemblance with the reality will be pure coincidence."

So, Quantum Mechanics and its Principle of Uncertainty are virtual mathematics only, but not physical reality.

Therefore it is necessary to establish the Certainty Principle in the field of the physics, since if the physical elements complete all physical laws, then their state are completely certain.

Also predictable if we have the enough knowledge to make it.

If not, it is a human problem, not a physics problem.

#### FROM THE SCHRODINGER'S CAT....TO THE FERMAN BIRDS

All us know the conclusions of Heisenberg (Schrodinger) about gauging on the position and momentum in particles if we use light as means of measure.

- -We can't measure the position of a particle without affecting its momentum.
- -We can't measure the momentum of a particle without affecting its position.

Solution given by these scientists: The situation, trajectory, speed and momentum of particles are uncertain. But it could have other many solutions to the problem. For example:

- 1.- We measure the position first, and later on we can measure its momentum.
- 2.- Look for methods of measure that have non-interaction with particles. For example when measuring emissions of their electromagnetic waves, nmr etc. Or wait to invent better methods of real gauging. Likewise we know the problem of the Schrodinger cat, which gives us the same orientation of uncertainty. Now well, with object of contradicting or differing of these scientists, I would like to give a simple example, exposing the solution that I suppose these scientists would give, as well as my own conclusions.

Let us suppose that a scientist lives near a lake and he see as every day flocks of birds go toward this lake. Once wakened up his curiosity, the scientist decides to study the behaviour of these birds and, notebook in hand, leaves toward the lake to make notes about the life of these birds.

However when he comes closer to the lake, the birds see him and they escape frightened. There has not been luck and the scientist has not been able to observe anything, neither to take any note.

The following day in spite of taking more cautions, the same thing happens and the birds also escape without having been able to be observed by the scientist.

After repeating this circumstance successively, the scientist reaches the conclusion that he won't be able to observe the behaviour of the birds. And as he is a good mathematician, he decides to invent a formula of uncertainty on the behaviour of the birds, reaching the following conclusions:

- --A high percentage of probabilities that the birds go to the lake to drink exists.
- --A high percentage that they go to feed also exists.
- -- A smaller probability that they go to take a bath exists.
- --Few possibilities that they go for swimming exist.
- --Several possibilities that they go to get pair exist.
- --etc. etc.

With all these data our scientist reaches a final conclusion: The behaviour of birds is completely uncertain. And subsequently invent a formula or Principle of Uncertainty for the behaviour of all the birds.

However, years later, somebody provides him of a video camera, which is able to hide near the lake and to record the supposed uncertain behaviour of birds.

The visualization is simple: The birds arrive at the lake, subsequently they settle in the bank, after they walk entering in the water, later they drink till to be satiated, then they take a bath and finally they take the flight again.

So, this proof demonstrated that their behaviour is real, certain, simple and predictable. Then, where the uncertainty was? In the scientist's mind, of course.

Because well, let us wait that "video camera" is invented soon, and so that, to check and to understand the movement, trajectory, speed and momentum of the subatomic particles will be able.

For example, my cosmic theories -if they are correct - can solve these problems since studying the elements of our solar system and to apply the relationship coefficients with regard to our atoms, we can get the correct results.

## Chaos

#### Physical concept of chaos

My definition would be:

"Chaos is the interaction of autonomous sub-systems when they are observed and considered as a unique superior system".

For instance, if we observe a crowd from a skyscraper, we believe we observe an authentic chaos. But what we are observing is the interaction of many people, each one of them having its own reasons and circumstances to be there and to circulate in that certain moment.

The main difficulty to predict results take place because of each sub-system could be composing in turn by many other minor autonomous sub-systems and so forth.

So, chaos is interaction among systems of very difficult measure and resolution.

"Therefore, a chaotic situation or chaos can take place when many autonomous sub-systems are forced to interact among them and to develop their peculiarities inside the same place in the space".

---On the other hand, the chaotic development is so fruitful and of such fecundity that we can consider that chaos represents the base of the cosmic and biological evolution. Metaphysically we can say chaos or chaotic development is the method that the Intelligence and Universal Feeling use to create and build our Universe.

Itself, chaos is creative intelligence because it unites and compares different Cosmos elements giving as results authentic acts of creativity.

#### Genesis of chaos

In the Cosmos, the nature and physical characteristic of chaos come from the own nature of the cosmic structuring.

Cosmos is structured by means of the union of infinitesimal energy points (space-time), which give infinitesimal points of matter later on. This matter has the property of being attracted mutually due to gravity, and for this reason, matter is structured in gravitational systems in such exponential order as: Matter points....., sub-atoms, atoms, stars, extra-stars and so forth.

So in the Universe, small units of matter join to form other bigger ones; these in turn join to form other bigger ones and so forth. Therefore the Cosmos structure is an exponential composition from smaller systems to bigger ones. Any physical element o system in the Cosmos doesn't exist, but as group of other smaller ones.

We could say therefore that any cosmic element is a system that in turn is composed by other sub-systems. Now well, the properties, characteristics and behaviour of any cosmic element depend mainly on the behaviour of its components.

