

## Results Of Research On Meterology

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**Abstract:** Meteorology is the interdisciplinary scientific study of the atmosphere. Meteorological phenomena are observable weather events that are explained by the science of meteorology, I have conducted researches in the field of meteorology and invented some related discoveries & inventions which may also be useful in understanding the extent of the meteorology.

[Gangadhara Rao Irlapati. **Results Of Research On Meterology.** *Researcher* 2016;8(1s):360-395]. ISSN 1553-9865 (print); ISSN 2163-8950 (online). <http://www.sciencepub.net/researcher>. 14. doi:[10.7537/marsrsj0801s16.14](https://doi.org/10.7537/marsrsj0801s16.14).

**Keywords:** Cyclones, Low pressure systems, Monsoons

**History:** I have conducted many scientific researches on the Indian Monsoon during the period of 1980-91, and invented the Indian Monsoon Time Scale which can help to study the past, present and future movements of the Indian Monsoon. In 1991, Sri G. M. C. Balayogi, Member of Parliament (Lok Sabha) recommended the Indian Monsoon Time Scale to the India Meteorological Department for implementation in the services of the country. In 1994, the cabinet secretary of India recommended the Indian Monsoon Time Scale to the Ministry of Science & Technology, Govt of India for implementation. In 1996, Many consultations were made with the parliament house, president of India and other VVIPs of India. In 2005, consultations were made with the India Meteorological Department about the Indian Monsoon Time Scale for further research and development in the services of the country. In 2009, the Secretary, Minister of science and technology was also recommended the Indian monsoon Time scale to the Indian Institute of tropical Meteorology for research and development.

**Construction:** The Indian Monsoon Time Scale-a chronological sequence of events arranged in between time and weather with the help of a scale for studying the past, present and future movements of monsoon of India and its relationship with rainfall and other weather problem and natural calamities.

Prepare the Indian Monsoon Time Scale having 365 horizontal days March 21<sup>st</sup> to next year March 20<sup>th</sup> 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 have been entering on the scale as per date and month of the each and every year. If we have been managing the scale in this manner continuously we can study the past, present and future movements of the Indian Monsoon.

For example, I have prepared the Indian Monsoon Time Scale by Preparing the Scale having

365 horizontal days from 1<sup>st</sup> April to next year March 31<sup>st</sup> 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. 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.

**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-east monsoon and north-west 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 descending 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-east monsoon and north-west 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 east monsoon and north-west monsoon etc. by keen study of the Indian Monsoon Time Scale.

**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  $23\frac{1}{2}$  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 the direct and converging rays of the summer sun on the Indian Sub-continent and develops into the monsoon trough and maintain monsoon circulation.

**Experiments Carriedout:** Many experiments were carried out on the Indian Monsoon Time Scale and Successfully proved out in practice.

**Publications:** Many journals announced the Indian Monsoon Time Scale In 2004, a news commentary was published in the popular daily Vartha. The journal of environmental & ecology announced the Indian Monsoon Time Scale and Global Monsoon Time Scale in 2015.

**Conclusions:** We can make many more modifications thus bringing many developments in the Indian Monsoon Time Scale.

**Indian 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 India. The variations in the solar cycle affects and stimulate the earth climate. The moon affects and stimulate the ocean tides and atmosphere too. The movement of axis of the earth inclined at  $23\frac{1}{2}$  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.

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 years.

I have prepared a model Indian weather time scale along with hundreds of additional scales (1617 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.

#### **Studies Carried Out :**

Firstly, see the Indian weather forecasting study model time 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 the Telangana, Rayalaseema and Coastal Andhra regions. 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.

Example for assuming the dry season or suppose to predict the rainfall situation in the summer season of the ensuing year 2019: study the 7<sup>th</sup> 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 7<sup>th</sup> 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 10<sup>th</sup> 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 10<sup>th</sup> 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.

We can make many more modifications thus bringing many more developments in the Indian weather time scale and its all additional Indian weather time scale.

**Bioforecast:** I have invented the bioforecast effect in 1965 by keen study and observations of the biolumicells. Although weakened by forecasting property with less successive rate, it is a primary and natural forecasting method. This is my third invention which can help to forecast the weather changes 18 days in advance.

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.

**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.

**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 outside its minimum distance.

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 lipscope 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.

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 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 after about 18 days. If the particles number is minimum the weather 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 after 18 days.

**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.

**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

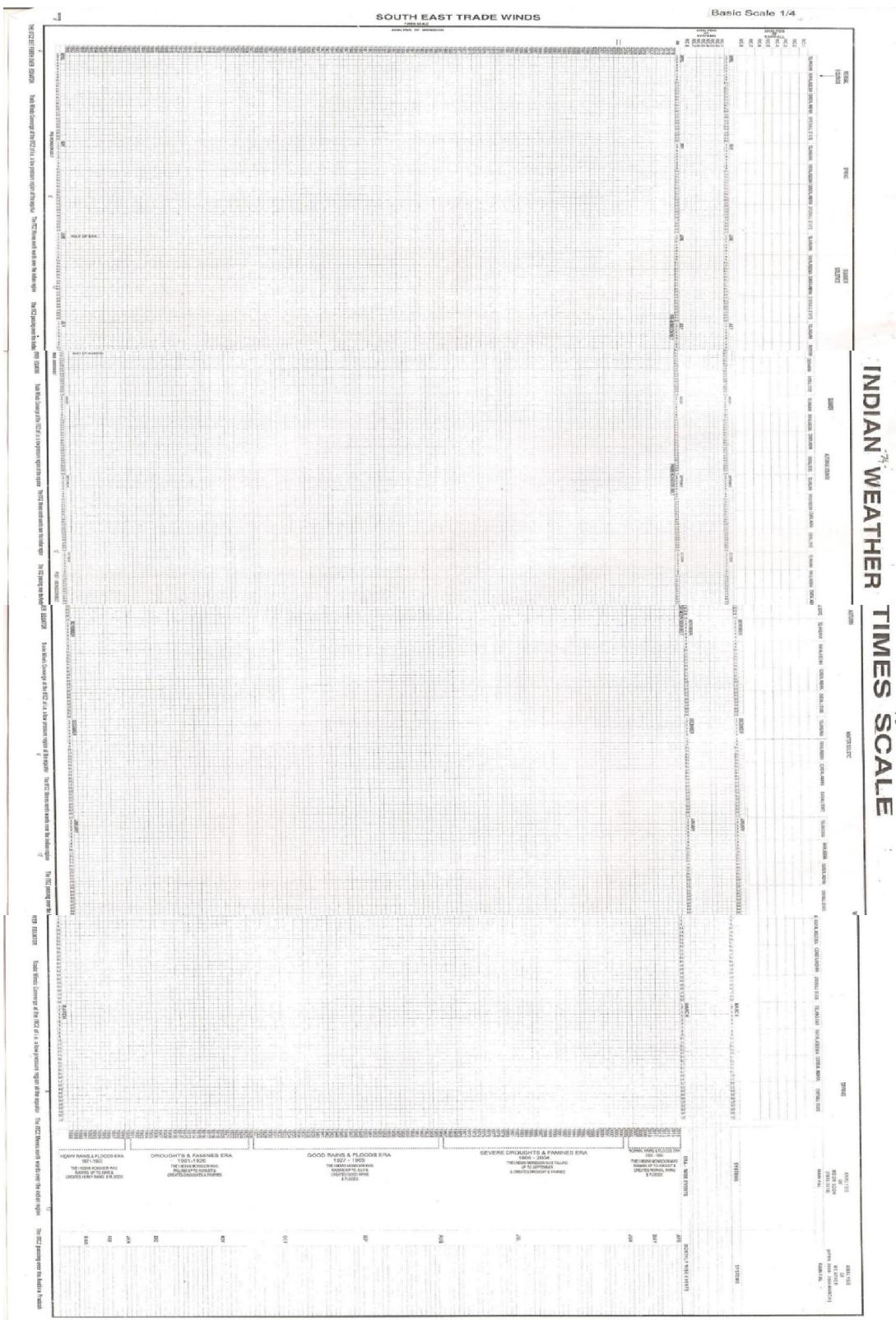
relationship between the biosphere and atmosphere (explore the inter-connection of earths geomagnetic field with natural calamities and their effect on human impulse). In these observations, the maximum level of the biolumicells were recorded between 7<sup>th</sup> to 11<sup>th</sup> of April, 1991. It is the sign of the ensuing cyclone of the 28<sup>th</sup> April 1991. The three directors of the said institutions were met in the Andhra Pradesh state Council of Sciences & Technology on 9<sup>TH</sup>, April 1991 and discussed about the prediction. As predicted on 9<sup>th</sup> April 1991, in the meeting a severe cyclone was formed in Bay of Bengal and struck the Bangladesh on 28<sup>th</sup> 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.

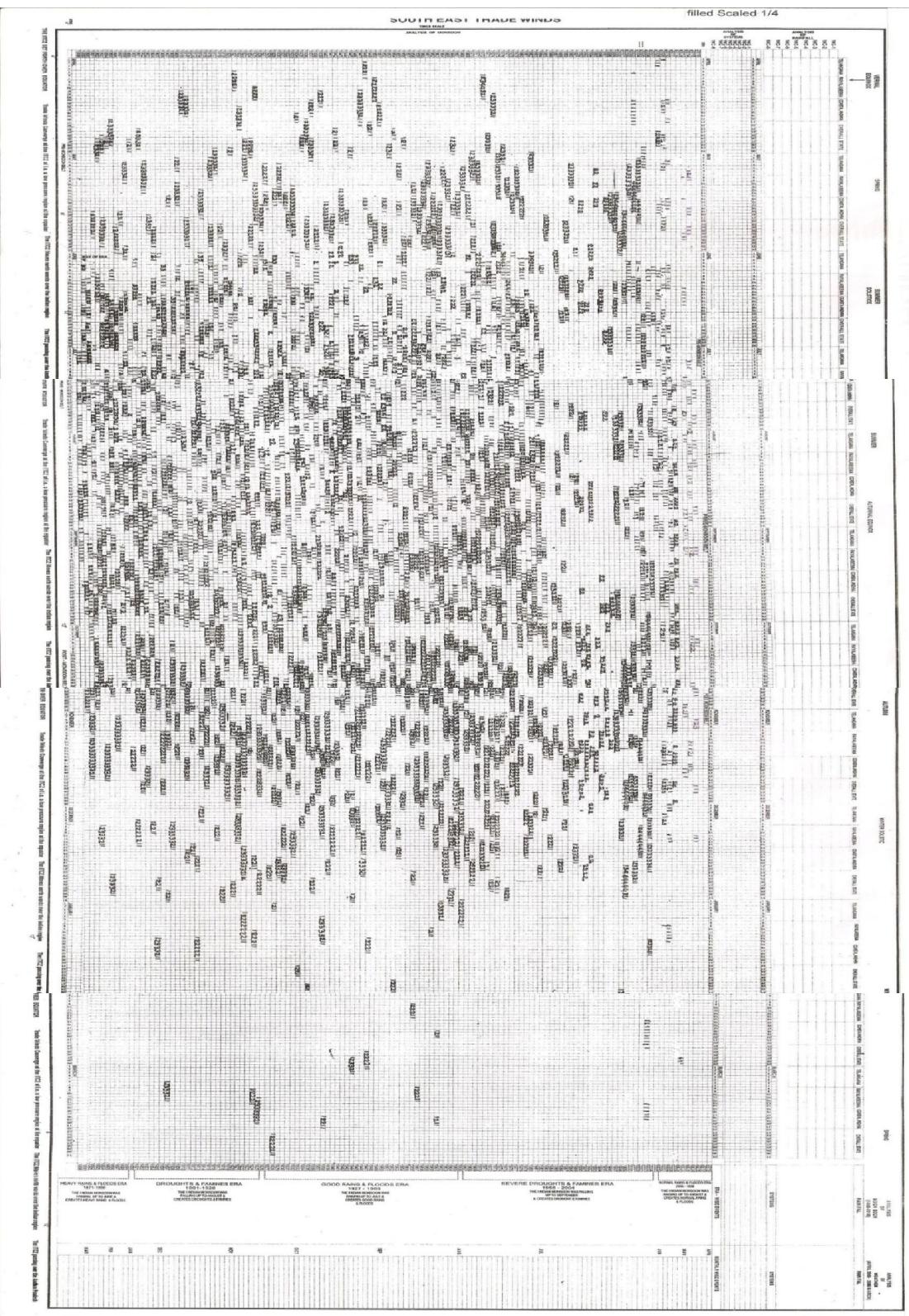
**Conclusion:**we can make many more changes thus bringing many more changes in the bioforecasting scale.

