

A Study On The Solar Tides & Its Forecasting Methods

Gangadhara Rao Irlapati

H. No.5-30-4/1, Saibabanagar, Jeedimetla, Hyderabad - 500 055, Telangana, India.

Email: scientistgangadhar@gmail.com

Abstract: Tides cause daily changes in water levels many coastal areas. Factors such as local topography and weather contribute to the timing and height of tides, but the primary reason for tides is the gravitational attraction between liquid water on the earth and the moon. All objects on earth experience tidal forces. However, the effect is most pronounced with water because, as a liquid, it is more easily deformed by gravity when compared to solid objects.

Gravity from the sun also influences water levels on the earth. The solar tides bulges are about half the size of those caused by the moon. Like the moon, gravitational attraction to the sun creates one bulge towards the sun and one away from it. Unlike the moon, solar tides do not vary on a daily basis. If there was no Moon, the daily tidal period would be exactly 24 hours. High tide would be at moon and midnight, and low tide at 6 pm and 6 am every day.

I have conducted many studies on the solar tides and my theory – Irlapatism - A new hypothetical model of cosmology will be helpful to study and understand the Solar Tides.

[Gangadhara Rao Irlapati. **A Study On The Solar Tides & Its Forecasting Methods**. *Rep Opinion* 2017;9(3s):91-103]. ISSN 1553-9873 (print); ISSN 2375-7205 (online). <http://www.sciencepub.net/report>. 8. doi:[10.7537/marsroj0903s17.08](https://doi.org/10.7537/marsroj0903s17.08).

Key Words: Irlapatism – A New Hypothetical Model of cosmology, Geo-universe, Atomic-universe, Energy-universe.

1. I. Introduction: A Natural hazard is a major adverse event resulting from natural processes of the earth, examples include floods, hurricanes, volcanic eruptions, earth quakes, tsunamis, and other geologic processes. A natural disaster can cause loss of life or property damage and typically leaves some economic damage in its wake, the severity of its depends on the affected population's resilience, or ability to recover and also on infrastructure available. I have conducted many researches and studies on the natural hazards and found some inventions which can help to study and forecast the hazards in advance.

2. Irlapatism-A New Hypothetical Model Of Cosmology:

2.1. Importance Of The Invention: Before study the hazards, everyone should know about the origin, structure, nature, evolution of the universe and its various properties. Since, all the hazards on the earth directly or indirectly are associated with the gravitational forces of the universe. Further, this in order to be study the hazards, study of the cosmology is needed to know about hazards. There are hazards on the earth, on other planets and there are also happening within atoms. Human beings are on the earth, are on the outside planets of the earth and also on the neutrons in the atoms. Even if the world's people appreciate or criticize me, it is fact. Hazards caused by asteroids, meteoroids, and comets as

they pass near the earth, enter the earth's atmosphere, and /or strike the earth, and by changes in inter planetary ionosphere, and atmosphere. In the face of extra terrestrial hazards and events that can lead to disasters, it is important to live in a resilient community because these types of disasters are so unpredictable and depending on the size of meteorite can cause serious damage through the heat emitted during impacts with earth's surface. In addition, impact can cause earth quakes, Tsunami, wildfires, acid rains from nitrogen oxides, darkness from dust and soot and global warming. It is for this reason that staying aware and prepared at all times is extra important. This is not an implication to live in fear, but a reminder to stay educated about these types of disasters and to have a plan in place as with any other type of disaster. Before an extraterrestrial hazards /events occur, there are some steps that can be taken to mitigate and minimize the impact. I have conducted many studies on the universe and its extra terrestrial hazards and gravitational forces and its affect on the natural hazards on the earth. A new hypothetical model of cosmology will be helpful to study and know the universe, extra terrestrial hazards and gravitational forces and its affect on the natural hazards on the earth.

2.2. History: I have conducted many studies on the origin, nature, structure and evolution of the universe during the 1970-77 and proposed hundreds of

postulations. Based on the postulations, A New Hypothetical Model of Cosmology was formulated in 1977. On the basis of the principles of the Hypothesis, a book was published in the name of IRLAPATISM-IRLAPTATI THEORY OF UNIVERSE by the supporters on 1st, July, 1977. All matters pertaining to universe such as Origin, Structure, Nature and Evolution were widely discussed in the book.

2.3. Structure: The cosmos is made up of universes in infinite number, having similar structure and properties, embedded one in each other and extended in ascending and descending order. To explain and justify this model, there are three universes so far known to us (a) Geo-Universe (b) Atomic-Universe (c) Photon-Universe. These three are having similar structure and properties, embedded one in each other and extended in ascending and descending order. Of these three, we know some extent about the internal structure and properties of the Geo-Universe but we do not know its external structure. We know some extent about the external structure and properties of

the Photon-Universe but we do not know its internal structure. Between of these three universes, we came to know a large extent about the internal & external structure and properties of the Atomic-Universe. Hence, I have taken the similarities of external structure & properties between the Geo-Universe & Atomic-Universe to propose that all the universes in ascending and descending order of the creation are having similar internal structure and properties. The similarities of external structure & properties between the Atomic Universe and Photon-Universe are taken to propose that all the universe in ascending and descending order of creation are having similar external structure and properties. And the manner in which of these three universes i.e., embedded one in each other, extended in ascending and descending order to propose that all the universes in ascending and descending order of the creation are embedded one in each other and extended in ascending and descending order.

2.4. Similar External Structure & Properties: According to the model, all the universes in ascending and descending order of the creation are having similar external structure and properties. To justify this, I have taken many similarities between the atom and photon. For example:

Atomic-Universe

- 1) The atom appearing in several forms such as Hydrogen to uranium etc., being due to the Internal structure having different atomic particles at various numbers.
- 2) The atom exhibiting several physical and chemical Properties such as weight, colour, taste, hardness etc being due to the internal structure having different particles at various number.

Photon-Universe

- 1) The particle "Photon" related to energy appearing in several forms such as radio waves, gamma rays, violet rays.

etc being may be probably due to the internal structure having different particles at various numbers.

- 2) The particle "photon" related to energy exhibiting properties such as wave length colour, temperature etc being may be Probably due to the internal structure having different particles at various number.

2.5. Similar Internal Structure & Properties:

According to the model, all the universes in ascending and descending order of the creation are having similar internal structure and properties. To explain and justify this, I have taken the many similarities between the atomic-universe and Geo-Universe.

