

## Madhya Maharashtra Indian Weather Time Scales

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**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 India which can help to forecast the weather changes in advance in 1980, Sri G. Surya Rao MLA had sent these Indian weather time scales to the chief minister of Andhra Pradesh for consideration and necessary action in 2004, some consultations were made with the planning department to implement the 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  $23\frac{1}{2}$  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.

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### 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.

	2020	June			July			August			SEPTEMBER			OVERALL SEASON			REMARKS
		T	R	C	T	R	C	T	R	C	T	R	C	T	R	C	
1	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	299.5	-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	-9.19	-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	-49.5	-6.1	+12	+1	+30		
	1939	-38.0	-20.5	-38.2	-44.6	-34.6	-42.3	-27.5	+13.9	2398	-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	784.8	-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	-82.5	-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	72.0	+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	+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	264.9	-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																
	2001	714.4	-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	+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	722	-19.7	+49.8	-42.6	-19.7	-35.1	2	-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	



8	JUNE		JUNE		JULY			AUGUST			SEPTEMBER			Division		REMARKS
	T	R	C	T	R	C	T	R	C	T	R	C	T	R	C	
2025																
2003	+11.3	-14.8	-21.6	-7.57	+22.3	-0.9	77.85	-6.2	-28.8	-1.86	-20.1	-13.2	-8.2	8	+3.2	
1986	79.82	+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	-3.0	-26.4	+53.5								
1947	-56.9	-16	-46.5	-29.3	+25.6	-3.5	-23.0	+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	+41.0	+35.1	-17.6	-17	-39	-8	
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	-56.1	-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	-28.3	+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	+25.3	-23.5	-35.7	+46.0	-9.3	+7.67	+94.1	+16.4	+1	+24	+23	
1910	+61.6	-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	+99.2	-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	+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	-65	+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	+67.3	-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	-6.2	+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	-9.41	-29.8	-48.7	+42.2	+15.4	-19.9	-40.0	+10.1	-31.5	+1	-8	-21	
1961	-17.0	-15.9	+3.1	-5.77	-7.8	+26.6	-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	+06.2	-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	77.89	-31.3	-32.3	-61.3	-26.6	-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	778.9	-52.8	739.9	+24	-10	+19	
1937	-50.8	+15.9	-89.6	+10.9	-0.48	-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	+22.9.8	-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	795.6	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	-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	76.875	+21.8	+32.8	70.96	+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	-2	-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	

	2013	June			July			August			SEPTEMBER			OVERALL SEASON			REMARKS
		T	R	C	T	R	C	T	R	C	T	R	C	T	R	C	
18	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	2269	+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	-47.6	-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	+35.3	-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	24.76	+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	
	1888	+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	