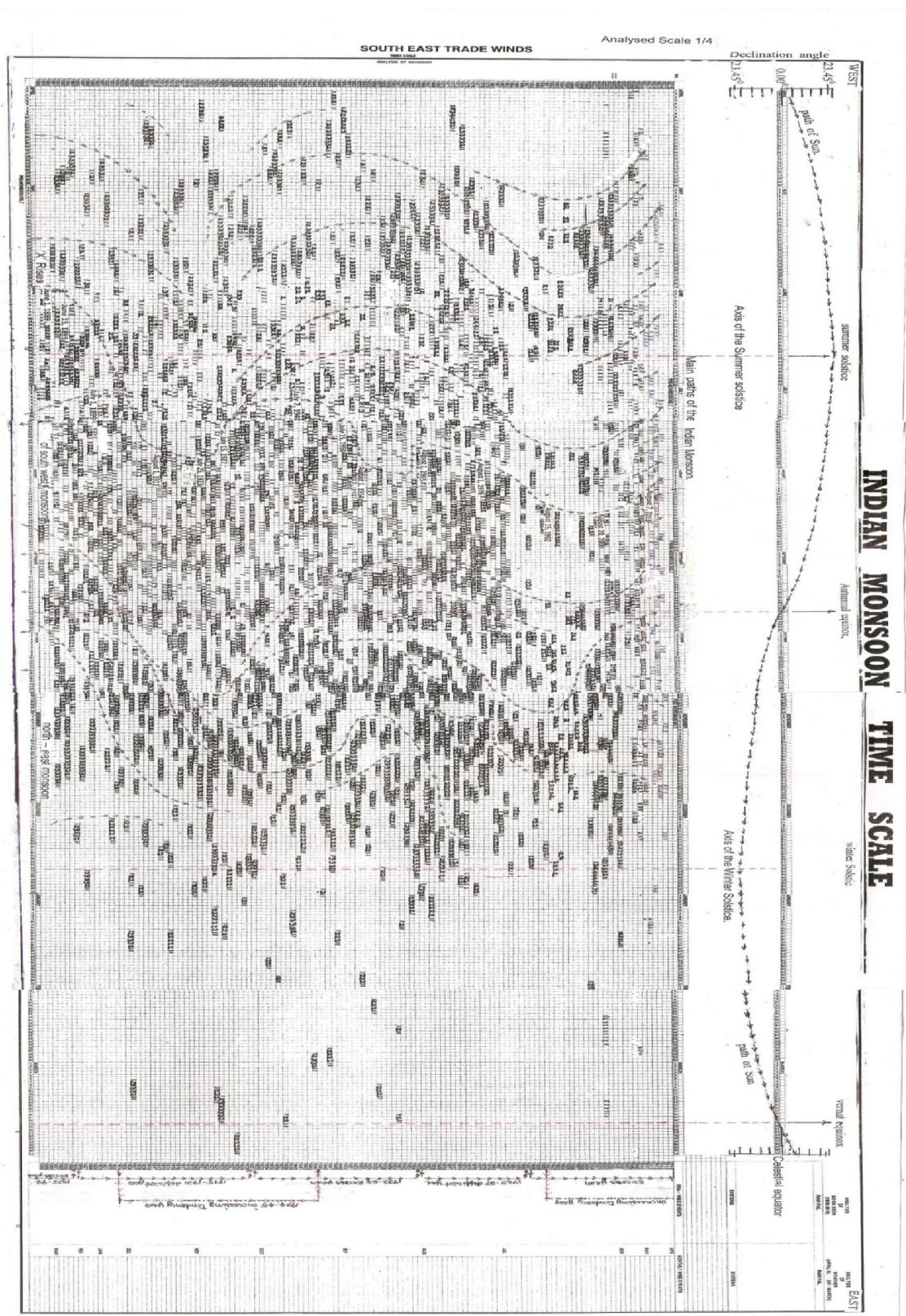
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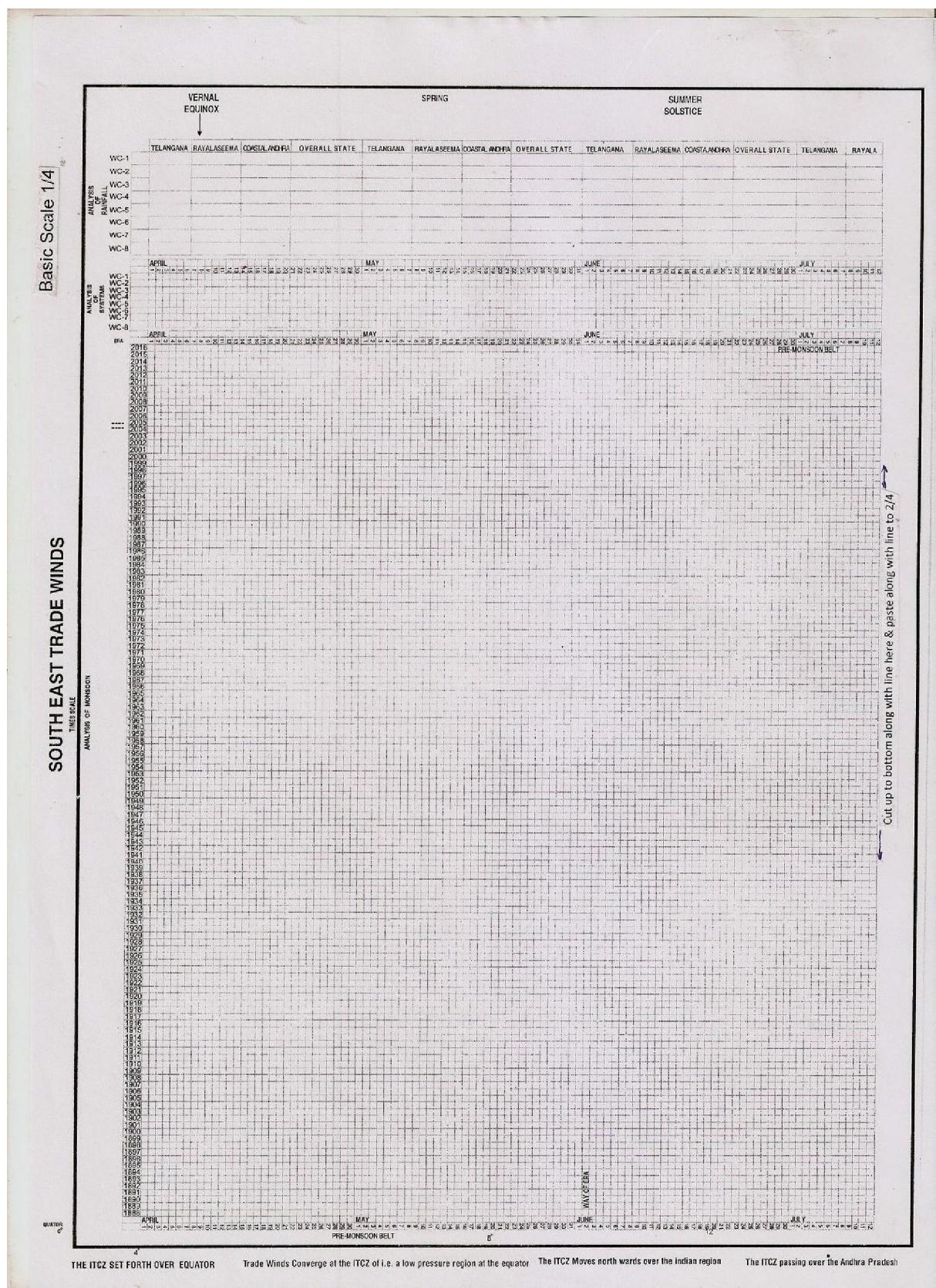
1. Mooley DA, Shukla J(1987); Charecteristics of the west ward-moving summer monsoon low pressure systems over the Indian region and their relationship with the monsoon rainfall. centre for ocean-land atmospheric interactions, university of Maryland, college park, MD.
2. All india monthly and seasonal 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.
4. Analysis of variability and trends of extreme rainfall events over india using 104 years of gridded daily rainfall data, M. Rajeevan, J. Bhate, A. K. Jaswal, Geophysical Research letters, 2008, online library.
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. Clustering of low pressure system during the Indian summer monsoon by intra seasonal oscillations, bn. goswani, rs. ajaya mohan, prince kxavier, and d. sengupta, centre for atmospheric and oceanic studies, Indian institute of science, bangalore, india.
7. Composite structure of monsoon low pressure system and its relation to Indian rainfall, v. krishna murthy and rs. ajaya mohan, 2010, j. climate, 23,4285-4305.
8. Indian monsoon university of st Andrews [www.Andrews.Ac.Uk/Dibz/Asia/Monsoon/Html](http://www.Andrews.Ac.Uk/Dibz/Asia/Monsoon/Html).
9. Indian monsoon /meteorology/britanica/.com www.britanica.com/science /indian monsoon.
10. The global monsoon system : research and forecast; [caos.iisc.in/faculty/bng/iwm-iii-bng-overview](http://caos.iisc.in/faculty/bng/iwm-iii-bng-overview).
11. Climate predictron centre-global monsoon; [www.cpc.ncep.noaa.gov/climate.weather](http://www.cpc.ncep.noaa.gov/climate.weather).
12. The global monsoon system, [www.wcrp-climate.org/documents/monsoon-factsheet](http://www.wcrp-climate.org/documents/monsoon-factsheet).
13. All india monthly and seasonal rainfall series, 1871-1993, b. parthasarathy, a. a munot, Drkothawale, theiritical and applied climatology, 1994, springer.
14. Parthasarathy b, munot aa, kothawale dr, monthly and seasonal rainfall series for all india homogeneous regions and meteorological subdivisions, 1871-1994, research report, iitm pune.
15. Longest instrumental rainfall series of the Indian regions (1813-2006), Indian institute of tropical meteorology, pune.
16. All Indian data series-(imd) pune.
17. Monthly rainfall data series-ministry of earth sciences, moes. gov. in.
18. 114 years rainfall in india-interactive, india environmentportal. org. in/rainfall in india.
19. [www.ncdc.noaa.gov/data-access/numerical-weather-prediction](http://www.ncdc.noaa.gov/data-access/numerical-weather-prediction).
20. En.wikipedia.org/wiki/numerical- weather-prediction.
21. The history of numerical weather prediction – NOAA; Fundamentals of numerical weather prediction/ ebooks.cambridge.org.
22. Ken ring, the moon and lunar science predict weather.
23. Moon predict weather lore / [www.almanac.com/content/moon-lore-weather](http://www.almanac.com/content/moon-lore-weather).
24. Climate change, sunspots activity & lunar /cosmic cycles ([www.the-longerview.com.au/sunmoon-climate.html](http://www.the-longerview.com.au/sunmoon-climate.html)).
25. Nelson john H, cosmic patterns; theirs influence on man and his communications 1974 American federation of astrologers.
26. Nelson j. h, RCA review, april 1951.
27. Nelson J. H., J. geocosmic research, summer 1974.
28. SATO live bioforecasting [www.Jst.go.Jp](http://www.Jst.go.Jp).
29. Bio weather forecast; [www.weatherforecasting.com/locations/bio-3/forecasts/latests](http://www.weatherforecasting.com/locations/bio-3/forecasts/latests).

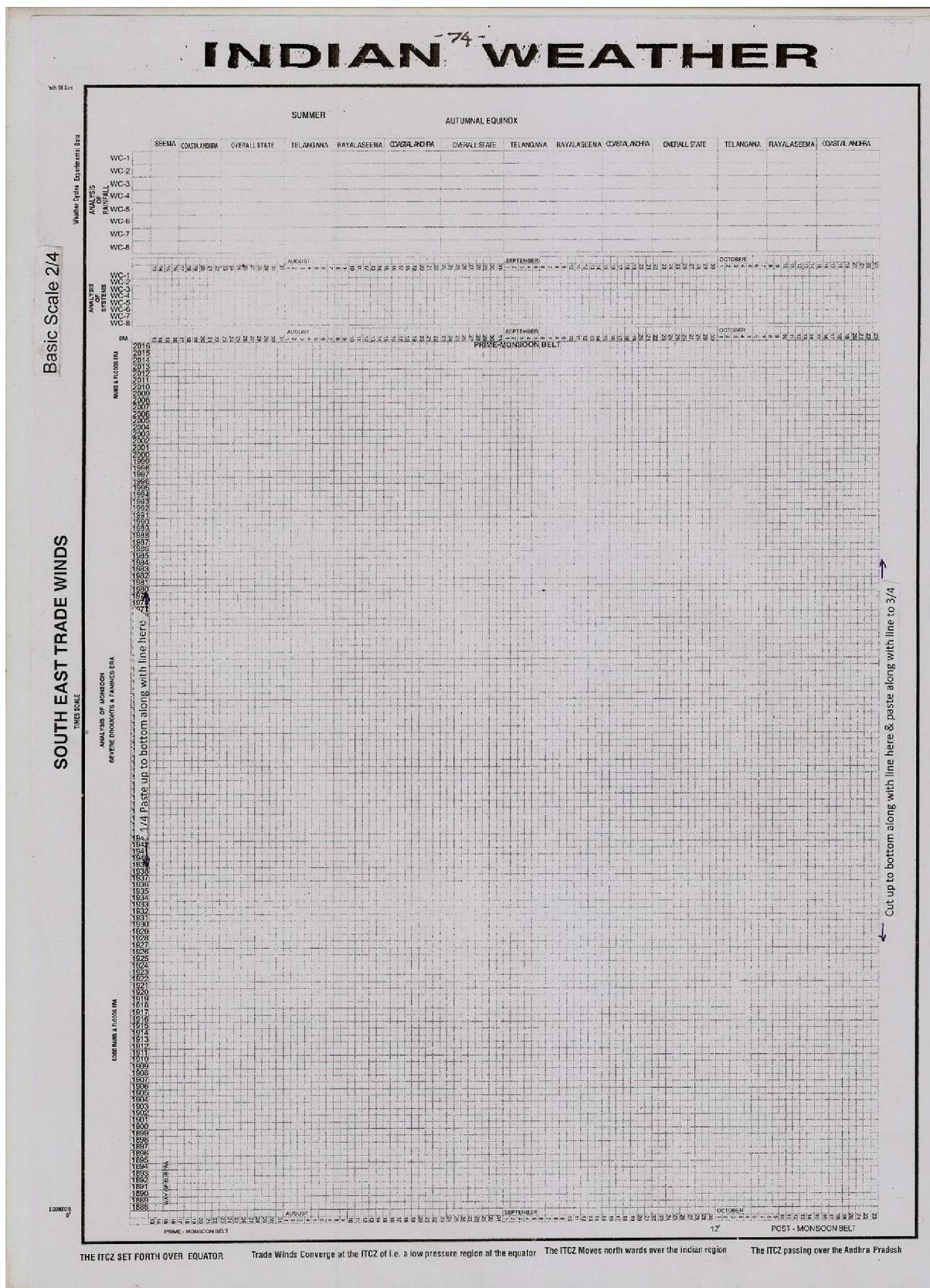
## Appendices: Indian Monsoon Time Scale

