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MONTEZUMA PYRHELIOMETRY

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MONTEZUMA PYRHELIOMETRY, 1920 TO 1926

By C. G. ABBOT

In order to make its pyrheliometer observations promptly available for the use of scientists, the Smithsonian Institution, at the solicitation of the Weather Bureau, has arranged for the advance publication of these observations, made at Montezuma, Chile, from 1920 to 1926.

As our computers were engrossed in the revision of solar constant work, these results have been transcribed from our records, and carefully checked under Professor Kimball's direction by C. Grant Bigham of the U. S. Weather Bureau.

The original observations, of which these are a summary, were made by various Smithsonian observers at Mount Montezuma, Chile, long. $68^{\circ} 56' W.$, lat. $22^{\circ} 40' S.$ alt. 8,895 ft. They were made with two silver-disk pyrheliometers, S. I. No. 29 and S. I. No. 30, mounted upon a single equatorial mounting and read on alternate minutes as described in the Annals of the Astrophysical Observatory of the Smithsonian Institution, Vol. III, pp. 47-52.¹ Usually each period of measurement extended over 7 minutes of time yielding two complete observations, one with each instrument. Whenever the results seemed unsatisfactory, the readings were continued 11 minutes, yielding four determinations. Applying corrections for thermometer temperature, stem temperature, and bore of stem, the results were computed as described in the cited reference.

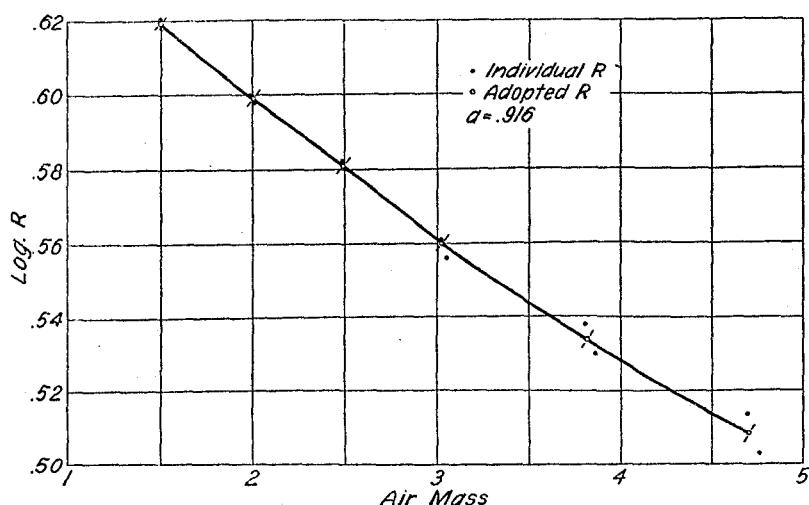
Along with the readings of the pyrheliometers the sun's altitude was measured with the theodolite. Air masses, m , were determined according to the investigations of Bemporad, with modifications suitable to the station Montezuma. Having reduced results of pyrheliometer S. I. No. 29 to the scale of pyrheliometer S. I. No. 30 by use of a constant multiplier (1.0060), the two sets of observations were plotted logarithmically, all as shown in the accompanying table and illustration.

[Date July 16, 1925. Observer, F. A. Greeley]

Watch time	Air mass	Corrected readings		Reading No. 29 reduced
		No. 29	No. 30	
7.35		4.77	3.166	3.185
7.36		4.70	3.265	
7.50		3.86	3.368	3.388
7.51		3.81	3.447	
8.12		3.05	3.591	3.613
8.13		3.02	3.641	
8.35		2.50	3.783	3.806
8.36		2.49	3.818	
9.13		2.01	3.940	3.964
9.14		2.00	3.971	
10.34		1.51	4.128	4.153
10.35		1.50	4.171	

¹ The silver disk of these pyrheliometers is $\frac{1}{4}$ inch from the lower end of a diaphragmed tube. Diameter of inner diaphragm, 1.020 inch; diameter of outer diaphragm, 1.461 inch; distance between diaphragms, 7 inches. The solid angle of radiation which can pass through the outer and inner diaphragms and impinges upon the disk is $20^{\circ} 6'$. The solid angle formed by joining the edges of the outermost diaphragm with the central point of the disk is $10^{\circ} 38'$. [Ed.]

From the best representative line (not necessarily a straight or even a regularly curved line) drawn by the observers in the field there were read off the values corresponding to the air mass representing the simultaneous bolographic observations. This instant would almost invariably fall near the middle of the group of pyrheliometric observations, so that interpolation of the best pyrheliometer value was very easy. The number, R ,



Logarithms of pyrheliometer readings plotted against air mass

corresponding to this selected logarithm of mean pyrheliometry has been copied out in the accompanying Table 1, together with the appropriate air mass. Hence each value given is the best representation of two closely accordant pyrheliometric determinations secured within a total interval of seven minutes.

In addition to pyrheliometers S. I. No. 29 and No. 30 the Montezuma station is equipped with a third instrument, S. I. No. 17, which is laid aside and used only occasionally on very fine days for standardization purposes. The following mean results of many sets of observations indicate great constancy of the scale of the pyrheliometers used daily:

Date	Mean ratio No. 17 No. 29	Date	Mean ratio No. 17 No. 29
Sept. 19, 1919	1.0134	Mar. 12, 1925	1.0180
Aug. 23, 1920	1.0112	Mar. 24, 1925	1.0163
Nov. 21, 1921	1.0166	Mar. 25, 1925	1.0150
Apr. 29, 1924	1.0160	May 6, 1926	1.0155
May 2, 1924	1.0134		
June 16, 1924	1.0155	Adopted ratio	1.0155
Aug. 24, 1924	1.0136		

Various comparisons were made with other pyrheliometers, including one, S. I. No. 5, which was compared at Washington, carried to Chile in 1921 by the writer, and again compared at Washington after his return. For the years 1920, 1921, 1924 (after April 24), and always

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hereafter, to reduce the readings in the table to calories per square centimeter per minute according to the Smithsonian scale of 1913, multiply by 0.3629.

In the years 1922 and 1923, unfortunately, the factor was not so certain, but has been determined as follows:

It is necessary to state that the observers who were at Montezuma in 1921 and 1922 did not maintain the work with due diligence or keep the station and instruments in proper order. When L. B. Aldrich succeeded as field director, in December, 1922, he had many troublesome things to put to rights, and in addition, was ill for a time and embarrassed by illness of his family. He had besides to introduce the new vestibuled pyranometer and to make the enormous mass of computations by the long method necessary to lay a basis for the short-method work as modified by the change in pyranometer.

Owing to these preoccupations, he unfortunately assumed that the pyrheliometers were in good condition, and was shocked to discover on April 24, 1924, that their black surfaces were covered with dust. His predecessor had not informed him of the presence of Pyrheliometer S. I. No. 17, but he was acquainted by cable of the fact, and within a few days after removing the dust he found, on April 29, 1924, that the pyrheliometers in daily use were in perfect accord with their condition as of November 21, 1921, when the writer made a comparison whose result is quoted above. The removal of the dust on April 24 raised the readings of each of the instruments by 2.8 per cent.

Mr. Aldrich is certain that the dust did not come on during his régime, so that it may be provisionally assumed that from December 20, 1922, to April 24, 1924, the dust was constant. The next question is how the dust accumulated between November 21, 1921, and December 20, 1922; whether gradually or in one or more sudden accessions.

P. E. Greeley recollects that in anticipation of Mr. Aldrich's arrival he employed a man to sweep the buildings about December 15, 1922. As it is quite possible that the covers of the pyrheliometers in daily use were carelessly left open, it was hoped that it might prove that all the dust settled on their black surfaces at that time. To test this question, the writer selected the following days in which the pyrheliometric results obtained just before and just after the date of sweeping are compared with days of other years having similar atmospheric humidity and transparency as indicated by ρ/ρ_{sc} and the function, F, which we use to determine atmospheric transmission coefficients in the "short method."

Comparison of similar days

[Days prior to December 15, 1922]

	ρ/ρ_{sc}	F.	Pyrh.	Harqua Hala solar constant	Δ Pyrh. (per cent)	Δ Solar constant (per cent)
<i>Air mass 2.0</i>						
Oct. 4, 1922-----	0.645	180	4.090	1.923	-----	-----
5, 1922-----	.657	181	4.110	1.924	-----	-----
6, 1922-----	.639	190	4.157	1.938	-----	-----
10, 1922-----	.633	186	4.099	1.918	-----	-----
Mean (6)-----	.644	186	4.114	1.926	-----	-----
Oct. 5, 1921-----	.648	186	4.128	1.932	+0.3	+0.3
Dec. 2, 1922-----	.769	207	4.170	1.931	-----	-----
Nov. 25, 1921-----	.769	192	4.178	1.964	+0.2	+1.7

Comparison of similar days—Continued

[Days subsequent to December 15, 1922]

	ρ/ρ_{sc}	F.	Pyrh.	Harqua Hala solar constant	Δ Pyrh. (per cent)	Δ Solar constant (per cent)
<i>Air mass 1.5</i>						
Oct. 5, 1922-----	.687	154	4.284	1.924	-----	-----
6, 1922-----	.689	142	4.308	1.938	-----	-----
Sept. 28, 1921-----	.688	148	4.296	1.931	-----	-----
Nov. 30, 1922-----	.790	145	4.486	(1.931)	+2.1	(+0.4)
23, 1921-----	.795	145	4.527	1.956	+0.9	(+1.3)
Mean-----	-----	-----	-----	-----	+0.9	+0.9

[Days subsequent to December 15, 1922]

	ρ/ρ_{sc}	F.	Pyrh.	Harqua Hala solar constant	Δ Pyrh. (per cent)	Δ Solar constant (per cent)
<i>Air mass 2.0</i>						
Jan. 11, 1923-----	0.510	463	3.853	1.924	-----	-----
17, 1923-----	.487	480	3.770	(1.928)	-----	-----
Mean (14)-----	.498	472	3.811	1.926	-----	-----
Jan. 14, 1921-----	.495	458	3.966	1.975	+3.9	(+2.5)
<i>Air mass 1.5</i>						
Jan. 11, 1923-----	.552	358	4.068	1.924	-----	-----
14, 1922-----	.554	376	4.241	1.952	+4.3	+1.5
17, 1923-----	.546	360	3.962	(1.929)	-----	-----
14, 1921-----	.552	362	4.195	1.975	+5.8	(+2.4)
Dec. 13, 1923-----	.669	162	4.206	1.933	-----	-----
Dec. 1, 1921-----	.673	228	4.389	(1.954)	+3.0	(+1.1)
Mean-----	-----	-----	-----	-----	+4.3	+1.9

* From these results it seems to be shown that for days prior to December 15, 1922, the pyrheliometric readings were in close accord with readings on days of nearly identical atmospheric conditions in the preceding year, when the pyrheliometers were known to be in good condition. On the other hand, for days of January, 1923, the pyrheliometer readings were much lower than on similar days of former years, and when allowance is made for change of solar constant, as determined at Mount Harqua Hala, the difference comes out 2.4 per cent.

Mr. Aldrich determined (by numerous observations) the effect of removing the dust by comparing both pyrheliometers, Nos. S. I. 29 and S. I. 30 with the pyranometer. As the two pyrheliometers maintained their usual scale relatively to each other all through the period of dust, only the mean result is given. These comparisons are as follows:

Pyrheliometric determinations of constant of pyranometer

	Δ	Per cent
Feb. 27, 1924-----	13.37	-----
Apr. 11, 1924-----	13.28	-----
Mean-----	13.33	-----
Apr. 26, 1924-----	13.72	+2.8

This indicates that the dust cut down the pyrheliometer readings by 2.8 per cent. This is in close accord with the indirect result just given, but is of course the definitive measure of the dust effect.

In order to check the matter still further and show that the constants of the pyrheliometers remained unaltered

from January, 1923, to April 24, 1924, when the dust was removed, the following comparisons are added:

	p/p_{sc}	F.	Pyrh.	Haroun Hala solar constant	Δ Pyrh. (per cent)	Δ Solar constant (per cent)
<i>Air mass 2.0</i>						
Mar. 8, 1923-----	0.682	208	4.092	(1.920)		
Mar. 1, 1924-----	.683	261	4.042	1.934	-1.2	(+0.7)
Mar. 9, 1923-----	.624	258	3.975	1.920		
Mar. 3, 1924-----	.613	264	3.979	(1.920)	+0.1	(0.0)
Apr. 19, 1923-----	.693	183	4.014	(1.920)		
Apr. 22, 1924-----	.697	155	3.970	1.919	-1.1	(-0.0)
<i>Air mass 1.5</i>						
Mar. 8, 1923-----	.776	173	4.285	(1.920)		
Mar. 9, 1924-----	.785	185	4.270	1.919	-0.3	(-0.0)
Mar. 13, 1923-----	.580	253	4.112	1.920		
Mar. 7, 1924-----	.599	247	4.140	1.900	+0.7	-1.5
Apr. 2, 1923-----	.712	185	4.186	(1.920)		
Apr. 1, 1924-----	.703	159	4.173	1.934	-0.3	(+0.7)
Mean-----					-0.3	-0.0

In view of all these results, it is thought that we may feel certain that the constants of pyrheliometers S. I. No. 29 and S. I. No. 30 were unchanged up to and including December 2, 1922, and were 2.8 per cent low from December 25, 1922 (Mr. Aldrich's first observation) to April 24, 1924, both inclusive. The days between December 2 and December 25 (not inclusive) are uncertain, as there are no suitable comparison days to test them against.

Hence to reduce to calories per square centimeter per minute: From the beginning to December 2, 1922, inclusive, and from April 25, 1924, to the end, inclusive, multiply the readings by 0.3629. From December 25, 1922, to April 24, 1924, inclusive, multiply the readings by 0.3731.

The reader should bear in mind that these results, given in Table 1, cover every day on which short-method determinations of the solar constant of radiation were made at Montezuma. As it was necessary only that the sky should seem clear of cirri and cumuli for a considerable distance from the sun for 10 minutes, to make one such determination, many days are included when the sky conditions altered between observations. Only those days when numerous pyrheliometer values are available are likely to have been good days, and of these only those are excellent for which the logarithms of pyrheliometry plotted against air masses fall on smooth curves slightly convex to the axis.

For all days when it seemed at all worth while to do so, the apparent atmospheric transmission coefficient for total solar radiation has been determined from such logarithmic plots, or by using our special slide rule machine (see Annals, Vol. IV, p. 84). These values are given under the caption *a* in Table 2. The column *e* gives in millimeters of mercury the pressure of aqueous vapor at the observatory, and the column *p. w.* (precipitable water) gives the depth in millimeters of liquid water which would be found by condensing all of the atmospheric humidity between the observer and the limit of the atmosphere. It is determined from the appearance of the infra-red water-vapor band, *p*, according to Fowle's method. (See Annals, Vol. III, pp. 171-181.)

The reader's attention is invited to a paper by the writer in the MONTHLY WEATHER REVIEW for May, 1926, in which a new application of such data as those given here in Tables 1 and 2 is shown. This seems to point to an increased value of pyrheliometric measurements at first-rate stations.² It is expected to continue the publication of such data from time to time in this REVIEW.

² The use of pyrheliometric readings alone to show variability of solar radiation was strongly stressed by both Marvin and Clough in the MONTHLY WEATHER REVIEW, July, 1925, p. 290, sec. II, and August, 1925, pp. 343-346. (C. F. M.)

