

#519

GS - 31I
RELATIVE-SUNSPOT-NUMBER ARCHIVE
FORMAT

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1. INTRODUCTION:

The documentation for this data set was originally on paper, kept in NSSDC's Data Set Catalogs (DSCs). The paper documentation in the Data Set Catalogs have been made into digital images, and then collected into a single PDF file for each Data Set Catalog. The inventory information in these DSCs is current as of July 1, 2004. This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system. The information existing in the DSCs is now not needed for locating the data files, but we did not remove that inventory information.

The offline tape datasets have now been migrated from the original magnetic tape to Archival Information Packages (AIP's).

A prior restoration may have been done on data sets, if a requestor of this data set has questions; they should send an inquiry to the request office to see if additional information exists.

2. ERRATA/CHANGE LOG:

NOTE: Changes are made in a text box, and will show up that way when displayed on screen with a PDF reader.

When printing, special settings may be required to make the text box appear on the printed output.

Version	Date	Person	Page	Description of Change
01				
02				

3 LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC
INFORMATION SYSTEM:

<http://nssdc.gsfc.nasa.gov/nmc/>

[NOTE: This link will take you to the main page of the NSSDC Master Catalog. There you will be able to perform searches to find additional information]

4. CATALOG MATERIALS:

- a. Associated Documents To find associated documents you will need to know the document ID number and then click here.
<http://nssdcftp.gsfc.nasa.gov/miscellaneous/documents/>

- b. Core Catalog Materials

REQ. AGENT
SAR

RAND NO.
V0281

ACQ. AGENT
WHW

GS-31I

RELATIVE-SUNSPOT-NUMBER
ARCHIVE FORMAT

This data set catalog consists of 1 tape. The tape is 1600 BPI,
ASCII, 9 Track with 5 files of data. The D and C numbers along with their
time span follows:

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-65452	C-24675	July 1, 1749 - March 31, 1984

RELATIVE-SUNSPOT-NUMBER ARCHIVE FORMAT

The relative sunspot number archive consists of five up-to-date files on the M600 disk under the user name SOLHI. Each file contains sunspot numbers averaged over different time intervals. Prof. M. Waldmeier of the Swiss Federal Observatory in Zurich originally published these observations in a book entitled Sunspot-Activity in the Years 1610-1960; it's a book that has been out of print for more than a decade.

FILE DIRECTORY

- File 0: Epochs of Maxima and Minima.
1610 to present epoch.
- File 1: Yearly Means of Sunspot-Relative-Numbers.
1700 to most current year of final values.
- File 2: Monthly Means of Sunspot-Relative-Numbers.
Jan 1749 to most current month of final values.
- File 3: Smoothed Monthly Means of Sunspot-Relative-Numbers.
Jul 1749 to most current month of final values.
- File 4: Daily Sunspot-Relative-Numbers.
January 8, 1818, to most current final value.

MAGNETIC TAPE FORMAT

9 Track, 1600 BPI, ASCII coded, Unlabeled
80 characters per logical record
2000 characters per block (physical record)

FORMAT FOR FILE 0

Epochs of Maxima and Minima: One Epoch Per Logical Record

Columns	Format	Description
1- 3	I3	Sunspot cycle number.
4- 5	2X	Blank
6-11	F6.1	Occurrence of sunspot minimum.
12-13	2X	Blank
14-18	F5.1	Minimum Sunspot-Relative-Number for this cycle.
19-20	2X	Blank
21-26	F6.1	Occurrence of sunspot maximum.
27-28	2X	Blank
29-33	F5.1	Maximum Sunspot-Relative-Number for this cycle.
34-35	2X	Blank
36-39	F4.1	Number of years with increasing number.
40-42	3X	Blank
43-46	F4.1	Number of years with decreasing number.
47-80	34X	Blank

FORMAT FOR FILE 1

Yearly Means: Five Years Per Logical Record

Columns	Format	Description
1- 4	I4	First year of this record's 5-year span.
5	A1	"_"
6- 7	I2	Last year of this record's 5-year span.
8	1X	Blank
9-14	F6.1	First yearly mean of this record's 5-year span.
15-18	A4	" * " means previous value was a max, otherwise 4 blanks.
19-24	F6.1	Second yearly mean of this record's 5-year span.
25-28	A4	" * " means previous value was a max, otherwise 4 blanks.
29-34	F6.1	Third yearly mean of this record's 5-year span.
35-38	A4	" * " means previous value was a max, otherwise 4 blanks.
39-44	F6.1	Fourth yearly mean of this record's 5-year span.
45-48	A4	" * " means previous value was a max, otherwise 4 blanks.
49-54	F6.1	Fifth yearly mean of this record's 5-year span.
55-80	26X	Blank

FORMAT FOR FILE 2

Monthly Means: One Year Per Logical Record

Columns	Format	Description
1- 4	I4	Year
5-10	F6.1	Jan Sunspot-Relative-Number.
11-16	F6.1	Feb Sunspot-Relative-Number.
17-22	F6.1	Mar Sunspot-Relative-Number.
23-28	F6.1	Apr Sunspot-Relative-Number.
29-34	F6.1	May Sunspot-Relative-Number.
35-40	F6.1	Jun Sunspot-Relative-Number.
41-46	F6.1	Jul Sunspot-Relative-Number.
47-52	F6.1	Aug Sunspot-Relative-Number.
53-58	F6.1	Sep Sunspot-Relative-Number.
59-64	F6.1	Oct Sunspot-Relative-Number.
65-70	F6.1	Nov Sunspot-Relative-Number.
71-76	F6.1	Dec Sunspot-Relative-Number.
77-80	4X	Blank

FORMAT FOR FILE 3

Smoothed Monthly Values: Format for this file is the same as that for file ③.
2

FORMAT FOR FILE 4

File 5 is organized in yearly sections with 32 logical records per year. The first 31 records contain 12 columns of daily values: the columns represent months; the rows represent days. The 32nd record contains monthly means.

First 31 Records for Each Year

Columns	Format	Description
1- 4	I4	Jan daily value column.
5- 6	2X	Blank
7-10	I4	Feb daily value column.
11-12	2X	Blank
13-16	I4	Mar daily value column.
17-18	2X	Blank
19-22	I4	Apr daily value column.
23-24	2X	Blank
25-28	I4	May daily value column.
29-30	2X	Blank
31-34	I4	Jun daily value column.
35-36	2X	Blank
37-40	I4	Jul daily value column.
41-42	2X	Blank
43-46	I4	Aug daily value column.

FORMAT FOR FILE 4 (continued)

First 31 Records for Each Year

Columns	Format	Description
47-48	2X	Blank
49-52	I4	Sep daily value column.
53-54	2X	Blank
55-58	I4	Oct daily value column.
59-60	2X	Blank
61-64	I4	Nov daily value column.
65-66	2X	Blank
67-70	I4	Dec daily value column.
71-72	2X	Blank
73-76	I4	Year
77-79	I3	Day of month (1-31).
80	1X	Blank

FORMAT FOR FILE 4 (continued)

32nd Record for Each Year

Columns	Format	Description
1- 5	F5.1	Jan monthly mean value.
6	1X	Blank
7-11	F5.1	Feb monthly mean value.
12	1X	Blank
13-17	F5.1	Mar monthly mean value.
18	1X	Blank
19-23	F5.1	Apr monthly mean value.
24	1X	Blank
25-29	F5.1	May monthly mean value.
30	1X	Blank
31-35	F5.1	Jun monthly mean value.
36	1X	Blank
37-41	F5.1	Jul monthly mean value.
42	1X	Blank
43-47	F5.1	Aug monthly mean value.
48	1X	Blank
49-53	F5.1	Sep monthly mean value.
54	1X	Blank
55-59	F5.1	Oct monthly mean value.
60	1X	Blank
61-65	F5.1	Nov monthly mean value.
66	1X	Blank
67-71	F5.1	Dec monthly mean value.
72	1X	Blank
73-76	F5.1	Year
77-80	4X	Blank

F E B R U A R Y 1 9 8 4 S O L A R I N D I C E S B U L L E T I N

NATIONAL GEOPHYSICAL DATA CENTER
Solar-Terrestrial Physics Division (E/GC2)
325 Broadway
Boulder, Colorado 80303 USA

A PROMPT NEW MONTHLY INFORMATION PRODUCT

- INCLUDES EXPLANATORY TEXT
- GIVES DAILY RADIO FLUX OF QUIET SUN
- SUMMARIZES ENTIRE CURRENT SUNSPOT CYCLE
- LISTS PREDICTIONS OF SMOOTHED SUNSPOT NUMBERS
- GIVES DAILY SUNSPOT NUMBERS FOR PREVIOUS MONTH

ARRIVES ON YOUR DESK BEFORE MANY OF THE OBSERVATIONS
ARE A MONTH OLD.

SOLAR RADIO FLUX. The quiet sun emits radio energy with a slowly varying intensity. These radio fluxes, which originate from atmospheric layers high in its chromosphere and low in its corona, change gradually from day-to-day, in response to the number and size of spot groups on the solar disk. The table below gives daily measurements of this slowly varying emission at selected wavelengths between about 1 centimeter and a meter. Many observatories record quiet-sun radio fluxes at the same local time each day and correct them for any bursts in progress at the time of measurement. At 2800 megahertz (10.7 centimeters) flux observations summed over the entire sun's disk have been made continuously since February 1947.

Numbers in parentheses in the column headings below denote frequencies in megahertz. Each entry under these columns is expressed in solar flux units—a measure of energy received per unit time, per unit area, per unit frequency interval. One solar flux unit equals the factor 10^{-22} Joules/second/square meter/hertz.

The letter "A" after an entry indicates an interpolated value. The observed and the adjusted Ottawa fluxes tabulated here are the "Series C" daily values reported by the Algonquin Radio Observatory in Ottawa, Ontario, Canada. Gaps in the Sagamore Hill (SGMR) observations taken at South Hamilton, Massachusetts, reflect equipment problems.

FEBRUARY 1984 OBSERVED SUNSPOT NUMBERS AND SOLAR RADIO FLUX

Day	Provisional Sunspot Numbers		Obs Flux Ottawa (2800)	Solar Flux Adjusted to 1 Astronomical Unit								
	Intl	Amer		SGMR (15400)	SGMR (8800)	SGMR (4995)	Ottawa (2800)	SGMR (2695)	SGMR (1415)	SGMR (606)	SGMR (410)	SGMR (245)
01	110	98	159.2	628	378	209	154.6	149	111	88	42	39
02	82	80	146.2*	634	368	187	142.0*	144	108	90	55	59
03	61	60	135.3	608	335	158	131.4	125	99	82	34	14
04	61	66	129.6	382	265	137	126.0	123	101	79	33	23
05	66	66	117.5	493	281	137	114.2	111	93	73	30	17
06	76	79	115.0	597	300	130	111.8	116	97	74	30	15
07	79	78	116.8	596	302	143	113.6	112	96	77	32	14
08	84	87	130.7	—	—	—	127.2	—	—	—	—	—
09	110	113	143.8	615	337	168	139.9	132	110	89	46	39
10	120	121	140.3*	609	334	179	136.7*	135	106	84	44	37
11	118	123	144.9*	606	326	165	141.1*	140	112	81	33	38
12	108	112	139.4*	609	306	161	135.8*	130	108	82	38	17
13	82	99	131.7	598	299	151	128.4	120	103	77	31	16
14	77	82	123.4*	567	306	143	120.3*	119	104	77	31	13
15	80	76	116.3	533	286	126	113.4	108	94	68	29	16
16	53	40	117.3*	513	274	129	114.5*	113	97	69	29	15
17	51	39	119.4	569	309	139	116.5	104	94	76	31	14
18	50	47	125.1*	576	312	145	122.2*	109	96	60	28	13
19	57	49	131.4*	614	320	165	128.4*	121	98	77	31	14
20	54	60	137.6	611	330	178	134.6	125	107	79	34	18
21	76	86	147.0	608	344	164	143.8	133	110	82	30	17
22	100	100	161.6	617	326	172	158.0	141	121	85	33	16
23	121	102	169.7	618	328	202	166.1	150	132	88	34	16
24	113	118	176.6*	568	328	187	172.9*	158	135	86	34	28
25	117	107	172.9*	—	—	—	169.4*	—	—	—	—	—
26	101	95	167.6	—	—	—	164.2	—	—	—	—	—
27	78	72	157.3	—	—	—	154.3	—	—	—	—	—
28	78	74	151.7	—	—	—	148.8	—	—	—	—	—
29	88	78	150.8	—	—	—	148.1	—	—	—	—	—
Mean	84	83	140.6	581	317	159	137.2	127	106	79	34	22

*Adjusted for burst in progress at time of measurement.

