

Constantine which is sufficiently attested and affords an explanation of the open space in the Holy Sepulchre. The theory of an atrium between the Anastasis and the basilica consequently falls to the ground.

However, I will not tell tales out of school. A work which I have ready for the press—"The Church of the Holy Sepulchre and its Sanctuaries," which now only requires a publisher—will, it is hoped, soon furnish the reader, who is so inclined, with further details in regard to this interesting subject.

J. H. FREESE.

ON THE TEMPERATURE OF THE AIR AT JERUSALEM,  
FROM CONTINUOUS OBSERVATIONS 1882 TO 1896,  
AND COMPARISON WITH THE TEMPERATURE OF  
THE AIR AT SARONA, FROM SIMULTANEOUS  
OBSERVATIONS 1882 TO 1889.

By JAMES GLAISHER, F.R.S.

JERUSALEM is situated in latitude  $31^{\circ} 46' 40''$  N. and longitude  $35^{\circ} 13' 30''$  E., and is about 2,500 feet above the level of the Mediterranean Sea. The observations of temperature were begun in the year 1861 by Dr. Chaplin, and continued by him till the end of the year 1881. The results of Dr. Chaplin's observations were published in the *Quarterly Statement* for January, 1883.

Under the head of Temperature Dr. Chaplin states that "to carry on a continuous series of meteorological observations in Jerusalem is extremely difficult, owing to the delays and uncertainties involved in replacing broken or defective instruments, and although great and constant care has been taken to make regular observations, it has several times happened that for a long period one or more of the thermometers has been wanting."

Owing to the causes mentioned by Dr. Chaplin, he felt obliged to restrict himself to the observations in only eight years—1864 to 1871—out of the twenty-one. It is greatly to be regretted that the complete record made by so careful an observer as Dr. Chaplin could not have been rendered available; in that case our knowledge of the climate of Jerusalem would have been much greater than it is.

From 1882 the observations have been made under the superintendence of the Palestine Exploration Fund. They were forwarded at the end of each year to the Society, but remained unreduced for some years; recently they have been sent to me at the end of each year. The results from 1882 to 1896 were published in the *Quarterly Statements* between July, 1893, and January, 1898, and this paper is based upon the yearly results published in those years.

TEMPERATURE OF THE AIR AT JERUSALEM.

At Saron, in latitude  $32^{\circ} 4' N.$  and longitude  $34^{\circ} 47' E.$ , and about 50 feet above the sea, observations under the superintendence of the Palestine Exploration Fund were made from the year 1880 to the year 1889, and were sent at the end of each year to the Society, but remained, as in the Jerusalem series, unreduced for some years. The results of each year's observations were published in the *Quarterly Statements*, beginning July, 1888, and ending October, 1890. The discussion of the 10 years' results was published in the *Quarterly Statements* for the year 1891. During eight years from 1882, the observations were taken simultaneously with those at Jerusalem, and from 1882 to 1889 the results in several of the tables in the discussion of the Saron observations are comparable with the discussion of the Jerusalem observations.

By looking over Table I it will be seen that the temperature of the air did not reach  $100^{\circ}$  in the years 1882, 1883, 1885, 1890, 1891, and 1895, but reached or exceeded  $100^{\circ}$  in all the other years, viz., 1884, 1886, 1887, 1888, 1889, 1892, 1893, 1894, and 1896. The highest temperature in the 15 years was  $108^{\circ}$  on June 18th, 1894, and the next in order was  $106^{\circ}$  on both July 12th and 13th, 1888. The highest temperature observed by Dr. Chaplin during 21 years, viz., 1861 to 1881, was on the 28th and 30th of August, 1881, when it remained for some hours at  $112^{\circ}$ .

The highest temperature in the year—

1882	was	$99^{\circ}5$	on	August 28th.
1883	"	$98^{\circ}5$	"	June 2nd.
1884	"	$105^{\circ}0$	"	August 6th and 9th.
1885	"	$98^{\circ}0$	"	August 7th.
1886	"	$105^{\circ}0$	"	June 15th.
1887	"	$102^{\circ}0$	"	August 21st.
1888	"	$106^{\circ}0$	"	July 12th and 13th.
1889	"	$100^{\circ}5$	"	August 1st.
1890	"	$97^{\circ}0$	"	September 10th.
1891	"	$97^{\circ}0$	"	June 10th and August 8th.
1892	"	$101^{\circ}0$	"	September 17th.
1893	"	$104^{\circ}5$	"	July 19th.
1894	"	$108^{\circ}0$	"	June 18th.
1895	"	$97^{\circ}0$	"	June 14th and September 22nd.
1896	"	$103^{\circ}0$	"	August 14th.

Thus the maximum temperature of the year has occurred in—

June, five times, viz., in 1883, 1886, 1891, 1894, and 1895; the highest was  $108^{\circ}0$  in 1894.

July, twice, in 1888 and 1893; the highest was  $106^{\circ}0$  in 1888.

August, seven times, in 1882, 1884, 1885, 1887, 1889, 1891, and 1896; the highest was  $105^{\circ}0$  in 1884.

September, three times, in 1890, 1892, and 1885; the highest was  $101^{\circ}0$  in 1892.

In the year 1891 the highest readings in June and August were alike.

" 1895 " " " June and September "

TABLE I.—Showing the highest temperature of the air at Jerusalem in every month.

Months.	YEARS.															Means of 15 years.
	1892	1893	1894	1895	1896	1897	1898	1899	1890	1891	1892	1893	1894	1895	1896	
January... ..	degs. 56·5	degs. 60·5	degs. 62·0	degs. 60·0	degs. 63·5	degs. 62·0	degs. 64·8	degs. 61·0	degs. 54·5	degs. 61·0	degs. 62·0	degs. 65·5	degs. 57·0	degs. 59·2	degs. 57·0	degs. 60·4
February ... ..	70·5	58·5	58·0	69·5	65·5	73·5	73·0	71·5	64·8	60·0	70·0	69·8	62·0	72·8	68·0	67·1
March ... ..	75·0	86·0	75·0	84·0	74·0	79·8	90·5	82·5	77·0	85·0	76·0	77·0	78·5	80·5	68·0	79·3
April ... ..	78·0	83·0	84·0	87·0	90·2	85·5	86·2	94·8	80·8	86·5	86·0	78·0	84·8	81·2	85·0	84·7
May ... ..	90·0	93·5	94·0	96·0	93·0	94·0	91·5	97·0	89·0	89·0	90·5	90·8	95·5	93·8	89·0	92·4
June ... ..	93·3	98·5	99·0	93·5	105·0	97·8	93·0	95·5	96·2	97·0	94·5	90·8	108·0	97·0	98·2	97·2
July ... ..	89·8	95·5	99·5	91·0	96·0	97·8	106·0	97·8	93·8	95·5	94·5	104·5	104·8	96·5	97·8	97·5
August ... ..	99·3	98·0	105·0	98·0	101·0	102·0	97·5	100·5	95·5	97·0	91·0	99·0	96·0	95·8	103·0	98·6
September ... ..	97·0	94·5	90·3	97·0	96·5	96·5	97·0	93·5	97·0	92·0	101·0	95·5	95·0	97·0	91·8	95·4
October ... ..	90·0	96·5	91·5	86·5	83·0	94·0	94·5	92·0	90·0	86·0	89·8	89·0	91·5	85·5	80·0	90·4
November ... ..	75·5	70·5	72·0	78·0	76·0	82·5	68·5	80·8	82·0	83·0	71·5	77·0	81·0	85·0	77·8	77·5
December ... ..	70·0	66·0	68·5	69·0	63·5	65·0	64·5	66·0	63·8	71·8	67·0	68·0	66·0	66·5	72·0	67·2
Means ... ..	82·1	83·5	83·2	84·2	84·4	85·9	85·6	86·0	82·0	83·7	82·8	83·7	85·0	84·3	83·1	84·0

In the year 1884 the temperature reached or exceeded  $100^{\circ}$  on four days, viz., on August 6th, 7th, 9th, and 10th; in 1886 on five days, June 14th, 15th, and 18th, and on August 14th and 15th; in 1887 on three days, August 16th, 21st, and 22nd; in 1888 on seven days, July 12th, 13th, 14th, 15th, 19th, 20th, and 21st; in 1889 on one day, August 1st; in 1892 on one day, September 17th; in 1893 on one day, July 19th; in 1894 on three days, June 17th and 18th, and July 16th; and in 1896 on three days, August 13th, 14th, and 15th. Thus the temperature has reached or exceeded  $100^{\circ}$  on 28 days during the 15 years.

