

Helical Helix : Solar System a Dynamic Process

By
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2008

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Helical Helix : Solar System a Dynamic Process
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DEDICATION
TO THE MEMORY OF
MY PARENTS
AND
TEACHERS

P. Keshava Khait
14.01.2008

*"Where the mind is without fear
and the head is held high
Where knowledge is free
Where the world has not been broken up
into fragments by narrow domestic walls
Where words flow from the depth of truth
Where tireless striving stretches its arms
towards perfection
Where the clear stream of reason
has not lost its way into the
dreary desert sand of dead habit
Where the mind is led forward by thee
into ever widening
thought and action
into that heaven of freedom
my father, let my **world** awake"*

Ravindranath Tagore
(*Geethanjali*)

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Curriculum vitae of Dr. P. Keshava Bhat



Born in Pallathadka, South India on January 3 1940, he was brought up in constant touch with natural life by his parents, Pallathadka Subraya Bhat and Lakshmi Amma. He is married to Devaki and has four children, all born in Cumaná, Venezuela.

Graduated from the **Madras University in B.Sc (1959), M.Sc (1961) and Ph.D in Botany (1966)**

Worked as a **Research Assistant** in the Madras Presidency College, Madras (1966-1968) and obtained **the Council of Scientific and Industrial Research (C.S.I.R) senior fellowship in 1968-1969.**

Worked as a **Senior Professor at the Universidad de Oriente**, in Cumana, Venezuela from 1969 to 1987 teaching Botany at both under graduate and post graduate levels.

In addition to the large number of scientific papers presented both at national and international levels, he has authored the following books.

Herbolario Tropical (1981)

Ayuda para el estudio de plantas con flores (1982)

Qué Como y Cuando comer (1984)

Herbolario Tropical : Una manera sencilla de vivir mejor (1985)

Las Bases del Naturismo : Naturaleza y bienestar humano (1991)

El Sentido de la Vida , desde el embarazo hasta la muerte (1994)

La Vuelta al Conuco : Produccion Naturista para un mundo en crisis (Co author) (1997)

Goodbye to Ruling Scientific Model, proposal for a new science (1997)

Sarala chikitseyinda samagra chintanadedege (Kavyalaya Mysore 2005) (KANNADA)

Dr.Bhat is an **ethnobotanist** promoting **Natural Health Reeducation Movement**. He has been teaching and training people on his philosophy in different countries around the world. (Venezuela, Peru, Colombia, Brazil, Dominican Republic, Puerto Rico, Nicaragua, Costa Rica, Mexico, Bolivia, Guadalupe, United States of America, Canada, France, Spain, Italy and India.)

Was elected as a member of the committee of experts in medicinal plants of developing countries during the first congress on medicinal plants held at Arusha, Tanzania in 1990. This event was jointly sponsored by the World Health Organization, South commission and the Government of Tanzania.

Participated in the Earth Summit held at Rio de Janeiro, Brazil in June 1992.

Presented papers at the International conference on Nutrition and Health held at Rome, Italy in December 1992.

Presented papers at the International conference on Medicinal Plants held at Bangalore, India in February 1998.

He thinks that the only solution to combat the prevailing health problems in the world, especially in the developing tropical countries is by means of self sufficiency, proper education, correct utilization of the existing natural resources and by implementing adequate change in living habits.

1. Herbolario Tropical : Una manera sencilla de vivir mejor .1985.

Versions in Spanish, English and French.

450 folk remedies using 64 tropical plants.

A popular house hold guide.

More than 120 thousand copies sold out.

2. Las bases del Naturismo : Naturaleza y el bienestar humano . 1991.

Versions in English and Spanish.

Conceptual and theoretical background for a new system of medicine for tropical area, useful around the tropics.

3. El Sentido de la Vida : Desde el embarazo hasta la muerte .1994.

Only Spanish version available.

A practical guide to youngsters regarding responsibilities as parents, delivery, child care, education, first aid.

Problems and possible solutions with senior citizens.

Includes a severe criticism of Cartesian model of experimental science with a proposal for a dynamic science.

4. El cosmos a traves del tunel espiralado infinito : Una interpretacion de los conceptos sobre nuestro lugar en la boveda celeste.1995.

English version available.

Describes a new model for the solar system . A helical orbit is described instead of a heliocentric orbit for planets.

5. Vuelta al Conuco : Produccion naturista en un mundo en crisis.1997.

A practical guide to farm work in order to develop a sustainable natural society in the tropics. 75 tropical crops are described.

6. Good bye to ruling scientific model , proposal for a new science.1998.

Only English version available.

A pioneer think tank material for further expansion with examples of new concepts, approaches , research and findings. A challenge to modern science.

7. Ayuda para el estudio de las plantas con flores (UDO, Oriente 1982) (SPANISH)

A practical guide and dichotomous key up to generic level for the study of flowering plants from the American tropics useful for students at pre and post graduate levels.

8. Sarala chikitseyinda samagra chintanadege (Kavyalaya Mysore 2005) (KANNADA)

A compilation of folk remedies and some chapters on new approach to health.

PROJECT URAGUA

In the year 1999 after celebrating 30 years of the reeducation movement in Venezuela, the govt of Venezuela through its establishments at Puerto Ordaz kept at my disposal 1160 hectares of Tropical Rain Forests on the banks of the Orinoco river at Delta Amacuro state. The main purpose was to develop a sustainable village model for tropical forests around the world, without damaging the natural resources . Sustainable agriculture, controlled ecotourism, health villages, alternate energy generation with sustainable technology and integrated education system were projected.

In the year 2001 the project had to be abandoned due to the absence of human resources to carry on the activities.

ETHNOBOTANICAL GARDEN, CHARA CHAKRA

Established in 1979 at Cumana, Sucre state, Venezuela.

A collection of 170 tropical plants, most of them considered as weeds in the agricultural science is grown for educational purposes and maintained. Regular short term workshops on sustainable agriculture, nutrition , astrophysics, health and diseases , yoga, garment making are held. Free orientation on health and nutrition is given to the general public and the community every week . Trained people work on similar lines all over Venezuela and in about 18 other countries based on the proposed system.

FUNDAVIME, a foundation registered in 1989 started functioning to promote, publish, conduct international and national seminars and workshops to demonstrate the sustainability of this method.

Sustainable farms are maintained on the same principles in Puerto Rico, Dominican Republic, Colombia and other countries. Other centres are being arranged progressively.

Efforts are made to establish an open University to promote all the ideas related to this movement .

Proposed future projects

I personally feel a need to establish a New Science Research Institute in India to train atleast 10 experts each in the following aspects of dynamic science:

1 . Astrophysics

Shape and orbits of planets, space travel, climate, ozone layer, hurricanes, sea level, origin and flow of rivers and many more related interesting topics.

2. Health and Nutrition

Treatment for tropical diseases like Leishmaniasis cutanea, Diabetes, Cancer, Allergies, Asthma, Psoriasis, Vitiligo, Multiple sclerosis, Parkinsons disease, Alzheimers disease, AIDS, Heart attack, Cerebro vascular accident, all kinds of Gastrointestinal disorders etc . with local and natural resources.

3. Health care combined with ecotourism

4. Ethnobotany (Classical Phytochemistry not used)

5. Botany (With a totally different perspective)

6. Sustainable Agriculture, Nutrition, Art of cooking and eating healthy food.

7. Life sciences and yoga ; Material Sciences.

8. Soft technology to obtain sustainable energy, clean air and water.

9. Dynamic science, Philosophy on science and think tank

10. Integral Education

New literature to support these lines of thought is under preparation. About 500 pages of manuscripts is ready for publication shortly.

At present, Dr. Bhat is engaged in conducting seminars and workshops in several tropical countries in and around the Caribbean coast.

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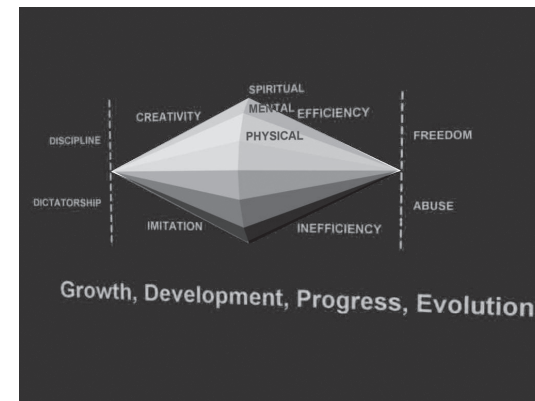
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INTRODUCTION

Science is true knowledge. Information is available in the dynamic nature. One has to observe the dynamic process with sensory perceptions and if possible, with extra sensory perceptions. The quality of the collected data depends on the preparation or training given to the senses, the systematic methods utilized during observation and pattern recognition. Personal discipline of the observer permits maximum efficiency. Physical mental and spiritual freedom of thinking, working and speaking permits creativity of action. Creative efficiency or efficient creativity is a basic tool for the scientist in search of worldly knowledge.

Figure 1



Definition of progress, Growth, Development and Evolution

To express such information critical analysis for integration of all perceptions is essential. An obvious conclusion based on logical reasoning should be coherent and self-explanatory.

One should develop vocabulary to maintain precision while communicating with others. That is where a language gets importance. Some experiences are beyond words or abstract in nature. Some patterns may require models for efficient communication. Only part of the knowledge may be communicated

in words. Words have significance but normally limited to specific objects or circumstances.

Table 1

Johannes Kepler Dec. 27, 1571 – Nov. 15, 1630
(Patrick Moore in Philips Atlas of the Universe 2003)

1st Law (1.609) A planet moves in an ellipse, the sun is one focus while the other is empty.

2nd Law (1.609) The radius vector- the line joining the centre of the planet to that of the sun-sweeps out equal areas in equal times. (a planet moves fastest when closest in)

3rd Law For any planet, the square of the revolution period (p) is proportional to the cube of the planet's mean distance from the sun (a) once the distance of any planet is known, its period can be calculated or vice versa)

The mathematical models for planetary movements presented by Tycho Brahe, Kepler and Newton in the 17th and 18th Centuries have been held in esteem for the past three centuries. Several assumptions are taken for granted in the name of Science or in the name of scientists. ***In a dynamic world concepts and assumptions accepted with a static fragmented point of view do not hold.*** In order to understand the complex process involved, direct observations as a whole and the expressed integrated pattern in particular should be undertaken.

The Cartesian scientific model preserved so far has not been critically reviewed nor it's faults rectified. In a heterogeneous tropical world, scientific norms are just those dictated by the European scientists.

No new paradigm has ever been entertained. Ruthless negation of other paradigms as superstition permitted the modern science and technology to project itself as the sole representative of Science as

true knowledge. This is why in every school program the contents are copied from the mainstream paradigm.

Cartesian Model

From a commercial point of view the modern civilization is maintained with high technology combined intimately with science in the name of knowledge. Modern society has benefited quite a lot with consumer goods or at least the life is made "easier" with gadgets. Modern society seems to ignore the dangers and imminent ecological problems caused by this convenience.

Table 2 (Rene Descartes 1596-1650 "Rational" theory 1644)

LIMITATIONS OF CONVENTIONAL SCIENTIFIC METHOD

The conventional scientific method -Cartesian mechanical one- usually adopts the following steps in order to determine the "scientific truth":

Step I. Observation of Nature.

In order to attain a better perception of the happenings in Nature the human being normally should make use of all the five sense organs (audition, tactile, vision, gustative and olfactory). Nevertheless, in order to measure isolated happenings the conventional scientific method employs only audition, tactile and vision. Thus, the observation is incomplete. The concepts used even in these parameters are usually obsolete, some are erroneous and many are prejudiced.

The observations are heterogeneous and realized at specific moments without taking into account the process as a whole. Other factors are not even considered (such as climatic, genetic structural or functional variables).

The absence of parameters to measure scientifically the taste and smell becomes evident at this stage.

Step II. Problem presentation.

The academic formation of the investigator and the available limited information are shortcomings or determining factors in problem presentation. The scope depends on the researcher and his point of view. Super specialization tends to ignore the process as a whole.

Step III. Arriving at a hypothesis.

The subjectivity of the researcher confines the hypothesis to a prejudice that expects to arrive at a specific result. The favorable results are then sought for, by all means.

Step IV. Experimentation.

This step is the most vulnerable one in the conventional scientific method. First of all the experiment should be repeatable. When the inherent dynamism of Nature is considered it is impossible to get two identical moments in relative space and time and thus moments are not repeatable. Experimental errors include human errors, instrumental errors and the variability of the external and internal conditions of experimental material.

As far as living organisms are considered there are no two individuals alike; one and the same organism is never identical at two different instances, the true dynamism of Nature.

Biodiversity is so complex and ample that so far it is humanly impossible to conduct a repeatable experiment. It is not possible to compare an “experimental” organism with a “control” one since the two are genetically, structurally and biologically different. The experimentation does not consider the individual qualities or organisms for lack of parameters to do so.

Step V. Theoretical conclusions.

Theoretical conclusions based on the four preceding steps are not reliable due to human and instrumental errors. Heterogeneous conclusions are not precise and hence are not comparable.

Proposal of a New Scientific Method

In order to vindicate a true science the following dynamic and better scientific method is proposed, on the basis of Natural Order and Way of Life (The Supreme Science).

Step 1. Identify the purpose of research in each case (always within humanistic ethics and respect to the Natural Order).

Step 2. Establish a simple and practical efficient and creative methodology adequately.

Step 3. Unbiased observation with all the senses with due respect to Natural laws and human integrity with a view to obtain a complete information in a comprehensive and organized way.

Observe the reality, recognize and avoid the illusions.

Step 4. Process the available data with logical reasoning and maximum possible objectivity.

Step 5. Arrive at obvious conclusions and comprehend the pattern in a natural process leading to the well being of humankind in harmony with nature.

Translated from Spanish from Bhat, Keshava, 'El Sentido de la Vida p. 70-71 (1994) Ediciones Vivir Mejor, Caracas, Venezuela.

ORIGIN OF ELEMENTS

In a dynamic universe everything moves. The primordial universe probably was formed of just particles. These particles started vibration and there commenced the motion. This type of motion served to make particles more compact at places and less compact elsewhere. The motion continued in a sequence and this produced curve. When the curve moved in all directions the process has developed spirals in every direction. Each galaxy continued revolving on its own faster and faster increasing friction. Naturally the particles got heated up and started glowing emitting flame all over. Some of these bodies became stars and others remained planets. Other celestial bodies of different descriptions came to exist. Some of them lost part of their characteristics others changed their pattern or behavior. Change is the norm of the present day universe, in space and time, perhaps until infinity. This dynamic nature manifests in every imaginable form, shape, activity and movements.

The natural elements became evident. The primordial space filled with undifferentiated uniform particles is the finest element called *ether*. These particles vibrate where they are to produce friction by motion. This phenomenon is comparable favorably with the superstring or M-theory described vividly by Brian Greene in the book “The Elegant Universe” Vintage Books Ed. New York 2003.

As a consequence of continued movement first air and then warmth or *heat* emerged. The *particles* melted to form liquid, the *water*. Particles became compact and solidified to manifest as *rocks or soil*. These basic elements exist even today. This type of thinking is typically found in ancient Indian texts called *Vedic* literature.

All celestial bodies in the known universe are in motion. It is possible that pure energy vibrates at different regions. The objects are detected only when such energy is expressed through some means. In other

words, unaccompanied energy cannot be located with instruments established so far. This is true even with our own atmosphere. Since air has not been photographed even its presence as a component of our planet is neglected or ignored. Then what about other atmospheres or interstellar “spaces”?

Table 3 Sir Isaac Newton : Laws Dec. 25, 1642 (= 4th Jan. 1643) – 1.727

Seeds, Michael A. 1999

The Solar System - Wadsworth Publishing Co. California

Law

1. A body continues at rest or in uniform motion in a straight line unless acted upon by some net force.
2. The acceleration of a body is inversely proportional to its mass, directly proportional to the net force, and in the same direction as the net force. $F = m a$
3. To every action, there is an equal and opposite reaction.

Newton’s first law supposes or assumes that “a body remains at rest”. Today no celestial body is at rest. Therefore, this assumption is not substantiated....” or if in motion it remains in uniform motion with constant speed in a straight line unless it is acted on by an unbalanced external force”.

A straight line on a globe is only theoretical and practically it becomes a curve. Again a rotating Earth or any other celestial body going its orbit is bound to encounter with external forces at every instant and can never be expected to maintain a straight line.

If acceleration is to be considered, there is no possibility of starting with zero at any time or at any place.

Therefore, the first law becomes obsolete.

The second law - when all bodies are in motion an “acceleration produced by an unbalanced force acting on a body is proportional

to the magnitude of the net force and invariably proportional to the mass of the body”

$$F=ma$$

$$P=mg \text{ (weight=mass x gravity)}$$

This also becomes obsolete because on a moving object where we are located and form part of the system, how to determine its mass or net force?

The situation is much clear in Heisenberg’s (1.927) uncertainty principle “***It is impossible to measure accurately both the positional and momentum of a particle simultaneously***”.

The third law of Newton states that “when ever one body exerts a force upon a second body, the second body exerts a force upon the first body. These forces are equal in magnitude and oppositely directed.”

This statement assumes that both bodies are initially at rest. Also assumes that one body moves faster than the other. The statement assumes that the bodies move in straight lines. Each body moves in n - dimension and the movement is continuous. This being the case such assumptions become historic but obsolete.

The time of action of one body is totally different from the time of any reaction.

Both the curvature of the space- time unit on one hand which flows eternally as well as the impossibility of time flowing backward in the reverse direction on the other are sufficient reasons to logically discard the stated assumptions.

W Heisenberg’s uncertainly principle 1927

It is impossible to measure accurately both the position and the momentum of a particle simultaneously. “Measured values cannot be assigned to the position r and the momentum p of a particle simultaneously with unlimited precision.”

AXIAL SHIFT

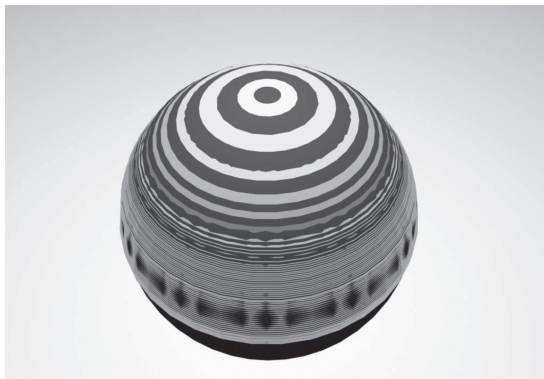
A clear sky is light blue or dark blue. At dawn and dusk a variety of colors and hues spread all over the sky, especially so when there are clouds dancing around. Sun illuminates during day- time, the zenith at noon.

The equinox corresponds to two days per year when the Sun passes through the zenith from the equatorial belt International Date Line Greenwich Mean Meridian. Both the hemispheres share this moment in equal terms except that the motion is to the North or to the South as the case may be.

On equinoctial day the Sun shines at zenith over the equator. From there onwards every rotation describes a fraction of latitude in such a manner that in about 90 days the zenith is observed over the line of Cancer or the line of Capricorn as the case may be. That is to say that $46^{\circ} 55'$ latitude gets expressed in 180 days. That is the maximum range of north south axial shift observable at any time.

Latitudes beyond the lines of Cancer and Capricorn on the two hemispheres should be recognized on the globe as a circle parallel to the equator but perpendicular to the planetary axis.

Figure 2



Latitudes on a sphere

Any attraction on the surface should occur in relation to the planetary axis, at respective latitude and is not directed to the centre of the Earth. This is applicable to any substance falling on the surface or even light incident from a distance.

Proportionately the angle of incidence of Sunlight changes in regions beyond $38^{\circ} 27' 30''$ on either hemispheres. This is the reason why the incident light while shining at zenith over the line of Capricorn in December, the $23^{\circ} 27' 30''$ angle is maintained at source. Similarly the receiving area of the Southern polar region gets tangentially illuminated.

The process is gradually increasing and gradually decreasing with maximum luminosity at the end of December. At that time the Sun overhead the line of Capricorn extends 15 degrees North and 15 degrees south of that line so that the illuminated area experiences the solstice. North Pole enjoys similar conditions near solstice of June. This is the reason for different characteristic climatic patterns at two Poles.

The water vapor at very cold temperatures (probably -60°C to 4°C) forms two bands in line with the Milky Way. When the planet passes through the region, especially during solstices, there is a special directional adjustment. The gaseous atmospheric tail broad at the equatorial plane and extending far beyond holds the water vapor. When the planet reaches the solstice points the tail changes directions proportionately. In other words, when the sun shines over the line of Cancer in the month of June the atmospheric tail was extending towards the North. The planet moves in the other direction after solstice and therefore, the atmospheric tail changes its extension.

During this process the entire gaseous mass gets twisted and subjected to torsion so that the tail reaches equatorial plane. Hot air produced due to friction at the lithosphere and hydrosphere of the tropical zone comes in contact with cold water vapor (clouds) at

these bands of the atmosphere to convert the same in to rain droplets. These droplets get together in order to form rain. At certain occasions these water drops may get crystallized to cause hailstorms or even to form snowfall.

Even when the evaporation of water is continuous from the hydrosphere, the vapors being heavier than the atmospheric air, reach the marginal areas of the spirally twisted gaseous atmosphere. The particles being dispersed at that region, even under low temperatures the clouds remain with charged water vapors in gaseous state. Of course, the low pressure is yet another factor to be considered at that location.

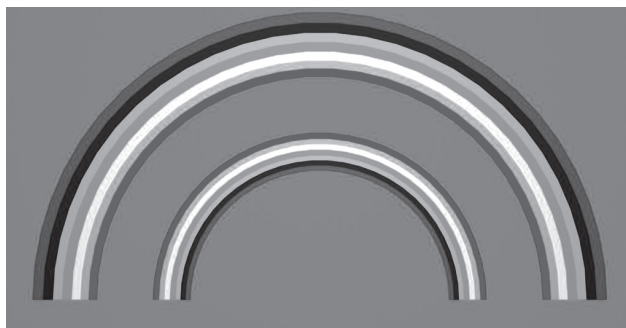
Element water in Biosphere

The water production occurs at the ocean flora and the vegetation at large. The tropics play a significant role in the climatic changes in the atmosphere and the Biosphere.

The tropical regions have their own combination of climatic factors among which the rain pouring followed by blinding lightning and frightening thunders with gushy winds, any time of the season is an enjoyable or memorable experience.

The rainbows when they appear in the morning hours or in the afternoon extend over wide areas and exceptionally double rainbows with inverted color sequences are common scenarios.

Figure 3



Double rainbows

Soon after the rainy season when the atmosphere is dust free the stars shine better in darker sky. This is the best time to get in contact with stars to learn about celestial bodies and with the cosmos.

Star Gazing

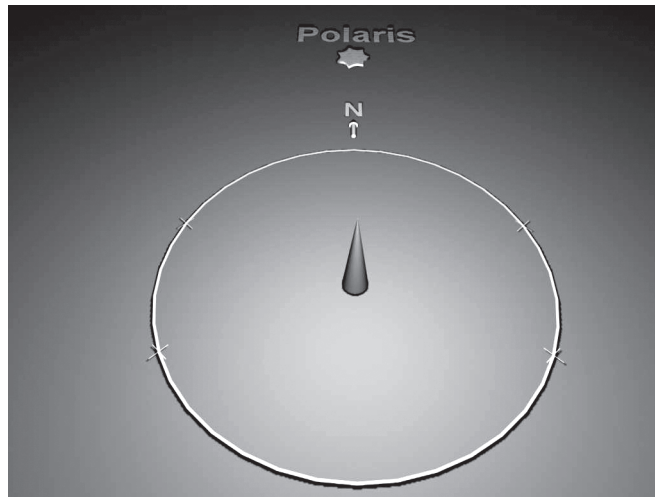
The stars and star groups with specific patterns are marvels of the mysterious universe around us. Our Sun is the nearest star and we belong to the solar system. The luminosity of the Sun illuminates the day and the rest of the stars remain invisible or fade out of sight. This is once again human limitation. However, once the Sunlight ceases to influence human eyes, other star- lights become visible at various magnitudes. A constant observation of the night sky reveals several celestial bodies. With the help of a star map of the skies it is possible to familiarize with the night sky.

OBSERVATORY: CONSTRUCTION

Locate an area with no artificial light and a level ground. Visibility of the sky should be with no obstacles like hills, trees, buildings or rocks. Plant a Pole 1.5 m height with pointed end. Draw a circle maintaining a radius of 5.7296 m with the Pole at the centre. Place 360 bricks, each 10cm x 10cm along the circumference to represent one degree each.

Locate Polaris in line with the pointed end of the Pole to establish North - South axis and place colored bricks to indicate the Cardinal points. Maintain daily observations at a specific but convenient local time, say 8 pm or 5 am. All observations must be recorded in a systematic way for future use.

By observation locate solstices, equinoxes, phases of the Moon and relative positions of visible planets.

Figure 4**Observatory**

Observe and write down

This model holds good for observatories in the Northern hemisphere only where the reference is possible to the Polaris.

For Southern hemisphere repeat the experiment with Southern Cross as an approximate indicator of the south pole.

Ruben's Box

On a plain surface indicate the cardinal points and draw lines to mark a box. Size of the box may be convenient to place a paper within and to note down details.

Construct a wooden box (say 20 cm x 20 cm x 10 cm). Place a hole at the center on its top. When this box is placed on the marked area in the open Sun, a ray of light passes through this hole and can be observed within.

Maintain the orientation aligned to the Cardinal points on the ground or an elevated platform.

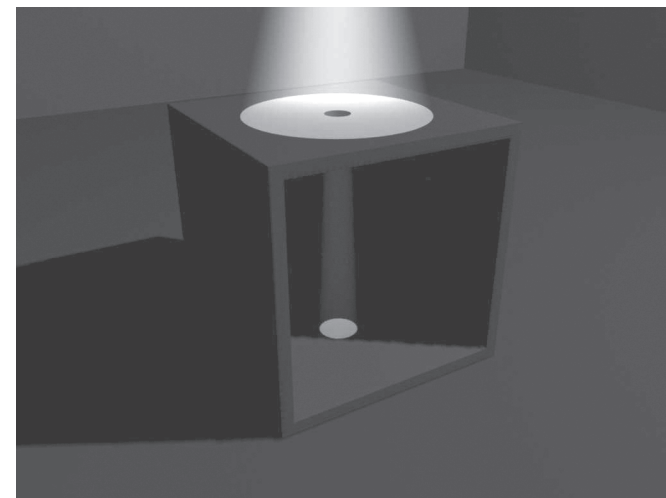
Daily observations are to be marked on a sheet of paper at a definite time (local/ standard/ universal). Noon 12m is the best in the tropics; especially in the Northern hemisphere.

A period of one year is the minimum time required for this study. On cloudy / rainy days the observation may be difficult or impossible. But observations adjacent to these days should be sufficient to bridge the gaps.

For the observation of the lunar motion monthly readings are necessary. In this case the phases of the moon and visibility at the time of observation are factors to be taken into account.

By tracing the incident light on the paper a design is obtained corresponding to the Ana lemma.

This proves that the planet always remains on one side of the Sun throughout the year. If the planet were to go around the Sun six months a year this observation is not possible.

Figure 5**Ruben's Box**

ANCIENT ASTRONOMICAL OBSERVATION

Ancient India is known for astronomical observations and texts are available to calculate time. Planetary movements are calculated with precision. Solar and lunar eclipses are regularly predicted with accuracy. Ancient observatories are excellent demonstrations of their scientific and technological achievements. Few such sites are still in good functioning condition. At *Ujjain* 75 degrees Eastern longitude intersecting the line of Cancer is one such observatory with five monuments, one of the tourist attractions of this ancient city. With brick and mortar back in 1719 one local King called Jayasinha constructed these structures. There no energy consuming machines are at work. There are no gears or moving pieces. All that occurs is a shadow play. At one structure one can locate the Polaris in continuation of a wall, inclined in the North South direction. Perpendicular to this wall is a graduated scale indicating hour and minute during day- time. At night the height of the stars or planets can be measured with another scale nearby. Yet another structure with a horizontal trunk inclined in an angle indicates time accuracy to 20 seconds, on a scale with the help of an iron rod at its centre. On either side of this trunk the scales indicate time during six months corresponding to the solstices.

Such structures are known as *Jantar Mantar* found at *Jaipur* and *Delhi*. Those constructed at *Varanasi* and *Mathura* disappeared in due course of time probably were destroyed. .

Table 4

Division of time in the Indian astrological calculation

In the mathematical aspect of Indian Astrology a day has 60 units of 24 minutes each. Each division is further fractioned in to 30 subunits to obtain 43200 units. They in turn are divided in to 60 sub units in order to calculate the time units.

One day = 60 units

One unit = 24 minutes = 30 subunits

One subunit = 60 fractions

Time Time Time

Three types of time may be recognized

- An absolute time that is universal and has neither a known starting point nor an end point; not even limited to a measurable parameter.
- For living organisms there is a time for birth and a moment for death. The interval is the life span. This time may be measured with parameters like seconds, minutes, days and so on. Mechanical devices may measure fractions and to some extent reliable. In every case some kind of energy source or gear system is involved.
- When one is engaged with some work involvement in another activity may be impossible or result to be unnatural. In such cases personal values decide what course to take up and say “no time” to the other work, however important that may be. This time is highly subjective.

The flow of events, energies, bodies, processes, objects, organisms or similar entities may be symmetrical or asymmetrical, limited in space - time unit or unlimited unidirectional or multidirectional, expanding or contracting. To understand a process, its dynamism, its wholeness or patterns needs careful observation, analysis of data with logical reasoning but most important of all with no bias or prejudice in order to arrive at obvious conclusions.

Polaris

Polaris is the brightest star in the constellation Small Bear. This star is special one because of its relative position just above the North Pole and apparently the star does not move. Again the entire zodiac appears to go round this star. On keen observation, however, its movement with in 1° range may be recorded.

Polaris is visible from the Northern hemisphere. From the equator this star is visible at the horizon whereas at the North Pole it is located at the zenith. Astronomical literature states that the distance from the Sun is about 430 light years. It is interesting to note that the latitudes on the Northern hemisphere may be estimated by the elevation at which this star is visible, quite useful information for navigators.

However, the possibility exists that the orbit of this star serves as a guideline around which twines helically the solar orbit. The solar year of 360° lasts about 225.000 terrestrial years. This is the explanation possible for the equinoctial precession in the astronomical literature.

Since our Earth is a part of solar system the entire galaxy or at least the zodiac seems to go round the axis formed by the orbit of Polaris at the Northern end and the Southern Cross at the Southern end. Perhaps the star Shaula, at 700 light years away, is in the direction of the center of Milky Way galaxy to the South.

The star Shaula at the tail end of the constellation Scorpion is the star to the South of our planet indicating the center of Milky Way galaxy in that direction the same way as the Polaris is indicator for the North. The Milky Way is observed extending from the Polaris through Cepheus, Cisne, Aquila, and Ophiuchus to reach the region in between Sagittarius and Scorpio. On the other side, the band extends from the Polaris through Cassiopeia, Perseus, Auriga, Pleiades, Hyades, Orion, Canis Major, Vela, and Southern Cross.

The rainy season extends this band and when the planet moves along this band gets drenched and normally known as the monsoons in the tropics.

The plane of displacement of our planet being equatorial the planetary axis is parallel to the solar axis. This is true for all the planets of the system.

EQUINOCTIAL PRECESSIONS

Seen from the Northern hemisphere at any time of the year the Polaris is observed in almost the same position probably because the star is moving in the same direction. Our Sun follows a helical orbit around the orbit of Polaris and one 360° year corresponds to 225.000 terrestrial years according to astronomical data. This permits the relative position of other stars in the zodiac or in the sky, their apparent disposition to explain equinoctial precession phenomenon. The polar shift of the axis leads to the directional change of the photosphere and this in turn explains the process.

Similar relative positions of the Moon, Earth and the Sun produce eclipses on a regular pattern and at an interval of about 18 years, 11 days and 8 hours. This may be possible to derive mathematically when n – body n- movements in helices get explained in corresponding calculations, SOUND and POUND (see page 39, 85, 89, 90) come in one straight line in one plane.

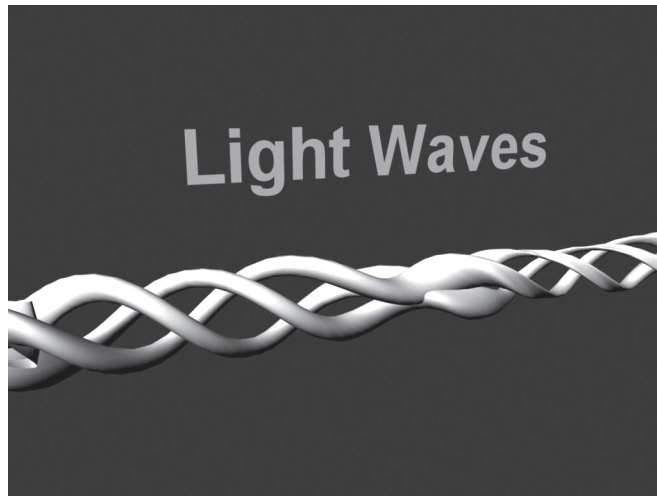
Stars emit light. Stars rotate on their respective axes and move along their helical orbits. But the emission of light is a continuous process. The light particles released from the photosphere of each star, owing to the rotation and revolution of the same, one behind the other so as to be seen as if flowing. However, these are not in a straight line but a curved helical line when plotted on a space- time three dimension chart. These particles move in space in the same way forming light waves flowing in all directions. When such light particles reach another celestial body with no illumination of their own, such bodies are illuminated. These bodies in turn exhibit rotation and revolution of their own pattern. The impact occurs at different moments in space- time complex. The particles are illuminated whether the light gets reflected or not.

WAVES AND CURVES OF LIGHT RAYS

This process exhibits an illusion as if the light moves in a straight line but the reality reveals that several helical waves flow simultaneously. The moving body receives the light continuously when the light particles moving at a high speed arrive one after the other. This type of motion exhibits undulating light waves.

Constituent components at the receiving end may possess capacity as a plant body or a non- living piece of metal, in order to express the relevant phenomena.

Figure 6



The bending of the light particles becomes clearer while visualizing the total process without fractioning. As many factors like the relative position and nature of rotation and orbital motion of the light emitting celestial body, the relative position of the observer, the light reflecting particles in the surrounding atmosphere, the rotation and revolution of the receiving celestial body may be taken into account to explain better these problems.

In order to elaborate a model to scale, why it is not done?

Table 5 As per available Astronomical Data

Distances between Earth and Celestial Bodies

Moon	1 light second
Sun	499.9 light seconds
Polaris	430 light years
Hamel	66 light years
Pleiades	370 light years
Aldebaran	65 light years
Betelgeuse	430 light years
Spica	260 ,,
Regulus	78 ,,
Antares	600 ,,
Arcturus	37 ,,
Shaula	700 ,,
Rigel	770 ,,
Saiph	720 ,,
Bellatrix	245 ,,
Deneb	1600 ,,
Vega	25 ,,
Sirius	8.6 ,,
Capella	42 ,,
Fomalhaut	25 ,,

This is just to show the proportion calculated by astronomers remain beyond the imagination of common man, definitely impossible to draw figures to scale.

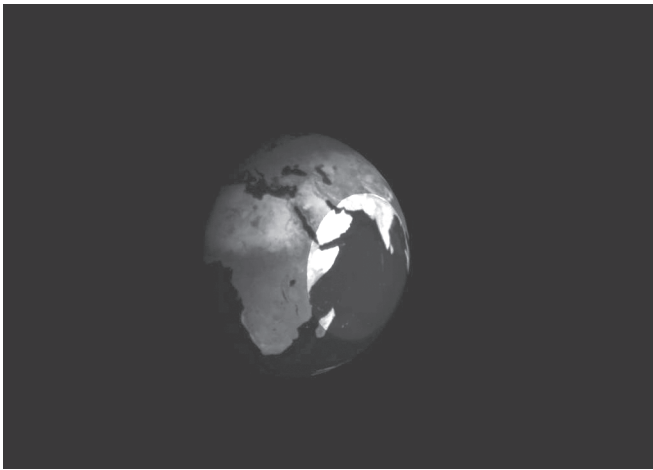
Trigonometrically the distance measured is expressed in parsecs. However, the diameter of the planetary orbit is *assumed* to be the base of triangle. On helical orbit this measurement is not possible. New calculations are necessary.

To represent these stars, planets and satellites (Moons) in addition to the distances, their sizes, shapes, velocities and other aspects, no satisfactory scale is possible. Schematic diagrams alone are therefore included in respective places in this work.

30° ARC SECTOR

On a spherical surface from Pole to Pole six sectors may be identified with 30° arc in each sector. Since the sphere is rotating one, twelve such sectors may be recognized out of 360° or one rotation. That is why from such large solar “sphere” when electromagnetic emissions get released at a time only from a 30° sector, in one direction. When the rotation takes place this 30° arc extends all around as a strip or a belt. If the celestial body were to exhibit axial shift to North and South then the belt will follow such modification. This phenomenon gets complicated to explain with n- bodies to interact.

Figure 7



30° arc sector exposure (video enclosed)

This explanation holds good to understand the frequent Sun -spots and outbursts of all sorts observed at the receiving end for the biosphere of the planet Earth. What are the effects on the climate or biosphere due to these exposures remain outside the field of study at this juncture.

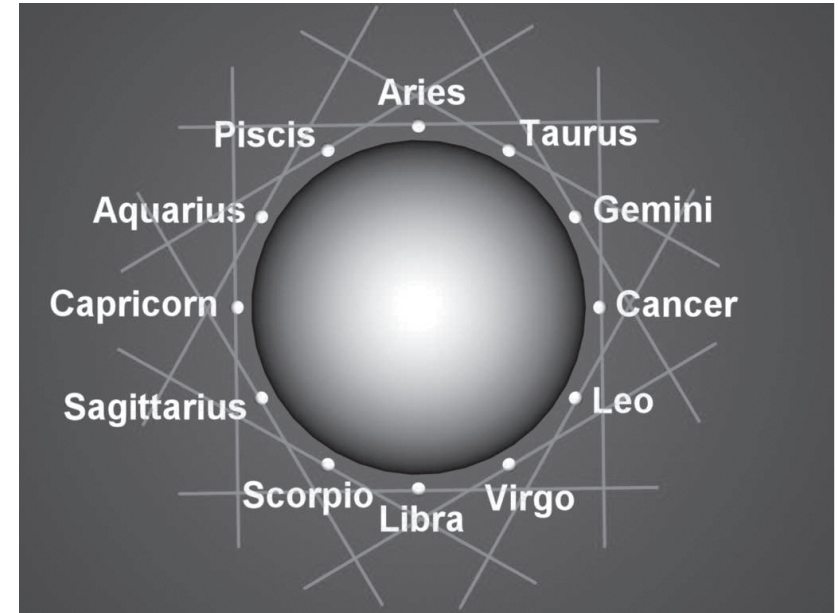
The blaze may change directions due to external or internal factors. This feature once again confirms the variability of this dynamic process.