Atomic-Universe

- 1) Various atomic particles at different sizes in several numbers are present in the atom.
- 2) These atomic particles types of having three charges at negative, positive and neutral states are present in the atom.
- 3) Positively charged protons are present in the nucleus.
- 4) Neutrons at neutral state are present in the Nucleus.
- 5) Negatively charged electrons are present at large distance of the atomic nucleus in the atom
- 6) Additional neutrons called isotopes are present. around
- 7) Radiation emitting from the atom.
- 8) There is a property of nuclear fission is in the atom.

Geo-Universe

- 1) Various astronomical objects at different sizes in several numbers are present in the Geo- Universe.
- 2) These astronomical objects having three type of charges at positive, negative and neutral states are present in the Geo- Universe.
- 3) Stars built by atoms having positive charged nucleus are present in centre of the Geo-Universe.
- 4) Planets at neutral state are present in Centre of the Geo- Universe.
- 5) Here is a concept that anti-matter cosmic bodies built by atoms having negatively charged nucleus are present at large distance of the Geo-Universe.
- 6) Additional planets called satellites the planets are present.
- 7) Cosmic rays emitting from the Geo- Universe.
- 8) There is a property of super Nova is in Geo- Universe.

2.6. Descending Order Of Creation: The Geo-Universe that means the Universe seen around our earth is a universe having magnificent structure and properties such as galaxies, stars and planets etc. Some planets such as earth having suitable conditions similar to the Earth having continents, countries, oceans, trees, animals, Cyclones, human beings etc. Such Geo-Universe being built by Universes of its descending order of creation that means photons, particles, atoms.

Atomic-Universe that means the atom present in several forms from hydrogen to uranium etc is another universe having magnificent structure and properties such as electrons, protons, neutrons, etc and continents, countries, oceans, cyclones, trees, animals, human beings may be present on some neutrons having suitable conditions exactly similar to the earth planet resembling to the Geo-Universe. Such Atomic-Universe being built by universes of its descending order of creation that means energy particle ‘photons’.

The Photon-Universe that means the particle “photon” related to energy present in several forms of electromagnetic radiation is also another universe having magnificent structure and properties similar galaxies, stars, planets, electrons, protons and neutrons etc. resembling to the Geo-Universe and Atom. Continents, countries, oceans, seas, cyclones, trees, animals etc on some particles having suitable conditions exactly similar to the Earth. Such Energy-Universe may also being built by Universes of its descending order of creation that is not yet known to us.

Thus the descending order of creation continuous infinitely.

2.7. Ascending Order Of Creation: The Photon-universe that means the particle related to energy “photon” having magnificent structure and properties is being as a primary syntactic unit in the universe of its ascending order of creation that means atom. All components in the atom such as electrons, protons and neutrons etc. are built by these “photons” in infinite number. Such each and every energy particle “photon” is basis to an infinite descending order of creation.

The Atomic—Universe that means the “Atom” having magnificent structure and properties is being as a primary syntactic unit in the universe of its ascending order of creation that means in our Geo-Universe. All components in the Geo-Universe such as stars, stars and planets etc., are built by these atoms in infinite number. Such each and every atom is basis to an infinite descending order of creation.

The Geo-Universe that means the “Universe” seen around our earth having magnificent structure and properties is being as a primary syntactic unit in the universe of its ascending order of creation that is not yet known to us. All similar galaxies, stars, planets etc components in that Universe are built by these

Geo-Universes in infinite number. Continents, countries, oceans, seas, cyclones, trees, animals etc on some components having suitable conditions exactly similar to the Earth. Such each and every Geo-Universe in that ascending creation is basis to an infinite descending order of creation.

Thus the ascending order of creation continuous infinitely.

2.8. Cosmic-Environments: The fill of structure and characteristics in the universe of the cosmos proposed as cosmic environments. For example the fill of structure and characteristics like galaxies, stars, planets etc in the Geo-Universe proposed as Geo-Environment, the fill of structure and characteristics like proton, neutrons and electrons etc in the Atomic-Universe proposed as Atomic-Environment and the fill of structure and characteristics in the Energy-Universe that means in the photon that is not yet known proposed as Energy-Environment.

2.9. Space Weather: The fill of structure and characteristics like galaxies, Stars, Planets and their orbits and other physical forces etc that surrounds in the universe proposed as space atmosphere, the state of galaxies, stars, planets, nebulas. Pulsars etc at a particular region over a long period of time proposed as space-climate, the state of characteristics of space-climate like solar wind flares, asteroids etc at a particular region during a short period of time proposed as space-weather.

2.10. Space Regions: The state of space atmosphere being in still proposed as “Inactive Space Region”, the state of space atmosphere being in active proposed as “Active Space Region” The region of space atmosphere in which the celestial bodies are more widespread areas proposed as “Space High Pressure Area” the less widespread areas proposed as “Space Low Pressure Area”.

2.11. Space Low Pressure Systems: Some space times happens variation of differences of pressure in the space-climate, At such a juncture, the celestial bodies and other space dust present in the space high pressure area will try to occupy the space low pressure area all at once. In this attempt, they will whirl around the space low pressure. The centre of space low pressure area itself is the black-hole and the circular whirling celestial bodies & other space dust etc caused by the space low pressure area proposed as Galaxy.

2.12. Uses: By study of results of my researches and knowing more about the roots and origin of the universe & its affects of gravitational forces on the earth, researches on disasters can be more effective, therefore the country can be estimated the impending weather conditions and natural calamities such as rains, floods, landslides, avalanches, blizzard and droughts, extreme winter conditions, extraterrestrial hazards, heavy rainfall, mudflows, extreme weather,

cyclones, cloud burst, sand storms, hails and winds etc in advance.

2.13. Studies Carried Out: Many studies were carried out on this Hypothesis and it was successfully proved out.

3.G.R.Irlapati'S Geoscope:

3.1. Importance Of The Invention: Earth Quakes is the perceptible shaking of surface of the earth, resulting from the sudden release of energy in the earth's crust that creates seismic waves. Earth Quakes can be violent enough to loss people around and destroy whole cities. "The seismicity or seismic activity of an area refers to the frequency, type and size of Earth Quake experienced over a period of time. Earth Quakes can also trigger mud slides, mass movements, sink holes, coastal erosion, lahar, mud flows, volcanic activities, landslides, tsunami, shaking and ground rupture, avalanches, fires, soil liquefaction, floods and human impacts, tidal forces etc., Indonesia, Turkey, Mexico, EL Salvador, Pakistan, Philippines, India, Nepal and many other countries are most Earth Quakes vulnerable countries in the world.