FEBRUARY 1984 SOLAR INDICES BULLETIN (Continued)

SUNSPOT NUMBERS. In 1848 the Swiss astronomer Johann Rudolph Wolf introduced a daily measurement of sunspot number. His method, which is still used today, counts the total number of spots visible on the face of the sun and the number of groups into which they cluster, because neither quantity alone satisfactorily measures sunspot activity.

An observer computes a daily sunspot number by multiplying the number of groups he sees by ten and then adding this product to his total count of individual spots. Results, however, vary greatly, since the measurement strongly depends on observer interpretation and experience and on the stability of the Earth's atmosphere above the observing site. Moreover, the use of Earth as a platform from which to record these numbers contributes to their variability, too, because the sun rotates and the evolving spot groups are distributed unevenly across solar longitudes. To compensate for these limitations, each daily international number is computed as a weighted average of measurements made from a network of cooperating observatories.

The international sunspot numbers tabulated on page 1 are provisional values taken from a bulletin prepared monthly by Dr. Andre Koeckelenbergh of the SUNSPOT INDEX DATA CENTER, 3 avenue Circulaire, B 1180 BRUXELLES, BELGIUM. The February 1984 data combine observations from 39 stations. Mr. Peter O. Taylor, P.O. Box 1476, Boca Raton, Florida 33429 USA, provides the American sunspot numbers. These counts are made by a dedicated, experienced, international group of amateurs—a group that the American Association of Variable Star Observers coordinates. The provisional American numbers listed on page 1 take into account the reports from 26 observers.

How do sunspot numbers in the table on page 1 compare to the largest values ever recorded? The highest daily count on record occurred December 24 and 25, 1957. On each of those days the sunspot number totaled 355. In contrast, during years near the minimum of the spot cycle, the count can fall to zero. Today, much more sophisticated measurements of solar activity are made routinely, but none has the link with the past that sunspot numbers have. Our archives, for example, include reconstructed daily values from as early as January 8, 1818; monthly means from January 1749; and yearly means beginning in 1700.

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS FOR CYCLE 21

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1976	15	13	12	13	13	12(m)	13	14	14	13	14	15	13
1977	17	18	20	22	24	26	29	33	39	46	52	57	32
1978	61	65	70	77	83	89	97	104	108	111	113	118	91
1979	124	131	137	141	147	153	155	155	156	158	162	165(M)	149
1980	164	163	161	159	156	155	153	150	150	150	148	143	154
1981	140	142	143	143	143	142	140	141	143	142	139	138	141
1982	137	133	129	124	120	117	115	109	101	96	95	95	114
1983	93	90	86	82	71	71	66	66	65 (3)	65 (5)	64 (7)	63 (8)	74 (6)
1984	62 (9)	60 (10)	57 (12)	54 (15)	52 (17)	51 (18)	50 (19)	48 (20)	46 (21)	44 (21)	42 (20)	40 (20)	50 (17)
1985	39 (21)	37 (20)	36 (20)	35 (20)	34 (20)	32 (20)	31 (19)	29 (19)	29 (18)	28 (19)	27 (19)	26 (20)	32 (20)
1986	26 (20)	26 (20)	24 (19)	23 (19)	22 (18)	20 (18)	18 (17)	17 (17)	16 (16)	16 (14)	15 (13)	15 (12)	20 (17)

The letter m in parentheses marks the minimum of Sunspot Cycle 21 and M marks the maximum.

For the current solar cycle, the table above gives observed smoothed sunspot numbers up to the last one derivable from the most recently measured monthly mean. These smoothed observed values are based on final monthly mean international numbers through December 1983 and on provisional numbers thereafter.

The entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval; subtracting the number in parentheses from the predicted value generates the lower limit. Consider, for example, the August 1984 prediction tabulated above. There exists a 90% chance that in August 1984 the actual smoothed sunspot number will fall somewhere between 28 and 68.

The charge for a 1-year subscription to this monthly bulletin is \$20. To become a subscriber you may either call (303) 497-6136 or write the NATIONAL GEOPHYSICAL DATA CENTER, Solar-Terrestrial Physics Division (E/GC2), 325 Broadway, Boulder, Colorado 80303 USA. Please include with your written order a check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGDC. Payment may be made, too, through one of three credit cards: VISA, American Express, or Mastercard. To ensure prompt service, provide your card's number and expiration date and the name to which the card was issued.



SMOOTHED MONTHLY MEANS

1749	89.0	90.2	92.3	92.6	88.2	83.8	81.6	82.8	84.1	86.3	87.8	88.
1750	66.8	64.2	59.5	54.9	51.7	49.0	46.2	45.0	46.4	47.5	47.9	69.
1751	47.2	46.4	45.3	46.4	47.8	48.0	48.2	47.8	46.0	44.1	42.2	47.
1752	38.2	36.2	36.7	35.8	34.2	32.1	28.8	25.8	22.8	19.9	18.3	40.
1753	17.1	15.8	13.9	13.0	12.7	12.3	12.6	13.4	14.0	13.9	12.7	17.
1754	9.2	8.4	8.4	8.8	8.5	8.9	9.7	9.6	9.4	9.4	10.1	10.
1755	11.5	11.4	11.3	10.6	10.7	10.6	10.3	10.9	12.4	14.1	16.0	11.
1756	18.0	20.7	23.8	25.7	28.4	31.4	33.4	35.7	37.9	40.6	42.7	17.
1757	46.5	46.8	47.2	48.4	47.7	47.2	48.0	48.2	47.7	46.6	45.6	44.
1758	46.5	48.1	50.1	51.5	52.7	53.4	54.8	56.2	58.0	59.6	61.1	62.
1759	62.5	63.3	62.8	61.8	62.0	62.7	63.0	64.4	66.0	66.8	68.8	72.
1760	75.7	77.5	79.8	83.0	85.9	86.5	84.8	82.9	80.7	78.8	75.5	71.
1761	68.3	64.8	62.5	60.4	59.0	59.9	61.7	60.5	58.3	56.7	55.3	53.
1762	52.4	51.5	49.8	48.8	47.1	45.8	45.3	46.5	48.0	48.3	48.8	49.
1763	47.8	46.9	45.4	43.0	40.8	37.8	34.9	32.0	29.9	28.8	27.3	25.
1764	25.3	25.2	24.6	23.6	22.5	21.4	20.4	19.3	19.1	19.0	18.6	18.
1765	16.4	14.4	12.8	12.0	11.2	11.2	12.1	13.5	14.5	15.9	17.2	18.
1766	20.6	22.9	26.0	29.3	32.9	36.4	38.9	41.5	43.1	43.7	46.1	49.
1767	53.0	55.4	57.8	60.6	63.5	67.4	70.7	71.5	72.1	75.1	77.2	77.
1768	81.2	86.2	91.5	97.9	103.7	106.1	107.3	111.9	115.8	114.5	112.5	111.
1769	111.1	110.9	109.3	105.2	102.3	101.2	98.0	91.1	85.7	84.9	88.9	93.
1770	93.6	89.1	86.1	85.4	83.5	81.9	84.3	88.9	90.1	90.5	86.9	79.
1771	77.3	77.6	75.4	72.8	70.7	67.8	64.6	60.1	58.3	56.7	54.3	53.
1772	50.0	46.1	43.5	40.4	37.4	35.6	34.5	35.6	37.3	38.0	38.9	39.
1773	38.9	38.2	37.1	35.6	34.2	31.9	28.9	24.4	19.8	16.6	13.3	10.
1774	9.3	8.6	8.5	7.9	7.5	7.2	7.7	8.9	9.2	9.4	10.2	10.
1775	11.0	11.7	12.9	14.5	16.3	18.5	20.8	22.8	25.2	29.6	35.6	41.
1776	47.5	55.1	62.9	70.3	78.1	87.6	98.0	106.6	113.6	119.6	128.2	138.
1777	144.8	148.4	151.9	156.3	158.5	156.5	151.8	151.5	153.2	152.5	148.4	141.
1778	139.0	137.5	133.8	129.9	127.0	125.7	124.1	119.4	115.7	112.8	109.4	106.
1779	103.5	100.0	98.2	95.5	91.3	86.9	86.0	86.2	83.4	80.4	79.2	79.
1780	79.4	78.0	75.4	71.5	69.8	69.1	66.2	62.8	60.6	58.8	55.6	51.
1781	47.0	44.5	42.9	42.0	40.4	38.7	37.4	36.3	36.0	35.0	33.2	31.
1782	30.6	29.4	27.7	26.4	25.1	23.6	22.2	20.3	18.3	16.9	15.5	14.
1783	12.3	10.8	10.0	9.7	9.8	10.0	9.9	9.6	9.5	9.7	10.5	11.
1784	13.9	15.5	16.9	19.4	22.0	23.5	25.4	28.3	31.6	36.1	42.0	46.
1785	49.6	54.5	60.7	66.7	72.6	79.3	86.9	93.4	97.5	100.9	104.4	107.
1786	111.4	115.3	119.2	123.0	125.9	129.5	132.2	133.3	136.6	138.0	136.4	137.
1787	140.7	141.2	140.4	139.1	136.6	132.8	129.9	128.7	127.6	127.3	128.3	127.
1788	124.9	122.5	119.9	116.5	116.0	117.9	117.7	117.3	116.4	114.2	111.7	109.
1789	106.0	103.4	101.2	99.6	97.2	92.5	88.6	84.6	81.0	79.4	77.8	75.
1790	74.9	73.1	70.8	69.4	67.9	66.9	66.0	65.4	65.1	64.5	64.0	63.
1791	62.2	61.9	62.2	61.8	61.3	60.5	60.0	59.5	58.8	57.6	56.2	55.
1792	55.1	54.0	51.3	49.3	48.3	47.3	46.4	45.5	44.3	42.6	41.7	41.
1793	40.7	40.7	40.7	39.3	39.6	40.8	40.0	38.9	37.6	36.2	34.7	32.
1794	30.5	28.7	28.2	28.0	25.8	22.7	21.3	20.6	20.1	20.8	20.9	20.
1795	20.2	19.8	19.0	18.8	17.8	16.6	15.7	14.6	13.3	11.6	9.9	9.
1796	8.8	8.0	7.7	7.0	6.7	6.5	5.9	5.4	5.7	5.9	5.5	7.
1797	4.1	3.8	3.5	3.2	3.2	3.8	4.1	4.4	5.1	5.8	6.5	4.
1798	7.8	7.8	7.5	7.6	7.3	6.8	7.0	7.1	6.6	5.9	5.4	5.
1799	7.2	8.8	10.1	10.9	11.5	13.2	15.3	17.0	18.5	20.4	22.8	24.
1800	25.2	26.6	28.3	30.0	32.1	33.7	34.9	36.5	37.7	38.6	39.6	40.
1801	41.8	42.8	44.1	45.1	45.1	45.0	45.1	45.4	45.1	43.9	43.2	42.
1802	42.4	41.7	40.8	41.2	42.5	43.1	42.9	42.6	43.2	45.1	45.7	45.
1803	44.3	44.0	44.6	45.3	46.1	47.0	48.1	48.6	48.6	48.2	47.9	48.
1804	48.9	49.2	48.8	47.1	44.9	43.1	41.3	39.8	38.4	37.2	36.3	35.
1805	34.2	33.2	31.7	30.7	30.0	28.7	27.0	25.1	23.0	22.3	21.5	20.
1806	18.9	17.6	16.3	14.7	13.0	11.1	9.6	8.7	8.0	7.1	6.8	7.
1807	6.8	6.4	6.5	6.6	6.8	7.6	8.4	8.9	9.2	8.8	7.9	7.
1808	6.7	6.1	5.3	4.6	4.0	3.0	2.2	1.6	1.1	1.0	0.8	0.
1809	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
1810	0.3	0.6	0.7	1.0	1.3	1.4	1.9	2.4	2.5	2.6	2.6	2.
1811	2.5	2.9	3.7	3.7	3.9	4.6	4.5	4.4	4.8	5.5	6.4	7.
1812	8.1	8.6	8.7	10.1	11.5	12.0	13.1	14.1	14.3	14.8	15.1	15.
1813	15.4	15.2	14.6	14.0	13.5	13.7	13.8	14.5	16.2	17.4	17.9	19.
1814	22.2	24.8	27.6	29.2	30.7	33.5	35.7	37.5	41.0	44.1	46.7	47.
1815	47.3	43.4	46.1	47.7	48.7	47.3	46.2	46.2	46.7	46.3	44.0	42.
1816	43.2	44.5	45.0	43.2	41.6	41.1	41.0	39.5	35.0	32.4	34.1	35.
1817	34.2	32.7	31.7	31.5	31.0	30.2	30.0	29.8	28.8	27.3	25.3	23.
1818	24.0	23.9	23.2	22.5	23.0	23.7	23.4	23.1	23.4	23.4	23.7	23.
1819	21.7	21.2	20.8	19.6	18.1	16.5	15.8	14.9	14.1	13.7	12.1	10.
1820	9.5	7.8	6.9	7.3	7.5	7.0	5.7	4.7	5.0	5.6	5.7	5.
1821	6.3	6.4	6.1	5.1	4.2	4.0	4.0	4.0	3.3	2.1	1.4	1.
1822	0.6	0.2	0.1	0.1	0.1	0.9	2.7	4.0	4.5	5.3	6.2	6.
1823	6.3	6.3	7.2	9.1	10.2	9.4	7.9	7.4	8.5	8.8	8.6	9.
1824	11.7	14.0	14.8	14.2	14.3	15.7	17.1	17.7	18.4	19.9	21.4	23.
1825	24.9	26.3	27.1	28.7	31.3	34.4	37.0	38.9	41.0	42.8	44.7	46.
1826	46.9	47.1	49.0	50.5	51.2	50.6	50.5	51.9	52.9	53.9	55.9	59.

