

## Nagaland, Manipur, Mizoram & Tripura Indian Weather Time Scales

Gangadhara Rao Irlapati

H.No.5-30-4/1, Saibaba Nagar, Jeedimetla, Hyderabad – 500 055, Telangana State, India  
Email ID: [scientistgangadhar@gmail.com](mailto:scientistgangadhar@gmail.com)

**History:** I have conducted many researches on the Indian weather and proposed hundreds and thousands of Indian weather Time Scale pertaining to the all Homogeneous Regions, Meteorological Subdivisions, states and districts of Indian which can help tp 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 Indian weather time scale at the directorate of Economics & Statistics department in 2006, some correspondences were made with the environment, forest, science & Technology department for implementation of the Indian 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 Indian weather time scale. In 2010, these scales were consulted with the A.P state council of science & Technology in 2008, Sri T. Subbirami Reddy, Honable Union Minister of state had recommended the Indian 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 Indian weather time scale during the years of 2008-2008.

**Abstract:** 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 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.

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**Keywords:** Indian weather, astronomical forces.

### 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.

**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 years.

**Studies Carried Out:** Many experiments were carried out on the Indian weather Time Scale and it was successfully proved out.

Firstly, see the Indian weather 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 Homogeneous regions and subdivisions, states and districts of India.

#### **Conslusions:**

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.

		June			July			August			SEPTEMBER			OVERALL SEASON			REMARKS
		T	R	C	T	R	C	T	R	C	T	R	C	T	R	C	
1	2020	-77.18	-9.5	-54.0	-39.2	+5	-15.8	+4.70	-11.2	-10.8	-35.2	-19.1	-26	-1	-12	-6	
	1992	-77.18	-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	-17.6	-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	-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	
	1995	-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	
	1978	+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	
	1961	-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	-36.8	-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	734.0	-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	+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	
	1996	-330	-28.3	-38.7	-28.0	-39.4	-38.4	-82.5	-34.2	-99.4	+1.007	+55.6	-26.6	-20	-18	-39	
	1968	-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	
	1940	-61.1	-53.3	-74.3	+12.5	-20	-5.6	-11.8	+20.0	+15.3	-12.1	+41.4	20.3	-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	22.0	+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	
	1909	-6.87	-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	283.3	+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	-70.93	+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	-36.5	-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	?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	
	2001	-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	
	1982	-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	
	1962	+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	
	1945	-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	
	1923	+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	-23.0	+16.5	+478	-70.2	-50.1	-69.6	+5.43	-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	-36.3	-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	+1.88	+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	

8	JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER		REMARKS	
	T	R	C	T	R	C	T	R	C	T	R	C	T	R	C	
2025	+11.3	-14.8	-21.6	-7.57	+22.3	-0.9	27.85	-6.2	-28.8	-1.86	-20.1	-13.2	-8.2	8	+3.2	
2003	+11.3	-14.8	-19.6	-21.4	-28.4	+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	-34.3	+20.3	-43.6	-1	-5	-3	
1969	+6.09	+11.3	-37.4	77.99	+11.0	-5.0	-26.4	+53.5	-57.1	-78.9	-73.9	-20.6	+9	+44	-22	
1947	-56.9	-16	-46.5	-29.3	+25.6	-3.5	-25.0	+85.6	-7.2	764.9	70.8	+28.8	+35	-3	+19	
1930	740.5	+42.7	+39.8	-46.6	-61.0	-44.4	-41.8	-62.7	-48.7	+410	+35.1	-17.6	-17	-39	-6	
1913	-32.1	-66.8	-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	+20	-36.6	+76.6	+2.1	-34.1	+62.9	-17.8	+76.6	+55.2	+4.8	+10	+45	+22	
1893	+42.3	+53.4	-13.4	+10.5	+98.2	-55.1	+67.6	-35	-10.6	+15.0	-0.96	-56.6	+45	+16	+19	
1871	-41.2	-59.5	+399.6	-44.5	+31.0	+65.6	-77.8	+6200	-99.9	+65.4	+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	753.3	+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	749.7	-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	-8.2	+25.4	+15.3	-51.4	+14.6	-78.6	-31.4	+3.0	-17.3	-0.06	+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	-9.4	-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	-0.3	-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	+87.7	-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	7017	-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	+08.2	-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	714.6	+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	+60.8	+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	27.89	-31.3	-32.3	-61.3	-28.6	-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	278.9	-52.8	239.9	+24	-10	+19	
1937	-50.8	+15.9	-89.6	+10.9	-9.48	-35.2	-16.5	+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	20.93	+39.5	-17.6	-42.6	-67.6	-49.6	-58.4	-85.1	+22.9	-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	95.6	733.3	+25	215.8	-34.1	-36.1	+25.8	+13.9	87.7	+89.6	+81.7	782.2	+48	+58	-45	
1921	+44.2	-4.16	-39.8	-660	+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	26.875	+21.8	+32.8	70.95	+809	+37.8	-30.7	-38.4	-14.3	+503.6	+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	+138.8	+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	7269	+37.2	+53.6	+1.2	-32	+8	-5	
	1919	+28.6	+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	?1.32	-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	?15.4	+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	?3.97	-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	