Many predictions has been developed for predicting the time and place in which Earth Quakes will occur. I have conducted several researches on the Earth Quakes and invented the Geoscope which can help to forecast the Earth Quakes and its secondary consequent hazards in advance.

3.2. History Of The Invention: During the years of 1980-86, I have conducted many researches with an ideal to invent a device that should be used to predict the geological hazards such as earthquakes and solve the mysteries such as mineral and water resources of the underground in advance. The Geoscope researches were completed in 1986 and the invention Geoscope was presented to the Hon'ble A.J.V.B.M. Rao, Member of Parliament (L.S.), Amalapuram Constituency for consideration. After consideration in 1987, Sri A.J.V.B.M. Rao met the Hon'ble Minister of State for science and Technology, New Delhi (later President of India) personally presented the Geoscope invention to the Council of Scientific and Industrial Research, New Delhi for further research and development in the services of welfare of the people. Sri K.R.Narayanan was issued orders to the C.S.I.R. in the capacity of Vice-President of Council of Scientific and Industrial Research to develop the invention the Geoscope in 1988. In 1989, the Hon'ble High Court of Andhra Pradesh was also issued orders to the Government of India, Ministry of science & Technology, Council of Scientific and Industrial Research to provide research facilities to carry out the experiments on the Geoscope in National Geophysical

Research Institute, Hyderabad for further research and development in the service of the country.

3.3. Construction: Geoscope means- a mechanical architecture established in between the underground and observatory with the help of bore-well proposed for conducting geological studies to know the earthquakes, ores and water currents etc.

A borehole having suitable width and depth has to be dug. An observatory having research & analysis facilities has to be constructed on the borehole Apparatus & sensors to recognize the geo- physical and geo-chemical changes generated in the underground such as foreshocks, chemical changes, electrogeopulses, micro-vibrations, pressure, geomagnetic forces etc should be inserted into the underground and linked with the concerned analysis sections of the observatory that is above the ground to study the changes taking place in the underground.

That means-relative results of geological & geographical researches & developments of past, present and future should be interposed, coordinated and constantly developed. The apparatus related to the geology and geography such as Richter scale etc also should be set in the observatories of the Geoscope. We can make many more modern ideas & modifications thus bringing many more improvements & developments in the Geoscope.

Many kinds of super high remote sensing technology in the area of sensor physics, signal processing used specially image processing, electromagnetic detection technology etc should be used in the Geoscope.

Geophysical deep underground detectors and mineral exploration equipments, natural gas sensors etc should be used in the Geoscope.

Electromagnetic sensors may also be used in the Geoscope project.

3.4. National Geoscope Project: Geoscope can establish at a single place and extend in many places. For example, there should be established three level centers i.e. One or more required number of local Geoscopes should be established in the expected earthquake zones. There should be established a Regional Geoscope Centre at every expected quake zone to co-ordinate and codify the information supplied by the local Geoscope centers of the zone and a Central Geoscope Centre to co-ordinate and codify the information supplied by the Regional Geoscope Centers from all over country in a coordinated manner.

Whenever a Local Geoscope Centre sends warning about the onset of earthquakes, the observation personal should immediately send the information to its Regional Geoscope Centre. The Regional Geoscope Centre should analysis the information and send it to the Central Geoscope Centre. The Central Geoscope Centre analyze the

information supplied by the Local Geoscope Centers, Regional Geoscope Centers and estimates the epicenter, time, area to be affected urban places etc., details of the impending earthquake and send to the authorities, and media and warnings in advance to take precautions.

Geoscope can start from a simple device i.e. A deep well having suitable width and depth has to be dug. Construct a room over the well. Wash the inner walls of the room with white Lime. Fix an ordinary electric bulb in the room. This construction involves no expenditure. Even students, children's and science enthusiasts can make the Home-Made Geoscope and detect the earth-quakes 24 to 28 hrs in advance. By making certain changes and alterations, the house having a well can be converted into a Geoscope i.e., wash the inner walls of the house with white lime. Fix ordinary electric bulbs in the room.

Observe the colour of the room lighting daily. When the bulb glows, the light in room generally appears white in color, but before occurrence of an earth-quake, the room lighting turns blue in colour. The onset of earth-quake can be guessed by this "Seismic luminescence Emission.

To build a gigantic construction Geoscope i.e. a deep bore-well having suitable width and depth has to be dug. An observatory having the most modern high-technological research facilities has to be constructed on that well. Most modern mechanical systems like electronic, physical and chemical sensors and apparatus to recognize the rise and fall of the underground water levels, micro-vibrations and shock waves generated in the underground, differences in pressure, temperature and other seismic activities should be inserted into the underground and linked with the concerned research analyzing departments of the observatory that is above the well to observe the seismic changes (and also mineral and water resources) taking place in the underground. The results of researches on the quakes like Richter scale etc., also should be setup in the Geoscope. Many kinds of super high remote sensing technology in the area of sensor physics, signal processing used specially image processing, electromagnetic detection technology etc should be used in the Geoscope. Geophysical deep underground detectors and mineral exploration equipments, natural gas sensors etc should be used in the Geoscope. Electromagnetic sensors may also be used in the Geoscope project. That means relative results of past, present and future pertaining to the earthquakes (seismic researches) mineral detecting apparatus should be interposed, co-ordinated, and constantly developed. We can make many more changes thus bringing many more developments in the geoscope.

Observe the geophysical & geochemical changes such as foreshocks, chemical changes, ground water levels, strain in rocks, thermal anomalies, fractoluminescence's gas anomalies, electro-geopulses, micro-vibrations, pressure, geomagnetic forces, etc taking place in the underground. The onset of earthquakes can be guessed by observing the aforesaid changes in the concerned analyzing departments of the observatory.

3.5. Studies: I have proposed much type of studies to study the earth's underground through the Geoscope by which we can predict the earthquakes 6 to 24 hours in advance.

3.6. Seismic Luminescence Study: This is a very easy and simple study in the Geoscope Project. Construct a room over a well having suitable width and depth. Wash the inner walls of the room with white lime. Fix an ordinary electric bulb in the room. (Otherwise by making certain changes and alternations any home or office having a well can be converted into the Geoscope. Wash the inner walls of the house with white lime. Fix an ordinary electric bulb but don't fix fluorescent lamp in the house. This method involves no expenditure).

Observe the colour of the lightning in the Geoscope room daily 24 hours 365 days. When the bulb glows, the lightning in the room generally appears as white (reddish). But before occurrence of an earth-quake, the room lightning turns violet in colour.