The shape of other stars, if they are made up of gas and ignited, also should be similar.

Helix is a universal pattern identifiable regarding the orbits of all celestial bodies. In space- time unit nothing remains longer than its own individual pattern and probably does not visit the same point again. Perhaps this is why one cannot take bath in the same drop of water twice even if it were the very same river.

The orbit of Polaris is a helix. Considering that the star Polaris holds a “land mark” in the sky, especially from the Northern hemisphere, the twelve constellations of the zodiac maintain a 360° band around its orbit, at least as seen from our planet. For a clear vision a 30° celestial band passing through the zenith may be visualized to represent this zone.

Figure 8



Zodiac signs

SUN'S PLACE IN THE ZODIAC

For all practical purposes we may assume that the Sun is located at a place close to the constellation Leo and Virgo. This is possible by the visibility of these two constellations from Earth as if overlapping. The South and North can be determined from this point with reference to other constellations. For example, the center of our Milky Way may be located in the direction of the star Shaula in between the constellations Scorpio and Sagittarius. Obviously the Polaris is located in the direction of the North Pole. On a clear cloudless Moonless winter sky, the Milky Way extends in this direction is evident.

As a hobby, astronomy is worthwhile in many ways. It requires least economic investment. It provides excellent challenges to learn discipline in practice. It permits expansion of our capacity to the infinity. All that is required is a constant attention. No one can take away the stars and constellations just even for a prank. They are all objects in motion but their positions, distances, relative sizes and orbital details remain impossible for us to change or even to notice. Perhaps by using sophisticated man – made instruments like telescopes one may observe the motion. This is possible by prolonged dedication preferably by a team -work.

Perhaps it is difficult to visualize the curvature of the globe and the way the visibility gets affected over the sky.

HELICES

Sun is thought to be a spherical burning torch rotating on its own axis and revolving on a helical orbit. Sun has a diameter of 1.39 million km (Ian Ridpath, 2002) surrounded by a Chromosphere around which there is a photosphere. Duration of one rotation varies from 26.8 days at equatorial plane to 25.5 days at polar planes. It takes about 225,000 years to complete a 360° orbit.

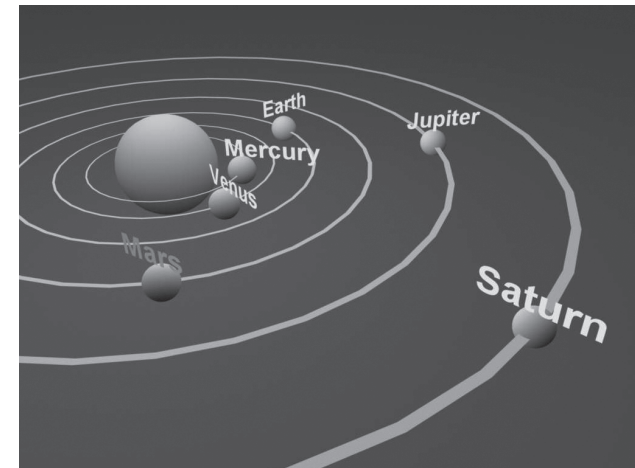
Astronomical calculations made by the XVI, XVII and XVIII century astronomers never imagined that this happened. They assumed that Sun is stationary. No wonder all the calculations are made with such assumptions and perhaps they have to be calculated once again.

It is also possible that the heliocentric orbits described for all the planets are again assumptions with no confirmation by direct measurement or observations.

The Greek observers like Aristarchus (About 270 B.C.) had suggested a heliocentric orbit for planets and the credit goes to Nicolas Copernicus (1514, 1543) [Mikolaj Kopernik Polish churchman] for confirming such hypothesis. Based on these ideas or assumptions Tycho Brahe, Kepler and Newton arrived at mathematical models to describe the same phenomenon.

All the planets known at that time are supposed to move along heliocentric orbits along the equatorial plane with particular degrees of axial inclinations for each one. The individual orbits are considered to be elliptic.

Figure 9



Copernicus / Newton model of solar system

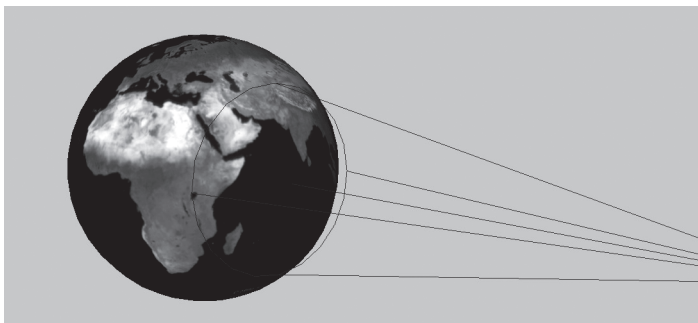
Information on the available astronomical data on planets of the solar system may be represented in a table.

Table 6 Solar System distances

Planet	Distance from Sun AU	Light second	Angle of Inclination	Rotation time	Revolution time
Mercury	0.3871	193.51	Parallel	58d14h	88d
Venus	0.72333	361.59266	2°6'	243d	225d
Earth	1	499.9	23°27'30"	23h56'4.091"	365d5h48'46"
Mars	1.52369	761.69263	25°2'	24h37'	687d
Jupiter	5.20281	2600.8847	3°1'	9h50'	11.86y
Saturn	9.53884	4768.4661	27°	10h14'	29.46y
Uranus	19.18184	9940.0116	98°	17h14'	84.01y
Neptune	30.0598	15026.894	28°3'	16h7'	165y
Pluto	39.517	19784.542	123°	6d9h	248y

Why celestial bodies are not visible at all times?

The nearest star being the Sun itself all or major portion of energy received on this planet is ultimately proceeding from the same. An observer on our planet sees the Sunrise, Sunset and the intervals in between. The brightness of the Sunlight due to its closeness to us normally outshines feeble light from other stars. Only the Moon reflects a part of Sunlight even during daytime except on a full Moon or a New Moon day. The night sky is studded with stars and many more marvels for curious observers, dedicated and industrious.

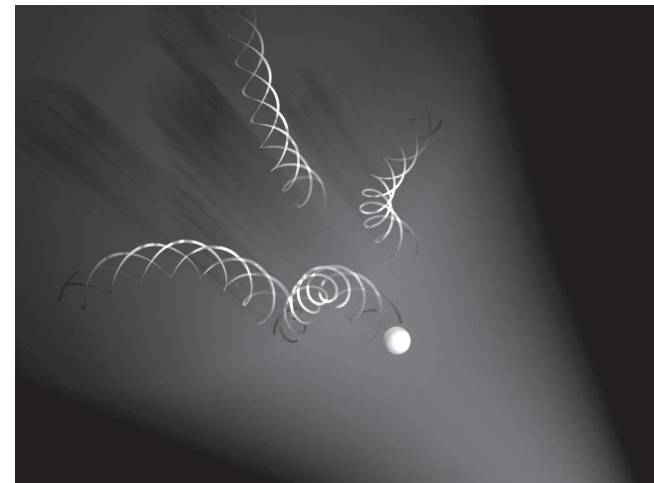
Figure 10

Range of illumination in one year (video enclosed)

YEARLY “CYCLE”

From ancient texts, from Indian specialists, the year is considered to commence from Aries at one time.

For practical purposes the position of our Solar system in the Milky Way may be located somewhere in the constellation Leo close to Virgo. This permits the visibility of Sunrise in the background at the end of Pisces or just beginning of Aries. Precisely the equinox registers at this moment when the Sun shines at zenith over the imaginary Equator crossing the International Date Line over the Pacific Ocean. Another equinox occurs when the Sunrise occurs with Libra at the background when the zenith at Greenwich Meridian intersects the Equator in the Atlantic Ocean. *The rotation of the planet on its axis produces day and night whereas the orbital displacement causes the year. The axial shift either to the North or to the South produces the two solstices.*

Figure 11

Seasonal variability

SPIRAL ON FLOW OF UNIVERSAL NATURAL DYNAMO (SOUND)

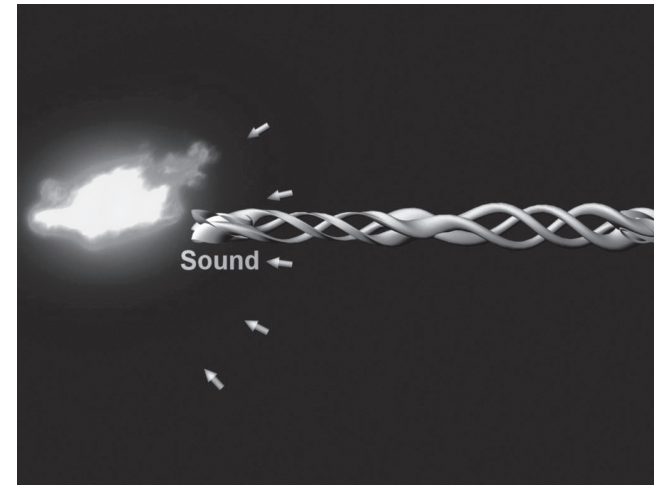
(Solar orbital usable navigation device)

The solar system with the known nine planets and their respective natural satellites is held in relative position permitting free flow of each object on a specific path. The energy required for smooth functioning of such a system is quite substantial. To explain this energy a descriptive term is proposed herewith: Spiral on flow of universal natural dynamo (SOUND).

Substantial solar mass is consumed for burning and getting transformed into electromagnetic energy that is radiated all around. Sun as a celestial body moves along its orbit besides rotating. While along its orbit there should be an axial shift to maintain a helical path. On one side there is a powerful force pushing away every celestial body in the vicinity but on the other, reduction in the mass attracts the planetary system. A gigantic vacuum develops at this point obviously at the place vacated by the Sun. The centripetal and centrifugal forces maintain the entire solar system the relative position and normal function.

The solar winds spread electromagnetic waves all around at a tremendous speed and the burning of solar mass getting transformed into energy (Sun burns 564 million tons of hydrogen per second to produce 560 million tons of helium and release electromagnetic energy at 400 km/second). This amount of mass consumed creates a vacuum. The displacement of the solar mass along its orbit maintains this vacuum just behind the solar body close to the Equator or at best behind the photosphere. This vacuum attracts the entire solar system towards this force. This force may be designated as SOUND (Spiral On flow of Universal Natural Dynamo). This sound occupies the cone apex. This maintains at the tip of the solar orbit. This is a tremendous energy but has no mass. This is not visible.

Figure 12



SOUND

The SOUND extending in time on a helical orbit attracts all the known planets maintaining them at specific distances.

Seen from Earth, rotating in clockwise motion, the SOUND is seen as if moving in anticlockwise direction.

The attraction or the SOUND is interpreted as the “North node” of astronomical literature. “Rahu” in Indian *Jyothisya* This energy attracts the entire system is produced at the apex of the solar orbit just behind the solar mass of burning gases. Possibly the blaze extends over this energy point as huge flame or photosphere.

The Sun with 19.9km/s orbital displacement (One 360° helix covering about 225,000 Earth years) reduces the observable distance to a simple dot taking in to consideration the time factor. The helical orbit twines around the helical orbit of the Polaris.

THE EQUATORIAL DISPLACEMENT

The equatorial displacement of each celestial body maintains the axes of the Sun, Earth and the Moon parallel to one another at all times.

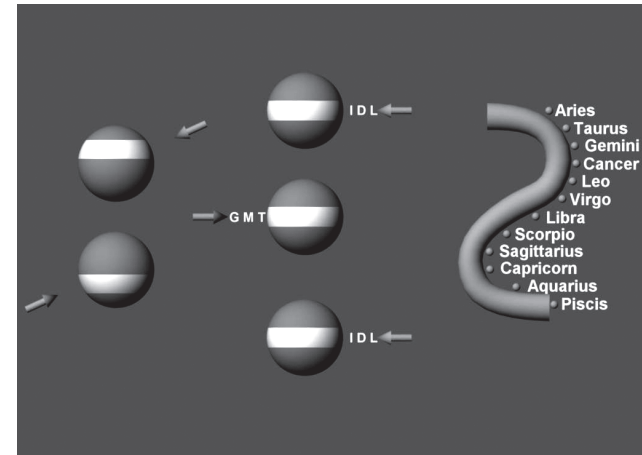
The same alignment holds good for other celestial bodies in the solar system.

It is interesting to note that the Polaris is visible over the zenith at North Pole.

Any magnet placed over the terrestrial equatorial region indicates the North magnetic Pole with N end whereas the S end indicates magnetic South Pole. On placing the magnets on the surface of the globe the N end presents a dip corresponding to the latitude where the magnet is placed but indicating the North. It is surprising to note that when the magnet is placed very close to the North Pole the N end touches the top of the axis but does not stand perpendicular to that point with reference to the planetary axis.

Prepare a three dimensional model of the solar system with heliocentric orbits for inclined axis of the planet Earth maintaining the Polaris right on top of North Pole. The relation between the day (30° arc) and night (330° arc) remains constant through out the year. The day extends as a band from Sun- rise to Sun- set to repeat the process next day once again. At equatorial region the duration of day and night are almost identical with minor variations during solstices.

Figure 13



SOLSTICES and EQUINOXES through Zodiac

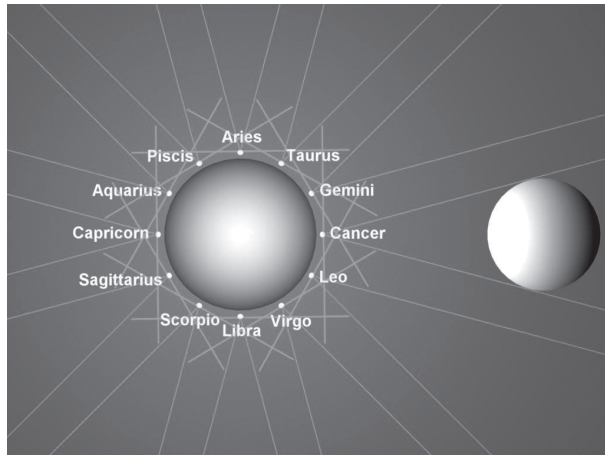
The equinoxes at two equatorial points 180° from each other occur in one year but once the illumination moves from the Southern hemisphere to the Northern hemisphere in Aries and second time this happens in reverse direction in Libra. The Solstices take place at right angles to the equatorial points maintaining 180° from each other at line of Cancer and at the line of Capricorn respectively. This apparent cyclic flow in time should be sufficient proof to show beyond doubt that heliocentric orbit for planet is not possible.

In a dynamic system the Earth should accelerate to go beyond the Sun during six months but decelerate to return to the area behind the Sun. The Sun is estimated to maintain about 20km/s revolution on its orbit. Fresh calculations may be necessary to describe this type of motion.

The constellations at the background are sufficient evidence to deny the heliocentric orbits for planets. The Sun at 500 light seconds distance, when visible within a cone of 30° maintaining a background of one constellation, say for example Aries, (Hamel at 68ly) the

Earth maintains in the opposite constellation at midnight, namely Libra. After six months to maintain heliocentric orbit, the mid day of today should become midnight and the midnight should become midday. ***This has not taken place!***

Figure 14



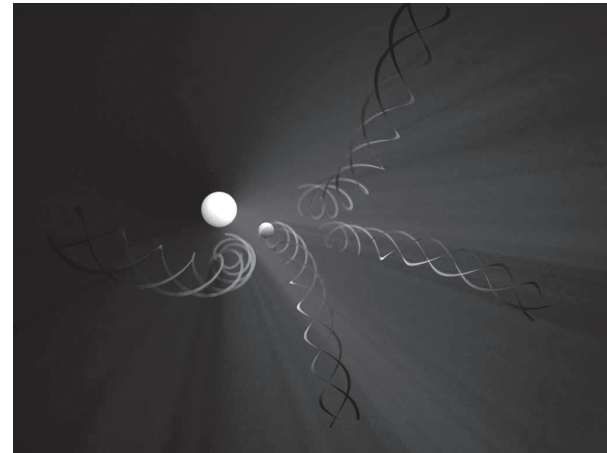
Visible range of 30° arc (Zodiac signs) (Video enclosed)

Visible changes!

Perhaps 12 models of Earth should be prepared with illuminated side (30° arc day) different from the night- time (330°) corresponding to the shadow of the planet. Place a representative source of Sun light at a distance of 500 light seconds (=149597893 km). Maintain the inclination at the source of light 23°27'30" with reference to the solar orbit on all sides. The 12 models should occupy an area corresponding to 30° each representing one Zodiac house.

However, at any moment the model should look like a cone, the Sun at the apex of the cone and the base of the cone constituting the orbit of the planet. The 360° is divided into 12 zodiac houses of 30° each. As the Sun proceeds on its own orbit the position of the Earth changes maintaining the relative angle and the distance a constant and changing the zodiac houses accordingly.

Figure 15



Planet earth behind photosphere through one year (Video enclosed)

The axial North South shift should describe the two solstices and the east west shift describes the equinoxes at International Date Line and the Greenwich Mean Meridian respectively.

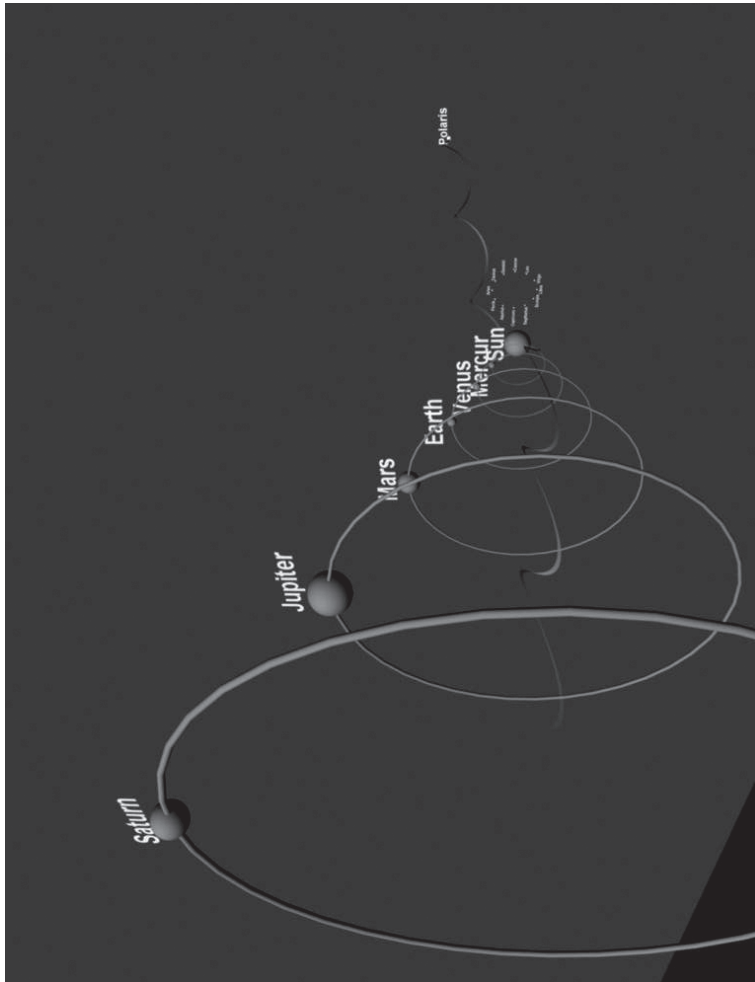
Remember the Polaris located just above the North Pole at a distance of 430ly. The helical orbit of the Sun follows the helical orbit of the Polaris and therefore, Polaris is visible from the Northern hemisphere always in the same place.

The planet Earth gets attracted by this force SOUND but pushed by the solar winds. As a result of the simultaneous centrifugal and centripetal forces the planet is maintained at a constant distance of 500 light seconds. The planet rotates from west to east and proceeds in one direction on its orbit whereas this SOUND appears to move in reverse direction and is considered as upper node in the western astronomy and *Rahu* by the ancient Indian science of *Jyotishya*.

Other planets also follow identical helical orbits. The solid angle at the source of light and the distances to each planet are maintained uniformly. Planets Mercury and Venus are closer to the

Sun and are called the inner planets whereas Mars, Jupiter, Saturn, Uranus, Neptune and Pluto are considered as outer ones. Fresh calculations and models will have to be made to describe the respective orbits. A comprehensive three- dimensional model of the solar system is possible only after that.

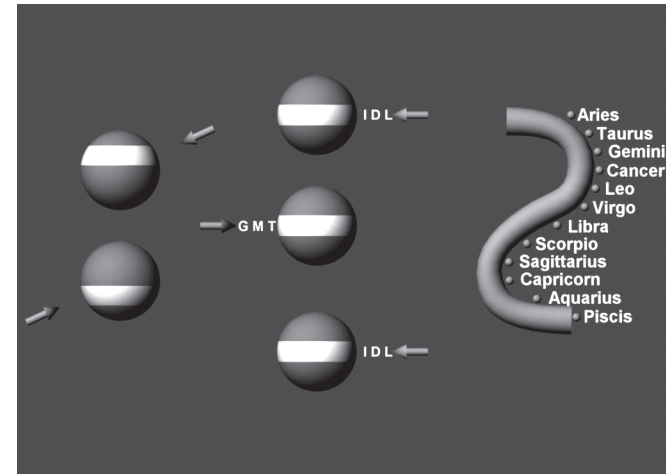
Figure 16



Helical Helix proposed model

A celestial body with an axial rotation attains a spherical shape. An equatorial plane displacement describes its orbit. In addition, when there is an axial shift within a limited range in the polar plane the orbit presents wavy movement. However, the gradual movement of the body with simultaneous three- dimension image describes a helix. The axial rotation of any planet (with no illumination of its own) exposes at a time, an area corresponding to 30° arc to an incident light. This illuminated area extends as a curved band across the equatorial plane. The moment the surface moves out of the range of illumination darkness appears covering 330° to complete the rotation. The axial shift either to the North or to the South permits the helix. The process repeats through the year describing a helical orbit.

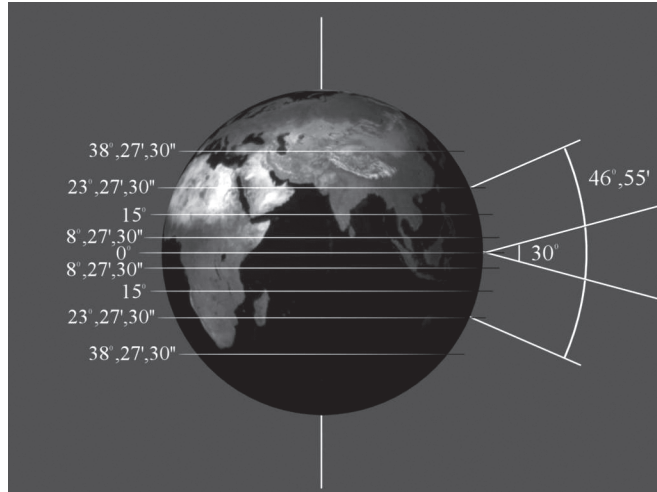
Figure 17



Axial shift and seasons

The light source should be considered as the cone apex, the 30° arc that illuminates the surface describes one position or one portion of the base of the cone. The orbit completes one 360° round maintaining the distance constant but the equatorial displacement extends like a helix. The North, east, South, west axial shift produces the seasonal changes.

Figure 18



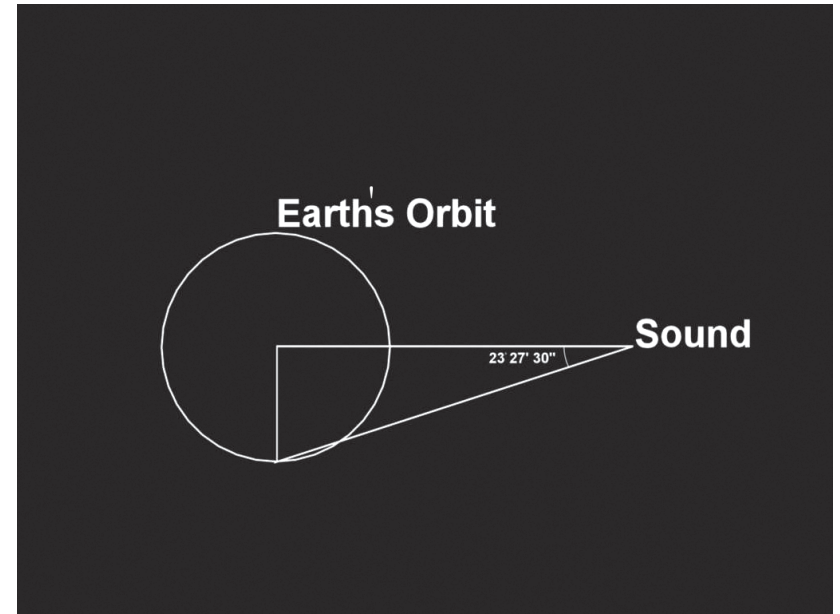
Range of exposure to sunlight

The Sun rotates on its axis, presents equatorial displacement and at all times maintains the relative position with the Polaris. This is possible with an axial shift comparable to that of the seasonal changes in planets. The solar orbit becomes a perpetual helix encircling the orbit of the Polaris.

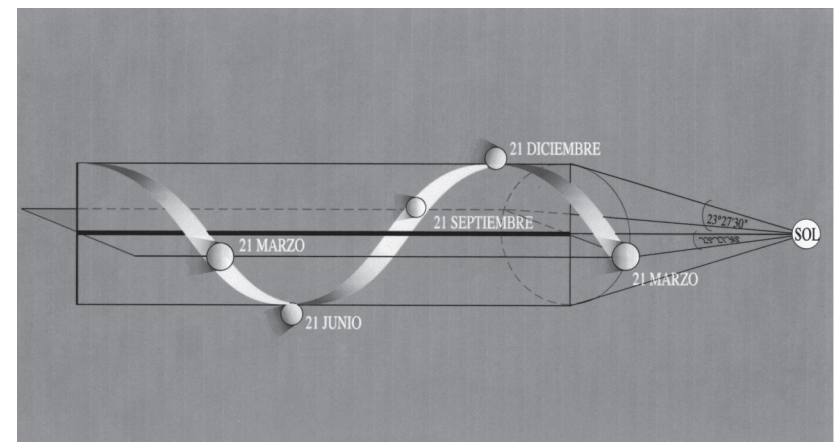
The zodiac maintains the relative positions of the constellations involved. Our planet like any other planets of the solar system follows this sequence.

The three simultaneous movements of celestial bodies produce helices. As a consequence the light emitted from the solar source flows continuously. The rotation extends the 30° arc emitting surface into a spiral band. The Sunlight is estimated to travel about 499.9 seconds to illuminate 30° arc surface of our planet Earth. Then the light particles resolve to a wave from a band on solar surface. The rotation of the planet adds to the twisting of the trail of the light particles at the receiving end.

Figures 19a & 19b



Earth's trajectory model



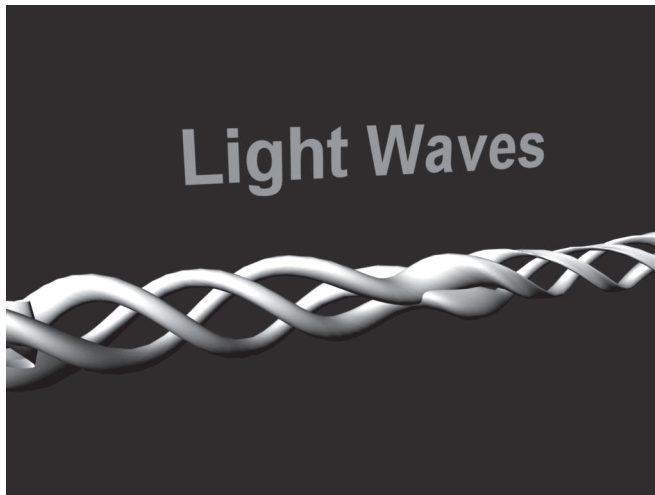
Schematic model

VISIBILITY/INVISIBILITY

The luminosity at any time determines the visibility of other light sources, reflected or feeble emissions. The angle at which other celestial bodies are located determines the visibility. Any celestial body that is visible within 30° of the Sunlight becomes invisible due to the brightness. The Moon is one exception that reflects Sunlight and is visible even during daylight. The relative closeness to the planet permits such visions.

The light emitted from photosphere of the Sun when received on the Earth the Earth should have moved 810° (two full rotations and a quarter). In order to complete 360° one rotation if the Sun takes about 27 terrestrial days, it is equivalent to about 9720° ($810^\circ \times 12$ zodiac units). The spin of the Sun and the spin of the planet represent the emitting end as well as the receiving surface, respectively. This explains the light waves that get twisted.

Figure 20



Any particle of light that got released from the photosphere should require about 500 light seconds to reach the surface of the

planet earth while the planet is rotating. Therefore, the incident particle is not perpendicular to the curved surface but a tangent. No particle can fall vertically or perpendicularly on the rotating curved surface.

The solar orbit takes 225,000 terrestrial years to complete one 360° turn. That explains the relative position of the planet Earth in a movement known as the equinoctial precession that covers about $225,000/12=18,750$ years, for each Zodaic sign.

It is interesting to note that the Big Bear completes one revolution around the Polaris in about 2700 years as seen from Earth. In reality it is the Sun as a star has moved in its own orbit and the accompanying planet Earth has served to locate or indicate the precession relative to the zodiac. The constellations of the zodiac serve as reference objects visible from the Earth.

The respective situations with other planets will have to be calculated individually. It is not the planet but the star when it moves along its helical orbit causes this 30° arc displacement in relative positions of celestial bodies or zodiac houses.

Data available from recent studies estimate that the orbital revolution of the Sun is about 225,000 years with a speed of 19.9 (20) km/s assuming the helical orbit of the Sun displaying around the orbit of the Polaris. The relative position of the Polaris, which is almost a constant, is very significant. When a celestial object moves in one direction, seen from another object at a distance the maximum displacement appears if the observer is located at right angles to the orbit. When the observer is just behind the orbit the object is permanently seen from behind and the celestial body's motion is not distinguishable. Such is the situation with Polaris and our Earth. The observer from the Northern hemisphere can see the Polaris always at the same location just above the North Pole. Again the Polaris seems to be a star with no motion at all.

The Ice Ages, melting of the snow inundations or flooding sudden disappearance of flora and fauna or even some land mass may be the consequence of such precession.

When observed after about 56,000 years, 90° solar displacement along its orbit, the Polaris is bound to be visible at another place and that has to be explained in this way. It is not the Earth, but the Sun that has moved along its orbit. Since Earth follows the Sun, the optical illusion explains a helical orbit for each celestial body, orbit of our star served as reference for another body but dependent on this one (for helical orbits see under Earth orbit)

At this juncture a point may be raised with reference to the shape of the Sun. For all practical purposes we take it for granted that the Sun is a burning sphere of gases as mentioned by the terms photosphere and chromospheres.

When a celestial body formed of burning gases in the space no specific shape is to be expected. Rotation of the mass may have rounded off the fire-ball no doubt. If the rotation occurs on an axis expressing two Poles, say North and South, this kind of a spherical mass should have the equatorial diameter maximum girth on the axis and practically no mass at the Poles, exposing the polar ends of the sphere which may be visualized.

Since the celestial body is on a constant motion of 20km per second along its helical orbit there should be enormous ram force in front of the Sun (head wind) and the flames drawn out into a tail at the rear. This celestial body is, therefore, should be visualized as a flowing fireball with flames extended at the tail end. The axial shift affects the direction of the tail and its consequences.

The light emitted irradiating on all sides as solar winds with speeds such as 400km/sec, with visibility of only 30° at a time on the photosphere strip during rotation is certainly a dynamic process.

Sun is considered as a medium star with 1.4 million kilometers diameter. It is a rotating mass of burning gases emitting electromagnetic energy as solar winds. Again the Sun moves along its orbit at a speed of about 20 km/s. The distance from Earth is estimated to be a constant astronomical unit (AU) at 149,597,893 km.

It is obvious to assume that a mass of gas moving at a speed of about 20km/s should develop ram force in front in the direction of movement and lesser pressure behind the body. The solar winds become dovetailed in the opposite direction away from its "front". Perhaps one can say that if the 30° arc faces the ram force in front, 330° arc remains away from such force but emitting solar winds continuously. These winds should flow like a tail behind. Our visibility is limited to 30° arcs at any time and hence, we see only this much of the luminosity as solar disc. No wonder if it is simply the flames we are looking at and considering that that is the Sun. The rotation on its own axis changes the visible point at all times. The 500 seconds interval when the light travels to reach the observer who is rotating on the surface of the planet provides for the helical wavy motion of the light. The orbital displacements of both bodies add to the helix.

Shape of the Sun

30° arc in the direction of equatorial plane orbital displacement where the ram force is maximum (20km/s speed) for the exposed surface can explain the whole model. If planets were to go round the Sun on heliocentric orbits, there should be some reference to this phenomenon in the literature. But as it is, nothing is available.

Also, there is no mention about the difference if any in the quality and quantity of light emitted from the Sun. When Sun is revolving on its orbit at a speed of 20km/sec there should be significant difference in this respect. The Tail end where there is less pressure compared to the front with ram force or the sides or laterals should

exhibit variations. The shape of the Sun should be like that of a burning torch moving at that speed. Only the flame is visible as light from the photosphere.

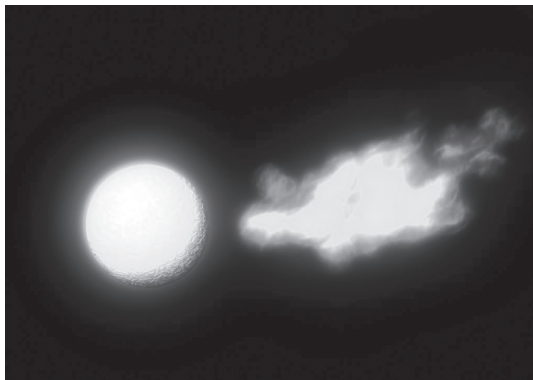
On Earth the impact should be evident considering the closeness or relative distance compared with the outer planets.

Probably the star world visible from all around the Sun may not be the same as we see from Earth. At least the relative position of Polaris, Big Bear or other constellations should be visible differently depending on their location and distance. No such differences are mentioned in astronomical literature.

The polar shift of the axis maintains the helical orbit. The ram force in front increases the pressure at the surface (30° arc) extending as a band due to axial rotation. Simultaneously the gaseous tail end with spiral waves extends to a considerable length. The Sunspots observed in this flame are said to cause climatic changes on the Earth.

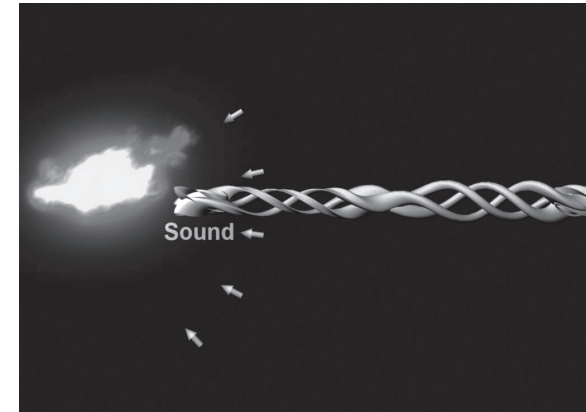
The situation changes with solstices. Aurora borealis are color patterns visible over Arctic regions when diffuse tangentially incident day light is visible extending over a period of six months duration per year. The rotation of the planet serves to extend the color patterns as if an audiovisual motion picture.

Figure 21a



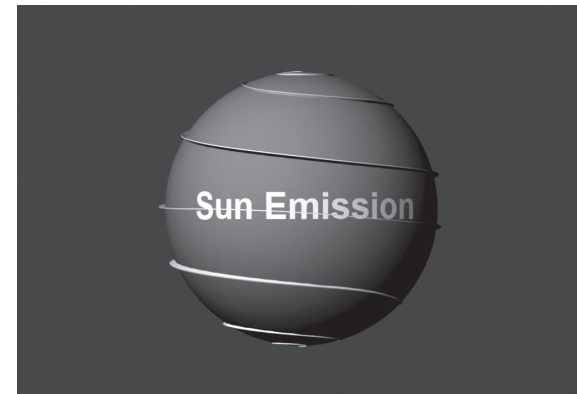
Sun, radiation zone and photosphere

Figure 21b



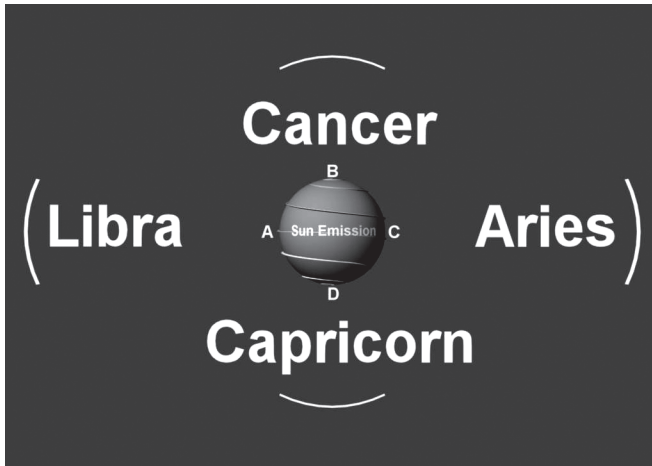
Photosphere spiral onflow of universal natural dynamo

Figure 21c



Emission range from pole to pole

The axial rotation and orbital revolution are known for planets. Simultaneous with these two movements there is a third movement involved. The axial shift to the North and to the South passing through east and west permits the seasonal variation at corresponding regions. The diameter of the orbit is determined by this shift, the angle at the light source and the distance at which the receiving surface is found. The orbital extension describes the helix as an infinite path.

Figure 22**Equinoxes and solstices with sun at cone apex**

All the celestial bodies present these movements combined together as only one complex movement.

The Sun also exhibits this complex movement. The light rays originating at the photosphere travel 499.9 (roughly 500 seconds.) light seconds to reach the Earth's surface. The rotation, revolution and axial shift of light emitting surface and the light-receiving surface determine the twisting of the rays. This causes uncertainty in the quality and quantity of incident light.

On the surface of Earth an observer can receive direct light from Sun and other stars or sources of radiation besides reflections from other planetary system on their respective locations. The impact of these phenomena will have to be better understood to know the dynamic nature.

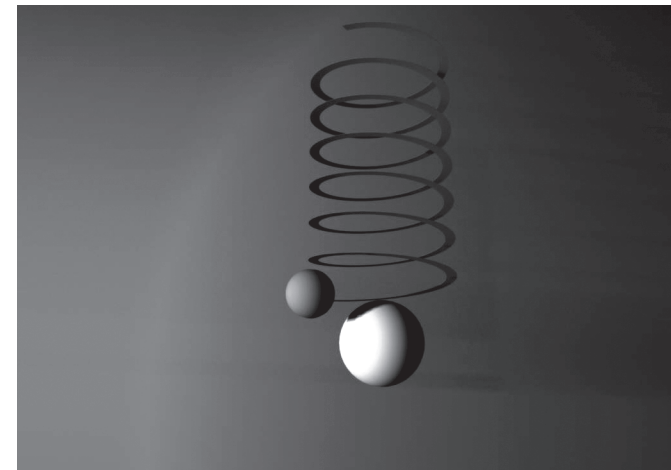
North South axis of the planet Earth is parallel to the Sun's axis and also to that of the Moon. Other planets and their Moons also present identical alignments.