It reached or exceeded $90^{\circ}$ in the year		1882	on	28	days.
"	"	$90^{\circ}$	"	1883	" 36 "
"	"	$90^{\circ}$	"	1884	" 33 "
"	"	$90^{\circ}$	"	1885	" 33 "
"	"	$90^{\circ}$	"	1886	" 55 "
"	"	$90^{\circ}$	"	1887	" 73 "
"	"	$90^{\circ}$	"	1888	" 51 "
"	"	$90^{\circ}$	"	1889	" 54 "
"	"	$90^{\circ}$	"	1890	" 37 "
"	"	$90^{\circ}$	"	1891	" 28 "
"	"	$90^{\circ}$	"	1892	" 23 "
"	"	$90^{\circ}$	"	1893	" 30 "
"	"	$90^{\circ}$	"	1894	" 36 "
"	"	$90^{\circ}$	"	1895	" 35 "
"	"	$90^{\circ}$	"	1896	" 29 "

Or in the 15 years the temperature has reached or exceeded  $90^{\circ}$  on 581 days.

The number at the foot of each column in Table I shows the mean of each year. The highest was  $86^{\circ}0$  in 1889, and the lowest  $82^{\circ}0$  in 1890.

The numbers in the last column of Table I give the mean of the 15 readings. The highest was  $98^{\circ}6$  in August, and the next in order were  $97^{\circ}5$  in July, and  $97^{\circ}2$  in June; the lowest was  $60^{\circ}4$  in January, and the next in order were  $67^{\circ}1$  in February, and  $67^{\circ}2$  in December. The mean of all was  $84^{\circ}0$ .

By taking the difference between the numbers in the above table and those corresponding for Sarona in Table I, published in the *Quarterly Statement* for 1891, p. 164, it will be seen the highest temperature of the air in each month at Sarona was always higher in the months from October to May, with the exception of April 1886, May 1882, May 1886, October 1883, and November 1887, when the temperature at Sarona was  $0^{\circ}2$ ,  $2^{\circ}0$ ,  $7^{\circ}0$ ,  $2^{\circ}5$ , and  $0^{\circ}5$  respectively lower than that at Jerusalem, and always lower than the temperature at Jerusalem in the months from June to September, with the exception of June 1886, June 1889, and September 1883, when Sarona was higher by  $7^{\circ}0$ ,  $4^{\circ}5$ , and  $11^{\circ}5$  respectively. Omitting these exceptional cases, it varied in—

October	from 2°0 higher in 1882 to 10°5 higher in 1886
November	„ 5°2 „ 1889 „ 17°5 „ 1882
December	„ 7°0 „ 1882 „ 17°5 „ 1886
January	„ 6°5 „ 1886 „ 17°5 „ 1883
February	„ 3°5 „ 1885 and 1887 to 16°5 „ 1886
March	„ 4°0 „ 1884 „ 14°5 „ 1887
April	„ 3°0 „ 1885 „ 13°0 „ 1888
May	„ 3°0 „ 1889 „ 7°0 „ 1885
June	„ 0°5 lower in 1885 „ 9°5 lower in 1883
July	„ 2°8 „ 1882 „ 13°0 „ 1888
August	„ 6°0 „ 1883 „ 15°0 „ 1884
September	„ 2°5 „ 1886 „ 7°0 „ 1888

The mean highest temperature for the eight years 1882-1889 was 88°·2 at Sazona and 84°·4 at Jerusalem.

From Table II it will be seen that the temperature was at or below 32°·0 in every year excepting 1885 and 1892.

The lowest temperature in the year—

1882	was 28°·5 in February.
1883	„ 31°·0 „ March.
1884	„ 28°·5 „ January.
1885	„ 34°·5 „ January, March, and December.
1886	„ 28°·5 „ March.
1887	„ 27°·0 „ January.
1888	„ 29°·5 „ December.
1889	„ 28°·0 „ December.
1890	„ 26°·5 „ January.
1891	„ 30°·0 „ February and December.
1892	„ 36°·0 „ January and December.
1893	„ 27°·5 „ December.
1894	„ 27°·0 „ January.
1895	„ 30°·0 „ January.
1896	„ 28°·0 „ January.

Thus the minimum temperature of the year has occurred in—

January, eight times, viz., in 1884, 1885, 1887, 1890, 1892, 1894, 1895, and 1896; the lowest was 26°·5 in 1890.

February, twice, in 1882 and 1891; the lowest was 28°·5 in 1882.

March, three times, in 1883, 1885, and 1886; the lowest was 28°·5 in 1886.

December, six times, in 1885, 1888, 1889, 1891, 1892, and 1893; the lowest was 27°·5 in 1893.

In the year 1885 the lowest readings in January, March, and December were alike.

TABLE II.—Showing the lowest temperature of the air at Jerusalem in every month.

Months.	YEARS.															Means of 15 years.
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	
January... ..	degs. 31·0	degs. 36·5	degs. 28·5	degs. 34·5	degs. 35·0	degs. 27·0	degs. 30·0	degs. 37·5	degs. 26·5	degs. 31·5	degs. 36·0	degs. 30·0	degs. 27·0	degs. 30·0	degs. 28·0	degs. 31·3
February ... ..	28·5	35·5	31·5	36·5	34·0	31·0	33·5	38·0	31·0	30·0	36·5	28·0	28·0	32·0	30·0	32·9
March ... ..	38·0	31·0	34·0	34·5	28·5	30·5	37·5	38·0	32·0	32·0	39·0	31·0	31·0	32·5	36·0	33·7
April ... ..	38·5	40·0	41·5	41·0	30·0	40·5	40·5	42·0	44·8	43·0	43·0	40·0	37·0	43·5	36·0	40·1
May ... ..	40·0	47·5	44·0	48·5	41·0	38·5	48·0	47·0	50·0	49·5	49·0	46·0	40·5	45·0	47·0	45·5
June ... ..	48·5	56·0	53·0	51·0	50·0	52·0	53·0	56·0	52·0	52·0	55·0	53·5	51·0	50·0	52·0	52·3
July ... ..	58·5	58·0	56·0	58·0	53·0	54·0	58·5	60·0	60·0	61·0	59·0	60·0	51·0	58·5	59·0	57·6
August ... ..	60·0	60·5	55·0	58·0	52·5	56·0	58·0	62·0	64·0	62·0	61·5	56·0	55·0	58·0	62·5	58·7
September ... ..	59·0	59·5	54·5	55·5	52·5	51·0	58·0	54·0	53·0	59·0	60·0	52·0	51·0	50·0	56·0	55·0
October ... ..	52·5	54·5	48·0	51·5	41·5	51·0	53·0	42·0	55·0	55·0	51·0	47·0	49·0	45·0	56·0	50·1
November ... ..	47·5	45·3	41·0	44·0	35·5	38·0	38·5	34·0	44·5	41·0	44·0	45·0	38·0	39·0	47·0	41·5
December ... ..	40·0	36·0	41·0	34·5	32·0	28·0	29·5	28·0	38·0	30·0	36·0	27·5	29·0	31·5	39·5	33·6
Means... ..	45·2	46·7	44·2	45·8	40·5	41·5	45·3	44·9	45·9	45·5	47·5	43·0	40·6	43·2	45·8	44·4

In the year 1891 the lowest readings in February and December were alike.