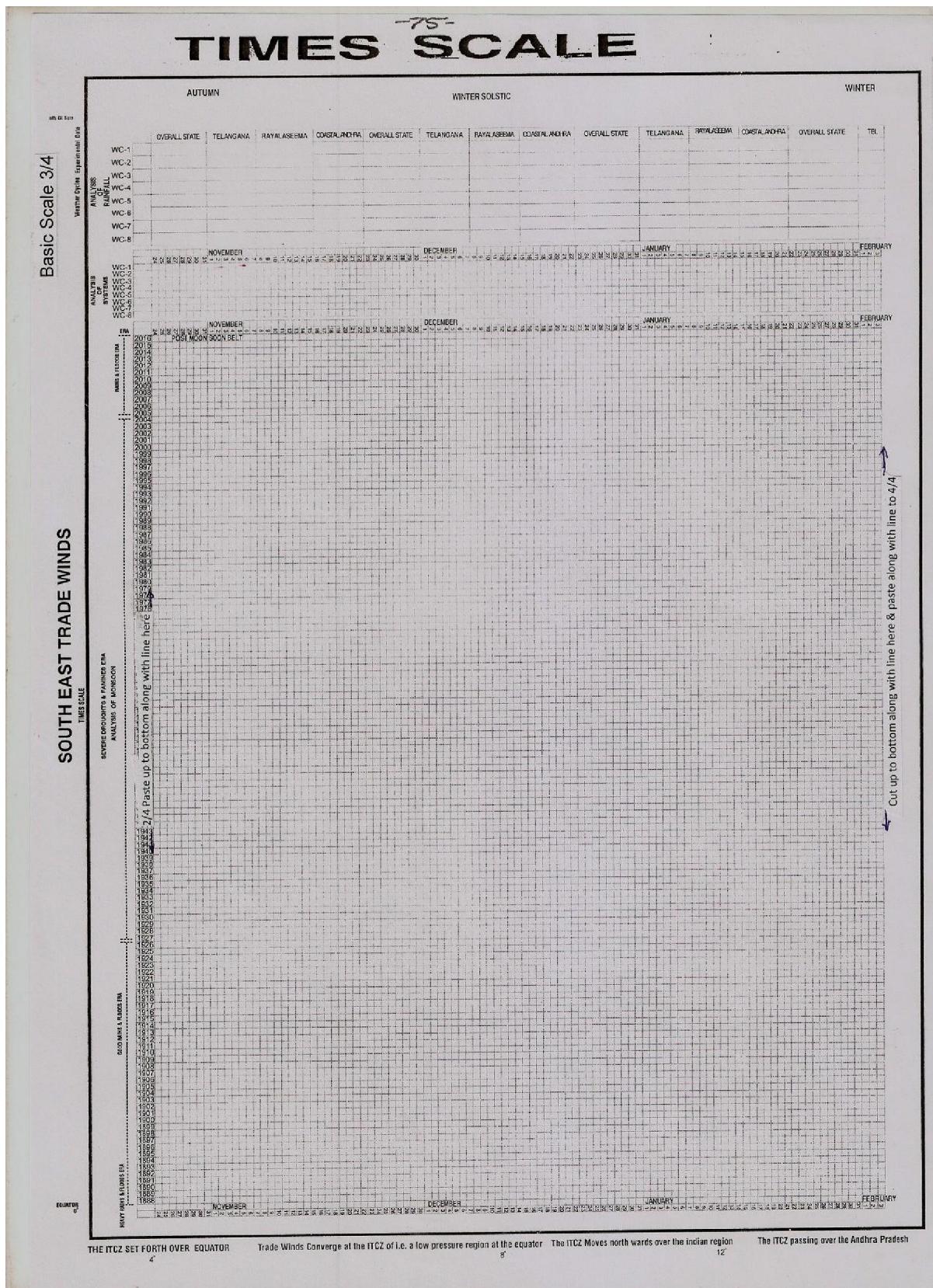


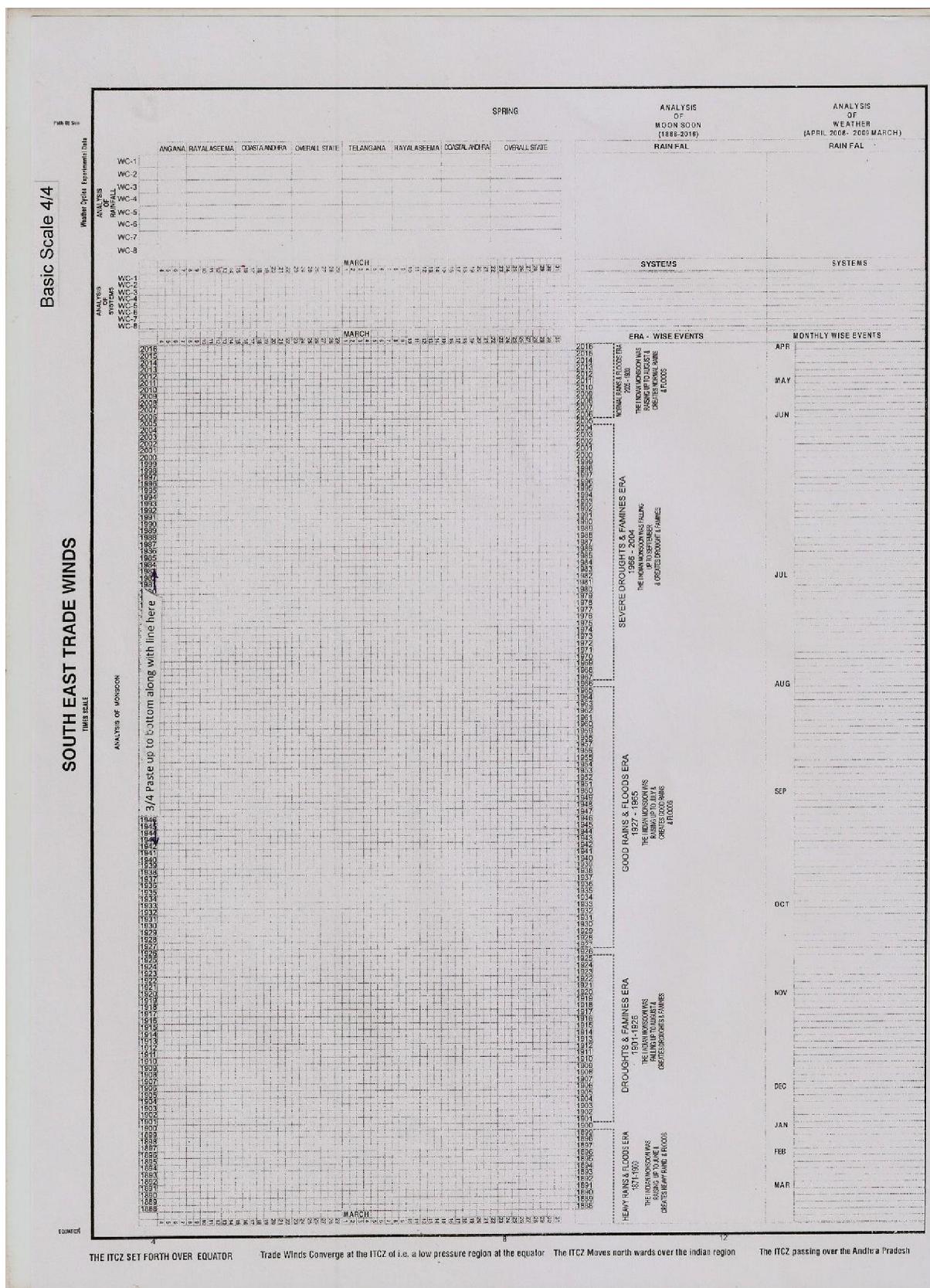


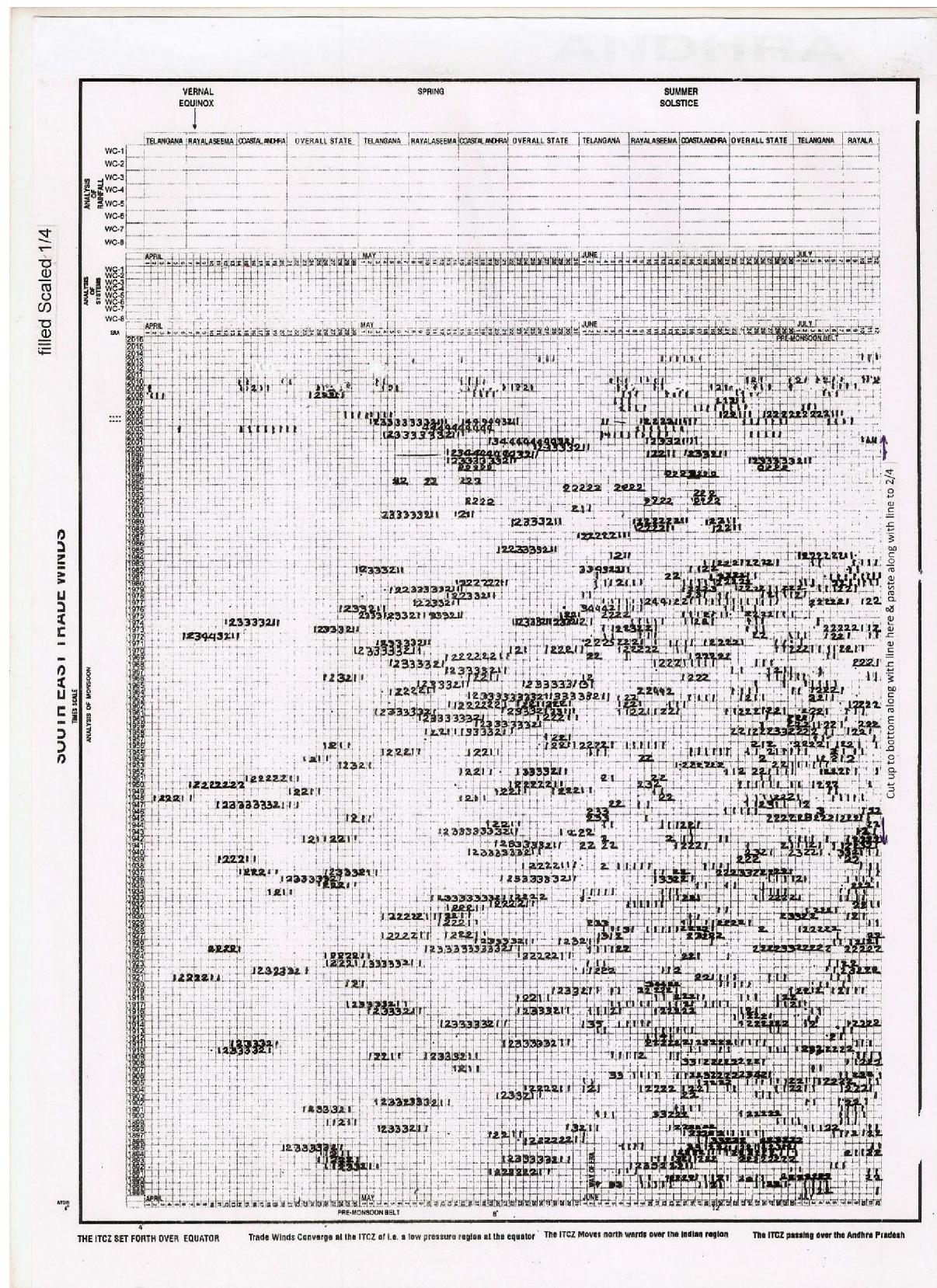


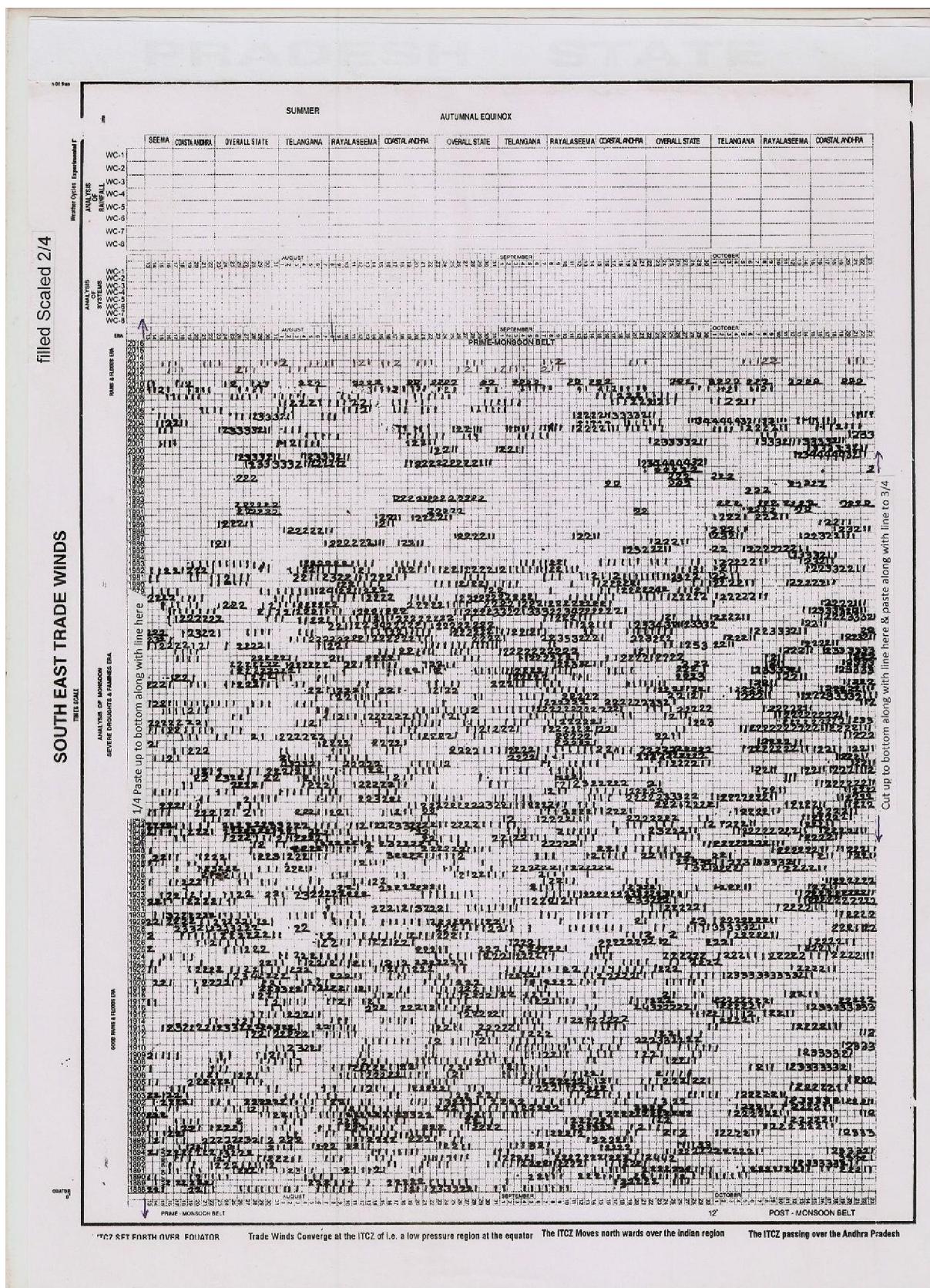


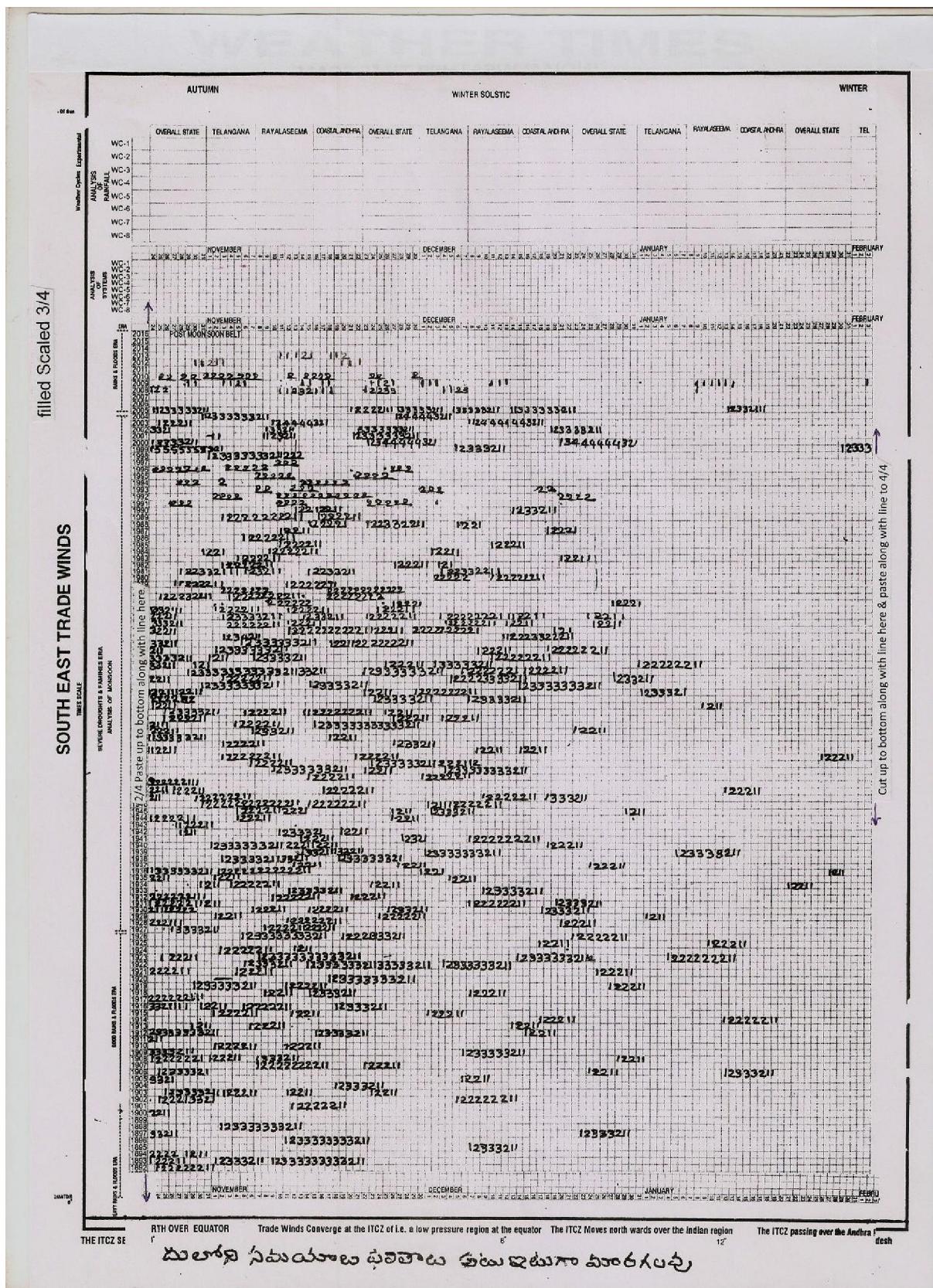




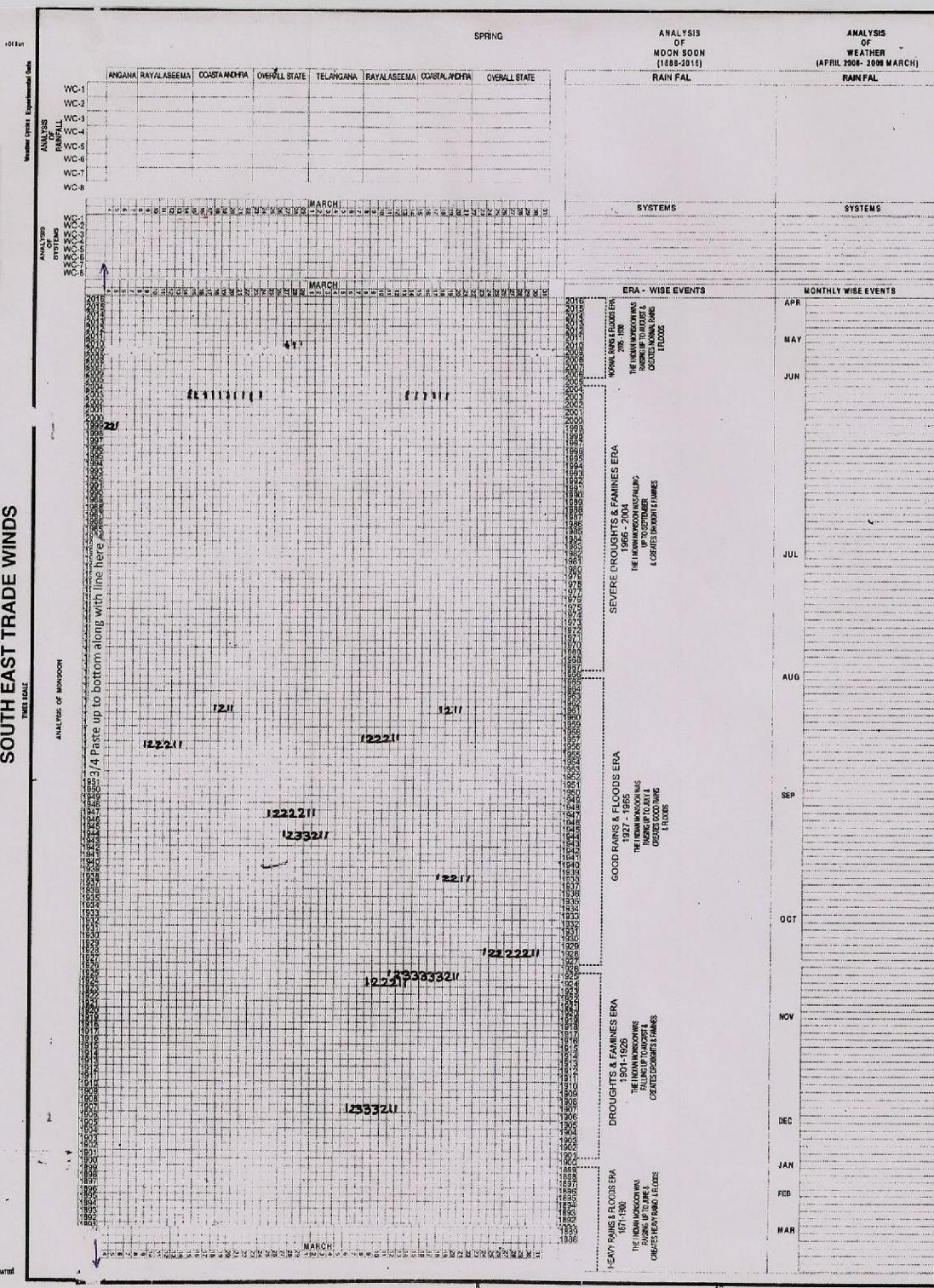