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TABLE 1.—*Pyrheliometer readings, Montezuma, Chile, 1920–1926*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731]

1920

1921

Jan. 4, a. m.	Jan. 14, a. m.	Feb. 21, p. m.	Mar. 2, a. m.	Mar. 10, a. m.	Apr. 1, a. m.	Apr. 10, a. m.	Apr. 17, a. m.	May 4, a. m.	May 15, a. m.
1.20 4.488	1.04 4.448	1.05 4.346	1.04 4.484	1.05 4.456	1.48 4.309	2.09 3.753	1.71 4.188	1.35 4.280	1.72 4.118
1.14 4.530		1.04 4.358		1.40 4.335	1.92 3.850	1.92 4.247	1.31 4.278	1.62 4.157	
Jan. 5, a. m.	Jan. 15, a. m.	Feb. 24, a. m.	Mar. 3, a. m.	Mar. 13, a. m.	Apr. 2, a. m.	Apr. 12, a. m.	Apr. 18, a. m.	May 6, p. m.	May 21, p. m.
1.96 4.121	1.07 4.442	1.38 4.136	1.10 4.470	1.31 4.218	1.23 4.377	2.90 3.616	1.32 4.335	2.63 3.676	2.92 3.605
1.47 4.387	1.04 4.465	1.29 4.176	1.07 4.482		2.46 3.777	1.26 4.351		2.56 3.656	2.56 4.157
Jan. 6, a. m.	Jan. 18, a. m.	Feb. 25, a. m.	Mar. 4, a. m.	Mar. 14, p. m.	Apr. 5, p. m.	Apr. 19, a. m.	May 22, p. m.		
1.00 4.607	4.95 2.728	1.04 4.384	2.93 3.691	1.82 3.849	1.45 4.335	2.34 3.867	1.85 3.999		
1.00 4.622	3.89 3.042	1.03 4.390	2.46 3.834		1.45 4.335	1.69 4.037	1.69 4.058	1.93 3.944	
Jan. 7, a. m.	2.97 3.855	2.47 3.619	1.43 4.162	1.11 4.436	1.27 4.251	1.98 4.037	1.65 4.145	1.71 4.036	
2.35 3.942	1.98 3.830	1.30 4.226	2.55 3.675	1.09 4.406	1.24 4.416	1.25 4.274	1.65 4.145	1.66 4.099	23, e. m.
1.99 4.113	1.47 4.130		2.18 3.887		1.24 4.416		1.57 4.188	1.55 4.150	
Jan. 8, a. m.	Feb. 11, p. m.	Feb. 28, a. m.	Mar. 6, a. m.	Mar. 18, a. m.	Apr. 8, p. m.	Apr. 15, a. m.	Apr. 25, p. m.	May 8, p. m.	May 24, p. m.
2.47 3.842	1.04 4.388	1.10 4.432	1.27 4.239	1.98 3.840	1.53 4.317	1.77 4.084	1.55 4.236		
1.99 4.057	1.02 4.376	1.07 4.465	1.08 4.325	1.75 3.938	1.44 4.186	1.48 4.340	1.65 4.158	1.50 4.276	
Jan. 10, p. m.	Mar. 1, a. m.	Mar. 7, a. m.	Mar. 19, p. m.	Apr. 9, a. m.	Apr. 16, p. m.	May 3, p. m.			May 25, a. m.
1.10 4.535		1.26 4.411	1.19 4.305	1.25 4.266	1.68 4.176	1.53 4.000	1.30 4.335		
	1.13 4.361	1.20 4.475	1.14 4.317	1.20 4.295	1.23 4.317	1.51 4.247	1.45 4.217	1.38 4.331	

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TABLE 1.—*Pyrheliometric readings, Montezuma, Chile, 1920–1926—Continued*

Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731.

1921—Continued

M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.
May 28, a. m.		June 22, p. m.		July 9, p. m.		July 22, a. m.		Sept. 27, p. m.		Oct. 6, p. m.		Oct. 18, p. m.		Nov. 18, a. m.		Nov. 26, a. m.	
1.41 | 4.130		1.64 | 4.093		1.49 | 4.389		1.57 | 4.268		5.00 | 3.286		4.62 | 3.186		4.72 | 3.432		4.92 | 3.270		2.44 | 4.171	
June 4, p. m.		1.54 | 4.180		1.45 | 4.389		1.50 | 4.285		4.32 | 3.416		3.81 | 3.404		4.10 | 3.520		3.91 | 3.616		1.99 | 4.338	
June 10, 4.237		June 24, p. m.		1.43 | 4.313		3.71 | 3.589		3.06 | 3.698		3.44 | 3.766		3.10 | 3.855		3.15 | 3.757		1.47 | 4.544	
1.53 | 4.260		July 10, p. m.		3.07 | 3.767		2.51 | 3.896		2.01 | 4.011		2.85 | 3.887		2.50 | 4.055		2.47 | 3.992			
June 7, p. m.		July 25, a. m.		2.53 | 3.840		2.02 | 4.150		1.50 | 4.325		2.07 | 4.047		2.01 | 4.248		1.98 | 4.179		1.47 | 4.386	
3.10 | 3.864		June 25, p. m.		1.49 | 4.340		1.40 | 4.365		Sept. 28, a. m.		Oct. 22, p. m.		1.49 | 4.457		1.49 | 4.457			
June 8, p. m.		July 26, a. m.		5.00 | 3.342		Oct. 7, a. m.		Oct. 18, p. m.		Nov. 18, a. m.		Nov. 26, a. m.		Dec. 5, a. m.			
2.00 | 3.939		1.50 | 4.112		3.99 | 3.556		4.98 | 3.231		5.02 | 3.126		4.21 | 3.569		2.12 | 4.157		2.44 | 4.112			
1.73 | 4.036		1.42 | 4.112		2.91 | 3.908		3.99 | 3.483		4.20 | 3.350		3.51 | 3.784		1.96 | 4.243		1.97 | 4.315		1.46 | 4.536	
2.19 | 4.130		1.37 | 4.116		2.46 | 4.050		2.03 | 3.801		3.49 | 3.497		2.28 | 4.130		1.49 | 4.450		1.42 | 4.560			
1.96 | 4.207		1.97 | 4.227		1.97 | 3.934		2.45 | 3.934		2.04 | 3.685		1.92 | 4.256		1.47 | 4.446		1.30 | 4.621			
June 9, a. m.		July 27, a. m.		1.45 | 4.403		1.48 | 4.366		Oct. 23, a. m.		Nov. 20, a. m.		1.45 | 4.426		1.45 | 4.553		Dec. 8, a. m.	
4.90 | 3.406		July 13, a. m.		1.47 | 4.003		4.42 | 3.520		2.43 | 4.110		1.45 | 4.26		1.45 | 4.553		1.18 | 4.511			
4.06 | 3.597		1.40 | 4.241		1.40 | 4.250		3.73 | 3.626		4.15 | 3.445		1.49 | 4.471		Nov. 20, a. m.		1.15 | 4.496			
3.00 | 3.926		June 28, p. m.		1.40 | 4.266		2.94 | 3.930		3.91 | 3.415		1.71 | 4.185		1.71 | 4.185		Dec. 9, a. m.			
2.49 | 4.025		July 14, p. m.		1.48 | 4.242		1.98 | 3.824		3.03 | 3.634		1.98 | 3.796		1.98 | 4.150		4.97 | 3.251			
2.00 | 4.211		July 29, p. m.		1.48 | 4.425		2.58 | 3.908		2.95 | 3.796		1.98 | 3.813		1.97 | 4.225		4.08 | 3.479			
1.50 | 4.400		Oct. 3, p. m.		1.51 | 4.274		2.05 | 3.984		2.48 | 3.837		1.98 | 4.150		1.49 | 4.404		3.08 | 3.798			
June 11, p. m.		July 31, a. m.		4.00 | 3.281		4.00 | 3.495		4.06 | 3.094		1.50 | 4.278		1.02 | 4.030		4.44 | 3.343			
2.18 | 3.868		1.45 | 4.300		3.83 | 3.495		3.04 | 3.716		4.25 | 3.342		1.51 | 4.112		1.01 | 4.639		3.76 | 3.548			
1.98 | 3.925		Sept. 24, a. m.		1.51 | 4.371		2.54 | 3.891		3.54 | 3.486		1.47 | 4.539		1.01 | 4.633		1.2 | 3.758			
June 13, p. m.		July 1, p. m.		5.16 | 3.350		5.16 | 3.508		2.94 | 3.684		1.41 | 4.536		1.01 | 4.633		1.45 | 4.001		2.45 | 4.046	
3.00 | 3.715		2.49 | 3.750		5.16 | 3.508		2.52 | 3.640		2.48 | 3.837		1.41 | 4.536		1.01 | 4.633		1.56 | 4.380		2.00 | 4.230	
June 18, p. m.		July 20, p. m.		5.16 | 3.508		5.16 | 3.671		1.98 | 3.981		1.50 | 4.278		1.02 | 4.030		1.44 | 4.448			
1.65 | 4.246		Sept. 25, a. m.		5.16 | 3.508		2.03 | 4.136		2.52 | 3.621		1.51 | 4.278		1.02 | 4.030		1.44 | 4.448			
1.57 | 4.222		July 21, a. m.		5.16 | 3.508		2.04 | 4.099		2.52 | 3.621		1.51 | 4.278		1.02 | 4.030		1.44 | 4.448			
June 19, a. m.		Oct. 5, a. m.		4.96 | 3.279		4.96 | 3.279		4.89 | 2.757		1.52 | 4.050		1.02 | 4.030		1.44 | 4.448			
2.69 | 3.656		July 2, p. m.		3.92 | 3.564		3.92 | 3.632		3.82 | 3.078		1.52 | 4.050		1.02 | 4.030		1.44 | 4.448			
2.48 | 3.805		1.75 | 4.217		2.98 | 3.824		2.04 | 3.871		3.25 | 3.327		1.52 | 4.050		1.02 | 4.030		1.44 | 4.448			
June 20, p. m.		July 20, p. m.		1.42 | 4.204		1.42 | 4.085		1.42 | 3.077		1.52 | 4.050		1.02 | 4.030		1.44 | 4.448			
3.00 | 3.677		Sept. 26, a. m.		1.42 | 4.241		1.42 | 4.299		1.42 | 3.077		1.52 | 4.050		1.02 | 4.030		1.44 | 4.448			
June 21, p. m.		Oct. 16, p. m.		1.42 | 4.241		1.42 | 4.300		1.42 | 3.077		1.52 | 4.050		1.02 | 4.030		1.44 | 4.448			
1.75 | 4.074		Oct. 23, a. m.		1.42 | 4.241		1.42 | 4.300		1.42 | 3.077		1.52 | 4.050		1.02 | 4.030		1.44 | 4.448			

1922

Jan. 8, a. m.	Jan. 22, a. m.	Jan. 30, p. m.	Feb. 19, a. m.	Mar. 2, a. m.	Mar. 10, p. m.	Mar. 24, p. m.	Apr. 12, p. m.	May 12, a. m.	June 29, p. m.
1.00 | 4.276	5.00 | 3.070	3.60 | 3.286	4.43 | 2.698	4.70 | 3.090	4.37 | 3.424	1.76 | 4.130	2.49 | 3.516	1.64 | 4.207	2.50 | 3.917
Jan. 11, p. m.		4.25 | 3.256	2.72 | 3.614	3.85 | 3.003	4.04 | 3.610	3.69 | 3.610	1.50 | 4.206	2.07 | 3.767	2.10 | 4.036
1.79 | 3.854		3.56 | 3.450	2.13 | 3.856	2.81 | 3.369	3.04 | 3.560	3.05 | 3.846	1.34 | 4.355	1.79 | 3.936	May 19, p. m.
1.59 | 4.083		2.05 | 3.666	2.24 | 3.842	2.24 | 3.614	2.47 | 3.741	2.53 | 3.981	1.51 | 4.365	2.01 | 3.963	2.30 | 3.967
Jan. 12, p. m.		1.47 | 4.055	1.47 | 4.055	1.81 | 3.837	1.86 | 3.949	2.00 | 4.217	1.51 | 4.365	2.01 | 3.963	1.98 | 3.949
2.02 | 3.885		Jan. 24, a. m.		4.90 | 2.965	4.14 | 3.177	4.74 | 2.754	1.62 | 4.169	1.45 | 4.206	1.65 | 4.290
1.56 | 4.139		4.04 | 3.216	3.10 | 3.516	4.03 | 2.979	4.15 | 3.214	4.84 | 3.389	1.63 | 4.213	1.48 | 4.305	1.65 | 4.290
Jan. 13, p. m.		3.47 | 3.395	2.45 | 3.707	3.05 | 3.334	3.01 | 3.593	3.41 | 3.793	1.63 | 4.213	1.48 | 4.305	1.65 | 4.290
1.85 | 4.074		3.01 | 3.556	1.96 | 3.981	2.44 | 3.606	1.97 | 3.819	2.47 | 3.784	2.65 | 3.664	1.48 | 4.305	1.65 | 4.290
1.56 | 4.222		2.49 | 3.754	1.96 | 3.977	1.96 | 3.819	1.98 | 3.990	2.46 | 4.064	1.48 | 4.305	1.48 | 4.305	1.65 | 4.290
Jan. 14, a. m.		1.48 | 4.216	1.48 | 4.216	1.48 | 4.055	1.50 | 4.207	1.96 | 4.227	1.21 | 4.227	1.48 | 4.305	1.65 | 4.290
1.84 | 4.030		4.39 | 3.236	3.29 | 3.412	4.28 | 2.911	4.10 | 3.119	4.70 | 3.388	1.66 | 4.160	1.55 | 4.206	1.87 | 3.986
1.48 | 4.249		1.57 | 3.631	1.52 | 4.103	2.57 | 3.631	3.10 | 3.451	4.07 | 3.548	1.66 | 4.160	1.55 | 4.206	1.87 | 3.986
1.30 | 4.319		Feb. 10, p. m.		4.28 | 2.911	2.57 | 3.631	2.49 | 3.681	3.43 | 3.750	2.95 | 3.876	2.55 | 3.819
Jan. 15, a. m.		Jan. 25, p. m.		4.28 | 2.911	1.52 | 4.103	1.93 | 3.926	2.01 | 3.921	2.46 | 3.917	2.00 | 4.023
3.54 | 3.147		2.57 | 3.631	2.57 | 3.631	1.44 | 4.109	1.44 | 4.109	2.47 | 4.055	1.99 | 4.033	2.46 | 3.917	2.00 | 4.023
1.93 | 4.074		Feb. 12, a. m.		4.28 | 2.911	1.52 | 4.103	1.93 | 3.926	2.01 | 3.921	2.47 | 4.055	2.00 | 4.023
1.69 | 4.193		4.54 | 3.369	3.90 | 3.526	4.28 | 2.911	1.52 | 4.103	2.47 | 4.055	1.99 | 4.033	2.46 | 3.917	2.00 | 4.023
1.50 | 4.276		2.83 | 3.855	2.28 | 4.053	2.28 | 4.053	1.52 | 4.103	1.97 | 4.232	1.50 | 4.300	1.99 | 4.033	2.46 | 3.917
Jan. 16, a. m.		Jan. 26, a. m.		4.63 | 2.985	3.90 | 3.400	4.64 | 3.140	4.83 | 3.300	4.17 | 3.262	1.87 | 3.819
1.53 | 4.266		4.93 | 2.989	4.17 | 3.177	2.91 | 3.560	4.01 | 3.311	3.18 | 3.569	3.83 | 3.491	3.66 | 3.420	2.22 | 3.963
1.63 | 4.365		2.97 | 3.548	2.41 | 3.707	2.41 | 3.707	3.06 | 3.758	3.03 | 3.720	2.98 | 3.673	1.90 | 4.083	2.22 | 3.963
Jan. 17, a. m.		4.54 | 3.221	3.95 | 3.388	1.93 | 3.981	2.47 | 3.954	2.58 | 3.750	2.51 | 3.913	2.42 | 3.900	3.82 | 3.673
2.32 | 4.023		3.95 | 3.388	2.41 | 3.707	1.45 | 4.188	1.45 | 4.188	1.98 | 3.981	1.98 | 4.064	2.54 | 3.798	July 15, a. m.
1.99 | 4.150		2.98 | 3.715	2.44 | 3.904	1.96 | 4.112	1.45 | 4.188	1.45 | 4.188	1.45 | 4.188	2.01 | 3.963	1.60 | 4.074
1.45 | 4.406		1.45 | 4.320	1.45 | 4.064	1.45 | 4.064	1.45 | 4.064	1.31 | 4.266</			

SUPPLEMENT NO. 27

TABLE 1.—*Pyrheliometric readings, Montezuma, Chile, 1920–1926—Continued*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731]