Methoxy Methacrylate												
	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
1920	-3.5	137.5	124.3	11.1	-74.6	-29.2	-2.4	-60.8	-13.2	100.1	-43.5	-84.4
1921	-54.1	-75	-100	27.6	-100	-20.1	0.2	-2.5	51.1	133.4	128.5	-5.5
1922	-100	450	-4.3	36.3	-17.3	2.0	-28.1	-32.5	35.8	-2.8	-24.7	98.3
1923	-95.8	-100	40.6	36.3	-23.1	-20.2	-2.1	24.6	-25.7	-20.5	-24.7	-78.3
1924	-100	-100	-21.8	62.5	-57.2	11.7	-12.8	-64.6	68.8	-70.6	-97.2	500
1925	-100	-100	-21.8	-41.4	1.7	4.3	-24.4	-58.5	56.0	56.5	11.3	-27.4
1926	-100	-100	-100	49.4	30.1	72.6	-7.8	-41.5	-5.2	-57.4	-24.4	-100
1927	-100	-100	-100	27.8	27.7	-28.0	-26.8	-16.2	26.7	73.1	-100	-100
1928	-100	-100	15.2	17.1	7.2	15.6	-40.6	-16.4	-20.7	41.6	3.1	-100
1929	-100	-100	0	-70.4	-95.1	-10.6	-28.8	-15.3	-37.5	74.2	-85.2	-56.4
1930	-21.5	-100	-100	-70.4	-95.1	-10.6	-28.8	-15.3	-37.5	-74.9	-3.5	-85.1
1931	412.5	68.6	-63.6	-77.7	-238.8	-62.8	-57.5	-43.5	-49.4	-8.1	-90.8	-76.4
1932	602.5	-66.6	153.1	330.3	32.4	-7.6	-25.9	-29.8	-39.8	-8.1	-90.8	-76.4
1933	-100	82.3	-74.3	-35.3	179.5	49.7	-46.8	30.7	-71.9	4.5	-60.3	-70.3
1934	79.1	-100	-43.1	181.0	-73.4	24.7	-37.1	-1.3	-52.1	365.0	115.6	430.6
1935	-27.1	233.3	-83.2	34.7	-41.2	-4.9	-13.0	1.1	57.2	85.6	78.4	-100
1936	-90	-100	168.7	102.0	33.0	-89.2	11.3	-40.9	50.0	7.2	11.8	-28.7
1937	100.8	84.6	6.3	-51.8	-84.3	-59.0	4.0	-44.3	-10.6	-12.3	-100	-48.3
1938	82.3	-100	-34.3	-26.3	57.5	33.4	-24.0	-48.3	14.9	-33.4	38.5	48.3
1939	358.1	-100	-100	-38.3	-28.1	-24.8	-24.9	-14.3	20.5	-14.4	-26	11.1
1940	-100	-100	6.3	-35.1	52.6	-63.3	-28.7	-24.3	21.2	74.8	-35.7	208.2
1941	-75.3	-100	-81.2	-63.8	-46.6	2.8	-23.6	-0.3	20.8	76.8	-21.9	-100
1942	340.3	-94	41.8	74.1	-128.4	-10.0	-10.1	-20.5	65.9	5.7	-75.2	-90.3
1943	108.3	-100	-100	39.3	33.5	5.8	0.46	-20.2	8.6	18.1	35.4	-100
1944	-83.3	151	-64.5	-88.7	-37.3	32.1	9.4	-20.6	-28.6	-28.6	27.8	489.0
1945	-100	-100	-81.3	-30.7	48.4	-14.0	-24.1	-50.0	-15.1	-47.4	76.8	-88.2
1946	287.5	-100	-100	128.9	128.9	-24.3	2.2	-22.3	9.4	9.4	-80.8	81.2
1947	-100	-100	-100	-32.3	43.1	46.7	-29.9	-37.8	-25.9	222.0	-56.5	849.3
1948	-100	-75	-100	76.7	-57.1	-38.7	-0.2	-17.7	96.6	-76.5	-77.1	10.4
1949	208.3	-100	-21.2	-55.5	108.4	-64.1	-18.3	-71.1	0.5	-83.3	176.6	68.0
1950	-100	27	106.0	78.8	8.4	-36.9	10.4	0.2	7.3	27.4	9.4	30.6
1951	-83.3	88.3	-3	-62.6	-28.6	-40.7	-60.9	-28.7	18.0	27.8	-100	-100