1828	61.2	62.6	63.6	63.5	63.8	64.2	63.8	62.8	62.4	64.1	64.7	62.
1829	63.3	64.9	65.1	65.3	65.8	66.7	67.4	68.7	70.2	71.2	71.7	71.
1830	68.9	65.8	65.1	66.6	68.3	69.9	70.8	69.7	69.1	67.3	63.9	61.
1831	60.2	60.4	59.6	57.0	53.8	50.0	47.1	46.7	45.3	42.5	41.5	41.
1832	39.8	36.6	33.4	31.1	28.9	27.6	26.7	24.2	20.7	17.9	15.7	13.
1833	12.1	11.7	11.7	11.3	10.3	9.3	8.3	8.1	7.9	7.5	7.3	7.
1834	7.8	7.8	7.7	8.4	10.2	12.2	13.4	13.7	14.7	17.8	21.8	24.
1835	27.5	31.9	37.9	44.6	50.4	55.1	60.2	67.1	73.8	80.5	86.7	93.
1836	99.5	103.9	105.7	107.2	109.9	116.1	125.6	132.6	136.9	138.2	138.0	139.
1837	142.7	145.8	146.9	146.4	145.2	141.5	136.5	130.9	127.4	127.2	127.8	126.
1838	121.3	116.7	113.5	111.2	108.6	105.2	101.6	100.8	98.9	93.6	87.4	82.
1839	79.6	80.8	85.4	87.9	87.5	86.5	84.7	83.0	81.5	80.7	81.5	81.
1840	80.7	76.6	71.1	66.9	64.6	63.6	60.8	56.0	52.5	50.5	49.4	49.
1841	48.7	46.7	44.3	41.8	39.5	37.4	36.7	36.2	35.5	34.5	32.1	28.
1842	26.6	25.4	24.1	23.8	25.1	25.1	23.9	22.8	21.5	20.2	19.3	18.
1843	18.1	17.4	16.2	14.2	12.0	10.9	10.5	10.8	11.5	12.2	12.3	11.
1844	11.9	12.9	13.5	14.3	14.6	14.6	15.7	17.6	20.0	22.7	25.7	28.
1845	29.9	30.7	31.9	33.7	35.7	38.5	40.6	41.5	42.6	44.0	45.0	46.
1846	49.0	50.6	54.8	58.6	60.1	61.3	62.5	63.2	63.9	63.8	63.4	64.
1847	66.0	69.8	75.6	83.1	91.5	96.6	102.5	109.3	113.0	116.6	120.3	123.
1848	128.3	131.6	128.7	124.2	121.1	122.2	124.2	124.9	125.3	124.6	123.5	120.
1849	116.5	110.9	107.7	104.9	101.7	98.5	92.6	87.5	85.2	82.2	79.0	77.
1850	75.6	74.0	73.7	73.4	71.5	68.1	66.4	67.0	66.9	66.7	67.2	67.
1851	66.6	66.3	65.4	64.2	63.7	64.0	64.2	62.3	60.6	60.8	60.9	59.
1852	59.5	59.0	57.0	55.9	56.2	55.3	53.1	50.9	48.9	47.2	45.6	44.
1853	44.3	45.0	45.2	44.0	41.9	39.9	38.0	35.9	34.3	32.7	31.3	30.
1854	28.2	25.6	23.7	22.0	20.8	20.7	20.4	20.0	19.5	18.4	16.9	15.
1855	14.2	12.9	11.4	10.4	9.2	7.5	6.2	5.4	4.5	3.8	3.6	3.
1856	3.3	3.6	3.9	3.9	3.8	4.1	4.9	5.5	5.8	6.2	7.6	9.
1857	10.5	11.7	13.7	16.8	19.3	21.5	23.8	26.0	29.4	32.7	34.3	36.
1858	38.6	41.7	44.8	48.5	51.5	53.6	56.7	60.7	64.3	67.6	71.7	75.
1859	78.9	82.6	85.9	87.9	90.8	93.2	93.7	93.7	94.0	93.8	93.9	95.
1860	97.2	97.9	97.0	95.4	94.4	95.1	94.9	93.7	93.3	94.5	93.6	90.
1861	88.1	85.8	84.5	83.1	80.3	77.8	77.2	76.7	73.7	69.5	67.9	68.
1862	67.7	66.7	65.3	63.7	62.5	60.8	58.5	57.6	58.2	58.6	57.6	55.
1863	51.9	49.6	47.1	45.2	44.5	44.0	44.4	44.4	44.0	43.8	43.0	43.
1864	44.8	46.0	46.6	46.6	47.2	47.5	46.6	45.9	44.4	43.1	42.5	41.
1865	39.1	37.2	36.2	35.2	33.2	31.1	29.8	29.0	28.4	27.2	25.9	24.
1866	22.8	21.0	19.4	18.7	17.9	16.8	15.0	12.1	9.9	8.7	7.8	6.
1867	5.9	5.4	5.2	5.3	5.3	6.3	7.9	9.2	10.5	12.6	14.9	17.
1868	19.3	21.5	24.2	27.6	31.7	35.5	39.2	42.9	45.8	47.1	50.5	56.
1869	61.4	64.6	68.0	69.4	70.1	72.4	74.6	77.6	84.3	93.8	101.7	105.
1870	110.0	116.2	121.6	127.5	134.0	138.0	139.6	140.5	140.2	139.6	138.5	135.
1871	132.3	129.3	125.1	120.4	116.3	112.9	110.8	110.3	107.8	103.0	98.9	98.
1872	98.9	98.3	99.0	101.0	101.9	101.9	102.0	101.7	101.6	100.9	97.4	92.
1873	87.8	85.2	81.4	76.2	71.5	67.7	65.2	62.4	58.4	54.4	52.4	52.
1874	51.8	51.5	50.4	49.1	47.4	45.5	42.7	39.1	36.8	36.1	34.6	32.
1875	29.8	25.5	22.5	20.5	19.2	17.9	17.1	16.8	16.3	15.1	13.7	12.
1876	11.7	11.6	11.7	12.0	11.8	11.4	11.7	11.9	10.8	10.6	11.8	13.
1877	13.1	12.6	12.7	12.7	12.6	12.5	11.4	10.4	10.1	9.3	8.0	7.
1878	6.6	6.0	5.3	4.6	4.0	3.5	3.3	3.9	2.4	2.3	2.4	2.
1879	2.5	3.2	3.7	4.2	5.0	5.7	6.9	9.0	10.9	12.3	13.7	15.
1880	17.7	19.8	23.9	27.6	29.7	31.3	32.8	34.4	36.8	39.5	41.6	43.
1881	47.0	49.7	49.6	49.9	51.8	53.5	54.6	55.6	57.0	59.5	62.2	62.
1882	60.4	58.4	57.9	57.8	58.9	59.9	60.3	60.0	58.1	56.5	54.6	54.
1883	57.3	59.0	59.0	59.8	60.9	62.3	65.0	67.9	71.4	73.0	74.2	74.
1884	72.4	71.7	72.4	71.3	67.8	64.6	61.4	58.8	56.6	54.2	53.6	55.
1885	57.1	57.4	56.2	54.9	54.4	53.2	51.6	49.2	47.6	47.4	45.2	41.
1886	37.2	34.3	32.2	30.2	27.5	25.8	24.6	23.2	20.5	16.7	14.7	13.
1887	13.1	13.0	12.6	11.9	12.1	12.7	13.2	13.0	12.9	13.0	12.4	11.
1888	10.3	8.6	7.9	7.8	7.8	7.3	6.3	5.8	5.8	5.8	5.6	5.
1889	5.6	6.6	7.2	7.1	6.7	6.3	6.5	6.3	5.9	5.7	5.7	5.
1890	5.5	5.0	5.0	5.8	6.6	7.0	7.4	8.6	9.8	10.8	13.1	16.
1891	20.5	23.5	26.0	29.2	32.2	34.6	37.9	42.5	46.3	50.0	53.7	56.
1892	58.4	62.0	65.2	66.4	68.1	71.0	73.2	73.4	73.9	75.3	76.3	77.
1893	78.0	79.7	81.5	82.5	83.3	84.3	85.3	86.1	86.0	85.2	85.6	86.
1894	87.9	86.2	83.2	82.5	81.6	79.4	77.2	75.6	75.3	75.4	73.8	71.
1895	67.7	65.2	64.8	64.2	63.5	63.5	62.5	60.7	59.9	58.2	55.1	52.
1896	51.5	49.6	48.0	46.5	44.5	43.0	42.3	41.6	39.5	38.0	37.1	35.
1897	32.9	32.0	31.2	30.1	28.3	26.6	25.8	25.7	26.3	26.0	25.6	26.
1898	26.0	25.6	25.4	25.7	27.5	27.6	26.3	24.7	22.7	21.9	21.1	20.
1899	20.4	19.4	17.1	15.1	13.2	12.2	11.7	11.5	11.2	10.9	11.3	11.
1900	10.7	10.5	10.6	10.6	10.4	9.9	9.1	8.2	7.6	6.8	5.9	5.
1901	4.8	4.4	3.9	3.2	2.8	2.8	3.0	3.1	3.3	3.6	3.3	2.
1902	2.6	2.7	3.1	3.9	4.7	5.0	5.2	6.0	6.8	7.9	9.5	10.
1903	12.3	14.6	15.8	16.9	19.3	22.5	25.4	26.6	27.9	29.6	31.4	33.
1904	35.5	37.7	39.7	41.1	41.5	41.6	42.9	46.4	49.8	50.5	50.7	51.
1905	52.5	53.5	54.6	56.6	60.5	63.4	63.1	60.4	58.5	59.5	60.6	61.
1906	63.4	64.2	63.8	61.3	55.9	53.5	55.1	59.6	62.7	62.4	61.7	60.
1907	56.9	55.0	56.4	59.6	62.6	62.8	60.5	55.9	51.4	50.3	50.4	50.