1922—Continued

M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.
Aug. 5, p. m.		Aug. 19, p. m.		Sept. 15, p. m.		Sept. 28, a. m.		Oct. 6, a. m.		Oct. 10, p. m.		Oct. 29, a. m.		Nov. 10, p. m.		Nov. 25, p. m.	
2.14 | 4.027		2.11 | 4.150		2.16 | 4.018		1.20 | 4.400		4.55 | 3.365		2.18 | 4.020		1.20 | 4.571		2.51 | 3.864		2.50 | 3.819	
		2.00 | 4.194		1.58 | 4.325				3.56 | 3.614		2.04 | 4.083		1.59 | 4.102		1.99 | 4.093		2.04 | 3.981	
Aug. 8, p. m.		Aug. 26, p. m.		1.92 | 4.080		1.92 | 4.080		2.55 | 3.945		1.51 | 4.281		1.52 | 4.164		1.88 | 4.135			
1.62 | 4.197		2.90 | 3.846		1.56 | 4.231		1.97 | 4.169		1.47 | 4.320		1.47 | 4.320		1.37 | 4.266					
Aug. 11, p. m.		Aug. 27, p. m.		2.53 | 3.882		Oct. 1, a. m.		2.03 | 4.093		Oct. 7, a. m.		2.03 | 4.093		Nov. 4, a. m.		Nov. 14, a. m.	
2.62 | 3.943		2.37 | 3.981		2.10 | 4.036		1.78 | 4.164		1.91 | 4.148		1.53 | 4.346		1.72 | 4.140		1.18 | 4.550		1.62 | 4.441	
2.44 | 3.996		2.03 | 4.115		2.07 | 3.945		Oct. 12, a. m.		1.72 | 4.140		1.53 | 4.355		1.48 | 4.266		1.47 | 4.498		1.47 | 4.498	
Aug. 12, a. m.		Aug. 28, a. m.		1.88 | 4.023		Oct. 4, p. m.		5.07 | 3.240		Oct. 12, a. m.		5.07 | 3.240		Nov. 6, a. m.		Nov. 15, p. m.	
4.97 | 3.281		1.24 | 4.416		1.89 | 4.130		1.30 | 4.366		4.30 | 4.413		1.30 | 4.366		4.30 | 4.413		4.53 | 3.266		2.06 | 3.963	
4.16 | 3.404		Aug. 30, p. m.		1.20 | 4.406		Oct. 5, a. m.		3.96 | 3.420		1.30 | 4.366		3.96 | 3.420		3.96 | 3.420		1.70 | 4.121	
3.09 | 3.771		1.74 | 4.243		1.80 | 3.947		Oct. 8, a. m.		3.60 | 3.607		1.30 | 4.366		3.60 | 3.607		2.99 | 3.698		1.53 | 4.207	
2.48 | 3.940		2.07 | 4.047		1.55 | 4.266		1.80 | 4.184		3.00 | 3.790		1.35 | 4.355		3.00 | 3.790		2.47 | 3.837		1.99 | 4.074	
1.98 | 4.093		1.32 | 4.423		1.94 | 4.104		1.35 | 4.404		2.47 | 3.962		1.25 | 4.446		1.99 | 4.140		1.44 | 4.266		1.28 | 4.457	
1.48 | 4.256																1.28 | 3.971	
																1.45 | 4.102	

1923

Jan. 2, p. m.		Jan. 31, a. m.		Feb. 19, p. m.		Mar. 8, a. m.		Mar. 20, a. m.		Apr. 3, a. m.		Apr. 13, a. m.		Apr. 26, a. m.		May 15, a. m.		June 5, a. m.
1.60 | 3.926		4.06 | 3.904		2.98 | 3.251		4.33 | 3.381		2.97 | 3.296		4.45 | 3.001		2.48 | 3.559		4.03 | 3.156		4.31 | 3.242		
1.35 | 4.121		2.44 | 3.564		2.75 | 3.846		3.61 | 3.581		2.45 | 3.508		3.80 | 3.193		3.98 | 3.297		3.34 | 4.090		3.03 | 3.412		
Jan. 3, p. m.		1.98 | 3.784		1.03 | 4.102		2.33 | 3.981		1.98 | 3.724		2.99 | 3.459		2.48 | 3.581		2.96 | 3.578		2.96 | 3.578		
2.53 | 3.548		1.48 | 4.046		1.97 | 4.102		1.50 | 4.285		2.44 | 3.649		2.44 | 3.649		1.99 | 3.923		1.38 | 4.150		1.50 | 4.096		
2.01 | 3.819		2.49 | 3.381		4.99 | 2.688		Mar. 9, a. m.		1.50 | 3.981		4.41 | 3.252		2.95 | 3.488		2.50 | 3.942		4.31 | 3.242		
1.51 | 4.130		1.98 | 3.656		2.97 | 3.287		4.06 | 2.938		1.36 | 4.058		3.84 | 3.390		2.46 | 3.662		1.99 | 4.111		3.03 | 3.412		
Jan. 4, a. m.		Feb. 2, a. m.		2.48 | 3.540		3.61 | 3.450		2.46 | 3.289		2.97 | 3.630		1.99 | 3.837		2.48 | 3.752		2.96 | 3.578		
5.36 | 2.828		5.30 | 2.049		1.99 | 3.767		2.98 | 3.656		3.94 | 2.893		1.97 | 4.001		1.51 | 4.048		2.48 | 3.894		2.47 | 3.718		
4.54 | 3.020		4.48 | 2.864		1.98 | 3.739		2.44 | 3.837		1.98 | 3.664		2.46 | 3.454		1.50 | 4.204		2.48 | 3.760		2.00 | 3.890		
3.85 | 3.214		2.97 | 3.499		1.98 | 4.001		1.98 | 3.802		1.50 | 3.893		4.44 | 3.180		1.51 | 4.124		1.51 | 4.096		1.50 | 4.096		
2.97 | 3.499		2.46 | 3.081		1.98 | 3.890		2.44 | 3.837		2.47 | 3.578		3.88 | 3.320		2.47 | 3.578		2.50 | 3.942		4.31 | 3.242		
1.51 | 4.130		1.98 | 3.802		2.49 | 2.953		4.20 | 3.451		2.00 | 3.773		2.48 | 3.581		1.51 | 4.048		1.99 | 4.074		3.03 | 3.412		
Jan. 5, a. m.		Feb. 1, a. m.		2.94 | 3.350		3.59 | 3.598		1.98 | 3.767		2.00 | 3.773		1.51 | 4.153		2.49 | 3.874		2.97 | 3.267		
1.48 | 4.130		5.14 | 2.848		2.98 | 3.508		2.98 | 3.767		1.98 | 3.811		1.98 | 3.811		1.51 | 4.153		1.51 | 4.026		1.50 | 4.096		
1.30 | 4.227		4.39 | 3.034		2.44 | 3.649		2.45 | 3.908		1.98 | 3.811		4.43 | 3.165		4.10 | 3.092		4.57 | 3.158		4.18 | 3.113		
Jan. 6, a. m.		2.98 | 3.483		2.00 | 3.834		1.97 | 4.043		1.98 | 3.811		3.86 | 3.321		2.95 | 3.420		3.88 | 3.320		3.60 | 3.276		
1.37 | 4.093		1.50 | 4.159		2.49 | 2.816		2.46 | 3.649		1.98 | 3.811		3.07 | 3.503		2.45 | 3.585		2.99 | 3.511		4.18 | 3.113		
Jan. 8, a. m.		Feb. 4, a. m.		3.61 | 3.056		2.46 | 3.767		1.98 | 3.811		2.47 | 3.676		1.50 | 4.048		2.49 | 3.663		2.49 | 3.663		
1.40 | 4.365		1.98 | 4.266		2.47 | 3.827		2.47 | 3.873		1.98 | 3.811		1.98 | 3.811		1.50 | 4.048		1.98 | 3.825		1.98 | 3.825		
Jan. 9, p. m.		Feb. 5, a. m.		1.50 | 4.027		2.46 | 3.545		2.46 | 3.841		2.47 | 3.578		1.51 | 4.036		2.47 | 3.578		2.47 | 3.578		
1.50 | 4.027		2.50 | 3.707		1.98 | 3.741		2.48 | 3.846		2.00 | 3.811		2.47 | 3.578		1.51 | 4.036		2.47 | 3.578		2.47 | 3.578		
1.30 | 4.150		1.98 | 4.159		2.46 | 3.741		2.48 | 3.846		1.98 | 3.809		2.47 | 3.609		1.51 | 4.018		2.47 | 3.609		2.47 | 3.609		
Jan. 10, p. m.		Feb. 6, a. m.		2.46 | 3.506		2.46 | 3.846		2.46 | 3.809		2.47 | 3.609		1.51 | 4.018		2.47 | 3.609		2.47 | 3.609		
2.02 | 4.009		2.02 | 4.102		2.46 | 3.501		2.46 | 3.837		1.98 | 3.917		2.46 | 3.837		1.49 | 4.036		2.46 | 3.837		2.46 | 3.837		
1.68 | 4.102		2.00 | 3.718		1.50 | 4.153		2.46 | 3.510		1.50 | 4.112		2.46 | 3.510		1.49 | 4.036		2.46 | 3.837		2.46 | 3.837		
Jan. 11, a. m.		Feb. 7, a. m.		2.36 | 3.669		2.46 | 3.724		2.46 | 3.842		2.46 | 3.842		1.49 | 4.036		2.46 | 3.842		2.46 | 3.842		
1.96 | 3.837		1.98 | 3.936		1.48 | 4.173		2.47 | 3.741		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
1.50 | 4.068		Feb. 8, a. m.		2.46 | 3.833		2.47 | 3.741		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
Jan. 12, a. m.		1.98 | 4.223		1.95 | 4.266		2.47 | 3.741		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
2.47 | 3.833		1.97 | 4.266		2.47 | 3.741		2.47 | 3.846		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
1.99 | 4.023		1.97 | 4.266		2.47 | 3.741		2.47 | 3.846		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
1.50 | 4.266		2.47 | 3.741		1.97 | 4.266		2.47 | 3.741		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
Jan. 17, p. m.		Feb. 10, a. m.		2.02 | 3.776		2.47 | 3.767		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
1.51 | 3.958		1.87 | 3.890		1.97 | 4.266		2.47 | 3.767		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
1.26 | 4.050		Feb. 11, a. m.		1.51 | 4.212		2.47 | 3.767		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
Jan. 18, a. m.		2.47 | 3.793		1.99 | 4.018		2.47 | 3.767		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
1.56 | 3.990		1.99 | 4.018		2.47 | 3.767		2.47 | 3.846		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
Jan. 21, a. m.		1.98 | 3.877		1.49 | 4.150		2.47 | 3.767		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036		2.47 | 3.846		2.47 | 3.846		
2.49 | 3.598		1.99 | 3.758		2.47 | 3.767		2.47 | 3.846		2.47 | 3.846		2.47 | 3.846		1.49 | 4.036	</td					

MONTEZUMA PYRHELIOMETRY

TABLE 1.—*Pyrheliometer readings, Montezuma, Chile, 1920–1926—Continued*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731]

1923—Continued

M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.
June 22, a. m.		July 8, a. m.		Aug. 3, p. m.		Sept. 13, a. m.		Sept. 20, a. m.		Oct. 15, a. m.		Nov. 6, p. m.		Nov. 20, a. m.		Dec. 12, a. m.	
4.53 3.340		2.46 3.800		2.00 3.945		1.47 4.325		3.00 3.721		1.04 4.419		1.98 3.992		4.85 3.036		2.88 3.362	
3.95 3.447		2.00 3.963		1.53 4.113		1.25 4.408		2.40 3.918		1.03 4.414		1.52 4.211		4.06 3.311		2.50 3.517	
3.44 3.599		July 10, a. m.		Aug. 4, a. m.		Sept. 13, p. m.		1.90 4.093		1.40 4.221		3.05 3.653		1.99 3.736			
3.00 3.711				2.34 3.835		1.50 4.266		1.50 4.266		1.31 4.355		2.50 3.864		2.00 4.108		1.64 3.897	
2.50 3.865				2.00 3.940		1.60 4.236		Sept. 30, a. m.		1.33 4.269		2.00 4.209		1.50 4.209			
2.00 3.972		July 11, a. m.		Aug. 27, a. m.		Sept. 14, a. m.		2.45 3.960		Oct. 17, a. m.		Nov. 7, a. m.		Dec. 13, p. m.			
June 23, a. m.				2.48 3.847		2.50 3.848		2.00 4.122		2.41 3.767		3.65 3.559		1.51 4.002			
4.93 3.078				2.00 4.016		1.63 4.018		1.63 4.251		2.49 3.770		3.25 3.681		1.28 4.160			
4.19 3.252		July 12, a. m.		1.50 4.131		2.99 3.590		1.50 4.290		1.49 4.133		2.50 3.898		1.24 4.174			
3.57 3.416				4.62 3.273		1.64 4.148		1.30 4.217		2.01 4.093		1.66 4.155		1.19 4.223			
2.98 3.574				2.46 3.751		1.50 4.130		1.24 4.244		1.50 4.279		1.50 4.252					
2.48 3.714		Aug. 5, a. m.		2.00 3.893		Sept. 15, a. m.		2.49 3.981		Oct. 19, a. m.		Nov. 8, a. m.		Dec. 14, a. m.			
2.01 3.891				1.99 3.842		1.50 4.130		1.99 4.118		2.00 3.959		1.28 3.434		2.75 3.566			
June 24, a. m.				1.99 3.977		2.48 3.824		1.60 4.211		1.80 4.034		1.17 4.319		2.50 3.680		2.00 3.859	
2.00 3.945		July 13, a. m.		2.00 4.029		Aug. 29, a. m.		1.55 4.236		1.55 4.128		Nov. 8, p. m.		Dec. 15, a. m.			
1.84 4.017				2.00 3.895		2.48 3.842		1.50 4.235		1.48 4.156		1.66 4.156		1.49 4.315		1.30 4.417	
June 25, a. m.		Aug. 7, a. m.		Aug. 30, a. m.		Sept. 16, a. m.		1.35 4.328		Oct. 2, a. m.		Oct. 20, a. m.		Dec. 15, a. m.		1.28 4.409	
4.53 3.236		2.86 3.288		2.48 3.873		Oct. 3, p. m.		4.27 3.855		2.00 3.970		Nov. 23, p. m.		1.15 4.456		1.18 4.436	
3.81 3.406		3.91 3.416		2.50 3.784		Sept. 17, a. m.		3.63 3.548		1.54 4.050		Nov. 24, a. m.		Dec. 17, a. m.		1.15 4.459	
2.99 3.617		3.01 3.681		2.00 3.994		2.50 3.697		1.50 4.289		2.00 3.900		1.30 4.080		2.49 3.902		1.36 4.159	
2.00 3.981		1.50 4.151		1.59 4.115		1.30 4.382		1.50 4.232		2.01 3.828		2.18 4.160		2.02 4.095		1.29 4.207	
June 26, a. m.		July 14, a. m.		Aug. 31, a. m.		Oct. 4, a. m.		1.50 4.325		2.00 3.970		1.50 4.074		Nov. 25, a. m.		1.22 4.258	
4.63 3.283		2.42 3.711		3.01 3.628		Oct. 5, a. m.		1.50 4.304		2.00 3.900		1.44 4.188		1.02 4.627		1.22 4.305	
3.87 3.463		2.00 3.883		2.49 3.798		Sept. 18, a. m.		3.00 3.617		2.00 3.907		1.33 4.229		1.01 4.655		1.02 4.645	
2.97 3.684		1.98 3.981		1.50 4.160		Sept. 19, a. m.		2.49 3.770		2.00 3.907		2.93 3.433		1.65 4.295		1.85 4.150	
2.49 3.822		2.49 3.715		2.00 4.073		2.47 3.955		1.98 3.945		2.00 3.897		2.30 3.689		1.50 4.351		1.67 4.246	
2.00 3.970		2.00 3.896		1.50 4.122		2.49 3.949		1.50 4.287		2.00 4.097		2.01 3.820		2.42 4.384		2.00 4.446	
June 27, a. m.		July 17, a. m.		2.00 4.112		Sept. 20, a. m.		1.50 4.290		2.00 4.097		1.50 4.055		2.91 3.439		1.53 4.155	
4.73 3.354		2.48 3.744		2.00 4.112		2.47 3.955		1.50 4.288		2.00 4.097		2.00 3.923		1.46 4.164		1.10 4.377	
3.90 3.480		2.48 3.737		2.00 4.071		2.49 3.945		1.50 4.135		2.00 4.097		2.98 3.433		1.08 4.382		1.05 4.398	
3.00 3.708		2.01 3.895		1.50 4.149		2.47 3.945		1.99 4.088		2.00 4.097		2.01 3.897		2.01 4.130		1.04 4.339	
2.49 3.899		2.49 3.715		2.00 4.123		2.49 3.949		1.50 4.287		2.00 4.098		2.00 4.055		1.02 4.325		1.02 4.302	
2.00 4.037		July 21, a. m.		2.00 4.112		Sept. 21, a. m.		1.50 4.290		2.00 4.098		2.00 4.055		1.07 4.322		1.07 4.310	
June 28, a. m.		2.40 3.221		2.00 4.112		2.48 3.945		1.50 4.288		2.00 4.098		2.00 4.055		Dec. 23, a. m.			
5.00 3.238		3.77 3.394		2.00 4.112		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.01 4.367			
4.19 3.437		3.00 3.600		2.00 4.112		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.360			
3.61 3.566		2.47 3.775		2.00 4.112		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.344			
3.00 3.707		2.49 3.839		2.00 4.112		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		3.94 2.984			
2.50 3.846		2.01 3.898		2.00 4.112		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		3.06 3.277			
2.00 4.028		2.01 3.898		2.00 4.112		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		2.51 3.518			
June 29, a. m.		2.47 3.958		2.00 4.112		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		2.00 4.002		1.30 4.178	
4.75 3.230		2.00 4.125		2.49 3.839		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.22 4.227		1.15 4.271	
4.13 3.362		1.99 4.020		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.10 4.301		1.10 4.301	
3.57 3.518		2.17 3.889		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		Dec. 25, a. m.			
3.00 3.677		2.01 4.027		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.01 4.367			
2.50 3.830		2.45 3.958		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.360			
2.00 4.028		2.00 4.037		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.344			
July 1, a. m.		2.47 3.751		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.334			
2.45 3.908		1.50 4.198		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.324			
2.00 4.076		2.47 3.751		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.310			
July 2, a. m.		2.47 3.615		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.302			
2.51 3.966		2.00 4.131		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.292			
2.00 4.036		2.00 4.030		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.282			
July 3, a. m.		2.17 3.627		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.271			
2.51 3.911		2.00 4.036		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.261			
2.00 4.063		2.00 4.079		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.251			
July 4, a. m.		2.50 3.785		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.241			
2.28 3.960		1.99 4.079		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.231			
1.98 4.059		2.46 3.907		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.221			
July 5, a. m.		2.47 3.750		2.00 4.124		2.49 3.945		1.50 4.288		2.00 4.098		2.00 4.055		1.00 4.211			
2.48 3.895		2.01 4.079															