4 MANGALAND													
Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec		
2012													
1984	-75.97765	89.56383	-48.08613	-67.99007	-59.51964	-35.89905	-49.37503	-41.51899	-15.60473	-20.75403	-100	-35.9649	
1985	20.11172	95.51078	-17.34445	52.10918	-44.51467	-8.166711	-21.46813	13.76395	-23.06802	-20.53441	146.053	-20.1758	
1986	90.56725	-30.85502	-50.95584	-73.50801	64.75389	41.13913	-56.60365	-15.5351	-41.06034	23.61344	45.14173	-100	
1987	20.01152	206.69114	65.61172	-27.29529	82.23355	-36.06056	38.31071	61.49994	-40.0936	-60.59748	91.30878	-38.4211	
1872	83.71888	63.14458	-54.54545	62.82818	69.76394	-52.26391	5.526180	31.25432	20.26651	14.37866	-92.6378	-46.1234	
1930	44.11408	105.548	35.04785	-48.62948	70.47966	-27.12044	27.83880	25.98389	31.75819	66.81354	933.1496	-100	
2013													
1981	-7.871225	58.73686	-16.91515	-40.50851	-61.5527	-38.44117	-46.16749	-53.01953	15.56082	31.35595	105.4438	188.9365	
1982	58.18566	95.91038	73.55459	-35.33999	76.00452	32.93247	-2.186948	27.71303	-29.23387	8.312593	140.9349	-100	
1983	127.3343	6.319703	93.01633	-66.29938	81.318729	-33.41567	-57.15046	-7.7389411	-8.820296	-35.15367	-41.30709	95.614	
1984	100	-34.743893	-84.09361	-41.67246	-88.64892	-38.97194	-51.09319	17.14614	-37.50952	38.81456	-20.86614	-100	
1985	-72.6253	94.05204	44.71684	-41.49921	62.30537	-15.95311	-12.53661	19.90194	-29.05973	59.85866	20.97244	-55.6931	
1986	36.98883	-39.4052	-68.18182	18.2134	89.77001	23.35449	50.28389	-24.4648	-18.34631	29.86337	181.0236	-88.5935	
1879	79.02963	79.36803	-82.53589	83.52353	-71.83576	-20.282117	-28.99629	31.28884	16.53666	24.46324	57.63154	14.03591	
2014													
1981	63.12745	17.10037	9.092509	-48.3871	-70.02963	51.54224	-6.724627	-40.11529	22.36399	-70.13046	41.70029	499.1228	
1982	-37.2095	-17.47212	-71.17225	51.6125	-59.25565	49.38443	14.10575	41.80311	22.21529	30.64411	119.2911	-60.0823	
1983	50.03795	94.87792	50.12488	-44.51613	54.64501	50.23825	35.3797	20.31112	38.82995	19.64867	83.85877	-42.9825	
1984	289.9441	304.461	65.19789	-15.58113	-48.25022	-1.39352	-29.70192	51.48166	-35.21981	3.188009	56.85919	62.3869	
1985	-45.2514	-51.73636	-83.13359	-47.94045	36.75289	540.7935	30.66663	21.25412	9.048362	61.1581	207.0866	85.0879	
1986	-100	-17.07952	-66.18565	23.97022	71.26993	20.71945	50	24.01714	21.253387	27.57115	64.17123	64.9373	
1885	81.70988	19.95911	-9.518595	-47.09123	-34.01527	-24.54417	-47.56565	21.94476	17.39252	42.08499	161.4173	57.5943	
2015													
1988	83.74107	12.26366	69.73688	-18.31766	-51.2233	-62.11926	-25.49681	23.11415	-51.52678	51.22656	101.1811	-68.2456	
1989	35.75419	28.62954	-33.11248	3.571573	-26.10897	-65.7077	-44.99649	40.53736	-48.28954	-20.39688	45.15411	48.2451	
1990	101.1173	258.9219	72.46551	63.34443	24.78024	-42.6732	-42.56309	12.12214	-31.52545	105.311	-98.4732	-300	