1908	50.5	51.6	53.2	51.9	49.9	48.9	49.3	50.5	52.6	53.1	51.9	50.
1909	49.4	46.4	41.6	40.7	42.2	43.3	42.6	40.7	38.2	35.4	33.8	32.
1910	31.5	30.1	29.1	27.7	24.7	20.6	17.6	15.7	14.2	14.0	13.8	12.
1911	12.0	11.2	10.0	7.6	6.0	5.9	5.6	5.1	4.6	4.0	3.3	3.
1912	3.2	3.0	3.1	3.4	3.4	3.4	3.7	3.9	3.8	3.5	3.2	2.
1913	2.6	2.5	2.2	1.8	1.7	1.6	1.5	1.5	1.6	2.4	3.2	2.
1914	4.6	5.1	5.8	6.5	7.4	8.8	10.4	12.9	16.1	18.6	20.7	24.
1915	29.4	34.8	38.9	42.3	45.3	46.9	48.3	49.8	51.5	53.9	56.9	58.
1916	57.8	55.6	54.0	53.7	54.6	56.3	58.3	60.2	62.1	63.3	65.1	68.
1917	73.4	81.2	89.7	94.1	96.3	100.7	104.8	105.4	104.2	103.5	102.2	98.
1918	95.5	92.8	88.5	87.0	87.0	83.5	78.6	77.2	77.5	76.1	75.4	78.
1919	78.4	75.2	72.8	70.4	67.4	64.6	63.7	62.8	61.9	60.5	56.7	51.
1920	46.8	43.2	40.3	39.4	38.7	37.9	36.8	34.9	32.1	31.0	31.3	30.
1921	31.0	31.7	31.1	29.0	27.3	26.5	25.3	24.4	25.5	25.8	24.3	22.
1922	20.1	18.1	16.9	15.8	14.9	14.4	13.9	12.6	9.4	7.1	6.7	6.
1923	6.4	5.9	6.0	6.6	6.9	6.4	5.6	5.6	5.7	5.8	6.8	8.
1924	9.8	11.6	12.9	14.0	15.1	16.1	16.9	17.9	19.3	20.9	22.6	24.
1925	25.9	27.1	29.3	32.6	35.9	40.9	47.2	51.8	55.6	57.7	58.9	60.
1926	62.6	64.1	65.1	65.2	65.4	64.7	64.3	65.7	66.9	69.5	72.4	72.
1927	72.0	71.8	71.7	71.7	71.6	70.5	69.1	68.4	68.3	68.4	67.7	69.
1928	72.1	75.1	77.3	78.1	77.3	77.2	77.1	76.1	74.2	71.6	69.2	67.
1929	66.2	64.3	61.3	58.6	59.6	63.0	64.8	64.0	62.8	61.1	60.6	57.
1930	53.6	49.8	48.0	47.1	44.2	39.0	33.5	31.2	30.7	30.2	29.4	28.
1931	27.6	26.9	25.9	24.2	22.6	21.6	21.1	19.7	17.8	16.3	14.8	14.
1932	14.8	14.2	13.3	12.6	12.2	11.4	11.2	11.7	12.0	11.7	10.7	9.
1933	8.4	7.9	7.7	7.5	6.9	6.2	5.4	4.3	3.4	3.6	4.6	5.
1934	5.7	6.3	6.6	6.7	7.2	8.1	9.4	10.6	11.9	12.7	13.0	15.
1935	17.6	19.6	22.0	25.6	29.9	34.2	37.9	42.0	46.5	51.3	55.0	57.
1936	59.0	62.2	65.9	68.8	72.5	77.2	82.6	87.8	90.3	92.1	96.1	101.
1937	107.6	113.5	116.7	119.2	119.0	115.8	113.0	111.2	110.9	110.6	110.8	109.
1938	109.3	109.2	107.9	106.3	107.1	109.4	108.8	106.3	103.6	103.0	103.0	102.
1939	101.1	96.9	97.4	97.9	95.2	90.9	87.6	85.5	85.5	84.3	79.6	76.
1940	74.2	73.0	71.1	67.8	66.0	66.7	67.6	66.8	64.6	61.9	59.7	57.
1941	56.6	54.7	52.8	52.4	51.2	49.0	47.0	47.0	47.6	49.1	50.2	47.
1942	43.7	41.1	36.5	33.3	31.8	31.0	29.6	27.7	25.6	23.0	21.1	20.
1943	20.1	19.9	19.6	18.8	17.5	16.5	16.0	14.4	12.6	10.8	9.2	8.
1944	8.2	7.7	7.8	8.4	8.8	9.2	10.2	11.3	12.3	14.0	16.5	19.
1945	21.9	23.8	25.1	28.1	31.7	33.1	34.3	38.6	43.9	48.1	52.1	56.
1946	60.6	67.0	72.9	76.8	81.4	88.6	95.3	100.2	104.3	109.6	117.6	126.
1947	131.7	136.8	143.4	149.0	151.8	151.7	151.2	148.9	145.5	145.7	146.2	145.
1948	144.8	142.8	140.5	138.2	135.8	135.3	136.6	141.1	147.7	148.5	143.9	139.
1949	136.6	134.5	133.2	133.0	134.8	136.0	134.4	130.0	124.4	121.0	119.6	118.
1950	115.0	111.9	106.4	99.5	92.9	86.6	82.2	79.0	75.3	72.2	71.4	72.
1951	71.7	69.5	69.8	70.7	70.2	69.8	68.6	66.3	63.3	59.2	53.0	46.
1952	43.2	42.0	39.5	36.0	33.6	31.9	30.8	29.4	28.2	27.6	27.1	26.
1953	24.1	21.6	19.9	18.9	17.4	15.2	12.8	11.5	11.4	10.4	8.8	7.
1954	6.4	5.6	4.2	3.4	3.7	4.2	5.4	7.2	7.8	7.9	9.5	12.
1955	14.2	16.4	19.5	23.4	28.8	35.1	40.1	46.5	55.5	64.4	73.0	81.
1956	88.8	98.5	109.3	118.7	127.4	136.9	145.5	149.6	151.5	155.8	159.6	164.
1957	170.2	172.2	174.3	181.0	185.5	187.9	191.4	194.4	197.3	199.5	200.8	200.
1958	199.0	200.9	201.3	196.8	191.4	186.8	185.2	184.9	183.8	182.2	180.7	180.
1959	178.6	176.9	174.5	169.2	165.1	161.4	155.8	151.3	146.3	141.1	137.2	132.
1960	128.9	125.0	121.6	119.6	117.0	113.9	108.4	101.9	97.2	92.6	87.2	82.
1961	80.2	74.8	68.9	64.3	60.1	55.8	53.1	52.5	52.3	51.4	50.5	48.
1962	45.2	41.8	39.8	39.4	39.2	38.3	36.8	34.9	32.7	30.8	30.0	29.
1963	29.4	29.8	29.7	29.0	28.7	28.2	27.7	27.2	26.9	26.0	23.8	21.
1964	19.5	17.8	15.4	12.7	10.9	10.2	10.3	10.2	9.9	9.6	10.2	11.
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.
1967	75.0	78.8	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.
1971	84.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.8	69.
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	60.6	58.7	55.
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.5	36.1	34.4	32.6	31.0	31.
1974	32.7	34.4	34.0	33.9	34.6	34.5	34.0	33.1	32.1	30.3	27.6	25.
1975	23.0	22.1	21.3	18.6	16.8	16.0	15.0	14.2	14.4	15.0	16.1	16.
1976	15.2	13.2	12.2	12.6	12.5	12.2	12.9	14.0	14.3	13.4	13.5	14.
1977	16.7	18.1	20.0	22.2	24.2	26.3	29.0	33.4	39.1	45.6	51.9	56.
1978	61.3	64.5	69.6	76.9	83.2	89.3	97.4	104.0	108.4	111.1	113.3	117.
1979	123.7	130.9	136.5	141.1	147.2	153.0	155.0	155.4	155.7	157.8	162.3	164.
1980	163.9	162.6	160.9	158.7	156.3	154.7	152.8	150.3	150.1	150.2	147.7	142.
1981	140.3	141.5	143.0	143.4	142.9	141.5	140.3	141.1	142.8	142.2	138.9	137.
1982	137.0	133.3	129.2	124.3	119.9	117.3	115.2	109.4	101.0	95.7	94.7	94.
1983	92.8	90.3	85.9	81.5	71.1	70.5	65.5	65.8	67.9	68.2	66.8	64.
1984	60.2	56.4	53.0									