SUPPLEMENT NO. 27

TABLE 1.—*Pyrheliometer readings, Montezuma, Chile, 1920–1926—Continued*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3731, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731]

1924

M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.
Jan. 1, a.m.		Jan. 19, a.m.		Feb. 4, a.m.		Feb. 27, a.m.		Mar. 13 a.m.		Mar. 30 a.m.		Apr. 18 a.m.		May 4 a.m.		May 19, a.m.	
3.06 | 3.648		3.04 | 3.873		4.63 | 2.793		3.03 | 3.567		1.26 | 4.288		2.00 | 3.929		4.45 | 3.068		2.95 | 3.524		1.38 | 4.335	
2.49 | 3.842		2.48 | 4.055		3.87 | 3.011		2.48 | 3.756		1.20 | 4.257		1.85 | 3.988		3.89 | 3.203		2.50 | 3.686		1.37 | 4.338	
2.00 | 4.043		2.00 | 4.193		3.02 | 3.300		1.99 | 3.990		1.17 | 4.288		1.61 | 4.071		3.04 | 3.447		2.19 | 3.834		1.36 | 4.337	
1.64 | 4.259		1.82 | 3.405		2.51 | 3.501		1.82 | 4.055		1.15 | 4.295		1.50 | 4.121		2.52 | 3.607		2.00 | 3.882		1.36 | 4.332	
1.50 | 4.292		1.50 | 4.444		1.99 | 3.752		1.50 | 4.178		1.50 | 4.121		1.42 | 4.161		1.50 | 4.140		1.50 | 4.140		2.50 | 3.855	
Jan. 2, a.m.		Jan. 20, a.m.		Feb. 5, a.m.		Feb. 28 a.m.		Mar. 14 a.m.		Mar. 31 a.m.		Apr. 19 a.m.		May 5 a.m.		May 19, a.m.	
2.49 | 3.878		4.91 | 3.323		4.83 | 3.010		4.87 | 2.951		4.87 | 3.476		4.06 | 3.780		3.01 | 3.780		4.67 | 3.253		4.62 | 3.261	
1.99 | 4.074		4.11 | 3.529		4.02 | 3.223		4.02 | 3.195		4.12 | 3.925		4.03 | 3.424		2.19 | 3.920		1.46 | 4.155		4.02 | 3.404	
1.82 | 4.150		3.01 | 3.837		1.41 | 4.012		3.04 | 3.540		2.49 | 3.681		3.00 | 3.525		3.05 | 3.096		2.00 | 4.107		1.44 | 4.185	
1.64 | 4.211		2.50 | 3.981		1.19 | 4.166		2.50 | 3.741		1.99 | 3.876		2.50 | 3.694		2.50 | 3.885		1.50 | 4.270		1.48 | 4.176	
1.51 | 4.280		1.99 | 4.177		1.99 | 4.070		1.99 | 3.968		1.49 | 4.070		2.00 | 3.900		1.50 | 4.060		1.50 | 4.289		2.00 | 4.015	
Jan. 3, a.m.		Jan. 21, a.m.		Feb. 6, a.m.		Feb. 29 a.m.		Mar. 15 a.m.		Apr. 20 a.m.		May 6 a.m.		May 20, a.m.		June 3, a.m.	
4.79 | 3.368		4.16 | 3.006		4.16 | 3.006		4.83 | 2.951		4.87 | 3.476		3.01 | 3.780		3.00 | 3.802		3.01 | 3.780		4.62 | 3.261	
4.04 | 3.559		2.99 | 3.355		2.50 | 3.570		4.06 | 3.179		4.94 | 2.967		2.50 | 3.920		2.50 | 3.924		2.50 | 3.920		4.02 | 3.404	
3.05 | 3.835		2.48 | 3.801		2.00 | 3.784		3.03 | 3.516		3.03 | 3.837		1.45 | 3.925		1.46 | 4.155		1.46 | 4.155		4.02 | 3.404	
2.50 | 4.027		2.00 | 3.995		1.67 | 3.928		3.04 | 3.540		2.49 | 3.681		1.46 | 3.925		1.46 | 4.155		1.46 | 4.155		4.02 | 3.404	
2.02 | 4.203		1.82 | 4.032		1.50 | 4.009		2.00 | 3.894		2.00 | 3.933		2.49 | 3.782		2.00 | 4.026		2.00 | 4.026		2.00 | 4.055	
1.45 | 4.464		1.49 | 4.207		1.50 | 4.133		1.50 | 4.133		1.50 | 4.165		2.21 | 3.846		2.00 | 4.112		2.00 | 4.112		2.00 | 4.185	
Jan. 4, a.m.		Jan. 22, a.m.		Mar. 1, a.m.		Mar. 17 p.m.		Mar. 15 a.m.		Apr. 22 a.m.		May 7 a.m.		May 22, a.m.		June 9, a.m.	
2.04 | 3.966		1.66 | 3.995		2.99 | 3.631		2.99 | 3.631		1.19 | 4.071		2.20 | 3.970		3.03 | 3.698		4.58 | 3.404		2.09 | 3.793	
2.49 | 3.922		1.40 | 4.120		2.47 | 3.823		1.16 | 4.026		1.16 | 4.026		2.50 | 3.872		3.00 | 3.637		4.58 | 3.404		2.47 | 4.226	
2.00 | 4.296		2.00 | 4.109		2.00 | 4.042		1.83 | 4.115		1.11 | 4.052		2.00 | 4.076		2.50 | 3.958		4.58 | 3.404		2.47 | 4.226	
1.66 | 4.406		1.68 | 4.121		2.50 | 3.842		1.50 | 4.273		1.07 | 4.046		1.50 | 4.273		1.50 | 4.273		1.50 | 4.273		1.50 | 4.273	
1.50 | 4.478		Jan. 23, a.m.		Mar. 2 a.m.		Mar. 18 a.m.		Apr. 4 a.m.		Apr. 24 a.m.		May 8 a.m.		May 24, a.m.		June 10, a.m.	
Jan. 7, a.m.		1.63 | 4.027		1.63 | 4.157		1.15 | 4.157		1.15 | 4.157		2.20 | 3.806		2.98 | 3.811		2.20 | 4.142		2.09 | 3.922	
3.05 | 3.506		1.49 | 4.269		2.48 | 3.827		1.14 | 4.181		1.14 | 4.181		2.50 | 3.866		2.50 | 3.956		2.20 | 4.226		2.47 | 4.074	
2.50 | 3.771		1.50 | 4.109		2.00 | 4.035		1.25 | 3.618		1.13 | 4.147		2.20 | 3.963		2.20 | 4.012		2.00 | 4.241		2.47 | 4.074	
2.00 | 3.983		1.35 | 4.236		1.85 | 4.072		1.50 | 3.987		1.07 | 4.046		1.50 | 4.201		1.50 | 4.201		1.50 | 4.341		2.00 | 4.241	
1.66 | 4.099		Feb. 8, a.m.		Mar. 3 a.m.		Apr. 9 a.m.		Apr. 24 a.m.		Apr. 6 a.m.		May 9 a.m.		May 25, a.m.		June 11, p.m.	
1.49 | 4.205		3.00 | 3.587		3.00 | 3.567		3.00 | 3.567		3.00 | 3.705		3.00 | 3.886		3.03 | 3.774		3.00 | 3.839		3.00 | 3.720	
Jan. 8, a.m.		2.49 | 3.798		2.49 | 3.798		2.50 | 3.512		2.50 | 3.512		2.50 | 3.866		2.50 | 3.956		2.48 | 3.990		2.48 | 3.990	
3.02 | 3.772		1.63 | 4.191		1.63 | 4.191		1.87 | 3.943		1.87 | 3.943		2.20 | 3.963		2.20 | 4.016		2.00 | 4.215		2.47 | 4.074	
2.40 | 3.958		1.49 | 4.269		1.49 | 4.269		1.80 | 4.059		1.80 | 4.059		1.80 | 4.059		1.80 | 4.059		1.80 | 4.059		2.47 | 4.074	
2.00 | 4.145		1.50 | 3.818		1.50 | 3.818		1.50 | 4.213		1.50 | 4.213		1.50 | 4.213		1.50 | 4.213		1.50 | 4.213		2.47 | 4.074	
1.61 | 4.308		1.35 | 4.236		1.35 | 4.236		1.35 | 4.236		1.35 | 4.236		1.35 | 4.236		1.35 | 4.236		1.35 | 4.236		2.47 | 4.074	
1.50 | 4.362		Jan. 26, p.m.		Mar. 19, a.m.		Apr. 9 a.m.		Apr. 24 a.m.		Apr. 6 a.m.		May 10 a.m.		May 25, a.m.		June 12, a.m.	
Jan. 10, a.m.		1.09 | 4.451		1.09 | 4.451		1.09 | 4.451		1.09 | 4.451		1.09 | 4.451		1.09 | 4.451		1.09 | 4.451		1.09 | 4.451	
2.24 | 4.072		1.05 | 4.478		1.05 | 4.478		1.05 | 4.478		1.05 | 4.478		1.05 | 4.478		1.05 | 4.478		1.05 | 4.478		1.05 | 4.478	
1.77 | 4.227		1.99 | 4.072		1.99 | 4.072		1.99 | 4.072		1.99 | 4.072		1.99 | 4.072		1.99 | 4.072		1.99 | 4.072		1.99 | 4.072	
1.64 | 4.291		1.81 | 4.150		1.81 | 4.150		1.81 | 4.150		1.81 | 4.150		1.81 | 4.150		1.81 | 4.150		1.81 | 4.150		1.81 | 4.150	
1.54 | 4.361		1.50 | 4.292		1.50 | 4.292		1.50 | 4.292		1.50 | 4.292		1.50 | 4.292		1.50 | 4.292		1.50 | 4.292		1.50 | 4.292	
Jan. 12, a.m.		4.90 | 3.067		2.49 | 3.617		2.49 | 3.617		2.49 | 3.617		2.49 | 3.617		2.49 | 3.617		2.49 | 3.617		2.49 | 3.617	
1.90 | 3.921		4.08 | 3.286		1.77 | 4.147		1.77 | 4.147		1.77 | 4.147		1.77 | 4.147		1.77 | 4.147		1.77 | 4.147		1.77 | 4.147	
1.70 | 4.039		3.03 | 3.616		1.13 | 4.174		1.13 | 4.174		1.13 | 4.174		1.13 | 4.174		1.13 | 4.174		1.13 | 4.174		1.13 | 4.174	
1.55 | 4.130		2.50 | 3.805		1.80 | 4.074		1.80 | 4.074		1.80 | 4.074		1.80 | 4.074		1.80 | 4.074		1.80 | 4.074		1.80 | 4.074	
1.30 | 4.204		2.00 | 3.986		1.10 | 4.185		1.10 | 4.185		1.10 | 4.185		1.10 | 4.185		1.10 | 4.185		1.10 | 4.185		1.10 | 4.185	
Jan. 13, a.m.		1.22 | 4.442		1.22 | 4.442		1.22 | 4.442		1.22 | 4.442		1.22 | 4.442		1.22 | 4.442		1.22 | 4.442		1.22 | 4.442	
1.15 | 4.470		1.05 | 4.037		1.24 | 4.018		1.24 | 4.018		1.24 | 4.018		1.24 | 4.018		1.24 | 4.018		1.24 | 4.018		1.24 | 4.018	
1.05 | 4.527		1.05 | 4.032		1.21 | 4.041		1.21 | 4.041		1.21 | 4.041		1.21 | 4.041		1.21 | 4.041		1.21 | 4.041		1.21 | 4.041	
1.04 | 4.548		1.20 | 4.345		1.20 | 4.345		1.20 | 4.345		1.20 | 4.345		1.20 | 4.345		1.20 | 4.345		1.20 | 4.345		1.20 | 4.345	
Jan. 14, a.m.		2.51 | 3.934		2.47 | 3.786		2.47 | 3.786		2.47 | 3.786		2.47 | 3.786		2.47 | 3.786		2.47 | 3.786		2.47 | 3.786	
2.24 | 4.037		2.01 | 4.140		1.99 | 3.909		1.99 | 3.909		1.99 | 3.909		1.99 | 3.909		1.99 | 3.909		1.99 | 3.909		1.99 | 3.909	
2.01 | 4.345		1.50 | 4.357		1.50 | 4.357		1.50 | 4.357		1.50 | 4.357		1.50 | 4.357		1.50 | 4.357		1.50 | 4.357		1.50 | 4.357	
1.43 | 4.378		1.49 | 4.177		1.49 | 4.177		1.49 | 4.177		1.49 | 4.177		1.49 | 4.177		1.49 | 4.177		1.49 | 4.177		1.49 | 4.177	
Jan. 15, a.m.		4.63 | 3.281		3.01 | 3.304		3.01 | 3.304		3.01 | 3.304		3.01 | 3.304		3.01 | 3.304		3.01 | 3.304		3.01 | 3.304	
3.98 | 3.468		2.50 | 3.532		4.41 | 2.928		4.41 | 2.928		4.41 | 2.928		4.41 | 2.928		4.41 | 2.928		4.41 | 2.928		4.41 | 2.928	
3.03 | 3.727		2.00 | 3.695		3.78 | 3.136		3.78 | 3.136		3.78 | 3.136		3.78 | 3.136							

MONTEZUMA PYRHELIOMETRY

TABLE 1.—*Pyrheliometer readings, Montezuma, Chile, 1920–1926—Continued*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731.]