Mathematically, to any Cosmos element we can consider it as a variable that in turn depends of the other variables that compose it.

When in a certain cosmic space many cosmic elements exist and all they must subsist in this space, logically they must interrelate and interact jointly and to produce some common results if we observe them as a group or unique system.

Now then, when all the elements or sub-systems of this space interact among them, the results that take place depend on two types of factors, which are:

The influence that each element of the group suffers as consequence of its own component variables, and the influence that suffers because of its interaction with the neighbouring elements.

In this case we will say that the group or chaotic system is doubly influenced:

- --First (underlying) coming from the variability and autonomy of its component sub-systems and
- --Second (co-lateral) due to the interaction among these sub-systems.

So, in my opinion the initial point of departure in the chaotic adjustment is not of maximum importance because we should already know it. The important thing for me is the underlying variables of each element and the influence that the interaction with other elements can cause.

For us, the possible results of a chaotic situation it is of very difficult solution, because so much the variation

of all the sub-systems that compose this chaotic situation as the way of interaction of these sub-systems are not within the reach of our knowledge.

Nevertheless, the question depends on the accuracy with which we want to obtain the results. If for us it is enough a mere approach, in this case we can obtain useful results for our necessities, and for it will be enough applying the knowledge of the variables that we know of each sub-system and later to value the possible interactions among sub-systems in a foregone and approximate way. In this case, the exactitude of the solution will also depend on the chaotic potential of each situation.

On the other hand, Cosmos has this question very easy because in chaos each element or sub-system has its own autonomy and it takes implicit its own physical laws for performance, so Cosmos alone has to wait results and later to marvel of the gotten creativity.

## **Factors of chaos**

Although we have said in anterior chapters that in most of the cases of chaotic situations it is not to our reach the total adjustment of parameters, we can study this situation by means of modules or factors that help us to understand better what the structuring or functionality of chaos is.

This way, we have observed in chaos parameters such factors as the number of elements or sub-systems that form them, the autonomy or variability of these sub-systems and the interaction capacity among them.

--- The number of elements or sub-systems that form a chaotic situation logically should be important and can define the chaos capacity of the system that we are observing.

If many elements exist, then each one of them will increase the chaotic capacity of the system and for us it will be of more difficult solution.

- --- The autonomy or variability is also a factor of first importance in the chaotic potential of the system that we are studying. If the elements or sub-systems were static, the chaotic potential would be almost null, and if the sub-systems were mutable and movable the chaotic capacity it will be much bigger.
- In the case of the autonomy o variability we will always keep in mind the middle autonomy of the subsystems due to they will be more of one.
- ---The factor interaction on the other hand turns out to be a little more complex because besides its capacity or interaction width, other factors that increase or decrease the chaotic potential of the system exist. I am referring to the capacity or aptitude of **convergence** in the interactions. An **interaction can be more or less convergent or divergent,** and this characteristic makes the system that we are studying can be more or less chaotic. Convergence example can be a tree or an automobile.

A tree could have millions of sub-systems (atoms, molecules, branches, leaves, etc.); most of these sub-systems also have certain functional autonomy and regenerative mobility; also they have a lot of interaction capacity among them.

Now well, in spite of all these reasons it would not be correct to say that a tree has great chaotic potential. Where is the key for it? Because of the interactions of its elements or sub-systems are of great convergence, forming an authentic and stable system that we cannot call it chaotic.

"Therefore convergence is an attitude or characteristic of the systems by means of which the sub-systems that compose them due to their properties and qualities can be induced to form orderly systems, which can stand perfectly organized without characteristic of chaos".

# Study and simplification of chaos of feb-2009

# Chaos

## Static and Dynamic Chaos

### Order and Chaos

Let's remember firstly the definition of Chaos in Structural Cosmology:

"Chaos is the interaction among autonomous elements or subsets when they stay and move in the same vital space".

(So at first, all interaction or interrelation among elements can be considered initially as a chaotic state, although later on could be necessary to analyze its chaotic degree.

In this sense and in my set theory, three integration degrees of symbiosis of the set elements are given, which go from the scrappily set (where no symbiotic relation seems to exist) to the fusion set where a total integration or symbiosis exists, and the elements already form a much defined physical body.)

That is to say, for creating a chaotic state firstly we need the existence of elements with autonomy and own characteristics, and second that these elements can have interaction among them.

Of this previous explanation we also take out diverse queries that later will try of clarifying.

The most important would be respect to if chaos is a human appreciation only, or if chaos really has physical consistency.

## The observable Chaos

A first consideration to keep in mind is that chaos besides being a physical reality that takes place when all the elements of a group are disconnected some from other and they don't keep any type of structural relationship among them, but also chaos in some way is a subjective consideration of the people that observe these set.

Now then, the study of the physical reality would be very difficult and not very useful for us because we would never arrive to observe the physical reality in all their points.

For it, we study the subjective chaos that includes to the real physical chaos and also to the subjective chaos observable for us.

Therefore we should accept ahead of time that our measures are relative or observables measures due to the used units are not completely physical, but conceptual units that are adapted to our understanding.