The rotation of each celestial object takes place if at all it takes place, with the axis as the center. The atmospheric mantle changes

shape and orientations according to the direction of orbital motion.

The North – South shift in the axial plane in combination with east west shift also in the axial plane (but equatorially) complete the year. The overall impression is that the planet gets displaced along its equatorial plane. This orbital motion becomes helical when the Sun moves on its helical orbit.

The angular curvature is so smooth that in one year 360° has been divided into units which extend $13^\circ 20'$ in the Indian system of astronomy on the basis of lunar motion. Every day the Moon moves $13^\circ 20'$ and thus completion of interval between full Moon and full Moon occurs in about 29.53 days. The Moon should have advanced 390° during this lapse as evidenced by the constellations of the zodiac visible at the background.

Figure 23**Earth with moon going round the terrestrial helical path**

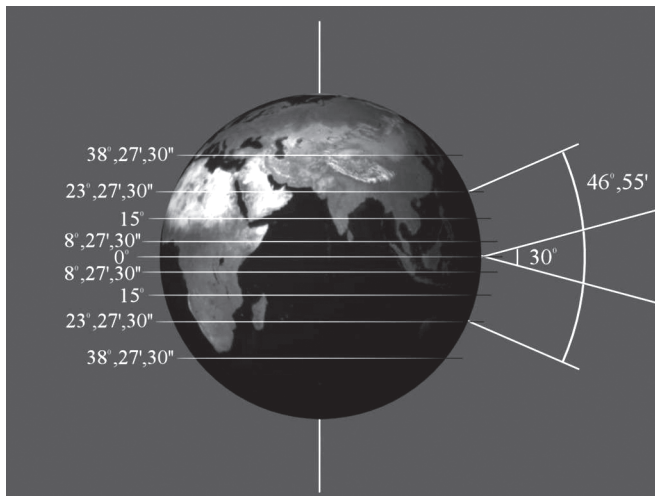
For other planets new calculations will have to be established taking into consideration this helical model for orbits. Each planet maintains a specific time for rotation or annual motion. The angle at the light emitting point, the distance from that point to the point at which the planet is situated are factors for this consideration.

The diameter of Earth at equatorial plane is determined as 12756.78 km. This measurement excludes the gaseous mantle that covers the planet what is normally referred to as atmosphere. During solstices the Sunlight illuminates line of Cancer / Capricorn at specific interval. The diameter of the planet at those latitudes should be inferior to 12756.78km.

This is the reason why the day is long and the shadow is short in one season but the other way round after six months. This explains the situation at the temperate regions during different seasons. The flora and fauna respond naturally to such seasonal variations.

Successively enlarging / decreasing spirals are formed as the planet rotates. The day- to day spirals may be considered as latitudes with maximum size at the equator.

Figure 24

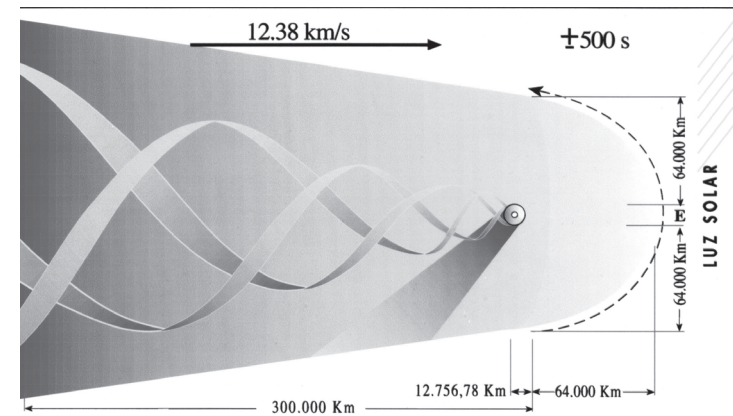


Daily extensions through the year

PRODUCTION OF HEAT

The heat produced due to friction and infrared rays is more at the tropical area compared to the rest of the planetary surface. But the cold front at one Pole and the warmer hemisphere on the other maintains the extreme conditions during six months each. This permits the illusion that the visible Sunlight has light and heat in it. Further it is possible that the atmospheric mantle moves just behind the hydrosphere and lithosphere following the orbit and obviously the heat transferred to the gaseous atmosphere moves in respective directions.

Figure 25

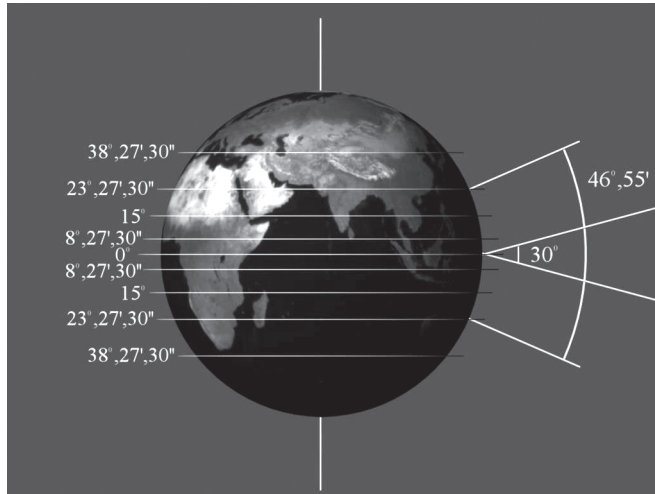


Planet earth with visible (night) non existent tail and invisible (atmosphere) existent tail

The reflection surface area like that of the Moon looks as a disc. In reality it is only a portion of a globe not more than a 30° arc corresponding to the 12 possible tangents representing the 12 zodiac houses.

An observer with a 30° solid angle visibility is able to visualize the illuminated lunar surface within the visible cone extending into the infinity. The constellations in the background serve as guiding markers for the benefit of observation. Other celestial objects with

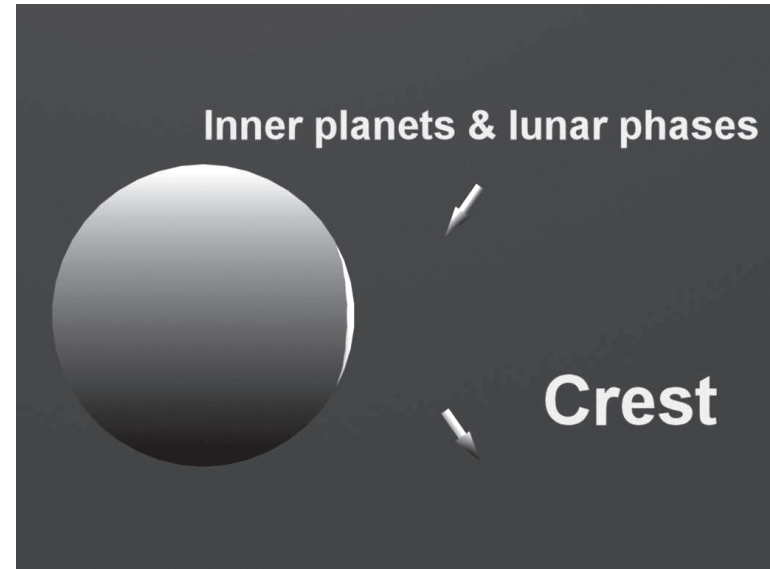
Figure 26



Position of observer 30° con apex

deflecting surfaces like those of planets like Venus, only a crescent shaped surface is visible due to the planet's own helical orbit. The orientation of the crescent indicates the relative position of the planet on its orbit as seen from the earth's surface. The images of these crescents through one full orbit should be sufficient to demonstrate the helical nature of the orbit. The waxing and waning moon also exhibits the crescent shape when the moon is located in between the earth and the sun, but on one side. It is note worthy that the lunar/solar eclipses do not occur every month. This is the clue to the fact that orbit of the moon is not around the earth. Images of other planets like Mars, Jupiter and Saturn (visible with unaided eye) reflect light from a disc 30° arc., again visibility only 30° conical constitute a complex system. All calculations will have to be considered once again.

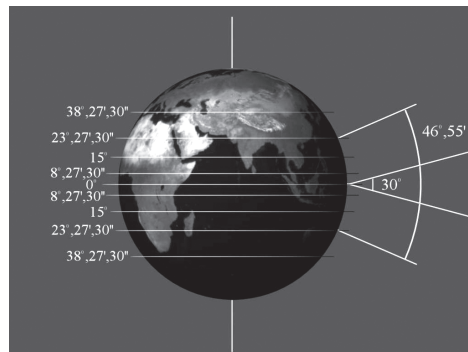
Figures 27a & 27b



The planetary rotation on its North/South axis, planetary revolution at equatorial plane with axial shift to the North, East, South and West constitute the three movements of the planet combined into one dynamic process. The natural satellites like the Moon maintain their own orbits twining around the helical orbit of the associated planet. The orbits of the natural satellites (Moons) closely follow behind the planets encircling the respective planetary orbit. When there are several of these satellites each one maintains individual orbits but all follow the respective planet.

The illumination coming from photosphere of the Sun, rotating on its own axis (average 27 days) and maintaining a helical orbit (equatorial plane) naturally should spread all over. But the receiving surface of the planet is located at a constant distance (149597893 Km =AU) and the solar axis and that of the Earth are parallel to one another. Owing to an inclination of $23^{\circ}27'30''$ ($=46^{\circ}55''$ solid angle) at the apex of a cone the Earth is illuminated at this angle. **However, the orbit of the Earth completes the base of this cone maintaining the angle and the relative distance as a constant.** With this design, the observation of 12 constellations in sequence at the background can easily be explained maintaining the day/night relation uniformly. The interpretation of this phenomenon constitutes a new approach to explain observed facts in nature.

Figure 28



Latitudinal extensions through one year

DARKNESS IS DUE TO TWO REASONS

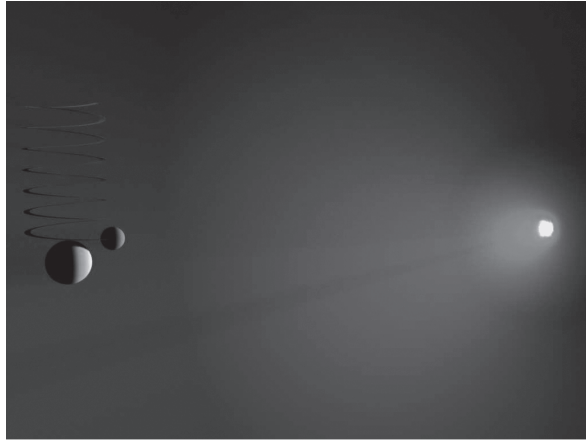
First of all there should be some kind of particles to reflect light from diverse celestial sources. The angle of incidence and reflection should be congenial for the observer. The light source should be sufficiently luminous. Hence, where there are no suspended particles light is not reflected and hence darkness prevails. This happens in outer space.

Second reason is the surface of the celestial body exposed to the illumination. In the case of planet Earth, Sunlight illuminates a portion of the globe at a time considered as day- light. Owing to the thickness of the lithosphere and hydrosphere dark shadow extends on the side opposed to the day light, and normally called the night. Unexposed areas also become dark due to reduced Sunlight reaching the area. Caves, caverns, Polar areas are good examples for this phenomenon.

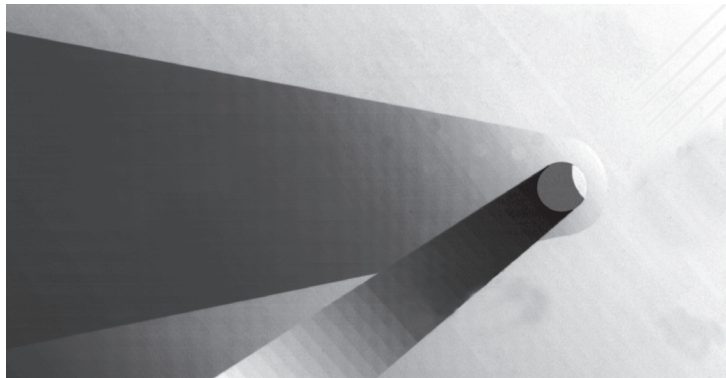
The darkness, therefore, may be due to lack of illumination or due to the shadow of the opaque body which may be called the night. However, the illumination limited to 30 degrees arc on a curved surface, the shadow formed on the other side of the globe will extend as a dark tail in addition to the surrounding sector where there is neither direct sun- light nor corresponding shadow. The luminosity determines the visibility of other celestial objects whether stars or planets or any other celestial objects.

The Sunlight constantly illuminating the surface of the planet, when seen by observers at different sites around the globe provides visible areas limited to about 35km radius when there are no other obstacles. However, a 30° solid angle may be considered for observation by human beings at any point. The large surface area exposed to the Sunlight where the 30° arc extends into a band from Sun rise to Sun set. Only at mid day when the Sun shines over head known as zenith, full 30° cone becomes evident.

Figures 29a & 29b



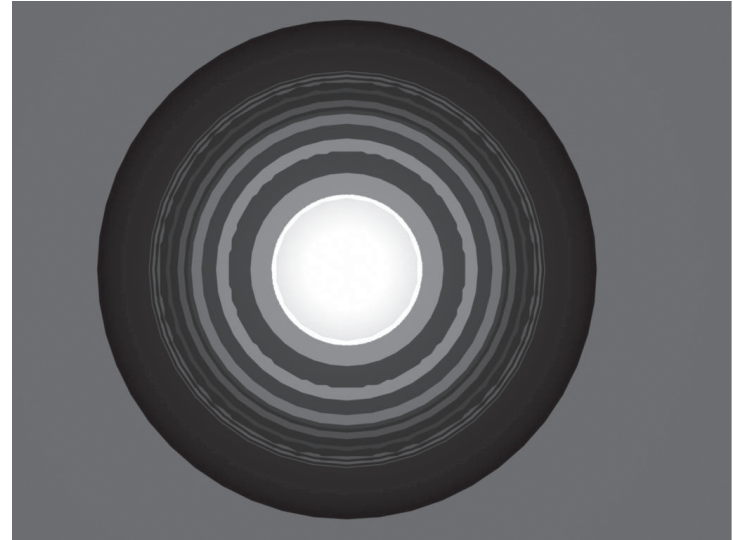
Sun, Earth, Moon



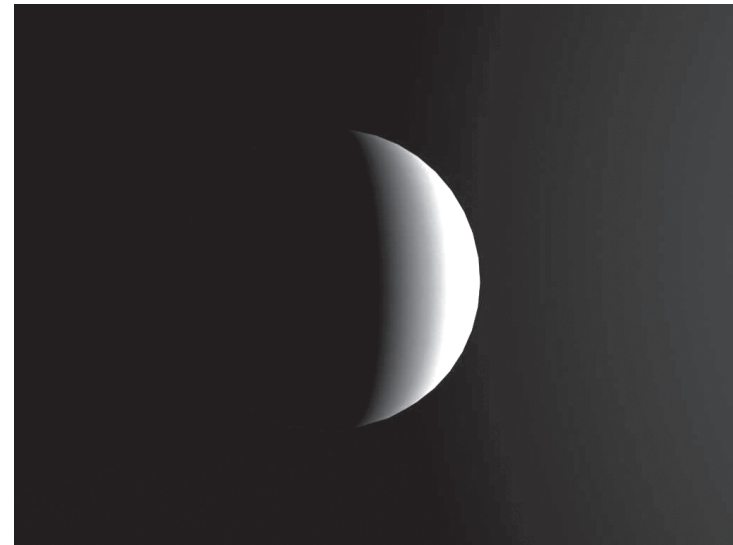
Dark night and extended atmosphere

The solid angle at the cone apex is indicated by the photosphere and the base of the cone covers an area receiving the direct impact. This phenomenon is not permanent but only can be imagined because of rotation of the planet when this area gets extended like a band.

Figures 30a & 30b

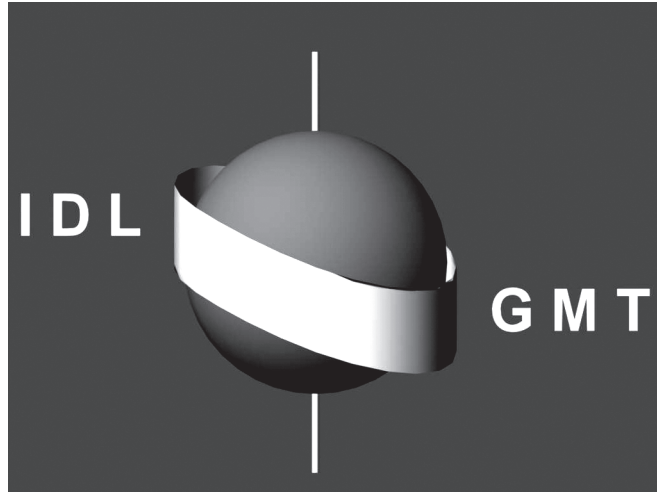


30° arc front view

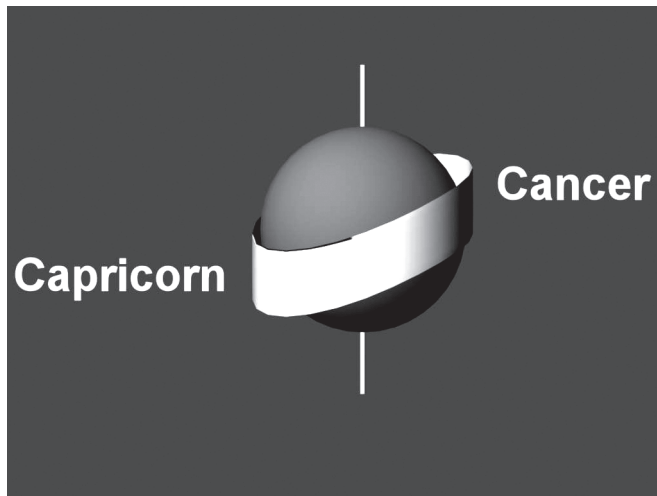


30° arc side view

Figures 31a & 31b



Equinoxes international date line / GMT



Solstices line of Cancer / Capricorn

The atmospheric pressure is more on the hydrosphere in the morning (ram force in front) and hence corresponding low tide in the ocean. The low pressure at the tail end close to the Sun set draws out the hydrosphere causing high tide in water bodies. Maximum expression

is evident in the full Moon or new Moon days. In between, especially during first and third quarters, two peaks are seen.

The rotation of the planet places the observer in the morning and evenings in front of the Sun but Sun in the morning is to eastern Horizon and to the west at Sunset. But an optical illusion makes us believe that the Sun has moved from east to west. The reality is that the planet has taken half rotation. This factor permits us to believe that the Moon rises in the east. On a full Moon day the moment the Sun sets in the west the Moon appears at eastern horizon. But Moon for all practical purposes is located in the west. The next day the Moon appears slightly late. Every night the Moon rises 48 minutes later so that after about 15 days the new Moon occurs.

Figure 32



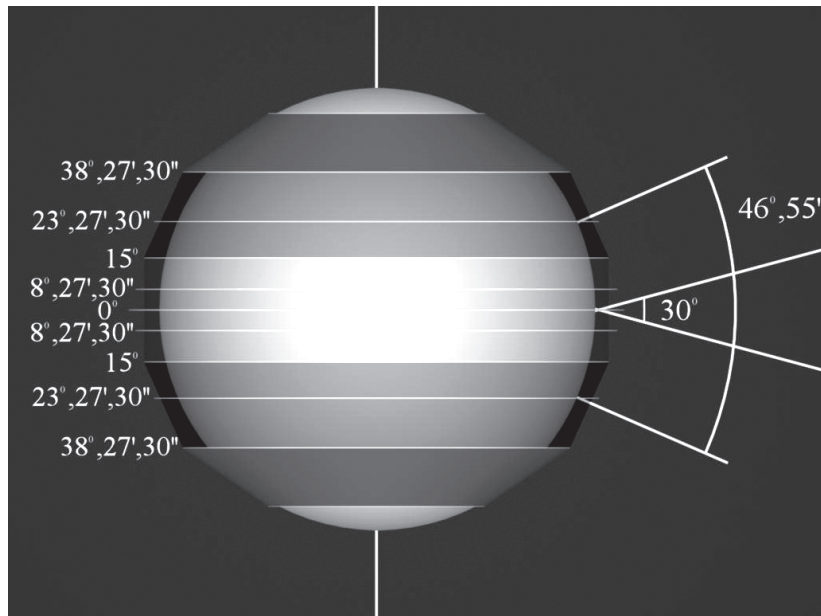
Sun, earth full moon positions "Opposition"

On equinoctial days, two times a year, the Sun shines on the zenith illuminating equatorial line to an extent of 15° on either side. The 30° cone base is the area illuminated by the Sun on the globular surface at any time, forming zenith at that locality.

On a solstice day, on the other hand, the Sun is on the zenith above line of Cancer in the North the illumination extending 15° north or on the line of Capricorn in the South extending 15° to the South.

Therefore, on one occasion the direct Sunlight illuminates areas $8^\circ 27' 30''$ North of equator or at another moment similar latitude South of equator.

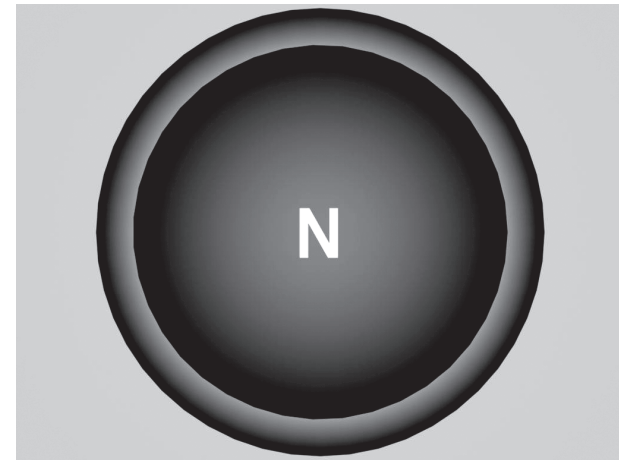
Figure 33



Illumination range, observer, latitudes

However, the inclined rays of the Sun illuminate the tropical belt to such an extent that only the Arctic or Antarctic regions remain with tangential illumination during six months each. At these Polar areas six months of day- light and six months darkness is the norm. Even when these areas get partially illuminated during the other six months light is dim and the Sun never reaches the zenith in these areas.

Figure 34



North pole front view

In areas north of $38^\circ 27' 30''$ Northern latitude, the length of the day/ night remain reciprocal through out the year. Similar situation is observed in the Southern hemisphere.

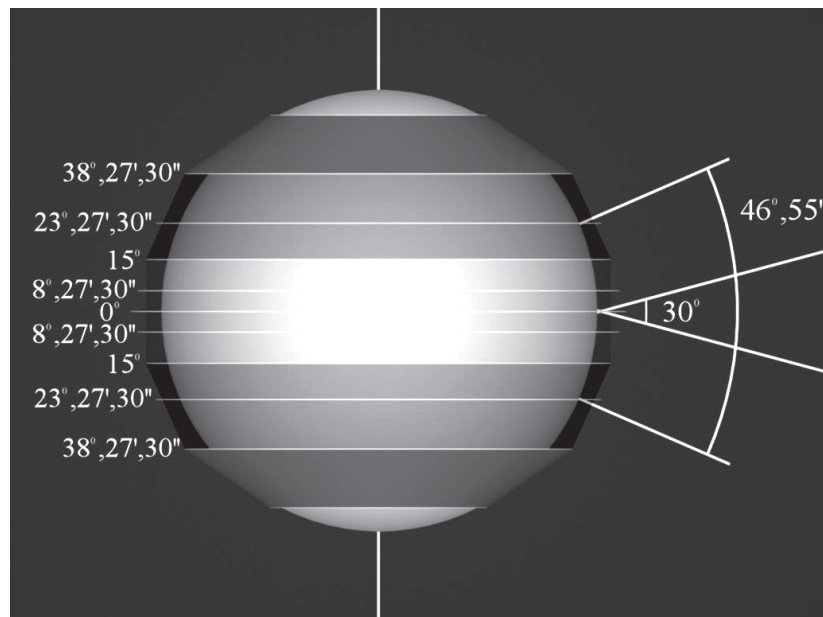
*“Never does the nature say one thing and wisdom another”
- Juvenal*

BIOSPHERE

The flora and fauna of the Biosphere will have to be explained taking into account these details. They are intimately related to the climatic changes in corresponding areas.

Figures explaining these sectors and the limits of tropical and subtropical belts demonstrate the biotic, climatic and other ecological zones.

Figures 35

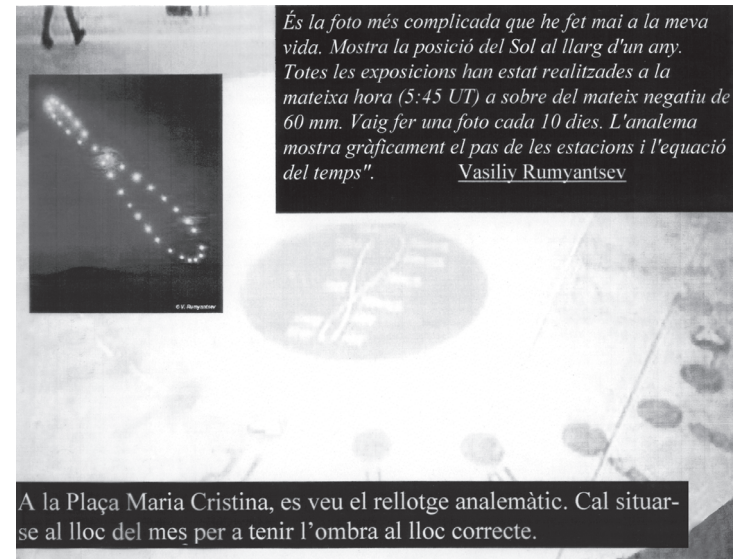


Biosphere

For People living in the tropical belt Sun shines throughout the year. The day night sequence follows a specific pattern. Seasonal changes and extreme conditions in the climate remain within a specific range but never reach extremes of cold or heat. The length of day and night maintains within very little variation in the tropics. One such unit day – night is considered as one day of about 24 hours duration (Sidereal day length corresponds to 23 hours 56 minutes and 4.091

seconds). This is so throughout the year. Any location of the observer maintains same side of the planet facing east every time the Sun rises in the morning.

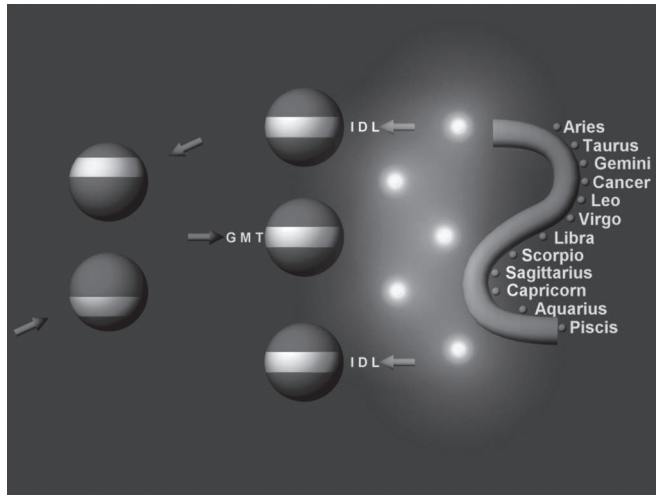
Figure 36



Ana Lemma

However, the background constellations change regularly one after the other in a specific sequence round the year. A Constellation at the background remains invisible due to the luminosity of the Sun in front. When the Sun is at zenith at midday today a Constellation should be at the background. But after six months this Constellation remains at nadir at midnight. Remember that the Polaris is observed at the same point throughout the year.

The Polaris is not reported to go round the Sun in a heliocentric orbit. Only the relative position of the Sun or the source of Sunlight changes with reference to the background Constellation.

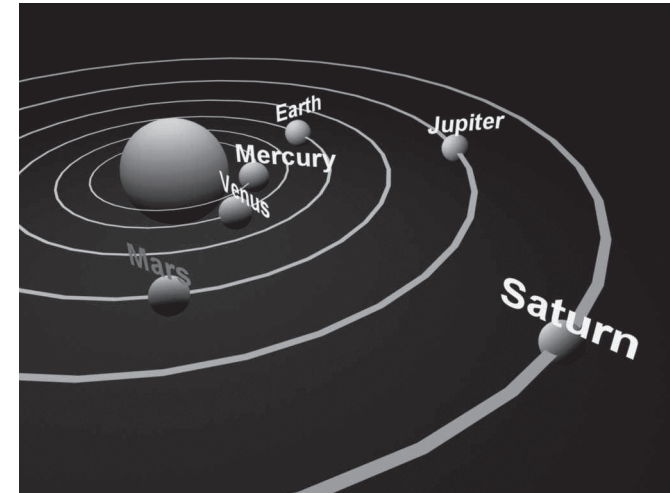
Figure 37**Visibility of Sun against Zodiac background**

This observation definitely shows that the planet Earth never maintains a heliocentric orbit at all. Similar situation is observed with all the planets in the solar system. This statement is totally contradicting the existing views of Copernicus, Tycho Brahe, Kepler, Galileo, Newton and others including the modern astronomers that all the planets in the solar system follow heliocentric orbit. In order to explain the seasonal variations it was necessary to assume the planetary axis inclination of $23^{\circ}27'30''$ in relation to the solar axis, consequently the heliocentric orbit had to be extended as an ecliptic.

This assumption has caused all the misconceptions in the name of Science around the world.

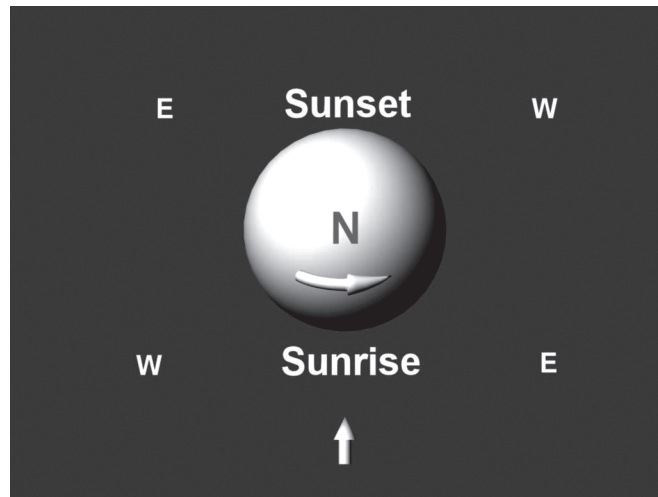
Even after the observation that Sun is not stationary but has its own orbital displacement in addition to the rotation as a celestial body, no more calculations and revisions relative to the planetary orbits are reported. As a matter of fact all celestial bodies are in motion. Their relative distances remain doubtful. It is time to think in terms of a dynamic model. In case of impossibilities to explain the process

with the recorded assumptions a thorough revision has to be implemented. If the mathematical models are insufficient to explain the process fresh models will have to be elaborated to avoid errors and inaccuracies in the knowledge. After all three hundred and thirty years have elapsed since Newton (1674) proposed his model.

Figure 38**Copernicus / Newton model visible planets / Sun (Video enclosed)**

The Poles of the planet at North and South are two extremes of an imaginary axis. The rotation of the planet from one side to the other, the expansion best observed at the equatorial plane, produces day and night. When an observer is standing looking at the North facing the Polaris, the right hand stretched out indicates the east and the left hand the west. Conventionally these are the four cardinal points for all references. But when the east is defined as the place where Sun is visible, there should be some modification. Thus, for example, the Sun sets at the western horizon and naturally this is the east where the Sun shines. The rotation of the planet Earth has created this optical illusion. However, the North South directions always remain the same. That is why this imaginary line represents the axis of the planet.

Figure 39



Earth East / West range while rotation

In the morning the Sun appears at the eastern horizon at noon Sun is seen overhead (Zenith) on Equinoctial day over equator and Sunset appear at the western horizon. This is simply an optical illusion. The rotation of the Earth exposes the surface where the observer stands to the Sunlight in the morning, noon and evening. In fact, if one can say that the observer is standing erect at noon with overhead Sun, at midnight the Sun may be located below the feet on the other side of the globe. In the same way what is east in the morning becomes west in the evening and the west in the morning obviously becomes east at dusk. North and South remain as such all through. Hence, on a full Moon day at Sunset (in the west as seen but which really is east) the Moon shines at the east (really it is the west). This illusion may be observed next morning when Sun rises in the eastern horizon. The Moon is seen in the west.

Figure 40



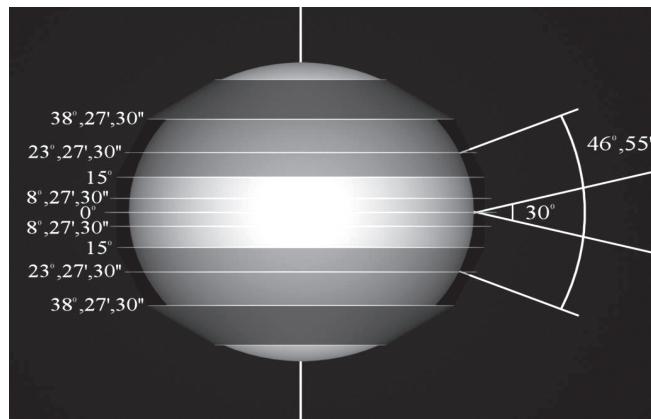
Sun, Earth, Moon at full moon position

The solid angle of $46^{\circ}55'$ cone apex has to be visualized with Sun at the center irradiating electromagnetic waves all over. The base of such a cone describes the orbit of the planet Earth if it were to stand still for one full year. The rotation and revolution of the Sun and the planet extend this planetary orbit into a helix.

The direction of orbital motion describes the illuminated area coinciding with the ram force. This corresponds to the maximum atmospheric pressure in the morning. Far away from this pressure area, 180° away is the tail end with decreasing pressure in the late evenings. The climatic changes take place under such conditions. The quality and quantity of Sunlight differ in the morning and evening. The rotation of the planet exposes the surface only partially tangentially in the morning and evening but perpendicularly at noon. The band of incident light is constantly moving from east to west contrary to the direction of planetary rotation from west to the east. However, the North – South axial shift helps the displacement of the light so that the tropical area and the subtropical area receive the Sunlight. Tropical area 15° latitudes on either side of the Equator

receive Sunlight at most of the time as a band whereas on the lines of Cancer and Capricorn the Sun shines over zenith once every six months. This is the consequence of the axial shift of the planet to the South or North along the planetary orbit. Quality and quantity of Sunlight, therefore, differs every day of the year even though the illumination is continuous.

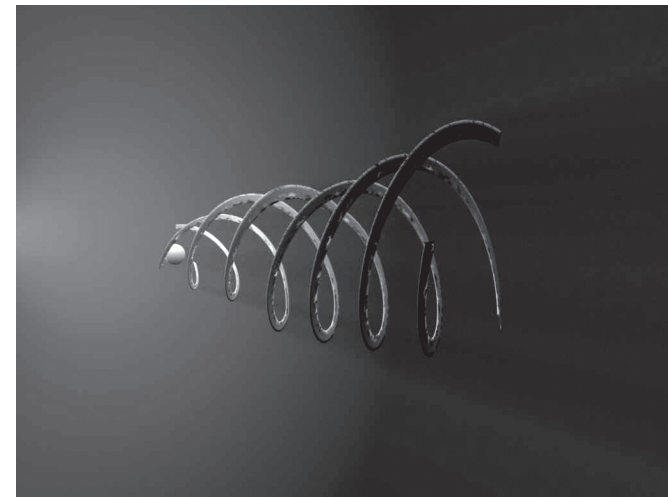
Figure 41



Latitudes, range of illumination, visibility

Corresponding features will have to be calculated for each zone on the surface of the planet. Likewise the wind directions, Tidal waves, climatic changes and other weather conditions need further studies. Axial rotation combined with orbital revolution induced the gaseous mantle known as atmosphere to extend into a long “tail”. Any substance heavier than air when reaches this mantle is immediately placed at the farthest end of the tail, where the attraction to the surface is almost absent. These particles are lost for ever in the space behind or get transformed into something else by combination with other substances with which they come in contact

Figure 42



Planet earth with its atmospheric tail

All planets with atmosphere exhibit such phenomenon. If the celestial body happens to be a star the tail is formed of fire or flames.

Planetary axis does not rotate but serves to refer the movement of the planet in relation to the North, East, South, West directions along its orbit as the case may be. The planet does not rotate on all radii and therefore, the center of the Earth cannot be considered for measuring the distances. To measure the mean sea level the center of the Earth is taken as a point of reference. The astronomical literature considers that the center of the Earth maintains the equidistant radii uniform all over the planet. Each radius maintains one point on the globe. The North South axis serves as line of reference around which the planetary mass rotates. This imaginary line should be considered as reference to calculate distances to any other points around the equatorial plane. If polar plane is to be compared then the polar extremes of this axis should be taken into account. This fact changes the concept of the Mean Sea Level. The equatorial diameter of the globe is 12756.78 Km

but decreases on both hemispheres until when it reaches the Poles there is nothing to be measured as it is only an imaginary line. Any latitude may be indicated on the North South axis for easy reference.

Along the helical orbit when the Earth moves close to solstices the monsoons appear, that is to say that the direction of the winds due to spiral movement of the gaseous atmospheric mantle which is extended like a tail plays important role to expose the tropical areas to the rain. The planetary surface experiences rain when it passes through the raining region of the orbit. Thus the climate changes locally with weather conditions getting altered due to specific situations in the atmospheric mantle.

Again the bay depressions, hurricanes, tornadoes occur during such occasions and precautionary measures could be taken in time to avoid untold miseries, loss of material and precious lives.

Counter currents may be produced artificially either in the atmosphere or under water using available technology or incorporating new technologies.

"One can not command nature except by obeying her"
- Francis Bacon

RAINY SEASON

The ram force at the surface of the advancing planet produces head wind pressure. The atmospheric pressure on the lithosphere and hydrosphere produces heat by friction while the planet moves in its own orbit. The heat thus produced evaporates the water. The continuous tidal waves help to increase the winds across the atmosphere and the water vapor condense in the air to form clouds. When the hot air of the tropics reaches this cold cloud, Tropical Torments appear. When the alignment is exactly in the Milky Way region the tropical areas receive rainfall. Before entering this region or after leaving this sector there is no rain in the area.