1924—Continued

M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.
June 26, a. m.		July 12, a. m.		July 26, a. m.		Aug. 15, a. m.		Aug. 27, a. m.		Sept. 13, a. m.		Sept. 30, a. m.		Oct. 18, a. m.		Nov. 1, a. m.	
4.88	3.108	2.98	3.602	1.70	3.954	4.59	3.094	4.71	3.133	2.94	3.946	3.02	3.792	3.04	3.901	3.02	3.574
4.18	3.266	2.49	3.739	1.61	4.004	3.83	3.299	3.95	3.312	2.49	4.086	2.51	3.967	2.48	4.066	2.50	3.738
3.00	3.589	2.26	3.868	1.47	4.033	3.00	3.538	3.02	3.683	2.19	4.193	2.19	4.067	2.19	4.158	2.21	3.875
2.50	3.765	1.98	3.919	1.43	4.093	2.48	3.701	2.50	3.815	1.09	4.276	2.00	4.133	2.00	4.253	2.00	3.976
2.00	3.943	1.50	4.113	1.99	3.878	2.00	4.013	1.50	4.446	1.50	4.459	1.50	4.459	1.50	4.227	1.50	4.533
1.50	4.140			1.50	4.087	1.48	4.241										
June 27, p. m.		July 13, a. m.		July 27, a. m.		Aug. 16, a. m.		Aug. 28, a. m.		Sept. 14, a. m.		Sept. 30, a. m.		Oct. 18, a. m.		Nov. 1, a. m.	
2.93	3.715	1.51	4.127	2.99	3.784	2.99	3.590	2.94	3.780	2.99	3.890	1.09	4.331	2.50	4.087	3.02	3.840
2.71	3.784	1.48	4.135	2.19	3.880	2.50	3.752	2.50	3.911	2.16	4.058	1.07	4.335	2.20	4.219	1.96	4.320
2.55	3.837	1.46	4.147	2.00	3.967	2.19	3.855	2.17	4.044	1.98	4.228	1.06	4.351	2.20	4.167	1.83	4.350
		1.44	4.152	1.50	4.104	2.00	3.026	1.99	4.140	1.50	4.409	1.68	4.389	1.50	4.470	1.69	4.405
June 28, a. m.		July 14, a. m.		July 28, a. m.		Aug. 17, a. m.		Aug. 30, a. m.		Sept. 15, a. m.		Oct. 4, a. m.		Oct. 19, a. m.		Nov. 2, a. m.	
2.99	3.664	4.88	3.228	4.88	3.216	2.84	3.588	2.99	3.356	4.45	3.565	2.80	4.181	2.50	4.087	2.39	4.134
2.48	3.857	3.98	3.425	3.97	3.425	2.99	3.694	2.50	3.703	3.82	3.714	1.44	4.213	2.49	4.022	1.96	4.320
2.19	3.956	2.00	4.021	2.50	3.861	2.50	3.855	1.86	3.963	2.99	3.288	1.38	4.242	2.20	4.167	1.83	4.350
1.50	4.197	2.00	4.017	1.99	4.024	1.57	4.078	2.00	3.811	1.50	4.426	1.28	4.270	1.99	4.224	1.25	4.431
June 29, a. m.		July 15, a. m.		July 31, a. m.		Aug. 18, a. m.		Aug. 31, a. m.		Sept. 17, a. m.		Oct. 6, a. m.		Oct. 20, a. m.		Nov. 3, a. m.	
4.95	3.342	3.00	3.783	1.56	4.112	2.99	3.588	1.19	4.214	2.87	3.936	4.45	3.565	3.01	3.871	1.44	4.325
4.60	3.545	2.50	3.930	1.50	4.138	2.49	3.764	1.18	4.205	2.45	4.056	3.82	3.569	2.50	4.078	1.30	4.410
2.98	3.807	2.51	3.971	2.20	4.039	2.18	3.875	1.17	4.217	2.00	4.233	2.00	4.007	2.00	4.365	1.25	4.431
1.99	4.169	1.50	4.322	1.50	4.227	1.42	4.178	1.50	4.160	1.50	4.414	1.50	4.434	1.50	4.470	1.20	4.458
June 30, a. m.		July 16, a. m.		Aug. 1, a. m.		Aug. 19, a. m.		Aug. 30, a. m.		Sept. 1, a. m.		Sept. 19, a. m.		Oct. 21, a. m.		Nov. 4, a. m.	
3.00	3.860	2.98	3.777	2.90	3.385	4.88	3.088	1.31	4.173	2.87	3.936	3.06	3.653	3.04	3.838	2.51	3.641
2.50	4.013	2.49	3.919	2.20	4.021	3.97	3.686	1.28	4.189	2.45	4.056	2.50	4.058	2.51	4.025	1.49	3.855
2.20	4.107	2.00	4.021	1.99	4.095	1.99	3.750	3.01	3.616	2.00	4.216	2.00	4.155	2.20	4.152	1.98	4.074
1.70	4.258	1.50	4.300	1.50	4.154	2.50	3.781	1.50	4.154	1.50	4.414	1.50	4.407	1.50	4.441	1.50	4.295
July 1, a. m.		July 17, a. m.		Aug. 2, a. m.		Aug. 19, a. m.		Aug. 30, a. m.		Sept. 1, a. m.		Sept. 19, a. m.		Oct. 22, a. m.		Nov. 5, a. m.	
3.01	3.652	5.00	3.215	1.50	4.012	4.88	3.088	1.83	4.173	2.87	3.936	3.06	3.653	2.00	3.964	2.51	3.964
2.50	3.838	3.99	3.447	1.46	4.021	2.19	3.686	1.82	4.087	2.45	4.056	2.97	3.727	2.50	3.980	1.26	4.104
2.20	3.714	3.02	3.720	2.52	3.882	1.99	4.064	2.00	4.128	1.83	4.154	2.12	4.041	2.18	4.154	1.98	4.176
2.00	3.948	1.50	4.249	1.50	4.152	2.00	3.791	1.50	4.154	2.00	4.441	1.50	4.439	2.00	4.183	1.50	4.536
1.88	3.944	2.08	3.688	2.48	3.868	2.99	3.746	1.82	3.853	1.83	3.877	2.99	3.909	3.03	3.643	3.77	3.697
July 3, a. m.		July 18, a. m.		Aug. 3, a. m.		Aug. 21, a. m.		Aug. 30, a. m.		Sept. 1, a. m.		Sept. 19, a. m.		Oct. 24, a. m.		Nov. 7, a. m.	
3.00	3.536	5.00	3.215	1.50	4.012	2.99	3.746	1.83	3.877	2.99	3.909	2.99	3.909	3.04	3.870	3.08	3.615
2.50	3.714	3.99	3.447	1.46	4.021	2.19	3.686	1.82	3.853	1.83	3.877	2.50	4.074	2.50	3.980	3.02	3.890
2.00	3.898	2.02	4.055	1.50	4.018	2.00	4.128	1.50	4.018	1.83	4.154	2.16	4.199	2.00	4.225	1.99	4.309
1.88	3.944	1.87	4.152	2.97	3.089	2.48	3.319	1.82	4.153	1.83	4.154	1.99	4.205	2.20	4.054	1.50	4.545
July 4, a. m.		Aug. 4, a. m.		Aug. 21, a. m.		Aug. 3, a. m.		Aug. 20, a. m.		Sept. 4, a. m.		Sept. 21, a. m.		Oct. 23, a. m.		Nov. 6, a. m.	
3.00	3.536	2.98	3.588	2.99	3.598	2.99	3.540	2.99	3.501	2.99	3.592	2.99	3.766	3.08	3.887	3.95	3.615
2.50	3.714	2.20	3.963	2.52	4.035	2.51	3.912	2.18	3.853	2.12	4.066	2.00	4.074	2.49	4.129	3.02	3.890
2.00	3.898	1.99	4.042	1.50	4.236	2.00	4.128	1.50	4.018	1.83	4.154	2.16	4.199	2.20	4.225	1.99	4.309
1.88	3.944	1.87	4.152	2.97	3.089	2.48	3.319	1.82	4.153	1.83	4.154	1.99	4.205	1.99	4.322	1.50	4.456
July 5, a. m.		July 19, a. m.		Aug. 21, a. m.		Aug. 4, a. m.		Aug. 30, a. m.		Sept. 1, a. m.		Sept. 19, a. m.		Oct. 22, a. m.		Nov. 5, a. m.	
2.51	3.846	3.00	3.933	2.20	4.031	1.99	4.055	1.49	4.277	2.99	3.693	3.03	3.643	3.01	3.915	3.77	3.697
2.38	3.892	2.50	3.933	2.20	4.031	2.00	4.095	1.49	4.277	2.50	3.844	2.97	3.727	2.50	4.125	3.02	3.898
2.00	4.018	1.99	4.260	1.50	4.277	2.13	4.055	1.50	4.277	2.00	4.095	1.70	4.269	2.00	4.155	1.67	4.431
1.90	4.048	1.49	4.277	2.99	3.745	2.47	3.813	1.99	4.213	2.00	4.095	1.99	4.212	2.00	4.225	1.50	4.380
July 6, a. m.		July 20, a. m.		Aug. 22, a. m.		Aug. 6, p. m.		Aug. 20, a. m.		Sept. 7, a. m.		Sept. 22, a. m.		Oct. 24, a. m.		Nov. 7, a. m.	
3.00	3.733	2.90	3.797	2.50	3.833	2.99	3.039	2.50	3.815	2.00	3.404	3.02	3.693	3.01	3.915	3.77	3.697
2.50	3.885	2.00	4.035	2.13	4.055	2.00	4.095	1.50	4.095	2.50	3.878	2.99	3.790	2.99	4.070	3.02	3.890
2.00	4.018	1.54	4.188	1.50	4.236	2.13	4.055	1.50	4.095	2.00	4.095	1.50	4.095	2.00	4.225	1.99	4.309
1.50	4.232	1.50	4.425	2.99	3.745	2.47	3.813	1.99	4.213	2.00	4.095	1.50	4.095	2.00	4.225	1.50	4.545
July 7, a. m.		July 21, a. m.		Aug. 23, a. m.		Aug. 9, a. m.		Aug. 21, a. m.		Sept. 7, a. m.		Sept. 24, a. m.		Oct. 25, a. m.		Nov. 8, a. m.	
2.99	3.860	3.98	3.549	3.01	3.812	2.47	3.810	3.00	3.470	2.51	3.951	3.04	3.449	3.01	3.816	3.01	4.541
2.51	4.093	2.50	3.882	2.50	3.950	1.99	4.291	2.47	3.850	2.20	3.957	2.52	3.764	2.50	3.959	3.01	4.483
1.99	4.260	2.00	4.095	2.01	4.130	1.82	4.350	1.50	4.463	2.00	3.873	2.00	3.882	2.00	4.081	2.50	4.077
1.54	4.411	1.50	4.428	1.50	4.323	2.86	3.884	2.47	3.822	2.00	3.870	2.51	3.673	2.00	3.904	2.50	3.959
1.50	4.410	1.50	4.323	1.50	4.323	1.99	4.150	1.80	4.227	1.50	4.150	1.50	4.348	1.50	4.365	1.50	4.365
July 8, a. m.		July 22, a. m.		Aug. 10, a. m.		Aug. 24, a. m.		Aug. 26, a. m.		Sept. 8, a. m.		Sept. 21, a. m.		Oct. 24, a. m.		Nov. 9, a. m.	
3.00	3.936	3.01	3.798														

SUPPLEMENT NO. 27

TABLE 1.—*Pyrheliometer readings, Montezuma, Chile, 1920–1926*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731]

1924—Continued

M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.
Dec. 3, a.m.		Dec. 5, a.m.		Dec. 10, a.m.		Dec. 13, a.m.		Dec. 18, a.m.		Dec. 21, a.m.		Dec. 23, a.m.		Dec. 25, a.m.		Dec. 27, a.m.	
1.05 | 4.601		1.17 | 4.693		4.74 | 2.937		1.65 | 4.114		4.94 | 3.234		4.98 | 2.907		4.93 | 3.214		4.94 | 2.488		1.43 | 4.274	
1.04 | 4.688		1.14 | 4.689		4.00 | 3.169		1.50 | 4.200		3.98 | 3.501		4.24 | 3.371		3.96 | 3.480		3.36 | 3.090		1.37 | 4.305	
1.04 | 4.706		3.04 | 3.453		1.32 | 4.310		3.05 | 3.786		3.02 | 3.747		3.97 | 3.192		3.02 | 3.785		3.01 | 3.238		1.31 | 4.325	
1.04 | 4.739		2.50 | 3.662		2.00 | 3.897		2.52 | 3.983		2.67 | 3.860		3.02 | 3.516		2.50 | 3.964		2.50 | 3.473		1.26 | 4.352	
		1.50 | 4.180		1.50 | 4.408		1.99 | 4.181		1.53 | 4.345		2.61 | 3.718		2.00 | 4.169		2.00 | 3.724			
		4.91 | 3.193		1.09 | 3.973		4.96 | 3.206		4.94 | 3.101		4.97 | 2.897		4.93 | 3.003		4.97 | 2.731		1.00 | 3.887	
		3.98 | 3.470		1.88 | 4.043		1.60 | 4.229		3.99 | 3.498		4.00 | 3.373		3.98 | 3.194		3.98 | 3.062		1.68 | 4.005	
		3.03 | 3.756		1.30 | 4.371		1.50 | 4.232		3.03 | 3.693		3.03 | 3.513		3.02 | 3.659		3.03 | 3.420		1.59 | 4.048	
		2.50 | 3.982		3.02 | 3.766		1.40 | 4.262		2.50 | 3.868		2.51 | 3.896		2.50 | 3.853		2.51 | 3.604		1.51 | 4.082	
		1.55 | 4.385		1.50 | 4.359		1.50 | 4.359		2.00 | 4.009		2.00 | 4.104		2.00 | 3.961		1.99 | 3.854		1.51 | 3.774	
						4.75 | 3.221		1.06 | 4.429		1.50 | 4.345		1.50 | 4.223		1.50 | 4.350		2.00 | 3.850	
						3.95 | 3.440		1.50 | 4.425								1.83 | 3.922	
																1.63 | 4.041	
Dec. 4, a.m.																	
2.22 | 4.150		1.02 | 4.330		1.02 | 4.359		1.32 | 4.425		1.00 | 4.420		1.50 | 4.345							
1.50 | 4.450		1.01 | 4.314		1.00 | 4.311													
1.45 | 4.470																	