This way in the static chaos we will see that one (1) chaotic degree represents the total chaos of the elements of the group and one (1) order degree represents the total order of the elements of the group.

## Classes of Chaos

We will consider two types or characteristic of Chaos that will be the Static Chaos and the Dynamic Chaos. As their names tell us, the Static Chaos will be given when the elements of the group to consider don't have motion.

You can also consider as static chaos to an instantaneous picture "photo" from a dynamic chaos that is taken for its study and consideration as static chaos.

On the other hand the Dynamic Chaos takes place when the elements of a group move inside the same one, and this way, another type of chaos take place that is the Fluctuation Chaos.

Here the important thing it is not the form and structure that the elements keep among them, but the change of mobility or fluctuation that each one of these elements can have regarding to the other ones.

This way if two elements coming closer one to other and they collide or they are simply rejected themselves changing of direction or speed, we say that what it happened is a double fluctuation due two element have changed of direction or speed.

#### Static Chaos

The static chaos has an important subjective component, say, that we can consider that a set of elements has chaotic consistency (or not) for the simple reason that its elements form figures, lines, etc. always from our point observation, although they could not represent any real physical ordination or coordination.

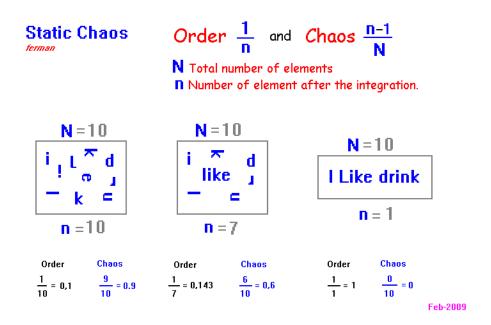
If for example in any paper we see several separate letters ( u s h e o ) we can say that they form a chaotic set.

But if we unite the letters and we form the orderly word ( h o u s e ) then we say that this set of letters forms an orderly set and no chaotic.

On the other hand if the word is in Chinese, for us the word could follow been quite chaotic. But this is a subjective idea of us, because from the physical point of view both states of the set should have the same consideration.

Now then, although they are subjective forms of observation, for us it is necessary to find methods of measure of these chaotic concepts.

And for it, I expose the following formula:



Previously we have seen two antagonistic concepts, Order and Chaos.

Order represents to the total integration and ordination of elements of the group and Chaos represents the total disintegration and disorder of the same one.

This parallel study is important since when we change the structure of the set, we can realize that what one of the concepts win is lost by the other one: When chaos diminishes – order increases, and vice verse. Because well, here we have put some very simple formulas that I believe they fit inside the subjective

concept that we are giving to this study of Chaos and Order.

In this case the Order is represented by the formula 1/n where n is the number of resultant elements after the integration and ordination of the set.

And Chaos is represented by the formula  $\mathbf{n-1}$  /  $\mathbf{N}$  where  $\mathbf{n}$  continues being the number of integrated elements and  $\mathbf{N}$  the total number of initial elements.

In the case that we put previously (house), firstly we would have a set with five disordered elements (( u s h e o )) and after the integration of the letters with obtain a single element (( h o u s e )).

In this case the application of the order formula would be:

Before the integration: (( u s h e o )) 5 elements.

1/5 = 0.2 Od ordination degrees

And after the integration: (( h o u s e )) 1 integrated element.

1/1 = 1 Od.

----- And as for the Chaos we would have that:

Before the integration: (( u s h e o )) 5 elements.

5-1/5 = 0.8 Chd chaotic degrees

And after the integration: (( h o u s e )) 1 integrate element.

1-1/5 = 0 Chd.

On the other hand in the static chaos we don't consider to space and time as parameter that intervene in the same one.

In the previous example it doesn't care if the letters are small or giant, or if the set formed during one minute or one year.

## **Dynamic Chaos**

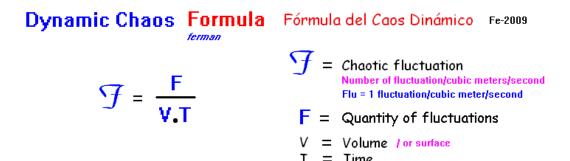
As we have said, the Dynamic Chaos has different characteristics than the Static Chaos since here what interests us it is the changes of motion of the elements that it will produce us that idea of Chaos of the motion.

Now then, in the dynamic chaos as in the static one a subjective great component exists, since perception of motion depend on our observation capacity.

Therefore here we say that the dynamic chaos is the one taken place by the motion changes or fluctuations that can be OBSERVABLE for us.

If the change is so small that we don't appreciate them clearly, this change won't produce us any chaos sensation, and therefore we don't consider it as chaos. Now then, if we can observe it by means of instruments or devices, or we simply want to make it to theoretical title, then yes, we can use any fluctuation for small that is.

To explain and to measure the dynamic chaos I have put the following formula:



Chaotic fluctuation is the observable change of motion or direction of any element due to own iniciative or exterior interaction

As we see this formula it is also extremely simple. Where  $\underline{\mathbf{F}}$  is the fluctuation coefficient or number of fluctuations for cubic meter and second.

F is the number of fluctuations measured in a set; V is the volume where the measure is taken; and T is the time during which the measure is made.