MONTHLY MEANS

1749	58.0	62.6	70.0	55.7	85.0	83.5	94.8	66.3	75.9	75.5	158.6	85.
1750	73.3	75.9	89.2	88.3	90.0	100.0	85.4	103.0	91.2	65.7	63.3	75.
1751	70.0	43.5	45.3	56.4	60.7	50.7	66.3	59.8	23.5	23.2	28.5	44.
1752	35.0	50.0	71.0	59.3	59.7	39.6	78.4	29.3	27.1	46.6	37.6	40.
1753	44.0	32.0	45.7	38.0	36.0	31.7	22.0	39.0	28.0	25.0	20.0	6.
1754	0.0	3.0	1.7	13.7	20.7	26.7	18.8	12.3	8.2	24.1	13.2	4.
1755	10.2	11.2	6.8	6.5	0.0	0.0	8.6	3.2	17.8	23.7	6.8	20.
1756	12.5	7.1	5.4	9.4	12.5	12.9	3.6	6.4	11.8	14.3	17.0	9.
1757	14.1	21.2	26.2	30.0	38.1	12.8	25.0	51.3	39.7	32.5	64.7	33.
1758	37.6	52.0	49.0	72.3	46.4	45.0	44.0	38.7	62.5	37.7	43.0	43.
1759	48.3	44.0	46.8	47.0	49.0	50.0	51.0	71.3	77.2	59.7	46.3	57.
1760	67.3	59.5	74.7	58.3	72.0	48.3	66.0	75.6	61.3	50.6	59.7	61.
1761	70.0	91.0	80.7	71.7	107.2	99.3	94.1	91.1	100.7	88.7	89.7	46.
1762	43.8	72.8	45.7	60.2	39.9	77.1	33.8	67.7	68.5	69.3	77.8	77.
1763	56.5	31.9	34.2	32.9	32.7	35.8	54.2	26.5	68.1	46.3	60.9	61.
1764	59.7	59.7	40.2	34.4	44.3	30.0	30.0	30.0	28.2	28.0	26.0	25.
1765	24.0	26.0	25.0	22.0	20.2	20.0	27.0	29.7	16.0	14.0	14.0	13.
1766	12.0	11.0	36.6	6.0	26.8	3.0	3.3	4.0	4.3	5.0	5.7	19.
1767	27.4	30.0	43.0	32.9	29.8	33.3	21.9	40.8	42.7	44.1	54.7	53.
1768	53.5	66.1	46.3	42.7	77.7	77.4	52.6	66.8	74.8	77.8	90.6	111.
1769	73.9	64.2	64.3	96.7	73.6	94.4	118.6	120.3	148.8	158.2	148.1	112.
1770	104.0	142.5	80.1	51.0	70.1	83.3	109.8	126.3	104.4	103.6	132.2	102.
1771	36.0	46.2	46.7	64.9	152.7	119.5	67.7	58.5	101.4	90.0	99.7	95.
1772	100.9	90.8	31.1	92.2	38.0	57.0	77.3	56.2	50.5	78.6	61.3	64.
1773	54.6	29.0	51.2	32.9	41.1	28.4	27.7	12.7	29.3	26.3	40.9	43.
1774	46.8	65.4	55.7	43.8	51.3	28.5	17.5	6.6	7.9	14.0	17.7	12.
1775	4.4	0.0	11.6	11.2	3.9	12.3	1.0	7.9	3.2	5.6	15.1	7.
1776	21.7	11.6	6.3	21.8	11.2	19.0	1.0	24.2	16.0	30.0	35.0	40.
1777	45.0	36.5	39.0	95.5	80.3	80.7	95.0	112.0	116.2	106.5	146.0	157.
1778	177.3	109.3	134.0	145.0	238.9	171.6	153.0	140.0	171.7	156.3	150.3	105.
1779	114.7	165.7	118.0	145.0	140.0	113.7	143.0	112.0	111.0	124.0	114.0	110.
1780	70.0	98.0	98.0	95.0	107.2	88.0	86.0	86.0	93.7	77.0	60.0	58.
1781	98.7	74.7	53.0	68.3	104.7	97.7	73.5	66.0	51.0	27.3	67.0	35.
1782	54.0	37.5	37.0	41.0	54.3	38.0	37.0	44.0	34.0	23.2	31.5	30.
1783	28.0	38.7	26.7	28.3	23.0	25.2	32.2	20.0	18.0	8.0	15.0	10.
1784	13.0	8.0	11.0	10.0	6.0	9.0	6.0	10.0	10.0	8.0	17.0	14.
1785	6.5	8.0	9.0	15.7	20.7	26.3	36.3	20.0	32.0	47.2	40.2	27.
1786	37.2	47.6	47.7	85.4	92.3	59.0	83.0	89.7	111.5	112.3	116.0	112.
1787	134.7	106.0	87.4	127.2	134.8	99.2	128.0	137.2	157.3	157.0	141.5	174.
1788	138.0	129.2	143.3	108.5	113.0	154.2	141.5	136.0	141.0	142.0	94.7	129.
1789	114.0	125.3	120.0	123.3	123.5	120.0	117.0	103.0	112.0	89.7	134.0	135.
1790	103.0	127.5	96.3	94.0	93.0	91.0	69.3	87.0	77.3	84.3	82.0	74.
1791	72.7	62.0	74.0	77.2	73.7	64.2	71.0	43.0	66.5	61.7	67.0	66.
1792	58.0	64.0	63.0	75.7	62.0	61.0	45.8	60.0	59.0	59.0	57.0	56.
1793	56.0	55.0	55.5	53.0	52.3	51.0	50.0	29.3	24.0	47.0	44.0	45.
1794	45.0	44.0	38.0	28.4	55.7	41.5	41.0	40.0	11.1	28.5	67.4	51.
1795	21.4	39.9	12.6	18.6	31.0	17.1	12.9	25.7	13.5	19.5	25.0	18.
1796	22.0	23.8	15.7	31.7	21.0	6.7	26.9	1.5	18.4	11.0	8.4	5.
1797	14.4	4.2	4.0	4.0	7.3	11.1	4.3	6.0	5.7	6.9	5.8	3.
1798	2.0	4.0	12.4	1.1	0.0	0.0	0.0	3.0	2.4	1.5	12.5	9.
1799	1.6	12.6	21.7	8.4	8.2	10.6	2.1	0.0	0.0	4.6	2.7	8.
1800	6.9	9.3	13.9	0.0	5.0	23.7	21.0	19.5	11.5	12.3	10.5	40.
1801	27.0	29.0	30.0	31.0	32.0	31.2	35.0	38.7	33.5	32.6	39.8	48.
1802	47.8	47.0	40.8	42.0	44.0	46.0	48.0	50.0	51.8	38.5	34.5	50.
1803	50.0	50.8	29.5	25.0	44.3	36.0	48.3	34.1	45.3	54.3	51.0	48.
1804	45.3	48.3	48.0	50.6	33.4	34.8	29.8	43.1	53.0	62.3	61.0	60.
1805	61.0	44.1	51.4	37.5	39.0	40.5	37.6	42.7	44.4	29.4	41.0	38.
1806	39.0	29.6	32.7	27.7	26.4	25.6	30.0	26.3	24.0	27.0	25.0	24.
1807	12.0	12.2	9.6	23.8	10.0	12.0	12.7	12.0	5.7	8.0	2.6	0.
1808	0.0	4.5	0.0	12.3	13.5	13.5	6.7	8.0	11.7	4.7	10.5	12.
1809	7.2	9.2	0.9	2.5	2.0	7.7	0.3	0.2	0.4	0.0	0.0	0.
1810	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
1811	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	2.4	6.1	0.8	1.
1812	11.3	1.9	0.7	0.0	1.0	1.3	0.5	15.6	5.2	3.9	7.9	10.
1813	0.0	10.3	1.9	16.6	5.5	11.2	18.3	8.4	15.3	27.8	16.7	14.
1814	22.2	12.0	5.7	23.8	5.8	14.9	18.5	2.3	8.1	19.3	14.5	20.
1815	19.2	32.2	26.2	31.6	9.8	55.9	35.5	47.2	31.5	33.5	37.2	65.
1816	26.3	68.8	73.7	58.8	44.3	43.6	38.8	23.2	47.8	56.4	38.1	29.
1817	36.4	57.9	96.2	26.4	21.2	40.0	50.0	45.0	36.7	25.6	28.9	28.
1818	34.9	22.4	25.4	34.5	53.1	36.4	28.0	31.5	26.1	31.6	10.9	25.
1819	32.8	20.7	3.7	20.2	19.6	35.0	31.4	26.1	14.9	27.5	25.1	30.
1820	19.2	26.6	4.5	19.4	29.3	10.8	20.6	25.9	5.2	8.9	7.9	9.
1821	21.5	4.2	5.7	9.2	1.7	1.8	2.5	4.8	4.4	18.8	4.4	0.
1822	0.0	0.9	16.1	13.5	1.5	5.6	7.9	2.1	0.0	0.4	0.0	0.
1823	0.0	0.0	0.6	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	20.
1824	21.7	10.8	0.0	19.4	2.8	0.0	0.0	1.4	20.5	25.2	0.0	0.
1825	5.0	15.5	22.4	3.8	15.5	15.4	30.9	25.7	15.7	15.6	11.7	22.
1826	17.7	18.2	36.7	24.0	32.4	37.1	52.5	39.6	18.9	50.6	39.5	68.
1827	34.6	47.4	57.8	46.0	56.3	56.7	42.3	53.7	49.6	56.1	48.2	46.

1828	52.8	64.4	65.0	61.1	89.1	98.0	54.2	76.4	50.4	54.7	57.0	46.
1829	43.0	49.4	72.3	95.0	67.4	73.9	90.8	77.6	52.8	57.2	67.6	56.
1830	52.2	72.1	84.6	106.3	66.3	65.1	43.9	50.7	62.1	84.4	81.2	82.
1831	47.5	50.1	93.4	54.5	38.1	33.4	45.2	55.0	37.9	46.3	43.5	28.
1832	30.9	55.6	55.1	26.9	41.3	26.7	14.0	8.9	8.2	21.1	14.3	27.
1833	11.3	14.9	11.8	2.8	12.9	1.0	7.0	5.7	11.6	7.5	5.9	9.
1834	4.9	18.1	3.9	1.4	8.8	7.8	8.7	4.0	11.5	24.8	30.5	34.
1835	7.5	24.5	19.7	61.5	43.6	33.2	59.8	59.0	100.8	95.2	100.0	77.
1836	88.6	107.6	98.2	142.9	111.4	124.7	116.7	107.8	95.1	137.4	120.9	206.
1837	188.0	175.6	134.6	138.2	111.7	158.0	162.8	134.0	96.3	123.7	107.0	129.
1838	144.9	84.8	140.8	126.6	137.6	94.5	108.2	78.8	73.6	90.8	77.4	79.
1839	105.6	102.5	77.7	61.8	53.8	54.6	84.8	131.2	132.7	90.9	68.8	63.
1840	81.2	87.7	67.8	65.9	69.2	48.5	60.7	57.8	74.0	55.0	54.3	53.
1841	24.1	29.9	29.7	40.2	67.5	55.7	30.8	39.3	36.5	28.5	19.8	38.
1842	20.4	22.1	21.7	26.9	24.9	20.5	12.6	26.6	18.4	38.1	40.5	17.
1843	13.3	3.5	8.3	9.5	21.1	10.5	9.5	11.8	4.2	5.3	19.1	12.
1844	9.4	14.7	13.6	20.8	11.6	3.7	21.2	23.9	7.0	21.5	10.7	21.
1845	25.7	43.6	43.3	57.0	47.8	31.1	30.6	32.3	29.6	40.7	39.4	59.
1846	38.7	51.0	63.9	69.3	59.9	65.1	46.5	54.8	107.1	55.9	60.4	65.
1847	62.6	44.9	85.7	44.7	75.4	85.3	52.2	140.6	160.9	180.4	138.9	109.
1848	159.1	111.8	108.6	107.1	102.2	129.0	139.2	132.6	100.3	132.4	114.6	159.
1849	157.0	131.7	96.2	102.5	80.6	81.1	78.0	67.7	93.7	71.5	99.0	97.
1850	78.0	89.4	82.6	44.1	61.6	70.0	39.1	61.6	86.2	71.0	54.8	61.
1851	75.5	105.4	64.6	56.5	62.6	63.2	36.1	57.4	67.9	62.5	51.0	71.
1852	68.4	66.4	61.2	65.4	54.9	46.9	42.1	39.7	37.5	67.3	54.3	45.
1853	41.1	42.9	37.7	47.6	34.7	40.0	45.9	50.4	33.5	42.3	28.8	23.
1854	15.4	20.0	20.7	26.5	24.0	21.1	18.7	15.8	22.4	12.6	28.2	21.
1855	12.3	11.4	17.4	4.4	9.1	5.3	0.4	3.1	0.0	9.6	4.2	3.
1856	0.5	4.9	0.4	6.5	0.0	5.2	4.6	5.9	4.4	4.5	7.7	7.
1857	13.7	7.4	5.2	11.1	28.6	16.0	22.2	16.9	42.4	40.6	31.4	37.
1858	39.0	34.9	57.5	38.3	41.4	44.5	56.7	55.3	80.1	91.2	51.9	66.
1859	83.7	87.6	90.3	85.7	91.0	87.1	95.2	106.8	105.8	114.6	97.2	81.
1860	82.4	88.3	98.9	71.4	107.1	108.6	116.7	100.3	92.2	90.1	97.9	95.
1861	62.3	77.7	101.0	98.5	56.8	88.1	78.0	82.5	79.9	67.2	53.7	80.
1862	63.1	64.5	43.6	53.7	64.4	84.0	73.4	62.5	66.6	41.9	50.6	40.
1863	48.3	56.7	66.4	40.6	53.8	40.8	32.7	48.1	22.0	39.9	37.7	41.
1864	57.7	47.1	66.3	35.8	40.6	57.8	54.7	54.8	28.5	33.9	57.6	28.
1865	48.7	39.3	39.5	29.4	34.5	33.6	26.8	37.8	21.6	17.1	24.6	12.
1866	31.6	38.4	24.6	17.6	12.9	16.5	9.3	12.7	7.3	14.1	9.0	1.
1867	0.0	0.7	9.2	5.1	2.9	1.5	5.0	4.8	9.8	13.5	9.6	25.
1868	15.6	15.7	26.5	36.6	26.7	31.1	29.0	34.4	47.2	61.6	59.1	67.
1869	60.9	59.9	52.7	41.0	103.9	108.4	59.2	79.6	80.6	59.3	78.1	104.
1870	77.3	114.9	157.6	160.0	176.0	135.6	132.4	153.8	136.0	146.4	147.5	130.
1871	88.3	125.3	143.2	162.4	145.5	91.7	103.0	110.1	80.3	89.0	105.4	90.
1872	79.5	120.1	88.4	102.1	107.6	109.9	105.5	92.9	114.6	102.6	112.0	83.
1873	86.7	107.0	98.3	76.2	47.9	44.8	66.9	68.2	47.1	47.1	55.4	49.
1874	60.8	64.2	46.4	32.0	44.6	38.2	67.8	61.3	28.0	34.3	28.9	29.
1875	14.6	21.5	33.8	29.1	11.5	23.9	12.5	14.6	2.4	12.7	17.7	9.
1876	14.3	15.0	30.6	2.3	5.1	1.6	15.2	8.8	9.9	14.3	9.9	8.
1877	24.4	8.7	11.9	15.8	21.6	14.2	6.0	6.3	16.9	6.7	14.2	2.
1878	3.3	6.6	7.8	0.1	5.9	6.4	0.1	0.0	5.3	1.1	4.1	0.
1879	1.0	0.6	0.0	6.2	2.4	4.8	7.5	10.7	6.1	12.3	13.1	7.
1880	24.0	27.2	19.3	19.5	23.5	34.1	21.9	48.1	66.0	43.0	30.7	29.
1881	36.4	53.2	51.5	51.6	43.5	60.5	76.9	58.4	53.2	64.4	54.8	47.
1882	45.0	69.5	66.8	95.8	64.1	45.2	45.4	40.4	57.7	59.2	84.4	41.
1883	60.6	46.9	42.8	82.1	31.5	76.3	80.6	46.0	52.6	83.8	84.5	75.
1884	91.5	86.9	87.5	76.1	66.5	51.2	53.1	55.8	61.9	47.8	36.6	47.
1885	42.8	71.8	49.8	55.0	73.0	83.7	66.5	50.0	39.6	38.7	30.9	21.
1886	29.9	25.9	57.3	43.7	30.7	27.1	30.3	16.9	21.4	8.6	0.3	13.
1887	10.3	13.2	4.2	6.9	20.0	15.7	23.3	21.4	7.4	6.6	6.9	20.
1888	12.7	7.1	7.8	5.1	7.0	7.1	3.1	2.8	8.8	2.1	10.7	6.
1889	0.8	8.5	6.7	4.3	2.4	6.4	9.4	20.6	6.5	2.1	0.2	6.
1890	5.3	0.6	5.1	1.6	4.8	1.3	11.6	8.5	17.2	11.2	9.6	7.
1891	13.5	22.2	10.4	20.5	41.1	48.3	58.8	33.0	53.8	51.5	41.9	32.
1892	69.1	75.6	49.9	69.6	79.6	76.3	76.5	101.4	62.8	70.5	65.4	78.
1893	75.0	73.0	65.7	88.1	84.7	89.9	88.6	129.2	77.9	80.0	75.1	93.
1894	83.2	84.6	52.3	81.6	101.2	98.9	106.0	70.3	65.9	75.5	56.6	60.
1895	63.3	67.2	61.0	76.9	67.5	71.5	47.8	68.9	57.7	67.9	47.2	70.
1896	29.0	57.4	52.0	43.8	27.7	49.0	45.0	27.2	61.3	28.7	38.0	42.
1897	40.6	29.4	29.1	31.0	20.0	11.3	27.6	21.8	48.1	14.3	8.4	33.
1898	30.2	36.4	38.3	14.5	25.8	22.3	9.0	31.4	34.8	34.4	30.9	12.
1899	19.5	9.2	18.1	14.2	7.7	20.5	13.5	2.9	8.4	13.0	7.8	10.
1900	9.4	13.6	8.6	16.0	15.2	12.1	8.3	4.3	8.3	12.9	4.5	0.
1901	0.2	2.4	4.5	0.0	10.2	5.8	0.7	1.0	0.6	3.7	3.8	0.
1902	5.5	0.0	12.4	0.0	2.8	1.4	0.9	2.3	7.6	16.3	10.3	1.
1903	8.3	17.0	13.5	26.1	14.6	16.3	27.9	28.8	11.1	38.9	44.5	45.
1904	31.6	24.5	37.2	43.0	39.5	41.9	50.6	58.2	30.1	54.2	38.0	54.
1905	54.8	85.8	56.5	39.3	48.0	49.0	73.0	58.8	55.0	78.7	107.2	55.
1906	45.5	31.3	64.5	55.3	57.7	63.2	103.6	47.7	56.1	17.8	38.9	64.
1907	76.4	108.2	60.7	52.6	42.9	40.4	49.7	54.3	85.0	65.4	61.5	47.