The clouds are present in sectors corresponding to this region (arc) on the orbit. In other words, Cancer and Capricorn are two zodiac signs with abundant rain producing capacities. When the Earth passes through these areas, heat produced with interface friction gets transmitted to the cold clouds. This produces lightning and thunder to start the downpour. Once the Earth moves out of this range no more rain is there, thus experiencing the next seasons of the year. At any moment a 30° cone is produced with observer at the cone apex and the Cosmos as the base of the Cone. Another inverted cone corresponds to the celestial point in reference, may be a planet, a star, a constellation or some such object. The cone apex corresponds to that point and the base covers the observer.

The equatorial arid tropical zone is ample, with lithosphere, hydrosphere and atmosphere. The hot vapor released from the hydrosphere gets into the gaseous atmosphere. The friction at the interface maintains the vapor in position and expands spirally more and more higher up in the air where the atmospheric pressure diminishes. As the vapors reach higher strata of atmosphere, the temperature drops in a specific pattern but the vapors are held in position. They get held up over two sectors along this atmosphere, when the gaseous tail is in line with the Milky Way. The sectors where the zodiac indicates.

40° – 133°20' 200° - 293°20' the clouds get accumulated. These particles being heavier they get condensed into bands or strips with shapes and sizes.

Figure 43



South West / North East Monsoon Sectors

The vapors reach the polar region attracted by the centrifugal force of rotation or the vortex formed there. Due to less heat prevailing at the region these vapors get condensed into snow or ice as the case may be. The same cold climate prevails even in the tropics and mountain- tops where the Sunlight illuminates but friction is not produced. Snow and ice may be condensed in these areas.

The planet during its helical orbit enters the identified region along with heat produced by friction. This happens just when the ram force is at the equatorial belt. There is every possibility of hot air produced at the interface move to the atmospheric strata dashing against the cold clouds to produce rain and people enjoy the rain, the water. This is the basis of profuse biomass, sustainable Nature. The gaseous atmospheric tail is bent in such a way that the direction remains opposite the direction of planetary displacement. That means from

one solstice to the other solstice the planetary axis shifts from north to the south or vice versa and the tail moves to the other direction. While the planet is changing the direction from one extreme to the other the tail has to adjust itself to occupy the opposite direction. While doing so the tail has to pass through the equatorial plane. The hot air produced at the tropics due to friction reaches the cold clouds in the tail region producing lightning, thunder and rain. This is how the monsoons are formed. Associated with this atmospheric adjustment several tropical currents are formed, sometimes transforming into hurricanes or tornadoes.

Figure depicting the monsoon seasons and the directions of wind currents closely related to the direction of the planetary movement should be visualized at this juncture.

The complex movement of the planet produces friction with the suspended particles in the air. The lithosphere produces heat in the tropics with extensive surface area. The hydrosphere in the tropics serves to evaporate the water and its transfer to the atmosphere in the form of humidity. The water evaporated during the past millions of years must have contributed on one side to expose more landmass by decreasing the sea level and to increase the cloud formation due to the water vapor released from the surface.

However, it is interesting to note that the air temperature in the tropics generally maintains at about 30° C at sea level but as one moves further in atmosphere the temperature drops. On regular jet flights at 10000 meters or about 33000 feet the outside temperature is minus 60°C (-60°C). The clouds reach variable heights. At that distance the evaporated water in the form of gaseous cloud should be held at -60°C. When the hot air rushes into the clouds they move from one place to the other or get accumulated and then the particles come closer to become droplets of water. These drops drift down the atmosphere causing rain. When the tropical belt exposed to

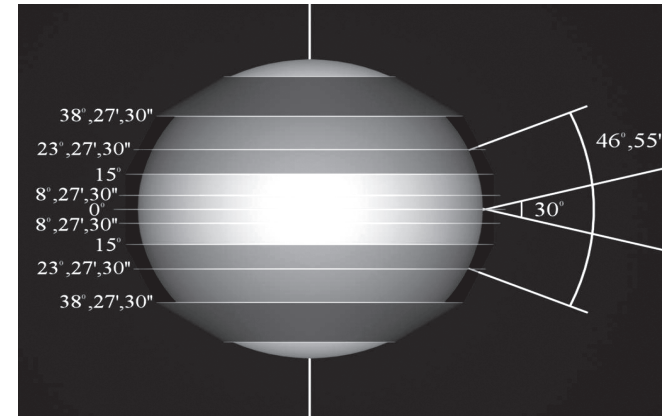
these areas gets drenched at lower heights of biosphere, the river flows and finally reaches the oceans.

Weather conditions, climate changes, seasonal variations are all factors for study under this paradigm.

Constituent particles being heavy and compact the lithosphere and hydrosphere rotate at a constant speed of 0.5km/sec. on Earth's North/South axis. The gaseous atmospheric mantle formed of lighter particles becomes more flexible. The spin releases waves in the hydrosphere and gets projected into the gaseous mantle. The orbital revolution at a speed of 11.889231km per second (calculated on the basis of the distance to be covered in one year) produces ram force in front of the planet, the first impact being on the atmosphere, the gaseous mantle gets compressed. This sector with compressed atmosphere corresponds to 30° arc at any given moment and extends into a strip directly in relation to the axial rotation. The tail end of the mantle with spiral waves extends into a drawn out gaseous cylinder.

The heavier suspended particles are closer to the hydrosphere and lithosphere. The incident light illuminates the ram force applied area that extends as a strip. A total of 12 arcs constitute the helically curved orbit. This area extends from $38^\circ 27' 30''$ Northern latitude to $38^\circ 27' 30''$ Southern latitude during one year owing to the axial North/South shift. The combined impact produces friction between particles of lithosphere and infrared rays (invisible sector of solar rays), hydrosphere, and atmosphere. Constant friction produces heat. This belt of the planet Earth is known for the heat and is known as the tropical zone. Beyond this zone where the friction is less, cooler areas occur.

Figure 44



BIODIVERSITY

Heat produced by friction in the biosphere promotes life on this planet. The rotation of the planet combined with the orbital displacement facing atmosphere pressure causes this friction. The heat produced establishes an ideal climate for the biodiversity to thrive. The exuberance of biomass both in the lithosphere and hydrosphere is typical tropical expression.

Food for all

The plant diversity or the vegetation makes use of the available resources, namely, the heat, Sunlight, water with dissolved minerals and organic nutrients, besides atmospheric air. The plants elaborate their methods to synthesize their own requirements. Meanwhile whatever has not been utilized for its own metabolism go to produce plant materials like roots, shoots, leaves, flowers, fruits and seeds for their growth and perpetuation. This is the reason why the plants are considered as primary producers on this planet. With all the science and technology science is yet to understand how and why these organisms manufacture millions of components found in each

case. All that is known in plant physiology is the presumed photosynthetic process combined with the respiration. The descriptions with all the complicated biochemical pathways fail to express the simplicity of the totality. This aspect becomes all the more complicated when one learns that the entire body of the plant is made up of one protoplasm with incomplete cell walls. Even the cell walls maintain certain gaps known as pits during their onset. The protoplasm maintains continuity through fine fibrils known as plasmodesmata. ***The dead cells constituting the vessel elements or the tracheary cells and tracheids with no protoplasm but with thick cell walls can not serve for conduction of sap or liquids of any kind.*** The scientists will have hard time to explain the ascent of sap when the so called conducting vessels are not capable of conduction at all. Plant ecologists will have hard time to interpret the process. The ionization of atoms and molecules supposed to take place in the cells or chloroplasts is only assumptions with no explanations accompanying the descriptions.

The animals thrive well as consumers of this plant material. Even among human population almost 76% of the world can be located in this tropical zone. The climate with timely alterations apparently establishes cyclic manifestations. However the seasons are expressed with clarity in the temperate zone to the North of line of Cancer or South of the line of Capricorn. Very little percentage of the population enjoys the extreme cold conditions of the Arctic or Antarctic regions regarded as the coldest zones of the planet. The biomass is proportionately more in the tropics and least in the Arctic Zone.

The rotation and revolution of the planet produces friction at the front at the interface of atmosphere with hydrosphere and the heat produced evaporates water from the surface. Lithosphere with compact particles emerged from the hydrosphere as land mass. The water started flowing helically and this multidimensional spiral remained a model for water flow. The net result is the free way established at the core center of the flowing water where the fish can move in any direction since this is the least resistance zone.

Fish move upstream, even in steep water- falls. Especially at nighttime when the surface pressure is reduced to minimum the fish can mobilize with ease.

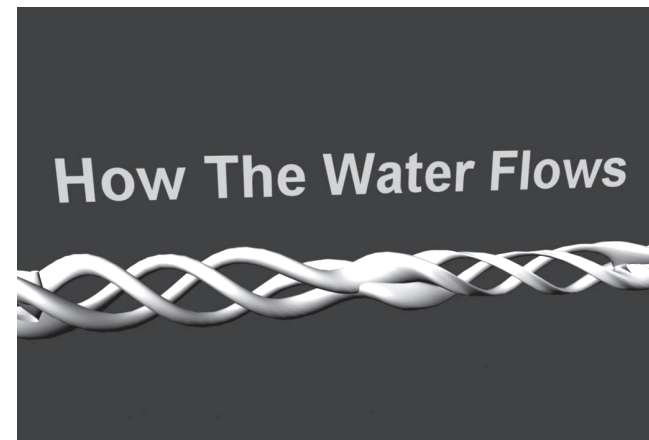
This process of evaporation of water from hydrosphere continues. Rivers originating from the mountain- tops flow in all directions. The river increases in length when the tides recede in oceans. The erosion from valleys combined with sedimentation at the estuaries increases the length of the river reducing the depth of the water in the ocean. The rain- water flows normally in this fashion.

On mountain- tops water becomes ice and starts melting when there is ideal circumstance. The ice derived water flows in the same way as the rain- water or spring water to reach the ocean.

Water flow

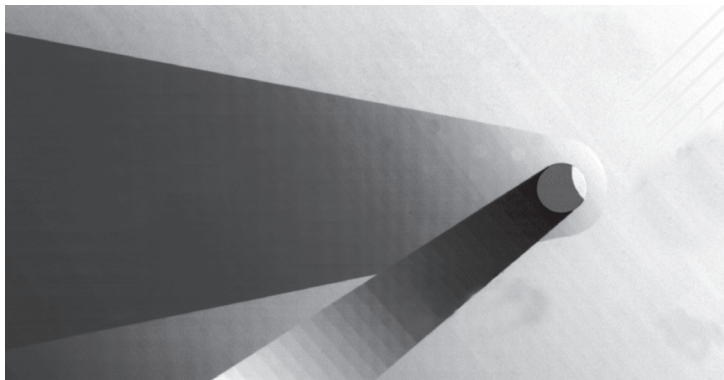
In every case the flow of water is helical leaving sand bunds, corroded rocks and eroded soil as evidence of this path way. Since the spirals appear in three dimensions and directions it has been impossible to detect and describe the natural phenomenon so far. The human intelligence should make use of this energy without obstructing the free flow of water.

Figure 45



The axial rotation exposes the observers to the Sunlight 30° arc at anytime covering 12 such units called the zodiac comprising 360°. The Sun is at the zenith at midday to expose the area 30° arc complete and this zone is not to be seen at night. But the rest of the constellations are partially observed at night 75°+180°+75° for a total of 330°arc. Soon after Sunset six constellations can be observed across the sky, early morning before Sunrise another set of constellations appear, one constellation, the one occupying at midnight over zenith is the only common arc visible on both occasions, first at the “eastern” horizon opposing the setting Sun and next morning at the “western’ horizon opposing the Sunrise. The shadow of the planet extends about 1383740 km, as a stele opposite the point of illumination 30° arc areas, the oncoming light ray presenting an inclination of 23°27’30” explained elsewhere in the text. This shadow extends beyond the planet as a conical projection around the year.

Figure 46

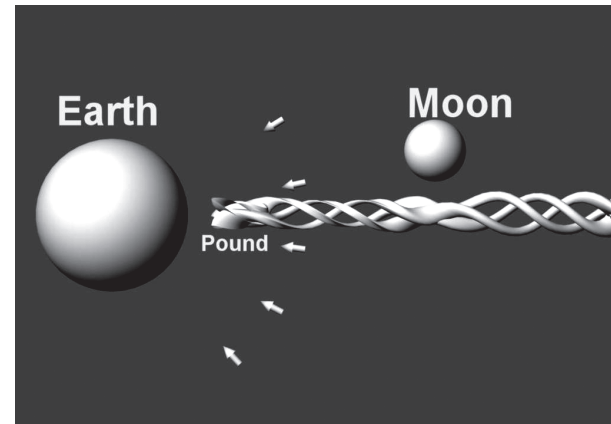


Shadow of the planet

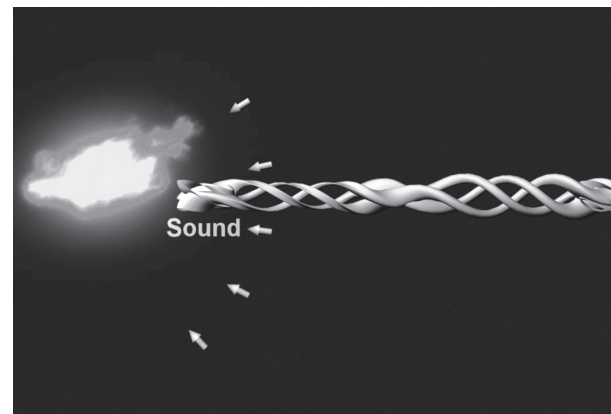
The orbital revolution presents a North, East, South and West shift permitting the four seasons. Simultaneously, every day about 1° displacement on the orbit should be interpreted as a curve forming part of the helix. The equatorial plane maintains parallel to the plane of displacement. The orbit of the planet (POUND) helically goes

round the helical solar orbit at the tip of which Spiral on flow of universal natural dynamo (SOUND) is situated.

Figures 47a & 47b



POUND



SOUND

It is assumed that the shape of the planet is a spheroid. Even photographic proof has been produced to demonstrate the shape. This *assumption* is taken for granted and taught as a scientific fact. For all other studies this ‘fact’ is the basis. This is an excellent example to show the hollowness of the entire scientific paradigm based on assumptions of this type.

INCOHERENCE

Textbooks consider that 71% of the surface of this globe is hydrosphere and 29% is lithosphere. Modern science is full of data based on these basic estimations. Any child or even adult gets confused talking about atmosphere as if it is some other entity different from the planet Earth. The modern technology is yet to develop instruments to photograph air or atmosphere. Can this justify the negation of air and atmosphere as a mantle around the lithosphere and hydrosphere of Earth? Or if it is accepted, a 100% surface of the planet covered with a mantle of atmosphere the shape of the planet cannot be a globe. The measurements will have to be evaluated once again. *Considering the rotation and revolution any planet with gaseous atmosphere should look like a comet.*

Magnetic needle remains parallel to the planetary axis when placed over the equator the North indicating the North Pole. The mariners compass functions with this principle. A magnet when moved to the North for example, the needle “dips” proportionate to the latitude the angle indicating the degree. On the North Pole, the needle stands erect still parallel to the axis. The needle does not get attracted to the center of the Earth. Close to the Pole the needle is indicating the axis with S extreme touching the North Pole.

Sun and other planets maintain their axis parallel to the terrestrial axis. The inclination of the orbit with reference to the photosphere varies with each planet. The distance at which each planet is located also varies. So also the individual orbits vary significantly. Each planet, its orbit and other attributes vary.

Ball in motion

Any ball when kicked gets displaced. Ball starts rolling on all directions. Each time the pattern may vary depending on other factors like the substrate for rebounding or other obstacles at sight. One may induce specific variations in the pattern of bouncing.(see video)

Celestial bodies, on the other hand, all move with an axis in a definite pattern that may be identified as HELICAL. This type of rotation or orbital revolution maintains the body in position in relation to other components. Action, reaction, interactions and cumulative effects may be envisaged for the entire system. An observer is involved in the movement and there is no possibility of proving any point to any body. As an observer is unable to distinguish the process as a whole, he should be happy with the outcome. ***All celestial bodies move helically at all time.***

Scope for applied research

The axial rotation of Earth at 0.5 km/sec (= 1800 km/h) and the claimed orbital revolution at 30 km/sec (=108,000 km/h) are significant dynamic forces not utilized for human use. If only a proper technology is developed to harness these free energies humanity can enjoy all comforts almost free of cost. It is ever lasting source.

Our own calculations based on the conical projection of the orbit, the revolutionary speed is about 11.889231 km/sec. (= 43200 km/h) and even this is sufficient source of energy. The rotation from west to east at 0.5 km/s combined with an axial shift may be added to the 11.889231 km/s speed of the orbital displacement provide ample energy source. An appropriate technology has to be brought in for energy conversion. Energy conservation problem is not there because the dynamic process is continuous. Other application for such energy may be designed. *Here is a challenge to the present day technology to think in terms of harnessing this safe energy. This technology should be sufficient even for interplanetary transportation. Once the escape velocity is attained all other possibilities become evident.*

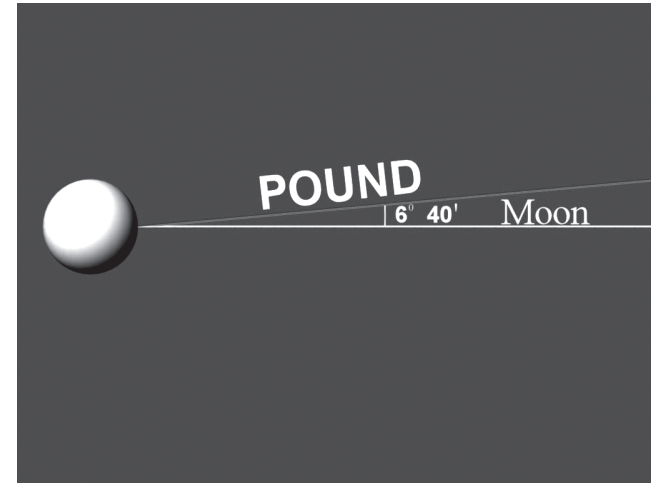
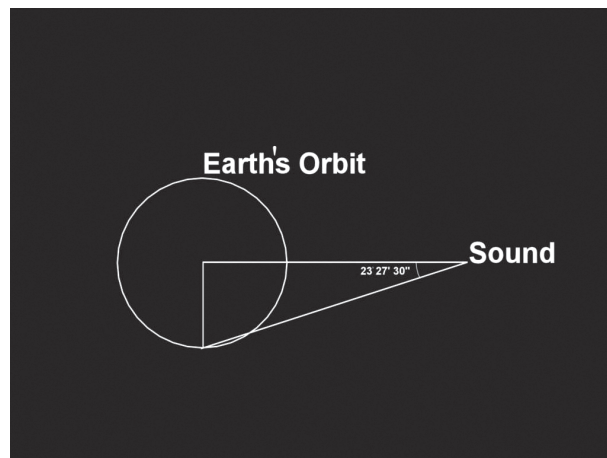
The centripetal and centrifugal forces provided from the movement of celestial bodies may be made use of or transferred to launch rockets for inter planetary travels. Proper manipulation of this source is important to avoid any kind of risk. Hope that a day will come

when such free energy flows through the daily life of common man around the world.

When a right angle triangle is made to rotate with one side of the triangle that constitutes the right angle the result is a cone with that side as its height. In one such right angle triangle the other two angles are $23^{\circ}27'30''$ and $66^{\circ}32'30''$. Let the acute angle ($23^{\circ}27'30''$) be at the cone apex forming a solid angle ($46^{\circ}55'$). The corner at the other angle ($66^{\circ}32'30''$) moves around to form the base of the cone. The cone represents the basic unit complex where the Sun is at the cone apex and the orbit of the planet Earth is the base. The center of this base when connected with the apex forms the height of the cone and coincides with the corner close to the angle 90° . The diameter of the base of the cone is 119104456 Km whereas the height of the cone is 37233577.7 Km. The hypotenuse of the right angle triangle is 149,597,893 Km as a Constant Astronomical Unit. Astronomical literature maintains this information. This is the distance between the photosphere and the planet Earth.

This distance and the solid angle at the cone apex are kept constant throughout the orbit in the new paradigm proposed herein.

Figures 48a & 48b (Video enclosed)



This type of orbital pattern should be considered for other planets. The angle of inclination and the distance between sun and earth are sufficient data for the respective calculations.

The axis of the Sun around which the mass rotates is parallel to the axis of the planets in general and to planet Earth in particular. The helical movement describes the orbit corresponding to the base of the cone. The axis of the Moon is also parallel to the axis of the Earth but in another dimension.

Calculations to be made

The orbital velocity of the sun is given as 19.9 km/sec. All the planets and their satellites move along with the main source of power, the Sun. Each celestial body has its own specifications and calculations may be taken up by interested parties to include all other planets.

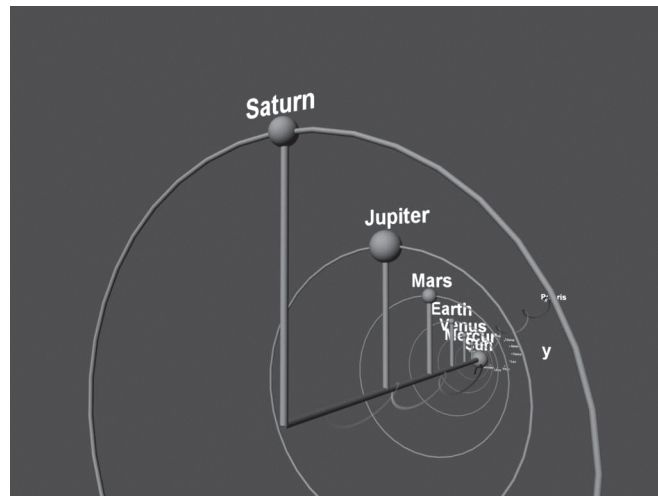
For example, Uranus is known to have an orbit of 84.01 years duration. It exhibits several uniqueness of its own. Its axis is said to have an inclination of 98° with reference to the Sun. According to the present approach the orbit of Uranus is so wide that the solid

angle at the cone apex is $98 \times 2 = 196^\circ$. Obviously its motion looks like a somersault. The interval between solstice and solstice is 42 years. The planet rotates in a direction contrary to that of the Earth.

Coaxial cones in helical paths / trajectories

The path headed by the SOUND (North node of literature) describes the solar orbit. Likewise the path headed by the POUND (South node) describes the terrestrial orbit. All planets maintain the SOUND at the apex of their respective cone and their bases correspond to their orbits. These orbits are of different characteristics but always maintain their position in relation to the solar orbit. The orbit of the Moon goes round the POUND just as the planetary orbit encircles that of SOUND.

Figure 49



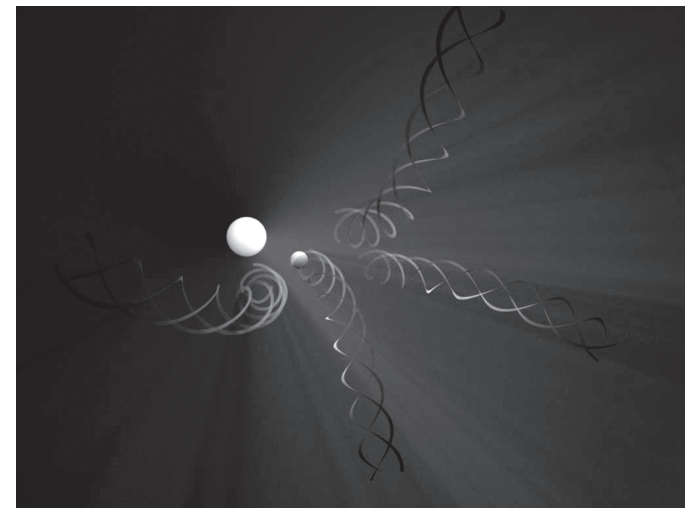
Coaxial cones in helical trajectories

SEASONAL CHANGES AND OTHER IMPACTS

Since the planet moves along its orbit, the light emissions maintain at $23^\circ 27' 30''$ inclination which represents the angle of bisection at the cone apex. The seasonal change in the biosphere due to axial shift during the orbital displacement of the Earth is worth studying with other internal and external factors.

For example, the solstices permit the change in axial North/South shift in such a way that the illuminated area changes from one hemisphere to the other hemisphere. While doing so, the direction of the ram force changes continuously. Along with this the tail end of the atmosphere also changes its direction correspondingly. The twists and curls produced in the atmosphere come as a consequence of planetary rotation itself. These alterations in the atmosphere get projected at the hydrosphere causing tornadoes and hurricanes or even dangerous tsunamis. The impact may reach the lithosphere causing Earth- quakes, eruption of volcanoes or such other natural calamities.

Figure 50



Seasonal changes of the atmospheric tail

The 30° belt on which the incident rays illuminate represent the ram force receiving front that extends from east to west in response to the rotation from west to east. Other alterations in weather or climatic conditions are possible.

Fresh calculation of helical

The diameter of the helical orbit of the Earth is calculated to be 119104456 km representing the base whereas the apex of the cone is at the photosphere itself. The distance 149597893 km is the distance between the Sun and the planet. The speed of the planet along its orbit is 11.889231 km/sec and the rotation speed of 0.5 Km/sec.

Other data available from ancient civilizations

The 30° arc exposed surfaces of the planet extends as a belt round and round the planet following the longitudes from east to west. The observer unaware of the rotation feels as if the sky and the celestial bodies that move in the same fashion from east to west. This is an optical illusion. This has been compared to a person on a boat proceeding in one direction feels as if the trees on either banks of the river are moving in the other direction by *Aryabhata*(499AD) several centuries ago in India.

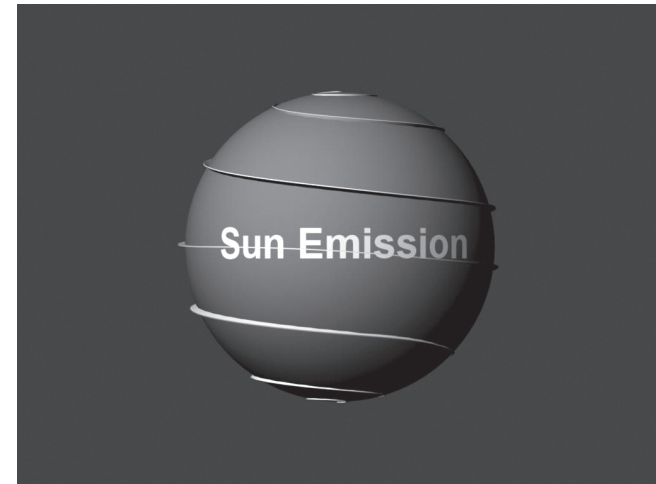
Catequilla hillock at Quitso-to (Quito, Ecuador) is good example not considered in scientific literature.

Variability of quality of sunlight

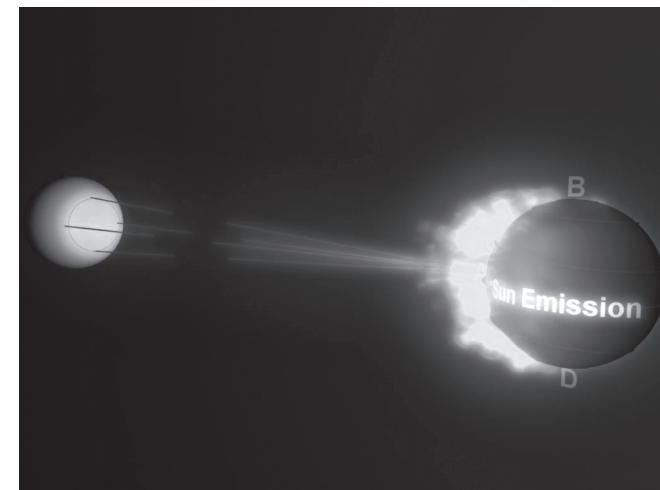
The rays originating from a 30° arc sector on the surface of photosphere travel about 500 seconds to reach the destination Earth. The rotation of the Sun extends the emission area into a ribbon like strip continuously winding or unwinding on the surface. The light emanating from the North Pole of the Sun illuminates the Southern hemisphere of the Earth due to the relative position of the planet along its orbit. The light from the South Pole of the Sun reaches the

Northern hemisphere of the Earth. Incidentally the solar equatorial areas emit light that reaches the equatorial zone of the Earth. This is the reason for variation in quality and quantity of light received and occasional Sunspots on the solar surface. Most probably the photosphere is visible and the Sun is not seen at all.

Figures 51a & 51b



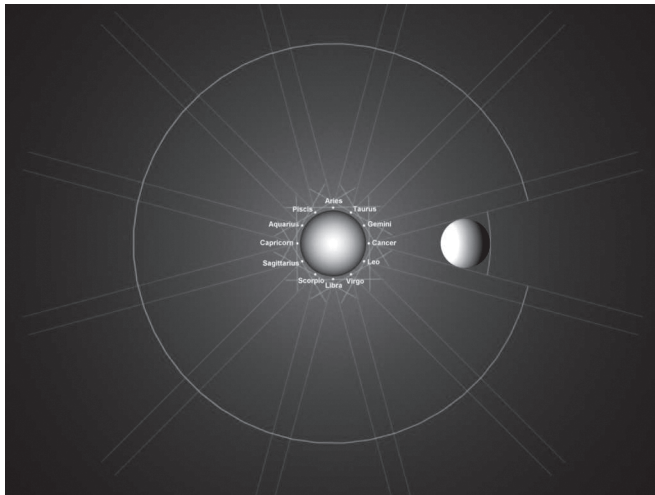
Emission areas at photosphere



Sun, Photosphere, yearly range

On a helical orbit the planet Earth revolves with a “Rotation”, every day/night expressing the phenomenon. The area exposed at a time is equal to just 30° arc. That is to say that on a globular surface clear vision is possible only at this sector and gradually lesser and lesser areas get expressed until the horizon is reached. Beyond that there is no visibility at all. Due to rotation during 12 hours about six 30° arcs equivalent to 180° get covered as day and similarly the night also covers 180° . However, at midday the Sun appears just at zenith and the illuminated area extends 15° before and 15° after to a total of 30° . On the other hand, at nighttime a total of 11 constellations comprising about 330° arc of the sky is visible at various degrees.

Figure 52

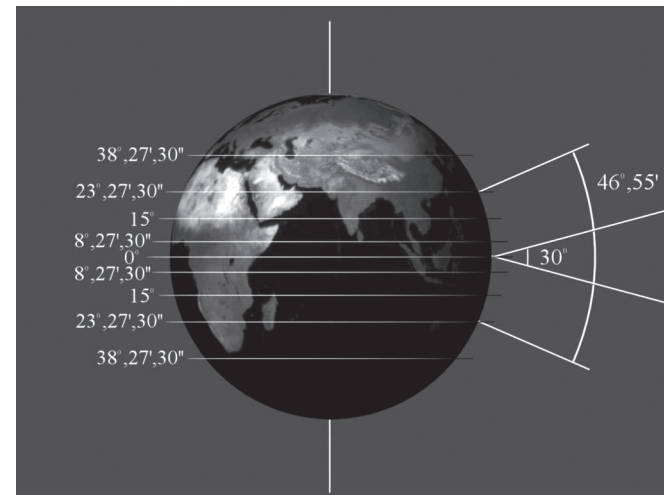


30° arc exposure, 330° night sky

The exposure at a time to Sunlight limited to 30° arc is a special feature. The 30° solid angle establishes a cone. However, the $23^\circ 27'30''$ inclination of the Sunlight illuminates certain zones on the planet holding specific latitudes exposed at a time on a globular surface. In other words, the illumination of the planet is possible as a band within specific range. This belt extends over the latitudes

15° beyond $23^\circ 27'30''$ on either hemisphere corresponding to the line of Cancer and the line of Capricorn where Sun shines over corresponding zenith at respective time of the year. Diffuse light from tangentially incident rays may be seen beyond this zone. The rotation and revolution maintains the limits of orbit at Line of Cancer in the North and the Line of Capricorn in the South. The illuminated tropical zone remains exposed to Sunlight at all times during the year. It must be mentioned here that on days corresponding to Solstices the illumination becomes tangential even at equatorial region. Latitudes 15° south of the line of Cancer gets overhead illumination on one solstice day. At that particular moment areas extending beyond latitude $8^\circ 27'30''$ North of Equator and farther South receives tangential illumination. The same way when the line of Capricorn gets Sun light over head north of $8^\circ 27'30''$ south latitude experiences tangential illumination.

Figure 53

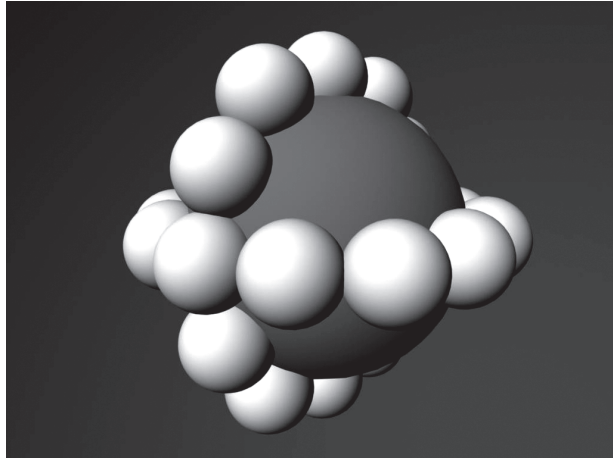


Day Night through the year

A WORKING MODEL

A maximum number of 62 cones, each with 30° solid angle at cone-apex, can cover complete vision all around the globe. But only a sector of cosmos can be seen at any point and at any time. Given conditions such that the solar illumination covers only the tropical belt, with extended subtropical belts on either side of the lines of Cancer in the Northern hemisphere and Capricorn in the Southern hemisphere, the vision of the cosmos gets reduced proportionately. Accordingly the curvature of the globe where the observer is located reduces the visibility.

Figure 54



62 cones each of 30° arc

At a given longitude or meridian at a time, bright illumination from Sunlight covering an area equivalent to 30° cone base does not permit possibility of observing other objects with feeble light. The other 330° sector becomes visible with the starlight covering 11 constellations when the Sun light is not visible to the observer or when the observer is out side the 30° arc. This distribution pattern is continuous at any point in the cosmos. Exceptionally reflected Sun light from the lunar surface is seen but even this is not possible at mid day.

TRADE WINDS

The shift of the planet along its orbit to North/South constituting the solstices affects the direction of the atmospheric tail. Obviously there will be directional change for the gaseous mantle loaded with quantities of water vapor extending like a tail full of energy. Similarly the east-west shift produces two alternating equinoxes in relation to the incident Sun-light and the equator. The gaseous tail moving in Northern and Southern directions develops the Trade winds expressed at the hydrosphere. This phenomenon may cause other ocean currents known differently at diverse oceans. The navigation history is full of stories regarding this phenomenon.

Shadow of the planet

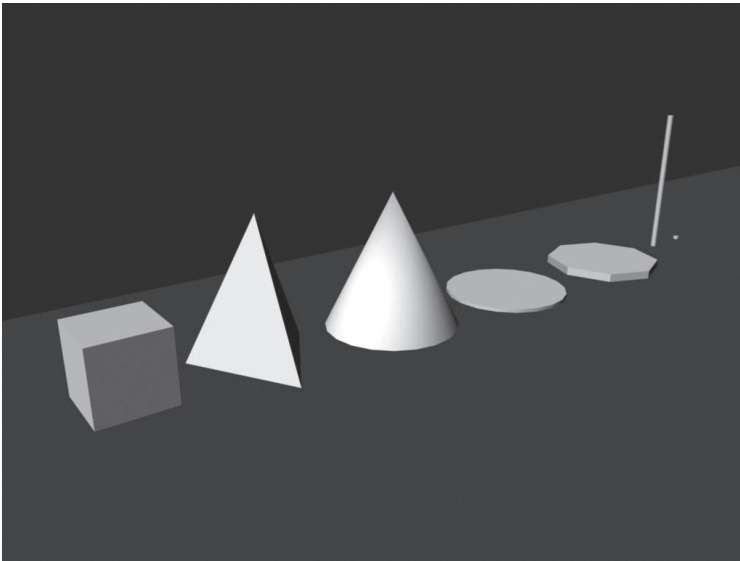
The shadow of the planet is projected as a dark tail. This extension known as the night has significant role in the metabolic processes of organisms in the biosphere. The shadow is a conical projection about 1383740km. (umbra) right opposite the oncoming Sun light. The solid angle at source of light $46^\circ 55'$ conical projection of the shadow may be recorded from corresponding locations along the base representing the orbit.

Assumptions cause errors

Euclidean geometry has come up with so much of information. Geometrical forms such as a dot, a line, a triangle, a quadrangle, and other shapes are taught at all schools around the world. The planet is referred to as a globe with a spherical surface. From this assumption several other concepts like globalization, globe-trotting, etc. are developed. There has been no explanation regarding the incompatibility of these concepts. On a globular surface how can one draw a straight line or a triangle or a quadrangle? Any line should be a curve. Even a circle becomes a sector. Doubts of this kind cause confusion for children or even to grown ups. Geometrical shapes and lines are better understood on a paper with two

dimensions but when it is a question of three dimensions the same concept requires modifications. When a fourth or fifth dimension is considered new concepts and descriptive terms will have to be defined and elaborated. Geodesic calculations may solve the situation to some degree but a permanent solution has to be implemented.

Figure 55



Euclidean geometrical figures represented in Cartesian model (XYZ)

Euclidean Geometry measures length, breadth and height. In books we come across the geometrical figures like triangle, square, straight line, circle, cone and so on.

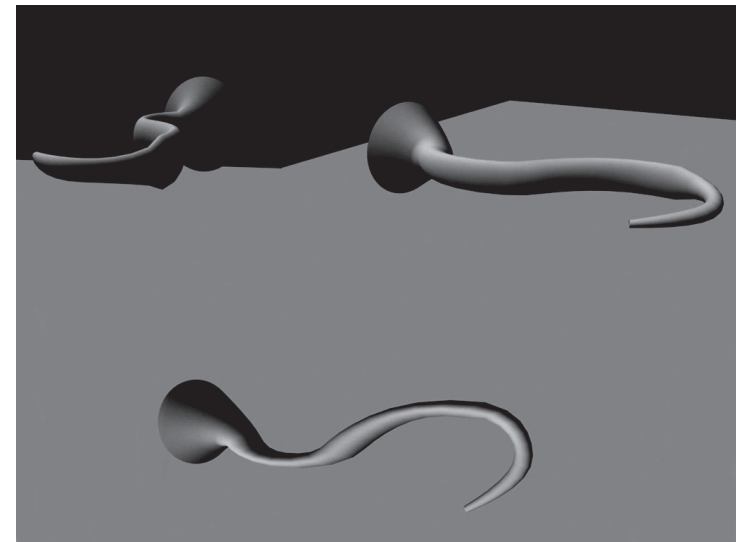
For precision measurements are in practice, millimeter, centimeter, meter, kilometer, inch, foot, yard, mile and so on.

STATIC MOMENTS VERSUS DYNAMIC PROCESS

Once these statements are subjected to critical analysis several facts contradict themselves. A point in space moving with reference to another point is highly dynamic. Several points in one direction make a line. But due to dynamism of each point the resulting line always should be a curved one and never a straight line. On a globular surface a straight line can never be drawn.