1991	-37.3096	-25.87643	-41.18356	5.012450	-23.12956	20.52785	-52.39932	6.881473	-21.59124	22.08048	443.7008	-300	
1992	-6.303911	4.832714	-80.50339	-10.22113	-93.0957	-49.60313	-34.49296	18.91659	-29.01716	-2.312101	22.013455	-300	
1993	49.16201	3.115582	36.96172	-81.68714	45.88859	-28.9361	-67.432016	11.52652	-16.87305	-12.9473	90.6128	-300	
1886	95.53073	-61.71004	81.68856	-46.69935	-23.46811	29.28311	-8.463869	13.50408	-18.53754	-23.81267	-99.7126	-78.5849	
2016													
1988	93.79609	7.972978	10.16746	-60.09326	51.56076	-38.84676	5.340667	15.71922	-44.06128	111.581	110.6293	-12.2809	
1989	-17.31844	58.14126	70.55669	63.07889	-73.08086	8.793154	-41.51881	33.1835	5.301142	22.38126	15.35411	47.01754	
1990	63.68715	33.44681	18.54067	-43.42431	23.46811	-29.12463	25.19517	30.1456	-32.87321	78.85491	187.7931	71.3298	
1991	99.44139	67.28625	88.95632	79.62179	-77.76107	-40.55372	-33.50309	-28.1084	-34.60218	28.86769	271.7598	55.3645	
1992	-100	-12.63941	52.27273	56.17866	-48.12511	-21.86563	-41.58013	4.573507	-21.15131	25.82664	200.38122	-72.8207	
2017													
1988	41.45251	90.33457	-30.38276	59.02744	-21.73179	-28.00112	-41.31086	4.050433	-4.929197	39.55758	516.5354	-99.1228	
1989	-100	-83.64112	66.96365	-48.1801	-61.46057	34.101516	54.22385	26.65605	-7.082641	-61.22017	7.480315	-100	
1990	-18.54799	-14.12639	126.7903	-62.60646	-30.58011	31.74043	-47.97729	39.42463	-23.69715	-40.14314	28.74016	-68.9474	
1991	-47.59777	22.67638	58.18517	-46.94709	-32.27271	-46.45035	115.7346	-46.91705	-16.03744	-41.71508	65.35411	-88.8471	
1992	43.28022	-92.56504	63.13876	-48.18859	-82.13209	-27.24287	-38.75089	5.192635	-32.91717	-13.40273	5.313811	-51.7544	
1993	-72.06704	-4.660462	204.54655	-42.9306	-82.46209	-49.16241	-26.50365	13.57008	-10.9458	34.54782	95.77555	60.5763	
1883	27.3703	62.45351	-6.100378	52.10918	-50.94124	-35.60005	-41.60752	24.78098	-26.02144	-29.57941	-48.8185	99.5825	
2018													
2001	100	204.461	99.99823	-69.03226	-65.14714	-18.67396	10.52165	34.68354	9.869594	43.79636	245.7756	-100	
1979	97.20527	66.171	8.851675	-73.25062	-69.36434	56.40118	33.428701	34.68354	-23.30713	60.253279	71.71584	758.7719	
1980	-17.90504	10.34717	91.02871	-15.33469	-79.05525	17.42197	-46.8117	-10.771	14.74215	-7.09117	98.8185	-100	
1981	108.3799	93.36858	-68.18182	63.11911	-34.84913	-27.66708	36.28911	25.15835	-35.85203	-4.246697	60.37352	173.8847	
1982	-100	64.11277	-22.68804	20.04963	-73.84448	-26.06247	-48.15427	20.20713	34.27337	-3.383714	271.6835	-66.4512	
1983	-74.80034	160.773	6.25931	42.92804	-71.83576	-40.90889	-33.91753	5.132286	-25.28811	-21.46605	46.41669	62.1807	
1889	72.09154	8.178429	49.16368	38.51117	-70.26843	-42.19714	-37.61303	-36.49022	8.869356	41.58216	183.8583	60.5263	