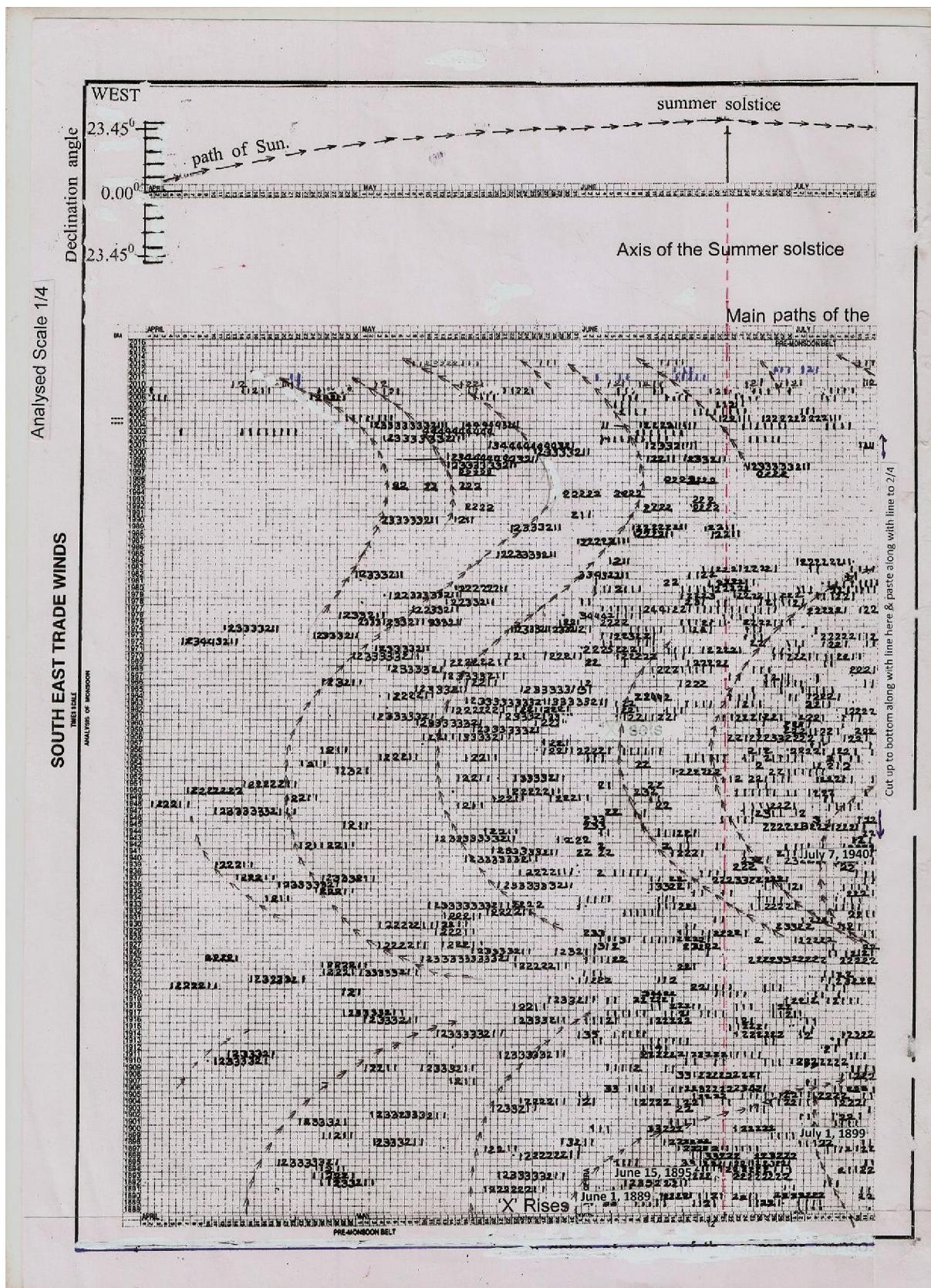


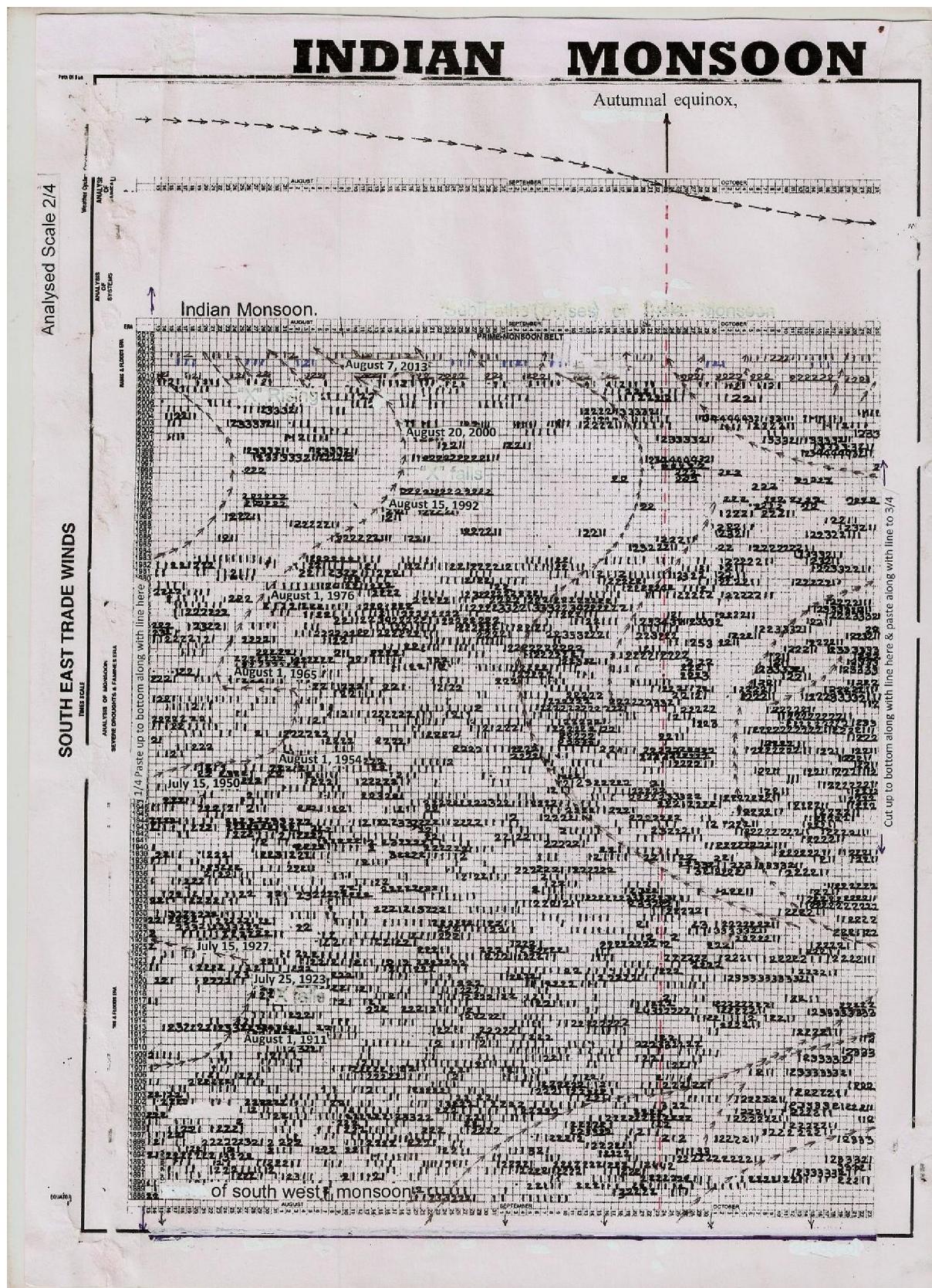


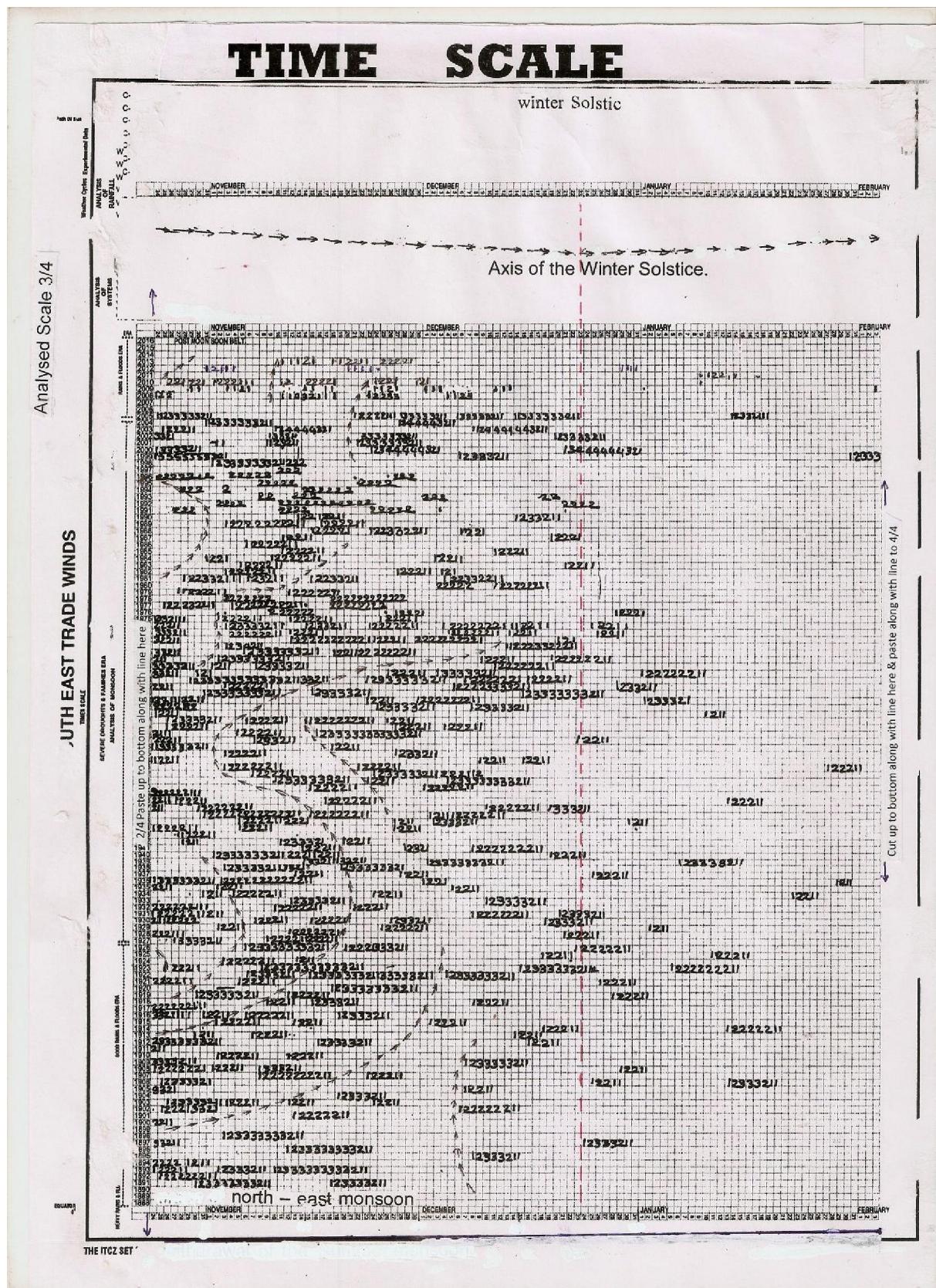


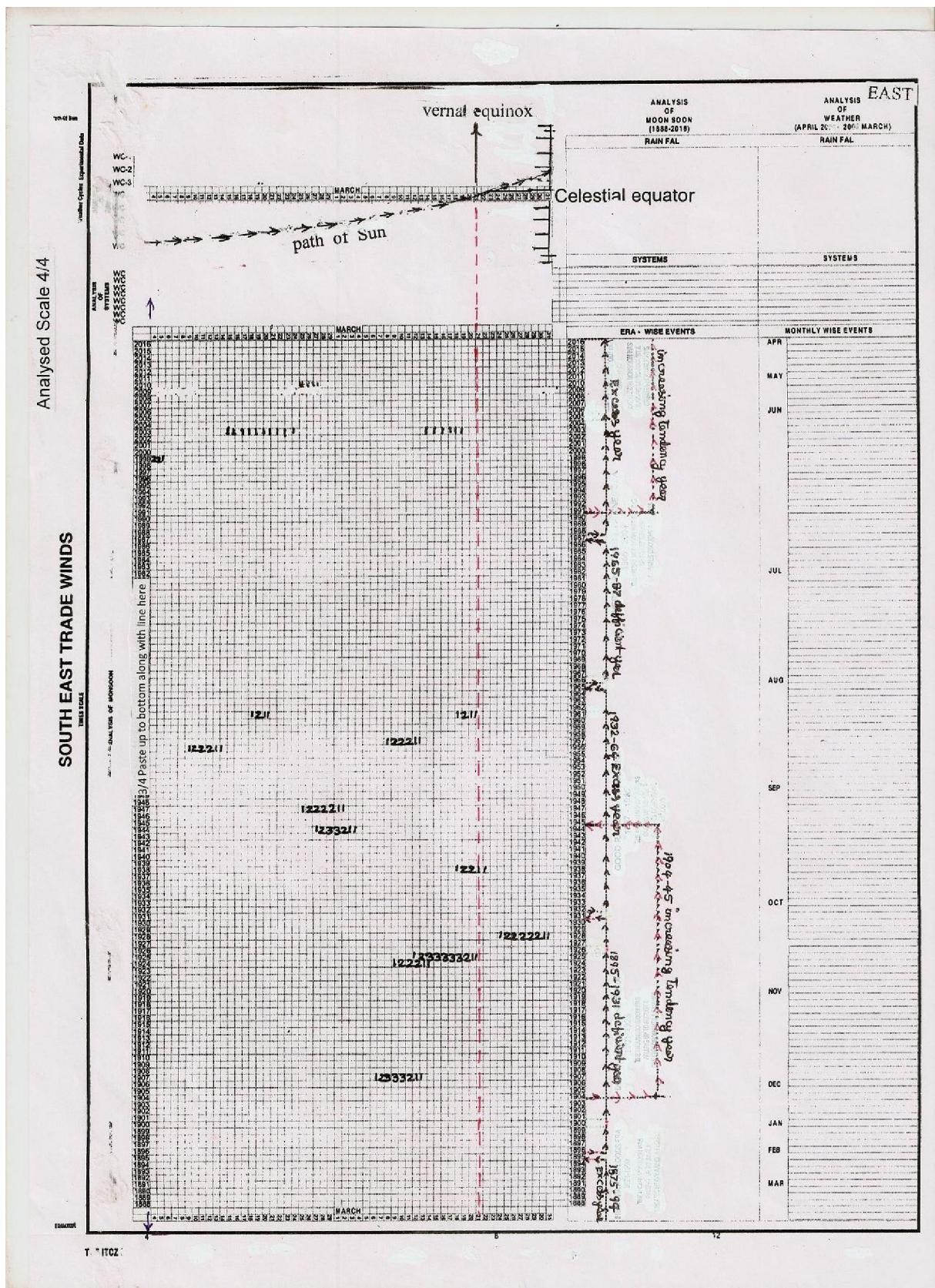
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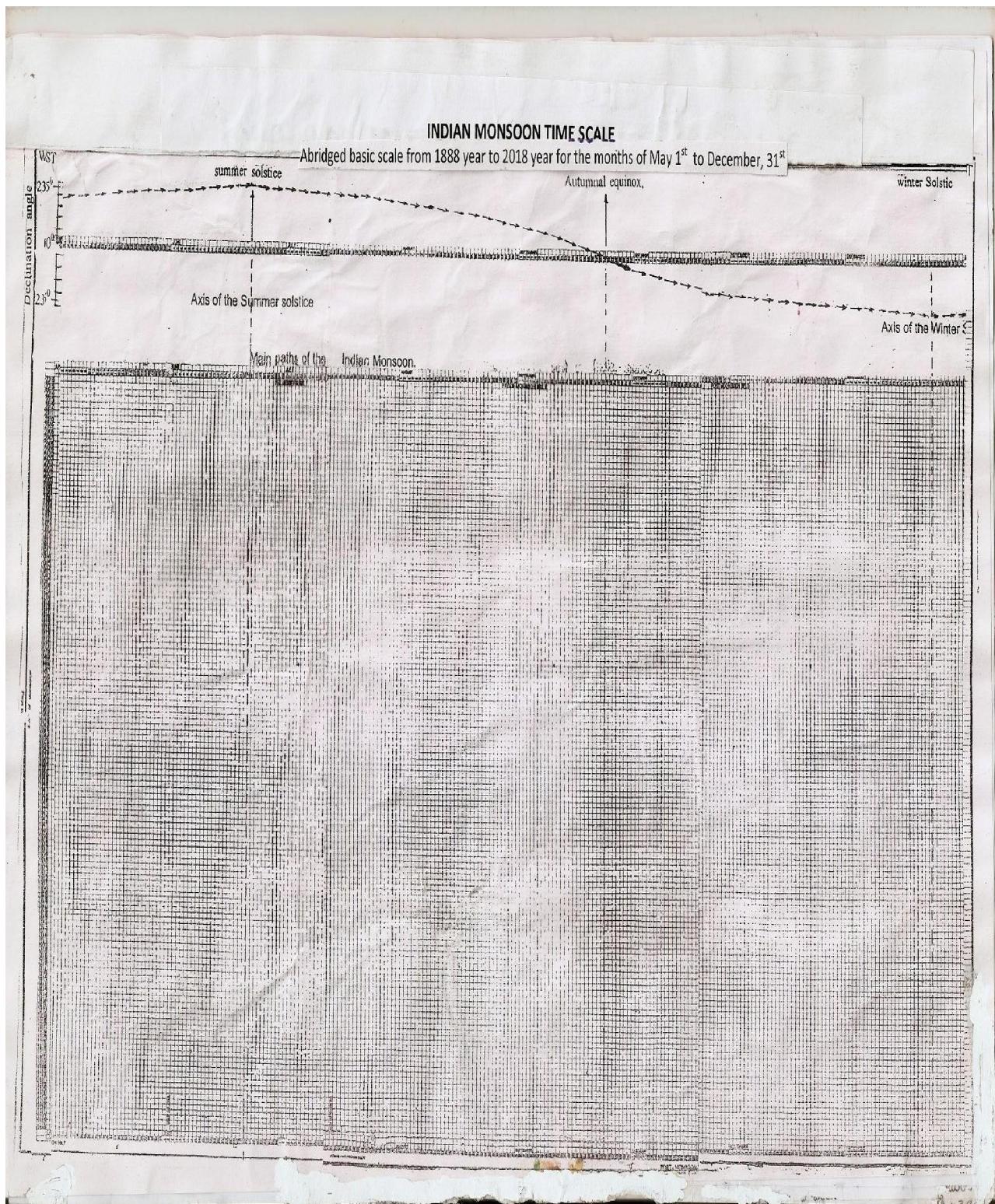