The dynamic chaos is relative and dependent of space and time, in fact because the motion is carried out inside the space and during certain time.

In the dynamic chaos the purpose is to measure and consider the movement changes, and therefore, to these changes we call them fluctuations.

And it is in fact the measure of the fluctuations taken place in a set what we try to measure with the formula. So the formula represents to the coefficient of fluctuation of the elements of a set, say, the number of fluctuations inside a set that are considered by unit of volume and time.

To the unit, which we will call Flu, it will be when a fluctuation takes place per second in a volume of a cubic meter.

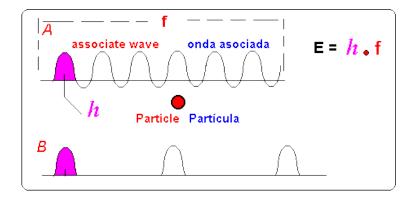
Nevertheless, the fluctuations can also be measured in surfaces o areas, in this case by square meter. Flus = Fluct/m2/s.

### Planck's constant h

#### Flaws in constant of Planck h

The Planck's constant h and its inclusion in the well-known formula  $\mathbf{E} = \mathbf{h.f}$  represents a too simple method, insufficient to embrace the physical reality of the energy emissions with associate frequency waves. The idea could be correct, but its quite incomplete; and inexact if we want to take this constant as real quantum number.

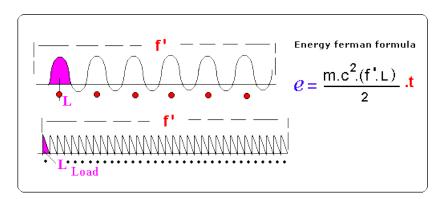
As we see in the drawing, when putting the formula E= h.f it means that h represents (when being constant) the quantum value of **a unique wave type** where f represents its frequency.



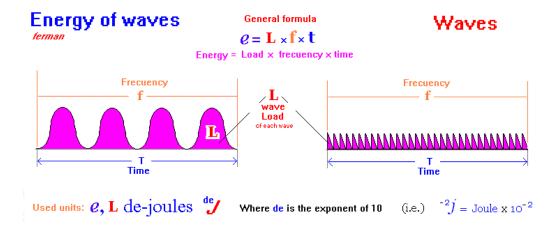
Now well, in physics the existence of alone one type of wave in the energy emissions seems completely unacceptable. A lot of types of waves have to exist, each one with its own width and potential or intensity, and so that, with different h value.

Also the waves should be united among them forming a continuous flow or oscillation.

But, as we see in the B drawing with the Planck constant h, the waves could form a continuous oscillation for one value of energy only; for lower values the waves will be separate some of other and for higher values the waves would be superimposed some on other, which will break the own value of the Planck constant. Therefore, the Planck's constant h and the energy formula E= h.f can be used if we consider them as relative, random or arbitrary number that we take as energy unit, but never as real quantum elements that can be transferred to other adjustments, as for example in quantum mechanics.

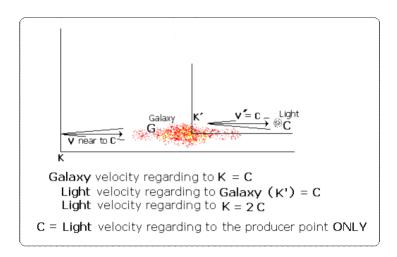


In the formula of the anterior drawing we can put the load L if we want to use quantum mass or quantum energy. If not, the mass m can substitute L, being this case m the total load of each wave or particle. Also is possible to use a quantum number of energy  $(m.c^2) = 10^-65$  joules.



## Errors in relativists theories: Einstein, Lorentz

### Light speed



This cosmic theory isn't agree with several postulates and Cosmos conception maintained by important scientists, as Einstein, Lorentz etc. in such topics as the characteristics of light as for its structure, its speed in relationship with different reference points, increase of the inertial mass when the speed of the object approaches to the speed of light, time variation to the speed of light, etc.

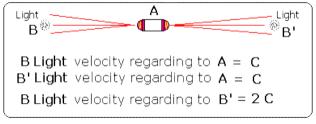
We will make reference in this chapter to the speed of light in relationship with different reference points. Photons like material particles that they are have the same mechanical or inertial characteristics than any other material particle.

They are produced and they are accelerated for magnetic "impulses" that shoot them from their origin places acquiring their well-known speed due to their small dimensions, because while other bigger particles take less speed, photons to be of very little mass and to receive a great magnetic impulse they are accelerated quickly and they acquire the speed of light.

Their speed is then that of light with regard to the origin place, but it is relatively bigger or smaller according to the movement of any other reference point with which is compared.

Therefore, photons in vacuum (hypothetical) are not electromagnetic waves, but rather they are material particles that taking great inertia due to its velocity and when entering in any energy field they can give their potential inertia transforming it into electromagnetic waves.

In the drawing we can see two examples of variation of the speed of light according to different reference points.