In that case, how to draw a straight line, a triangle, a quadrangle, a circle, or any such forms on a globular surface? Visibility at any point is reduced to 35 km radius and an observer at the apex of a cone can see objects within a 30° cone. The blurred vision or even distorted pattern may be visible for the observer. Looking at the Constellation Scorpio from different angles is a good example. Another example may be that of the Southern Cross.

Figure 56



Angular variability of celestial bodies

On application of this situation to the Sunlight, it is clear that the light originating from photosphere with a surface made up of flowing flames which is on constant rotation and orbital displacement, illuminates a small portion of the globular surface of the axially rotating Earth with orbital advancement when each ray takes about 499.9 light seconds for this journey.

The North South axial shift that produces the solstices exposes either Southern or Northern hemisphere at a time. During equinoxes the Sunlight illuminates the equatorial region leaving the Poles without light. When the illumination is shifted to the Southern hemisphere, the Arctic region remains under darkness and when the Northern hemisphere is illuminated the Southern Antarctic zone experiences darkness.

From one side the exposed area experiences daytime the unexposed area remains dark. It is important to note that the exposed globular surface is much reduced in spite of the fact that the days are longer because of lesser diameter at that latitude and proportionately the darkness extends across the other hemisphere. The same situation repeats at the other hemisphere after six months.

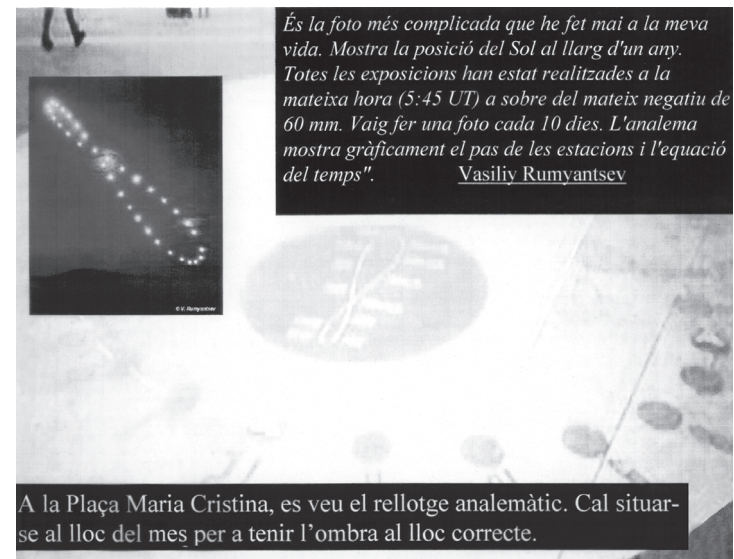
Ana lemma explained

It is interesting to note that on two occasions during the equinox the Sunlight illuminates the equatorial region and the day night length remain equal duration.

This occurs at two opposite sides of the planet even though these regions correspond to the equatorial zone. The International Date Line over the Pacific Ocean and Greenwich Mean Time over the Atlantic are two recognized longitudes corresponding to the two equinoxes but at 180° apart. In between these two points of reference at 90° longitude east and 90° longitude west are the solstice sectors, each located at 23°27'30" to the North and South latitudes

respectively. The direction of rotation from west to east occurs in the equatorial plane but the North South shift along the orbital displacement exposes the corresponding hemisphere to such an extent. The incident light at an angle of 23°27'30" inclination at the origin of Sunlight maintains the conical projection at all times. When the Earth moves South the illumination is to the Northern hemisphere and next time when it turns to North the Southern hemisphere gets exposed to the Sunlight. The gaseous atmosphere extending as a tail behind should indicate the direction of movement. Any air pockets or pressure areas developed in this mantle may cause climatic changes or affect the hydrosphere at corresponding areas.

Figure 57



Ana Lemma

The maximum diameter of the globe is estimated as 12756.78km at the equatorial region whereas from North Pole to South Pole it is just 12713.83 km. The direction of rotation is from west to east in the equatorial plane while the axis as such hardly rotates. The axis presents 1° shift along its orbit per day in one rotation. This shift permits the onward motion of the planet along its orbit by 1° and at the same time shift either to the North or to the South according to the season. However, the North South shift extends over a range of $46^\circ 55'$ extending the belt from line of Cancer to the line of Capricorn. The difference in the diameter of the planet at every latitude, when compared to that at equator permits the exposure of more areas of the surface because the projection of the conical illumination has wider reach compared to the equatorial belt. When the Sun shines at zenith over line of Capricorn, 15° South to this latitude (that is $38^\circ 27' 30''$ S) coming under direct exposure and beyond that latitude dispersed light until the Antarctic zone. This is known as the summer in the Southern hemisphere.

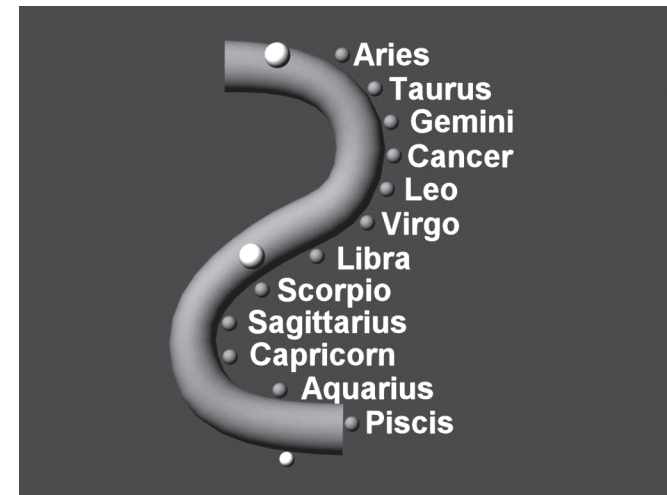
On the other hand, when similar situation prevails in the Northern Hemisphere the Northern hemisphere enjoys six months of Sunlight. Spring and summer are two seasons alternating with autumn and winter. These well- defined seasons are easily identifiable at temperate regions whereas in the tropical zone the demarcation is not that precise. Perhaps six seasons may be recognized in the tropical zone with gradation from one to the other in one year.

Such helical orbits are to be calculated for other celestial bodies for a clear picture of the solar system as a whole.

The astronomical unit (AU) is standardized on the basis of distance from Earth to the Sun. Considering the distance taken by a light ray to reach the planet from photosphere it is calculated as 499.9 light seconds (approximately 8 minutes and 20 seconds). This may be further determined as 149597893 km, applying the recent values of

speed of light. Distance from Earth to the Moon is calculated as one light second or equivalent 384400 km.

Figure 58



Zodiac through earth's path in one year and position of the Sun

Distances of stars relative to the Sun are calculated with modern methods. These are measured instrumentally using radio astronomy and expressed in light years (number of years taken by a ray of light to reach our observatory from source).

The parallax method or parsecs requires correction in view of the possible trigonometric error.

Scope for further studies

However, it is only an approximate calculation. The instrumental, experimental and human error put together may be quite significant. This factor also requires further verification to improve the data as to its reliability. The attributed expansion of the galaxies, their motion, the presence of celestial bodies, even possible absence of these objects at this moment are all factors not considered so far.

Taking into consideration that all celestial bodies are in motion, including the light emitting (stars) and the light receiving (planets) ones, the path of the light ray through so many light years may not be easy to locate, identify or represent graphically.

Sometimes, when star clusters are referred to one is not sure whether the distance mentioned corresponds to one of the group. For example, Pleiades is said to be a constellation with an open cluster of 7 stars visible even with out instruments. The astronomical data gives the distance as 370 light years. But the literature does not specify from which star in this cluster? Anybody gets confused.

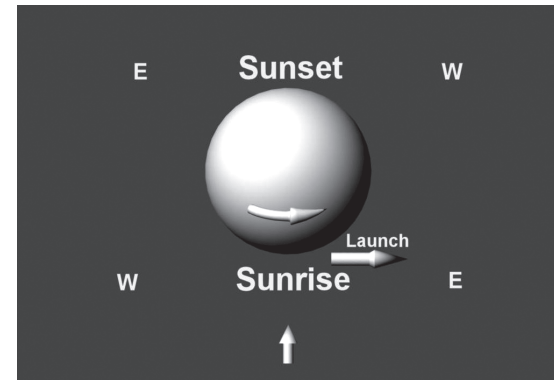
Once the helical orbits for celestial bodies are accepted, fresh models will have to be established. The shape of each planet or their satellites, their orbits, the relative distances and other details will have to be calculated once again since the present day calculations are made on erroneous assumptions.

Interplanetary voyage

Once the orbit of each celestial body of our solar system is established beyond doubt, interplanetary voyages become feasible and more efficient. The solar winds and SOUND provide sufficient energy to propel the spaceship to any location on the system.

The rotation and axial shift also give certain facilities for take off or landing. The extended tail end and the spirals in this stele should be of great use in this project. The same manipulation should serve to avoid unnecessary frictions and obstacles while take off or landing.

Figure 59

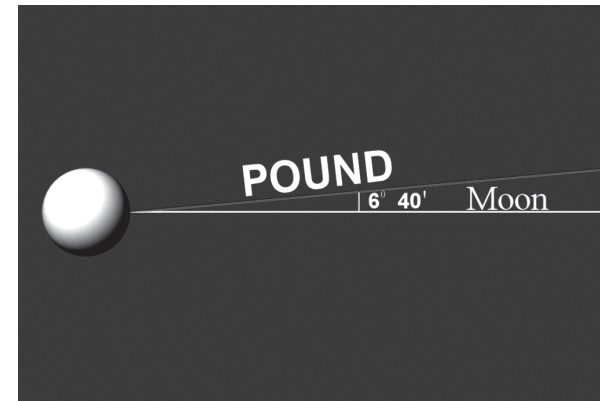


Launching indicators

Obviously the cost of journey should be within the reach of interested public.

Care should be taken to project such interplanetary journeys since the plan for inner planets should be different from the one for outer planets. The timing of exit and entry into any atmosphere is a key point in each case. The direction of rotation of each celestial body is one of the fundamental factors for consideration. If it is the Moon as destination the POUND program should be applied.

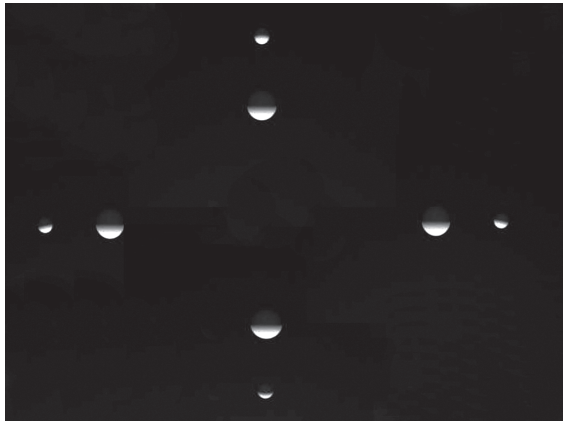
Figure 60



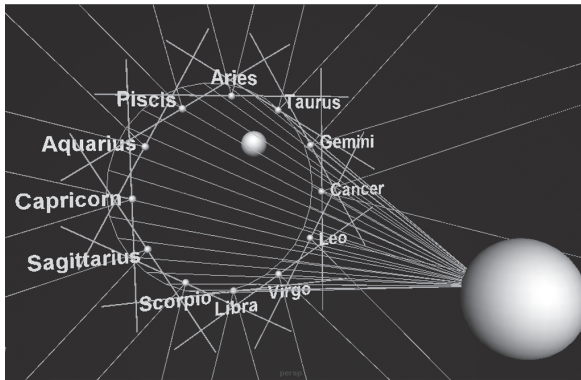
Earth POUND Moon

For travel between celestial bodies timings for take off or landing, angle of take off and other details will have to be calculated in each case. For example, when planning a journey from Earth to the Moon the phases of the Moon are important. Generally seventh or eight days after or before full Moon or new Moon are recommended in order to reduce obstacles and resistance. Calculations should be made to locate the object in question so that precise moment and relative position to start journey may be pinpointed.

Figures 61a & 61b



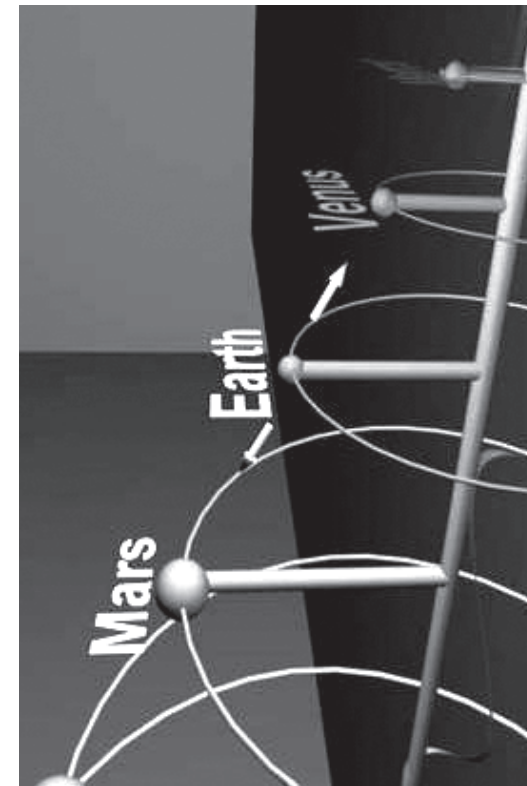
Positions of Lunar phases around the earth's trajectory



Motion of celestial bodies

However, when interplanetary travel is planned the calculations are different. In this case the orbit of each planet will have to be calculated before take off. The distance between the planets varies according to their positions in their respective orbits, in spite of the fact that they all maintain a constant distance from the Sun. This contrasts with the journey from a planet to its natural satellite. This is because the distances between these two objects are maintained a constant. This is possible with any planet and its satellite(s). Planning to travel from one planet to the satellite of another planet should take into consideration the orbits of both planets first and the respective satellites

Figure 62



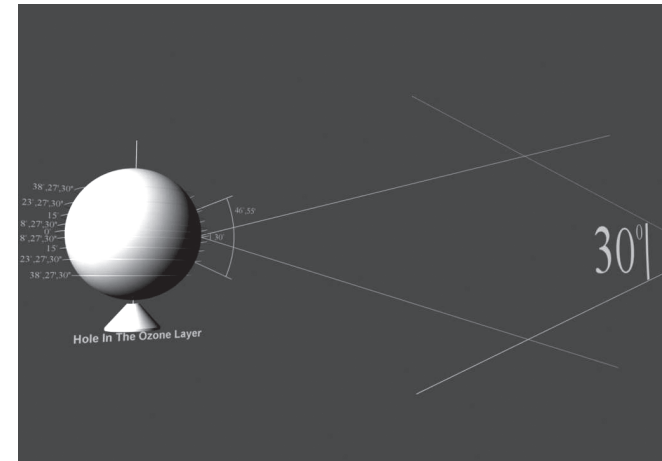
Outer and Inner planets

OZONE LAYER: A REFLECTION

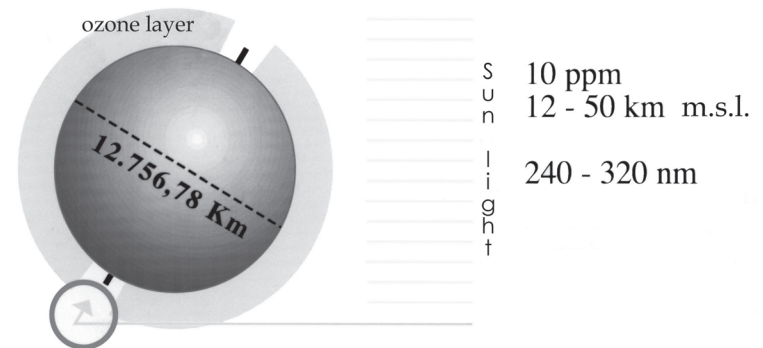
In the month of October 1957 a group of British Scientists happened to be on a scientific expedition to the Antarctic. They observed a special phenomenon in the sky where an empty space the size that of the United States of America was visible at about ten kilometers over the South Pole. When no other explanation was available, they *assumed and interpreted* this to be a “hole in the ozone layer”. Ever since this hole in the ozone layer has been a formidable subject for global studies. Every year the expeditions continue to go to the Antarctic and all the group of scientists has witnessed this phenomenon and contributed extensively on research topics related to this.

As a result, all the countries of the world are involved in a global effort to solve the problem to avoid serious consequences. Moves from diverse stand points such as political, economical, ecological, scientific, conservationist non government organizations and public in general to arrest the “global warming” or “green house effect” are continuously increasing. Several national and international seminars and workshops are held to discuss the problem in detail. The festivities and lunch, dinners, cocktail parties, held during these sessions are opportunities to watch how resources are wasted. In addition to financial expenses, time, energy and human resource are wasted worldwide. Even the United Nations through its Environmental Program at Nairobi, Kenya has elaborate projects on the subject. Sufficient literature is available on global warming and green house effects, control measures to reduce industrial emissions and other emissions, and other measures. The general public with anxiety and fear or even panic is eager for easy solution. A casual visit to any city in European Community should be sufficient to understand the popular reaction.

Figures 63a & 63b



Hole in the Ozone layer



Inclined axis of the earth and relative position of the hole

I feel it is reasonable and logical to review all the aspects in this moment to console the anxious public in general, ecological movements and organizations in particular.

From the available data some basic considerations are revealing, Ozone is a heavy gas, highly unstable and represented by O_3 symbolically in the Periodic Tables of elements in Chemistry. The gas gets transformed in to oxygen with ease. Some 50 years ago we

were taught that this layer at sea coast has a thickness of about 3 mm only. But now its presence is extended to about 60Km in to the atmosphere with a density of 10 parts per million. About 70 to 90 % of the incident ultra violet rays present in the Sunlight are supposed to be filtered by this layer, changing the climate by altering the temperature.

The industrial effluence especially the gaseous Chlorofluorocarbons (CFCs) or Carbon Dioxide or Monoxide, is supposed to cause strong deterioration of this ozone layer. Thus increase in temperature is likely to cause melting of ice from the Poles increasing the sea level, inundating low laying cities and land masses, causing diseases like cancer of the skin among the Caucasian race, climate and meteorological disasters.

However, the Earth Summit at Rio de Janeiro in June 1992 raised the issues and 171 countries, through representatives, signed protocol to save the Biosphere. Several other international gatherings were held. The recent at the beginning years of III millennium Kyoto Protocol is being considered world- wide and is being implemented immediately. The Russians have signed the same in recent months with a view to reduce the gaseous emissions, especially in the industrial world to the 1990 level. The developing countries have some more time to tow in.

The economic resources, time and energy, human resources used up in this project seem to be too costly at this moment with no solutions at hand. If at all the reduction of CFCs is attained by 2012, there may be a possibility of avoiding a calamity. The industrially underdeveloped countries can earn special monetary benefits on emission control. But who knows by that time whether the entire ozone gets depleted once for all! Then all these people involved in the project become jobless! Who will bear the financial problems or burdens?

At the outset several loop- holes are glaring in this issue.

First of all the atmosphere is not even taken into consideration for the purpose of shape of the planet. When a globe is described 71% of hydrosphere and 29% lithosphere gaseous atmosphere is not at all considered. When a mantle of gaseous atmosphere is taken into consideration around the globe and the planet in motion, the shape of the same is no more a globe that should be comet like with a core and a mantle drawn out at tail end. Limits of atmosphere are not yet determined. Any heavy gas like ozone cannot sustain without support or known limits. The density of ozone is just 10 parts per million. What about the rest 999990 parts per million formed of? Is it possible to separate a gas from the rest of atmospheric gases without any known mechanisms? For lack of support the heavy particles may be drawn away towards the tail end due to spin, rotation and orbital advancement. The ram force in front of the planet is so much and still the ozone layer of heavy gases should maintain its position precisely where the 30° cone of incident Sunlight illuminates.

Secondly, this illumination extends from 38°27'30" N latitude to 38°27'30" S latitude during one complete year. The illumination is a significant factor for biosphere as a whole and for human beings in particular where their skin is known to produce vitamin D. Direct Sun light never illuminates rest of the planetary surface. The area in front of the planet where the ram force is maintained as a belt due to rotation is the only surface exposed to the illumination at all times. Any filter for the solar radiation should be present precisely at this 30° arc, if any part of the same needs to be eliminated. No such arrangement is reported in the literature on the subject.

Thirdly the Sunlight illuminates the Polar Regions during certain seasons alone and that too the diffuse light reaches the heights of atmosphere but no perpendicular light rays reach the region. The much- appreciated aurora borealis with myriads of colors is a good example of this tangentially illuminated atmospheric phenomenon. Even then, there is no known mechanism to divert the oncoming

light rays to enter the “hole” which actually is parallel to the polar cap. The speculation that some ultra violet rays enter through the hole unfiltered, they pass through the tropics and move to the Northern hemisphere and cause skin cancer among some people seems to be pure fiction. The curved surface of the biosphere, hydrosphere and lithosphere are sufficient explanation to disprove such possibilities. Again, cause of cancer, that of skin or any other loci is not yet known even among scientific circles and it is quite premature to attribute such disease to the lack of ultra violet filters in the atmosphere.

Therefore, all these aspects permit a simple conclusion that there is NO OZONE layer. Or if there is one such layer, there is no hole in it or even if there is a hole in ozone layer light does not pass through that. Even if it passes, the rays do not reach or cross the equatorial zone. Even if it crosses, it is not going to cause skin cancer among the Caucasian people.

The global warming or the much feared Green house effect even if it is produced due to industrial emissions and other chemical contaminations in the Biosphere the heat produced can not reach the Poles because the atmospheric mantle should have drawn out such heavy gases at the equatorial plane where it is extending as a tail. Even if the ice caps melt the water produced should be less than the mass of ice because the water as liquid occupies lesser volume than in the form of ice. Even if the volume of water produced is sufficient the same should hardly raise the sea level at all. This is because about 97% of water is in the oceans and about 2% is in the form of ice including the higher altitudes and Polar Regions. When Arctic region gets some illumination, Antarctic region is in total darkness and ice caps appear. The same phenomenon repeats in the Arctic region, six months later.

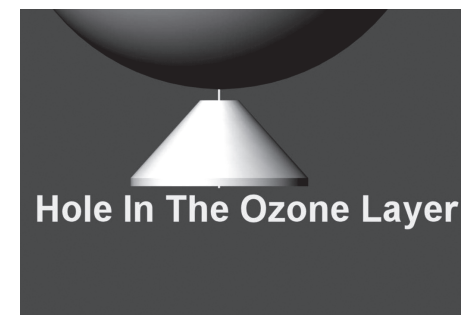
Perhaps as a post- script it is my duty to explain one more point. The observed hole above the Polar Region has to be demystified.

PROPOSAL TO EXPLAIN “THE HOLE IN THE OZONE LAYER”

When any object is spinning on its axis at a very high velocity (say 1800km/h) a vortex is likely to be formed in the atmosphere where suspended particles are concentrated. This may be due to the magnetic force maintaining a spectacular umbrella around the Poles. The incident light illuminating these particles from one side reveals such a vortex. But the planet is on a motion along its orbit and hence the vortex gets extended to one side. Seen from the Antarctic laboratory this describes exactly the hole. Those who wish to verify the phenomenon may do so at any house- hold with the help of a simple churning mechanism used in the kitchen. The apparatus while stirring liquids or semi liquids establishes a vortex right at the top of the same. Another example is the inundated river with muddy water flowing with several vortices appearing and disappearing with much ease. By swimming in the same direction at corresponding speed one is safe even in such a situation.

Whirlpool movements in fluid or gaseous medium produce funnel-like vortex. Its shape, extension and location change immediately. When celestial bodies present rotation such vortices are formed right in front of the Poles of the axis. In addition to axial rotation if there is an orbital revolution in equatorial plane such funnel like vortex gets extended into a pathway since this kind of displacement produces vacuum proportional to the mass burnt or displaced.

Figure 64



Seen from the polar end the vortex is formed in the vacuum produced into which other objects get attracted. The vortex becomes prominent when the light rays illuminate the suspended particles, reflecting the same. These particles shine due to lateral illumination. When these particles gathered from the entire atmosphere owing to their characteristic features, their density increases. The apices of the axis at North and South Pole are areas with least rotation whereas the tropical equatorial areas are fast moving due to the thickness and massiveness. The vortex develops around the tip of the Pole attracting dust particles from the atmosphere. The magnetic Pole serves this purpose.

Any rotating celestial bodies should exhibit such collection of particles in the form of magnetic camps.

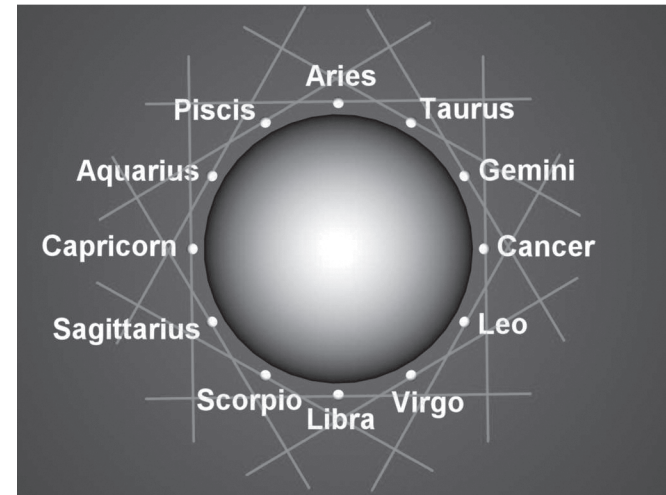
Hope the intelligent minds can easily see the point and dedicate their attention to other human problems like food, hunger, drinking water, contamination, health hazards and so many aspects of human well being.

High- level decisions should be undertaken only after expert opinions analyzing the basic questions involved. The money, time, energy, and human resources spent on “hole in the ozone layer” are a permanent loss for the humanity as a whole and are a good example of what should not have happened.

Zodiac houses

Equatorial diameter of the Earth is estimated as 12.756.78km that amounts to about 40.000km circumference (3339.717 km per zodiac house). Each zodiac house extending over 30° arc 12 houses cover 360°.

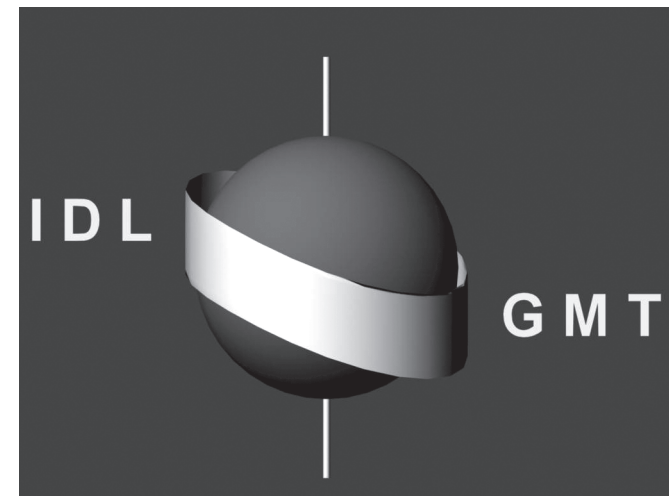
Figure 65



Zodiac houses with 30° arc around the earth

International Date Line experiences Sun set when the Sun is at zenith over head at 90°E latitude, Sunrise at GMT and 90°W indicating the Nadir position.

Figure 66

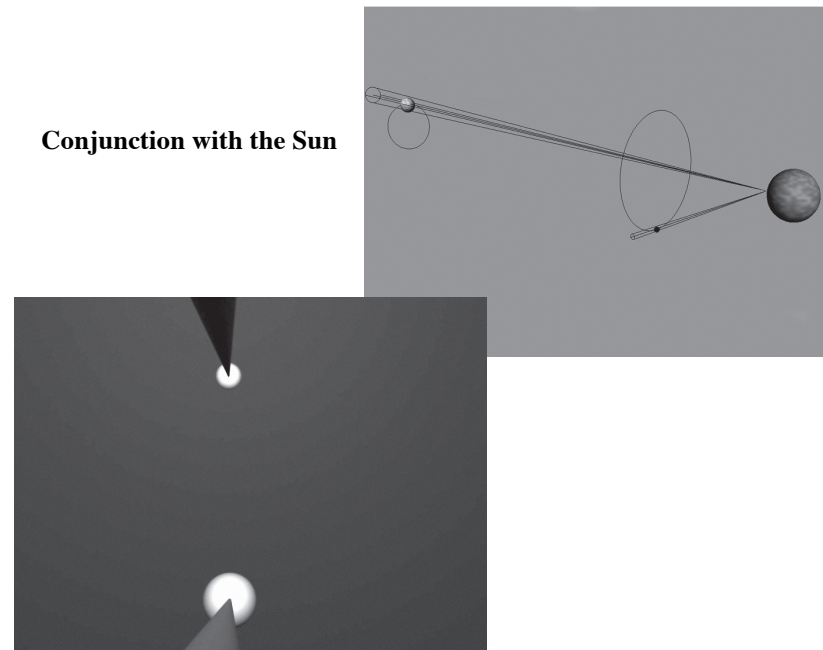


International Date Line / Greenwich Mean Time

The luminosity of Sunlight is brighter than other natural lights and therefore, while Sun shines in the sky other celestial bodies are not visible except in some occasions, the Moon. At any time Sunlight expands in a cone whose solid angle corresponds to 30° arc. In case the Sun is visible in one constellation at Sunrise that area remains invisible during day- time. But soon after Sunset, immediately next to that constellation, the next zodiac becomes visible. Next day morning just prior to Sunrise, the previous constellation becomes visible.

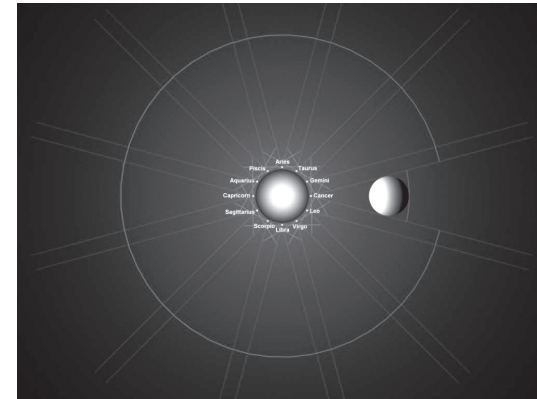
The planets in their respective orbits happen to pass through the same 30° conical projection of Sun- light entering in to the conjunction with that planet when these planets remain invisible. Once the relative position either that of the observer or that of the planet becomes sufficiently far from the Sunlight, again the planet becomes visible.

Figures 67a & 67b



The rest 330° of the zodiac, therefore, is visible from the Sunset to the Sunrise the next morning. This confirms that at a time only 30° becomes invisible. The night sky at a time exposes 180° arc. But from dusk to dawn extend over 330° arc. The visibility cone exposed to the Sunlight at dawn receives the light for 12 hours at the equator on equinoctial days where as the next zodiac house (cone) maintains 10 hours with in the invisibility sector. This is the constellation that is visible at the night sky soon after Sun set. Successive constellations remain invisible during 8, 6, 4 and 2 hours. The order of appearance continues in a cyclic manner but the helical definition includes the dynamic projection of Nature. Therefore, the 180° is the day and 180° the night.

Figure 68



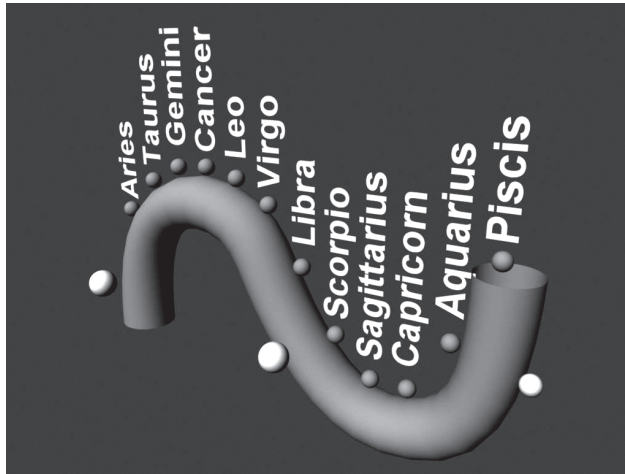
30° Day and 330° Night

The duration may change to some extent due to the axial shift either to the North or to the South during solstices.

However, the zodiac sign where the Sun is located apparently depends on the relative position of the observer and the position of the planet on its orbit. Precisely the angle of incident light $23^\circ 27' 30''$ at the cone apex (the photosphere) illuminates the arc of 30° conical projection on the spherical surface of the planet. This sector is identified as the area of ram force that is at the front. That is to say

in the direction of planetary displacement along its orbit. The planet is located and spinning along the orbit. This orbit in one year describes the 12 zodiac houses to complete 360°.

Figure 69



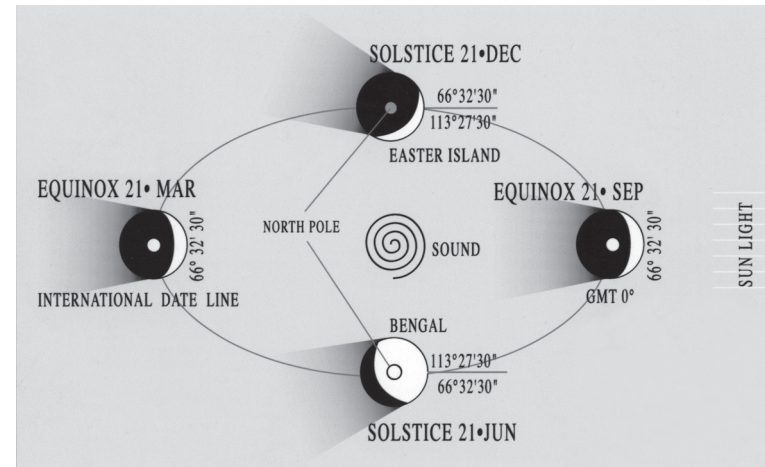
Earth's helical path through Zodiac signs

An observer at any point on the Earth should be considered as the cone apex with a solid angle of 30° can see only those celestial bodies within the range of that cone extending to the infinity. This is how an observer can visualize the constellations within the arc. When the Earth rotates the observer can see the Sun as if moving around the zodiac during the day and the orbit in one-year cycle. This is just an optical illusion. All the celestial bodies are seen as if moving from east to west whereas in reality the Earth or the observer with the Earth is rotating from west to east.

The equinoxes and solstices represent four points on the orbit from where the Sun is seen in specific constellations in the background. The available astronomical literature has not taken into account the whole process but moments in space time as individual units in a closed circuit called the ecliptic orbit. The Sun becomes stationary.

The paradigm presented here in represents a continuous dynamic process in the form of helical helices for all celestial bodies. Each unit maintains individuality in several aspects.

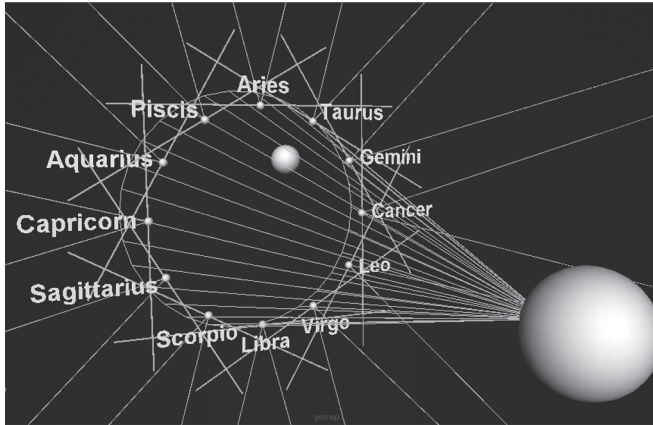
Figure 70



Seasonal changes Solstices / Equinoxes

An observer is at the cone apex and is capable of seeing until eternity but within that 30° cone projection. At the same time and place the observer is facing another object, the Moon within the 30° cone. The solid angle at the apex of the cone where the Moon is located is maintained at 13° 20'. The location of the observer is at some point along the base of that cone. The Moon being the nearest celestial body its movement is easily followed and appreciated. However, the reality should be distinguished from the optical illusions to interpret the process.

Figure 71



Monthly coverage of moon's motion

When the dynamic nature of the celestial bodies is taken into account the cones in motion describe helices.

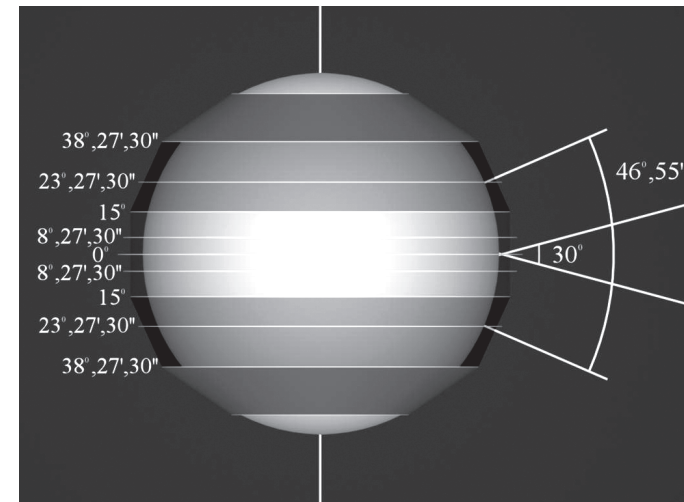
The lithosphere with hydrosphere surrounded by the atmosphere constitutes the planet Earth. The living organisms are found in Biosphere including the lithosphere, hydrosphere and a portion of the atmosphere.

On observation it is evident that part of the lithosphere and hydrosphere gets exposed to the Sunlight entering through the gaseous atmosphere. The air remains invisible owing to its transparent nature. The minute suspended particles in it serve to reflect the incident light besides serving to absorb the heat produced due to friction. The incident light illuminates a small sector at a time on the globe which extends $\frac{1}{12}$ of the tropical belt forming a 30° cone base. The complete year describes the base of the cone as a helix whose one unit is 360° . The rotation of the cone permits the extension of this illuminated region across the globe along a definite strip.

Equinoxes and solstices

On equinoctial day for example, the Sunlight illuminates 15° North and 15° South of Equator. On solstice day the zenith is observed right above the line of Cancer (June 21) and the line of Capricorn (December 22) extending 15° North and 15° South with reference to these lines. This strip between the line of Cancer and that of Capricorn extends $46^\circ 55'$ but the direct illumination extends $76^\circ 55'$ (Ranging from $38^\circ 27' 30''$ Northern latitude to $38^\circ 27' 30''$ Southern latitude). Other areas on the globe get exposed partially to the Sunlight or certain portions remain dark for considerable time during solstices.