1925

Jan. 1, a.m.		Jan. 12, a.m.		Jan. 20, a.m.		Feb. 19, a.m.		Mch. 11, a.m.		Mch. 23, a.m.		Apr. 1, a.m.		Apr. 13, a.m.		Apr. 23, a.m.		May 5, a.m.
1.99 | 3.897		1.20 | 4.300		1.08 | 4.300		1.03 | 4.407		4.53 | 3.134		4.92 | 2.978		4.86 | 3.111		4.70 | 3.373		4.91 | 3.338		
1.80 | 3.981		1.16 | 4.312		1.06 | 4.345		1.02 | 4.409		3.91 | 3.305		3.97 | 3.225		3.94 | 3.357		3.94 | 3.430		3.87 | 3.631		
1.69 | 4.055		1.13 | 4.329		1.05 | 4.357		1.02 | 4.409		3.00 | 3.581		3.01 | 3.537		3.01 | 3.786		2.99 | 3.725		3.00 | 3.886		
1.60 | 4.088				1.04 | 4.377				2.50 | 3.753		2.50 | 3.732		2.45 | 3.832		2.51 | 3.877		2.49 | 4.023		
1.50 | 4.134						1.03 | 4.230		1.98 | 3.950		1.98 | 3.942		2.00 | 4.041		1.99 | 4.093		2.00 | 4.199		
						1.05 | 4.421		1.50 | 4.169		1.50 | 4.155		1.50 | 4.239		1.50 | 4.357		1.53 | 4.370		
Jan. 2, a.m.						1.04 | 4.403												
1.67 | 4.036		3.00 | 3.357		1.02 | 4.426		1.01 | 4.416		1.41 | 4.139		4.92 | 2.917		4.98 | 3.019		4.79 | 3.263		2.48 | 3.904		
1.58 | 4.060		2.50 | 3.583		1.01 | 4.416				1.36 | 4.151		3.47 | 3.319		3.94 | 3.208		3.92 | 3.516		2.12 | 4.004		
1.50 | 4.096								1.32 | 4.198		2.96 | 3.505		3.00 | 3.576		2.98 | 3.768		2.00 | 4.038		
1.41 | 4.138						1.01 | 4.397		1.28 | 4.202		2.48 | 3.688		2.49 | 3.755		2.45 | 3.803		1.80 | 4.123		
						1.00 | 4.418		1.00 | 4.415		2.00 | 3.888		2.00 | 3.954		2.00 | 4.116		1.50 | 4.253		
Jan. 3, a.m.						1.00 | 4.418		1.00 | 4.415		1.50 | 4.110								
4.92 | 2.808		3.00 | 3.101		1.00 | 4.366		1.00 | 4.415		4.90 | 2.911		4.92 | 2.995		4.98 | 3.019		4.79 | 3.833		2.48 | 3.904		
3.95 | 3.101		3.00 | 3.436		1.00 | 4.366		1.00 | 4.415		3.92 | 3.209		3.47 | 3.266		3.94 | 3.208		3.92 | 3.516		2.12 | 4.004		
3.01 | 3.436		2.50 | 3.550		1.00 | 4.366		1.00 | 4.415		3.00 | 3.576		2.96 | 3.505		3.00 | 3.629		2.98 | 3.768		2.00 | 4.038		
2.50 | 3.550		2.00 | 3.867		1.00 | 4.366		1.00 | 4.415		2.48 | 3.688		2.49 | 3.755		2.45 | 3.832		2.47 | 3.877		1.80 | 4.123		
1.50 | 4.121								1.50 | 4.110		1.50 | 4.166		1.50 | 4.229		1.50 | 4.330		1.50 | 4.253		
Jan. 4, a.m.																		
1.08 | 4.332																		
1.07 | 4.351																		
1.06 | 4.345																		
1.04 | 4.343																		
Jan. 5, a.m.																		
4.92 | 2.792		3.02 | 3.682		1.04 | 4.204		1.01 | 4.416		4.95 | 2.909		4.84 | 3.019		4.98 | 3.263		4.79 | 3.833		2.48 | 3.904		
3.98 | 3.026		3.03 | 3.312		1.00 | 4.298		1.01 | 4.384		3.04 | 3.497		3.97 | 3.225		3.94 | 3.357		3.92 | 3.516		2.12 | 4.004		
3.03 | 3.312		2.50 | 3.550		1.00 | 4.298		1.01 | 4.384		2.50 | 3.689		3.00 | 3.576		3.00 | 3.629		2.98 | 3.768		2.00 | 4.038		
2.50 | 3.550		2.00 | 3.807		1.00 | 4.298		1.01 | 4.384		2.18 | 4.001		2.46 | 3.688		2.49 | 3.832		2.47 | 3.877		1.80 | 4.123		
1.50 | 4.034		1.00 | 4.317		1.00 | 4.298		1.03 | 4.343		1.01 | 4.041		1.50 | 3.869		1.50 | 3.926		1.50 | 4.037		1.50 | 4.253		
Jan. 6, a.m.																		
1.13 | 4.128																		
1.08 | 4.139																		
1.07 | 4.146																		
Jan. 7, p.m.																		
1.02 | 4.408																		
1.00 | 4.402																		
1.00 | 4.430																		
Jan. 8, a.m.																		
4.98 | 2.927																		
3.99 | 3.229																		
3.00 | 3.573																		
2.51 | 3.760																		
2.00 | 3.982																		
1.50 | 4.220																		
Jan. 9, a.m.																		
4.93 | 3.059																		
3.00 | 3.626																		
1.99 | 4.018																		
1.50 | 4.287																		
Jan. 10, a.m.																		
4.95 | 3.063																		
4.05 | 3.317																		
3.00 | 3.648																		
2.49 | 3.854																		

MONTEZUMA PYRHELIOMETRY

TABLE 1.—*Pyrheliometric readings, Montezuma, Chile, 1920–1926—Continued*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731]

1925—Continued

M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.	M.	R.
May 15, a. m.		June 1, a. m.		June 19, a. m.		July 3, a. m.		July 21, a. m.		Aug. 4, a. m.		Aug. 22, a. m.		Sept. 9, a. m.		Sept. 24, a. m.	
4.88 3.311	4.69 3.350	4.62 3.436	4.05 3.145	4.72 3.306	2.69 3.955	2.52 4.000	3.01 3.746	4.95 3.293	4.29 3.562	3.95 3.530	3.97 3.521	3.98 3.359	3.78 3.610	3.01 3.551	3.69 3.090		
3.05 3.744	3.00 3.769	3.97 3.583	3.98 3.359	3.78 3.610	2.48 3.822	2.48 3.086	1.99 4.174	3.99 3.551	3.01 3.908	3.01 3.804	2.99 3.614	2.22 4.099	2.20 4.009	2.20 3.828	3.01 3.908		
2.50 3.915	2.50 3.908	2.50 3.950	2.48 3.794	2.46 4.009	2.01 4.194	1.80 4.241	1.80 4.215	2.90 3.828	2.49 3.072	2.00 4.056	2.02 4.098	2.00 4.176	1.56 4.351	1.56 4.079	2.49 4.072	2.00 4.240	
2.00 4.104	1.50 4.286	1.50 4.246	1.50 4.295	1.50 4.163	1.61 4.357	1.50 4.364	1.47 4.385	1.50 4.248	1.50 4.372	1.50 4.226	1.50 4.222	1.50 4.194	1.50 4.396	1.50 4.337	1.50 4.442		
May 16, a. m.		June 2, a. m.		June 21, a. m.		July 4, a. m.		July 22, a. m.		Aug. 5, a. m.		Aug. 23, a. m.		Sept. 10, a. m.		Oct. 8, a. m.	
4.93 3.279	4.75 3.270	4.76 3.192	4.70 4.152	3.01 3.806	5.01 3.420	2.50 3.972	3.00 3.752	4.95 3.293	3.00 3.889	4.00 3.270	4.01 3.434	3.01 3.634	3.00 3.911	3.00 3.805	3.69 3.090	4.29 3.562	
4.00 3.518	4.01 3.434	4.07 3.359	1.65 4.139	2.48 3.959	3.00 4.108	2.10 4.060	2.00 4.150	2.49 3.889	2.20 4.120	3.00 4.005	3.01 4.162	2.50 4.167	2.50 4.060	2.20 4.104	3.69 3.090		
3.00 3.803	3.02 3.636	3.01 3.645	1.60 4.162	1.90 4.167	2.00 4.215	1.58 4.296	1.58 4.250	2.49 3.887	2.00 4.163	2.00 4.095	2.01 4.154	1.59 4.207	1.59 4.337	1.59 4.250	2.49 4.072		
2.51 3.958	2.50 3.868	2.50 3.796	2.00 4.050	1.50 4.194	2.47 3.961	1.50 4.396	1.50 4.337	2.49 3.887	1.50 4.248	1.50 4.372	1.50 4.226	1.50 4.194	1.50 4.337	1.50 4.250	2.49 4.072		
2.00 4.145	1.50 4.349	1.50 4.222	1.50 4.222	1.50 4.109	2.00 4.109	1.50 4.396	1.50 4.337	2.49 3.887	1.50 4.248	1.50 4.372	1.50 4.226	1.50 4.194	1.50 4.337	1.50 4.250	2.49 4.072		
May 17, a. m.		June 3, a. m.		June 22, a. m.		July 6, a. m.		July 23, a. m.		Aug. 6, a. m.		Aug. 24, p. m.		Sept. 11, n. m.		Oct. 9, a. m.	
4.97 3.179	4.82 3.361	4.80 3.271	4.12 3.422	2.99 3.744	2.70 4.006	2.70 4.006	1.49 4.227	3.00 3.752	2.50 3.937	2.50 3.937	2.00 4.021	2.00 4.021	2.00 4.005	2.00 4.021	2.20 3.080		
3.97 3.404	4.05 3.554	4.01 3.434	1.60 4.162	3.00 3.824	2.68 4.074	2.50 4.074	1.36 4.288	3.00 3.911	2.50 4.060	2.50 4.060	1.80 4.215	1.80 4.215	1.80 4.104	1.80 4.215	1.89 4.146		
2.99 3.695	2.50 3.825	2.50 3.797	2.00 4.050	1.50 4.194	1.60 4.251	1.50 4.251	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.80 4.387		
2.00 4.145	1.50 4.215	1.50 4.222	1.50 4.222	1.50 4.109	2.00 4.109	1.50 4.396	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.20 4.382		
May 18, a. m.		June 4, a. m.		June 23, a. m.		July 7, p. m.		July 24, a. m.		Aug. 7, a. m.		Aug. 25, a. m.		Sept. 12, a. m.		Oct. 10, a. m.	
4.97 3.179	4.82 3.361	4.80 3.271	4.12 3.422	2.99 3.744	2.70 4.006	2.70 4.006	1.49 4.227	3.00 3.752	2.50 3.937	2.50 3.937	2.00 4.021	2.00 4.021	2.00 4.005	2.00 4.021	2.20 3.080		
3.97 3.404	4.05 3.554	4.01 3.434	1.60 4.162	3.00 3.824	2.68 4.074	2.50 4.074	1.36 4.288	3.00 3.911	2.50 4.060	2.50 4.060	1.80 4.215	1.80 4.215	1.80 4.104	1.80 4.215	1.89 4.146		
2.99 3.695	2.50 3.825	2.50 3.797	2.00 4.050	1.50 4.194	1.60 4.251	1.50 4.251	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.80 4.387		
2.00 4.145	1.50 4.215	1.50 4.222	1.50 4.222	1.50 4.109	2.00 4.109	1.50 4.396	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.20 4.382		
May 19, a. m.		June 5, a. m.		June 24, a. m.		July 9, a. m.		July 25, a. m.		Aug. 8, a. m.		Aug. 27, a. m.		Sept. 13, a. m.		Oct. 12, a. m.	
4.97 3.179	4.82 3.361	4.80 3.271	4.12 3.422	2.99 3.744	2.70 4.006	2.70 4.006	1.49 4.227	3.00 3.752	2.50 3.937	2.50 3.937	2.00 4.021	2.00 4.021	2.00 4.005	2.00 4.021	2.20 3.080		
3.97 3.404	4.05 3.554	4.01 3.434	1.60 4.162	3.00 3.824	2.68 4.074	2.50 4.074	1.36 4.288	3.00 3.911	2.50 4.060	2.50 4.060	1.80 4.215	1.80 4.215	1.80 4.104	1.80 4.215	1.89 4.146		
2.99 3.695	2.50 3.825	2.50 3.797	2.00 4.050	1.50 4.194	1.60 4.251	1.50 4.251	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.80 4.387		
2.00 4.145	1.50 4.215	1.50 4.222	1.50 4.222	1.50 4.109	2.00 4.109	1.50 4.396	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.20 4.382		
May 20, a. m.		June 6, a. m.		June 25, a. m.		July 12, a. m.		July 27, a. m.		Aug. 9, a. m.		Aug. 28, a. m.		Sept. 14, a. m.		Oct. 13, a. m.	
4.97 3.179	4.82 3.361	4.80 3.271	4.12 3.422	2.99 3.744	2.70 4.006	2.70 4.006	1.49 4.227	3.00 3.752	2.50 3.937	2.50 3.937	2.00 4.021	2.00 4.021	2.00 4.005	2.00 4.021	2.20 3.080		
3.97 3.404	4.05 3.554	4.01 3.434	1.60 4.162	3.00 3.824	2.68 4.074	2.50 4.074	1.36 4.288	3.00 3.911	2.50 4.060	2.50 4.060	1.80 4.215	1.80 4.215	1.80 4.104	1.80 4.215	1.89 4.146		
2.99 3.695	2.50 3.825	2.50 3.797	2.00 4.050	1.50 4.194	1.60 4.251	1.50 4.251	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.80 4.387		
2.00 4.145	1.50 4.215	1.50 4.222	1.50 4.222	1.50 4.109	2.00 4.109	1.50 4.396	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.20 4.382		
May 21, a. m.		June 7, a. m.		June 26, a. m.		July 11, a. m.		July 26, a. m.		Aug. 10, a. m.		Aug. 29, a. m.		Sept. 15, a. m.		Oct. 12, a. m.	
4.97 3.179	4.82 3.361	4.80 3.271	4.12 3.422	2.99 3.744	2.70 4.006	2.70 4.006	1.49 4.227	3.00 3.752	2.50 3.937	2.50 3.937	2.00 4.021	2.00 4.021	2.00 4.005	2.00 4.021	2.20 3.080		
3.97 3.404	4.05 3.554	4.01 3.434	1.60 4.162	3.00 3.824	2.68 4.074	2.50 4.074	1.36 4.288	3.00 3.911	2.50 4.060	2.50 4.060	1.80 4.215	1.80 4.215	1.80 4.104	1.80 4.215	1.89 4.146		
2.99 3.695	2.50 3.825	2.50 3.797	2.00 4.050	1.50 4.194	1.60 4.251	1.50 4.251	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.80 4.387		
2.00 4.145	1.50 4.215	1.50 4.222	1.50 4.222	1.50 4.109	2.00 4.109	1.50 4.396	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.20 4.382		
May 22, a. m.		June 11, a. m.		June 25, a. m.		July 12, a. m.		July 27, a. m.		Aug. 10, a. m.		Aug. 28, a. m.		Sept. 15, a. m.		Oct. 12, a. m.	
4.97 3.179	4.82 3.361	4.80 3.271	4.12 3.422	2.99 3.744	2.70 4.006	2.70 4.006	1.49 4.227	3.00 3.752	2.50 3.937	2.50 3.937	2.00 4.021	2.00 4.021	2.00 4.005	2.00 4.021	2.20 3.080		
3.97 3.404	4.05 3.554	4.01 3.434	1.60 4.162	3.00 3.824	2.68 4.074	2.50 4.074	1.36 4.288	3.00 3.911	2.50 4.060	2.50 4.060	1.80 4.215	1.80 4.215	1.80 4.104	1.80 4.215	1.89 4.146		
2.99 3.695	2.50 3.825	2.50 3.797	2.00 4.050	1.50 4.194	1.60 4.251	1.50 4.251	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.80 4.387		
2.00 4.145	1.50 4.215	1.50 4.222	1.50 4.222	1.50 4.109	2.00 4.109	1.50 4.396	1.50 4.337	2.00 4.108	1.50 4.396	1.50 4.396	1.50 4.337	1.50 4.337	1.50 4.337	1.50 4.337	1.20 4.382		
May 23, a. m.		June 13, a. m.		June 27, a. m.		July 14, a. m.		July 29, a. m.		Aug. 12, a. m.		Aug. 30, a. m.		Sept. 16, a. m.		Oct. 15, p. m.	
4.97 3.179	4.82 3.361	4.80 3.271	4.12 3.422	2.99 3.744	2.70 4.006	2.70 4.006	1.49 4.227	3.00 3.752	2.50 3.937	2.50 3.937	2.00 4.021	2.00 4.021	2.00 4.005	2.00 4.021	2.20 3.080		
3.97 3.404	4.05 3.554	4.01 3.434	1.60 4.162	3.00 3.824	2.68 4.074	2.50 4.074	1.36 4.288	3.00 3.911	2.50 4.060	2.50 4.060							

SUPPLEMENT NO. 27

TABLE 1.—*Pyrheliometric readings, Montezuma, Chile, 1920–1926*

[Pyrheliometers S. I. No. 30 and S. I. No. 29 reduced to the scale of No. 30. To reduce to gram-calories per minute per cm², multiply R by 0.3629, excepting the period December 25, 1922, to April 24, 1924, inclusive, when use 0.3731]