#### **Error** in inertial mass

Einstein postulated that the inertial mass of any material would increase spreading to infinite when this material circulated to the speed of light, since to get this speed it would be necessary to apply infinite force that is would transform into inertia mass by absorption of the applied energy in radiation form according to the formula:

$$E_o = \frac{m c^2}{\sqrt{1 - \frac{\mathbf{v}^2}{c^2}}}$$

This postulate is based on affirming that no material can surpass the speed of light, and therefore, when we apply force to a body and this acquires next speeds to that of light the body acquires the applied energy in radiation form and inertial mass.

As it is explained in the chapter Law of Universal Balance, this is not this way and what happens is that all force or energy, included the cosmic energy, goes diminishing its effectiveness as it comes closer to its development speed, ending up being null when it arrives to this development speed.

Therefore, as any matter goes taking more and more speed, the energy that impels it goes transmitting it less and less push force, until ending up being null its application or effectiveness.

In the following drawing we can see the mentioned formula with which we can measure the force applied in each moment depending on the speed of object to which is applied and of the speed of development of the used energy. Where:

Fa = Resultant force applied to the object.

P = Force primary power

Vd = Force development speed

Vo = Speed of the object

$$Fa = P. \frac{Vd - Vo}{Vd}$$

### **Error in simultaneity**

Relativity studies as the example on the fall of two rays on the embankment of a railway and, as conclusions, that each system of coordinates has its differentiated time of any other system of coordinates it is erroneous according to the studies and conclusions of this theory.

It is erroneous because they subject the real happened event to the variables of the speed of light and of the situation of an observer on the embankment or inside of the train.

Here we could ask the following question: if the means (light, sound) were ideal, that is to say instantaneous, it could be proven easily for any system of coordinates existence of simultaneity, existing therefore absolute time. Then if theses communication means are not ideal, in the Universe simultaneity leaves of existing?

Certainly not, the means of communication cannot affect to the execution of the facts. Any event has absolute value with regard to time and space in its absolute values, and with regard to the properties and characteristic of this event.

An event has its own interior characteristics and it can seem relative or not according to the means that we use to value it. But the event is absolute with regard to itself and regarding to time and space in their absolute value.

Therefore we can expose two complementary principles about the relativity or the absolute value of any enclosure of space or time:

"Quantities of space or time could be or appear relative among them, but they take absolute value regarding to time or to space in whole" and

"Two or more sub-enclosure of space or time can take relative values among them but there will always be a superior enclosure for which the values of these sub-enclosures will take absolute value and simultaneity."

On the other hand, Einstein is contradicted himself when saying that:

The speed of light is constant for the whole reference points that we take, while space and time are relative and each reference point has its own time.

This cannot be true since so that the speed of light is constant for any reference point, so much time as space have to be constant (stationary) since, being speed equal to space divided time, if one of these factors was unstable or relative the result of the previous formula it would be also unstable or relative too.

Example of simultaneity: Train-embankment

Every time I revise the problem of the relativity explained by Einstein with respect to the fallen rays on the embankment I leave surprised as a scientist of his category could reach to similar conclusions and stiller, that many important scientists had seconded these conclusions without less contradiction. It is incredible. Let us see the problem:

Let us locate at certain time according to the drawing. Spain place and Spain time: 13 hours 25 minutes 39 seconds and 25 thousandth of second of any day.

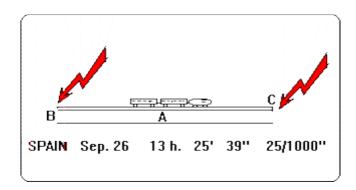
In this hour and on an embankment (example of Einstein) inside the Spanish territory two rays fall, which are simultaneous to fall at this hour, since the Spain time is common for the embankment, for the train and for the whole Spain territory.

But not alone they are simultaneous between them, but with any other thing that happens in this hour on the Spanish territory, that is to say, they are simultaneous with millions of events.

If now we locate fifteen observers in different positions: Close and far from the embankment and inside the train that goes by the embankment, we can have the following conclusions:

- 1) If the observers are stupid or without physics knowledge, each one of them will give us different version about the event depending on its situation; even if one of the observers is blind and alone he can listen the thunder, he will tell us that the event happened quite after than this event occurred really.
- 2) But if they are intelligent and they have enough knowledge on physics, each one of them will adjust its situation with the speed of light and the speed of the train (or the speed of sound in the case of the blind man), reaching the conclusion that the rays fell simultaneously.

Therefore the simultaneity doesn't depend on who observes it, but of the global time in that the events happen.



Example of simultaneity: Distant events

To explain the principles exposed in the previous chapter we will give an example in which we understand the simultaneity of two distant events of which we cannot check their specific simultaneity but we understand that this simultaneity exists.

Are two people taken as example of systems of coordinated in movement.

These people inhabit the same city (Malaga) but one lives to the east of the city and the other one to the west, and they are not known themselves neither they have any contact between them. Therefore they can be considered as two coordinate systems with their own relative spaces and their own relative times.

To justify the principles before mentioned, we will take a space-time enclosure that is superior and common for both, which will be as space the city of Malaga and as time the 26 day of September of any year.

This day each one of them will develop its own life, its work, its leisure, etc.