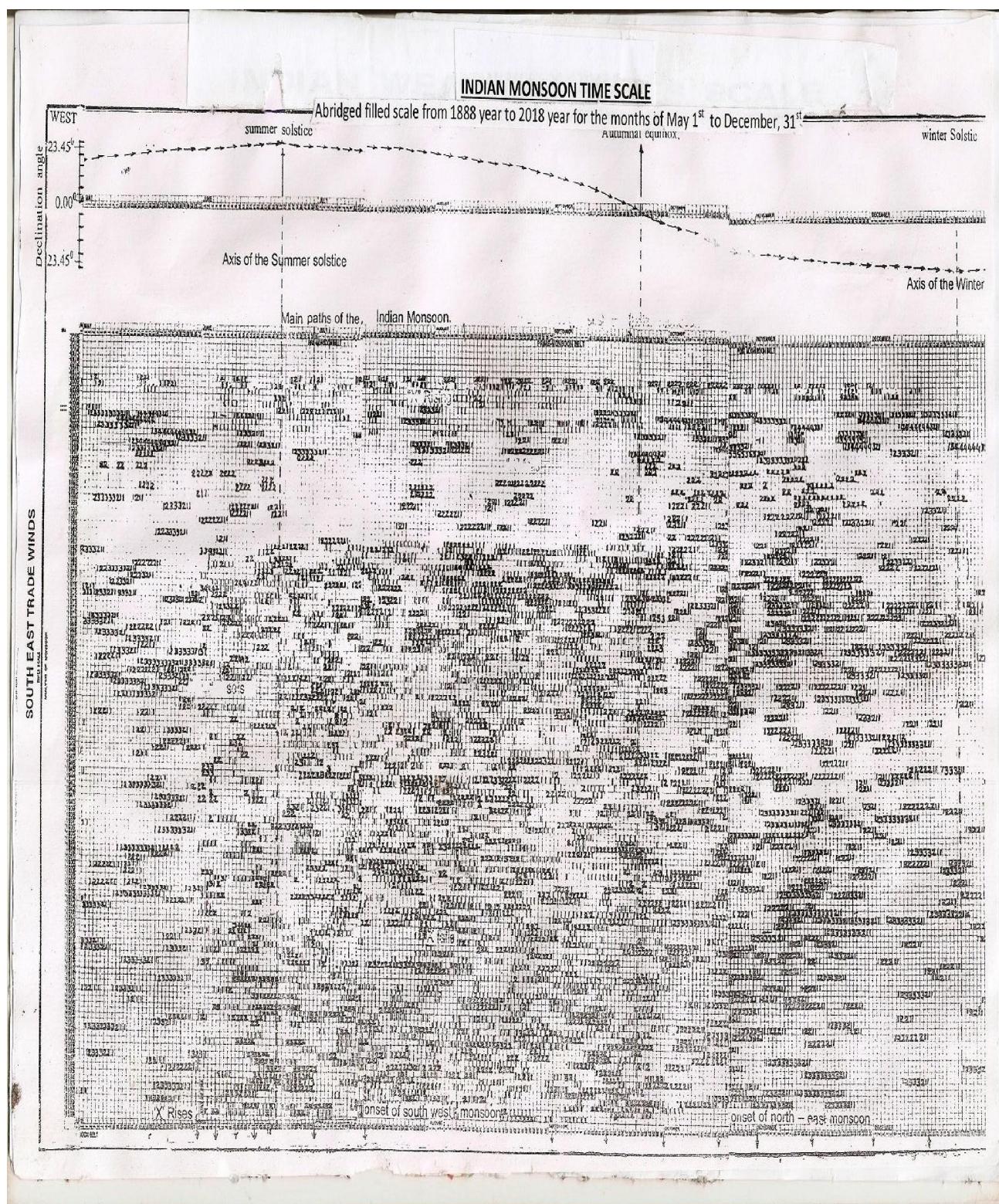


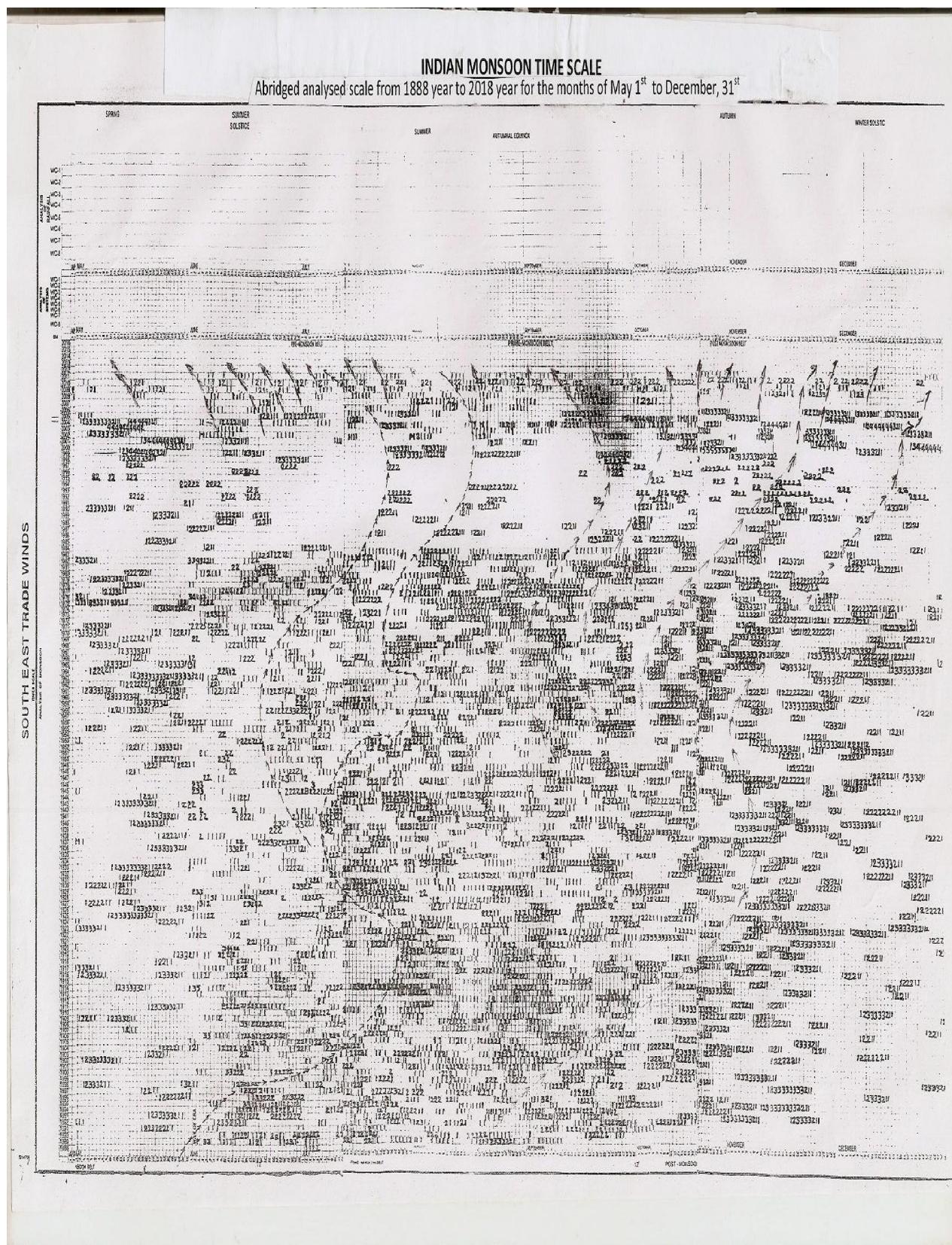










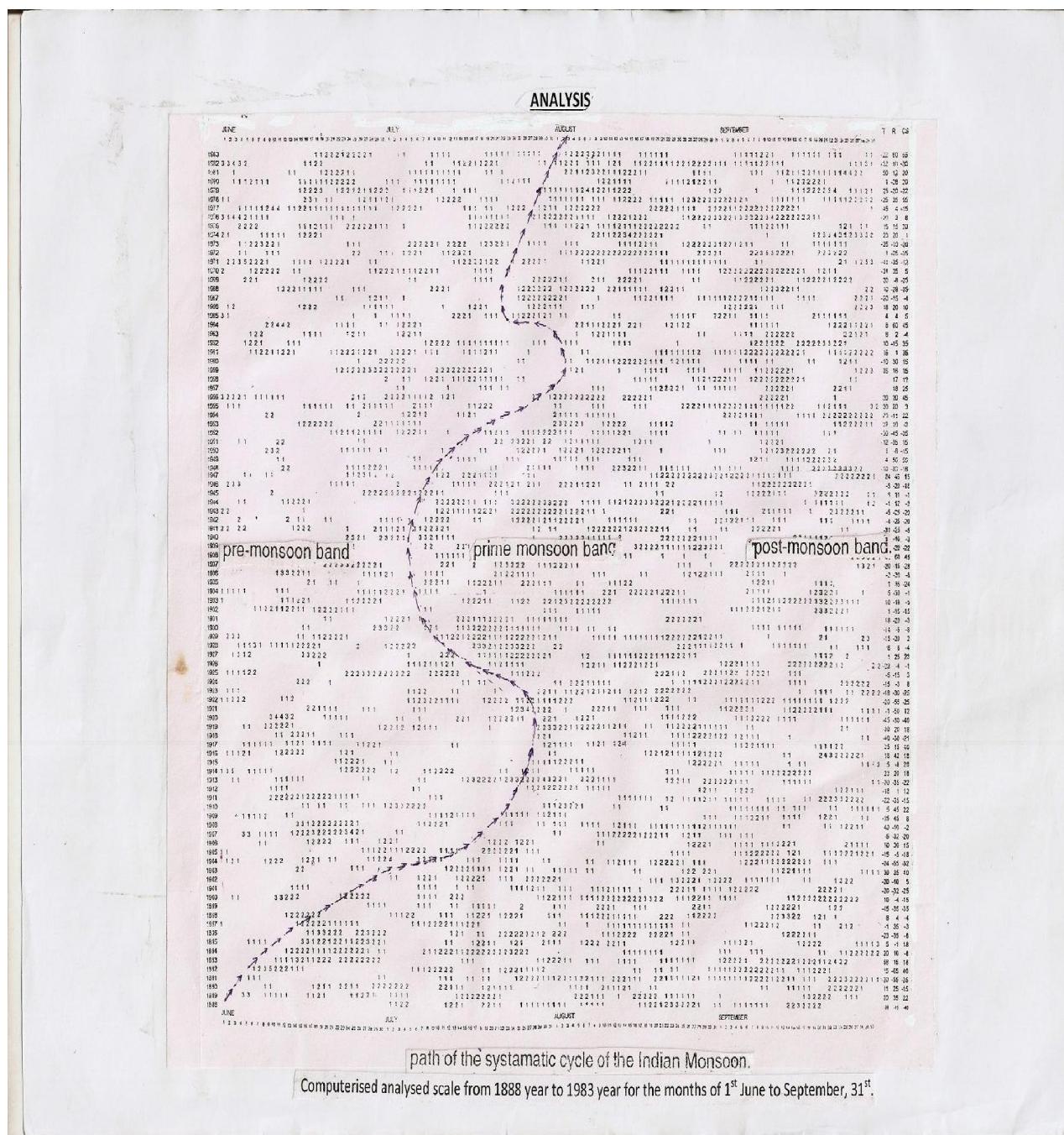


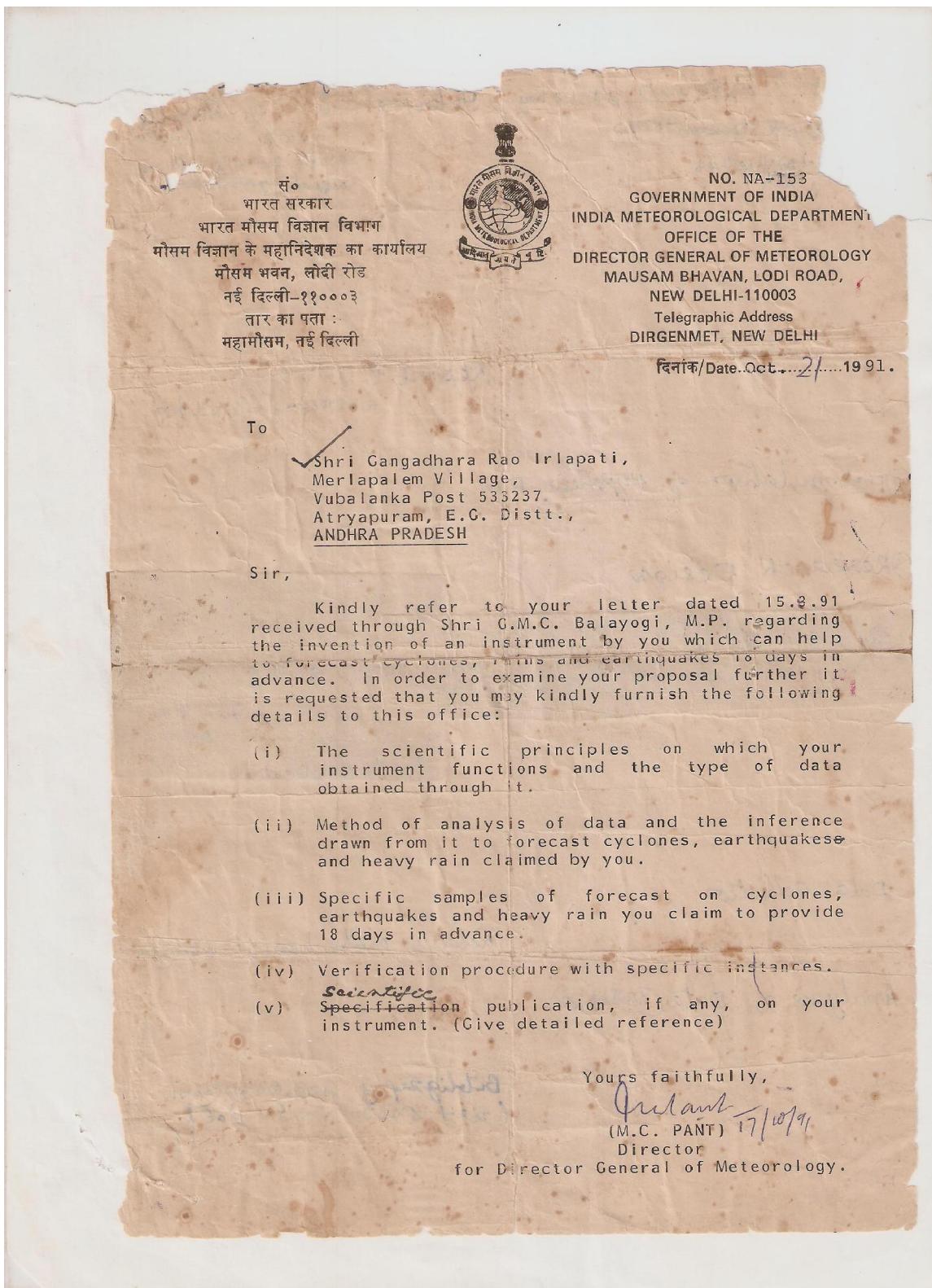
## MAP OF THE INDIAN MONSOON

**ANALYSIS  
OF  
Years  
(1888-1983)**

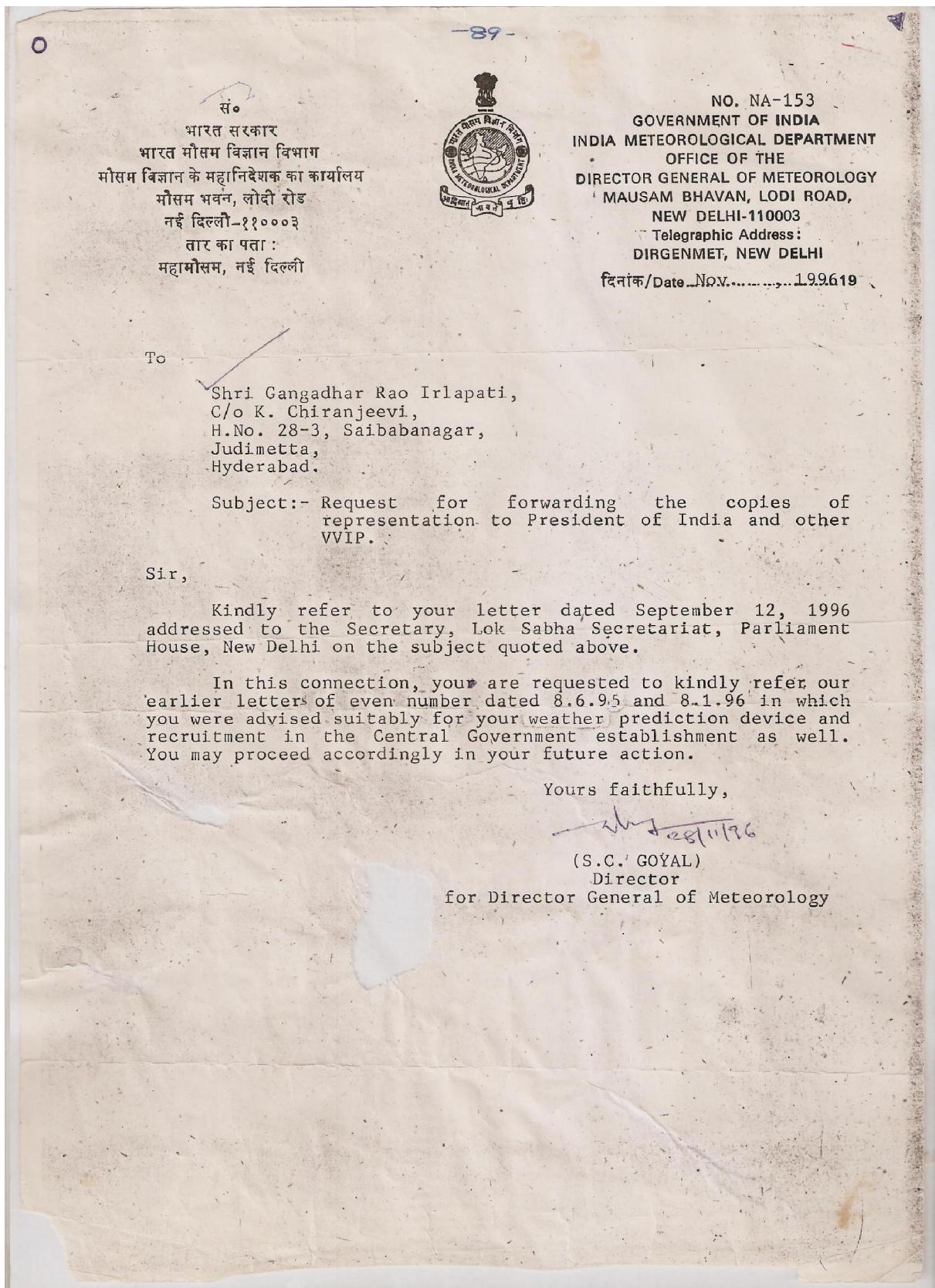
**ANALYSIS  
OF  
Months  
(UNISER)**

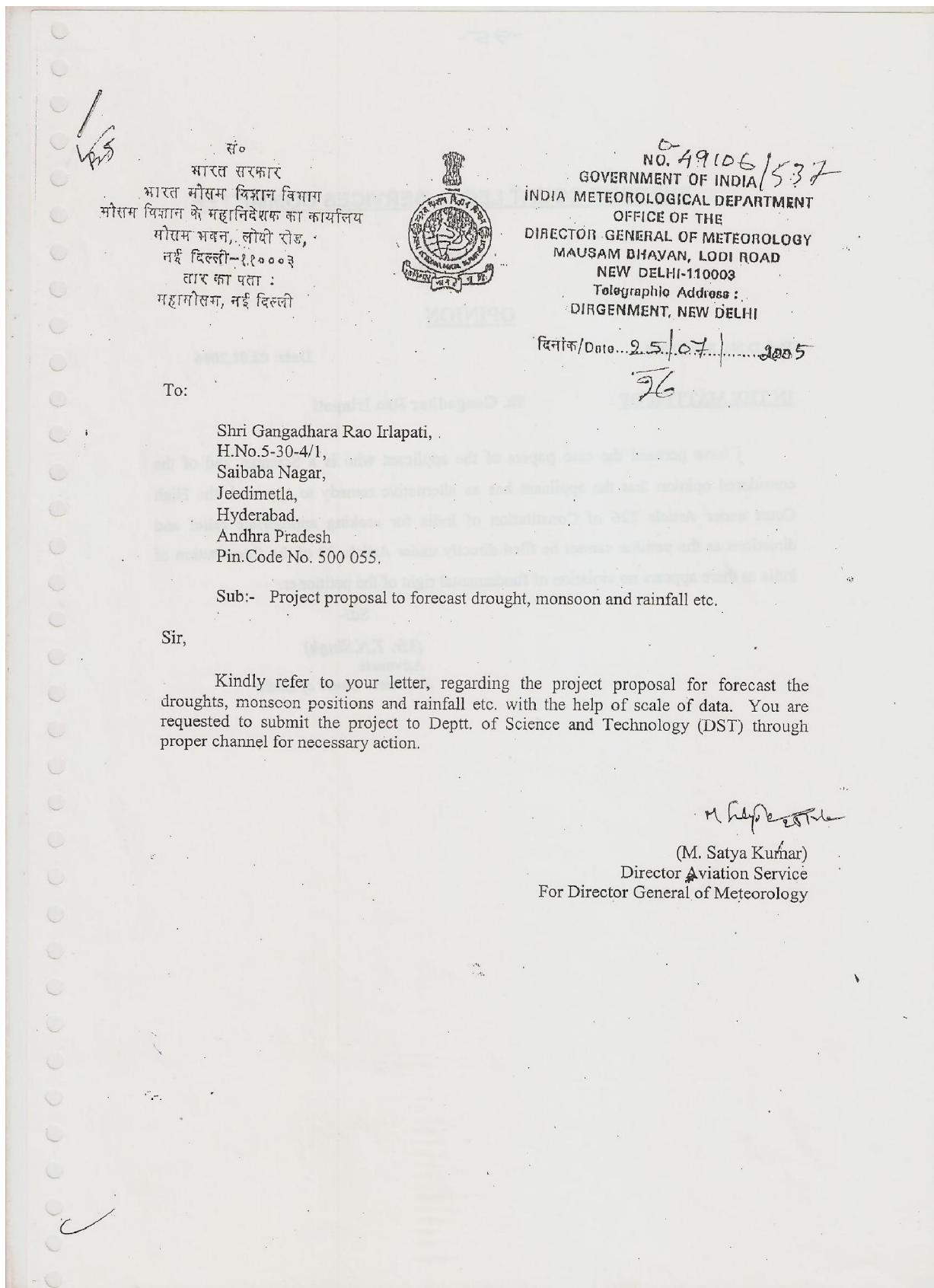
Computerised basic scale from 1888 year to 1983 year for the months of 1<sup>st</sup> June to September, 31<sup>st</sup>













डा. टी. रामसामी  
सचिव  
**Dr. T. RAMASAMI**  
**SECRETARY**

-92 -

No. DST/SECY/.../2009  
भारत सरकार

विज्ञान और प्रौद्योगिकी मंत्रालय  
विज्ञान और प्रौद्योगिकी विभाग  
टेक्नोलॉजी भवन, नया महरौली मार्ग, नई दिल्ली-110 016  
**GOVERNMENT OF INDIA**  
**MINISTRY OF SCIENCE & TECHNOLOGY**  
**DEPARTMENT OF SCIENCE & TECHNOLOGY**  
Technology Bhavan, New Mehrauli Road, New Delhi-110 016

June 1, 2009

Dear Shri Irlapati Rao,

I receive your letter of 11<sup>th</sup> May, 2009. Thank you. You may be aware that IITM is currently under the administrative control of Ministry of Earth Sciences. However, I have written to the Director, IITM requesting him to dos the feasible in consultation with their Secretary.

Kindest regards,

Yours sincerely,

(T. Ramasami)

**Shri Gangadhara Rao Irlapati**  
Asst. Section Officer  
A.P. Public Service Commission  
(Beside Gandhi Bhavan)  
Nampally, Hyderabad 500 001

- 93 -

No. F-12016/1/00-NA/100

भारत सरकार  
 भारत मौसम विज्ञान विभाग  
 मौसम विज्ञान के महानिदेशक का कार्यालय  
 मौसम भवन, लोदी रोड, नई दिल्ली-110003  
 तार का पता: महामौसम, नई दिल्ली  
 दूरभाष: 24611068, 24631913



GOVERNMENT OF INDIA  
 INDIA METEOROLOGICAL DEPARTMENT  
 OFFICE OF THE  
 DIRECTOR GENERAL OF METEOROLOGY  
 MAUSAM BHAWAN, LODI ROAD, NEW DELHI-110003  
 Telegraphic Address: DIRGENMET, NEW DELHI  
 Tel. No. 24611068/24631913, Fax No. 24643128,

November, 2009.

1. December

✓  
 Shri Gangadhara Rao Irlapati  
 A.S.O., A.P.P.S.C., Nampally,  
 Beside Gandhi Bhawan,  
 Hyderabad - 500 001, A.P.

Subject:- "Indian Weather Time Scale" – regarding.

Sir,

With reference to your letter addressed to Secretary, Ministry of Earth Sciences, regarding forecast relating to prediction of cyclone, monsoon, heavy rainfall etc., you may kindly refer this office letter No. O-49106/537 dated 25/26.7.2005.

However, your dedication and interest in the field of meteorology is highly appreciated.

Thanking you,

Yours faithfully,

*T Kumar  
1-12-09*  
 (Awadhes Kumar)  
 Scientist 'E'  
 for Director General of Meteorology