2013	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1903	-7.76757	45.12714	19.86648	67.1464	-72.4887	-24.15059	18.84111	-31.6693	78.58034	47.24463	202.3622	51.7562
1905	84.9162	4.033239	2.900331	51.41439	66.96184	-40.77508	44.33995	-54.01611	-37.0033	47.60356	7.480315	47.8947
1906	100	-84.01443	-29.1896	-46.39427	-71.21638	-26.60006	31.58861	19.93094	-38.12743	65.77769	-62.38472	80.7018
1946	-100	-45.81413	70.75426	4.813856	-75.16323	-38.8644	-4.686173	48.69159	-30.79563	93.01431	-89.67713	285.3649
1929	0.558659	-38.06691	-46.81895	5.60734	-62.38071	16.08415	-40.17033	23.10402	-4.054602	51.33577	-80.70365	38.59549
1907	89.84411	4.089719	-3.115789	-4.962773	-80.76855	-46.4237	-38.3845	45.65915	-22.58897	60.83179	-45.27599	172.807
1890	-11.17318	100	37.39234	-47.4938	-76.58212	-48.28838	12.87825	-42.50833	-22.99537	15.34877	-36.22007	35.0877
1875	-44.13408	-31.37026	-15.66985	-28.70908	-86.67332	38.51173	-50.35486	14.50897	-42.24649	66.68815	-62.20472	10.50632
2000												
1943	100	97.56506	57.85474	-43.5732	-75.92918	-71.21564	51.68736	-29.71131	2.121685	21.34027	15.74852	208.7319
1964	70.85694	2.60228	42.35132	-0.099336	-60.28126	-27.13859	30.78926	44.71475	16.81197	81.66442	44.68418	52.6116
1936	69.77134	69.14498	40.19335	19.20103	-23.3325	-35.81373	26.58722	-1.389858	18.24633	1.871751	55.51183	67.54313
1948	15.64246	-43.12268	-95.52446	58.26123	-78.26695	4.618378	1.086892	53.17169	-38.31511	7.417036	159.8475	-100
1893	50.13409	102.73075	100.4785	-61.14144	-70.41688	-16.12885	40.24131	-19.14845	-12.63051	-18.76903	67.37231	21.0576
2021												
1999	-99.48130	-100	-99.2823	91.91067	-52.37118	-61.6572	-32.81276	-4.766097	-18.13435	-0.71558	-38.18898	22.15238
1983	-39.6648	266.173	11.36364	-50.42184	-66.96158	-32.44578	22.27793	-18.11277	-6.072181	26.41503	172.8346	-2.63158
1988	-31.79888	172.8625	-57.05742	-32.8536	-73.09312	-18.12449	-12.00852	-18.6191	-25.58503	-35.62435	6.239213	307.8847
1941	201.1173	-6.319703	19.1684	-60.84169	-87.39327	-40.01058	47.90632	-5.598575	24.86274	20.46226	-386	-100
1976	100	34.52749	85.14746	41.38938	71.53848	-52.97126	35.52165	33.04948	11.01404	5.7996801	-53.3672	87.45141
1909	86.03352	86.51885	97.96811	-24.26799	-77.83377	-18.7588	56.44074	12.82125	31.98128	2.517411	162.09321	433.4563
1987	-32.40221	51.57386	5.62201	5.806452	88.17539	-53.40215	43.0862	20.82894	29.39158	53.22256	23.29835	30.1754
1870												
2022												
2005	91.28345	7.434944	37.15111	-61.93548	-69.6886	-76.30248	-81.57704	12.57214	7.899316	18.216237	69.68504	57.03354
1983	40.28232	27.13755	124.04311	16.87345	73.13931	-54.98148	-51.47764	-17.28023	-40	18.47755	11.02362	22.352
1960	-100	88.15409	-51.14354	83.17618	-74.88659	27.96685	26.11285	28.42112	8.767561	-27.52115	72.2283	-100
1949	47.59777	-81.41264	-79.90891	17.17122	-63.05876	30.25621	-32.61128	22.62737	-2.388892	-25.22446	75.98625	44.7368