Nevertheless and when being alive and to exist both during that day (September 26) it doesn't have any doubt that in any moment of this day each one of them will be making something that will coincide with what the other one is also making.

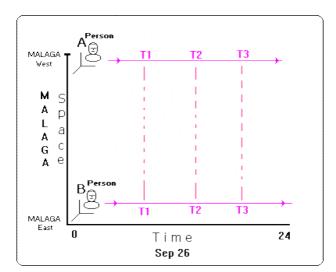
Therefore we know that during the whole day they will be making simultaneous things.

We know that there will be coincidence of acts carried out by both, although clear, we (and they) will never know which will be the coincident acts because we don't have the adapted media for it.

Therefore not being able to demonstrate the simultaneity of the different physical events doesn't mean that this simultaneity doesn't exist; it simply means that we don't have the appropriate media to check it.

So, it remains clear that the simultaneity exists inside a superior enclosure that embraces appropriately to the two enclosures where the events are developed.

In the below drawing a demonstrative example is exposed graphically.



#### Error in decrease of time

That Einstein is wrong in many of his postulates and concretely when time decrease to the speed of light it could be demonstrated mathematically from points of view relativistic and non-relativistic.

Here, so it is not necessary to mix and to confuse theories, I will put on a demonstrative example from the relativistic point of view exclusively.

Let me put an adjusted example.

Supposedly we have gotten a spacecraft that can circulate next to speed of light.

With this, we will take a trip from the earth to the moon whose distance of us we accept that it is of 390.000 Km.

So that we don't have doubts of the circulated space, we will put kilometric buoys from here to the moon, to go checking the space that we travel.

We take as reference point an observer in the earth and another inside the spacecraft with chronometer clocks.

We take the trip and the observers write down the rounded kilometres and the lapsed time.

According to the theory of the relativity the observer of the earth would give as trip duration about 1Â'3 seconds.

On the other hand, the observer located in the spacecraft would give us much smaller time, about  $0\hat{A}'6$  seconds.

If now each one of them adjusts the speed to that the spacecraft has gone, the results will be surprising. The observer located in the earth will tell us that the spacecraft circulates at 390.000 / 1.3 = 300.000 km/s and we think that it is guessed right.

On the other hand, the observer located in the spacecraft will tell us that this circulated to a speed of 390.000 / 0.6 = 650.000 Km/s. The mathematic solution cannot be another since space doesn't belong to the spacecraft and it is invariable at any speed.

We see therefore that if the spacecraft circulates to 650.000 Km/s all the relativistic postulates are false since they maintain as invariable the maximum speed that you can get (300.000 km/s).

Therefore the basic principles of the theory of the relativity are against the time decrease to the speed of light.

Also, the error in time decreasing can be demonstrated in equation systems where two o more moving objects exist.

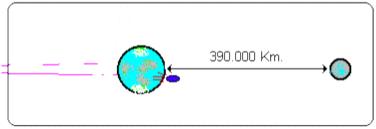
For instance,

- ---If from earth (A) we throw an object (B) around sun (C) in the same turning speed of earth and in contrary sense. Then time in A > B, but regarding C time in B = A and this is not possible.
- ---Analysing the supposed justification of time decrease that in airplanes the atomic clocks could show, we will see this decrease should be due to the gravity or another circumstance.

Let us see: If an airplane lifts off from Madrid with destination Mexico and with an approximate speed of 1.700 k/hour, we would have that the atomic clocks would give us a low decrease of time inside the airplane due to the speed with regard to their departure place.

However because earth rotates on itself next to 1.700 K/hour in the contrary sense, it would be Madrid who would take that speed, since the airplane would be really stopped regarding to earth, and therefore, the time decrease on the clock would not be due to the biggest speed.

This means we need to have a stationary space and a stationary time on which we can measure the real speed of an object, and not being this way, all the bodies that are distancing among them would have the same speed the one with regard to the other ones, and none of them will be stationary reference point to validate their speeds.



## Reference Frames

**Reference frames** are the different positions (of space, time, speed etc.) in which we can observe any phenomenon or physical event.

We must notice as base of this study that any phenomenon from different positions observed is always the same one, that is to say, invariable in its properties and characteristics. However our observation can be different according to the position that we take.

This way for example:

- --If we are located on the moon, we will see that all the other stars seem to rotate around the moon.
- --If we are located on the earth, we will see equally that all the stars and planets seem to rotate around the earth.
- --If we go on a highway and we go increasing the speed, the kilometres will seem to us shorter.
- --If we observe the moon at first sight and later on we look at it through a telescope, we will find that the moon seem has increased of volume.
- --If we are located in an embankment and we see pass a train whistling, we will find that when the train comes closer to us, its sound seem to be of more frequency and when the train goes going away its sound seem to be lees frequency.

All these examples and all the other ones that we can put on, show us in one hand that physical phenomena are invariables, and on the other hand, different observation frames exist and each one of them could give us a particular and inexact vision of these phenomena.

And so that the science is, to find the appropriate formula for each reference frame by means of which we can obtain the exact measure of the event.

Therefore the appropriate procedure will be:

- 1) To obtain the observation
- 2) To find the appropriate formula to come closer to the reality of the phenomenon
- 3) And after understanding the observed physical phenomenon, to check that we have applied the appropriate formulas.