1908	39.2	33.9	28.7	57.6	40.8	48.1	39.5	90.5	86.9	32.3	45.5	39.
1909	56.7	46.6	66.3	32.3	36.0	22.6	35.8	23.1	38.8	58.4	55.8	54.
1910	26.4	31.5	21.4	8.4	22.2	12.3	14.1	11.5	26.2	38.3	4.9	5.
1911	3.4	9.0	7.8	16.5	9.0	2.2	3.5	4.0	4.0	2.6	4.2	2.
1912	0.3	0.0	4.9	4.5	4.4	4.1	3.0	0.3	9.5	4.6	1.1	6.
1913	2.3	2.9	0.5	0.9	0.0	0.0	1.7	0.2	1.2	3.1	0.7	3.
1914	2.8	2.6	3.1	17.3	5.2	11.4	5.4	7.7	12.7	8.2	16.4	22.
1915	23.0	42.3	38.8	41.3	33.0	68.8	71.6	69.6	49.5	53.5	42.5	34.
1916	45.3	55.4	67.0	71.8	74.5	67.7	53.5	35.2	45.1	50.7	65.6	53.
1917	74.7	71.9	94.8	74.7	114.1	114.9	119.8	154.5	129.4	72.2	96.4	129.
1918	96.0	65.3	72.2	80.5	76.7	59.4	107.6	101.7	79.9	85.0	83.4	129.
1919	48.1	79.5	66.5	51.8	88.1	111.2	64.7	69.0	54.7	52.8	42.0	34.
1920	51.1	53.9	70.2	14.8	33.3	38.7	27.5	19.2	36.3	49.6	27.2	29.
1921	31.5	28.3	26.7	32.4	22.2	33.7	41.9	22.8	17.8	18.2	17.8	20.
1922	11.8	26.4	54.7	11.0	8.0	5.8	10.9	6.5	4.7	6.2	7.4	17.
1923	4.5	1.5	3.3	6.1	3.2	9.1	3.5	0.5	13.2	11.6	10.0	2.
1924	0.5	5.1	1.8	11.3	20.8	24.0	28.1	19.3	25.1	25.6	22.5	16.
1925	5.5	23.2	18.0	31.7	42.8	47.5	38.5	37.9	60.2	69.2	58.6	98.
1926	71.8	69.9	62.5	38.5	64.3	73.5	52.3	61.6	60.8	71.5	60.5	79.
1927	81.6	93.0	69.6	93.5	79.1	59.1	54.9	53.8	68.4	63.1	67.2	45.
1928	83.5	73.5	85.4	80.6	77.0	91.4	98.0	83.8	89.7	61.4	50.3	59.
1929	68.9	62.8	50.2	52.8	58.2	71.9	70.2	65.8	34.4	54.0	81.1	108.
1930	65.3	49.9	35.0	38.2	36.8	28.8	21.9	24.9	32.1	34.4	35.6	25.
1931	14.6	43.1	30.0	31.2	24.6	15.3	17.4	13.0	19.0	10.0	18.7	17.
1932	12.1	10.6	11.2	11.2	17.9	22.2	9.6	6.8	4.0	8.9	8.2	11.
1933	12.3	22.2	10.1	2.9	3.2	5.2	2.8	0.2	5.1	3.0	0.6	0.
1934	3.4	7.8	4.3	11.3	19.7	6.7	9.3	8.3	4.0	5.7	8.7	15.
1935	18.6	20.5	23.1	12.2	27.3	45.7	33.9	30.1	42.1	53.2	64.2	61.
1936	62.8	74.3	77.1	74.9	54.6	70.0	52.3	87.0	76.0	89.0	115.4	123.
1937	132.5	128.5	83.9	109.3	116.7	130.3	145.1	137.7	100.7	124.9	74.4	88.
1938	98.4	119.2	86.5	101.0	127.4	97.5	165.3	115.7	89.6	99.1	122.2	92.
1939	80.3	77.4	64.6	109.1	118.3	101.0	97.6	105.8	112.6	88.1	68.1	42.
1940	50.5	59.4	83.3	60.7	54.4	83.9	67.5	105.5	66.5	55.0	58.4	68.
1941	45.6	44.5	46.4	32.8	29.5	59.8	66.9	60.0	65.9	46.3	38.4	33.
1942	35.6	52.8	54.2	60.7	25.0	11.4	17.7	20.2	17.2	19.2	30.7	22.
1943	12.4	28.9	27.4	26.1	14.1	7.6	13.2	19.4	10.0	7.8	10.2	18.
1944	3.7	0.5	11.0	0.3	2.5	5.0	5.0	16.7	14.3	16.9	10.8	28.
1945	18.5	12.7	21.5	32.0	30.6	36.2	42.6	25.9	34.9	68.8	46.0	27.
1946	47.6	86.2	76.6	75.7	84.9	73.5	116.2	107.2	94.4	102.3	123.8	121.
1947	115.7	133.4	129.8	149.8	201.3	163.9	157.9	188.8	169.4	163.6	128.0	116.
1948	108.5	86.1	94.8	189.7	174.0	167.8	142.2	157.9	143.3	136.3	95.8	138.
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7			

ANNUAL MEANS

1700-04	5.		11.	16.	23.	36.
1705-09	58.	*	29.	20.	10.	8.
1710-14	3.		0.	0.	2.	11.
1715-19	27.		47.	63.	60.	39.
1720-24	28.		26.	22.	11.	21.
1725-29	40.		78.	122.	103.	73.
1730-34	47.		35.	11.	5.	16.
1735-39	34.		70.	81.	111.	101.
1740-44	73.		40.	20.	16.	5.
1745-49	11.		22.	40.	60.	80.9
1750-54	83.4	*	47.7	47.8	30.7	12.2
1755-59	9.6		10.2	32.4	47.6	54.0
1760-64	62.9		85.9	61.2	45.1	36.4
1765-69	20.9		11.4	37.8	69.8	106.1
1770-74	100.8		81.6	66.5	34.8	30.6
1775-79	7.0		19.8	92.5	154.4	125.9
1780-84	84.8		68.1	38.5	22.8	10.2
1785-89	24.1		82.9	132.0	130.9	118.1
1790-94	89.9		66.6	60.0	46.9	41.0
1795-99	21.3		16.0	6.4	4.1	6.8
1800-04	14.5		34.0	45.0	43.1	47.5
1805-09	42.2		28.1	10.1	8.1	2.5
1810-14	0.0		1.4	5.0	12.2	13.9
1815-19	35.4		45.8	41.1	30.1	23.9
1820-24	15.6		6.6	4.0	1.8	8.5
1825-29	16.6		36.3	49.6	64.2	67.0
1830-34	70.9	*	47.8	27.5	8.5	13.2
1835-39	56.9		121.5	138.3	103.2	85.7
1840-44	64.6		36.7	24.2	10.7	15.0
1845-49	40.1		61.5	98.5	124.7	96.3
1850-54	66.6		64.5	54.1	39.0	20.6
1855-59	6.7		4.3	22.7	54.8	93.8
1860-64	95.8	*	77.2	59.1	44.0	47.0
1865-69	30.5		16.3	7.3	37.6	74.0
1870-74	139.0	*	111.2	101.6	66.2	44.7
1875-79	17.0		11.3	12.4	3.4	6.0
1880-84	32.3		54.3	59.7	63.7	63.5
1885-89	52.2		25.4	13.1	6.8	6.3
1890-94	7.1		35.6	73.0	85.1	78.0
1895-99	64.0		41.8	26.2	26.7	12.1
1900-04	9.5		2.7	5.0	24.4	42.0
1905-09	63.5	*	53.8	62.0	48.5	43.9
1910-14	18.6		5.7	3.6	1.4	9.6
1915-19	47.4		57.1	103.9	80.6	63.6
1920-24	37.6		26.1	14.2	5.8	16.7
1925-29	44.3		63.9	69.0	77.8	64.9
1930-34	35.7		21.2	11.1	5.7	8.7
1935-39	36.1		79.7	114.4	109.6	88.8
1940-44	67.8		47.5	30.6	16.3	9.6
1945-49	33.2		92.6	151.6	136.3	134.7
1950-54	83.9		69.4	31.5	13.9	4.4
1955-59	38.0		141.7	190.2	184.8	159.0
1960-64	112.3		53.9	37.6	27.9	10.2
1965-69	15.1		47.0	93.8	105.9	105.5
1970-74	104.5		66.6	68.9	38.0	34.5
1975-79	15.5		12.6	27.5	92.5	155.4
1980-84	154.6		140.4	115.9	66.6	*