1927	77.08457	116.203	-45.13893	47.04715	-75.41418	-92.13088	-17.17175	-100	29.45359	4.303839	28.34646	93.1228
1933	6.145251	-34.20074	62.08134	47.13603	25.85384	40.24548	-19.76579	-11.46145	7.3862715	0.390321	70.47344	-100
1893	60.3752	121.1886	28.13605	-16.00491	-37.87042	9.945336	-22.6984	-12.12177	2.086681	21.34027	61.41732	541.772
1871	-359	18.55911	41.50718	26.2531	-79.59968	-49.51221	31.40575	25.66158	-21.18569	-13.14249	84.64567	556
2023												
2006	-100	49.21411	-99.2823	-52.80397	-67.64395	-29.307	58.76508	-27.70908	40.03048	-63.3402	-51.53948	-78.4386
1985	-61.80447	-12.39201	88.33018	-16.41382	73.63134	-48.66867	-4.151881	25.42002	-22.27768	13.88919	-22.17717	60.57683
1952	69.23934	-15.61338	15.92509	-32.35212	77.08671	-54.59185	-32.07989	-40.88798	-21.78315	18.15224	-24.43945	-100
1960	64.24581	38.28996	-40.55224	-26.72452	81.25359	-37.27718	-47.12085	-7.779526	-45.99064	25.30904	320.47224	49.1228
1933	-98.48268	71.34221	-72.36842	-34.59057	75.20758	-52.61889	40.52732	1.099922	-45.21061	69.21601	-78.34646	50.81711
1911	70.53866	77.17143	4.132971	-34.66005	69.93462	32.37531	25.78107	-23.87342	40.11778	17.75721	-44.25197	-100
1894	-97.20067	64.41222	21.72269	-42.92604	66.81827	38.77509	31.11111	1.86412	10.72081	45.1522	348.189	108.7719
1877	82.68156	45.72491	30.26316	38.48635	75.3747	67.00758	78.54657	-9.750104	7.550202	54.71698	54.131071	90.35409
2024												
1996	27.11238	36.80397	37.03134	-32.66509	39.25163	-57.03545	29.18737	-28.7687	-24.21217	26.35003	-57.48031	-300
1968	9.697282	28.39618	7.525848	-37.44817	-72.52637	-35.26098	16.74547	-21.28884	44.61778	28.75210	48.11034	91.2283
1947	35.53073	86.93885	81.13097	-36.4208	65.43283	6.80656	8.935243	18.1588	5.135627	43.83118	-98.4252	173.4386
1917	41.10382	8.921931	17.16289	12.95288	72.86511	-51.82047	-36.35557	-29.11207	-25.0134	15.6133	35.82617	57.8847
1884	34.74865	35.4052	-13.17751	-18.13414	-45.41235	-33.68706	-47.18595	-15.18486	-23.21173	-6.766128	94.88189	89.0877
2025												
2003	97.2362	61.71004	10.64533	26.26087	64.33953	-8.169453	-37.32498	-44.71803	-2.30889	-27.71633	-42.51969	479.82416
1986	48.22334	48.65888	35.39193	10.32758	86.84098	-18.21661	-49.48545	-22.30113	2.39782	58.67068	192.2641	38.2895
1969	48.27334	48.65888	20.38493	10.32758	86.84098	-18.21661	-49.48545	-22.30113	2.39782	58.67068	192.2641	38.2895
1947	35.53073	86.93885	81.13097	-36.4208	65.43283	6.80656	8.935243	18.1588	5.135627	43.83118	-98.4252	173.4386
1910	34.13408	105.348	26.04785	-48.44486	-20.47965	-27.12044	-27.83889	25.18389	-34.75815	48.28354	603.1496	-100
1913	82.12791	81.56877	2.511962	-31.10338	-68.50829	-26.5754	-28.90349	11.56248	-53.13885	0.583266	51.18311	42.15536
1891	95.52073	30.11152	41.38756	-13.20034	38.90531	26.03103	-33.46895	32.93804	34.29017	70.51737	128.3465	59.3325
1824	134.6368	230.855	-19.37295	-41.23821	-72.4008	-32.03958	16.66075	-44.21011	16.59906	41.13931	6.299013	103