Therefore, with relationship to the reference frames we should have in mind that:

- -- The physical phenomena are always invariable in its property and characteristics.
- -- Its observation can be different according to the taken reference frame.

Another consideration to take in mind is the different degrees in the qualification of the reference frames, question that is not considered in the transformation of Galileo neither in the studies of Einstein.

In the views of Galileo and Einstein the motion is consider as simple circumstance without considering the cause of this movements.

But this is not this way, and all motion has as principle and condition to the force that produces it, and in fact, the necessity of all force to lean on in a reference frame or field to exercise its influence is what conditions that all motion has attributed an initial reference frame where this motion is supported. Besides, this theory bet for the almost non-existence of "ideal places" for the reference frames of Galileo since through the whole space fields of force and energy exist (gravitation and magnetic fields) that condition the motion of masses.

In this case I would define an initial frame of reference as **emission source** of motion and one or more **development frames** of motion, which are used as support points for the development of this motion. These development frames of motion can be from the simple space, fields of force or vectors of force (p.e. in collisions), which can go varying the motion.

As we can see, each reference frame could have its own degree of influence in the motion, and all they can influence jointly in any movement.

So, the emission source could be the main frame of adjustment of the motions in many cases; question that very often forgets, reaching conclusions so not very fortunate, as those that end up in the theory of the relativity when studying the speed of light.

So that, and to understand better, I could simplify this question putting:

# Reference frames and development frames of the physics events.

We know that a reference frame is a point or place where we can OBSERVE and/or measure -with regard to that frame- to the phenomena or physics events that take place in that or other places of the space.

This way for example if we go circulating on foot for a road, our walk can be observed and even measured by observers located in different points of the space.

This way, to each one of those points where our walk can be observed, it is to what we call reference frame. However we should distinguish clearly (and it seems that at this time it is not made appropriately) what is a reference frame of observation from what it is a Development Frame, that is to say, on which is carried out the physics event in question or the execution of the same ones.

This way in the example of our walk for the road, the development frame is ours: The road that serves us as support, and us, the bodies that move for that support or reference space.

The other ones, those that observe us in other positions, are single reference frames for the observation. Reason is so important this distinction?

Because the development fames are those that intervene in the execution of the events and therefore they build it, support, date and affect to these events.

The other ones, the reference frames, they alone observe and take relative data to their position. But they never intervene, change or influence on these events.

In the example, when we circulate for the road, it is this road and our capacity of walking that determines the movement, but never the position of an observed, neither the relative movement that our development frame has regarding to other reference frames.

That is to say, our movement is not affected by the speed of the earth; neither of an automobile that passes next to us; neither the movement of the earth around the sun, the sun on our galaxy, etc. The whole event is executed inside our development frame.

Now well, this distinction between reference frames and development frames is very important because in the current physics, the temptation (mainly, relativist temptation) of proposing the influence of the reference frames on the development frames of the physics events exists.

This way the disastrous sentence (according to my point of view) of Einstein saying that of "The motion, time, .. etc. of a physics event depends on an observer located in....". Certainty not. It depends on the development frame of the phenomenon in question only.

Similar atrocity can be translated into other properties of light and vision, and as example, Relativity could also say:

The dimensions of an object depend on an observer that is located at ....., That is to say, if we are far from the object we see it (AND IT IS) smaller, and if we are close to it we see it (AND IT IS) much bigger. Because not, neither the size, speed, force, time, etc. of an object or physics event depend on any observer.

Each one o them has its own characteristic and properties independently of possible observers.

And already as example of what I am speaking, I put the experiment of Michelson\_Morly, where it is attempted that the external frame of reference -the earth- influences in the movement of the luminous ray in the system of mirrors.

In this case as in all, the exterior o reference frames don't influence the development frames of any event. Not the earth frame or its speed, neither the movement of the earth around the sun, neither the movement of the sun inside the galaxy, etc.

The only influence frame is its development frame where the physics event is created, supported and executed, that is to say, the system of mirrors.

Therefore the only data to take into account for the system influence are the distances characteristic of the arms and the unique existent speed inside the system, the speed of light. The other reference frames don't influence in the process.

#### Other differences between development frames and reference frames can be:

- ---The development frames are where the physics events take place and they don't need of the existence of an observer.
- \* Rivers don't need of an observer to can run.

The reference frames are different places to where the physics events take place, and on them any observer had to exist, because if in this reference frame dontt exist observers, then this frame doesn't have sense neither consistency.

\* A river can have infinite reference frames, but only when a place had any observer or means of observation can be considered as a reference frame.

If observation doesn't exist -- then reference doesn't exist. Observation gives reference.

---Apart from this, the development frames have attributed fields of force, inertias or energy that impel to the objects that move in these fields.

Against, the observation or reference frames what need are observers and observation means to measure to the development frames.

## Scalars of time and space

When I contradict the relativity postulates of Einstein, also I often expose and his great intuition. At the end I use to conclude that:

#### "Einstein had a great intuition, but bad resolution in his postulates."

Now well, to my to understand another bad resolution of his great intuition it was the one with respect to the definition and postulation of the differential in the local times.