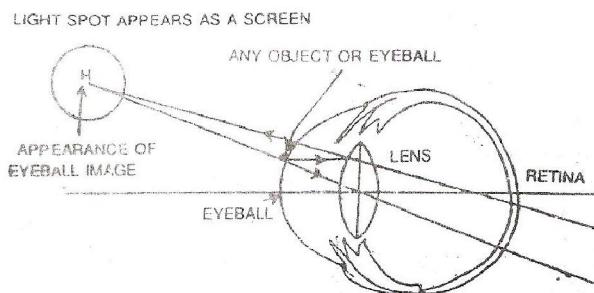
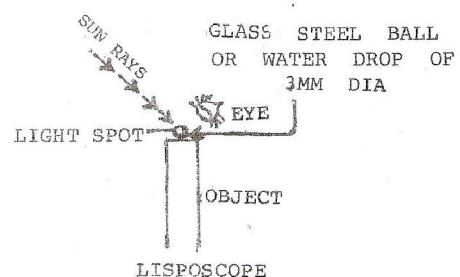
|   | T    | June  |       |        | July  |       |       | August |        |       | SEPTEMBER |       |        | OVERALL SEASON |       |       | REMARKS |   |
|---|------|-------|-------|--------|-------|-------|-------|--------|--------|-------|-----------|-------|--------|----------------|-------|-------|---------|---|
|   |      | R     | C     | T      | R     | C     | T     | R      | C      | T     | R         | C     | T      | R              | C     | T     | R       | C |
| 1 | 2020 | -9.5  | -54.0 | -39.2  | +5    | -15.8 | +4.70 | -11.2  | -10.8  | -35.2 | -19.1     | -26   | -1     | -12            | -6    |       |         |   |
|   | 1992 | 27.18 | -9.5  | -54.0  | -39.2 | +5    | -15.8 | +4.70  | -11.2  | -10.8 | -35.2     | -19.1 | -26    | -1             | -12   | -6    |         |   |
|   | 1964 | -31.6 | +21.3 | -15.0  | -36.6 | +108  | -13.4 | 799.5  | -17.8  | -11.8 | +1503     | +139  | +95.4  | +17            | +16   | +44   |         |   |
|   | 1936 | +31.7 | -9.16 | -13.0  | -14.1 | -35.3 | -7.00 | -12.5  | -65.7  | -32.3 | +7.82     | +21.2 | -39.2  | -3             | -29   | -5    |         |   |
|   | 1908 | -32.3 | -62.9 | +69.9  | +5.8  | -29.4 | -50.9 | -9.13  | -57.2  | -25.2 | +10.8     | +84.9 | +48.4  | +38            | -9    | -2    |         |   |
|   | 1880 | +21.5 | +15.2 | -99    | -24.0 | -50.2 | -46   | -60.7  | +2.63  | -99.4 | +56.2     | +19.7 | -51    | -11            | -18   | -30   |         |   |
| 2 | 2017 |       |       |        |       |       |       |        |        |       |           |       |        |                |       |       |         |   |
|   | 1995 | -1.01 | -11.5 | -36.2  | -13.6 | +6.5  | -20.9 | -46.7  | -20    | -23.0 | -71.7     | -17.3 | -49.3  | -33.5          | -27.1 | -16.3 |         |   |
|   | 1978 | -78.2 | -7.7  | +26.2  | -1.17 | +57.5 | +6.9  | +47.0  | -13.1  | +31.7 | +169.0    | +100  | +8.0   | +50            | +37   | +55   |         |   |
|   | 1961 | +34.0 | +27.8 | +70.9  | -37.9 | +32.9 | -24.3 | -8.35  | -4.9   | +13.3 | +20.0     | -49.6 | -6.1   | +12            | +1    | +30   |         |   |
|   | 1939 | -38.0 | -20.5 | -38.2  | -44.6 | -34.6 | -42.3 | -27.5  | +13.9  | 7398  | -3.95     | +81.7 | -13.5  | -28            | -12   | -23   |         |   |
|   | 1922 | -12.3 | -50.4 | -90.2  | -27.6 | -516  | -31   | -35.9  | -30.3  | -42.0 | +22.6     | -1.2  | -48.3  | -18            | -29   | -15   |         |   |
|   | 1905 | -17.6 | +8.61 | -29.3  | -64.4 | -62.2 | -72.7 | +16.8  | +103   | -10.5 | 734.8     | -58.1 | -6.5   | -5             | -4    | -18   |         |   |
|   | 1883 | +60   | +23.3 | -25.1  | -8.24 | -23.5 | -55.1 | +32.2  | +36.4  | -10.6 | +85.1     | -32.1 | -56.6  | +31            | -4    | -21   |         |   |
| 3 | 2024 |       |       |        |       |       |       |        |        |       |           |       |        |                |       |       |         |   |
|   | 1996 | +13.5 | +29.4 | +13.7  | -32.4 | -21.4 | -17.3 | +21.1  | +96.6  | -9.8  | -4.49     | +51.2 | +19.3  | -3.6           | +83.1 | +46   |         |   |
|   | 1968 | -330  | -28.3 | -38.7  | -28.0 | -39.4 | -38.4 | -32.5  | -34.2  | -99.4 | +1.007    | +55.6 | -26.6  | -20            | -18   | -39   |         |   |
|   | 1940 | -19.8 | +24.3 | -2.0   | +9.24 | -159  | -34.0 | -89.9  | -33.9  | -18.4 | -26.2     | +35.0 | -21.5  | -5             | -5    | -3    |         |   |
|   | 1912 | -61.1 | -53.3 | -74.3  | +12.5 | -20   | -5.6  | -11.8  | +20.0  | +15.3 | -12.1     | +41.4 | 70.3   | -15            | +1    | +10   |         |   |
|   | 1884 | -38.8 | -53.7 | -69.4  | +40.7 | -43.1 | -33.7 | -23.1  | -25.0  | -15.3 | +65.6     | -30.9 | +8.1   | +12            | -48   | -1    |         |   |
| 4 | 1999 | -24.2 | -25.8 | -13.9  | -23.5 | -30.1 | -48.8 | -2.28  | +7.8   | -40.9 | +25.8     | -24.0 | -18.4  | -9.1           | -20   | -15.9 |         |   |
|   | 1982 | +5.15 | +59.3 | -34.4  | +27.6 | +0.5  | -24.1 | -28.6  | -66.3  | -40.9 | +12.4     | +17.0 | -27.0  | +1             | -5    | +13   |         |   |
|   | 1965 | -51.1 | +40.2 | -36.6  | -44.5 | -23.3 | -24.2 | -27.0  | +2.08  | -9.7  | +80.8     | -7.04 | ?2.0   | +10            | +3    | +3    |         |   |
|   | 1943 | +13.5 | -54.8 | -20.8  | -31.4 | -30.9 | -35.8 | -50.5  | -9.5   | +27.8 | +99.1     | +1.76 | -14.9  | -5             | -20   | -20   |         |   |
|   | 1926 | -69.7 | +32.3 | +298.6 | -10.8 | -33.5 | +1.8  | -19.4  | -31.4  | -36.5 | -18.6     | -36.7 | -5.3   | -25            | -2    | -1    |         |   |
|   | 1999 | -8.87 | -45.4 | -32.6  | +0.71 | -45.4 | -22.4 | -35.9  | +2.06  | -4.5  | +1.24     | +26   | +4.3   | -12            | +44   | +7    |         |   |
|   | 1887 | +20.1 | +165  | +2.4   | -23.5 | +5.41 | -32.6 | 783.3  | +133.1 | +506  | +148.0    | +16   | +31.9  | +49            | +62   | +40   |         |   |
|   | 1870 | +11.5 | -64.1 | -89.5  | -42.4 |       |       | +50.6  | -22.8  |       | -58.1     | +25.5 | -29    | +25            | -7    |       |         |   |
| 5 | 2000 | +56.9 | +75.4 | +47.8  | -22.9 | -7.8  | -34.8 | +66.5  | +145   | 764.9 | -57.0     | -25.1 | -57.9  | +11            | +39   | +23   |         |   |
|   | 1972 | ?0.93 | +39.5 | -77.6  | -42.6 | -67.6 | -49.6 | -58.4  | -85.1  | +29.9 | +37.2     | +39.9 | +446.6 | -1             | -24   | -34   |         |   |
|   | 1944 | -17.7 | +99.9 | -0.2   | -1.96 | +5.6  | -17.4 | -310   | +33.6  | -35.4 | +74.8     | -1.92 | -10.9  | -39            | +15   | -2    |         |   |
|   | 1916 | +42.2 | -35.5 | -2.4   | +9.79 | +12   | +36   | -24.3  | +17.9  | -11.5 | +92.0     | +54.0 | -38.4  | +19            | +45   | +18   |         |   |
|   | 1888 | -18.3 | -55.3 | -56.2  | -4.76 | -53.2 | -32.5 | -43.6  | -42.2  | -57.4 | -49.3     | +72   | -57.6  | -28            | -14   | -39   |         |   |
| 6 | 2018 |       |       |        |       |       |       |        |        |       |           |       |        |                |       |       |         |   |
|   | 2001 | ?14.4 | -61.8 | -13.4  | -6.5  | -44.4 | -52.0 | -53.8  | -22.4  | -94.3 | -28.4     | +10.9 | +15.1  | -25.1          | +2.1  | -1.2  |         |   |
|   | 1979 | -18.7 | -26.9 | -23.0  | -530  | -40.4 | -60.9 | -50.4  | -578   | -64.2 | +99.3     | +37.8 | +12.1  | -8             | -20   | -21   |         |   |
|   | 1962 | -48.5 | +54.0 | -36.1  | -24.9 | -47.1 | +2.5  | -27.6  | +6.1   | -10.5 | +103      | +4.4  | +58.9  | +14            | -11   | +30   |         |   |
|   | 1945 | +17.1 | -58.3 | -67.7  | +14.2 | +112  | -6.7  | -2.23  | +17.7  | -26.6 | +18.9     | -15.6 | +6.3   | +8             | +15   | -1    |         |   |
|   | 1923 | -80.1 | -11.2 | -75.5  | +3.97 | -53.4 | -57.5 | -54.2  | -80.7  | -99.4 | +73.8     | +33.5 | -99.3  | -17            | -29   | -13   |         |   |
|   | 1906 | +95.6 | +57.6 | +180.6 | -10.7 | +18.0 | -34.9 | -3.33  | +13.8  | +10.9 | +34.8     | +47.4 | -45.6  | +10            | +29   | +18   |         |   |
|   | 1889 | -16.6 | -25.8 | +50.1  | +2.55 | +43.6 | -27.4 | +24.0  | +28.8  | -33.2 | +76.8     | +17.8 | +45.2  | +18            | -34   | +23   |         |   |
| 7 | 2019 |       |       |        |       |       |       |        |        |       |           |       |        |                |       |       |         |   |
|   | 2002 | -23.0 | +16.5 | +478   | -70.2 | -50.1 | -69.6 | +54.3  | -44.2  | +64.9 | -58.4     | -23.4 | 57.9   | -37.1          | -31.5 | -35.1 |         |   |
|   | 1985 | +19.3 | -21.8 | -4.6   | -15.4 | -85.6 | -6.8  | -44.5  | -18.3  | -24.8 | -39.2     | -62.0 | -44.1  | -23            | -20   | -4    |         |   |
|   | 1963 | -24.0 | -7.7  | -35.3  | -43.0 | +4.5  | -22.2 | -25.0  | +60.6  | -7.2  | -27.1     | -35.4 | -4.3   | +11            | +2    | -3    |         |   |
|   | 1946 | +270  | -31.6 | -22.0  | +5.69 | -39.7 | -9.8  | -18.3  | -16.6  | -30.5 | -47.4     | +6.4  | -16.1  | -8             | -20   | -15   |         |   |
|   | 1929 | -31.6 | -20.2 | +46.2  | -56.6 | -44.5 | -65.4 | -39.9  | -69.5  | -22.5 | +79.3     | +58.1 | -4.1   | -18            | -12   | -3    |         |   |
|   | 1907 | ?22   | -19.7 | +48.8  | -42.6 | -19.7 | -35.1 | ?      | -74.6  | -53.6 | -18.4     | -1.2  | -64.4  | -8             | -28   | -19   |         |   |
|   | 1890 | +1.86 | +84.1 | +2.3   | -7.57 | -11.6 | -39.7 | -25.0  | +9.21  | +50.7 | +78.5     | +38.5 | -30.7  | +10            | +22   | -15   |         |   |
|   | 1873 | -13.5 | -47.7 | -48.2  | -64.5 | -53.2 | -39.4 | -31.5  | -24.7  | -16.7 | +39.8     | +25.6 | -39.9  | -27            | -19   | -20   |         |   |

|    | JUNE |        | JUNE  |        | JULY  |       | AUGUST |       |         | SEPTEMBER |        |        | OCTOBER |       | REMARKS |       |     |    |     |
|----|------|--------|-------|--------|-------|-------|--------|-------|---------|-----------|--------|--------|---------|-------|---------|-------|-----|----|-----|
|    | T    | R      | C     | T      | R     | C     | T      | R     | C       | T         | R      | C      | T       | R     | C       |       |     |    |     |
| 8  | 2025 | +11.3  | -14.8 | -21.6  | -7.57 | +22.3 | -0.9   | 77.85 | -6.2    | -26.8     | -1.86  | -20.1  | -13.2   | -8.2  | 8       | +3.2  |     |    |     |
|    | 2003 | +6.09  | +11.3 | -37.4  | 27.99 | +11.0 | -5.0   | -26.4 | +52.9   | +47.3     | -54.8  | +31.1  | 34.3    | +20.3 | -43.6   | -1    | -5  | -3 |     |
|    | 1986 | 79.92  | +5.6  | -19.6  | -21.4 | -28.4 | +52.9  | +47.3 | -54.8   | +31.1     | -28.4  | -78.9  | -73.9   | -20.6 | +9      | +44   | -22 |    |     |
|    | 1969 | +6.09  | +11.3 | -37.4  | 27.99 | +11.0 | -5.0   | -26.4 | +53.5   | -57.1     | -25.0  | +85.6  | -7.2    | 764.9 | 70.8    | +28.8 | +35 | -3 | +19 |
|    | 1947 | -56.9  | -16   | -46.5  | -29.3 | +25.6 | -3.5   | -25.0 | +44.4   | -41.8     | -62.7  | -48.7  | +410    | +35.1 | -17.5   | -17   | -39 | -8 |     |