Because, before occurring of an earthquake-gas anomalies such as radon, helium, hydrogen and chemico-mineral evaporations such as sulphur, calcium, nitrogen and other fracto-luminescence radiations show up earlier even at large distances from the epicenter due to stress, disturbances, shock waves and fluctuations in the underground forces. These gas anomalies & fracto luminescence radiations and other chemical evaporations enter into the well through the underground springs. When these anomalies occupy the room above the well, the room lighting turns violet in colour. The light in the room scattered in the presence of these gas anomalies, fracto-luminescence radiations and other chemico-mineral evaporations the ultra violet radiation is emitted more and the room lighting turns in violet colour. Our eye catches these variations in the radiation of the lighting in the room easily since_

- a) The violet rays having smaller wave length.
- b) The violet radiation having property of extending greatly.
- c) The light becoming weak in the violet region.
- d) The eyes having greater sensitivity to violet radiation.

Due to all reasons the room may appear violet in colour then we can predict the impending earth quakes 12 hours in advance.

3.7. Electro Geopulses Study: This is also easy study to recognize the impending earth quake. A borehole having suitable width and depth has to be dug. An earth wire or rod should be inserted into the underground by the borehole and linked with the concerned analysis section having apparatus to detect, compare measure of the electric currents of the electric circuit of the earth systems. Otherwise by observing the home electric fans. etc, We can also study the electrogeopulses studies to predict the impending earth quake.

Observe the changes in the electric currents of the earth system 24 hours, 365 days. From a power station, the electricity is distributed to the far-off places. Normally the circuit of the power supply being completed through the earth system. Whenever if the disturbances occurs in the layers of the earth's underground, the fluctuation rate will be more due to the earth quake obstructions such as pressure, faults, vibrations, water currents etc., of the earth's underground. So we can forecast the impending earth quake by observing the obstruction of electric currents of circuit of the earth system in the observatory of the Geoscope and also by the obstruction sounds in the electric fans etc.

3.8. Experiments Carriedout: I have carried out a number of experiments on the Geoscope project and all were successfully proved out in practice. The risk of earthquakes in Andhra Pradesh of India is less but the source is greater in north India and other regions in the world where the establishment of the geoscope is very useful.

3.9. Hazard Detection Method: And also we can find out many more secrets of the underground by keen study of the Geoscope.

For example, build Geoscope in the seismic areas and earthquakes can be predicted by virtue of performing studies as described above.

Another example, build Geoscope in the coastal areas of the sea and earthquakes and its consequent secondary hazards such as tidal forces, rogue waves, tsunami can be predicted by virtue of performing studies as described above.

Furthermore example, build Geoscope in the possible areas where landslides are likely to occur and the earthquakes and it secondary consequent hazards such as landslides mud slides, mass movements, sink holes, coastal erosion, lahar, mud flows, etc can be estimated by virtue of performing studies as described above.

One more example, build Geoscope in the volcanic activity areas and volcanic activities such as volcanic gases, steam generated eruptions, explosive

eruption of high – silica lava, effusive eruption of low-silica lava, debris flow and carbon dioxide emission etc can be predicted by virtue of performing studies as described above.

These are some examples only. We can find out many more secrets of one country ground conditions by keen study of Geoscope..

3.10. Uses: By setting up the National Geoscope Project and maintain, the country can be predicted the impending earthquakes, volcanic hazards (and storm surges, tsunamis etc consequence secondary hazards due to the earthquakes occur in the womb that means underground of the sea or ocean if the country have the chances of occurring of these disasters) in advance.

And also the country can be predicted mineral and underground resources such as iron, gold, silver, tin, copper, nickel, aluminum, chromium etc mine sites and non-metallic resources like sand gravel, gypsum, halite, uranium, dimension stones, etc. by inserting many kinds of super high remote sensing technology in the area of sensor physics, signal processing used specially image processing, electromagnetic detection technology and geophysical deep underground detectors and mineral exploration equipments, natural gas sensors etc in the underground through the Geoscope.

Setting up the National Geoscope Project and maintain will also be useful in emerging industries such as geothermal and geo-sequestration etc.

3.11. Conclusion: we can make many more researches on the geoscope thus bringing many more developments, modifications and improvements in the geoscope.

4. Global Monsoon Time Scales:

4.1. Importance Of The Invention: Monsoon means a seasonal reversing wind accompanied by its corresponding weather changes and natural calamities in precipitation. We cannot be said that a monsoon especially to be relevant to a particular continent, region or country. Each and every continent or region or country has its own monsoon winds. By establishing the Monsoon Time Scale and maintain, the country can be estimated the impending weather conditions and natural calamities such as rains, floods, landslides, avalanches, blizzard and droughts, extreme winter conditions, heavy rainfall, mudflows, extreme weather, cyclones, cloud burst, sand storms, hails and winds etc in advance. Surface water resources can still be found.

4.2. History: I have Conducted many researches on the global monsoon systems during the period of 1980-91 with an ideal to invent the mysteries of the world global monsoon system and formulated the basics of monsoons of the Global Monsoons, Regional Monsoons, Sub-Regional Monsoons & Country –

Wise Monsoons along with local, northern, southern, summer and winter wise monsoons to predict the weather changes and natural calamities in advance and to take mitigation measures. In 1991, I submitted a research report on the world global monsoon systems along with a special report on the Indian Monsoon Time Scale to Sri G.M.C. Balayogi, Member of Parliament (Lok Sabha). Sri G.M.C. Balayogi recommended the research report to the India Meteorological Department for implementation in the services of the country. In 1994, the Cabinet Secretary of India recommended the Global Monsoon Time Scales to the Ministry of Science & Technology, Government of India for implementation. In 1996, many consultations were made with the Parliament of India, President of India and other VVIPs of India. In 2005, consultations were made with the India Meteorological Department about the Global Monsoon Time Scales for further research and development in the services of the country. In 2009, the Secretary, Minister of Science and Technology was also

recommended the Global Monsoon Time Scale to the Indian Institute of Tropical Meteorology for further research and development.

4.3. Construction: The global Monsoon Time Scale – a Chronological sequence of events arranged in between time and weather with the help of a scale for studying the past's, present and future movements of monsoon of a country and its relationship with rainfall and other weather problem and natural calamities.