2006	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1987	37.40729	51.67386	5.62201	5.80645	-88.97579	50.43515	-43.0802	20.83154	75.39158	-53.22056	78.22235	-70.1754
1970	174.1298	51.47381	-70.78947	-58.10521	63.1994	-32.53394	-30.8902	38.13579	-41.15449	62.02822	70.20104	88.5068
1953	68.71508	-53.15525	35.16796	29.66983	56.66298	-37.32411	-35.49313	13.30059	35.71838	50.61809	-61.6065	-80.0018
1931	-95.63073	-13.18379	-44.73684	-20.02481	69.85183	-53.83799	-26.42122	51.82969	20.65523	17.19584	92.91539	31.3333
1914	588	158.3645	25.78493	11.81409	70.23054	-46.30577	-41.62537	4.124381	-39.21994	-12.35239	64.17323	518.6211
1897	96.64884	-93.44238	8.8515675	-84.01985	70.26819	-34.05041	35.55713	11.88971	-20.40562	28.45100	135.3741	-81.4961
1875	186.0335	-21.00372	30.23531	-38.41193	64.5781	-10.95845	-20.36988	41.58809	-42.49671	-69.54121	-85.41307	-44.7388
2007												
2010												
1993	-86.01352	566.9345	-11.36364	25.11166	38.39963	-32.86898	17.49511	-17.56091	-10.53322	50.81122	46.45669	-100
1971	41.34678	27.11358	-80.67201	9.380397	78.46811	-18.55699	50.21259	17.72152	-33.13573	-6.634324	217.2441	-67.5639
1953	67.94711	102.1206	71.04478	20.02893	61.82069	-14.3361	-37.89922	6.283049	-17.5791	67.3833	-92.91399	86.8421
1932	505	17.84387	82.65555	26.40268	72.87095	-37.71028	40.13688	2.949915	32.66131	20.75472	-46.45669	466.6967
1915	-883.2489	11.75465	-6.818183	25.01241	55.63787	43.57258	-37.38149	6.057914	25.99344	17.30644	40.73627	-200
1898	3.351955	51.900375	-82.85474	88.73445	-48.779	6.241389	-40.96277	6.543594	-21.050384	-14.89915	97.4138	69.2583
1883	47.65336	-75.836471	49.2623	-14.81831	-51.62173	43.04355	-27.97761	-19.63136	9.474478	22.45668	44.48819	-29.1474
2008												
2000	-11.17318	8.395725	17.29865	1.3895748	46.84133	-93.03675	71.93938	-10.60279	21.34737	12.94126	-21.66505	-100
1972	-77.65361	18.85811	59.33014	46.15385	78.84179	-41.06071	56.58867	-12.77015	53.41669	54.26155	42.20472	45.1228
1954	25.63226	21.93369	49.16766	-54.51117	78.49071	-10.6244	20.63268	20.01772	-1.49766	49.83335	-59.6063	-100
1936	66.44045	-71.40562	81.33931	-13.95504	86.75289	-48.4243	-43.16891	30.81203	5.39.6810	78.59466	12.20472	60.5263
1888	56.42458	108.92129	42.84758	22.81841	71.20794	50.41202	-31.91298	6.079919	-12.35569	-31.06092	54.11071	-100
2007	-100	31.54665	69.61221	1.726971	-20.94425	16.89296	-14.00706	46.49332	11.41651	2.963043	211.9912	-59.1722
1992	100	31.15685	52.33273	15.68238	-21.3767	37.54188	-26.77431	-42.34333	21.52026	15.35652	104.7244	3.524372
1973	-31.228402	114.49881	60.88517	39.47891	-41.12155	20.35197	-47.81083	31.04718	35.72543	-1.3662938	568.5039	351.7544