In the year 1892 the lowest readings in January and December were alike.

In the year	1882	it was at or below	32°	on	7	nights.
	1883	"	"	32°	"	1 night.
	1884	"	"	32°	"	5 nights.
	1886	"	"	32°	"	3 "
	1887	"	"	32°	"	11 "
	1888	"	"	32°	"	7 "
	1889	"	"	32°	"	2 "
	1890	"	"	32°	"	18 "
	1891	"	"	32°	"	8 "
	1893	"	"	32°	"	12 "
	1894	"	"	32°	"	24 "
	1895	"	"	32°	"	5 "
	1896	"	"	32°	"	4 "

The lowest temperature in the 15 years was 26°·5 on January 26th, 1890; and the next in order was 27°·0, which occurred on five different nights, viz., on January 23rd, 26th, and 27th, 1887, and on January 20th and 21st, 1894.

The temperature was below 40° in the year 1882 on 46 nights.

"	"	40°	"	1883	"	29	"
"	"	40°	"	1884	"	50	"
"	"	40°	"	1885	"	23	"
"	"	40°	"	1886	"	97	"
"	"	40°	"	1887	"	84	"
"	"	40°	"	1888	"	37	"
"	"	40°	"	1889	"	40	"
"	"	40°	"	1890	"	64	"
"	"	40°	"	1891	"	52	"
"	"	40°	"	1892	"	19	"
"	"	40°	"	1893	"	65	"
"	"	40°	"	1894	"	113	"
"	"	40°	"	1895	"	57	"
"	"	40°	"	1896	"	61	"

Or in the 15 years the temperature on 837 nights has been below 40°.

The number at the foot of each column in Table II shows the mean of each year. The lowest was 40°·5 in 1886, and the highest 47°·5 in 1892.

The numbers in the last column of Table II give the mean of the 15 readings. The lowest was 31°·3 in January, and the next in order were 32°·9 in February and 33°·6 in December; the highest was 58°·7 in August, and the next in order were 57°·6 in July and 55°·0 in September. The mean of all was 44°·4.

By taking the difference between the highest and lowest temperature in each year, the yearly range was—

In 1882	....	....	....	....	....	71°·0
1883	....	....	....	....	....	67°·5
1884	....	....	....	....	....	76°·5
1885	....	....	....	....	....	63°·5
1886	....	....	....	....	....	76°·5
1887	....	....	....	....	....	75°·0
1888	....	....	....	....	....	76°·5
1889	....	....	....	....	....	71°·5
1890	....	....	....	....	....	70°·5
1891	....	....	....	....	....	67°·0
1892	....	....	....	....	....	65°·0
1893	....	....	....	....	....	77°·0
1894	....	....	....	....	....	81°·0
1895	....	....	....	....	....	67°·0
1896	....	....	....	....	....	75°·0

The greatest range, 81°·0, was in 1894, the next in order were 77°·0 in 1893 and 76°·5 in both 1884 and 1888; the smallest was 63°·5 in 1885, and the next in order were 65°·0 in 1892 and 67°·0 in both 1891 and 1895. The mean annual range of the 15 years was 72°·0.

By taking the difference between the numbers in the above table and those corresponding for Sarona in Table III, published in the *Quarterly Statement* for 1891, p. 169, it will be seen that the lowest temperature of the air in each month at Sarona was always higher than that at Jerusalem, with the following exceptions—March 1882, September 1882, September 1883, October 1883, October 1885, November 1882, and December 1884, when the temperature at Sarona was 1°·0, 2°·0, 1°·5, 1°·5, 0°·5, 1°·5, and 3°·0 respectively lower than that at Jerusalem. Omitting these exceptional cases, it varied in—

January	from	2°·5	higher in	1883	to	8°·0	higher in	1886
February	„	3°·0	„	1889	„	9°·0	„	1886
March	„	2°·5	„	1888	„	10°·5	„	1886
April	„	0°·0	„	1883	„	12°·0	„	1886
May	„	0°·5	„	1883	„	7°·0	„	1882 and 1896
June	„	2°·5	„	1882	„	7°·0	„	1885 and 1886
July	„	1°·5	„	1882	„	8°·0	„	1885, 1886, and 1887
August	„	4°·0	„	1882	„	12°·5	„	1886
September	„	5°·0	„	1888	„	10°·0	„	1887
October	„	0°·5	„	1882	„	14°·0	„	1889
November	„	3°·1	„	1888	„	14°·0	„	1887
December	„	0°·0	„	1882	„	18°·0	„	1887

The mean lowest temperature for the eight years 1882–1889 was 49°·7 at Sarona and 44°·3 at Jerusalem.



TABLE III.—Showing the monthly range of the temperature of the air at Jerusalem in every month.

Months.	YEARS.															Means of 15 years.
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	
January ...	degs. 25·5	degs. 24·0	degs. 33·5	degs. 25·5	degs. 28·5	degs. 35·0	degs. 34·8	degs. 23·5	degs. 28·0	degs. 29·5	degs. 26·0	degs. 35·5	degs. 30·0	degs. 29·2	degs. 29·0	degs. 29·2
February ...	42·0	23·0	23·5	31·0	31·5	42·5	31·5	33·5	33·8	30·0	33·5	40·8	34·0	40·8	38·0	34·2
March ...	37·0	55·0	41·0	49·5	45·5	49·3	53·0	44·5	45·0	53·0	37·0	46·0	47·5	48·0	32·0	45·5
April ...	39·5	43·0	42·5	46·0	60·2	45·0	45·7	52·8	36·0	43·5	43·0	38·0	47·8	37·7	49·0	44·6
May ...	50·0	46·0	50·0	47·5	52·0	55·5	43·5	50·0	39·0	39·5	41·5	44·8	55·0	48·8	42·0	47·0
June ...	44·8	42·5	46·0	42·5	55·0	45·8	40·0	39·5	44·2	45·0	39·8	37·3	57·0	47·0	46·2	44·8
July ...	31·3	38·5	43·5	33·0	43·0	43·8	47·5	37·8	33·8	34·5	35·5	44·5	53·8	33·0	38·8	39·8
August ...	39·5	37·5	50·0	40·0	48·5	46·0	39·5	36·5	31·5	35·0	29·5	43·0	41·0	37·8	40·5	39·8
September ...	38·0	35·0	35·8	41·5	44·0	45·5	39·0	39·5	44·0	33·0	41·0	43·5	44·0	47·0	35·8	40·4
October ...	37·5	42·0	43·5	37·0	46·5	43·0	41·5	50·0	35·0	31·0	38·8	42·0	42·5	40·5	33·0	43·3
November ...	23·0	25·2	31·0	34·0	40·5	44·5	30·0	46·8	37·5	42·0	27·5	32·0	43·0	47·0	30·8	38·0
December ...	30·0	30·0	27·5	34·5	31·5	37·0	35·0	38·0	25·8	41·8	31·0	40·5	37·0	32·0	32·5	33·6
Means...	36·9	36·8	39·0	38·5	43·8	44·4	40·3	41·1	36·1	38·2	35·3	40·7	44·4	41·1	37·3	39·6

TEMPERATURE OF THE AIR AT JERUSALEM.

