

Zambia Weather Time Scales

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Abstract: The climate of Zambia in central and southern Africa is tropical modified by altitude. Most of the country is classified as humid subtropical or tropical wet and dry, with small patches of semi and steppe climate in the south west. There are three seasons cool and dry from May to August, hot and dry from September to November and warm and wet from December to April. Zambia is exposed to periodic droughts and tropical storms from November to April, heavy rain floods etc., natural hazards.

I have conducted many comprehensive studies on the Zambia climate and natural hazards. Keeping in view of the facts of climate and natural hazards of the Zambia, I have proposed the Zambia Monsoon Time Scale, Zambia National Geoscope Project along with the Zambia Weather Time scale, Bioforecast effect, Irlapatism- A New Hypothetical Model of Cosmology etc which can help to estimate the impending weather conditions and natural hazards of the country in advance to take mitigative measures and save the people, crops and other assets. For example.

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

By setting up the Zambia National Geoscope Project and maintain, the country can be predicted the earthquakes 12 to 24 hours in advance.

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

By establishing the Zambia Monsoon Time Scale and maintain, the country can be estimated the impending weather conditions and natural calamities like rains, floods, landslides, avalanches, blizzard, droughts, extreme winter conditions, heavy rainfall, mudflows, extreme weather, cyclones, cloud bursts, sand storms, hails, and winds etc in advance. Surface water resources in advance.

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Key Words: Zambia Weather Time Scale, Zambia Monsoon Time Scale, Zambia National Geoscope Project, IRLAPATISM-A New Hypothetical Model of Cosmology, Bioforecast, Local Geoscope Centres, and Regional Geoscope centres, Central Geoscope Centres.

Introduction:

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.

I have conducted many extensive researches on the astronomical forces and its effects on the earth climate. The basis for this assumption is likely to be the obvious (and long known) effect of the moon on the ocean: tides. The reasonable regularity of the

monsoon and its active – break cycle with a period of about 30 days (comparable to the lunar month) adds to the idea's appeal. There is, however, little evidence to show that the moon affects weather (though there are tides in the atmosphere too).

A more physical (and testable) idea is that weather (and climate) are due to the Sun. It is the march of the Sun that leads to the seasons, with winter occurring in the hemisphere farther from the Sun (the distance changes owing to the elliptic orbit of the Earth and its inclined axis). The Sun's heat is unequally distributed over the Earth, with the heating being strong over the equator and minimum over the poles. The atmospheric circulation, of which the monsoon is a part, is the result of the need to redistribute the heat. Note that the monsoon is affected

therefore by global phenomena like El Niño and by similar phenomena in the Indian Ocean.

The monsoon was earlier thought to be a gigantic sea breeze driven by the temperature contrast between the hot Indian subcontinent and the cooler ocean to the south. The sea – breeze idea, however, does not explain much of the monsoon. This idea has therefore been supplanted now by the idea that the monsoon consists of repeated northward movement of a cloud band that girdles the warm regions of the tropics.

This band of clouds, clearly seen (and indeed revealed) by satellites, is called the Inter – Tropical Convergence Zone (ITCZ) because air masses converge in this region, leading to rising motion of air. This rising motion leads to condensation of the moist air, which leads to clouds and rainfall. The available observations show that ITCZ is associated with rainfall (over both ocean and land) and is about 5-10° wide. The ITCZ follows the movement of the Sun. Its north – South range is limited over the Atlantic and Pacific Oceans because there is a weaker temperature contrast between the hemispheres owing to these oceans spreading from pole to pole. In the Indian Ocean. However, there is a strong temperature contrast provided by the warm land to the north and the cooler ocean to the south, and the ITCZ migrates over 20° of latitude from the equatorial region to over northern India during the summer monsoon.

The monsoon is now known to consist of repeated northward incursions of the ITCZ during a season. LPSs form in the ITCZ. Hence, predicting the monsoon depression and rainfall is contingent upon predicting the transitions of the ITCZ. This happens to be a phenomenon that couples the atmosphere, the ocean, and land. The task of elucidating the process continues. The variations in the solar cycle affects and stimulate the earth climate.

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.

Country-Wise Astroclimatic Weather Time Scales

I have also proposed about 200 country-wise Astroclimatic Weather Time Scales for all the world countries.

Zambia Weather Time Scales:

I have conducted many extensive researches on the astronomical forces and its effects on the earth climate particularly on various regions of the Zambia country.

Preparation Of The Scale:

Prepare the Zambia Weather 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 scientific basis of preparation of the scale is that the moon orbits the earth through its familiar cycle of lunar nodes. The path crossing from south to north ascending node and descending node has the opposite sense; it will reach the beginning point in a complete cycle of 18.7 years i.e 19 years. We know that generally the moon which attracts and stimulates the weather of Earth. So, according to the different orbits in different years at different regions during 19 year's time schedule of the moon around the earth – its gravitational attraction and stimulation on the weather may be different in different years at different regions during its 19 years time schedule. And there is a chance of same weather conditions shall be occurring again and again repeated once in every 19th year.

Data Required For The Scale:

The main weather events/data if any such as percentages of rainfall of the Zambia (or in any form of codes according to the researcher's convenience just like as "T" for thunder storms, "S" for sand storm) etc., may be taken to formulating the Zambia Weather Time Scale.

Performance Of The Scale:

The rainfall/weather data of the years, have been entering on the scale in percentages or as it is pertaining to the 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 posterior years weather. On the basis of the principle, we can assume that a considerable, of course it may be little chance of prediction for an ensuing years by study the data of earlier years.

Indian Weather Time Scale (2004):

For example, I have prepared the an model Indian Weather Time Scale along with hundreds of additional scales (1617 block scales, 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 sub-divisions of India were studied and analyzed elaborately.

Method Of Analysis:

The scale of study should be prepared indicating dates for the months of June, July, August, and September repeating once in every 19th previous year according to the schedule of the scale. Firstly, see the model scale. In this scale, the June, July, August and September months of the summer monsoon season of India were taken in a table in which the each month is

also divided into three parts 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.

Type Of Data Taken:

The rainfall data over the Indian region have been entering on the scale in percentages sometimes as it is pertaining to the month and season of the each and every year. For this, a lot of enormous rainfall data 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** All india monthly and seasonal rainfall series, 1871-1993, B.Parthasarathy, A.AMunot, D.R.Kothawale, Theoretical and applied climatology,1994, Springer. Etc.

Verification Procedure:

In case of repeating a similar weather once in every 19th year at a particular time and location in a scale, again in the same following order there is a chance of repeating similar previous similar weather condition at the same time and location during the subsequent current year approximately.

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 Indian weather time scales of all Indian Homogeneous regions and subdivisions, states and districts of India.

Uses:

Zambia Weather Time Scale used to forecast the weather changes and rainfall etc in advance. All other weather conditions such as cyclones, damaging winds, droughts and water shortage etc., can be predicted.

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.

Conclusions:

We can make many more modifications thus bringing many more developments in the Zambia Weather Time Scale.

The Figures and Tables are shown in the end of this issue.

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