1951	33.70536	200	60.52632	22.59894	-81.85515	5.184271	-23.4241	6.144999	64.18897	64.34513	18.505%	-51.7549
1939	74.30168	300.4833	61.39313	-41.29032	67.21519	13.62938	-13.85125	-15.27043	34.79619	7.091333	340.0669	33.3007
1917	100	191.30866	63.15388	14.93792	84.75264	52.12485	-32.06023	21.12223	-12.10608	21.27521	342.3134	-100
1895	-72.06304	47.026402	6.3397113	2.231251	60.35912	-45.28399	37.15401	1.03933	-4.000506	11.97137	13.33583	564.186
1880	3.910615	47.00341	36.50478	40.049163	75.06728	-42.23195	19.19996	4.073648	-44.71119	26.54522	172.2477	22.86006
2011												
1994	54.18993	98.51101	128.82248	-31.55335	82.44601	-54.79601	50.31292	4.050633	-4.020597	39.55758	518.5259	-99.1773
1977	40.78217	-76.36248	73.68471	44.76407	71.30468	-25.26715	38.84606	21.70151	-31.04212	-12.5473	11.282976	103.5088
1955	-71.18436	91.82156	25.47847	13.94541	71.60943	-41.44834	29.06317	24.11968	-28.81403	21.99089	501.5248	71.4798
1938	41.23184	60.59348	10.51637	48.112	31.83325	-29.01837	93.01724	-11.12569	-17.56611	15.56977	229.42113	-100
1921	41.22067	41.26194	120.45765	41.731697	75.43948	-42.46961	15.92934	26.58866	16.53883	37.31945	76.01575	99.1273
1899	6.702211	65.51107	5.0292023	39.90076	69.36213	-24.26338	7.93263	-4.665605	-10.18008	54.71938	30.31496	24.68821
1887	-29.66448	266.171	-21.36394	50.42184	66.46158	-31.49528	82.02930	18.11227	6.021841	26.41509	172.26396	-3.63153
2004	71.50838	43.80963	88.35177	10.939258	89.39993	-29.57125	3.619588	-41.35788	92.17161	20.36435	93.91333	91.2281
1991	27.37493	25.27841	37.08138	-18.54279	82.9105	-12.4455	33.53942	20.4649	-36.31825	75.27651	3.1493806	98.2456
1948	93.644139	106.83431	68.54067	-31.86104	-52.02158	55.10492	-43.03693	27.11162	33.47854	21.27521	129.7638	71.0208
1930	-97.73343	53.15985	103.11	56.12903	83.01305	-49.16291	50.71237	27.56809	6.133847	-34.5383	41.07087	98.2866
1892	91.43211	63.56877	-16.09727	3.088671	-65.53007	-55.36942	51.2075	-38.75489	-60.31201	26.93559	118.50299	-48.2956
2008	130.1676	5.562008	-39.5953	85.60374	80.87634	63.42484	-46.77427	18.41189	-42.36349	0.195182	-58.4252	-98.2456
1980	93.50279	81.38409	15.311	42.43126	38.60121	-52.44225	42.93825	50.18646	-42.92216	56.14834	-100	-92.0605
1957	32.06204	86.24935	-35.16796	10.27395	-63.12155	36.67783	-24.64534	-42.2767	-22.12168	114.363	100.0874	-100
1931	66.38045	49.44238	47.020157	26.30273	-88.78453	-34.10257	43.31805	18.39594	-36.81397	21.53546	473.58943	-100
1894	97.2063	64.21227	217.2345	-42.50384	66.83827	-28.22503	-31.13011	-34.08516	10.20281	25.7529	168.189	106.7721