|    | 1930 | 740.5  | +42.7 | +39.8  | -46.6 | -61.0 | -44.4  | -41.8 | -62.7   | -48.7     | -22.7  | +24.3  | -35.6   | 66    | -30     | -38   |     |    |     |
|    | 1913 | -32.1  | -66.5 | -13.3  | +25.3 | -18.9 | -9.7   | -48.6 | -69.7   | -63.8     | -3.9   | -3.52  | -33     | -18   | +74     | -17   |     |    |     |
|    | 1874 | -45.9  | +39.5 | +7.3   | -4.1  | +50.6 | -13.4  | -43.8 | -58.1   | -59.8     | +15    | +252.0 | +32.3   | -2    | -12     | +14   |     |    |     |
| 9  | 2004 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1976 | -30.7  | -2.6  | -63.3  | +77.3 | -23.9 | +24.8  | +2.73 | +83.1   | +17.4     | 20     | -54.4  | -52.3   | +18   | 2       | +7    |     |    |     |
|    | 1948 | -69.0  | -48.1 | -61.5  | -45.8 | -35.6 | -26.6  | -58.7 | -15.6   | -48.9     | +66.3  | -19.3  | -8.1    | -10   | -30     | -19   |     |    |     |
|    | 1920 | -39.6  | -39.5 | -42.8  | -40.6 | -71.8 | -99.4  | +55.5 | -36.6   | -47.4     | -22.7  | +24.3  | -35.6   | 66    | -30     | -38   |     |    |     |
|    | 1892 | +20.1  | +16.5 | +2.4   | -23.5 | +5.41 | -32.6  | 783.3 | +133.1  | +50.6     | +148.0 | +16    | +31.9   | +49   | +62     | +40   |     |    |     |
| 10 | 2005 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1983 | +7.42  | +17.6 | +19.8  | +2.92 | -88.9 | +7.0   | +85.1 | +77.8   | +22.4     | +127   | +160   | +39.6   | +51   | +65     | +50   |     |    |     |
|    | 1960 | -29.2  | +5.97 | -12.1  | -39.3 | +23.1 | -17.2  | -67.6 | -88.5   | -59.9     | 7105.2 | +167   | +60.4   | -9    | +29     | +12   |     |    |     |
|    | 1949 | -26.3  | +51.6 | -8.4   | -24.4 | +13.7 | +3.1   | -11.9 | +29.5   | +8.9      | +106.1 | +109.0 | +61.1   | +5    | +50     | +47   |     |    |     |
|    | 1927 | +55.6  | +25.9 | +34.2  | +4.10 | +26.3 | -23.5  | -35.7 | +46.0   | -9.3      | +7.67  | +94.1  | +16.4   | +1    | +24     | +23   |     |    |     |
|    | 1910 | +81.6  | -22.2 | +2.0   | -36.6 | +76.6 | +2.1   | -34.1 | +62.9   | -17.8     | +76.6  | +55.2  | +4.6    | +10   | +45     | +22   |     |    |     |
|    | 1893 | +42.3  | +53.4 | -13.4  | +10.5 | +98.2 | -55.1  | +67.6 | -35     | -10.6     | +15.0  | +8.96  | -56.6   | +45   | +16     | +19   |     |    |     |
|    | 1871 | -41.2  | -59.5 | +399.6 | -44.5 | +31.0 | +65.6  | -77.8 | +6200   | -99.9     | +85.4  | +26.6  | +714    | -36   | -7      | -18   |     |    |     |
| 11 | 2006 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1989 | +71.8  | -47.9 | -20.3  | +72.1 | +26.5 | +80.2  | +2.64 | -79.6   | -10.5     | 253.3  | +59.8  | -99.3   | +43   | +49     | +42   |     |    |     |
|    | 1967 | +17.4  | -25.4 | -1.7   | +51.5 | +6.11 | -0.4   | -25.2 | -72.2   | -55       | +28.3  | +8     | -16.7   | +19   | -10     | +2    |     |    |     |
|    | 1950 | -51.7  | -12.2 | -40.7  | -33.7 | -20.8 | -9.4   | -67.6 | -7.19   | -59.9     | +31.5  | +11.3  | +2.8    | +1    | -5      | -9    |     |    |     |
|    | 1933 | +87.3  | -76.1 | -52.5  | +116  | -18.9 | -6.9   | -22.9 | +80.3   | -29.6     | 249.7  | -48.4  | -32.1   | +11   | -11     | -5    |     |    |     |
|    | 1911 | +0.78  | +3.47 | -22.9  | -36.6 | -26.4 | -22.2  | -28.4 | -59.8   | -62.5     | +1.00  | -22    | -13.5   | -20   | -32     | -18   |     |    |     |
|    | 1894 | +7.8   | -45.4 | -6.2   | +25.4 | +15.3 | -51.4  | +14.6 | -78.6   | -31.4     | +3.0   | -17.3  | -0.6    | +19   | +11     | -7    |     |    |     |
|    | 1877 | -43.2  | +5.41 | -70    | -75.6 | -65.4 | -53.4  | -58.5 | -48.5   | -56.3     | +15.9  | +7.20  | +21.4   | -39   | -19     | +21   |     |    |     |
| 12 | 2007 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1990 | +48.6  | -29.3 | -9.3   | -39.0 | -45.2 | -54.4  | +49.2 | -2.2    | +6.1      | +10    | +32.3  | -99.3   | +11   | +8      | -2    |     |    |     |
|    | 1973 | +0.31  | +0.5  | -33.6  | -9.1  | -29.8 | -48.7  | +42.2 | +15.4   | -19.9     | -40.0  | +10.1  | -31.5   | +1    | -8      | -21   |     |    |     |
|    | 1951 | -17.0  | -15.9 | +3.1   | -5.77 | -7.8  | +28.6  | -405  | -62.2   | -26.4     | -0.8   | -33.6  | -31.4   | -10   | -33     | +11   |     |    |     |
|    | 1934 | -3.04  | +25.6 | -4.5   | +22.8 | +27.0 | +5.9   | +0.3  | -68.0   | -18.8     | +11.5  | -62.4  | -40.4   | +5    | -30     | -1    |     |    |     |
|    | 1917 | +43.9  | +36.3 | +8.77  | +7.94 | -38.8 | -38.4  | -17.2 | +52.1   | +3.2      | +11.3  | +22.0  | +30     | +25   | +17     | +38   |     |    |     |
|    | 1895 | -17.5  | -44.5 | -21.4  | -7.9  | +27.6 | -17.4  | -15.4 | -27.6   | -4.8      | -60.3  | +41.3  | +25.5   | +45   | +2      | +19   |     |    |     |
| 13 | 2008 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1980 | +66.0  | -17.6 | +80    | -34.3 | -28.4 | -11.6  | -99.9 | 2017    | -6.6      | +2.48  | -447   | -37.1   | +5    | -25     | +20   |     |    |     |
|    | 1952 | -50    | +34   | -37.8  | -59.7 | -45.3 | -45.0  | -60.4 | -42.1   | -51.0     | -40.1  | -63.6  | -53.2   | -30   | -41     | -39   |     |    |     |
|    | 1924 | -4.8.6 | -58.8 | -56.6  | -36.1 | -13.3 | -45.2  | -16.7 | -38.6   | -32.8     | +105.9 | +81.4  | +7.4    | -7    | -3      | +8    |     |    |     |
|    | 1896 | -34.0  | -32.3 | -22.8  | -18.7 | -38.8 | -29.3  | +0.18 | -21.8   | -25.3     | +0.82  | -31.2  | -16.5   | -24   | -32     | 6     |     |    |     |
| 14 | 2009 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1987 | -31.1  | -36.5 | -53.8  | -12.6 | -6.2  | -53.6  | +0.63 | +30     | -20.9     | -52.1  | -18.0  | -60.6   | -18   | -21     | -33   |     |    |     |
|    | 1970 | 775.9  | -5.1  | +41.5  | -39.9 | -2.8  | -39.7  | +63.4 | +77.2   | +9.0      | +36.3  | +83.0  | +477.5  | +25   | +39     | -5    |     |    |     |
|    | 1953 | -20.3  | -26.5 | +0.8   | -56.1 | +4.1  | -40.1  | -35.7 | -48.4   | -20.4     | 214.6  | +54.8  | -10.3   | +25   | +10     | -3    |     |    |     |
|    | 1931 | +50    | -440  | +768.9 | +12.3 | -2.70 | -24.0  | +38.0 | -26.8   | +39.2     | +14.3  | -33.2  | +12.8   | +18   | -11     | -12   |     |    |     |
|    | 1914 | 7159.0 | -13.6 | -7.9   | +11.6 | -23.1 | -19.7  | -6.43 | +42.1   | -31.3     | +67.9  | +49.2  | +44     | +27   | +20     | +18   |     |    |     |
|    | 1897 | -34    | -42.6 | -57.2  | +47.5 | -9.47 | -48.1  | -34.6 | +32.1   | -26.5     | +42.4  | +12.8  | +39.4   | -1    | +35     | -2    |     |    |     |
|    | 1875 | -      | +11.5 | -64.1  | -89.5 | -47.4 | -      | +50.6 | -22.8   | -         | +58.1  | +25.5  | -29     | +25   | -7      |       |     |    |     |
| 15 | 2010 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1993 | -37.1  | -46.1 | -58.6  | -17.1 | +19.3 | -36.9  | -27.9 | +43.4   | -40.1     | -2.40  | +9.9   | -1.8    | -17.5 | -12.8   | -6.3  |     |    |     |
|    | 1971 | 77.9   | -31.3 | -32.3  | -61.8 | -26.5 | -57.4  | -19.4 | -25.4   | -24.6     | -14.3  | -46.7  | +5.1    | -29   | -35     | -10   |     |    |     |
|    | 1954 | -27.1  | -54.6 | -9.4   | -30.0 | +93.4 | -4.8   | -40.2 | -17.3   | -26.6     | 778.9  | -52.8  | 739.9   | +24   | -10     | +19   |     |    |     |
|    | 1937 | -50.8  | +15.9 | -89.6  | +10.9 | -9.48 | -35.2  | -43.5 | +63.1   | -31.4     | +11.3  | +86.7  | +444.8  | -18   | -11     | -28   |     |    |     |
|    | 1915 | +99.4  | -39.0 | +18.1  | -15.2 | +58.2 | -24.4  | -8.40 | -49.2   | +24.4     | -12.6  | +58.3  | -14.9   | +10   | +6      | +21   |     |    |     |
|    | 1898 | -20    | -37.2 | +5.3   | -47.8 | +30.2 | -18.1  | -34.6 | -42.1   | -51.4     | +42.4  | +106.4 | -8.5    | +18   | +3      | -3    |     |    |     |
|    | 1881 | -18.9  | +15.0 | +41.2  | -56.7 | -78.3 | -73.3  | -34.2 | +75.1   | -123      | +41.0  | +12    | +10.4   | -36   | +5      | +4    |     |    |     |
| 16 | 2011 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1994 | -29.0  | -40   | -55.7  | -20.0 | -98.9 | -9.7   | +6.71 | -10.8   | -37.2     | -71.7  | -71.3  | -49.3   | -23.5 | -34.9   | -21.4 |     |    |     |
|    | 1977 | 70.93  | +39.5 | -17.6  | -42.6 | -67.6 | -49.6  | -58.4 | +85.1   | +22.9.9   | -37.2  | +39.9  | +446.6  | -39   | -24     | -34   |     |    |     |
|    | 1955 | -49.8  | -48.3 | -37.6  | -55.5 | +17.2 | -39.2  | -16.5 | +94.7   | +3.2      | +29.2  | +10.6  | +1.0    | +35   | +20     | +3    |     |    |     |
|    | 1938 | 295.6  | 733.3 | +25    | 715.8 | -34.1 | -36.1  | +25.8 | +13.9.8 | 77.7      | +89.8  | +81.7  | 782.2   | +48   | +58     | -45   |     |    |     |
|    | 1921 | +44.2  | -4.16 | -39.8  | -66.0 | +75.5 | +2     | -47.2 | +45.7   | -30.7     | +50.6  | -23.2  | +2.5    | -1    | -5      | +13   |     |    |     |
|    | 1899 | -17.2  | -85.4 | -57.8  | -74.7 | -88.4 | -68.4  | -38.1 | -37.7   | -34.1     | -10    | +43.5  | -22.9   | -43   | -36     | -32   |     |    |     |
|    | 1882 | +20.1  | +165  | +2.4   | -23.5 | +5.41 | -32.6  | 783.3 | +133.1  | +50.6     | +148.0 | +16    | +31.9   | +49   | +62     | +40   |     |    |     |
| 17 | 2012 |        |       |        |       |       |        |       |         |           |        |        |         |       |         |       |     |    |     |
|    | 1984 | -34.6  | -56.1 | -37.4  | +0.50 | +49.4 | -15.2  | -58.5 | -84.1   | -71.6     | +24.6  | -22    | -37.8   | -20   | -30     | -23   |     |    |     |
|    | 1956 | 76.875 | +21.8 | +32.8  | 70.96 | +809  | +37.8  | -30.7 | -38.4   | -14.3     | +503.8 | +38    | +19.6   | +24   | +20     | +40   |     |    |     |
|    | 1928 | +37.3  | +21.8 | -56.2  | -21.5 | -38.5 | -20.2  | -27.5 | -17.4   | -29.7     | +102   | -3.44  | +9.5    | +9    | -5      | -2    |     |    |     |
|    | 1900 | -10.9  | -30.1 | -47.8  | +29.3 | +48.5 | -19.3  | -38.7 | -78.6   | -63.6     | +90.3  | +53.8  | +10.0   | +10   | -2      | -12   |     |    |     |
|    | 1872 | -44.5  | -13.8 | -0.2   | -29.9 | -17.7 | -18.1  | -45.0 | -99.1   | -9.49     | +44.4  | +54.3  | +16     | -25   | +4      | +18   |     |    |     |