Figure 72



Range of Solstices / Equinoxes

From a rotating planet our visibility remains reduced to 30° arc so that 12 such units are possible on 360° circle. The arc in reality amounts to a cone with the apex at the observer and the base reaching the skies. Another cone with solid angle of 30° should be visualized at the photosphere, the source of Sunlight. This permits the exposure of the Biosphere which is just one point in the orbit that may be

considered as the base. The brightness of its light so close to the planet, hardly 500 light seconds distance other celestial objects except perhaps, normally the Moon and exceptionally the bright Venus, become insignificant or simply invisible. Twelve such units cover the Biosphere in a circle round the world. However, the North South axial shift permits a larger tropical zone exposed to Sunlight considering the abundance of biomass between $46^{\circ}55'$ (from the line of Capricorn to the line of Cancer) plus 15° each North and South for a maximum of $76^{\circ}55'$. To cover the whole area, therefore, it requires as many as 36 units. The circumpolar areas beyond $76^{\circ}55'$ latitude on either hemisphere, receiving diffuse light, produce least friction as they are away from the ram force and hence with less heat. At the same time the light emission from Polar Regions of the photosphere has such limitations so that hardly one or few solar rays reach the surface of the Earth. The pronounced curvature at the receiving surface of the Earth, the tangential nature of incident rays have been reasons for not obtaining exact quantitative and qualitative information or other properties of these with terms and models known so far.

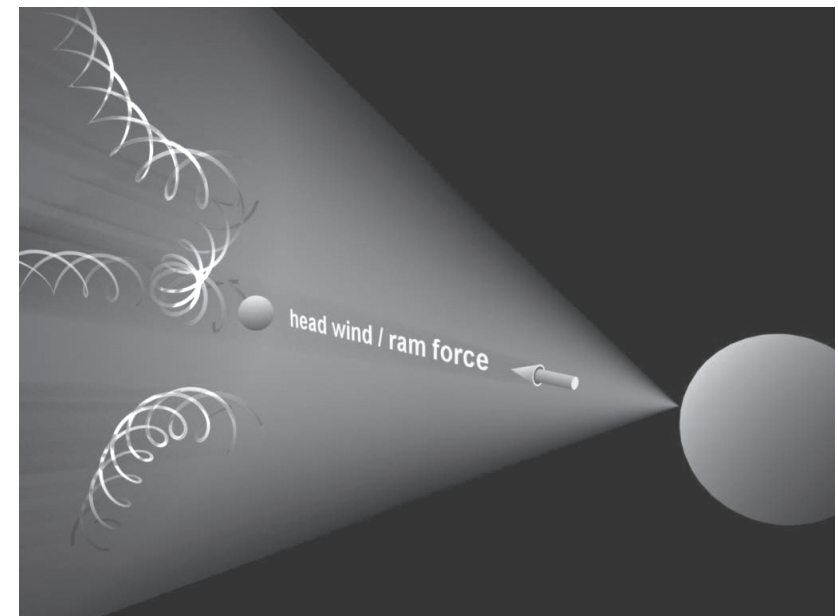
The shadow of the planet produced by the planet due to unilateral illumination extends like a dark cylinder opposite the Sunlight, called the night (umbra). The rotation of the planet exposes only one portion of the planet at a time and precisely the stele of dark night moves accordingly on the opposite side following the conical projection of 30° . The axial shift of the planet from North to South and *vice versa* projects the night into a conical orbit extended into a helical mode. The solid angle of $46^{\circ} 55'$ where the Sun is located represents the apex of this cone.

Night (shadow), when plotted through one year, looks like a funnel extending like a figure "8". Ana lemma.

The gaseous atmospheric mantle remains invisible throughout. This layer is subjected to ram force from out side, the direction of

planetary displacement in equatorial plane whereas on the other side gets extended into an elongated tail. This tail becomes twisted receiving the impact from the spin and also a proportionate tilt away from the direction of orbital displacement. The constant change in the rotation, axial shift and orbital advancement describes a universal curve with $n -$ dimension positions for the entire planet on rotation and orbital revolution. The atmospheric mantle moves like a tail to the North when the planet shifts to the South or moves to the South when the planet shifts to the North causing the solstice positions. Several climatic, seasonal and atmospheric conditions change proportionately. The impact zone of ram force changes due to the rotation, axial shift and orbital revolution extending as a band. Animal migration in the biosphere will have to be interpreted in terms of the wind direction in the atmosphere.

Figure 73



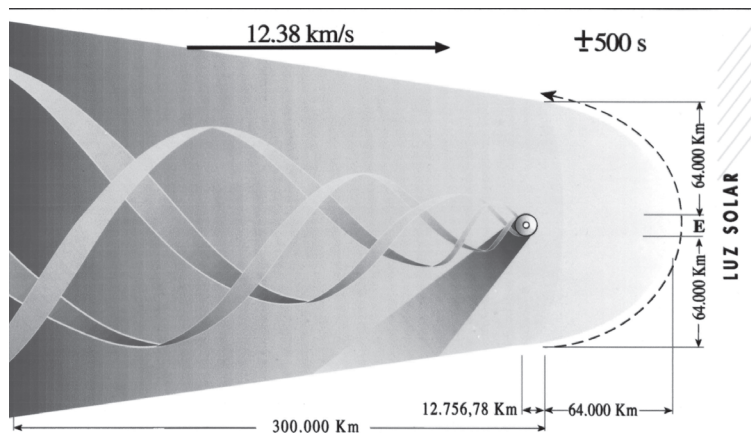
Ram force (head wind) and 4 seasons

GRAVITATION FORCE G

The value of g varies at different latitudes and longitudes. Maximum value of g corresponds to this impact zone of ram force while minimum value is obtained at areas directly opposite to this zone. At the exposure area the low tide prevails following greater atmospheric pressure whereas at area opposite (or 180°) high tide is noticed with lower pressure.

Obviously the gaseous mantle subjected to this ram force is reduced in thickness (probably reaching out only about 64000 km) whereas 180° from this area the mantle gets extended or drawn out into prolonged tail probably extending over 300000 km with spiral waves flowing from the biosphere.

Figure 74

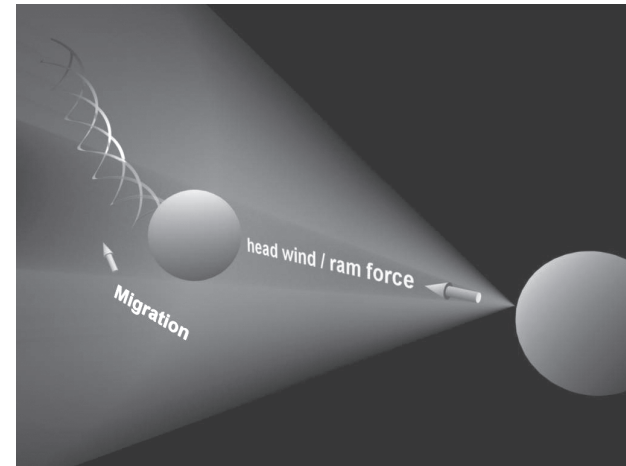


Comet like planet

Migratory birds and flies (butter flies) make use of this pressure gradient to glide through this least resistant flow zone to cover incredible distances at ease. The same process repeats over hydrosphere provoking ocean currents that are efficiently made use of by sea animals like whales which migrate from the Arctic zone to even Mexican coasts of the Pacific. This phenomenon follows in

both ways according to the direction of the flow determined by the orbital shift of the planet.

Figure 75



Migration route for animals through the atmosphere

The ram force adds up to the solar winds and the sum total effect is evident and this solves the migratory mystery. (see video)

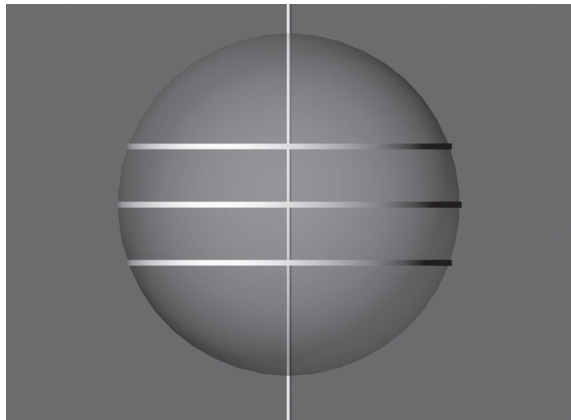
Axis or central point

The center of the globe is taken as a point. For calculation of distances or energy considerations this point is utilized in all astronomical or geological measurements. Considering the North South axis for the planet the *entire axis* has to be regarded and not just central point. When the planet is at the equinoctial position two times a year the incident Sunlight at zenith reaches the planetary surface in a perpendicular manner. These may be the two times a year when the central point represents the center. On all other occasions the entire axis should represent the center of the Earth and therefore, the incident rays are perpendicular to the axis at corresponding points.

The North South axial shift reduces or increases as the case may be the circumference of the planet in such a way that the center

(the axis) of the planet maintains perpendicular to the incident light at noon. The North South shift only indicates the respective latitudes. The helix becomes with each rotation bigger and bigger or smaller and smaller until the solstice. The maximum value for Earth diameter is 12756.78 km at Equator. Naturally this should be lesser at lines of Cancer and Capricorn.

Figure 76



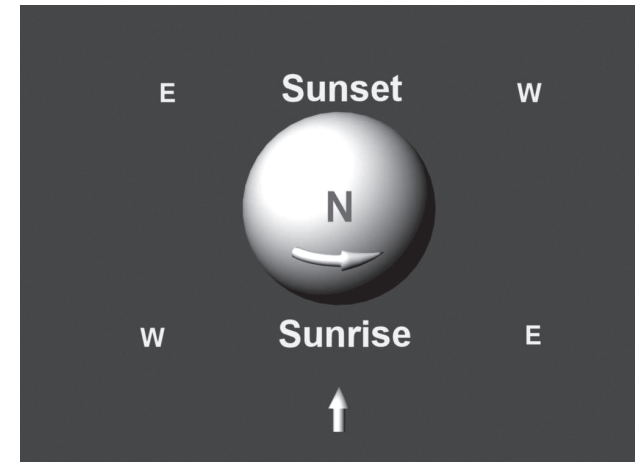
**Maximum diameter at Equator less at Solstices
All lines are perpendicular to the axis of the planet**

The visibility reaches about 30° from any point as if it is the cone apex. When Sunlight is illuminating an area no other celestial objects like planets become visible owing to their feeble luminosity. The Moon and Venus in rare occasions are exceptions to this condition. Only those celestial objects which do not possess a normal axial rotation but roll in all directions as may occur in the case of a falling asteroid for example, do not exhibit a definite axis. Perhaps the center of this body may be considered for any purposes as its center.

The Earth is exposed to the Sunlight at all times. The rotation of the planet permits exposure of about 30° arc on the globular surface of the lithosphere and hydrosphere. The illuminated area extends as a continuous sinusoid belt. The relative position of the Sun in the morning permits an observer to consider that direction to be EAST.

Due to rotation of the planet the Sun sets in the evening at WEST when the Sunlight is no more visible.

Figure 77



Rotation causing illusion

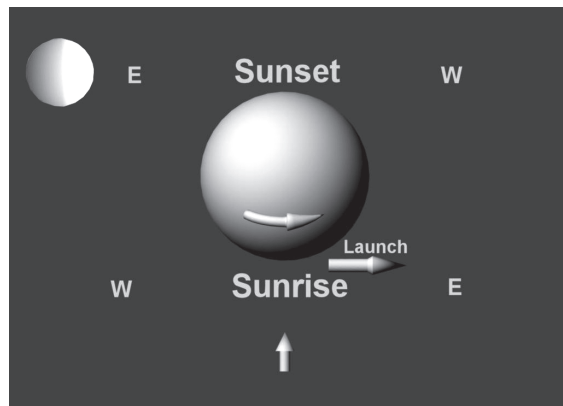
The speed of the planet Earth on its orbit amounts to 11.889 km/sec. where as rotation speed at the equator is calculated as 0.5km/sec. The ram force in front of the planet is superior at Sunrise in the direction at which the planet proceeds and the 30° arc area exposed at any time.

The pressure on the atmospheric mantle is expressed on the flexible hydrosphere in the form of low tide. The rotation displaces the 30° arc in the direction contrary to the movement as a belt and so also the corresponding low tide extends round the globe. Relatively low pressure occurs in the evening since it is the tail end and proportionately the high tide is the expression in the hydrosphere. Intermediate conditions occur at other times. The high tide and low tide conditions have nothing to do with the Moon.

According to the information available on atmosphere, Mean Sea Level (how to measure on a globular surface?) is at 14°C (probably a temperate region) 8-18 km troposphere. This is the region preferred

by the commercial flights because of favorable winds. The temperature outside the cabin of a jumbo jet at its scheduled route is about minus 56°C. From 18km up to 50km it is supposed to be the Ozone layer at minus 45°C. Then up to 80km Stratosphere at 80°C. Beyond that altitude the artificial satellites, space shuttles maintain their orbits up to 300km, the temperature being minus 63°C. Heat increases beyond this level and up to 500km extends Ionosphere. Then the next layer, too hot for useful exploitation so far, is the Exosphere. Beyond this nothing much has been known, nor reported.

Figure 78



Planning space travel

On Feb. 7, 1984 at an altitude of 102km above Hawaii and at a speed of 8.055555km/s (129000 km/h) Bruce Mc Candler stepped into space (?) became the first human satellite. He was still with in the atmosphere.

Present day geostationary satellites navigate in the equatorial plane. Their orbital period is synchronized with the Earth’s period of rotation at an altitude of 35,786km. to be able to cover 1/3 Earth’s circumference. The satellite is still in the atmosphere.

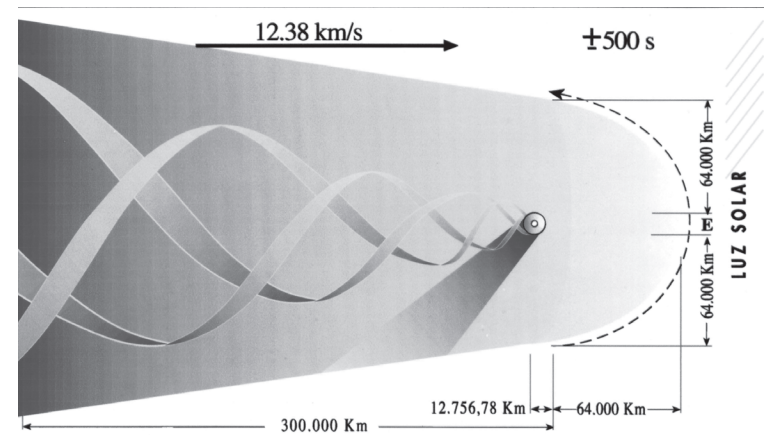
The equatorial plane orbit is a must for these artificial satellites taking into consideration the center of Earth as center of orbit. Other orbits are not possible so far.

MEAN SEA LEVEL ON A GLOBE

The axis should be considered as the center of the Earth for all references. Referring to the “Mean Sea Level” it is assumed that the center of the planet presents equidistant radii on a spherical planet. This acceptance requires critical discussion on more than one ground.

First of all, the planet has central axis extending from North Pole to the South Pole and the rotation takes place with reference to this axis. This fact has several implications. Secondly, *the shape of the planet is not a globe, not even a spheroid when atmosphere is considered as part and parcel of the planet in addition to the lithosphere and hydrosphere.* The rotation and orbital revolution permits to extend the gaseous mantle drawn out into a prolonged twisted tail whereas at another end the ram force compresses the gaseous mantle closer to the hydrosphere and lithosphere. The hydrosphere being flexible exhibits low tide as a direct response.

Figure 79

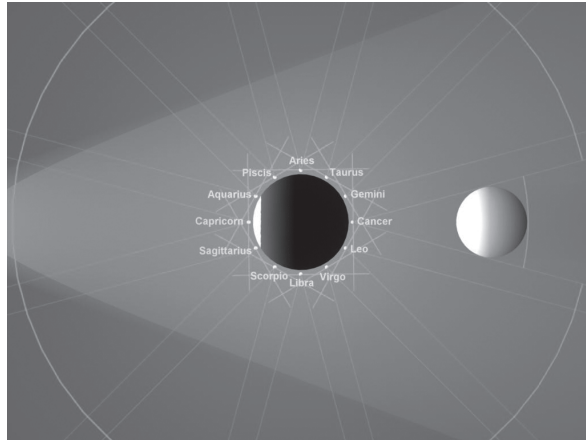


Planet Earth : Details

In fact, the rotation of the planet illuminated by Sunlight on one side alone can explain why the day and night repetition is uniform through out the year. The Sun appearing at dawn on the horizon

reaches the zenith at noon and at Sun set it disappears so that the night prevails. This is the impression of an observer at one position on the surface of the planet unaware of the reality that it is an optical illusion and is due to rotation. Again at midnight the same observer is at a nadir position 180° away from the noon location.

Figure 80



Full moon position : Opposition

The surface pressure increases in an area corresponding to 30° arc in front of the planet on its orbit or revolution. Obviously the hydrosphere responds to this with a low tide. On the opposite side the hydrosphere is drawn out into a high tide. Due to rotation of the planet this status continues all around when the tides continue to flow one after the other. Perhaps this is the reason for the tides in the oceans and seas. These waves are permanent varying in heights and strength. Wind that blows in specific directions influences the tides.

On a globular surface no mean sea level could be established. If the iceberg melts at one Pole due to heating the other Pole develops iceberg due to cold spell and vice versa.

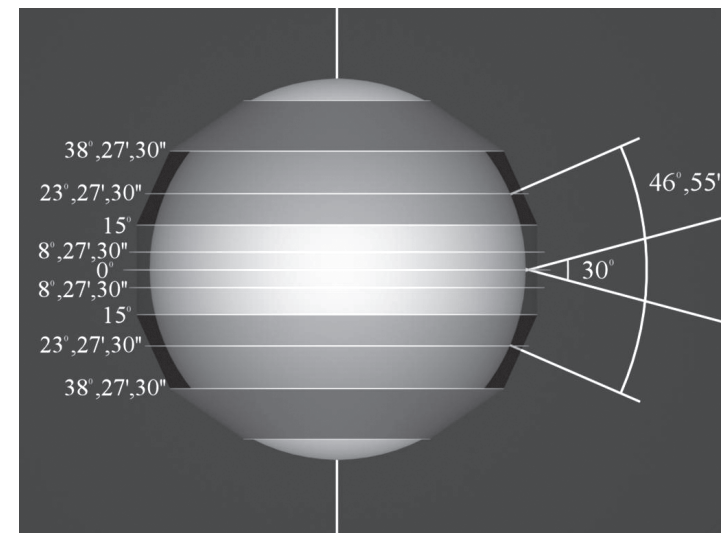
Even if a volcano erupts at any point, even at the ocean floor in the Arctic, raising the waves as high as 1000 meters, the water gets spread out all over for a while until the direct effect of the cause and the waves diminish and appear in the regular low tide and high tide mode.

How to calculate or compare the heights of mountain peaks at different latitudes on a globe?

When can we compare tropical mountains with Arctic peaks? What about the distance from the central axis extending from Pole to Pole? Distance from the center of the Earth becomes obsolete considering the axis as a line around which the mass moves.

Any attraction on the surface of the planet is perpendicular to this axis. The thickness of the mass of lithosphere and hydrosphere with reference to the axis gradually increases or decreases which means to say that the radii are shorter and shorter as one proceeds from the Equator towards the Poles.

Figure 81

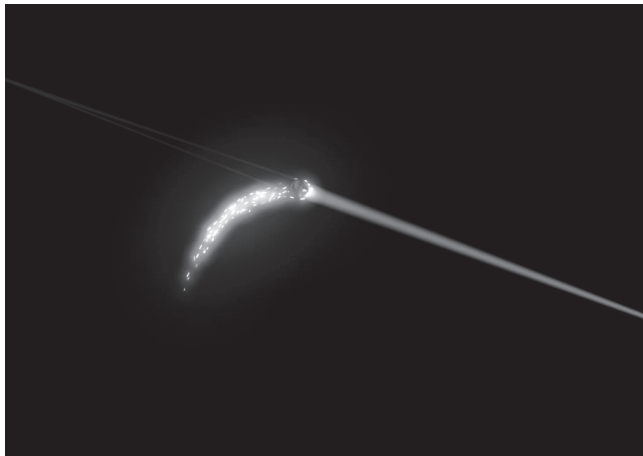


Axis and Latitudes

Figure 82

So also ocean depths are neither measurable nor comparable at various localities of the surface of the planet.

Dynamic Nature can never be understood by us if we stick on to static concepts and mechanical models.

Figure 83

Earth seen from a comet, note the illuminated atmospheric tail

THERAPEUTIC USE OF SUNLIGHT

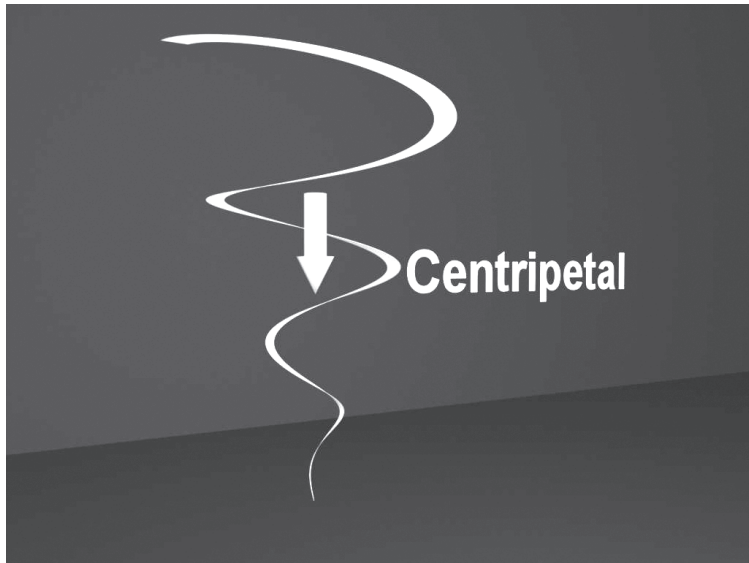
The reduced atmospheric pressure / area away from the ram force impact area is an interesting phenomenon in addition to the high tides of oceans. It is playtime for kite fliers. Best time to enjoy this sport is in the evening. This is the best time for Sun bath. The human skin produces precursors of vitamin D on exposure to the evening Sunlight. Therapeutic deployment of light rays with best results is possible in the evening. Exposure to sunlight, other than that of the evening should be avoided especially in the tropical region to avoid Sunburns.

The fish swim upstream to their hatcheries. They are known to move up the waterfalls against the current. The natural water holes or springs exhibit increased water flow by night. The water flow on the global surface is a very interesting scientific challenge awaiting satisfactory explanation. The hot springs and geysers bursting out of crevices are all natural phenomena with no known mechanism; especially in relation to the rotation and revolution of the planet. The erosions caused by the water flow cause crevices and sculptures on rocks and mountains exposing an entire history for study. Entire valleys or river banks hold typical patterns exhibiting the layers or stratification of gravel, sand, sediments, and other such remnants with which such history may be unraveled.

Free energy

Perhaps some day human being, like other migratory birds and animals can harness the principles of high or low pressure areas, the axial shift or the rotation and revolution of the planet. The energy coming from other celestial sources should also be considered for exploitation. The heat accumulated on the surface of the atmosphere or the water vapor accumulated as clouds along specific zones in the atmosphere are excellent sources of energy for exploitation with appropriate technology.

Figures 84a & 84b



Centripetal Force



Centrifugal Force

Gravitation force: $g = (2\pi/T)^2 L \text{ m/sec}^2$

A copper ball pendulum was activated while a stop- watch measured the time interval. Average time taken for ten oscillations was noted down. The data was recorded every hour throughout the day during several months. Calculations were made applying the formula. From the observations and analysis of the data the daily peak occurred at 6 am with Value of $g = 10.3 \text{ m/sec}^2$

The daily minimum was at 6 pm with Value of $g = 9.5 \text{ m/sec}^2$

Interestingly daily averages during the phases of the Moon indicated that Dark phase value of $g = 9.95 \text{ m/sec}^2$ Bright phase value of $g = 9.72 \text{ m/sec}^2$

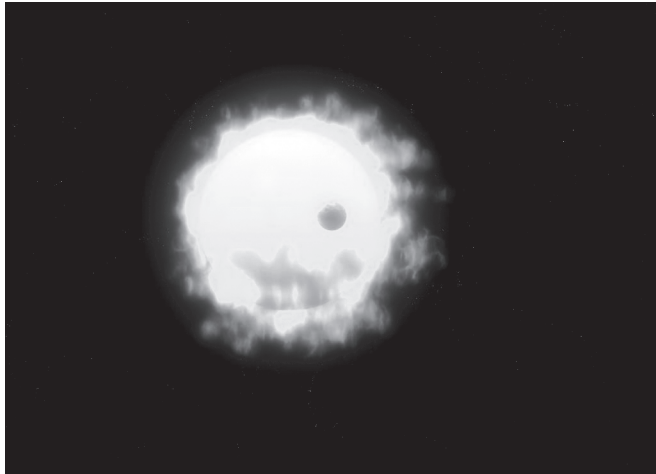
Observation on June 8, 2004 day of Venus conjunction (in India)

Morning	6.00	10.2
Morning	11.00	9.75
Noon	12.00	9.75
Afternoon	13.00	9.70
	14.00	9.60
	17.00	9.40
	18.00	9.37

The values maintained at 9.75 m/sec^2 while the Venus was passing across the solar disc. This memorable view may be remembered always to explain the planet's orbit in between the Sun and the Earth.

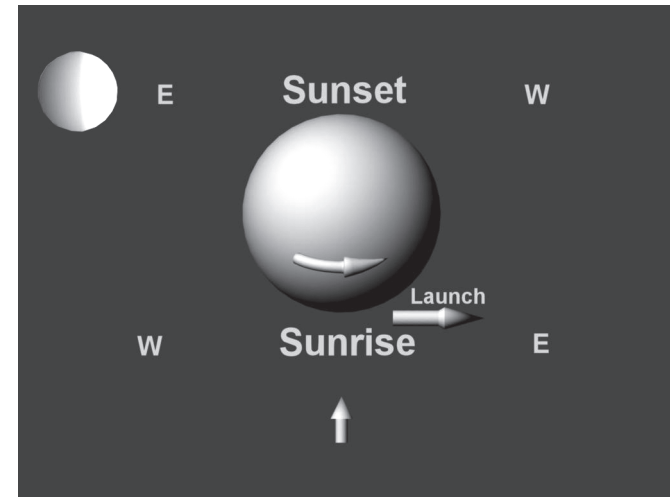
Venus sun conjunction

On June 8, 2004 the planet Venus appears right in front of the solar disc transiting the same in about six hours. The Sun is visible with a background ^a Orion (53°20' from Aries) and obviously Earth is with Antares at background or very close to it. It is to be expected that the luminosity of the Sun does render other celestial luminosities invisible from 38°20' to 68°20' and the rest of the sky visible at night.

Figure 85**Venus passing through the photosphere (See Video 12)**

Soon on June 12, 2004 Venus is visible early in the morning just prior to Sunrise. This configuration permits the observer to conclude the orbits of the Earth, Venus, and the Sun. Likewise Venus disappears on Feb. 23, 2005 for a longer period corresponding to the relative position on its orbit that is closest to the orbit of Earth. If the orbits and relative positions of all planets and Moons could be determined in the same way the understanding of the solar system improves significantly.

As it was explained earlier, what was east in the morning becomes west in the evening. On a full Moon evening the Sunset in the western horizon coincides with the Moon- rise in the eastern horizon. As such, the visual illusion when interpreted correctly, the location of the Moon behind the planet is evident.

Figure 86**Full Moon at sunset**

The apparent popular belief, supported by the prevailing science, that the Moon attracts the high tides is coincidental and has no mutual relations at all. The pressure gradient at the surface of the planet is the only valid explanation for these tides.

The experience of school children fainting at the flag hoisting ceremony in the morning ceases to be mysterious when one understands the high atmospheric pressure over the area. Several other phenomena may perhaps be associated with such pressure gradients.

Normally many flowering plants present flowers early morning. Many birds convey beautiful melodies at this hour. Animals, whether wild ones or those domesticated ones, have characteristic reactions of activation. Even human beings react adequately, at least in the tropical villages where such pressure is appreciable throughout the year. If only one observes the breathing behavior in the sense which nostril functions at dawn or dusk or when one is tired or mentally alert many more natural phenomena and human reactions to such

moments could be interpreted with ease. Perhaps at temperate climate this may not be palpable due to extremes during certain seasons. The migratory birds and animals make use of this natural phenomenon for their effortless transportation. The change in the direction of the planet lashes the tail end in such a way that their impact is transferred deeper into the atmosphere hydrosphere or even lithosphere. The energy involved in such enormous winds and spins may manifest as hurricanes, tornadoes or even Earth- quakes. Perhaps this is the reason why the seasonal hurricanes and other natural calamities follow solstice positions. Earth- quakes are associated with lunar phases generally near the New Moon position. An integral evaluation of the planet as a whole reveals these secrets better than a localized fragmented area.

Appropriate technologies may be developed to neutralize the forces involved. Perhaps this force may be harnessed for human well being just as the migratory birds and animals make use of these currents with necessary soft technology.

A multidisciplinary action is required to face such situation from various angles.

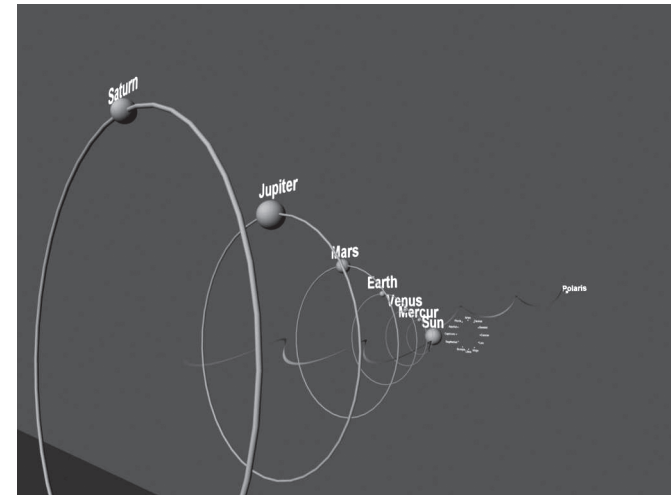
The climatic changes in the biosphere are natural projections of these processes in which several forces interact in diverse planes and directions. It is a dynamic Nature.

“Nature is the art of God”- Dante

MODEL

In a classical concept a cone has an apex and a circular base with sides extended like a funnel. This may be true in an abstract sense or in constructing tent – like structures. An umbrella is an imitation but useful in many ways.

Figure 87



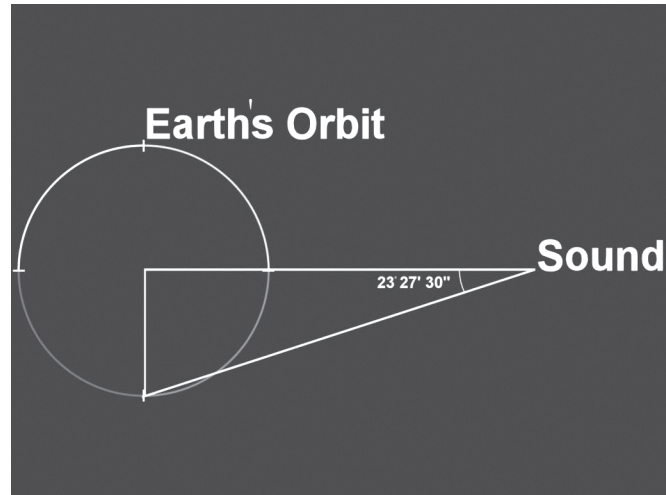
Proposed Helical Helix model

For all practical purposes the cone referred to in this book considers the solid angle at the apex. This angle is variable in each case (celestial bodies) but the shape remains the same. The base extends into space with practically no end or if it refers to the surface of some celestial bodies in perpetual motion, the curved areas represent the base. The sides are not demarcated by special limits.

This conical form is useful in describing several aspects in astronomy. For example, an observer has visual capacity of 30° arc that means to say that the cone apex where the observer stands is a solid angle of 30° with 15° on bisection. The base of such cone extends to infinity. Again considering the motion of the celestial body where the observer is located the cone extends as a strip all

round. This strip all around covering 360° permits 12 such units; this is applicable to the zodiac. On a circle 12 tangents may be drawn just touching the circumference and when they are equidistant each sector corresponds to 30° this is the maximum capacity for the observer any where on a circle.

Figure 88



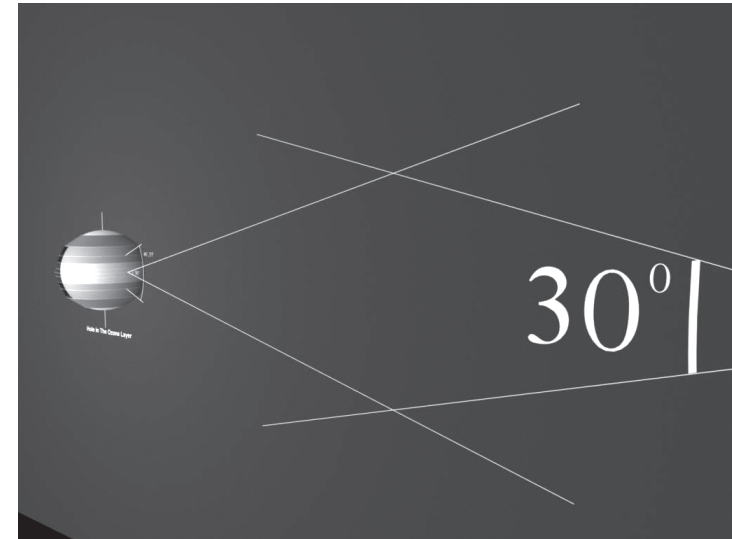
Schematic model of the cone

Applied to the source of Sunlight, when the cone apex is located at the photosphere, the solid angle is $46^\circ 55'$ and bisection of that angle corresponds to $23^\circ 27' 30''$. This is the angle normally mentioned in astronomical literature as the angle of inclination of the axis of Earth. The orbit of the Earth is to be located at the base of this cone at a constant distance of 149597893 Km (AU). When the Sun advances on its orbit the planet maintains this distance and the cone base gets extended as a helix. Such a description holds good for all celestial bodies. The four seasons correspond to the four locations indicating 90° from one another.

The area from which the light rays are emitted from the photosphere another cone with 30° solid angle will have to be described to explain

the illumination. Just as an observer has visibility of 30° the light rays also spread out from a spherical surface (assuming that the photosphere is uniform) and are projected conically. This illuminated sector due to its luminosity does not normally permit an observer to see the rest of the celestial objects.

Figure 89



30° Arc : Observer / Emission Range

Both these cones are to be considered to understand the solar system and planetary motion. Yet another cone has to be visualized at the equatorial region of the planet Earth with a solid angle of $13^\circ 20'$. This point represents the apex of a cone describing the lunar orbit around the planetary orbit. Again this point corresponds to POUND (Planetary Orbit Universal Natural Dynamo), which serves to haul the Moon at a constant distance of 384404 Km.

Similar conical models in motion may be developed for each celestial body with respective calculations to incorporate the stars, the planets and their natural satellites as well.

HELICAL TRAJECTORY OR PATH

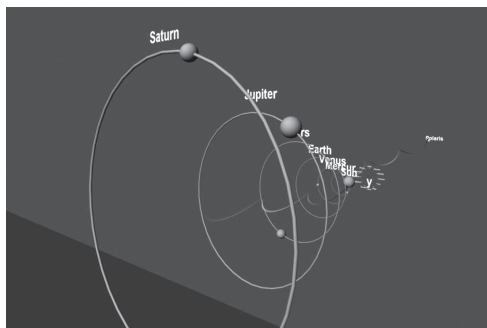
Likewise, this apical angle corresponds to the cone with its base extending over the year or the planetary orbit. Owing to the spiral on flow of universal natural dynamo (SOUND for short, description of which follows in the text) (Solar Orbit Usable Navigation Device) representing the orbital displacement of the Sun, the planetary orbit constituting the base of the cone gets extended like a helix.

Another cone apex is formed just behind the equator at the tip of the planetary orbit with a solid angle of $13^{\circ}20'$ at its tip. The base of this cone indicates the orbit of the Moon twining helically around the Planetary Orbit Universal Natural Dynamo. (Planetary Orbit Usable Navigation Device POUND)

Similar cones may be described for each celestial body with rotation and revolution like Earth or satellites like the Moon. The apical angle varies with each body and so also the corresponding base of the cone constituting the orbit of the same body. The distance from the apex of the cone to the position of the base is a constant. This is useful in measuring distances from the star to the planets. All that has to be done is to visualize a coaxial multiple cone complex to include the component bodies in series.

New models will have to be developed mathematically and technologically to illustrate the process.

Figure 90



Helical Helix

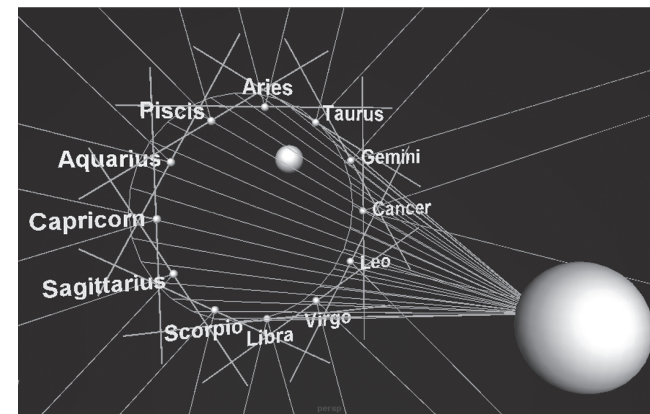
The planet Earth presents a single complex movement involving a three dimension displacement through another space – time dimension. Hence, the rotation causes day / night sequence. The orbital displacement leads to the year long flow. The axial shift to the North or to the South causes seasonal changes expressing as solstices and equinoxes as extreme locations.

Western equatorial node

When the planet moves forward, an area occupied by the same becomes a vacuum that is the tip of the orbit. This energy point attracts the Moon. This energy may be named as Planetary Orbit Universal Natural Dynamo [POUND for short] known in astronomical literature as the “lower node”. This point maintains as the cone apex, conserving Moon at a distance of 384.404km away twining its orbit around the planetary orbit.

The natural satellite Moon follows the planet at a distance of 384404kms. The lunar orbit is also helical winding around the planetary orbit.

Figure 91



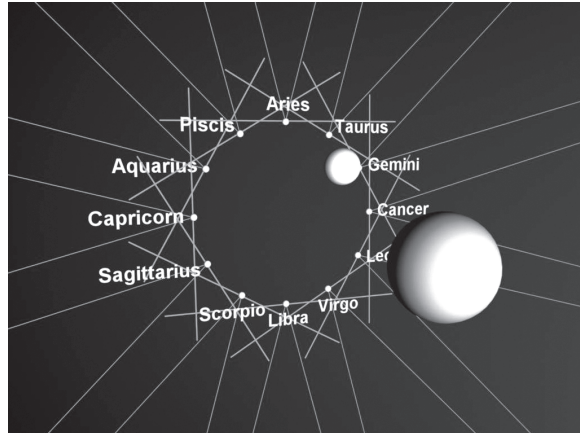
Lower node explained as POUND

The reflected surface of the Moon appears as crescents or once a month as “full Moon”. Only 30 degrees arc at the center gets exposed

to the Sunlight on a globular surface with lesser visibility all around due to curved nature until 180 degrees.