The extreme ranges in each month are as follows :—

In January	the smallest	was	23°·5	in	1889,	the largest	35°·5	in	1893
February	"	"	23°·0	"	1883	"	42°·5	"	1887
March	"	"	32°·0	"	1896	"	55°·0	"	1883
April	"	"	36°·0	"	1890	"	60°·2	"	1886
May	"	"	39°·0	"	1890	"	55°·5	"	1887
June	"	"	37°·3	"	1893	"	57°·0	"	1894
July	"	"	31°·3	"	1882	"	53°·8	"	1894
August	"	"	29°·5	"	1892	"	50°·0	"	1884
September	"	"	33°·0	"	1891	"	47°·0	"	1895
October	"	"	31°·0	"	1891	"	50°·0	"	1889
November	"	"	25°·2	"	1883	"	47°·0	"	1895
December	"	"	25°·8	"	1890	"	41°·8	"	1891

The smallest range in the 15 years in the month was 23°·0 in February, 1883, and the largest 60°·2 in April, 1886.

The number at the foot of each column in Table III shows the mean monthly range of the year, and these numbers varied from 35°·3 in 1892 to 44°·4 in both 1887 and 1894.

The numbers in the last column of Table III give the mean range in each month. The smallest was 29°·2 in January, and the next in order were 33°·6 in December and 34°·2 in February; the largest was 47°·0 in May, and the next in order were 45°·5 in March and 44°·8 in June. The mean monthly range for the 15 years was 39°·6. From Dr. Chaplin's observations, published in the *Quarterly Statement* for January, 1883, p. 39, the mean monthly range for eight years, viz., 1864 to 1871, was 39°·9.

By taking the difference between the numbers in the above table and those corresponding for Saronia in Table V, published in the *Quarterly Statement* for 1891, p. 174, it will be seen that the monthly range of the temperature of the air at Saronia was always larger than that at Jerusalem in the months from October to April, with the following exceptions—January 1886, February 1887, March 1884, March 1886, April 1885, April 1886, April 1888, October 1883, October 1886, October 1889, November 1886, November 1887, November 1889, and December 1887, when the range at Saronia was smaller by 1°·5, 2°·5, 4°·0, 1°·5, 1°·0, 12°·2, 2°·7, 1°·0, 5°·5, 8°·0, 4°·5, 14°·5, 0°·8, and 7°·0 respectively, and always smaller than the range at Jerusalem in the months from May to September, excepting May 1883, May 1885, May 1888, June 1889, and September 1883, when the range at Saronia was larger by 5°·0, 2°·5, 1°·5, and 13°·0 respectively. Omitting these exceptional cases, it varied in—

October	from	0°·0	larger in	1887	to	10°·0	larger in	1885
November	"	1°·0	"	1884	"	19°·0	"	1882
December	"	0°·0	"	1888	"	16°·5	"	1884
January	"	4°·2	"	1888	"	15°·0	"	1883
February	"	0°·0	"	1885	"	8°·0	"	1883
March	"	2°·5	"	1885	"	9°·5	"	1889
April	"	4°·5	"	1882	"	12°·0	"	1883

May	from	0°0	smaller in	1889	to	14°0	smaller in	1886
June	„	0°0	„	1886	„	14°8	„	1887
July	„	4°3	„	1882	„	18°5	„	1888
August	„	10°5	„	1883	„	23°0	„	1884
September	„	3°0	„	1882	„	16°5	„	1887

The mean monthly range for the eight years 1882-1889 was 38°·4 at Saron and 40°·1 at Jerusalem.

The extreme monthly mean high day temperatures in each month are as follows :—

In January	the lowest was	47°·3	in	1890,	the highest	53°·9	in	1886
February	„	49°·0	„	1882	„	60°·8	„	1895
March	„	58°·0	„	1896	„	67°·2	„	1888
April	„	64°·9	„	1893	„	75°·2	„	1887
May	„	75°·4	„	1882	„	82°·9	„	1885
June	„	82°·2	„	1895	„	88°·6	„	1886
July	„	85°·5	„	1882 and				
				1883	„	93°·2	„	1888
August	„	86°·7	„	1894	„	93°·8	„	1890
September	„	80°·9	„	1884	„	88°·0	„	1892
October	„	75°·9	„	1895	„	89°·0	„	1887
November	„	56°·9	„	1888	„	71°·2	„	1893
December	„	53°·4	„	1888	„	61°·3	„	1896

Thus the *mean high day temperature* has varied, the most 14°·3 in November, the next in order 13°·1 in October, and 11°·8 in February ; and the least 6°·4 in June, 6°·6 in January, and 7°·5 in May. The lowest in the 15 years was 47°·3 in January, 1890, and the highest 93°·8 in August, 1890.

The highest monthly mean high day temperature in each year has been as follows :—

In 1882 in August	....	....	....	....	88°·2
1883 „ August	....	....	....	....	87°·2
1884 „ August	....	....	....	....	88°·0
1885 „ August	....	....	....	....	89°·3
1886 „ August	....	....	....	....	92°·2
1887 „ August	....	....	....	....	91°·9
1888 „ July	....	....	....	....	93°·2
1889 „ August	....	....	....	....	90°·0
1890 „ August	....	....	....	....	93°·8
1891 „ August	....	....	....	....	89°·6
1892 „ September	....	....	....	....	88°·0
1893 „ July	....	....	....	....	90°·8
1894 „ June	....	....	....	....	87°·6
1895 „ July and August	....	....	....	....	88°·2
1896 „ August	....	....	....	....	91°·3

TABLE IV.—Showing the monthly mean of the high day temperature of the air at Jerusalem.

Months.	YEARS.															Means of 15 years.
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	
January ...	degs. 49·8	degs. 51·8	degs. 49·4	degs. 50·8	degs. 53·9	degs. 50·5	degs. 49·7	degs. 51·5	degs. 47·3	degs. 51·2	degs. 52·4	degs. 52·4	degs. 50·5	degs. 53·8	degs. 49·8	degs. 51·0
February ...	49·0	52·0	49·7	56·4	56·5	55·2	57·4	55·7	54·2	50·5	56·7	53·0	52·9	60·8	52·0	54·1
March ...	63·5	63·5	60·2	64·1	59·5	61·9	67·2	67·1	64·5	63·2	63·3	60·5	61·2	60·3	59·0	62·5
April ...	68·3	68·9	73·2	66·8	69·5	75·2	70·3	71·6	69·8	72·0	72·4	64·9	66·2	70·8	66·4	69·8
May ...	75·4	78·4	77·2	82·9	76·4	76·9	75·8	80·4	80·7	80·4	77·5	77·0	79·9	79·8	76·8	78·4
June ...	82·7	85·0	85·5	82·9	88·6	86·9	83·0	85·2	84·9	86·6	83·9	83·7	87·6	82·2	82·1	84·7
July ...	85·5	85·5	85·7	85·7	87·1	89·0	93·2	89·3	91·3	86·8	85·6	90·8	87·4	88·2	86·7	87·8
August ...	88·2	87·2	88·0	89·3	92·2	91·9	89·3	90·0	93·8	89·6	87·1	86·9	86·7	88·2	91·3	89·3
September ...	86·9	86·3	80·9	86·4	87·3	87·0	87·2	81·6	83·5	84·9	88·0	83·5	85·1	83·8	84·5	85·3
October ...	76·2	79·7	77·9	81·0	81·0	89·0	82·5	81·9	80·5	78·6	82·2	78·2	83·9	75·9	81·0	80·6
November ...	67·0	64·0	64·9	70·3	64·0	70·7	56·9	63·6	67·0	66·3	63·9	71·2	64·1	66·1	67·7	65·9
December ...	58·6	55·0	59·4	58·9	56·3	57·0	53·4	54·6	54·1	55·4	56·0	55·6	55·8	58·1	61·3	56·7
Means...	70·9	71·4	70·9	72·9	72·7	74·3	72·2	73·0	72·6	72·1	72·4	71·5	71·8	72·3	71·5	72·2

So that the maximum has been—

Once in June.  
 Three times in July.  
 Eleven times in August.  
 Once in September.