1952	-100	-100	90.6	-4.8	-45.2	-37.0	-13.6	-4.0	-83.9	-71.6	90.4	-100
1953	1308.1	-100	190.6	86.3	-21.5	-47.1	-21.5	-12.3	-39.0	103.9	-87.6	-100
1954	-45.3	1033.3	24.3	309.0	43.8	7.2	-20.1	-26.3	-29.8	-23.6	181.2	-80.6
1955	24.3	-100	-36.8	84.8	-100	2.0	17.0	-45.7	-17.8	46.3	-20.6	-23.4
1956	288.3	-100	330.8	330.8	-100	28.7	-12.8	-21.0	-24.7	-35.4	-20.6	-67.7
1957	908.3	150	330.8	119.1	-2.0	18.0	-24.3	-20.7	-20.7	27.9	423.4	-12.5
1958	-100	0	-78	-24.7	-18.7	-25.3	-31.0	-24.7	-30.7	2.0	-63.4	-100
1959	45.9	-100	-65.6	6.0	-22.9	26.8	-21.7	9.1	46.0	154.7	-22.1	-100
1960	812.5	-100	-59.3	-7.0	-94.0	-3.4	-65.3	-43.6	24.5	67.8	-79.8	-100
1961	77.1	125	17	-88.4	-67.3	-40.9	-30.0	7.7	62.7	-58.2	219.7	-32.5
1962	-100	-2.2	23.5	14.4	19.0	-0.4	-6.8	-36.1	6.7	-20.0	-5.6	78.1
1963	67.8	-100	100	13.1	-50.2	-42.6	26.4	2.4	24.8	-30.0	-75.9	-82.0
1964	-26	125	810.6	12.1	-48.7	83.6	6.9	53.0	23.8	-85.0	-100	-100
1965	287.5	-100	-100	-46.9	-28.3	22.1	-28.1	-3.0	-28.6	-58.8	-11.3	177.4
1966	-100	-100	-37.5	37.3	11.3	-28.8	-27.4	-55.8	58.4	108.8	-79.6	-100
1967	-66.6	508.3	90.4	27.3	-57.1	68.1	-83.3	-5.3	-50.5	-26.7	-69.4	-100
1968	-43.3	5100	23.4	-26.3	-44.7	-42.4	-24.7	-57.4	-47.5	19.8	-21.1	-100
1969	-100	508.3	207.3	11.0	-77.7	-8.4	-10.2	-7.3	-81.7	24.7	-53.2	-10-3
1970	-100	542.6	76.8	180.2	53.3	14.3	-8.6	-5.7	1.2	24.7	363.1	63.3
1971	-43.8	475	35	351.5	-37.8	20.9	-41.3	-21.0	-26.4	14.5	-82.9	-28.3
1972	-100	123.2	-53.1	1420.6	-37.8	11.7	10.3	17.6	-26.2	-90.2	89.4	-100
1973	-100	100	-31	137.9	-21.5	11.7	-40.2	-33.3	-24.7	-12.2	120.4	180.8
1974	-100	408.3	-100	-30.3	120.8	5.3	-25.3	-24.3	6.5	-45.8	59.0	-78.3
1975	-100	-100	-100	-49.4	-29.2	0.3	-49.9	-4.0	-29.8	0.4	-55.8	-100
1976	-100	-100	68.7	-45.4	-26.3	-6.1	-31.2	-5.8	29.7	-7.6	-5.6	-64.4
1977	-8.3	300	15.6	-35.0	-28.6	5.8	-10.0	-0.3	6.8	23.2	307.7	75.1
1978	-100	-100	81.3	-2.0	-68.4	-34.8	-10.0	-21.7	6.8	-48.5	-75.4	-100
1979	-100	-100	128.1	-23.1	-81.8	-26.7	-38.7	-70.2	30.6	24.0	-2.1	-100
1980	-100	187.3	-100	-100	-2.4	30.3	-32.3	-74.3	-10.1	127.2	-100	-100
1981	-4.6	187.3	-62.3	54.7	92.9	-29.6	-56.5	-42.0	-15.3	-42.5	93.2	-100
1982	-17.1	-97.6	-90.6	54.8	-42.7	-63.3	15.3	6.1	-67.1	-22.5	-62.8	387.0
1983	-81.8	-100	-58.7	-26.3	117.1	-5.1	-10.3	-68.5	-8.9	208.5	-62.8	-100
1984	-35.3	-48.3	17.1	-83.9	-43.4	-35.6	-17.7	11.2	-21.1	-27.8	-67.1	-82.8