Prepare the Global Monsoon Time Scale having 365 horizontal days from March 21st to next year March 20th of a required period comprising of a large time and weather have been taken and framed into a square graphic scale. The main weather events if any of the country have been entering on the scale as per date and month of the each and every year. If we have been managing the scale of a country in this manner continuously, we can study the past, present and future movements of monsoon of a country. We can make separate monsoon time scales per each and every individual country.

4.4 Global Monsoon Time Scales

African Monsoon Time Scale
North American Monsoon Time Scale
Asian Monsoon Time Scale
Australian Monsoon Time Scale
European Monsoon Time Scale

4.5. Regional Monsoon Time Scales

North American Monsoon Time Scale
North African Monsoon Time Scale
Indian Monsoon Time Scale
Western North Pacific Monsoon Time Scale
South American Monsoon Time Scale
South African Monsoon Time Scale
Australian Monsoon Time Scale
East Asian Monsoon Time Scale

4.6. Sub-Regional Monsoon Time Scales

South Asian Monsoon Time Scale
Maritime Continent Monsoon Time Scale
East African Monsoon Time Scale
West African Monsoon Time Scale
Indo-Australian Monsoon Time Scale
Asian-Australian Monsoon Time Scale
Malaysian Australian Monsoon Time Scale
Northern Australian Monsoon Time Scale
Arizona Monsoon Time Scale
Mexican Monsoon Time Scale
South-West Monsoon Time Scale
North-East Monsoon Time Scale
South East Asian Monsoon Time Scale

4.7. Construction: The global Monsoon Time Scale – a Chronological sequence of events arranged in between time and weather with the help of a scale for studying the past's, present and future movements of monsoon of a country and its relationship with rainfall and other weather problem and natural calamities. Prepare the Global Monsoon Time Scale having 365 horizontal days from March 21st to next year March 20th of a required period comprising of a large time and weather have been taken and framed into a square graphic scale.

4.8. Maintenance: The main weather events if any of the country have been entering on the scale as per date and month of the each and every year. If we have been managing the scale of a country in this manner

continuously, we can study the past, present and future movements of monsoon of a country.

4.9. Indian Monsoon Time Scale: For example, I have prepared the Indian Monsoon Time Scale by Preparing the Scale having 365 horizontal days from 1st April to next year March 31st of 128 years from 1888 to 2016 for the required period comprising of large time and weather have been taken and framed into a square graphic scale. The monsoon pulses in the form of low pressure systems over the Indian region have been entering on the scale in stages by 1 for low, 2 for depression, 3 for storm, 4 for severe storm and 5 for severe storm with core of hurricane winds pertaining to the date and month of the each and every year.

4.10. Preparation Of Scales: For example, I have prepared the Indian Monsoon Time Scale by Preparing the Scale having 365 horizontal days from 1st April to next year March 31st of 128 years from 1888 to 2016 for the required period comprising of large time and weather have been taken and framed into a square graphic scale. The scale is to be long. So that it is divided into four parts suitable for publication. The first part is beginning from 1st April to July 12th, the second part is from 13 July to October 23rd, the third part is from 24th October to February 3rd and the fourth part is 4th February to March 31st ending.

Further the same has been prepared in three scales. The first one is preliminary basic scale, the second one is filled by data scale and the third one is filled and analyzed by data.

Besides the above manual scale, I have prepared a computer graphic scale generated by the system from the year 1888 to 1983 for the period of 1st June to September 30th.

4.11. Collection Of Data: The monsoon pulses in the form of low pressure systems over the Indian region have been entering on the scale in stages by 1 for low, 2 for depression, 3 for storm, 4 for severe storm and 5 for severe storm with core of hurricane winds pertaining to the date and month of the each and every year. For this, a lot of enormous data of low pressure systems, depressions and cyclone has been taken from many resources just like Mooley DA, Shukla J(1987); Characteristics of the west ward-moving summer monsoon low pressure systems over the Indian region and their relationship with the monsoon rainfall. centre for ocean-land atmospheric interactions, university of Maryland, college park, MD., and from many other resources.

If we have been managing the scale in this manner continuously, we can study the past's present's and future's of the India monsoon and its relationship with rainfall and other weather problems & natural calamities in India.

4.12. Analysis: The Indian Monsoon Time Scale reveals many secrets of the monsoon & its relationship with rainfall & other weather problems and natural calamities. For example, some bands, clusters and paths of low pressure systems along with the main paths of the Indian Monsoon (South-west monsoon and north-east monsoon) clearly seen in the map of the Indian monsoon it have been some cut-edge paths passing through its systematic zigzag cycles in ascending and ascending order which causes heavy rains & floods in some years and droughts & famines in another years according to their travel. For example, during 1871-1990's the main path of the Indian monsoon was rising over June, July, August and creating heavy rains and floods in most years. During 1900-1920's it was falling over August, September

and causing low rainfall in many years, During 1920-1965's, it was rising again over July, August, September and resulting good rainfall in more years. During 1965-2004's it was falling over September and causing low rainfall and droughts in many years. At present it is rising upwards over June, July, August, and will be resulting heavy rains & floods in coming years during 2004-2060. The tracking date of main path & other various paths such as south-west monsoon and north-east monsoon etc., of the Indian Monsoon denotes the onset of the monsoon, monsoon pulses or low pressure systems. And also we can find out many more secrets of the Indian monsoon such as droughts, famines, cyclones, heavy rains, floods, real images of the Indian Monsoon, and onset & withdrawals of south west monsoon and north-east monsoon etc. by keen study of the Indian Monsoon Time Scale.

4.13. Principle: This is an Astrogeophysical / Astrometeorological phenomenon of effects of astronomical bodies and forces on the earth's geophysical atmosphere. The cause is unknown however the year to year change of movement of axis of the earth inclined at 23½ degrees from vertical to its path around the sun does play a significant role in formation of clusters, bands & paths of the Indian Monsoon and stimulates the Indian weather. The inter-tropical convergence zone at the equator follows the movement of the sun and shifts north of the equator merges with the heat low pressure zone created by the rising heat of the sub-continent due to direct and converging rays of the summer sun on the India Sub-Continent and develops into the monsoon trough and maintain monsoon circulation.

4.14. Hazard Detection Method: The tracking date of main path & other various paths such as south-west monsoon and north-east monsoon etc., of the Indian Monsoon denotes the onset of the monsoon, monsoon pulses or low pressure systems, storms and its consequent secondary hazard Sand Storms etc.. And also we can find out many more secrets of the Indian monsoon such as droughts, famines, cyclones, heavy rains, floods, real images of the Indian Monsoon, and onset & withdrawals of south west monsoon and north-east monsoon etc. by keen study of the Indian Monsoon Time Scale.