The number at the foot of each column in Table IV shows the mean of each year. The highest was  $74^{\circ}3$  in 1887, and the lowest  $70^{\circ}9$  in both 1882 and 1884.

The numbers in the last column of Table IV give the mean of the 15 readings. The highest was  $89^{\circ}3$  in August, and the next in order  $87^{\circ}8$  in July, and  $85^{\circ}3$  in September; the lowest was  $51^{\circ}0$  in January, and the next in order were  $54^{\circ}1$  in February, and  $56^{\circ}7$  in December. The mean of all was  $72^{\circ}2$ .

By taking the difference between the numbers in the above table and those corresponding for Saronia in Table VII, published in the *Quarterly Statement* for 1891, p. 225, it will be seen that the mean high day temperature of the air at Saronia was always higher than that at Jerusalem in the months from September to May, with the exception of May 1882, May 1883, September 1886, September 1887, September 1888, and October 1887, when the mean high day temperature at Saronia was  $0^{\circ}1$ ,  $1^{\circ}7$ ,  $0^{\circ}1$ ,  $1^{\circ}0$ ,  $0^{\circ}1$ , and  $0^{\circ}8$  respectively lower than that at Jerusalem, and always lower than the temperature at Jerusalem in the months from June to August, with the exception of August 1883, which was  $1^{\circ}0$  higher than that at Jerusalem. Omitting these exceptional cases it varied in—

September	from $0^{\circ}3$ higher in 1882 to $2^{\circ}8$ higher in 1884
October	„ $3^{\circ}1$ „ 1886 „ $7^{\circ}1$ „ 1882
November	„ $6^{\circ}2$ „ 1885 „ $12^{\circ}6$ „ 1868
December	„ $10^{\circ}3$ „ 1882 „ $13^{\circ}1$ „ 1887
January	„ $10^{\circ}8$ „ 1884 and
	1886 to $12^{\circ}9$ „ 1887
February	„ $6^{\circ}7$ „ 1882 „ $11^{\circ}5$ „ 1889
March	„ $5^{\circ}3$ „ 1882 „ $10^{\circ}3$ „ 1888
April	„ $2^{\circ}5$ „ 1889 „ $6^{\circ}4$ „ 1885
May	„ $0^{\circ}0$ „ 1884 „ $3^{\circ}3$ „ 1887
June	„ $0^{\circ}1$ lower in 1885 „ $3^{\circ}1$ lower in 1882
July	„ $0^{\circ}0$ „ 1885 „ $4^{\circ}7$ „ 1888
August	„ $0^{\circ}9$ „ 1888 „ $4^{\circ}3$ „ 1886

The mean high day temperature for the eight years 1882–1889 was  $76^{\circ}7$  at Saronia and  $72^{\circ}3$  at Jerusalem.

TABLE V.--Showing the monthly mean of the low night temperature of the air at Jerusalem.

Months.	YEARS.															Means of 15 years.
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	
January ...	degs. 37·4	degs. 42·5	degs. 38·0	degs. 40·3	degs. 39·1	degs. 34·5	degs. 37·0	degs. 41·0	degs. 32·3	degs. 40·5	degs. 41·3	degs. 40·6	degs. 34·1	degs. 36·2	degs. 37·9	degs. 38·2
February ...	36·1	40·2	38·7	42·5	39·4	40·3	44·1	43·1	36·9	38·2	43·2	39·6	35·7	39·6	38·6	39·7
March ...	45·4	46·2	43·2	46·7	39·4	42·5	49·8	48·8	46·8	42·3	46·0	41·7	40·1	41·2	42·2	44·2
April ...	53·3	49·8	53·3	49·1	45·8	50·5	51·6	50·8	52·3	52·7	52·2	46·7	44·0	51·6	49·1	50·2
May ...	54·0	55·0	55·5	59·9	50·8	52·3	54·5	58·6	57·7	58·7	57·9	55·4	53·4	58·2	57·5	56·0
June ...	60·6	61·8	62·4	60·5	59·7	59·1	61·0	62·5	63·5	60·2	61·9	67·0	59·2	59·3	61·3	61·3
July ...	63·5	64·3	61·6	62·6	58·2	62·0	69·0	66·7	68·7	66·0	63·7	67·9	60·1	64·3	65·4	64·3
August ...	65·3	65·1	63·5	62·3	58·4	61·8	65·0	65·0	68·7	66·9	64·6	61·1	58·9	62·9	69·5	63·9
September ...	65·0	63·2	57·8	60·5	57·4	57·6	62·8	60·6	62·1	62·4	65·9	57·9	56·8	58·6	63·5	60·8
October ...	56·4	60·2	57·9	57·5	52·5	60·4	63·8	59·5	59·3	59·9	61·9	53·6	54·9	51·9	63·1	58·2
November ...	52·4	51·9	48·7	49·6	42·8	46·6	45·9	44·9	52·9	52·3	51·1	50·2	44·1	46·4	54·0	48·9
December ...	47·2	43·1	46·3	42·6	37·8	37·4	42·4	39·2	44·4	44·4	44·3	39·3	36·7	44·8	49·7	42·6
Means...	53·0	53·6	52·2	52·8	48·4	50·4	53·9	53·4	53·8	53·7	54·5	51·8	48·2	51·2	54·3	52·4

The monthly mean low night temperature varied in—

January	from	32°·3	in 1890	to	42°·5	in 1883
February	„	35°·7	„ 1894	„	44°·1	„ 1888
March	„	39°·4	„ 1886	„	49°·8	„ 1888
April	„	44°·0	„ 1894	„	53°·3	„ 1882 and 1884
May	„	50°·8	„ 1886	„	59°·9	„ 1885
June	„	59°·1	„ 1887	„	67°·0	„ 1893
July	„	58°·2	„ 1886	„	69°·0	„ 1888
August	„	58°·4	„ 1886	„	69°·5	„ 1896
September	„	56°·8	„ 1894	„	65°·9	„ 1892
October	„	51°·9	„ 1895	„	63°·8	„ 1888
November	„	42°·8	„ 1886	„	54°·0	„ 1896
December	„	36°·7	„ 1894	„	49°·7	„ 1896

Thus the mean low night temperature has varied, the most 13°·0 in December, the next in order 11°·9 in October and 11°·2 in November; the least 7°·9 in June, 8°·4 in February, and 9°·1 in both May and September. The lowest mean reading in the 15 years was 32°·3 in January, 1890, and the highest 69°·5 in August, 1896.