EPOCHS

	1610.8		1615.5		4.7	3.5
	1619.0		1626.0		7.0	8.0
	1634.0		1639.5		5.5	5.5
	1645.0		1649.0		4.0	6.0
	1655.0		1660.0		5.0	6.0
	1666.0		1675.0		9.0	4.5
	1679.5		1685.0		5.5	4.5
	1689.5		1693.0		3.5	5.0
	1698.0		1705.5		7.5	6.5
	1712.0		1718.2		6.2	5.3
	1723.5		1727.5		4.0	6.5
	1734.0		1738.7		4.7	6.3
	1745.0		1750.3	92.6	5.3	4.9
1	1755.2	8.4	1761.5	86.5	6.3	5.0
2	1766.5	11.2	1769.7	115.8	3.2	5.8
3	1775.5	7.2	1778.4	158.5	2.9	6.3
4	1784.7	9.5	1788.1	141.2	3.4	10.2
5	1798.3	3.2	1805.2	49.2	6.9	5.4
6	1810.6	0.0	1816.4	48.7	5.8	6.9
7	1823.3	0.1	1829.9	71.7	6.6	4.0
8	1833.9	7.3	1837.2	146.9	3.3	6.3
9	1843.5	10.5	1848.1	131.6	4.6	7.9
10	1856.0	3.2	1860.1	97.9	4.1	7.1
11	1867.2	5.2	1870.6	140.5	3.4	8.3
12	1878.9	2.2	1883.9	74.6	5.0	5.7
13	1889.6	5.0	1894.1	87.9	4.5	7.6
14	1901.7	2.6	1907.0	64.2	5.3	6.6
15	1913.6	1.5	1917.6	105.4	4.0	6.0
16	1923.6	5.6	1928.4	78.1	4.8	5.4
17	1933.8	3.4	1937.4	119.2	3.6	6.8
18	1944.2	7.7	1947.5	151.8	3.3	6.8
19	1954.3	3.4	1957.9	201.3	3.6	7.0
20	1964.9	9.6	1968.9	110.6	4.0	7.6
21	1976.5	12.2	1979.9	164.5	3.4	

\$ASS IN TB0
\$EXE TPLIST BS

INPUT PARAMETERS ARE: AS FL=1=1 5

TAPE NO.	1	FILE NO.	1
RECORD	1	LENGTH	2000
1610.8	1615.5	4.7	3.5
1626.0	7.0	8.0	
5	5.5		
	1645.0		
	1634.0		
	1639.5		5.
	1649.0	4.0	6.0
	1660.0	5.0	6.0
	1655.0		
	1675.0	9.0	4.5
	1666.0		
	1685.0	5.5	4.5
3.5	5.0		
	1698.0		
	1705.5		
	1689.5		
	1693.0		
	1679.5		
	1712.0		
	1718.2		
	6.2	5.3	
	1723.5		
	1727.5		
	4.0	6.5	
	1738.7	4.7	6.3
2.6	5.3	4.9	
	1755.2	8.4	1761.5
	86.5	6.3	5.0
	2	1766.5	11.2
	1769.7	115.8	3.2
	5.8		
	3	1775.5	7.2
	1778.4	158.5	2.9
	6.3		
	4	17	
84.7	9.5	1788.1	141.2
	3.4	10.2	
	5	1798.3	3.2
	1805.2		
49.2	6.9	5.4	
	6	1810.6	0.0
	1816.4	48.7	5.0
	6.		
9		7	1823.3
	0.1	1829.9	71.7
	6.6	4.0	
	8	1833.9	7.3
	1837.2	146.9	3.3
	6.3		
	9		
	1843.5	10.5	1848.1
	131.6	4.6	7.9
	10	1856.0	3.2
	18		
60.1	97.9	4.1	7.1
	11	1867.2	5.2
	1870.6	140.5	3.4
8.3		12	1878.9
	2.2	1883.9	74.6
	5.0	5.7	

TAPE NO.	1	FILE NO.	1
RECORD	2	LENGTH	720
13	1889.6	5.0	1894.1
	87.9	4.5	7.6
14	1901.7		2.6
1907.0	64.2	5.3	6.6
6.0			
	15	1913.6	1.5
	1917.6	105.4	4.
	16	1923.6	5.6
	1928.4	78.1	4.8
	5.4		
	17	1933.8	3.4
	1937.4	119.2	3.6
	6.8		
	18	1944.2	7.7
	1947.5	151.8	3.3
	6.8		
	19	1954.3	
3.4	1957.9	201.3	3.6
	7.0		
4.0	7.6		
	20	1964.9	9.6
	1968.9	110.6	
	21	1976.5	12.2
	1979.9	164.5	3.4

TAPE NO.	1	FILE NO.	2
RECORD	1	LENGTH	2000
1700-04	5.	11.	16.
29.	20.	10.	8.
2.	11.		
	1715-19	27.	
	47.	63.	*
	60.	39.	
	1720-24	28.	
	26.	22.	
	11.	21.	
	1725-29	40.	
	35.	11.	
	111.	*	101.
	1730-34	47.	
	70.	81.	
	1735-39	34.	
	40.	20.	
	16.	5.	
	1740-44	73.	
	22.	40.	
	60.	80.9	
	1745-49	11.	
	47.7	47.8	
	30.7	12.2	
	1750-54	83.4 *	
	10.2	32.4	
	47.6	54.0	
9.6			
51.2	45.1	36.4	
	1755-59		
	62.9	85.9 *	
	11.4	37.8	69.8
	1760-64		
	1765-69	20.9	

TAPE NO. 1 FILE NO. 4
RECORD 1 LENGTH 2000

1749 81.6 82.8 84.1 86.3 87.8 88.7 1750 89.0 90.2 9
3 92.6 88.2 83.8 83.3 81.8 78.6 75.4 72.9 69.6 1751 66.8 64.2 59.5 54.9 51.7 49
46.2 45.0 46.4 47.5 47.6 47.1 1752 47.2 46.4 45.3 46.4 47.8 48.0 48.2 47.8 46.
0 44.1 42.2 40.9 1753 38.2 36.2 36.7 35.8 34.2 32.1 28.8 25.8 22.8 19.9 18.3 17.4
1754 17.1 15.8 13.9 13.0 12.7 12.3 12.6 13.4 14.0 13.9 12.7 10.7 1755 9.2 8.
4 8.4 8.8 8.5 8.9 9.7 9.6 9.4 9.4 10.1 11.1 1756 11.5 11.4 11.3 10.6 10.7
10.6 10.3 10.9 12.4 14.1 16.0 17.1 1757 18.0 20.7 23.8 25.7 28.4 31.4 33.4 35.7
37.9 40.6 42.7 44.4 1758 46.5 46.8 47.2 48.4 47.7 47.2 48.0 48.2 47.7 46.6 45.6
46.0 1759 46.5 48.1 50.1 51.5 52.7 53.4 54.8 56.2 58.0 59.6 61.1 62.0 1760 62.5
63.3 62.8 61.8 62.0 62.7 63.0 64.4 66.0 66.8 68.8 72.4 1761 75.7 77.5 79.8 83.0
85.9 86.5 84.8 82.9 80.7 78.8 75.5 71.7 1762 68.3 64.8 62.5 60.4 59.0 59.9 61.7 6
0.5 58.3 56.7 55.3 53.2 1763 52.4 51.5 49.8 48.8 47.1 45.8 45.3 46.5 48.0 48.3 48
.8 49.1 1764 47.8 46.9 45.4 43.0 40.8 37.8 34.9 32.0 29.9 28.8 27.3 25.8 1765 2
5.3 25.2 24.6 23.6 22.5 21.4 20.4 19.3 19.1 19.0 18.6 18.1 1766 16.4 14.4 12.8 12
.0 11.2 11.2 12.1 13.5 14.5 15.9 17.2 18.6 1767 20.6 22.9 26.0 29.3 32.9 36.4 38.
9 41.5 43.1 43.7 46.1 49.9 1768 53.0 55.4 57.8 60.6 63.5 67.4 70.7 71.5 72.1 75.1
77.2 77.8 1769 81.2 86.2 91.5 97.9 103.7 106.1 107.3 111.9 115.8 114.5 112.5 111.9 177
0 111.1 110.9 109.3 105.2 102.3 101.2 98.0 91.1 85.7 84.9 88.9 93.9 1771 93.6 89.1 86.1
85.4 83.5 81.9 84.3 88.9 90.1 90.5 86.9 79.5 1772 77.3 77.6 75.4 72.8 70.7 67.8
64.6 60.1 58.3 56.7 54.3 53.3 1773 50.0 46.1 43.5 40.4 37.4 35.6 34.5 35.6 37.3
38.0 38.9 39.3

TAPE NO. 1 FILE NO. 4
RECORD 10 LENGTH 880

1974 32.7 34.4 34.0 33.9 34.6 34.5 34.0 33.1 32.1 30.3 27.6 25.2 1975 23.0 22.1 2
4.3 18.6 16.8 16.0 15.0 14.2 14.4 15.0 16.1 16.2 1976 15.2 13.2 12.2 12.6 12.5 12
.2 12.9 14.0 14.3 13.4 13.5 14.8 1977 16.7 18.1 20.0 22.2 24.2 26.3 29.0 33.4 39.
1 45.6 51.9 56.9 1978 61.3 64.5 69.6 76.9 83.2 89.3 97.4 104.0 108.4 111.1 113.3 117.7
1979 123.7 130.9 136.5 141.1 147.2 153.0 155.0 155.4 155.7 157.8 162.3 164.5 1980 163.9 162.
6 160.9 158.7 156.3 154.7 152.8 150.3 150.1 150.2 147.7 142.7 1981 140.3 141.5 143.0 143.4 142.9
1.5 140.3 141.1 142.8 142.2 138.9 137.8 1982 137.0 133.3 129.2 124.3 119.9 117.3 115.2 109.4
101.0 95.7 94.7 94.6 1983 92.8 90.3 85.9 81.5 71.1 70.5 65.5 65.8 67.9 68.2 66.8
64.0 1984 60.2 56.4 53.0

TAPE NO. 1 FILE NO. 5
RECORD 1 LENGTH 2000

38 75 34 14 10 1818 01
44 60 11 28 13 10 1818 02 10 52 51
13 17 24 11 25 14 1818 03 11 52 34 10 15 1
5 15 1818 04 12 33 12 32 43 10 10 15 1818
05 15 17 23 43 25 13 24 0 1818 06
10 21 19 54 36 1818 07 39 23 24 21
15 38 52 68 1818 08 52 36 36 20 12 35 32
94 24 1818 09 29 37 37 22 20 40 24 26
1818 10 40 28 27 23 1818 11
31 30 42 18 1818 12 22 115 26 32
44 20 24 1818 13 44 19 28 33 10 35
20 98 0 1818 14 49 15 41 45 10 32 24 0
0 1818 15 17 28 49 10 51 25 0 1818 16 46
22 65 10 0 1818 17 59 26 39

4	11	33	1818	19	0	44	40	16	18	10	10
	1818	20	0	51	54			10	15	1818	21
			32	50	36	10	14	1818	22	0	31
47	42	31	52	62	50	1818	23	48	17	40	31
	16	33		63	1818	24	15	0	26	75	59
	1818	25									20
											27