|  | 18   | June  |       |       | July  |       |        | August |        |        | SEPTEMBER |        |       | OVERALL SEASON |       |       | REMARKS |
|--|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-----------|--------|-------|----------------|-------|-------|---------|
|  |      | T     | R     | C     | T     | R     | C      | T      | R      | C      | T         | R      | C     | T              | R     | C     |         |
|  | 2013 | +42.1 | +17.7 | +64.5 | -11.9 | -16.1 | -30.2  | -39.0  | -17.8  | -93.7  | +1.31     | -11.6  | +32.7 | -9.6           | +14.7 | +22.6 |         |
|  | 1991 | +42.1 | +17.7 | +64.5 | -11.9 | -16.1 | -30.2  | -39.0  | -17.8  | -93.7  | +1.31     | -11.6  | +32.7 | -9.6           | +14.7 | +22.6 |         |
|  | 1974 | -26.6 | -5.5  | -14.3 | -46.9 | -12.2 | -99.9  | -22.6  | -20.7  | -37.2  | +17.6     | +10.3  | +33.6 | -24            | +19   |       |         |
|  | 1957 | -16.9 | +19.5 | +45.3 | -49.0 | -12.9 | -30.4  | -1.91  | -26.6  | +21.3  | +12.4     | -22.4  | -12.1 |                | +8    | +24   |         |
|  | 1935 | -6.87 | +43.4 | -45.1 | +11.5 | +4.16 | -30.6  | -31.1  | +138.6 | +346.3 | +51.0     | -11.3  | -21.8 | +2             | +35   | -24   |         |
|  | 1918 | -93.3 | -45.9 | -16.8 | -46.1 | -56.3 | -62.1  | -57.0  | -38.2  | -40.5  | +1.00     | +18.1  | -13.2 | -40            | -29   | -20   |         |
|  | 1901 | -21.0 | -6.25 | -40.7 | -11.5 | -69.7 | -43.8  | -16.3  | +10.4  | -42.2  | -44.0     | +30.1  | -28.9 | -19            | -29   | -24   |         |
|  | 1879 | -8.51 | +18.8 | +3.2  | -27.8 | +48.1 | -116.5 | +31.4  | -10.4  | -99.4  | +56.7     | +19.7  | -51   | -9             | -6    | -16   |         |
|  | 19   | 2014  |       |       |       |       |        |        |        |        |           |        |       |                |       |       |         |
|  | 1997 | -59.7 | +7.9  | -65.1 | -40.2 | -54.2 | -37.2  | -33.8  | -40.7  | -48.2  | +10.6     | +134   | +109  | -33.2          | +14.1 | +15   |         |
|  | 1975 | -15.4 | -4.9  | +53.8 | +7.44 | +48.3 | -16.3  | -10.9  | -14.9  | -28.5  | +149      | +31.6  | +7.2  | +21            | +11   | +20   |         |
|  | 1958 | -60.6 | -19.5 | -42.3 | -10.1 | -16.7 | +22.7  | -32.0  | +105   | -15.9  | +13.0     | -10.4  | -12.7 | +8             | +10   |       |         |
|  | 1941 | +18.0 | -47.0 | +82.5 | -67.5 | +578  | -70.2  | -33.4  | -48.3  | +269   | +37.2     | +53.6  | +1.2  | -32            | +8    | -5    |         |
|  | 1919 | +26.6 | +6.66 | -20.1 | -41.1 | +57.3 | -19.7  | -55.7  | -80.0  | -49.2  | +457      | +10.7  | -26   | -32            | +2    | -15   |         |
|  | 1902 | -36.6 | -27.6 | -47.8 | -48.6 | -13.6 | -35.5  | -12.1  | -55.7  | -99.4  | +26.3     | -13.2  | +15.1 | -19            | -17   | +4    |         |
|  | 1885 | -20.7 | +19.4 | -4.2  | -14.1 | +11.8 | -31.5  | -47.8  | -41.8  | -67.3  | +38.5     | -25.4  | +5.5  | -18            | -18   | -10   |         |
|  | 20   | 2015  |       |       |       |       |        |        |        |        |           |        |       |                |       |       |         |
|  | 1998 | 21.32 | -529  | -34.5 | -21.5 | -58.6 | 29.8   | +15.4  | +20.2  | +5.1   | +49.0     | +70.6  | +56   | -50.9          | +37   | +25.3 |         |
|  | 1981 | +36.3 | -0.6  | -26.9 | +1.12 | -5.9  | +10.0  | +7.12  | -7.6   | -28.9  | +105.1    | +61.2  | +24.6 | +26            | +10   | +25.3 |         |
|  | 1959 | -4.76 | +76.3 | +18.3 | -11.5 | +9.27 | +20.5  | -34.2  | -165   | -30.9  | -99.9     | +136   | -28.8 | +40            | +10   | +12   |         |
|  | 1942 | 74.76 | +42.7 | -12.1 | -7.78 | -66.7 | -47.9  | +22.4  | -13.1  | -18.4  | -44.5     | -24.8  | +34.2 | -4             | -20   | -20   |         |
|  | 1925 | 6.28  | -47.2 | +1.0  | +2.38 | -9.2  | -10    | -4.93  | +19.1  | +2.4   | -0.54     | -18.4  | +386  | -2             | -14   | +4    |         |
|  | 1903 | -25.7 | -680  | +22.6 | +54.0 | -46.8 | +10.2  | +34.8  | +30.3  | +8.0   | +5304     | +72    | +7.0  | +45            | +39   | +37   |         |
|  | 1886 | +60.9 | +3.88 | +25.1 | +26.6 | +69.4 | -4.2   | +40.6  | +40.1  | +55.3  | -39.9     | +9.04  | -99.3 | +24            | +21   | +38   |         |
|  | 21   | 2016  |       |       |       |       |        |        |        |        |           |        |       |                |       |       |         |
|  | 1988 | -14.2 | -57.0 | -57.4 | +10.7 | +77.7 | +33.6  | -25.9  | +12.7  | +19.4  | +136      | +33.4  | +37.4 | +65            | +50   | +41   |         |
|  | 1966 | -54.9 | +67.3 | -32.8 | 715.4 | +14.3 | +32.3  | -7.57  | +0.5   | +6.1   | +61.3     | +14.8  | -27.2 | +3             | +20   | +9    |         |
|  | 1932 | +13.2 | -629  | -13.1 | 73.97 | -24.1 | -13.7  | +20.1  | +22.0  | -36.2  | +52.6     | -20.32 | -32.4 | +1             | -10   | -18   |         |
|  | 1904 | +15   | -33.4 | -42.5 | -4.6  | -22.1 | -51.4  | -69    | -83.0  | -38.0  | +36.9     | -39.6  | -41.5 | -24            | -55   | -30   |         |
|  | 1876 | -42.2 | -20.8 | -33.3 | -34.7 | 73.6  | -52.1  | -31.8  | -42.4  | -99.9  | -40.6     | -71.1  | -50.4 | -38            | -53   | -19   |         |

## Analysis Of Data Of Bio Forecast

| Date of Experiment | Number of Biolumicells | Actual Weather |
|--------------------|------------------------|----------------|
| 1-May-1991         | 8                      |                |
| 2-May-1991         | 14                     |                |
| 3-May-1991         | 19                     |                |
| 4-May-1991         | 20                     |                |
| 5-May-1991         | 28                     |                |
| 6-May-1991         | 22                     |                |
| 7-May-1991         | 50                     |                |
| 8-May-1991         | 65                     |                |
| 9-May-1991         | 83                     |                |
| 10-May-1991        | 89                     |                |
| 11-May-1991        | 72                     |                |
| 12-May-1991        | 40                     |                |
| 13-May-1991        | 30                     |                |
| 14-May-1991        | 14                     |                |
| 15-May-1991        | 11                     |                |
| 16-May-1991        | 6                      |                |
| 17-May-1991        | 12                     |                |
| 18-May-1991        | 3                      |                |
| 19-May-1991        | 10                     |                |
| 20-May-1991        | 8                      |                |
| 21-May-1991        | 16                     |                |
| 22-May-1991        | 9                      |                |
| 23-May-1991        | 12                     |                |
| 24-May-1991        | 5                      |                |
| 25-May-1991        | 6                      | Low            |
| 26-May-1991        | 10                     | Low            |
| 27-May-1991        | 19                     | Depression     |
| 28-May-1991        | 8                      | Cyclone        |
| 29-May-1991        | 3                      | Cyclone        |
| 30-May-1991        | 11                     | Depression     |
| 31-May-1991        | 9                      | Depression     |



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**ANDHRA PRADESH STATE COUNCIL OF SCIENCE & TECHNOLOGY**

(CONSTITUTED BY GOVT. OF A.P.)

10-2-289/16, 1st MAIN ROAD, SANTINAGAR, HYDERABAD-500 028.

PROCEEDINGS OF THE MEMBER-SECRETARY, A.P. STATE COUNCIL OF  
SCIENCE & TECHNOLOGY: HYDERABAD.

PRESENT: SRI G. VEERACHANDRA RAO.

Proc. No. ADMN/RESEARCH/231/91.

Dated: 25-06-91.

Sub:- APCOST - Minutes of Evaluation Committee  
on 9-4-91.

Ref:- Application of Sri I. Gangadhara Rao,  
Date: 7-5-91.

-:::-

ORDER:

In pursuance of the decision taken in the meeting of the Member-Secretary, APCOST, held with the Director, DRAC and the Director, A.P.Science Centre on 9-4-91 in his Chamber, an amount of Rs.150/- per month is sanctioned towards assistance to Sri. I.Gangadhar Rao to supply daily data of his work on measurement of Circular Ring Structures reflected on the Moon or Ball to further explore the inter-connection of Earth's Geo-Magnetic field with Natural Calamities and their effect on human impulse. This assistance will be paid for April, May & June 1991.

Sd/- G. VEERACHANDRA RAO.  
MEMBER/- SECRETARY.

//t.c.f.b.o//

  
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