For example, the date of tracking ridge of path is the sign to the impending cyclone and its secondary consequent hazard floods, storm surges etc.

Another example, the thin and thick markers on the upper border line of the Indian monsoon time scale are the signs to the impending heavy rains & floods and droughts & floods. The thick marking of clusters of low pressure systems on the Indian monsoon time scale is the sign to the impending heavy rains and floods and the thin marking of clusters of low pressure

systems on the Indian monsoon time scale is the sign to the impending droughts and famines.

Furthermore example, the main passage of line of monsoon travel from June to September and September to June are also signs to impending weather conditions of a country. For example, during 1871-1990's the main path of the Indian Monsoon was rising over June, July, August and creating heavy rains and floods in most years. During 1900-1920's it was falling over August, September and causing low rainfall in many years. During 1920-1965s, it was rising again over July, August, September and resulting good rainfall in more years. During 1965-2004's it was falling over September and causing low rainfall and droughts in many years. At present it is rising upwards over June, July, August, and will be resulting heavy rains & floods in coming years during 2004-2060 in India.

These are some examples only. We can find out many more secrets of a country weather conditions by keen study of its monsoon time scale.

4.15. Uses: Global Monsoon Time Scales used to forecast the weather changes and natural hazards of a country in advance. All other weather related natural hazards such as avalanches, cyclones, damaging winds, droughts and water shortage, floods, thunderstorms, tornadoes, tropical cyclones, typhoons etc can be predicted.

By establishing the Global Monsoon Time Scales can help to study the movements of the one's country's monsoon and its monsoon related weather changes and natural hazards.

4.16. Conclusions: We can make many more modifications thus bringing many more developments in the Global Monsoon Time Scales. We can also make many more changes and development in the monsoon time scales and make separate monsoon time scales in name of each and every region of the world in accordance with the weather circumstances of the region.

5. Bio-Forecast:

5.1. History: I have conducted many researches on the bio forecasting methods and invented the simple but peculiar Bio forecasting system in 1965. A research project was jointly conducted with Andhra Pradesh state council of science & Technology, Andhra Pradesh state remote sensing applications centre and Andhra Pradesh Science Centre in 1991. I have invented the bioforecast effect in 1965 by keen study and observations of the LIPOSCOPES biolumicells.

5.2. Importance Of The Invention: By conducting experiments of Bioforecast and maintain, one country can be estimated the impending weather conditions and natural calamities rains, cyclones, extreme weather conditions extreme winter conditions, cloud

burst, hail storms etc in advance. Although weakened by forecasting property with less successive rate, it is a primary and natural forecasting method. This is my invention which can help to forecast the weather changes 18 days in advance.

5.3. Liposcope: I first started the researches in 1963-65 @ 5 to 7 years age with little instruments such as papers and pencils, water drop etc. and invented the light spot scope (Liposcope). Liposcope is a simple but wonderful instrument which functions with a natural doctrine hidden secretly in the function of the eye which can help to find out some inventions and discoveries like biolumicells, bioforecast effect etc, Liposcope is my first invention.

5.4. Construction: Take one small glass/steel ball or water drop on an object and stand in sun the light. Expose the ball/drop to the sun rays. As a result of the sun rays, there will be a light spot in the drop/ball. Place the light spot closely to the eye. The light spot appears many times bigger as a circular screen. The appearance in the screen of light spot is the surface of the eyeball. This can be proved by moving eyelids, the movement of eyelids, eye water and some bioluminescent particles on the eyeball can be observed in the screen of light spot.

5.5. Principle: The principle of the liposcope is that the eye lens changes its focal length from a minimum distance to the object at infinity and can see the object. If the distance decreases below minimum, the clarity of vision decreases. At this position, the eye lens acts as a simple microscope and form virtual images of all objects in front of it. We can see them on the screen of light spot if place just inside its minimum distance.

5.6. Biolumicells: I have discovered the biolumicells (Bioluminescentmicells) on the eyeball in 1964 in the Liposcope experiments. These particles are a part and parcel of the human body, may be released within the human body and secreting to the eyeball through the eye water. This is my second invention.

In the liposcope observations we can see three types of biolumicells on the eyeball the first one is the most bright and active and it is seen rarely on the eyeball and this biolumicell is has high velocity, mechanical energy, spin around itself it. The second one has normal bright seen normally on the eyeball and the third and last one is bright less, it is seen frequently on the eyeball.

Looking the screen of light spot and move the eyelids. We can see some biolumicells on the eyeball. After finding a number of biolumicells all at once in cloud or group, you must count them without eyelid movement. Firstly, observe with one eye two or three times. Later on another eye. As we examine one after another with both eyes, we have to take into account the greatest number of particles.

5.7. Hazard Detection Method: Analyze the data and make a table with the particulars-date of observation, time of observation, number of particles and weather report. Firstly we must put the date, next the time of observation, then the number of particles available in the observation. Do the observations three or four times daily in the morning & evening and record the number. At last, record the weather hazards report of the country on the same day. If we do our observations and analyze in that manner, we can notice that there is a relation between the differences in particles number in the table and the changes in the weather and hazards after about 18 days. If the particles number is minimum the weather or hazards after 18 days will be normal. On the other hand if the particles number is at maximum there will be a change in the weather or hazards after 18 days.

5.8. Principle: The cause is unknown however it can understand that generally biolumicells secrete in less or minimum levels at normal weather conditions, but over the formation of low pressure weather conditions, biolumicells begin to secrete at maximum levels due to a fall in weather pressure on the human body.

5.9. Experiment Carried Out: Many experiments were carried out on the liposcope, biolumicells and its bioforecasting methods & it were successfully proved out in practice.

5.10. Great Prediction: The important prediction of the bioforecast effect was proved in 1991. In 1991, the Andhra Pradesh state council of science & Technology, The Andhra Pradesh Remote Sensing Applications Centre and the Andhra Pradesh Science Centre were conducted experiments on the relationship between the biosphere and atmosphere (explore the inter-connection of earths geomagnetic field with natural calamities and their effect on human impulse). In these observations, the maximum level of the biolumicells were recorded between 7th to 11th of April, 1991. It is the sign of the ensuring cyclone of the 28th April 1991. The three directors of the said institutions were met in the Andhra Pradesh state Council of Sciences & Technology on 9th, April 1991 and discussed about the prediction. As predicted on 9th April 1991, in the meeting a severe cyclone was formed in Bay of Bengal and struck the Bangladesh on 28th April 1991. As a result, thousands of people were killed and crores of rupees property was damaged. This is the great prediction by the bioforecast and the remaining predictions were weak.