1925—Continued

M.	R.	M.	R.	M.	R.	M.	R.												
Oct. 25, a.m.		Oct. 31, a.m.		Nov. 9, a.m.		Nov. 14, a.m.		Nov. 19, a.m.		Nov. 25, a.m.		Dec. 2, a.m.		Dec. 7, a.m.		Dec. 15, a.m.		Dec. 23, a.m.	
2.50	4.131	2.20	4.055	2.50	3.984	2.49	3.830	4.87	3.165	2.20	3.903	2.20	3.793	1.60	4.236	1.80	4.098	2.00	4.151
2.19	4.250	2.01	4.123	2.19	4.093	2.20	3.940	3.89	3.438	2.00	3.999	2.00	3.863	1.50	4.279	1.70	4.205	1.70	4.281
2.00	4.311	1.80	4.208	2.00	4.153	2.00	4.048	3.00	3.710	1.80	4.093	1.80	3.956	1.40	4.326	1.35	4.345	1.55	4.355
1.59	4.500	1.59	4.297	1.80	4.220	1.80	4.136	2.48	3.908	1.59	4.204	1.60	4.074	1.30	4.370	1.41	4.427	1.41	4.427
1.50	4.543	1.50	4.336	1.60	4.312	1.60	4.238	2.00	4.089	1.50	4.228	1.50	4.150	1.30	4.370	1.33	4.477	1.33	4.477
Oct. 26, a.m.		Nov. 1, a.m.		Nov. 10, a.m.		Nov. 15, a.m.		Nov. 20, a.m.		Nov. 27, a.m.		Dec. 3, a.m.		Dec. 8, a.m.		Dec. 15, a.m.		Dec. 23, a.m.	
2.48	4.036	2.20	4.146	4.91	3.091	1.44	4.336	2.49	3.941	1.61	4.328	1.60	4.167	1.80	4.128	1.46	4.335		
2.00	4.232	2.00	4.231	3.04	3.367	1.39	4.363	2.20	4.053	1.50	4.359	1.50	4.207	1.64	4.197	1.40	4.347		
1.70	4.363	1.83	4.204	3.00	3.646	1.34	4.388	2.00	4.053	1.45	4.377	1.50	4.232	1.50	4.283	1.35	4.376	2.00	4.061
1.50	4.448	1.60	4.375	2.50	3.837	1.30	4.420	1.80	4.222	1.38	4.404	1.40	4.251	1.40	4.299	1.80	4.431	1.30	4.431
1.38	4.500	1.51	4.412	2.00	4.056	1.26	4.438	1.80	4.222	1.32	4.432	1.34	4.283	1.34	4.283	1.25	4.458		
Oct. 27, a.m.		Nov. 6, a.m.		Nov. 11, a.m.		Nov. 16, a.m.		Nov. 21, a.m.		Nov. 28, a.m.		Dec. 4, a.m.		Dec. 9, a.m.		Dec. 20, a.m.		Dec. 29, a.m.	
2.20	4.069	2.48	3.864	2.20	4.056	2.52	3.963	2.18	4.054	2.00	4.096	4.48	3.181	2.15	4.067	2.00	3.080		
2.00	4.141	2.20	3.979	2.00	4.070	2.00	4.144	1.80	4.244	2.00	4.170	3.67	3.445	2.00	4.134	4.00	3.363		
1.80	4.218	1.80	4.232	1.60	4.232	1.80	4.232	1.80	4.218	1.50	4.262	3.03	3.600	1.80	4.229	3.00	3.679		
1.60	4.321	1.50	4.377	1.50	4.265	1.64	4.305	1.60	4.303	1.50	4.304	2.50	3.855	1.70	4.276	2.50	3.877		
1.50	4.377	1.50	4.268	1.50	4.336	1.50	4.348	1.50	4.348	1.40	4.347	1.40	4.319	1.36	4.365	2.00	4.079	1.50	4.310
Oct. 29, a.m.		Nov. 7, a.m.		Nov. 12, a.m.		Nov. 17, a.m.		Nov. 22, a.m.		Nov. 30, a.m.		Dec. 5, a.m.		Dec. 10, a.m.		Dec. 21, a.m.		Dec. 30, a.m.	
2.00	4.203	2.50	3.926	2.19	4.130	2.20	4.110	2.20	4.062	2.51	3.768	2.19	3.992	2.00	4.188	2.50	3.950		
1.81	4.287	2.20	4.046	2.00	4.121	1.80	4.220	2.00	4.144	1.93	4.004	2.00	4.070	1.60	4.210	2.20	4.210		
1.70	4.339	1.80	4.218	1.80	4.232	1.80	4.271	1.80	4.228	1.80	4.094	1.60	4.428	1.60	4.371	1.93	4.308	2.00	4.172
1.60	4.392	1.60	4.429	1.50	4.301	1.60	4.378	1.60	4.365	1.60	4.233	1.60	4.269	1.55	4.477	1.70	4.218	1.80	4.218
1.50	4.429	1.50	4.406	1.50	4.406	1.50	4.412	1.50	4.370	1.50	4.238	1.50	4.325	1.42	4.521	1.60	4.356		
Oct. 30, a.m.		Nov. 8, a.m.		Nov. 13, a.m.		Nov. 18, a.m.		Nov. 23, a.m.		Dec. 1, a.m.		Dec. 6, a.m.		Dec. 11, a.m.		Dec. 22, a.m.		Dec. 31, a.m.	
4.98	3.294	2.49	3.976	2.20	4.155	2.20	4.070	2.48	4.024	1.70	4.076	1.40	4.388	4.27	3.432	2.51	4.056	1.89	4.360
4.00	3.555	2.20	4.086	2.00	4.229	2.00	4.128	2.20	4.126	1.60	4.120	1.34	4.410	3.62	3.614	2.00	4.261	1.70	4.436
3.01	3.859	2.00	4.159	1.80	4.316	1.81	4.210	1.99	4.220	1.50	4.157	1.30	4.407	2.99	3.895	1.70	4.395	1.60	4.502
2.50	3.987	1.80	4.227	1.60	4.308	1.60	4.310	1.80	4.302	1.40	4.190	1.25	4.441	1.55	4.447	1.50	4.565	1.50	4.565
2.00	4.215	1.50	4.426	1.50	4.325	1.60	4.448	1.50	4.357	1.60	4.402	1.35	4.213	1.21	4.461	1.50	4.501	1.40	4.584

1926

Jan. 1, a.m.		Jan. 12, a.m.		Jan. 25, a.m.		Feb. 11, a.m.		Mar. 1, a.m.		Mar. 13, a.m.		Mar. 29, a.m.		Apr. 6, a.m.		Apr. 14, a.m.		Apr. 22, a.m.	
2.50	4.036	2.50	3.836	1.50	4.248	1.78	4.015	2.50	3.669	1.60	4.149	4.90	2.985	2.81	3.698	2.80	3.878	2.20	3.064
1.98	4.256	2.20	3.959	1.40	4.301	1.67	3.977	2.20	3.793	1.27	4.328	3.96	3.236	2.50	3.990	2.00	4.044		
1.80	4.340	2.00	4.046	1.32	4.345	1.55	4.043	2.00	3.902	1.24	4.370	3.02	3.526	2.20	4.093	1.80	4.194	1.50	4.252
1.64	4.410	1.80	4.162	1.25	4.377	1.70	4.033	1.70	4.392	1.22	4.392	2.00	3.908	1.62	4.175			1.50	4.252
1.50	4.462	1.60	4.241	1.19	4.424	1.50	4.111	1.50	4.111	1.53	4.015	1.53	4.015	1.50	4.015	1.50	4.015	1.50	4.015
Jan. 2, a.m.		Jan. 13, a.m.		Jan. 26, a.m.		Feb. 14, a.m.		Mar. 3, a.m.		Mar. 30, a.m.		Apr. 7, a.m.		Apr. 15, a.m.		Apr. 23, a.m.		Apr. 30, a.m.	
2.00	4.125	2.00	4.018	1.20	4.196	1.14	4.232	1.09	4.036	1.20	4.042	2.81	3.681	2.81	3.850				
1.80	4.217	1.80	4.129	1.64	4.229	1.10	4.261	1.80	4.105	1.35	4.261	3.62	3.614	2.00	3.953				
1.63	4.307	1.64	4.229	1.07	4.258	1.27	4.258	1.61	4.210	1.17	4.132	2.19	3.908	2.21	3.895	1.44	4.176		
1.50	4.396	1.50	4.319	1.40	4.450	1.07	4.273	1.70	4.229	1.30	4.132	1.81	4.055	2.01	3.970	1.40	4.167	2.00	4.203
1.40	4.452	1.40	4.373	1.40	4.450	1.07	4.500	1.50	4.266	1.51	4.269	1.82	4.046	1.50	4.203	1.50	4.203	1.50	4.203
Jan. 3, a.m.		Jan. 14, a.m.		Jan. 27, a.m.		Feb. 15, a.m.		Mar. 4, a.m.		Mar. 16, a.m.		Mar. 3, a.m.		Mar. 31, a.m.		Apr. 16, a.m.		Apr. 24, a.m.	
1.20	4.467	1.45	4.388	1.36	4.446	1.64	4.022	2.29	3.684	1.70	4.220	1.53	4.015	2.81	3.681	4.95	3.363		
1.15	4.488	1.36	4.446	1.50	4.060	2.49	3.861	2.00	3.710	1.80	4.228	2.19	3.908	2.00	3.595	1.40	4.176		
1.10	4.513	1.30	4.499	1.40	4.105	1.20	4.033	1.70	3.895	1.50	4.004	1.81	3.984	2.01	3.970	1.40	4.167	1.38	4.179
1.07	4.529	1.17	4.500	1.17	4.500	1.50	4.266	1.60	4.190	1.50	4.190	1.50	4.207	1.50	4.401			1.50	4.401
Jan. 5, a.m.		Jan. 15, a.m.		Jan. 26, a.m.		Feb. 16, a.m.		Feb. 23, a.m.		Feb. 20, a.m.		Feb. 1, a.m.		Feb. 28, a.m.		Apr. 17, a.m.		Apr. 25, a.m.	
1.29	4.401	1.57	4.421	1.35	4.406	1.15	4.534	1.11	4.489	1.70	4.074	2.48	3.711	1.90	3.913	2.82	3.843	2.52	3.853
1.25	4.424	1.60	4.460	1.27	4.446	1.09	4.513	1.60	4.150	1.50	4.042	2.50	3.631	1.60	3.975	2.50	3.938	2.20	3.981
Jan. 6, a.m.		Jan. 14, a.m.		Jan. 21, a.m.		Feb. 18, a.m.		Feb. 20, a.m.		Feb. 21, a.m.		Feb. 22, a.m.		Feb. 29, a.m.		Apr. 18, a.m.		Apr. 26, a.m.	
2.50	3.943	1.44	4.499	1.22	4.477	2.01	4.143	2.00	3.922	1.80	4.002	1.70	4.021	2.81	3.564	2.83	3.664	2.50	3.853
2.20	4.051	1.80	4.122	1.60	4.191	1.60	4.318	1.60	4.094	1.60	4.074	2.20	3.831	2.20	3.877	2.20	4.067	2.00	4.135
1.80	4.198	1.80	4.389	1.50	4.256														

MONTEZUMA PYRHELIOMETRY

13

TABLE 2.—Apparent atmospheric transmission coefficient α , water vapor pressure, e , and precipitable water, p. w., at Montezuma, Chile, on days when pyrheliometric readings were obtained, 1920–1926