The lowest monthly mean low night temperature in each year was as follows :—

In 1882	....	....	....	....	36°·1	in February.
1883	....	....	....	....	40°·2	„ February.
1884	....	....	....	....	38°·0	„ January.
1885	....	....	....	....	40°·3	„ January.
1886	....	....	....	....	37°·8	„ December.
1887	....	....	....	....	34°·5	„ January.
1888	....	....	....	....	37°·0	„ January.
1889	....	....	....	....	39°·2	„ December.
1890	....	....	....	....	32°·3	„ January.
1891	....	....	....	....	38°·2	„ February.
1892	....	....	....	....	41°·3	„ January.
1893	....	....	....	....	39°·3	„ December.
1894	....	....	....	....	34°·1	„ January.
1895	....	....	....	....	36°·2	„ December.
1896	....	....	....	....	37°·9	„ January.

Therefore the lowest monthly mean has occurred—

Eight times in January.  
 Three times in February.  
 Four times in December.

The number at the foot of each column in Table V shows the mean of each year. The lowest was 48°·2 in 1894, and the highest 54°·5 in 1892.

The numbers in the last column of Table V give the mean of the 15 readings. The lowest was 38°·2 in January, and the next in order were

39°·7 in February and 42°·6 in December ; the highest was 64°·3 in July, and the next in order were 63°·9 in August and 61°·3 in June. The mean of all 52°·4.

By taking the difference between the numbers in the above table and those corresponding for Saronia in Table IX, published in the *Quarterly Statement* for 1891, p. 230, it will be seen that the mean low night temperature of the air at Saronia was always higher than that at Jerusalem with the exception of April 1882, June 1882, and September 1883, when the mean low night temperature at Saronia was lower by 1°·4, 1°·3, and 2°·2 respectively. Omitting these exceptional cases it varied in—

January	from 2°·9 higher in 1884 to 10°·4 higher in 1887
February	„ 3°·1 „ 1885 „ 9°·3 „ 1886
March	„ 1°·7 „ 1882 „ 9°·6 „ 1886
April	„ 0°·1 „ 1884 „ 6°·0 „ 1886
May	„ 0°·1 „ 1885 „ 5°·2 „ 1886
June	„ 1°·3 „ 1884 „ 4°·3 „ 1885
July	„ 0°·2 „ 1888 „ 7°·4 „ 1886
August	„ 3°·4 „ 1882 „ 10°·8 „ 1886
September	„ 1°·3 „ 1882 „ 9°·7 „ 1887
October	„ 1°·6 „ 1883 „ 8°·1 „ 1886
November	„ 2°·6 „ 1883 „ 10°·6 „ 1887
December	„ 2°·3 „ 1884 „ 13°·5 „ 1887

The mean low night temperature for the eight years 1882–1889 was 56°·9 at Saronia and 52°·2 at Jerusalem.

The mean daily range has varied—

In January	from 9°·3 in 1883 to 17°·6 in 1895
February	„ 11°·0 „ 1884 „ 21°·2 „ 1895
March	„ 15°·8 „ 1896 „ 21°·1 „ 1894
April	„ 15°·0 „ 1882 „ 24°·7 „ 1887
May	„ 19°·3 „ 1896 „ 26°·5 „ 1894
June	„ 16°·7 „ 1893 „ 28°·9 „ 1886
July	„ 20°·8 „ 1891 „ 28°·9 „ 1886
August	„ 21°·8 „ 1896 „ 33°·8 „ 1886
September	„ 21°·0 „ 1896 „ 29°·9 „ 1886
October	„ 17°·9 „ 1896 „ 29°·0 „ 1894
November	„ 11°·0 „ 1888 „ 24°·1 „ 1887
December	„ 9°·7 „ 1890 „ 19°·6 „ 1887

The smallest range in the 15 years was 9°·3 in January, 1883, and the largest 33°·8 in August, 1886.



TABLE VI.—Showing the monthly mean daily range of the temperature of the air at Jerusalem.

Months.	YEARS.															Means of 15 years.
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	
January... ..	degs. 12·4	degs. 9·3	degs. 11·4	degs. 10·5	degs. 14·8	degs. 16·0	degs. 12·7	degs. 10·5	degs. 15·0	degs. 10·7	degs. 11·1	degs. 11·3	degs. 16·4	degs. 17·6	degs. 11·9	degs. 12·8
February ... ..	12·9	11·8	11·0	13·9	17·1	14·9	13·3	12·6	17·3	12·3	13·5	13·4	17·2	21·2	13·4	14·4
March ... ..	18·1	17·3	17·0	17·4	20·1	19·4	17·4	18·3	17·7	20·9	17·3	18·8	21·1	19·1	15·8	18·4
April ... ..	15·0	19·1	19·9	17·7	23·7	24·7	18·7	20·8	17·5	19·3	20·2	18·2	22·2	19·2	17·3	19·6
May ... ..	21·4	23·4	21·7	23·0	25·6	24·6	21·3	21·8	23·0	21·7	19·6	21·6	26·5	21·6	19·3	22·4
June ... ..	22·1	23·2	23·1	22·4	28·9	27·8	22·0	22·7	21·4	26·4	22·0	16·7	28·4	22·9	21·1	23·4
July ... ..	22·0	21·2	24·1	23·1	28·9	27·0	24·2	23·1	22·6	20·8	21·9	22·9	27·3	23·9	21·3	23·6
August ... ..	22·9	22·1	24·5	27·0	33·8	30·1	24·3	25·0	25·1	22·7	22·5	23·8	27·8	25·3	21·8	25·4
September ... ..	21·9	23·1	23·1	25·9	29·9	29·4	24·4	24·0	21·4	22·5	22·1	25·6	28·3	25·2	21·0	24·5
October ... ..	19·3	19·5	20·0	23·5	28·5	28·6	18·7	22·4	21·2	18·7	20·3	24·6	29·0	24·0	17·9	22·4
November ... ..	14·6	12·1	16·2	20·7	21·2	24·1	11·0	18·7	14·1	14·0	12·8	21·0	20·0	19·7	13·7	16·9
December ... ..	11·4	11·9	12·1	16·3	18·5	19·6	11·0	15·4	9·7	11·0	11·7	16·3	19·1	13·3	11·6	13·9
Means... ..	17·9	17·8	18·7	20·1	24·3	23·9	18·3	19·6	18·8	18·4	17·9	19·7	23·6	21·1	17·2	19·8

The greatest monthly mean daily range of temperature in—

1882	was	22°·9	in	August.
1883	„	23°·4	„	May.
1884	„	24°·5	„	August.
1885	„	27°·0	„	August.
1886	„	33°·8	„	August.
1887	„	30°·1	„	August.
1888	„	24°·4	„	September.
1889	„	25°·0	„	August.
1890	„	25°·1	„	August.
1891	„	26°·4	„	June.
1892	„	22°·5	„	August.
1893	„	25°·8	„	August.
1894	„	29°·0	„	October.
1895	„	25°·3	„	August.
1896	„	25°·6	„	August.

The greatest monthly range of temperature in the 15 years has occurred—

Once in May.
Once in June.
Eleven times in August.
Once in September.
Once in October.

The number at the foot of each column in Table VI shows the mean of each year. The largest was 24°·3 in 1886, and the smallest 17°·2 in 1896.

The numbers in the last column of Table VI give the mean of the 15 ranges. The smallest, 12°·8, was in January, increasing month by month to the largest, 25°·4, in August, then decreasing month by month to the end of the year. The mean for the 15 years was 19°·8.

From Dr. Chaplin's observations published in the *Quarterly Statement* for January, 1883, p. 39, the mean daily range for the eight years, viz., 1864 to 1871, was 19°·5.