5.11. Uses: By conducting and maintain the bioforecast experiments, the country can be study and predict the weather changes and its related impending weather conditions and natural calamities such as rains, floods, landslides, avalanches, blizzard and droughts, extreme winter conditions, heavy rainfall, mudflows, extreme weather, cyclones, cloud burst,

sand storms, dust storms, hails, and extreme winds etc in advance.

5.12. Conclusion: We can make many more developments in the bioforecasting system thus bringing many more uses to the welfare of the people.

6. Astroclimatic Weather Time Scales:

6.1. Importance Of The Invention: I have conducted many extensive researches on the astronomical forces and its effects on the earth climate particularly on various regions of the India. The variations in the solar cycle affects and stimulate the earth climate. The moon affect and stimulate the ocean tides and atmosphere too. The movement of axis of the earth inclined at 23 ½ degrees from vertical to its path around the sun affects and stimulate the earth weather and leads to formation of monsoons and seasons etc. So the astronomical forces affect and stimulate the earth climate it may be more or less but it is true. These scales may be taken as a part of scientific study of astronomical forces & its effects on the earth climate.

In the time and scale of the universe some things from astronomy to atom including living beings have been repeating once in every certain time or period. For example, the south and north magnetic poles have been shifting in every certain period. The sun spots have been repeating once in every eleven years. The lunar and solar eclipses have also been occurring once in every 18.6 years. The seasons such as winter, autumn etc. also have been repeating once in every year in the same month of the year. The periodical menses in the females repeating once in every month.

6.2. History: I have conducted many researches on the weather and proposed hundreds and thousands of Astroclimate weather Time Scales pertaining to the all Homogeneous Regions, Meteorological Subdivisions, States and Districts of India which can help to forecast the weather changes in advance. In 1980, Sri G. Surya Rao MLA had sent these Indian Weather Time Scales to the Chief Minister of Andhra Pradesh for consideration and necessary action. In 2004, some consultations were made with the planning department to implement the Astroclimate weather time scale at the Directorate of Economics & Statistics Department. In 2006, some correspondences were made with the Environment, Forest, and Science & Technology Department for implementation of the Astroclimate weather time scale. The same scales were sent to the chief minister of Andhra Pradesh in 2003. And the same was again submitted to the Chief Minister of Andhra Pradesh in 2006. Many consultations were made with the Commissioner for Disaster Management in the years of 2008, 2009 about the implementation of Astroclimate weather time scale. In 2010, these scales were consulted with the A.P State

Council of Science & Technology. in 2008, Sri T. Subbarami Reddy, Honable Union Minister of State had recommended the Astroclimate Weather Time Scale to the Indian Meteorological Department for implementation in the services to the country. Later consultations were made with the India Meteorological Department about the Astroclimate Weather Time Scale from the years of 2008 to till to date.

6.3. Construction: On the basis of the said universal facts, I have prepared a time scale with 21 blocks, each block containing certain prescribed cycle of years in which similar calendar years repeating one after another that leads similar weather conditions of those previous years to future years likely repeating every year approximately. The rainfall of the years, have been entering in the scale in percentages or as it is pertaining to month, season, annual wise of the each and every year. If we managing the scale in this manner continuously, we may assuming the weather conditions of the anterior years on the basis of the posteriors years weather. On the basis of the principle, we can assume that a considerable, of course it may be little chance of predication for an ensuing years by study the data of earlier.

6.4. Maintanance And Performance: Firstly, see the model scale. In this scale, the June, July, August and September months of the summer monsoon season were taken in a table in which the each month is also divided into three parts of the Telangana, Rayalaseema and Coastal Andhra regions of India. The monthly wise rainfall data of the months of the regions from 1870 to till available years are taken in the form of percentages or as it is and entering in the scale pertaining to the region wise of the each and every year. If we managing the scale in this manner continuously, we may assuming the weather conditions of the anterior years on the basis of the posterior years weather.

6.5. Hazard Detection Method: Example for assuming the dry season or suppose to predict the rainfall situation in the summer season of the ensuing year 2019: study the 7th cycle in which wet conditions in 10 years and dry conditions in 14 years were occurred in the month of June: wet conditions in 2 years and dry conditions in 22 years were occurred in the month of July: wet conditions in 4 years and dry conditions in 20 years were occurred in the month of August and wet conditions in 8 years and dry conditions in 16 years were occurred in the month of September. On the whole, wet conditions in 24 times and dry conditions in 72 times repeated in the summer monsoon season of the 7th cycle (As a result, there were dry conditions occurred in the 2002 year also). Therefore it is a considerable chance to predict that a

dry season will be repeated in the ensuing year of 2019.

Example for assuming the wet season or suppose to predict the rainfall situation in the summer season of the ensuing year 2022: study the 10th cycle in which wet conditions in 13 years and dry conditions in 8 years were occurred in the month of June: wet conditions in 13 years and dry conditions in 8 years were occurred in the month of July: wet conditions in 9 years and dry conditions in 12 years were occurred in the month of August and wet conditions in 19 years and dry conditions in 2 years were occurred in the month of September. On the whole, wet conditions in 54 times and dry conditions 30 times were repeated in the summer monsoon season of the 10th cycle. As a result, there were wet conditions occurred in the 2005 years also. Therefore, it is a considerable chance to predict that a wet season will be occurred in the ensuing Year of 2022.

In the same manner, we can study the remaining all weather time scales of all Indian Homogeneous regions and subdivisions, states and districts of India.

6.6. Studies Carried Out: I have prepared about 1617 scales by which a lot of time, space and climate of 12 months, 4 seasons, 50 regions & 150 above years were studied in which all weather conditions such as rainfall, temperature, cyclones, river water etc of all homogeneous regions and sub-divisions of India were studied and analyzed elaborately.

6.7. Uses: By establishing Astroclimate weather time scale and maintain, the country can be estimated the impending weather conditions and natural calamities like rains, cyclones, extreme weather conditions, cloud burst, mudflows, hail storms and secondary subsequent hazards just like as floods, landslides, avalanches, blizzard and droughts in advance.

6.8. Conclusions: We can make many more modifications thus bringing many more developments in the Astroclimate weather time scale.