The Moon follows the Earth. The reflected Sunlight is expressed as full Moon. The dark side of the Moon never gets within the visible range.

Figure 92

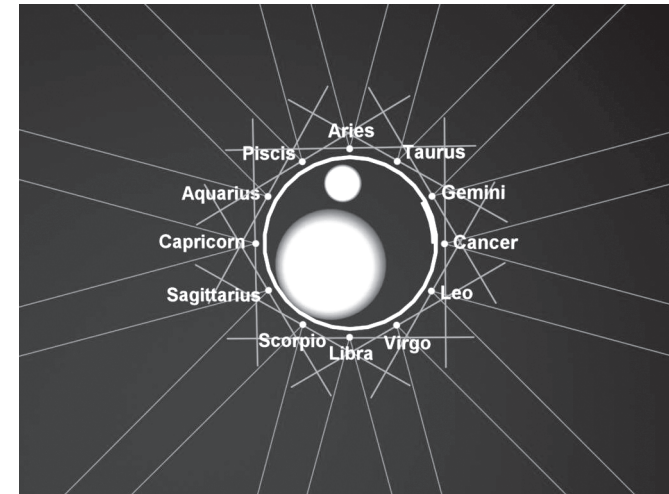


Lunar trajectory through the zodiac

In this Universe where we live in perhaps it may not be possible to observe every moving object around us, especially the celestial bodies owing to their astronomical distances. The rotation of the planet Earth provides us an opportunity to react to the Sunlight with which our daily routine is established. The nearest celestial body, the natural satellite of this planet, the Moon exhibits its motion in such a way that any body can get an idea of how bodies move in the infinite space.

It is no wonder that the lunar movements are observed from close quarters due to the relative proximity and the ease with which calculations may be made. The interval between the Full Moon and another one takes 390° of its orbit completing in about 29.5305882 (synodic period) terrestrial days gives an average of 800 minutes arc a day. For convenience the month has an average of 30 days. $360^\circ = 27.321661$ days (sidereal period).

Figure 93



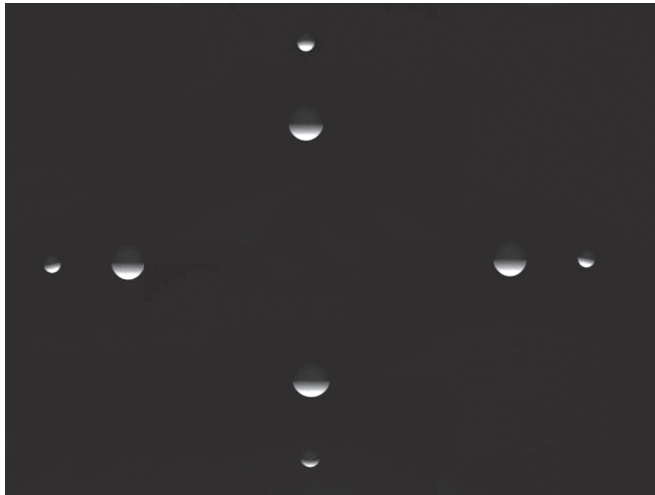
Sun, Moon through zodiac signs

The visibility angle of the reflected Sun- light from the lunar surface changes every day so that the waxing and waning phenomenon solely represents the angle on its helical orbit. The observer is stationed on the planet Earth. The light emission is from the Sun. Its reflection is from the Moon. The very helical nature of the orbit of Sun, Earth, and Moon permits the observation of the process. Out of these three bodies the planet serves as support for the observer, Sun to illuminate and Moon to reflect. The $13^\circ 20'$ daily motion (apparent) may well be an optical quality “cooking” or illusion. Human mind is fast moving and is capable of moving from theme to theme or place to place or time to time. The Moon is said to influence or co- ordinate the mental function. There is at least one big difference. One may control the movements of the mind by constant practice but it is humanly impossible to immobilize the Moon, not even for a fraction of a second.

The sum total of self-induced fire at the Sun made up of electromagnetic energy cannot be measured from observations. The lunar orbit closely winding around the helical terrestrial orbit is at a

distance of 384.404km from the Earth. The Sunlight illuminates the moon. Only part(s) of this is received on the lunar surface covering about 30° that in turn, is reflected and becomes visible on the full Moon day. But on the new Moon day the Moon is located with in the 30° limits of the Sunlight and hence its relative position does not permit the perception of reflected light from the Earth.

Figure 94



Lunar phases

Why moon should not be going round the earth?

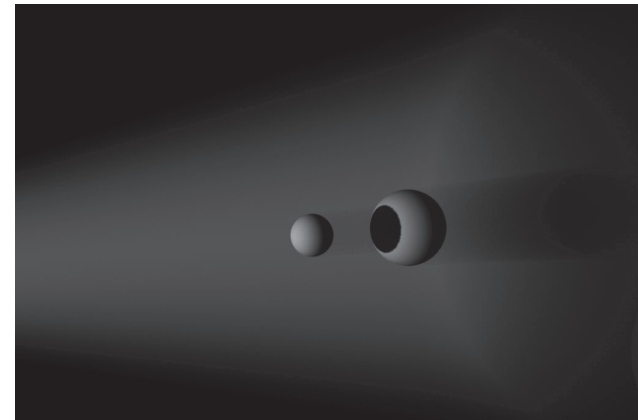
If the Moon were to go round the Earth, as is taught every where, some serious objections are evident.

The relative size of the Sun, the Earth and the Moon arranged in a heliocentric orbit for the planet and Earth centered orbit for the Moon should provide a series of solar eclipses at every new Moon, few days earlier and after. Also there should be a series of lunar eclipses at every full Moon, earlier and later positions. This is so because if the Moon's shadow extends on the surface of the Earth at that region the Sun becomes invisible totally or partially and a solar eclipse should occur. It is again inevitable that when the Moon comes in

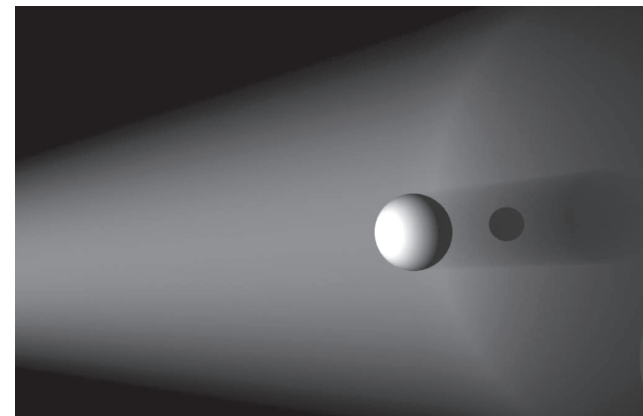
line with the Sun and the Earth for full Moon position the shadow of the planet should produce a partial or total lunar eclipse visible from Earth.

Both these situations do not occur. Again the phases of the Moon are a peculiar phenomenon. The size, distance, and the orbit of the Moon, as described in text, should produce eclipses every time. (Seeds, Michael A. The Solar System, Wadsworth Publication Company, New York, 1999.)

Figures 95a & 95b



Solar Eclipse



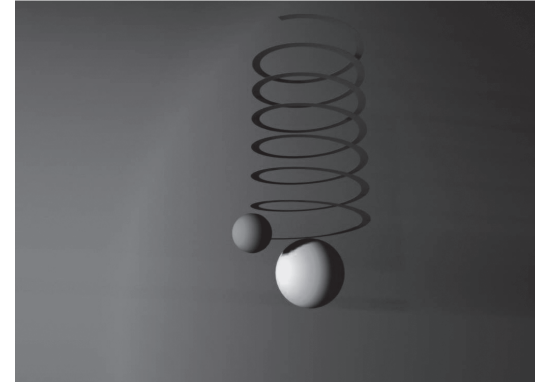
Lunar Eclipse

There is an invisible face for the Moon. A better satisfactory explanation is called for.

From the information available in the modern astronomical literature and by direct observation the Moon is the celestial body close to the Earth. This permits us to know that the distance from the observer to the celestial body, the size of that body and its capacity to reflect light or when a star, to irradiate light rays, are important factors for studying all about the object. Its movement can be observed on a daily basis with reference to other celestial objects. The relative movement of other planets or their satellites also can be observed. In every case, the Sun serves as the source of light for all the planets of solar system. A comparative study of various planets, Moons or other celestial bodies has to refer to the relative position, rotation, size, revolution of the Sun along the orbit as a star. For practical purposes of location an area of the sky is identified with specific stars and star clusters, called the constellations depicting different patterns in the sky. Obviously, the ancient astronomers recognized several animal outlines, some kind of visual images and called them zodiac signs each one covering about 30° arc. Twelve of them cover the 360° belt, along the celestial equator, about 16° broad. Their distribution also follows a helical model.

Obviously, when the Moon follows the helical orbit encircling the planetary orbit the Sunlight illuminates the Earth as well as the Moon at all times, with certain exceptions. At times the position of the Moon is such that the incident Sunlight is not visible from the Earth's surface because it is within the 30° cone sector of the sky where the Sun shines; it is the new Moon day. By chance if the Moon happens to reach a 180° straight line by locating itself in between the Sun and the Earth a solar ellipse is formed due to the shadow of the Moon extending over 270km across the terrestrial surface. This can occur only during day time.

Figure 96

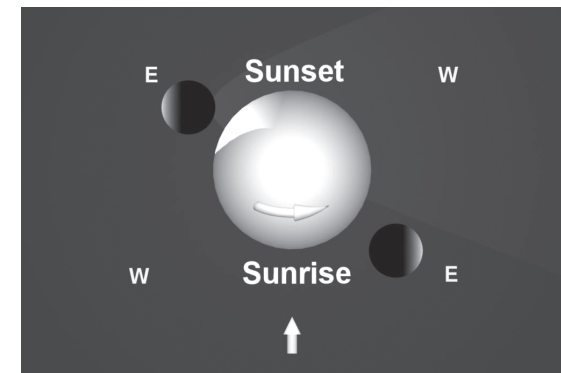


Partial eclipse of the Sun

About 15 days later, again the Moon may reach a point on its own orbit beyond the Earth (at 180° straight) in line with Sun and the planet causing an eclipse of the Moon as it enters the shadow of the planet at night.

Other days the reflected surface of the Moon is seen whereas the other side is never visible from terrestrial observatories. The waxing and waning may be seen as a curved line when we trace the relative position and luminosity of the Moon. However, the waning Moon is visible in the morning skies and the waxing Moon in the evening skies.

Figure 97



Waxing and Waning Moon

Seen from northern or southern latitudes the crescent extends in the east west direction.

Axial rotation, axial shift and orbital revolution of the planet produce a total spin force and a space just behind its equatorial plane. This vacuum attracts its natural satellite, the Moon. This spot represents the most recent location of the planet and therefore is located at the tip of the orbit just behind to (the west) the planet as it were. *This attractive force is called Planetary Orbit Universal Natural Dynamo (POUND for short). This point corresponds to the "lower node" described in astronomical literature. The same energy point is under reference in astrological texts as one "planet" (Ketu) because of its movement.*

Maintaining this point POUND at the apex a cone may be imagined when along the base of the same cone moves the Moon. It is maintained at a distance of 384.404km. the angle at the apex corresponds to about $6^{\circ}42'$ ($= 13^{0.24}$ solid angle at the apex). The lunar orbit twines round the planetary orbit that is helical. One turn 360° of Moon's orbit lasts in 27 days 7 hours 48 minutes 12 sec. Taking into account the orbital displacement of the planet during this period, the distance between full Moons is 390° equivalent to 29 days 12 hours and 29 minutes approximately. The lunar movement follows the Earth and hence seen at the western side. This is why the back- side of the Moon does neither get illuminated by Sunlight nor seen from the Earth.

The Moon is at a constant distance of 339714.458577 km. from the Earth.

New Moon to new Moon 29.5305881 days corresponding to $390^{\circ} = 2544476272 \text{ s}$ $360^{\circ} 27.32166 \text{ days} = 235414599 \text{ s}$
 1.02 km/s $27^{\text{d}}7^{\text{h}}43^{\text{m}}12^{\text{s}}$ 27988985.35 km in 235414599 s

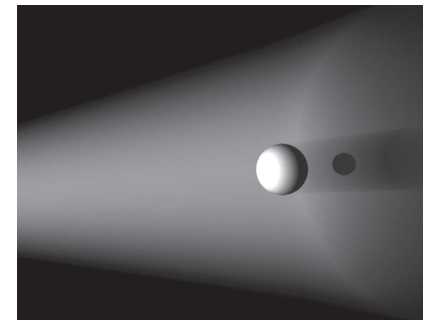
Radius of the helical orbit = 4454585.5 km ($\pi = 3.141592536$)

After discovery of atmosphere on Moon, however sparse it is, its shape also should be a comet-like.

The lunar orbit around the Earth's helical orbit at times reaches that side of the helix exposed to the Sunlight but in such a way that full Moon reflects this light. When the Earth comes in between the Moon and the Sun, the lunar eclipse results. After 14.765 days the Moon reaches a position in between the Sun and the Earth to be called new Moon because the night side of the Moon is "visible" from the Earth whereas the illuminated side is facing the Sunlight. When the shadow of the Moon passes over the Earth it is solar eclipse (extending 270km wide).

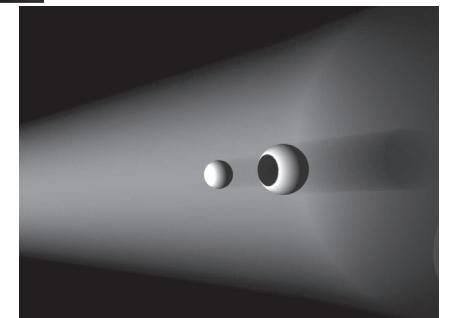
When Moon enters within 12° sector in relation to the Sun, a new / full Moon occurs. Likewise, if it is 0° or 180° either solar or lunar eclipse ensues.

Figures 98a & 98b



Lunar Eclipse - Opposition

Solar Eclipse - Conjunction

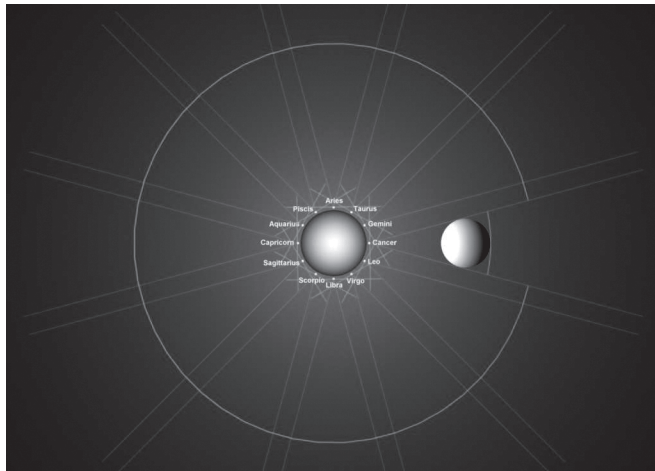


Source of light is at the cone apex and reflecting surfaces without self-illumination at the base of the cone (helical orbit). The opposite location enters the 30° invisible sector due to inability to receive the reflection (opposition). When one body moves faster than the other body the slower one is said to be on retrograde motion.

Like wise, other planets also reflect Sunlight from their surfaces. Each planet has its own helical orbit and other individual characteristics. Each planet may have one or more natural satellites. The satellites accompanying the respective planets also present helical orbits. By observing the complex celestial bodies their helical orbits, the angle of inclination at which their orbit is located, the relative distances and all such information may be understood.

By drawing invisibility cone 15°+15° beyond Sun any celestial object within this cone becomes invisible. The planetary rotation being west to east the zodiac measures the longitude 360° divided into 12 signs of 30° arc each planetary position and its orbital advancement indicate the visibility or not of other celestial objects.

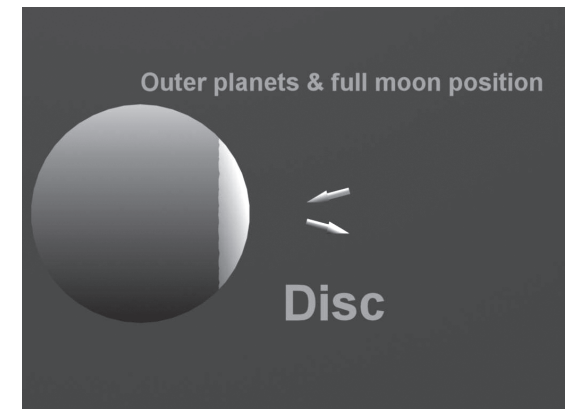
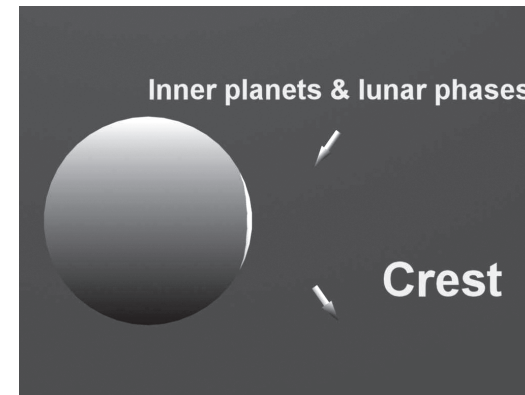
Figure 99



30° / 330° visibility zones

The day- light 30° arc gets reflected from a globular surface that can be seen. Night- time 180° arc is a constant invisible zone for all the planets with spherical reflecting surface. The night side of outer planets is never observed from the Earth because of two reasons. First, the reflecting surface of these planets is only visible at night from any inner planets including the Earth. Second, because of its position, Sunlight does not illuminate the night side of planets on their respective orbits. The inner planets deflect the Sunlight from the surface. We see the inner planets as an arc or a crescent and part of the night is also visible. An observer on the surface of the Earth can only reach a small portion of the outer planets.

Figures 100a & 100b



The North South shift of the planet on its orbit delimits the visibility to the tropical region, especially the equatorial regions or areas adjacent to this.

It is interesting to note that the Moon is not going round the Earth as indicated in the astronomical literature. A clue to this effect may be seen on a careful observation of daily positions, the increasing or decreasing reflecting areas and the inclination of illumination proceeding from the Sun.

Another point of interest is the predictable eclipse. Once the daily motions of the planet and its satellite in relation to the solar visibility are known, it is a matter of simple calculation. When all the three bodies, namely the Sun, the Moon, and the Earth, come in 180° line on all sides and planes an eclipse is formed. Such occasions do not repeat every month.

The SOUND and POUND fall in line with the Earth so that the shadow of the Moon extends over 270km radius on the Earth causing solar eclipse or when the Moon's dark side alone is "visible". At another moment the shadow of the Earth may be in the path of the full Moon causing a lunar eclipse.

There is every possibility of an effect of eclipses on biosphere since the reflected rays are interrupted for sometime.

The Planetary Orbit Universal Natural Dynamo (POUND) situated close to the Earth's equatorial plane directly in front of the ram force, serves as the apex of a cone. The base of this cone at a distance of 384404km is the Moon. The axis of the Moon is parallel to the axis of the Earth and that of the Sun.

Although the complex planet satellite system resolves to a cone it gets extended as helix due to the orbital advancement of the planet to cover the 360° in 365 days 5 hours 48 minutes and 46 seconds describing a helix. The apex of the second cone corresponds to the photosphere (SOUND) and the orbit of the planet is at the base.

Similar coaxial cones with planets at orbits describing the helix in each case will have to be calculated taking into account the angle at the cone apex and the distance at which they are located.

The Sunlight illuminates the planets from one side so also their satellites. At least the dark side (nights) of external planets and that of the Moon remain invisible from the Earth. Occasionally, all the three celestial bodies, the Sun, the planet and its satellite get aligned to 180° when an eclipse is detected.

MODEL OF EARTH-MOON COMPONENT

Prepare 30 models of Earth and Moon maintaining a constant distance of 384.404km. Each Moon should be at a distance of about $13^\circ 20'$ apart to cover the 360° in 27 days as seen from the Earth. The apex of the cone, in this case, is the POUND, close to the equator, which for an observer on Earth, seems to retrograde just like SOUND but at 180° from one another. The angle at the apex should be $13^\circ 24'$ so that the Moon placed at a distance of about one light second is seen moving around the planetary orbit illuminated by the Sunlight. Seen from one or any spot on the planet Earth, the daily changes in the relative position of the Moon and the surface illuminated visible proportionate angle from the Earth will have to be represented. (see figures 91, 92 & 93).

The full Moon occurs when the Moon is in line with the Earth or more precisely with SOUND and POUND that are at 180° or very close to it. When the Moon moves to a position in between the Sun and the Earth a new Moon occurs.

It is interesting to note that the interval between full Moon and another full Moon (29.53 days) corresponds to 390° motion including 360° of the Moon and the 30° of the Earth. The other point is the source of light, the Sun itself. Obviously the motion of the Sun being negligible it is not taken into consideration, at this moment.

Interval between a full Moon and a New Moon is therefore 195° and not 180° as may be imagined. Considering the helical orbit of the Earth, the daily position of the Moon indicates the distance, on an average, but every day the angle of observation differs to some extent. The sequence of lunar positions when traced with the observation of a shadow produced by the Moonlight proves the fact.

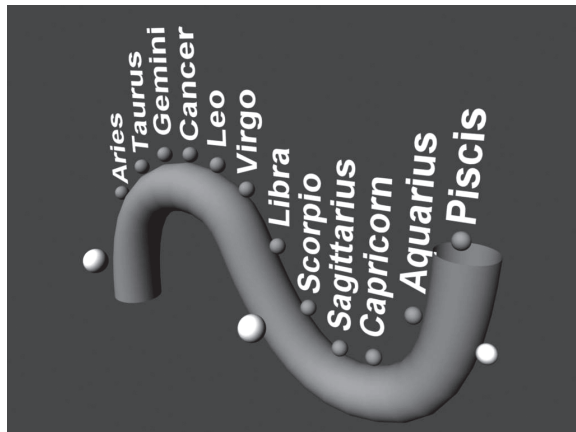
Convenience of 30 days duration for a month

The 30° arc, the zodiac, determines the area observable by human being at a time. Again, this is the stretch of celestial band that becomes invisible due to the brightness of Sunlight.

Time taken by the Earth as a planet to move 30° along its orbit covers about 30 days. This is a convenient measurement to define the human capacity to observe celestial objects.

When other celestial bodies, especially the closer ones like planets and the Moon, become invisible once they enter the 30° arc. Either they move out of that arc to become visible once again as it happens with the Moon soon after the New Moon or Earth (observer) moves out of that cone as it is the case with outer planets.

Figure 101



Zodiac houses through one year

In the case of inner planets like Mercury or Venus, they become invisible twice in their orbit. Once if they are moving in a direction similar to that of the Earth when they get displaced faster than Earth their invisibility is of shorter duration. Another time when they are moving in a direction away from the direction of terrestrial orbit, the motion of the observer maintains the object (the inner planet) within the invisible range for a longer period. But as soon as the object gets out of this invisible arc or the observer moves to a different area the situation becomes clear.

The escape velocity at a celestial body for a space ship should exceed the combined rotation and revolution speed of that body. Thus, in order to get out of the planet Earth, the vehicle should exceed 12.389km/s (about 44600km/hr.). At this speed a space ship should reach the Moon in less than 10 hours. Escape velocity on the surface of the Moon being 2.38km/s , it is easier to take off. The first or third quarter of the lunar phases should be ideal for both landing and take off when the extremes are avoided.

NASA calculates 259 days journey to Mars. Wait till day 714 for alignment of planets for take off in order to arrive on Earth on day 972.

Locate Mars along its orbit in a relatively easier position. Earth is the inner planet for Mars. The solar winds at 400km/s should facilitate journey to Mars besides 20km/s solar revolution on its orbit. The time taken for the curved path is less than a month!

For the return journey, look out for the closest positions of the two planets. A curved path should be selected in such a way that from the outer planet Mars an inner planet Earth may be reached in about one month. The escape velocity on Mars being 5km/s a space vehicle can return with ease in about 75 days.

One should plan from the touch down on return trip backwards. For planning this, calculations should be made in such a way that return journey plus time required on Mars add time required for travel from earth to Mars are all included.

For example

a) Send a rocket in a specific curve in a direction away from the Sun (Earth to Mars)

Return from Mars in a middle position towards the Sun (Mars to Earth)

b) Send a rocket towards the Sun (Earth to Venus)

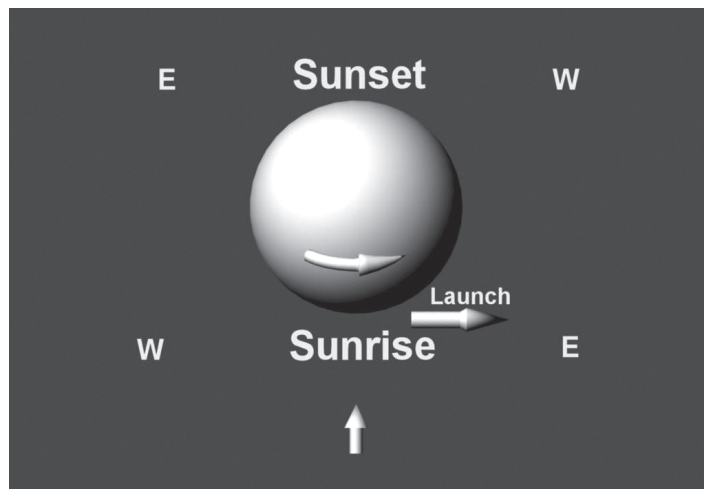
Return in a curve away from the Sun (Venus to Earth)

c) Send a rocket towards the Moon on seventh or eighth day after full moon or new moon when the relative position of the Earth is congenial.

Return the same day or may wait for another fifteen days to get similar alignment.

By this method the efficiency in time energy and resources become optimum for these journeys.

Figure 102



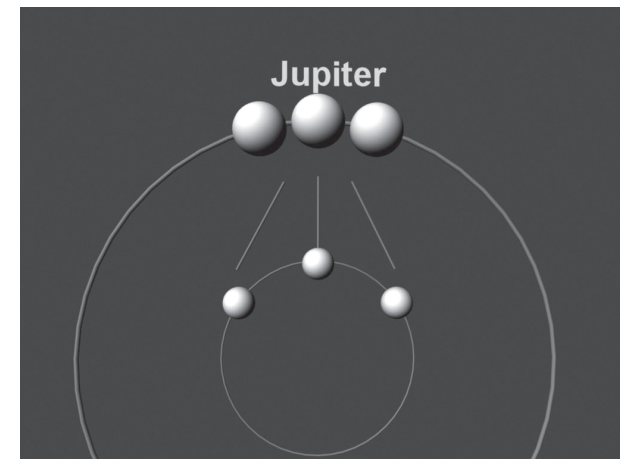
Launching technique

RETROGRADE MOTION OF PLANETS

The retrograde motion is an optical illusion for the observer due to the relative position and the movement of planets or celestial bodies. The duration corresponds to the time taken by the planet in question or where the observer is located (Earth).

When one planet moves faster than the other, the slower one appears to move backwards also known as “retrograde”. However, the ‘SOUND’ and ‘POUND’ always present retrograde motion even though they are not objects as such but are simply energy points capable of attracting some other celestial objects.

Figure 103



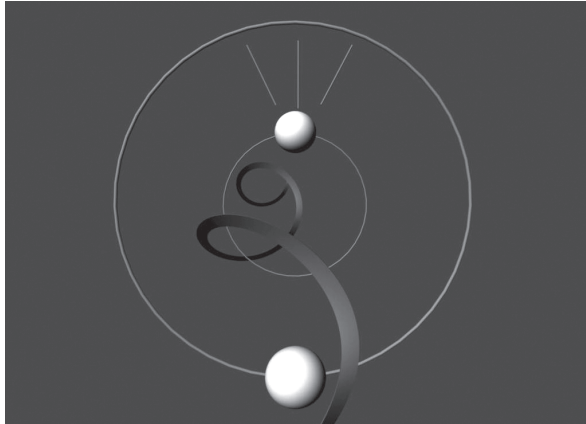
Retrograde motion of outer planet (See Video)

The sky at the background serves as point of reference. The inner and outer planets have their own peculiarities.

In the case of inner planets, which are not visible for an observer on Earth at midnight, they appear to be on retrograde when they are located at zenith at midday within a range of 30 degrees from the Sun. Either the inner planet (Venus or Mercury) moves out of this range or the Earth moves to another location from where the planets

are visible outside this range. These inner planets may become visible at a distance not beyond 48 degrees at any time and this is the reason why they are not seen at midnight. The inner planets deflect the oncoming sunlight from their lateral surfaces and hence are always seen as crescents.

Figure 104



Inner Planet - Retrograde motion observe the reverse direction (see Video)

The outer planets (Mars, Jupiter and Saturn that are visible to an observer devoid of optical instruments) are said to be on retrograde motion when the planet Earth located at a closer orbit but moves along its orbit faster than these celestial bodies. When their motion is relatively slower this illusion is evident. This phenomenon occurs when the outer planet is seen at the eastern horizon at sunset so that at midnight it is seen at Nadir. Saturn for example takes 29.46 terrestrial years to complete one orbit maintains about 135 days on retrograde and continues on its normal course. In astronomical literature this phenomenon is represented as a loop in its orbit.

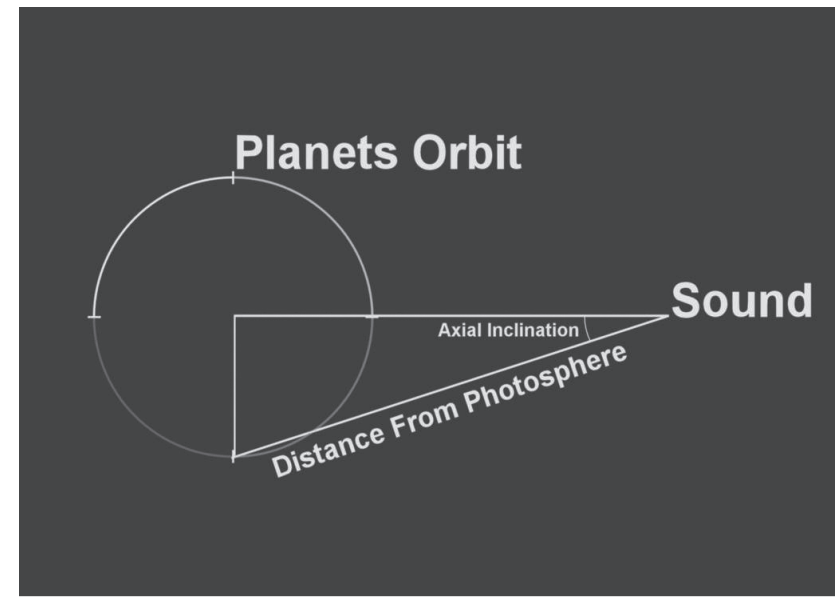
In the case of these outer planets the reflected sunlight alone is visible for an observer, that too from an area of about 30 degrees only. This looks like a disc but never a crescent. The dark side is not seen at all.

Interestingly the SOUND and POUND always depicted at opposition to one another, present retrograde motion, as seen by an observer on the Earth. They return to the same house of the zodiac after about 18 years. This has to do with the rotation and revolution of the Earth.

A fast moving vehicle like a train next to another slow moving train on an adjacent track is a good example. Passengers seated in one train may feel the same sensation as an observer on a planet. After all it is only an optical illusion.

Coaxial cones representing the known solar planetary system with the sun at the cone apex may be visualized. The base of each cone represents the orbit of one planet. The circumference of the base represents the length of the orbit. The solid angle at the cone apex and the distance from the photosphere to the planet are constants for each one of the planets.

Figure 105



Model for Celestial Object

Ana lemma

The sun moves helically on its own orbit but around the Stele of Polaris orbit. This helical orbit is so huge that the orbits of all planets become an insignificant fraction of arc second but the constant revolution of each celestial body maintains them in their own helical orbits.

Seen from the planet Earth, the 360° covering one year may be divided into 360° units to locate the exact location of any other celestial body for easy reference just because Earth covers nearly 1° per day on its orbit when it rotates once. The rotation and revolution of other planets should be calculated anew and corroborated by observation. Ana lemmas may be obtained from each planet and probably from different latitudes to observe the phenomenon with precision.

Holistic view

Observe the position of Sun and other planets in relation to the background constellations and infer the position of the observer. Likewise locate the Moon everyday over a month to follow the orbit. When planets appear /disappear in the morning or evening, the respective loci should be sufficient to trace their orbits in relation to the Sun and other celestial bodies.

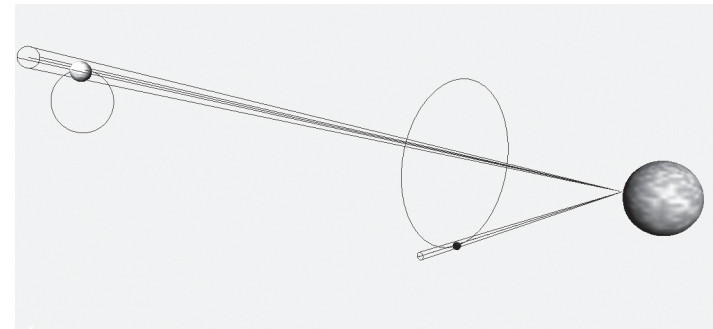
Sunlight gets reflected from planets and satellites. When observer is in a location outside the glare from Sunlight (daylight) such reflected lights can be seen. Moon is an exception. But when the planets enter within 30° arc in relation to the Sun they go beyond the Sun on their orbits. After some known time intervals they are seen when they come out of the 30° cone where Sunshine is predominant.

When heliocentric orbits are considered, the disappearance of a planet, Jupiter for example, means its location 2603.5291 light

seconds beyond the Sun. Add another 499.9 light seconds, distance from Earth to the Sun for a total distance of 3103.4291 light seconds. The size of the planet and the distance from the observer at one place on Earth when considered, the planet may not be visible at all due to the brightness of the Sunlight and probably the size and distance of the planet.

But no sooner the planet moves out of the 30° , it becomes visible in spite of the size and distance. There are no heliocentric orbits for planets. New calculations should be made to determine the issue. If there is heliocentric orbit when the Earth is just in between the Sun and the planet, the distance between the planets remains 2103629 light seconds that can be verified. Other cases are identical to this.

Figure 106



Invisibility of outer planet at opposition

Close to this SOUND follows the orbit of the planet Mercury. Next orbit is that of Venus third in line comes the orbit of Earth. This is the reason why Mercury and Venus are called inner planets on a coaxial system. These inner planets maintain closeness to the Sun and therefore, never to be observed at Nadir. They are observed either in the morning or early night soon after Sunset but never beyond 48 degrees away from the Sun.

It is interesting to note that these planets appear like crescents reflecting the Sunlight, from the borders whereas the darker portions

may be observed with telescopes. On rare occasions, as it occurred on June 8, 2004 for example, Venus was eclipsing the Sun passing through the solar disc at noon as seen from the Earth. This clearly shows that the orbit of the planet is closer to the Sun.

In case of outer planets like Mars, Jupiter and Saturn, they are seen in such a way that only their day time gets reflected whereas their darker night side is not visible.

However, when these planets are on their respective orbits within 30° arc relative to the Sun, any celestial body becomes invisible due to the brightness of the solar light. Therefore, any planet and Sun when appear in one zodiac within 30° , only Sun is visible.

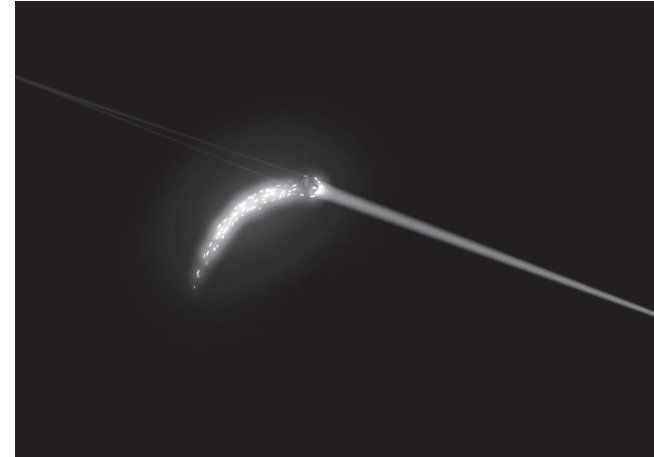
Geostationary orbit of artificial satellites is in the equatorial plane at 35786 km. distance, where it's orbital (revolution) period is synchronized to that of the rotation of the Earth, so that about 1/3 of Earth is visible. The satellite's lifetime is about 15 years.

No other orbit is possible because the center of the orbit must coincide with the centre of the Earth.

Celestial bodies which appear at known orbits are called comets with a core and an elongated tail all glitter with incident light. They are considered as mere "visitors" to the solar system. Probably they are also planets of solar system but at different planes and orbits.

If some day in the near future someone can go that far and observe our planets similar appearance should be visible. This is because the gaseous atmospheric mantle of the Earth drawn out into a tail. When illuminated laterally it should look exactly the same as a comet. So are other celestial bodies with gaseous atmosphere, without light emissions of their own.

Figure 107



Earth as a comet

Once in a while such comets or parts there from may collide with some other planets or other celestial bodies as occurred a few years ago with one of the satellites of planet Jupiter. (Comet Shoemaker). The debris got deposited on this Satellite.

Asteroids or any such objects may get lost or deposited on any other celestial body in due course of time. Some events are observed others are not. Some are reported, others go unnoticed.

Orb (Latin) = ring, sphere, globe

Orbit = Curved course of a planet, path, track

Either change the dictionary meaning or incorporate a new word to define helical trajectory.

Distance from the Sun

Table 7

Stars and planets by Ian Ridpath 2002 Dorling Kindersley Book

- Planet Mercury is close to the Sun. 46 and 69.8 million kilometers from the Sun the axis is parallel to the axis of the Sun. Axial rotation 58 Earth days 14 hours !T of time it takes for revolution (88 Earth days) No atmosphere but hard rock is observed.
- Planet Venus spins from east to west 243 Earth days. Revolution 225 Earth days. 2.6° axial inclination. 108 million km from the Sun. Crescent phase appears when Venus is close to the Earth. (Full view on the other side of the Sun? Not visible from Earth?). Has gaseous atmosphere, clouds.
- Earth 149597870.7km Astronomical Unit. $23^{\text{h}} 56^{\text{m}} 4.091^{\text{s}}$ $365^{\text{d}} 5^{\text{h}} 48^{\text{m}} 46^{\text{s}}$ $23^\circ 27' 30''$ axial tilt. Gaseous atmosphere covers the lithosphere and the hydrosphere.
Moon 6.7° tilted from vertical with reference to the ecliptic
- Mars axial tilt 25.2° spin $24^{\text{h}} 37^{\text{m}} 687$ days 228 million km. from the Sun. gaseous clouds are found on the surface.
- Jupiter 778 million km from the Sun 11.86 years 3.1° tilt Spin $9^{\text{h}} 50^{\text{m}}$ water ice gas.
- Saturn 1427 million km from the Sun 29.46 Earth years Spin $10^{\text{h}} 14^{\text{m}}$
- Uranus 2.871 million km from the Sun 84.1 Earth years Axis tilt 98° spin $17^{\text{h}} 14^{\text{m}}$ methane clouds
- Neptune 4.498 million km from the Sun 28.3° tilt Spin $16^{\text{h}} 7^{\text{m}}$ 165 years methane clouds
- Pluto Spin 6 days 9 hours 248 years tilt 123° 4.400-7300 million km from the Sun. Methane in the atmosphere?