TAPE NO.	1	FILE NO.	5
RECORD	214	LENGTH	1520
46	77	88	32
111	50	34	27
0			
1984	14	44	80
112			
59	85	80	30
23	8		
1984	15	46	53
117	60	97	83
25	23	12	
1984	16	51	51
105	56	83	73
21	18	0	
1984	17	49	50
95	73	70	62
26	17	0	
1984	18	51	54
90	82	74	51
22	11	10	
1984	19	69	54
10			
3	69	70	53
18	16	0	
1984	20	76	76
98	60	65	43
12	12	9	
1984	21	64	100
87	55	77	48
22	10	10	
1984	22	70	121
89	59	83	54
25	19	0	
1984	23	70	117
80	80	86	58
38	24	8	
1984	24	99	117
97	99	75	44
30	36	7	
1984	25	105	101
97	124	87	
49	25	49	0
1984	26	99	78
96	121	86	40
9	37	0	
1984	27	106	78
98	125	69	41
9	37	0	
1984	28	110	88
94	120	74	50
12	34	0	
1984	29	102	
107	107	70	42
16	27	8	
1984	30	82	113
63	12	36	
1984	31	57.0	85.4
83.5	69.7	76.4	46.1
37.4	25		
.5	15.7		

***** JOB DONE.

[illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible]

BLOCK LENGTHS: MIN=00880 MAX=02000 AVG=01888 NUMBER OF BLOCKS=000010

[illegible][illegible]

0 49 13 15 0 36 1819 19 29 0 32 71 0 0
 444444444444444F4444FF4444FF444444444444444FF444444F4444FF444444444444444FFFF4FF444444444FF44444F4444444444FF4444FF444444444444F44444F
 000000000000000000000049000013000000000000000001500000000003600000000000001819019000000000290000000000000000320000710000000000000000

[illegible]

TAPEMARK NO 0005 BLOCK LENGTHS: MIN=01520 MAX=02000 AVG=01998 NUMBER OF BLOCKS=000214

TAPEMARK NO 0006 -- EOV NO 001

TRUE DENSITY AT END OF PROCESSING: DEN=3

LENGTH ESTIMATE=0039 FEET 05 INCHES FOR DEN=3 AND TRTCH=STANDARD

(LENGTH ESTIMATE USUALLY ACCURATE WITHIN PLUS OR MINUS TEN PERCENT; ALMOST ALWAYS WITHIN TWENTY PERCENT)

PROCESSING OF THIS TAPE COMPLETED: TOTAL BYTES READ=0000472560 NUMBER OF DATA BLOCKS READ=000239

*** TSO FOREGROUND HARDCOPY ***
 DSNAME=W3WHW.ZSN.TEMP

FILE 1 EXAMPLE

1610.8	1615.5	4.7	3.5
1619.0	1626.0	7.0	8.0
1634.0	1639.5	5.5	5.5
1645.0	1649.0	4.0	6.0
1655.0	1660.0	5.0	6.0
1666.0	1675.0	9.0	4.5
1679.5	1685.0	5.5	4.5
1689.5	1693.0	3.5	5.0
1698.0	1705.5	7.5	6.5
1712.0	1718.2	6.2	5.3

FILE 2 EXAMPLE

1700-04	5.	11.	16.	23.	36.
1705-09	58. *	29.	20.	10.	8.
1710-14	3.	0.	0.	2.	11.
1715-19	27.	47.	63. *	60.	39.
1720-24	28.	26.	22.	11.	21.
1725-29	40.	78.	122. *	103.	73.
1730-34	47.	35.	11.	5.	16.
1735-39	34.	70.	81.	111. *	101.
1740-44	73.	40.	20.	16.	5.
1745-49	11.	22.	40.	60.	80.9

FILE 3 EXAMPLE

1749	58.0	62.6	70.0	55.7	85.0	83.5	94.8	66.3	75.9	75.5	158.6	85.2
1750	73.3	75.9	89.2	88.3	90.0	100.0	85.4	103.0	91.2	65.7	63.3	75.4
1751	70.0	43.5	45.3	56.4	60.7	50.7	66.3	59.8	23.5	23.2	28.5	44.0
1752	35.0	50.0	71.0	59.3	59.7	39.6	78.4	29.3	27.1	46.6	37.6	40.0
1753	44.0	32.0	45.7	38.0	36.0	31.7	22.0	39.0	28.0	25.0	20.0	6.7
1754	0.0	3.0	1.7	13.7	20.7	26.7	18.8	12.3	8.2	24.1	13.2	4.2
1755	10.2	11.2	6.8	6.5	0.0	0.0	8.6	3.2	17.8	23.7	6.8	20.0
1756	12.5	7.1	5.4	9.4	12.5	12.9	3.6	6.4	11.8	14.3	17.0	9.4
1757	14.1	21.2	26.2	30.0	38.1	12.8	25.0	51.3	39.7	32.5	64.7	33.5
1758	37.6	52.0	49.0	72.3	46.4	45.0	44.0	38.7	62.5	37.7	43.0	43.0

FILE 4 EXAMPLE

1749							81.6	82.8	84.1	86.3	87.8	88.7
1750	89.0	90.2	92.3	92.6	88.2	83.8	83.3	81.8	78.6	75.4	72.9	69.6
1751	66.8	64.2	59.5	54.9	51.7	49.0	46.2	45.0	46.4	47.5	47.6	47.1
1752	47.2	46.4	45.3	46.4	47.8	48.0	48.2	47.8	46.0	44.1	42.2	40.9
1753	38.2	36.2	36.7	35.8	34.2	32.1	28.8	25.8	22.8	19.9	18.3	17.4
1754	17.1	15.8	13.9	13.0	12.7	12.3	12.6	13.4	14.0	13.9	12.7	10.7
1755	9.2	8.4	8.4	8.8	8.5	8.9	9.7	9.6	9.4	9.4	10.1	11.1
1756	11.5	11.4	11.3	10.6	10.7	10.6	10.3	10.9	12.4	14.1	16.0	17.1
1757	18.0	20.7	23.8	25.7	28.4	31.4	33.4	35.7	37.9	40.6	42.7	44.4
1758	46.5	46.8	47.2	48.4	47.7	47.2	48.0	48.2	47.7	46.6	45.6	46.0

FILE 5 EXAMPLE

38	75	34		14	10		1818	01
44	60	11	28	13	10		1818	02

	10		52	51	13	17	24	11	25	14	1818	03
	12		11	52	34	10	15	15		15	1818	04
	15	17	33	12	32	43			10	15	1818	05
			23	43	25			24		0	1818	06
				10	21	19	54	36			1818	07
39			23	24	21	15	38	52			1818	08
	52		36	36	20	12	35	32			1818	09
		29	37	37	22	20	40	24	24		1818	10

THE DATA EXTEND WELL INTO 1984 IN MOST CASES.

GS-3/I

MAR 18 1985

N	N	GGGG	DDDD	CCC
NN	N	G	D	C
N	N	G	D	C
N	N	G	D	C
N	N	G	D	C
N	NN	G	D	C
N	N	GGGG	DDDD	CCC

////////////////////////////////////
/ NOAA / NESDIS / NGDC /
/
/ NATIONAL GEOPHYSICAL /
/ DATA CENTER /
/ BOULDER , COLORADO /
////////////////////////////////////

TAPESCAN OF TAPE NUMBER W01610
DENSITY 1600 BPI
9 TRACK
CODE ASCII
YEARLY, MONTHLY, AND DAILY ZURICH SUNSPOT NUMBERS

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	2	3	4	5	6	7	8	9	10	11	12	13	14

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*****
*****      2 BLOCKS READ IN FILE      0
*****

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[illegible]

END PROCESSING FILE # 0

0	1	2	3	4	5	6	7	8	9	10	11	12	13
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1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012

1700-04	5.	11.	16.	23.	36.
1705-09	58. *	29.	20.	10.	8.
1710-14	3.	0.	0.	2.	11.
1715-19	27.	47.	63. *	60.	39.
1720-24	28.	26.	22.	11.	21.
1725-29	40.	78.	122. *	103.	73.
1730-34	47.	35.	11.	5.	16.
1735-39	34.	70.	81.	111. *	101.
1740-44	73.	40.	20.	16.	5.
1745-49	11.	22.	40.	60.	80.9
1750-54	83.4 *	47.7	47.8	30.7	12.2
1755-59	9.6	10.2	32.4	47.6	54.0
1760-64	62.9	85.9 *	61.2	45.1	36.4
1765-69	20.9	11.4	37.8	69.8	106.1
1770-74	100.8	81.6	66.5	34.8	30.6
1775-79	7.0	19.8	92.5	154.4 *	125.9
1780-84	84.8	68.1	38.5	22.8	10.2
1785-89	24.1	82.9	132.0 *	130.9	118.1
1790-94	89.9	66.6	60.0	46.9	41.0
1795-99	21.3	16.0	6.4	4.1	6.8
1800-04	14.5	34.0	45.0	43.1	47.5
1805-09	42.2	28.1	10.1	8.1	2.5
1810-14	0.0	1.4	5.0	12.2	13.9
1815-19	35.4	45.8 *	41.1	30.1	23.9
1820-24	15.6	6.6	4.0	1.8	8.5

***** 3 BLOCKS READ IN FILE 1 *****

560 BYTES FOLLOWING FROM BLOCK # 2 OF FILE 1

0	1	2	3	4	5	6	7	8	9	10	11	12	13
1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012													
1950-54	83.9	69.4	31.5	13.9	4.4								
1955-59	38.0	141.7	190.2 *	184.8	159.0								
1960-64	112.3	53.9	37.6	27.9	10.2								
1965-69	15.1	47.0	93.8	105.9 *	105.5								
1970-74	104.5	66.6	68.9	38.0	34.5								
1975-79	15.5	12.6	27.5	92.5	155.4 *								
1980-84	154.6	140.4	115.9	66.6									

END PROCESSING FILE # 1

2000 BYTES FOLLOWING FROM BLOCK # 0 OF FILE 2

0	1	2	3	4	5	6	7	8	9	10	11	12	13
1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012													
1749	58.0	62.6	70.0	55.7	85.0	83.5	94.8	66.3	75.9	75.5	158.6	85.2	
1750	73.3	75.9	89.2	88.3	90.0	100.0	85.4	103.0	91.2	65.7	63.3	75.4	
1751	70.0	43.5	45.3	56.4	60.7	50.7	66.3	59.8	23.5	23.2	28.5	44.0	
1752	35.0	50.0	71.0	59.3	59.7	39.6	78.4	29.3	27.1	46.6	37.6	40.0	
1753	44.0	32.0	45.7	38.0	36.0	31.7	22.0	39.0	28.0	25.0	20.0	6.7	
1754	0.0	3.0	1.7	13.7	20.7	26.7	18.8	12.3	8.2	24.1	13.2	4.2	

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*****
*****      10 BLOCKS READ IN FILE      2
*****
*****

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END PROCESSING FILE # 2

[illegible]


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*****
***** 10 BLOCKS READ IN FILE 3 *****
*****

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END PROCESSING FILE # 3

[illegible]

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*****
*****      214 BLOCKS READ IN FILE      4
*****
*****
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46	77	88	32	111	50	34	27	0	1984	14
44	80	112	59	85	80	30	23	8	1984	15
46	53	117	60	97	83	25	23	12	1984	16
51	51	105	56	83	73	21	18	0	1984	17
49	50	95	73	70	62	26	17	0	1984	18
51	54	90	82	74	51	22	11	10	1984	19
69	54	103	69	70	53	18	16	0	1984	20
76	76	98	68	65	43	12	12	9	1984	21
64	100	87	55	77	48	22	10	10	1984	22
70	121	89	59	83	54	25	19	8	1984	23
70	117	80	80	86	58	38	24	8	1984	24
99	117	97	99	75	44	30	36	7	1984	25
105	101	97	124	87	49	25	49	0	1984	26
99	78	96	121	86	40	9	41	0	1984	27
106	78	98	125	69	41	9	37	0	1984	28
110	88	94	120	74	50	12	34	0	1984	29
102		107	107	70	42	16	27	8	1984	30
82		113		63		12	36		1984	31
57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	1984	

END PROCESSING FILE # 4