By taking the difference between the numbers in the above table and those corresponding for Sarona in Table XI, published in the *Quarterly Statement* for 1891, p. 235, it will be seen that the mean daily range of temperature of the air at Sarona was always larger in the months from October to April, with the exception of February 1882, March 1886, April 1886, April 1887, October 1885, October 1886, October 1887, November 1886, November 1887, and December 1887, when the mean daily range at Sarona was 1°·2, 1°·4, 2°·5, 0°·4, 1°·2, 5°·0, 4°·2, 0°·9, 3°·5, and 0°·4 respectively smaller than that at Jerusalem; and always smaller than at Jerusalem in the months of May to September, excepting May, 1885, and September, 1883, which were 0°·4 and 4°·6 respectively larger than at Jerusalem. Omitting these exceptional cases it varied in—

October	from	1°·3	larger in	1884	to	2°·9	larger in	1882
November	„	1°·4	„	1889	„	7°·7	„	1883
December	„	1°·7	„	1886	„	10°·2	„	1884

January	from 0°·6 larger in 1886 to 7°·9 larger in 1884
February	„ 1°·2 „ 1886 „ 6°·8 „ 1889
March	„ 1°·2 „ 1885 „ 7°·0 „ 1888
April	„ 1°·2 „ 1888 „ 5°·9 „ 1882
May	„ 0°·4 smaller in 1889 „ 5°·1 smaller in 1886
June	„ 1°·8 „ 1882 „ 6°·6 „ 1887
July	„ 3°·1 „ 1882 „ 8°·5 „ 1886
August	„ 3°·3 „ 1883 „ 15°·1 „ 1886
September	„ 1°·0 „ 1882 „ 10°·1 „ 1887

The mean daily range of temperature for the eight years 1882-1889 was 19°·8 at Sarona and 20°·1 at Jerusalem.

By selecting in each month the lowest and highest numbers in Table VII, the mean temperature has varied—

In January	from 39°·8 in 1890 to 47°·2 in 1883
February	„ 42°·5 „ 1882 „ 50°·2 „ 1895
March	„ 49°·5 „ 1886 „ 58°·5 „ 1888
April	„ 55°·1 „ 1894 „ 63°·3 „ 1884
May	„ 63°·6 „ 1886 „ 71°·4 „ 1885
June	„ 70°·8 „ 1895 „ 75°·4 „ 1893
July	„ 72°·6 „ 1886 „ 81°·1 „ 1888
August	„ 72°·8 „ 1894 „ 81°·2 „ 1890
September	„ 69°·3 „ 1884 „ 77°·0 „ 1892
October	„ 63°·9 „ 1895 „ 74°·7 „ 1887
November	„ 51°·4 „ 1888 „ 60°·8 „ 1896
December	„ 46°·2 „ 1894 „ 55°·5 „ 1896

The month of the lowest mean temperature in the 15 years was January, 1890, and was 39°·8, the next in order was January, 1894, 42°·3; and the month of the highest was August, 1890, 81°·2, the next in order were July, 1888, 81°·1, and August, 1896, 83°·4.

The months of the lowest and highest mean temperatures in each year are as follows :—

In 1882	the lowest was February, 42°·5; the highest August, 76°·8
1883	„ „ February, 46°·1; „ August, 76°·1
1884	„ „ January, 43°·7; „ August, 75°·8
1885	„ „ January, 45°·5; „ August, 75°·8
1886	„ „ January, 46°·5; „ August, 75°·3
1887	„ „ January, 42°·5; „ August, 76°·8
1888	„ „ January, 43°·4; „ July, 81°·1
1889	„ „ January, 46°·2; „ July, 78°·2
1890	„ „ January, 39°·8; „ August, 81°·2
1891	„ „ February, 44°·4; „ August, 78°·2
1892	„ „ January, 46°·8; „ September, 77°·0
1893	„ „ February, 46°·3; „ July, 79°·3
1894	„ „ January, 42°·3; „ July, 73°·7
1895	„ „ January, 45°·0; „ July, 76°·3
1896	„ „ January, 43°·8; „ August, 80°·4

TABLE VII. — Showing the mean temperature of the air in every month at Jerusalem.

Months.	YEARS.															Means of 15 years.
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	
January ...	degs. 43·6	degs. 47·2	degs. 43·7	degs. 45·5	degs. 46·5	degs. 42·5	degs. 43·4	degs. 46·2	degs. 39·8	degs. 45·9	degs. 46·8	degs. 46·5	degs. 42·3	degs. 45·0	degs. 43·8	degs. 44·6
February ...	42·5	46·1	44·2	49·5	47·9	47·8	50·7	49·4	45·5	44·4	50·0	46·3	44·3	50·2	45·3	46·9
March ...	54·4	54·9	51·7	55·4	49·5	52·2	58·5	57·9	55·7	52·7	54·7	51·1	50·6	50·7	50·1	53·3
April ...	60·8	59·8	63·3	57·5	57·6	62·8	61·0	61·2	61·0	62·4	62·3	55·8	55·1	61·2	57·8	60·0
May ...	64·7	66·7	66·3	71·4	63·6	64·6	65·1	69·5	69·2	69·5	67·7	66·2	66·7	69·0	67·2	67·2
June ...	71·7	73·4	73·9	71·7	74·1	73·0	72·0	73·9	74·2	73·4	72·9	75·4	73·4	70·8	71·9	73·0
July ...	74·5	74·9	73·7	74·1	72·6	75·5	81·1	78·2	80·0	76·4	74·7	79·3	73·7	76·3	76·0	76·1
August ...	76·8	76·1	75·8	75·8	75·3	76·8	77·2	77·5	81·2	78·2	75·8	74·0	72·8	75·5	80·4	76·6
September ...	76·0	74·8	69·3	73·4	72·3	72·3	75·0	72·6	72·8	73·6	77·0	70·7	71·0	71·2	74·0	73·1
October ...	66·3	67·0	67·9	69·3	66·8	74·7	73·1	70·7	69·9	69·3	72·0	65·9	69·4	63·9	72·0	69·3
November ...	59·7	58·0	56·8	60·0	53·4	58·6	51·4	54·2	60·0	59·3	57·5	60·7	54·1	56·2	60·8	57·4
December ...	52·9	49·1	52·3	50·7	47·0	47·2	47·9	46·9	49·3	49·9	50·2	47·5	46·2	51·5	55·5	49·7
Means ...	62·0	62·3	61·6	63·0	60·5	62·3	63·0	63·2	63·2	62·9	63·5	61·7	60·0	61·8	62·9	62·3

The month of lowest mean temperature in each year has been--

Eleven times in January.

Four times in February.

The month of the highest mean temperature in each year has been--

Five times in July.

Nine times in August.

Once in September.

The number at the foot of each column in Table VII shows the mean of each year. The lowest was  $60^{\circ}0$  in 1894, and the highest  $63^{\circ}5$  in 1892.

The numbers in the last column of Table VII give the mean of the 15 readings. The lowest was  $44^{\circ}6$  in January, increasing month by month to the highest,  $76^{\circ}6$ , in August, then decreasing month by month to the end of the year.

The three coldest months in the year are January, February, and December, and their mean value is  $47^{\circ}1$ .

The month of highest mean temperature is August, and the next in order are July and September, and these are the three hottest months in the year; their mean value is  $75^{\circ}3$ .

The mean of the 15 years was  $62^{\circ}3$ . From Dr. Chaplin's observations, published in the *Quarterly Statement* for January, 1883, the mean temperature for the eight years, viz., 1864 to 1871, was  $62^{\circ}8$ .