Biographical Sketchy

Gangadhara Rao Irlapati born on 25, May, 1958 at Merlpalem village in India to pullaiah irlapati and manikyam irlapati. He has acquired all sciences inherently by birth. However, he completed his primary classes 1 to 5 in elementary school, Merlapalem from 1963-1968, upper primary classes 6 to 7 in upper primary school, ubalanka from 1969-1971, High school classes 8 to 10 in zilla parishad high school from 1971-1974, in Ravulapalem and junior college education 11 to 12 in Mahatma junior college, Atryapuram from 1974-1976. He did his graduation degree B. A in economics etc in Andhra University from 1985 to 1989 and post graduation degree M. Sc in disaster mitigation sciences from Sikkim Manipal University, Gangtok during 2001-

2003. He was honored with M. Phil(2006) for his researches on world weather and disaster sciences, Ph. D (2010) for his researches on world weather changes and natural hazards and D. Sc.(2015) for his researches on the global monsoons & its effects on weather changes and natural calamities.

He was submitted many representations to the government and research organizations for providing research facilities but they did not encourage and provide research opportunities to him. He was envied by Research Institutes, scientists and subjected to incessant verbal insults and drove out many times. He built a lab at his house with available apparatus and books and conducted thousands of researches on weather problems and natural calamities and found hundreds of discoveries and inventions such as Lisposcope, Biolumicells and Bio-forecast In 1967, A New Hypothetical Model of Cosmolgy in 1977, Geoscope in 1989, Indian Monsoon Time Scale in 1991. Mainly he did a lot of work into the design of the global monsoon time scales, geoscope projects for the various regions of the world. How much efforts did tho, he could not get recognition either by government or by society moreover ridiculed and subjected in many ways. Mainly the revolutionary concepts about the cosmology have been criticized and exposed to the anger of superstitious, got into a violent altercations which made him to go into imprisonment.

The postulations about the universe, existence of god, theory of evolution, life on the neutrons etc in the book were exposed to the anger of fanatic people and he got into a violent altercation. As a result he was subjected to the anger, suppression and persecutions of the superstitious officials. His theory was instantly criticized by the superstitious people. His lab was destroyed and copies of the books were burned. He was forced by the fanatics to withdraw the hypothesis.

He reported these persecutions and torments to the Revenue Divisional Officer. Amalapuram on 6-7-1977. The Revenue Divisional Officer was conducted an enquiry about this matter on forenoon, July 21st, 1977.

While returning from the enquiry, He was attacked by a mob and they had taken him forcibly to the village chavadi, Ryali there superstitious people were met and where he was beat up. Followed by an altercation about the ideas of the hypothesis, they beaten and forced him to put sign on some prepared documents, and an offence falsely framed and foisted against him. After intense tortures he was sent to the Taluk Magistrate, kothapeta and persuaded to renounce his views. The superstitious officials and people succeeded him in imprisoning. The Taluk Magistrate was declared him as a dangerous boy and up to anything and issued sentence to punish him and handed over to the police station, Ravulapalem.

He was arrested by the police on July 21, 1977. A case was registered and he was imprisoned. He was kept remand for some months in sub-jail and remaining period interrogated periodically by fanatics and officers.

The trials were done from April 2, 1979 to November 20, 1979. After many trials and arguments, the Hon'ble Additional Judicial First Class Magistrate Court was found him not guilty and acquitted on November 27, 1979.

Research organizations and Officials were humiliated him different ways. His efforts have been criticized. Political recommendations, officials support, publicity, region, religion, cash and community factors may influence in giving recognition, awards, rewards, honor and fame to scheduled caste community dalit scientists in India. He is a victim of negligence. Racism and discrimination He sacrificed his life for the past 50 years in conducting researches on the weather problems and natural calamities. He is an unfortunate scientist who could not get recognition either by government organizations & non-government organizations or by national & international communities. He is now making his life's last journey due to pains and poverty & disregard and despair.

References:

1. Mooley DA, Shukla J(1987); Charecteristics of the west ward-moving summer monsoon low pressure systems over the Indian region and their relationship with the monsoon rainfall. centre for ocean-land atmospheric interactions, university of Maryland, college park, MD.
2. All india monthly and seasonal rainfall series, 18711993, B. Parthasarathy, A. AMunot, D. R. Kothawale, Theoretical and applied climatology, 1994, Springer.
3. Das P. K. and B. L. Bose, 1958, Numerical study of movement of monsoon depression, Ind. journal of meteor. geophysics.
5. Jadhav, S. K. and A. A. Munot, 2004; statistical study of the low pressure systems during summer monsoon season over the Indian region, mausam, 55, 15-30.
6. Indian monsoon university of st Andrews www.andrews.ac.uk/dibz/asia/monsoon/html.
7. Indian monsoon /meteorology/britanica/.com [www.britanica.com/science/indian monsoon](http://www.britanica.com/science/indian%20monsoon).
8. The global monsoon system:research and fore cast; caos. iisc.in/ faculty/ bng/ iwm-iii-bng-overview.
9. The global monsoon system, [www.wcrp-climate.org/documents/monsoon -factsheet](http://www.wcrp-climate.org/documents/monsoon-factsheet).
10. [www/en-wikipedia.org/wiki/cyclic model](http://www/en-wikipedia.org/wiki/cyclic_model).
11. The Steinhart-turok model.

12. The Baun-frampton model.
13. Loop quantum cosmology.
14. En.wikipedia.org/wiki/multiverse.
15. Heliocentric model.
16. Geocentric model.
17. Copernican model.
18. Heliocentric model vs geocentric model.
19. en.wikipedia.org/wiki/big_bang_theory.
20. en.wikipedia.org/wiki/steadystate_theory.
21. www.astro.ucla.edu/~wright/steady stat .
22. www.ncdc.noaa.gov/data-access/numerical-weather-prediction.
23. En.wikipedia.org/wiki/numerical-weather-prediction.
28. The history of numerical weather prediction – NOAA.
29. Fundamentals of numerical weather prediction/ebooks.cambridge.org.
30. Ken ring, the moon and lunar science predict weather.
31. Moon predict weather lore / www.almanac.com/content/moon-lore-weather
32. Climate change, sunspots activity & lunar /cosmic cycles (www.the_longerview.com.au/sunmoon-climate.html).
33. Nelson JH, J. geocosmic research, summer 1974.
34. Meteorology astrology (Astrometeorology) lewis. james. R, march 2003, astrology book 2003, p 453.
35. Improved seasonal drought forecasts using reference evapotranspiration anomalies, danielj, MCEvoy, justin I Huntington, john F Mejia, Michael T Hobbins, geophysical research letters, 14-1-201.

4/15/2017