- Distance between Earth and Mercury SHOULD have been 104 and 196 million km.
Venus 52 and 258 million km
Mars 78 and 378 million km
Jupiter 628 and 928 million km
Saturn 1277 and 1577 million km
But this is not observed.

The size and shape observed may change due to distance. The consideration of gaseous atmosphere as a mantle for any planet should permit a fresh look at its shape. The size of a celestial body and the distance at which it is located are important factors in its visibility.

Venus and Mercury are two planets known as internal ones since their orbits are closer to the Sun when compared with the orbit of the Earth.

Neither midday nor mid night of these planets are visible from Earth. Only a crescent shaped Venus surface is seen. With the telescope the darker side of the Venus becomes partially visible.

Venus may be observed at best about 46° from the solar disc.

This phenomenon is to be interpreted in such a way that the orbit of the planet is the nearest one to the terrestrial orbit.

In order to observe its midday Venus should move to the other side of the Sun. Midnight of Venus is observed when the planet Venus forms an eclipse of the Sun. This is possible when the Sun and Venus are found visible in one and the same constellation, at 180° in line with the Earth.

This fact conveys much more concern about the calculations made so far assuming heliocentric orbits for planets.

At about 19.30 on the 23 June 2005, seen from the Jardín Etnobotánico Chara Chakra, Cumana, Venezuela, a beautiful sight was on display near the western horizon. The sunset occurred recently and the stars and planets started appearing in the sky.

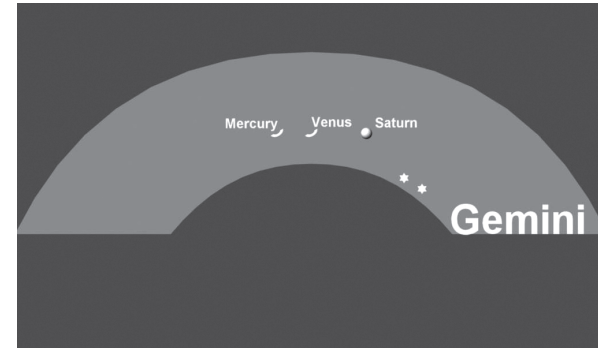
The Castor and Pollux combination of the Constellation Gemini was seen close to the horizon but just above in the Constellation Cancer were Saturn, Venus and Mercury shining one near the other. A very interesting and tricky sight indeed to get an outer planet Saturn seen as a disc and the inner planets Venus and Mercury seen as crests.

The zodiac belt of 360 degrees gets conveniently divided into 12 Constellations of 30 degrees arc each. The zodiac belt is considered 8 degrees on either side of the equatorial line dividing the sky equally into two hemispheres. The zenith position projected as a cone with 30 degrees solid angle at its apex describes the full area covered by the exposure. This is true for the light source, the photosphere or the observer. The observer is viewing the photosphere at the zenith but all around the cone projection extends in to the farthest extremes of the Universe or visible cone area. The zodiac background serves as a point of reference for the observer. The luminosity of the photosphere does not permit the visibility of other less luminous celestial objects at this moment. Projecting the light from the source with a conical area of 30 degrees the observer is in the center of the base of the cone and the Constellation at the background covers about 30 degrees.

On that particular day the sun was still visible in the Constellation Gemini and the full moon that happened the night before was visible with the Sagittarius at the background. Other Constellations namely Cancer, Leo, Virgo, Libra, Scorpio and Sagittarius were visible in the same order in the sky. Early morning just before sun rise one could observe Capricorn, Aquarius, Piscis, Aries, Taurus and a part of Gemini. Each Constellation maintains at the zenith for about 2 hours.

This observation is significant. According to the classical astronomical literature, the solstices occur around 21st June and 21st

Figure 108



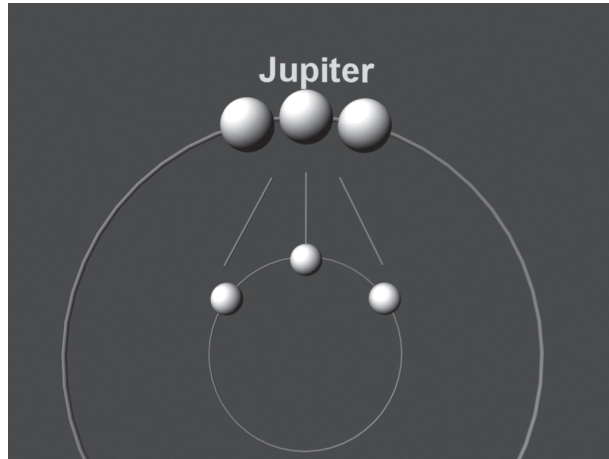
Night Sky on 23rd June 2004

or 22nd of December, the equinoxes around 21st March and 20th September. Obviously, the sunset occurs before the visibility of stars and planets. If Castor and Pollux are visible at the west close to the horizon the constellation Gemini is in sight, at least the last few days. In other words, instead of solstice when sun is in Cancer it has taken place right in Gemini.

Similarly, in the month of December the sun is visible with Sagittarius in the background and reaches Capricorn around mid January. This is to redefine Gemini-Sagittarius constellations marking two solstices and Pisces-Virgo coincide with equinoxes. Alternatively, in order to maintain the four seasons of the year, solstices should be moved to July and January; equinoxes to April and October.

The crest shaped Mercury and Venus planets were glittering. Seen from these planets earth should be visible in the back ground of Sagittarius but sun should not be seen in Gemini as it happens from the earth. It is probable that seen from either Mercury or Venus Saturn should be visible in the Constellation of Gemini. But an observer on Saturn is viewing the Sun and earth in the Constellation Sagittarius or depending on the angle may not see some of them.

Figure 109



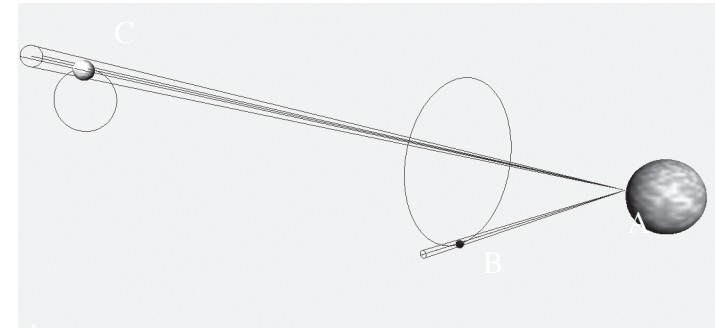
Retrograde movement of Jupiter

The planet Mercury close to the sun maintains the orbit in such a way that it is visible on rare occasions only. The curvature of the orbit permits the retrograde form of visibility from the earth. So also for the planet Venus. When it is the outer planet the retrograde movement is observable when the same appears at Nadir (midnight) point and the orbital displacement of the observer, in this case the earth, is the reason for the illusion.

The axial shift is a continuous process and being so smooth it is observable with longer intervals, the solstices are the extreme points. Alternative equinoctial positions are taken as eastern and western extremes. These four points determine the four seasons of the year. Compared to a clock the positions may be like this: 12 hours the December Solstice, 3 hours the March equinox, 6 hours the June Solstice and the 9 hours the September Equinox.

Distance from the Sun to any planet is a constant in this helical model where the apex of the cone is the photosphere and the base of the cone represents the orbit of the planet in question. Therefore,

Figure 110



Mutual invisibility

the solid angle at this cone apex is also a constant for a specific planet. Distances between any two planets depend on their respective orbital lengths and the relative positions of each one with respect to the other planets. All these calculations will have to be determined.

Sun/SOUND/ photosphere.....A

Planet earth.....B one year = 365 days 5 hours 48 minutes 45.8 seconds

Planet Jupiter.....C one orbit = 4334days and 8 hours

AB and AC are constants. BC variable through 360 degrees.

Since both planets are moving independently one has to consider 720 degrees for more exact results.

Distances from earth to other planets will have to be calculated at least four times a year. Perhaps it may be necessary to measure four times for every planet along its orbit of 360 degrees in relation to the orbit of the earth. If planets were to maintain heliocentric orbits as claimed by the astronomers till today the calculations available should be sufficient. When helical orbits are described for each one of them new calculations become necessary.

The rotation of the planet earth on its equatorial plane from west to east exposes a 30 degree arc to the sun light at a time and this extends as a belt all around the planet. A shadow is projected opposite this illumination and the night extends as a cone. This cone moves on a conical manner extending as a smooth curve through the year. The gaseous mantle extends as a wagging tail behind the earth in directions opposite the axial shift either to the north or to the south causing solstices. The spin produces twists and whirls in the atmosphere. These torsions are expressed as movements of air mass or clouds across the mantle in specific directions causing climatic changes in the biosphere. The trade winds, hurricanes, tornadoes are all different manifestations of this phenomenon.

In Nature any action is seldom visible. Some times even the reactions are hard to observe. The interactions get manifest in diverse manner and these in turn may release a chain of reactions. All or most of these expressions are easily observable. Human being has fractioned the whole and hence is unable to interpret the process as a whole.

The 30 degree solid angle at the emission point with its conical projection and another cone with the apex at the observer and the same 30 degree solid angle projected from the receiving end should meet at some way in between the two apices. This meeting point between two cone bases should serve to monitor climatic changes around the planet.

The visible light produces illumination but the heat is to be located in the infra red rays that are invisible but can be concentrated with the help of a lens to be focussed on a single point.

The ice ages occur when there is a shift in the relative position of the Polaris. This happens with equinoctial precession caused by the orbital displacement of the sun which takes 225000 years to cover 360 degrees. With as little as 45 degrees change should produce significant effect in the relative position of the planet earth. Perhaps this is the reason why the planet Uranus has an eccentric orbit.

The action, reaction and interaction between the SOUND and POUND should reflect on the hydrosphere to manifest high tides and low tides on a daily basis. The same reason should explain the trade winds blowing in specific directions during solstices or equinoxes.

The side of the moon that is not illuminated is neither visible from the earth. Conversely, seen from the lunar surface, earth should be visible reflecting light as a disc on a New Moon day but becomes visible the darker side [night] on a full moon night. Partial visibility of the illuminated surface should be visible during the other phases.

A spherical surface exposed 30 degree arc is the maximum area which can serve as emission area or receiving area. The two conical projections are complementary. The mid point at the apex permits 15 degree arc on all sides. This completes one hour exposure. The 360 degrees to complete a circle get automatically divided theoretically in to 12 units of 30 degrees each and are conveniently identified as Constellations. The light particle from the photosphere gets released but the photosphere rotates releasing light particles continuously. After traveling about 499.9 seconds these particles illuminate the surface of the earth which in turn rotates. Both emitting and receiving celestial bodies are on motion along their respective orbits. This produces a wavy motion for the photons.

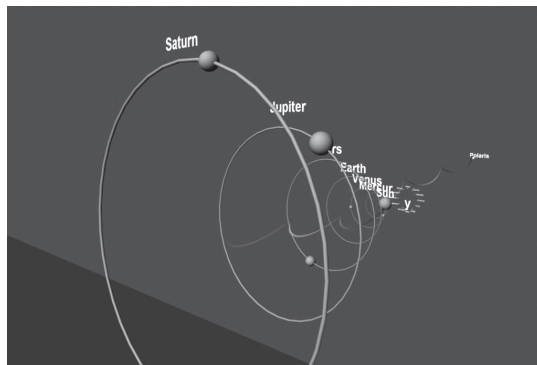
Daily rotation of 0.5 Km/ sec for the earth to cover the sidereal day in 86164.1 seconds from west to east is significant. Orbital revolution may be calculated as 11.889 Km/sec considering the helical orbit. The escape velocity should be $11.889 - 0.5 = 11.389$ Km/ sec making use of the rotation. If one were to take off in the opposite direction the escape velocity becomes 12.389 Km/sec. Similarly the escape velocities with reference to other celestial bodies will have to be determined.

The zodiac belt of 360 degrees gets conveniently divided into 12 Constellations of 30 degrees arc each. The zodiac belt is considered

8 degrees on either side of the equatorial line dividing the sky equally into two hemispheres. The zenith position projected as a cone with 30 degrees solid angle at its apex describes the full area covered by the exposure. This is true for the light source, the photosphere or the observer. The observer is viewing the photosphere at the zenith but all around the cone projection extends in to the farthest extremes of the Universe or visible cone area. The zodiac background serves as a point of reference for the observer. The luminosity of the photosphere does not permit the visibility of other less luminous celestial objects at this moment. Projecting the light from the source with a conical area of 30 degrees the observer is in the center of the base of the cone and the Constellation at the background covers about 30 degrees.

Distance from the Sun to any planet is a constant in this helical model where the apex of the cone is the photosphere and the base of the cone represents the orbit of the planet in question. Therefore, the solid angle at this cone apex is also a constant for a specific planet. Distances between any two planets depend on their respective orbital lengths and the relative positions of each one with respect to the other planets. All these calculations will have to be determined.

Figure 111



Helical Helix : Solar System

Distances from earth to other planets will have to be calculated at least four times a year. Perhaps it may be necessary to measure four times for every planet along its orbit of 360 degrees in relation to the orbit of the earth. If planets were to maintain heliocentric orbits as claimed by the astronomers till today the calculations available should be sufficient. When helical orbits are described for each one of them, new calculations become necessary.

Simultaneous measurements from several points on single meridian the distances may be calculated better for any celestial body.

Why light rays form wavy motion?

A spherical surface exposed 30 degree arc is the maximum area which can serve as emission area or receiving area. The two conical projections are complementary.

The mid point at the apex permits 15 degree arc on all sides. This completes one hour exposure. The 360 degrees to complete a circle get automatically divided theoretically in to 12 units of 30 degrees each and are conveniently identified as Constellations. The light particles from the photosphere get released but the photosphere rotates releasing light particles continuously. After an interval of about 499.9 seconds these particles illuminate the surface of the earth which in turn rotates. Both emitting and receiving celestial bodies are on motion along their respective orbits. This produces a wavy motion for the photons.

Light from other sources present distortions.

How to use the rotation revolution for take off?

Daily rotation of the earth at 0.5 Km/ sec. to cover the sidereal day in 86164.1 seconds from west to east is significant. Orbital revolution velocity may be calculated as 11.889 Km/sec considering the helical orbit. The escape velocity should be $11.889 - 0.5 = 11.389$ Km/ sec making use of the rotation. If one were to take off in the opposite

direction the escape velocity becomes 12.389 Km/sec. Similarly the escape velocities with reference to other celestial bodies will have to be determined.

Terms such as apogee and perigee become superfluous with helical orbit descriptions. All the calculations are to be done once again considering this reasoning.

With unaided eye an observer in the tropics can see inner and outer planets at night. The inner planets deflect the Sunlight from a surface of the planet. The dark side is not visible when it is not illuminated. Their orbits being smaller than that of the planet Earth, they are not visible at midnight. The midday and the midnight are invisible from the Earth. During one 360° orbital revolution two times these planets become invisible and then the timings of their visibility change, either before Sunrise or soon after Sunset. Venus, for example deflects 7 of the 12 solar rays. Where as the outer planets and the Moon together reflect just 5 of 12 solar rays.

The outer planets “disappear” from the sky when they enter in conjunction with the Sun. These outer planets become invisible only once every year. When these planets become non-productive or they are seen in their known position. To avoid confusion the night of these planets becomes invisible from sight and by examination it is when the Sun and the planet occur in one and the same zodiac.

APPENDIX I

Project nine units of five minutes each to be developed as a source audiovisual material.

UNIT 1 - 300 s

2 – 1 Image/s per second

Permanent Energy Source - Sunlight - Fire - Lightning

Sunlight = Heat (caused by Infrared Rays and as a friction product) + visible light

“Light comes from the East” - To every country at dawn the Sun sets in the West, too!

Worship as God Provider This sequence repeats

Dawn = DAY 30° arc

Rising Sun

Midday

Setting Sun

Night fall 330° Shadow

Other visible changes in the sky - stars move
planets move faster
moon moves fastest

Sun sets in the West Moon rises in the East ROTATION OF THE EARTH

Moon sets in the West Sun rises in the East showing celestial bodies in motion

Texts Ancient and Modern As God or Energy Source

Worship - India konarak, - Sun temples, yoga, oblations, salutations,

Agnihotra, Yaga, Lighting of a Lamp, pouring water, etc.

Sumerians Babylonia sun worshippers

Maya Tikal temples - Temples, legends, salutations, Popol Vuh,

- Inca-Temples, salutations, legends, Inti Raymi Teohuanaco, Colina Catequilla of Quitsa-to (half the world) Cochasqui-intiraymy-june

Pambamarca	December
	Blowing conch
- Nordic	- Stonehenge
- Greek	- Helios Mythology,
- Egypt	- Pyramids Mythology Giza, Ra,
Akhenaton of XIV Century BC	“Supreme God” energy provider

Measurement of events

Seconds, Minutes, Days, etc.

Jantar mantar
Solar Discs
Circle and a Pole
Hour Glasses
Sand hour glasses
Water hour glasses
Watch - mechanical
Quartz - electronic

Correction of Calendars

Gregory XIII 1582 AD 4th -> 15th of October

Calendars, day, week, fortnight, month lunar (27 days), solar (30 days), seasons, year mayan 13 months of 28 days each + 1 day (25th July)

Breath, 86,164.1 seconds per sidereal day, blink of an eyelid - - - - - > zodiac 24 hour cycle

Chanting mantras, syllables

Eclipses lunar seasonal changes

Astronomy Planets stars astrology, *Hora*, zodiac

Milky Way constellations natural satellites

88 constellations / International Astronomical Union

60 visible and identifiable with unaided eyes from the Northern hemisphere 8° 30' North latitude

UNIT 2 - 300 s

AVAILABLE DATA

Atharva Veda 12-1-52	P
Arya Bhata	
Aryabhateeya	Earth rotation calculated as 23h56'4.1” The actual astronomical calculation with all technological help has been determined at 23h56'4.091”
	Planet Earth goes round in one year -

4s motion

‘varshena bhuumih prthivii vrtyaavrtaa praanenaihi kalam bhuhh’

ARISTARCHUS of SAMOS about 270 B.C.

PLATO - Teacher

ARISTOTLE – Student GREEK BEFORE CHRIST - 2 astronomers followed Eudoxus Callipus

SPHERES ROTATING ABOUT THE CENTER OF THE EARTH

CUBE	EARTH	ICOSAHEDRON
------	-------	-------------

WATER		
TETRAHEDRON	FIRE	OCTAHEDRON

AIR	Plato’s ideas
DODECAHEDRON	CELESTIAL ELEMENT

HOT		
Fire	Air	Earth’s motion is less at the center
DRY	MOIST	Ptolemy
Earth	Water	Heavenly bodies

moved around in circles

COLD
Claudius Ptolemaeus (150 A.D.) 2nd Century A.D.

55 concentric spheres to move and carry the 7 planets

EL DIBUJO

Nicholas Copernicus (1473 – 1543) 1514 confirmed (Mikolaj Kopernik)

observation of Aristarchus Greek

Sun is the centre - no motion for the Sun

6 planets with heliocentric orbits, equatorial plane

Tycho Brahe (1546 – 1601) 1595 views on universe

Johann Kepler (1571-1630) 1619 mathematical support - elliptic orbit
parabola hyperbola

Galileo Galilei (1564-1642) spherical Earth, Moon, Jupiter with 4 moons

use of telescope as technology
religion x science - the Inquisition

Isaac Newton (1642-1727) 1665 gravity with reference to the center of the Earth, calculus,

analysis of light through prism
line area volume motion curves

NASA 1999
Voyager I - ERROR –

Interpretation of photo composition from

39 images.

Dynamic sun 19.9km/s / 225,000 year orbit

Aristarchus of Samos about 270B.C. Heliocentric orbits for planets.

Copernicus Nicholas 1473-1543 1514, 1543 confirms

Tycho Brahe 1546 – 1601

Kepler Johannes

Galileo Galilei 1564-1642 1642 Earth a globe, use of telescope

Isaac Newton 1642 1665 Gravitation

John Dalton 1808 Atoms

Robert Boyle Chemistry of Gases

Classical astronomy by charts and tables

Instruments and gadgets telescopes (optical and radio)

satellites, rockets, radar, solar heliosphere observatory, Hubble telescope, Voyager I, computer technology

Results: Heliocentric orbits, aphelion/ perihelion retrograde or looping motion, elliptic, ecliptic, inclination of axis in relation to Sun, equatorial plane, eclipses, photo composition intersection of orbits- solar, lunar upper or North node lower or South node

Contradictions:

- Visibility of 11 constellations of the zodiac at night, one constellation during daytime, instead of 6 during the day and 6 during the night
- Acceleration - deceleration
- Visibility of inner planets, interval of visibility and duration
- Visibility of outer planets, interval of visibility and duration
- Eclipses with every lunar cycle on daily basis incomplete waxing/ waning moon; complete on full moon/new moon
- Composition of planet Earth
 - solid - 29%
 - liquid - 71%
 - gas - ?
- Axial rotation and orbital revolution cannot maintain geoid form
- The force of gravity is not with reference to the center of the Earth
- Inability to photograph atmosphere
- Motion of the Sun 19.9km/s along its orbit 225,000 years equatorial plane displacements 365d 5h 48m 46s – length of the terrestrial year and 27d 7h 48m 12s is the lunar orbit (the lunar cycle new moon to new moon is 390°)
- Relative position of Polestar: Earth - Sun- Polaris; Polaris visual displacement 1°
- 430ly Sun – Polaris; 499.9 ls Earth – Sun; 1 ls Moon – Earth
- Day remains day around the year. Night remains night always

UNIT 3 - 210s

300s

CONCEPTS AND METHODS

OBSERVATION THINKING ANCIENT CIVILIZATIONS
INCA MAYA ABISSYNIA EGYPT GREEK INDIA CHINA
BABYLONIAN

AVAILABLE INFORMATION

Copernicus 1514 Mercater 1569 Gregory XIII 1582

Rene Descartes 1644

Scientific Method: Observation of Nature Man is a machine
 Problem identification

Hypothesis formulation

Experiment
 Theoretical conclusions

Robert Boyle 1660's Study of gases

Robert Hook 1664 Study of cork with microscope

Francis Bacon 1664 1 = 1 Experimentation as proof
 mathematician

Isaac Newton 1674 Laws

Linnaeus 1753 Nomenclature (binomial)

John Dalton 1808 Atoms Molecules Periodic Tables Scientific
 Method

Instrumentation / Apparatus / Gadgets

Telescope Microscope Laboratory Measurement scales Mathematics
 Quantitative Study Analytical Descriptive Dependent Statistics

Dogmatic concepts Fragmentation (Reductionism) Hearsay Speculation
 Illusion as Reality Technology application Static

Three senses (Audition, Touch and Vision) limited perception – Audio visual
 technology contradicts *'Ekagrata'*

Prejudiced problem identification

Hypothesis biased individual capacity and limitations

Experimentation $1 \neq 1$ impossible to repeat any experiment in space-time,
 no control possible

Theoretical Conclusions: Biased, impossible, quantitative, partial static
 moments have no importance in a
 Dynamic Process Observation
 (Fragmentation, Speculation, Conceptual
 errors- obsolete, incoherent,
 heterogeneous authors, human and

instrumental errors)

Observation of the process with 5 sensory
 perceptions

Common sense

6th ESP

Logical reasoning

Recognizing the pattern in the process

Helical or spiral put into cyclic
 phenomena (season, year, etc.)

Need for qualitative mathematics

n- dimension

Permanent curves. Process

UNIT 4 - 300s

NATURE: DYNAMIC PROCESS

Point with Six directions, line an extension

Triangle with five sides cylinder with four in, out, above, below

Quadrangle with six sides, cube

Sphere with 2 surfaces- outer and inner

Shapes and facets

5 elements in combinations 120:20:20:20:20

6 flavors

5 sense organs common sense ESP

circle, wave, motion, tides, expansion in space time

Flow of energy, water, air, particles, time, rotation, cycle, whorls, spirals,
 helix, cone, funnel, etc.

Birth growth degeneration death

Change of locality/state Boil water - Hot air ☐ vaporization
 heat gain

Cool - Ice solidification

heat loss

Logical sequence

salt – sea water ☐ rain water subsoil + salt ☐

spring water

heat gain – heat loss

evaporation flow into river

– ocean R salt sedimentation

Drop a pebble into an aquarium

Three dimension model of the total process in a dynamic method symmetric asymmetric model

Continuity + Change Web Generation Gap!!

Past Present Future in a string and the role of each is supposed to do something worth consideration

Direction Polarity Symmetry three dimensional waves

Symmetry radial asymmetry eccentric
bilateral erratic

Biodiversity

Each individual process is interdependent

Sum of internal and external factors produce ever changing form in a specific pattern that is organism

Gametes	A ₁	A ₂	B ₁	B ₂
M ₁	A ₁	A ₂	B ₁	B ₂
	M ₁	M ₁	M ₁	M ₁
M ₂	A ₁	A ₂	B ₁	B ₂
	M ₂	M ₂	M ₂	M ₂
N ₁	A ₁	A ₂	B ₁	B ₂
	N ₁	N ₁	N ₁	N ₁
N ₂	A ₁	A ₂	B ₁	B ₂
	N ₂	N ₂	N ₂	N ₂

Multidimensional patterns

length breadth depth curve space-time

mind-perception ESP sentiments/emotions consciousness

1 ≠ 1

PATTERNS

Gametes ... Zygotes

**UNIT 5 - 300s
OZONE LAYER**

Ozone O₃ : Heavy gas, highly unstable (easily decomposing into oxygen); 10ppm; 12-50 km above sea level filtering 8-40 km (poles), 17-50 km equator

Protective mantle around the globe, only 240-320 nm portion of UV light waves are filtered mean sea level on a globe!!

BRITISH SCIENTISTS from Antarctic labs observed a hole in this area in October 1957

- monthly depletion is estimated at 60%
- total ozone volume had not changed until 1994
- the hole is larger than the extension of USA
- the UV rays penetrate through the hole and pass through the equatorial zone and damage the skin of white people in Siberia near the arctic circle
- pollution, contamination, industrial wastes are all causes
- green house effect leading to extinction of life on Earth

But

- rotation of the planet and its orbital motion will shift the mantle to the opposite end of the movement of the planet since it is heavier than air
- 10 ppm against 999990 ppm of all other gases
- friction, cosmic rays, temperature gradient, wind condition affect the air group
- hole is visible only October through February, every year
- cannot enter the hole because there is no re-direction
- cannot cross the tropics to arrive at Russian labs
- vortices formed in the atmospheric air on the axis
- when illuminated these are visible at night or day
- sunlight coming from about 150 million km cannot bend to enter the hole
- ozone layer in these cases has no chance to protect against UV 240 - 320 nm
- cannot cross the tropical belt, storms and hurricanes
- cannot cross the continent to reach arctic circle

- skin cancer is dependent on numerous factors but not due ozone alone
- ozone when present should be found as a mantle 10 ppm, away in the gaseous tail end and can do no harm since no light passes through this
- no identifiable ozone layer
- no uniform distribution
- cannot cause greenhouse effect
- should form a mantle far behind in the atmosphere
- does not attack the white people in Siberia Sun spots.
- no justification to contaminate water, air, soil, etc.
- no justification for depletion of fossil resources

UNIT 6 - 270s SOLAR SYSTEM

Sun, 9 planets, 6 visible without a telescope and 3 with a telescope

In constellation Leo, rotating on its axis once in about 26.8 days (25 - 27 days) 12 houses of the zodiac 360 moving along its orbit 220.000 km one “360” orbit along the equatorial plane around helical orbit of Polaris.

MAKING A CONE IN MOTION

Burning mass sends out solar winds at 800 km/s centrifugal force

Revolution of the Sun along its orbit at 19.9 km/s. A vacuum is found along its orbit, which attracts celestial bodies closer by i.e. planets and their corresponding moons (satellites).

SOUND

Centrifugal force + vacuum on the orbit push and pull the following celestial bodies, the planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto

Each planet with a helical orbit of its own

Planet Earth has solid earth and ground water + liquid water + water

vapor incorporated into gaseous air as atmosphere on rotation and orbital helical displacement; a central solid core rotating and a loose gaseous mantle extended in one direction (the tail)

Rotation 0.5 km/s on straight axis 23h 56m 4.091s 86164.091s (23h 56m 4.091s)

Helical orbital displacement 11.889231 km/s on helical orbit day 30 /night 330

365 days 5hrs 48min 46sec

Angle at light source 23°27' 30”

Exposed to light day/ opposite shadow is the night

All other planets move in similar orbits but different distances making different angles at the source of sunlight

The shape of every planet with atmosphere should resemble the one just described, comets too, why not Sun??

Their distances and orbital speeds to be calculated

The retrograde motion or looping of orbits is an illusion due to an equal motion of two or more celestial bodies

In a cross section the orbit makes a helical a helical path but the vacuum (SOUND) a the tip of the cone just behind the star (Sun)

The base of the cone corresponding to year 360°

The cone changes its position by seasons due to corresponding localities along the orbit 30° cone.

$c = 299792458 \text{ km/s}$

In the background the zodiac may be identified since our position at night and day along the helical orbit locates the Sun in a specific background

Along the helical orbit of the Earth the displacement of the planet establishes a vacuum just behind which forms the “cone apex” for the lunar orbit; again helical 27.32 days lunar month or 29.52 days

between new moon / new moon or full moon / full moon making 390f. Shadow of the Moon extends 270km. on Earth during solar eclipse

The relative positions of the sun, planets, and the corresponding moons of each planet should represent the entire solar system. A huge tunnel headed by the Sun followed by planets at specific distances and moons accompanying each planet. Helical orbits for each celestial body.

Comets: other planets in other planes, belonging to the Solar System.

UNIT 7 - 300s

Core of the planet Earth rotates West to East at 0.5km/s so that the Sun rises in the East and looks as if to set in the evening in the West. The East West plane corresponds to the equatorial plane of the Earth.

Shadow of the opaque core extends on the other side of the incident rays, generally coinciding with the tail end of the extended atmosphere with spiral waves from the rotation of the core

East West plane becomes illusory

Displacement along the helical orbit at a speed of 11.889231 km/s leaves a vacuum along the helical orbit which forms the tip of the cone with moon moving along the base of the imaginary cone. The vacuum may be enforced to as a dynamo (head) whereas another dynamo is located at SOUND.

In literature they are known as upper and lower nodes locate sunrise / sunset against moon set / moon rise East West plane and North/ South shift of the axis of the Earth

Eclipses are three body problems along 3 helices star orbit planet-orbit satellite orbit

Tidal waves high tide low tide solar winds and SOUND effect

Hurricanes, tornadoes night sky atmosphere / climate

Each axis is parallel to other axis of celestial bodies in our system. Sun and solar planets, the moons of the planets present this phenomenon.

The motion of each body around its own axis is in fact a helical motion forming part of the orbital displacement in a curve: rotation in equatorial plane but in polar directions.

For example, in the case of Earth the shift lasts for six months whereas the moon shift takes about 14.76 days. Calculations are required for other planets and their respective moons.

The complex movement in a helical manner cannot be split into rotation and traslation or nutation. The relative motion of other planets look like retrograde movement as viewed from other orbits.

30° front cone (ram force) x 12 constellations extending as a band N – S axis without rotation towards which all external bodies are attracted perpendicularly.

Geocentric mean sea level has no validity.

Rain bearing cold clouds are along 2 bands along the Milky Way directions. The hot air produced by friction on the surface when meets the cold clouds, lightning and thunder are produced and raindrops are formed. When the planet passes through this sector, it gets drenched.

UNIT 8 - 210s HUMAN CAPACITY

5 sensory perception + common sense + ESP + Mind

MIND with healthy and noble thoughts
transcends distances while asleep
allows intellect to work, motor organs to work

responsible for real expression of the intellect
 patient, conscious, everlasting

Thanks to immortal mind all actions, past, present and future,
 brooding contemplation meditation dreaming planning speculation,
 induces indispensable actions

Source of all KNOWLEDGE uniting as the spokes of wheel all
 activities coordinated

Seated in the heart of every bit of the cell it is the driving force

LOGICAL REASONING - helical/spiral process

interdependent / dependent / independent process

mass	solid color	Earth orientation	Black	East
agglutination	liquid	Water	Blue	West
heat /light 5 elements	Energy	Fire	Red	South
flexibility North	gas 120:20:20:20:20	Air	Yellow	
space middle	volume	Ether	colorless	

All have equal opportunity 1 = 1

Each one has limited / unlimited capacity 1 ≠ 1

Flexibility and applicability of concepts

Food body systems organs tissues cells Dynamic
 n - dimension

perpetual curve

{Inhalation

Breath body Retention 5 + 5 movement

Exhalation

Mind body sentiments*, memory, reasoning, thinking, messenger

love / hatred

happy / unhappy

*sentiments / emotions

detachment / attachment

friendly / angry

Selfless / selfish

tolerant / jealousy

compassion / cruel

common sense

Intuition body Extrasensory perception through inner self

Bliss body

UNIT 9

KNOW BEYOND DOUBT

EXPLORE THE UNKNOWN WITH APPROPRIATE
 TECHNOLOGY

AVOIDABLE PROBLEMS IDENTIFIED AND SOLVED

TORNADO / HURRICANE Heat and Expand the nucleus with
 solar radiation

FLOODING / DROUGHT EVAPORATE / FLOODING with
 reflected radiation

ARTIFICIAL RAINS with evaporators

LIGHTENING with reflectors

CLIMATIC ADJUSTMENTS AROUND THE WORLD

*TIDAL VARIATION / HARNESSING

Administration of natural resources with criteria of scarcity

USE OF SOFT TECHNOLOGY

REFINE PROGRESS / EVOLUTION / DEVELOPMENT as a product of efficiency and creativity based on discipline and freedom

*2 high tides and 2 low tide shift regularly when a planet moves along its orbit the atmosphere extends as a tail spiraling behind the solid rotating mass as a core. This tail moves opposite the orbit. The shadow of the solid core (the night) extends in front of the sunlight. The tides are lower in front of the Sun and the orbit high tides occur in opposite position.

Interplanetary travel is possible with the new concept. Launching time and direction determines the object. When the object is Venus or Mercury, early morning launching is favorable whereas evening launching should help journey to Mars, Jupiter, Saturn, and other planets. Note the angles of inclination of each planet to locate the distance and the orbit of that planet.

Sound and attraction centre along the planetary being excellent powerful attracting centers, their energies may be harnessed for use in the celestial bodies.

Solar rays (Infrared rays) concentrate through lens to produce fire .

Magnets to attract metals like iron.

Susruta used magnet to extract iron from patient.

Vidyut Mahabharata

Puspak Vimana Ramayana

4 – 7 – 2002

Sunrise 18863995 days in Kaliyuga

Moon in Aries (first 13° 20')

ARYABHATA b. 476 AD *ARYABHATEEYA* 499 AD.

Square and cube root of numbers

23h 56m 4.1s rotation on its own axis

Value of pi = 62832/20000

Just as a boat rider moving forward sees the stationary objects (on either side) as moving backward, just so are the celestial bodies seen moving west from the equator. Midnight to midnight

Varahamihira (c. 600 AD)

Brahmagupta (598) Algebra Kuttaka Ganita

Bhaskara I (c. 600) Bijaganita Avyakatu
Ganita

Mahaviracharya (c. 850)

Aryabhata II (c. 950)

Sridharacharya (991)

Bhaskara II (1114)

Parameshwara (1380 - 1460)

Nilakanta Somayaji (1444 - 1545)

Copernicus (1514) heliocentric theory

Galileo (1642)

Sage Baudhayana Shulva Sutra Vedic

Rg Veda Sage Dirghatamas in cosmic hymn
year of 12 lunar months of 360 days

Yajurveda shortest day winter solstice SISIRA
begins UTTARAYANA

longest day summer
solstice

Yajur and Atharvaveda note the 27 nakshatras and their dhruvakas (longitudinals) position in the sky

Decimal number system 1 - 9 and 0

APPENDIX II

Video 1

Heliocentric orbits for visible planets as proposed by Copernicus (1514) and established through mathematical models derived by Tycho Brahe, Johannes Kepler and Sir Isaac Newton

When dynamic displacement of the sun through its trajectory is incorporated to the model the incoherence becomes evident.

- a) On earth, the same side gets exposed to the sunlight at an interval of 24 hours throughout the year, maintaining the background zodiac sign variable.
- b) The inner and outer planets, their respective orbital positions, their size, visibility, visible shape, distance from earth are factors incoherent in the heliocentric model.

Video 2

The moon encircling the earth at an equatorial plane should produce atleast one complete (total) eclipse of the sun/moon and several partial eclipses per month in the existing model.

Video 3

A ball rolls on all directions depending on the gradient and impulse unlike planets that exhibit rotation with reference to a permanent polar axis

Video 4

Light illuminating the surface of the earth throughout the year 30° full exposure from zenith gradually decreasing illumination extends all around to complete 90° from the zenith.

Video 5

12 Zodiac houses where planets / sun / celestial bodies appear to move.

Video 6

Proposed helical coaxial dynamic model for the planets of solar system with 12 Zodiac houses and polaris for reference and relative positions.

Video 7

Planet earth with atmospheric tail along its yearly trajectory helical around the solar path. The moving tail establishes the facility for migratory animals and the seasonal changes in the climate and weather conditions.

Video 8

Model to show the relation between the photosphere and the path of a planet. The angle at the cone apex and the distance from the position of the planet to the photosphere are constants for each planet.

Video 9

Moon moving around the helical trajectory of the planet. Observe the illumination developing an eclipse very occasionally. About 4 eclipses are possible every year.

Video 10

Seen from the polaris the sun moves along the zodiac. Seen from the tropical regions of the earth moon and sun seem to move along the zodiac. Daily rotation of the earth experiences zodiac houses.

When sun is seen at the back ground of one zodiac house the earth is at the opposite house establishing the full moon. It may be the moon or any other visible planets that seem to move in front of the zodiac background.

Video 11

Retrograde motion for planets. Outer planet (Jupiter) seen from an inner planet (Earth)

Video 12

Inner planet (Earth) seen from an outer planet (Jupiter) observe its motion in reverse direction

Video 13

Venus passing in front of the photosphere (2005) causing an eclipse of the sun.

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