As for I understand the question, which I have explained in the topic of the simultaneity:

"For two reference frames or two distant systems of time and motion that are observed separately, an apparent disconnection, discontinuity or locality can exist, but there will always be a superior system that contains and include to these two reference frames in which is proven clearly that this discontinuity doesn't exist and that the whole space and time are stationary and continuous for both reference frames."

This means that the locality or discontinuity of space or time doesn't exist.

This definition or principle on the space and time tells us that a medium infinitely great of space exists and an medium infinitely large of time also exists in which any space or local time are included and therefore these space-time local can be measured as completely stationary and invariable regarding the entirety of the space-time.

Now then, the whole space and time of the Cosmos melt giving us the cosmic energy, matter and all motion that take place in the Cosmos.

This case, so much the cosmic energy (gravity), matter or the forces and motions -that this energy produces-can be concentrates, to be added, opposed, etc., and even they can influence some in others.

But it is always changes at levels of energy, matter, forces or motion, but they never influence in space and time, which are the primary and unalterable elements of the Cosmos.

Secondary elements of the Cosmos (energy, matter; forces, motions, speeds) never can influence in the primary elements as they are space and time.

Then, we can say the secondary elements can have different density through space, but primary elements are stationary through space.

Now then, as so much time as space complete the mathematical laws, included the exponential or scalar one. That means that we can choose in the space or time infinitely big or infinitely small units according to our necessities. And these cases, according to the unit that we take, we will be this way studying and observing different cosmic elements.

In relation to space, if we take years light we will be observing stars and galaxies; and if we take angstroms - or atomic metres  $Amt = 10^-23$  metres-("Vital space in the atomic level") we will be observing atoms and molecules

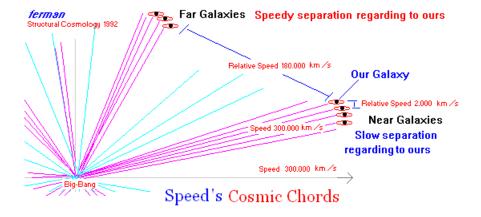
And in time the same thing happens: If besides choosing atomic metres Amt, we choose times units of atoms **atomic seconds** Asc =  $10^{\circ}$ -23 seconds ("vital time at atomic level"), we will be living on an electron and being studied its rotation movement (annual) around the atomic nucleus.

And here seem to be the main problem that physicists have today; that they don't take in mind the scalar time and they try to see in one second the trillion turns that an electron gives for second; or the trillions of positions and changes that any unstable particle travels or takes place in one second, all which is not possible to measure because our time of "reaction or observation" it is infinitely bigger than their time of performance.

Therefore, the virtual concept in particles doesn't exist, neither their real appearance and disappearance, but their change and magnetic adaptation in infinitesimal times and whose process we cannot observe because our relative or "vital time" is vastly slower.

----In the same sense, the scalar property of space is not considered when adjusting the gravitation in atoms, which -together the ignorance of the integration effect- makes that the modern physics considers separately two atomic forces (Strong forced and gravity) when in fact it is the same one. To adjust the gravitation in the atomic nuclei it is necessary to consider atomic space units that are very small, and their square until our level or distance from these atomic nuclei that is enormous, in order of 10^46.

# Speed-Chords in galaxies.



As we have seen, my cosmos model tells us that our galaxies are the equivalent (at stellar level) to the cosmic rays of high energy at atomic level.

And both are also equivalent to photons at sub-atomic level.

Therefore, these three elements are energy particles (when moving to great speed) that beginning their march with 300.000 k/s and moves through space to that speed.

But looking by a moment our galaxy and let us see some results, as can be the speed of the galaxies.

#### Speed of galaxies.

As I have mentioned that galaxies move near to the speed of light.

Then the question is:

- Why we think that they go much slower?

And the answer is simple:

- Due to the speed-chords (expansion angle) among the nearest galaxies to us that is very small when these galaxies have the same path than ours.

For instance:

When an explosion takes place, not all the resultant fragments go separating among them to the same speed, but rather those that go in the same direction (and so, very parallel among them) go separating very slowly; and those that go in contrary sense move away very quickly.

Nevertheless, if we locate ourselves on one of these fragments and proceed to measure the speed from our position, regarding to the nearest fragments alone, then we could think that we go very slowly.

However, if we measure the speed regarding to those that go in contrary sense, we would believe that we go very quickly.

And that is what happens in our galaxy when we measure our possible speed regarding to the nearest galaxies that go in the same direction and quite parallel to us: Because that we will take out the conclusion that we go very slowly.

And clear, with relationship to those that go in opposed sense we cannot measure because they are very far from us and we cannot see them.

So here we take out a very erroneous conclusion: The speed of our galaxy is very small with regard to that of light, when it is the same one (300.000 km/s., see drawing.)

Then, to this relative speed among galaxies (and not regarding to their departure position) it is to what we call Speed-chords of galaxies, because it is really represented by the circumference's chords that is created among the galaxies that expand and the initial position of the Big-Bang as circumference centre.