By taking the difference between the numbers in the above table and those corresponding for Sarona in Table XIII, published in the *Quarterly Statement* for 1891, p. 303, it will be seen that the mean temperature of the air at Sarona was always higher than that at Jerusalem in every month, with the exception of May 1883, June 1882, June 1883, and July 1888, when the mean temperature at Sarona was  $0^{\circ}7$ ,  $2^{\circ}2$ ,  $0^{\circ}1$ , and  $2^{\circ}2$  respectively lower than that at Jerusalem. Omitting these exceptional cases, it varied in--

January	from $6^{\circ}8$ higher in	1884	to $11^{\circ}6$ higher in	1887
February	„ $6^{\circ}0$ „	1887	„ $9^{\circ}9$ „	1886
March	„ $3^{\circ}6$ „	1882	„ $8^{\circ}8$ „	1886
April	„ $1^{\circ}6$ „	{ 1882 1883 1889 }	„ $5^{\circ}7$ „	1885
May	„ $0^{\circ}3$ „	1885	„ $3^{\circ}7$ „	1887
June	„ $0^{\circ}1$ „	1884	„ $2^{\circ}1$ „	1885
July	„ $0^{\circ}4$ „	1882	„ $3^{\circ}2$ „	1885 & 1886
August	„ $0^{\circ}8$ „	1882	„ $3^{\circ}3$ „	1886
September	„ $0^{\circ}4$ „	1883	„ $5^{\circ}6$ „	1889
October	„ $1^{\circ}3$ „	1887	„ $7^{\circ}9$ „	1889
November	„ $5^{\circ}2$ „	1885	„ $9^{\circ}9$ „	1888
December	„ $7^{\circ}0$ „	1882	„ $13^{\circ}1$ „	1887

TABLE VIII.—Showing the departure of the mean temperature of the air in every month above or below its mean for 15 years.

Months.	YEARS.														
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
January ... ..	degs. -1.0	degs. +2.6	degs. -0.9	degs. +0.9	degs. +1.9	degs. -2.1	degs. -1.2	degs. +1.6	degs. -4.8	degs. +1.3	degs. +2.2	degs. +1.9	degs. -2.3	degs. +0.4	degs. -0.8
February ... ..	-4.4	-0.5	-2.7	+2.6	+1.0	+0.9	+3.8	+2.5	-1.4	-2.5	+3.1	-0.6	-2.6	+3.3	-1.6
March ... ..	+1.1	+1.6	-1.6	+2.1	-3.8	-1.1	+5.2	+4.6	+2.4	-0.6	+1.4	-2.2	-2.7	-2.6	-3.2
April ... ..	+0.8	-0.2	+3.3	-2.5	-2.4	+2.8	+1.0	+1.2	+1.0	+2.4	+2.3	-4.2	-4.9	+1.2	-2.2
May ... ..	-2.5	-0.5	-0.9	+4.2	-3.6	-2.6	-2.1	+2.3	+2.0	+2.3	+0.5	-1.0	-0.5	+1.8	0.0
June ... ..	-1.3	+0.4	+0.9	-1.3	+1.1	0.0	-1.0	+0.9	+1.2	+0.4	-0.1	+2.4	+0.4	-2.3	-1.1
July ... ..	-1.6	-1.2	-2.4	-2.0	-3.5	-0.6	+5.0	+2.1	+3.9	+0.3	-1.4	+3.2	-2.4	+0.2	-0.1
August ... ..	+0.2	-0.5	-0.8	-0.5	-1.3	+0.2	+0.6	+0.9	+4.6	+1.6	-0.8	-2.6	-3.8	-1.1	+3.8
September ... ..	+2.9	+1.7	-3.8	+0.3	-0.8	-0.8	+1.9	-0.5	-0.3	+0.5	+3.9	-2.4	-2.1	-1.9	+0.9
October ... ..	-3.0	-2.3	-1.4	0.0	-2.5	+5.4	+3.8	+1.4	+0.6	0.0	+2.7	-3.4	+0.1	-5.4	+2.7
November ... ..	+2.3	+0.6	-0.6	+2.6	-4.0	+1.2	-6.0	-3.2	+2.6	+1.9	+0.1	+3.3	-3.3	-1.2	+3.4
December ... ..	+3.2	-0.6	+2.6	+1.0	-2.7	-2.5	-1.8	-2.8	-0.4	+0.2	+0.5	-2.2	-3.5	+1.8	+5.8
Means... ..	-0.3	0.0	-0.7	+0.6	-1.7	+0.1	+0.7	+0.9	+0.9	+0.6	+1.2	-0.6	-2.3	-0.5	+0.6

The mean temperature for the eight years 1882-1889 was  $66^{\circ}6$  at Saron and  $62^{\circ}2$  at Jerusalem.

The greatest departures in each month above or below its mean of 15 years are :—

	Below the mean of 15 years.	Above the mean of 15 years.
January ....	$4^{\circ}8$ in 1890	and $2^{\circ}6$ in 1883
February....	$4^{\circ}4$ ,, 1882	,, $3^{\circ}8$ ,, 1888
March ....	$3^{\circ}8$ ,, 1886	,, $5^{\circ}2$ ,, 1888
April ....	$4^{\circ}9$ ,, 1894	,, $3^{\circ}3$ ,, 1884
May ....	$3^{\circ}6$ ,, 1886	,, $4^{\circ}2$ ,, 1885
June ....	$2^{\circ}2$ ,, 1895	,, $2^{\circ}4$ ,, 1893
July ....	$3^{\circ}5$ ,, 1886	,, $5^{\circ}0$ ,, 1888
August ....	$3^{\circ}8$ ,, 1894	,, $4^{\circ}6$ ,, 1892
September .....	$3^{\circ}8$ ,, 1884	,, $3^{\circ}9$ ,, 1892
October ....	$5^{\circ}4$ ,, 1895	,, $5^{\circ}4$ ,, 1887
November .....	$6^{\circ}0$ ,, 1888	,, $3^{\circ}4$ ,, 1896
December .....	$3^{\circ}5$ ,, 1894	,, $5^{\circ}8$ ,, 1896

The largest departure below the mean was  $6^{\circ}0$  in November, 1888, and the next in order were  $5^{\circ}4$  in October, 1895, and  $4^{\circ}9$  in April, 1894.

The smallest departure below the mean was  $2^{\circ}2$  in June, 1895; and the next in order was  $3^{\circ}5$  in both July, 1886, and December, 1894.

The largest departure above the mean was  $5^{\circ}8$  in December, 1896, and the next in order were  $5^{\circ}4$  in October, 1887, and  $5^{\circ}2$  in March, 1888.

The smallest departure above the mean was  $2^{\circ}4$  in June, 1893, and the next in order were  $2^{\circ}6$  in January, 1883, and  $3^{\circ}3$  in April, 1884.

The mean temperature in June was the most uniform, the next in order were January and September, the departure in these months from the mean being, in—

June ....	$2^{\circ}2$ below to $2^{\circ}4$ above the mean.
January ....	$4^{\circ}8$ ,, $2^{\circ}6$ ,,
September ....	$3^{\circ}8$ ,, $3^{\circ}9$ ,,

The mean temperature in October was the most variable, the next in order were November and December. The departure from the mean in these months were, in—

October ....	$5^{\circ}4$ below to $5^{\circ}4$ above the mean.
November ....	$6^{\circ}0$ ,, $3^{\circ}4$ ,,
December ....	$3^{\circ}5$ ,, $5^{\circ}8$ ,,

The greatest change of temperature from month to month being from October to November, which is as large as  $11^{\circ}9$ , and the next in order  $7^{\circ}7$ , from November to December, making a decrease of  $19^{\circ}6$  from October to December.

ERRATUM.

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OCTOBER "QUARTERLY STATEMENT," 1897.

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LIST OF DONATIONS AND SUBSCRIPTIONS.

*For* "H. C. King, Esq., £1 11s. 6d.," *read* "H. C. Kay, Esq."

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