Date	a	e	p. w.	Date	a	e	p. w.	Date	a	e	p. w.	Date	a	e	p. w.	Date	a	e	p. w.	Date	a	e	p. w.		
August:				1920				1921				1922				1922				December:					
3, p.m.	0.928	0.98	2.6	December:	mm.	mm.	mm.	June—Con.	mm.	mm.	mm.	February—Continued	mm.	mm.	mm.	January:	mm.	mm.	mm.	Continued	mm.	mm.	mm.		
4, a.m.	.923	1.10	1.0		3, a.m.	—	—	27, p.m.	0.945	1.11	1.1	20, a.m.	.893	6.30	11.9	2, p.m.	2.92	8.5	2.92	8.5	7, p.m.	7.74	7.6		
5, a.m.	.928	.57	1.6		4, a.m.	—	—	28, p.m.	.930	.97	1.2	28, a.m.	.881	6.36	11.5	3, p.m.	7.74	7.6	3, p.m.	7.6	14, p.m.	3.70	6.8		
6, p.m.	—	1.19	1.4		5, a.m.	—	—	29, a.m.	—	1.05	1.3	March:	—	—	—	4, a.m.	—	—	—	25, p.m.	—	—	—		
7, a.m.	.919	1.16	1.5		6, a.m.	—	—	1, p.m.	.925	.72	.8	2, a.m.	.911	4.72	6.9	11, p.m.	2.92	8.5	2.92	8.5	14, p.m.	7.74	7.6		
8, a.m.	—	1.34	2.2		7, a.m.	—	—	2, p.m.	.924	.76	1.0	3, a.m.	.900	3.34	7.1	12, p.m.	7.74	7.6	3, p.m.	7.6	15, p.m.	3.70	6.8		
9, a.m.	1.899	1.78	4.1		8, a.m.	—	—	3, a.m.	—	.53	.8	4, p.m.	—	3.65	5.7	14, p.m.	—	—	—	25, p.m.	—	—	—		
10, a.m.	—	2.41	3.2		10, p.m.	—	—	4, p.m.	—	1.12	.6	6, p.m.	.916	3.48	5.0	15, p.m.	2.92	8.5	2.92	8.5	25, p.m.	4.82	15.8		
11, a.m.	1.906	1.94	1.9		11, a.m.	—	—	5, p.m.	—	1.56	1.0	7, a.m.	.914	3.14	4.0	2, p.m.	2.94	9.6	2, p.m.	2.94	9.6	12, p.m.	8.5		
12, a.m.	.914	1.85	2.8		12, a.m.	—	—	10, p.m.	—	.84	1.3	8, p.m.	—	2.42	2.8	3, p.m.	8.5	10.0	3, p.m.	8.5	10.0	10, p.m.	9.5		
13, a.m.	.904	2.09	2.6		13, a.m.	—	—	11, a.m.	.924	1.82	2.2	13, a.m.	.880	2.39	2.6	4, a.m.	8.5	9.5	4, a.m.	8.5	9.5	4, a.m.	9.5		
14, a.m.	—	.50	1.1		14, a.m.	—	—	13, a.m.	—	1.80	1.7	11, a.m.	.930	1.83	2.1	5, a.m.	4.20	10.1	5, a.m.	4.20	10.1	5, a.m.	10.1		
15, a.m.	.68	0.6	16, a.m.		15, a.m.	—	—	14, a.m.	—	1.82	1.7	12, a.m.	.921	2.54	2.0	6, a.m.	4.03	13.7	6, a.m.	4.03	13.7	6, a.m.	13.7		
17, a.m.	.927	2.27	4.0		17, a.m.	—	—	15, a.m.	—	1.81	4.9	13, a.m.	.904	2.38	3.1	7, a.m.	5.37	9.8	7, a.m.	5.37	9.8	7, a.m.	9.8		
18, p.m.	—	2.41	5.4		18, a.m.	—	—	16, a.m.	—	1.69	1.4	13, a.m.	.904	2.38	3.1	8, a.m.	5.37	9.8	8, a.m.	5.37	9.8	8, a.m.	9.8		
19, a.m.	1.917	2.55	4.6		19, a.m.	—	—	17, a.m.	—	1.58	1.8	17, a.m.	—	3.47	7.3	9, p.m.	5.37	9.8	9, p.m.	5.37	9.8	9, p.m.	9.8		
20, a.m.	.918	2.57	5.1		20, a.m.	—	—	18, a.m.	—	1.65	1.6	18, a.m.	—	2.73	3.5	10, p.m.	5.37	9.8	10, p.m.	5.37	9.8	10, p.m.	9.8		
21, a.m.	.919	2.11	2.2		21, p.m.	—	—	19, a.m.	—	2.73	1.0	19, a.m.	.907	2.92	6.0	11, a.m.	5.24	8.5	11, a.m.	5.24	8.5	11, a.m.	8.5		
22, a.m.	—	.83	1.2		22, p.m.	—	—	20, a.m.	—	3.25	4.4	20, p.m.	—	3.29	5.2	12, a.m.	5.24	8.5	12, a.m.	5.24	8.5	12, a.m.	8.5		
23, a.m.	.927	.62	.7		23, p.m.	—	—	21, a.m.	—	2.27	4.5	21, p.m.	—	2.76	5.2	13, a.m.	5.24	8.5	13, a.m.	5.24	8.5	13, a.m.	8.5		
24, p.m.	—	1.02	.8		24, a.m.	—	—	22, a.m.	—	1.87	2.1	22, p.m.	—	3.70	6.3	14, a.m.	5.24	8.5	14, a.m.	5.24	8.5	14, a.m.	8.5		
26, a.m.	—	1.28	2.8		25, a.m.	—	—	23, a.m.	—	3.21	1.4	23, p.m.	—	18, a.m.	—	15, p.m.	5.24	8.5	15, p.m.	5.24	8.5	15, p.m.	8.5		
27, a.m.	.913	1.32	2.9		26, a.m.	—	—	24, a.m.	—	3.31	3.0	24, p.m.	—	4.03	5.8	21, a.m.	5.24	8.5	21, a.m.	5.24	8.5	21, a.m.	8.5		
28, a.m.	.918	1.33	2.2		27, a.m.	—	—	25, a.m.	—	6, p.m.	.911	1.87	2.8	23, p.m.	5.24	8.5	23, p.m.	5.24	8.5	23, p.m.	8.5				
29, a.m.	.919	2.40	4.6		28, a.m.	—	—	26, a.m.	—	.909	2.66	3, a.m.	—	1.904	6.41	12, a.m.	5.24	8.5	12, a.m.	5.24	8.5	12, a.m.	8.5		
30, a.m.	.914	2.46	4.1		29, a.m.	—	—	27, a.m.	—	.909	2.97	3, a.m.	—	30, a.m.	7.04	12, a.m.	5.24	8.5	12, a.m.	5.24	8.5	12, a.m.	8.5		
31, a.m.	.909	1.89	3.0		30, a.m.	—	—	28, a.m.	—	.904	3.02	3, a.m.	—	31, a.m.	4.86	11.6	12, a.m.	5.24	8.5	12, a.m.	5.24	8.5	12, a.m.	8.5	
September:				1921				September:				October:				May:				February:					
1, a.m.	.807	1.24	2.2		1, a.m.	—	—	24, p.m.	2.18	3.4	3.4	1, p.m.	1.87	3.3	10, a.m.	5.37	11.0	1, a.m.	5.37	11.0	1, a.m.	11.0			
2, a.m.	.918	.88	1.0		2, a.m.	—	—	25, a.m.	.910	2.71	5.8	2, p.m.	1.918	1.99	2.7	11, a.m.	5.37	11.0	11, a.m.	5.37	11.0	11, a.m.	11.0		
3, a.m.	1.42	1.9	14, a.m.		3, a.m.	—	—	26, a.m.	.910	1.07	2.0	3, p.m.	1.912	3.02	3.6	12, a.m.	5.37	11.0	12, a.m.	5.37	11.0	12, a.m.	11.0		
5, p.m.	2.81	6.6	15, a.m.		5, a.m.	—	—	27, a.m.	.920	3.20	3.0	4, p.m.	—	1.846	4.00	9, a.m.	5.37	11.0	9, a.m.	5.37	11.0	9, a.m.	11.0		
6, a.m.	.906	2.45	4.1		6, a.m.	—	—	28, a.m.	—	1.04	2.6	5, p.m.	—	4.16	10.0	2, a.m.	5.37	11.0	2, a.m.	5.37	11.0	2, a.m.	11.0		
7, a.m.	.910	1.63	1.9		7, a.m.	—	—	29, a.m.	—	.909	2.14	4.4	4, p.m.	—	2.05	3.1	3, a.m.	5.37	11.0	3, a.m.	5.37	11.0	3, a.m.	11.0	
8, a.m.	1.37	2.0	11, p.m.		8, a.m.	—	—	30, a.m.	—	.909	1.99	4.2	5, p.m.	—	2.05	3.1	4, a.m.	5.37	11.0	4, a.m.	5.37	11.0	4, a.m.	11.0	
9, a.m.	.916	1.57	2.3		9, a.m.	—	—	1, p.m.	—	.916	1.62	6.5	6, p.m.	—	1.91	1.67	5, a.m.	5.35	8.6	5, a.m.	5.35	8.6	5, a.m.	8.6	
10, a.m.	.904	1.24	1.5		10, a.m.	—	—	2, p.m.	—	.885	1.95	8.8	7, p.m.	—	1.91	1.67	4, a.m.	5.35	8.6	4, a.m.	5.35	8.6	4, a.m.	8.6	
11, a.m.	1.55	3.2	24, a.m.		11, a.m.	—	—	3, p.m.	—	.916	1.98	—	8, p.m.	—	1.77	2.5	12, a.m.	5.35	8.6	12, a.m.	5.35	8.6	12, a.m.	8.6	
12, a.m.	.912	1.87	2.6		12, a.m.	—	—	4, p.m.	—	.917	1.87	2.2	9, p.m.	—	1.77	2.5	13, a.m.	5.35	8.6	13, a.m.	5.35	8.6	13, a.m.	8.6	
13, a.m.	.908	1.91	5.5		13, a.m.	—	—	5, p.m.	—	.917	1.72	3.2	10, p.m.	—	1.77	2.5	14, a.m.	5.35	8.6	14, a.m.	5.35	8.6	14, a.m.	8.6	
14, a.m.	.906	2.54	4.6		14, a.m.	—	—	6, p.m.	—	.917	1.65	4.4	11, p.m.	—	1.77	2.5	15, a.m.	5.35	8.6	15, a.m.	5.35	8.6	15, a.m.	8.6	
15, a.m.	—	2.23	3.4		15, a.m.	—	—	7, p.m.	—	.917	1.75	—	12, p.m.	—	1.77	2.5	16, a.m.	5.35	8.6	16, a.m.	5.35	8.6	16, a.m.	8.6	
16, a.m.	1.80	2.2	1, a.m.		16, a.m.	—	—	8, p.m.	—	.917	2.05	9.0	1, p.m.	—	2.44	5.4	2, a.m.	5.35	8.6	2, a.m.	5.35	8.6	2, a.m.	8.6	
17, a.m.	.906	1.85	1.8		17, a.m.	—	—	9, p.m.	—	.917	2.73	3.3	2, p.m.	—	2.87	3.8	3, a.m.	5.35	8.6	3, a.m.	5.35	8.6	3, a.m.	8.6	
18, a.m.	.918	1.84	1.7		18, a.m.	—	—	10, p.m.	—	.917	1.77	3.3	3, p.m.	—	2.87	3.8	4, a.m.	5.35	8.6	4, a.m.	5.35	8.6	4, a.m.	8.6	
19, a.m.	1.893	2.47	4.7		19, a.m.	—	—	11, p.m.	—	.917	2.53	3.0	4, p.m.	—	1.57	.9	5, a.m.	5.35	8.6	5, a.m.	5.35	8.6	5, a.m.	8.6	
20, a.m.	—	2.35	5.7		20, a.m.	—	—	12, p.m.	—	.917	1.71	2.7	5, p.m.	—	1.57	.9	6, a.m.	5.35	8.6	6, a.m.	5.35	8.6	6, a.m.	8.6	
21, a.m.	—	2.09	5.3		21, a.m.	—	—	13, p.m.	—	.917	1.71	1.8	6, p.m.	—	1.57	.9	7, a.m.	5.35	8.6	7, a.m.	5.35	8.6	7, a.m.	8.6	
22, a.m.	—	2.75	5.9		22, a.m.	—	—	14, p.m.	—	.917	1.71	1.8	7, p.m.	—	1.57	.9	8, a.m.	5.35	8.6	8, a.m.	5.35	8.6	8, a.m.	8.6	
23, a.m.	—	1.77	3.0		23, a.m.	—	—	15, p.m.	—	.917	1.71	1.8	8, p.m.	—	1.57	.9	9, a.m.	5.35	8.6	9, a.m.	5.35	8.6	9, a.m.	8.6	
24, a.m.	—	1.84	3.8		24, a.m.	—	—	16, p.m.	—	.917	1.71	1.8	9, p.m.	—	1.57	.9	10, a.m.	5.35	8.6	10, a.m.	5.35	8.6	10, a.m.	8.6	
25, a.m.	—	1.09	6.4		25, a.m.	—	—	17, p.m.	—	.917	1.71	1.8	10, p.m.	—	1.57	.9	11, a.m.	5.35	8.6	11, a.m.	5.35	8.6	11, a.m.	8.6	
26, a.m.	—	2.97	7.8		26, a.m.	—	—	18, p.m.	—	.917	1.71	1.8	11, p.m.	—	1.57	.9	12, a.m.	5.35	8.6	12, a.m.	5.35	8.6	12, a.m.	8.6	
27, a.m.	—	2.87	6.0		27, a.m.	—	—	19, p.m.	—	.917	1.71	1.8	12, p.m.	—	1.57	.9	13, a.m.	5.35	8.6	13, a.m.	5.35	8.6	13, a.m.	8.6	
November:				January:				December:				February:				September:				October:					
1, a.m.	.910	3.65	5.4		8, a.m.	—	—	1, p.m.	—	4.09	17.9	1, p.m.	—	2.62	2.7	15, p.m.	8.6	22, a.m.	5.40	11.4	1, a.m.	8.6	22, a.m.	5.40	11.4
2, a.m.	1.97	3.6	4.5		9, a.m.	—	—	2, p.m.	—	5.31	10.4	2, p.m.	—	1.38	1.6	16, p.m.	8.6	23, a.m.	5.40	11.4	2, a.m.	8.6	23, a.m.	5.40	11.4
3, a.m.	2.27	3.4	14, a.m.		10, a.m.	—	—	3, p.m.	—	4.05	3.4	3, p.m.	—	1.38	1.6	17, p.m.	8.6	24, a.m.	5.40	11.4	3, a.m.	8.6	24, a.m.	5.40	11.4
4, a.m.	—	2.76	4.7		11, a.m.	—	—	4, p.m.	—	1.903	2.48	2,0	4, p.m.	—	1.38	1.6	18, p.m.	8							

1 Small range of air mass.

³ Readings irregular.

SUPPLEMENT NO. 27

TABLE 2.—Apparent atmospheric transmission coefficient a , water vapor pressure, e , and precipitable water, $p. w.$, at Montezuma, Chile, on days when pyrheliometric readings were obtained, 1920-1926—Continued

Date	a	e	$p. w.$	Date	a	e	$p. w.$	Date	a	e	$p. w.$	Date	a	e	$p. w.$	Date	a	e	$p. w.$
1923				1923				1923				1924				1924			
April—Con.	mm.	mm.	mm.	August—Continued	mm.	mm.	mm.	Continued	mm.	mm.	mm.	April—Con.	mm.	mm.	mm.	July—Con.	mm.	mm.	mm.
25, a. m.	2.63	3.0		29, a. m.	2.89	4.4		10, a. m.	2.882	3.51	9.1	4, a. m.	5.35	8.1		25, a. m.	2.902	1.47	2.3
26, a. m.	.906	2.25	4.4	30, a. m.	2.49	3.3		11, a. m.	2.895	3.29	7.5	6, a. m.	5.36	4.0		26, a. m.	2.70	5.2	
27, a. m.	.914	1.28	1.3	31, a. m.	1.67	2.8		12, a. m.	.887	4.36	13.6	9, a. m.	5.04	13.4		27, a. m.	.906	1.83	3.1
28, a. m.	.916	1.41	2.3	September:				13, p. m.	4.82	12.9		10, a. m.	.907	4.72	8.6	28, a. m.	.916	1.62	2.1
29, a. m.	2.44	3.5						14, a. m.	2.897	4.70	10.2	11, a. m.	.909	3.11	3.3	31, a. m.	2.15	2.7	
30, a. m.	1.66	3.5		1, a. m.	1.43	1.4		15, a. m.	3.83	3.4		12, a. m.	3.12	2.8		August:			
May:				2, a. m.	.925	1.29	.8	16, a. m.	4.38	7.5		13, a. m.	2.917	2.25	1.9	1, a. m.	2.909	1.64	5.3
2, a. m.	.914	1.51	3.1	3, a. m.	1.13	1.2		17, a. m.	.906	3.50	3.6	14, a. m.	.923	2.06	2.6	2, a. m.	2.69	6.2	
3, a. m.	.917	2.21	4.0	4, a. m.	2.918	1.82	1.7	18, a. m.	2.66	8.4		15, a. m.	1.921	2.76	3.5	3, a. m.	2.909	2.71	1.4
10, a. m.	.920	1.09	1.0	5, a. m.	.99	3.9		22, p. m.	2.98	10.6		16, a. m.	3.44	5.3		4, a. m.	.926	1.55	.4
11, a. m.	1.21	2.2	6, a. m.		1.62	4.8		23, a. m.	2.99	9.5		17, a. m.	.909	3.02	5.0	5, a. m.	.88	.5	
12, a. m.	.920	1.71	2.6	6, p. m.	1.32	2.4		24, a. m.	2.912	2.91	8.6	18, a. m.	2.920	1.48	6.6	6, p. m.	1.88	2.5	
13, a. m.	1.37	3.4	7, a. m.	2.920	1.23	2.9		20, a. m.	6.90	9.2		21, a. m.	.909	4.06	6.3	10, a. m.	.914	1.57	.8
15, a. m.	3.00	5.1	8, a. m.	2.931	2.20	2.4		22, a. m.	.916	2.81	2.5	22, a. m.	1.917	1.83	.8	11, a. m.	2.21	1.4	
17, p. m.	3.16	4.1	9, a. m.	1.923	2.13	1.9		23, a. m.	2.917	1.8		13, a. m.	2.909	1.7		13, a. m.	.909	2.18	2.5
18, a. m.	1.12	6.0	10, a. m.	.927	2.12	1.9		24, a. m.	2.920	1.91	1.4	14, a. m.	.909	2.47	6.5				
21, a. m.	.914	2.33	6.0	11, a. m.	1.54	1.5		25, a. m.	2.88	2.38		15, a. m.	.910	2.26	4.5				
26, p. m.	2.14	5.9	12, a. m.	1.914	2.24	1.3		26, a. m.	2.920	1.31	1.3	16, a. m.	.910	2.39	4.8				
27, a. m.	.922	1.72	4.0	13, a. m.	1.12	1.0		28, a. m.	.927	1.71	1.2	17, a. m.	.909	2.7					
28, a. m.	1.45	1.6	13, p. m.		1.09	1.1		29, a. m.	2.910	3.83	3.8	18, a. m.	2.903	1.77	3.3				
29, a. m.	.914	1.14	1.0	14, a. m.	1.46	2.7		20, a. m.	2.88	2.4		19, a. m.	.912	1.90	2.9				
30, a. m.	.82	.7	15, a. m.	.914	1.55	2.0		21, a. m.	2.852	1.82	2.4								
31, a. m.	.919	.74	1.0	16, a. m.	1.56	1.3		22, a. m.	2.906	3.45	5.0	23, a. m.	2.906	1.89	.9	1, a. m.	2.96	5.5	
June:				17, a. m.	1.904	4.23	6.2	23, a. m.	2.887	3.20	4.3	24, a. m.	1.914	3.22	3.8	21, p. m.	2.24	3.3	
1, a. m.	.907	.73	1.5	18, a. m.	.901	2.97	3.8	24, a. m.	2.910	2.86	2.3	22, a. m.	2.909	2.91	2.2	22, a. m.	.880	1.96	3.4
2, a. m.	.93	3.2	19, a. m.	1.922	1.04	1.1		25, a. m.	2.917	2.48	1.1	23, a. m.	2.910	3.03	3.4	23, a. m.	.894	1.86	2.7
3, a. m.	1.63	3.2	20, a. m.	.918	1.16	1.4		26, a. m.	.909	2.53	6.4	24, a. m.	2.882	3.45	6.0	24, a. m.	.914	2.03	2.4
4, a. m.	1.21	3.6	21, a. m.	.918	1.10	1.8		27, a. m.	2.04	2.5		25, a. m.	2.911	2.73	2.1	25, a. m.	.912	1.55	2.1
5, a. m.	.909	1.54	3.0	22, p. m.	1.23	1.4		28, a. m.	2.61	7.0		26, a. m.	2.909	1.41	2.0	27, a. m.	.908	1.65	.9
7, p. m.	2.28	4.0	23, a. m.	1.908	1.70	1.6		29, a. m.	2.06	3.0		28, a. m.	2.930	1.29	1.2	28, a. m.	.903	1.27	1.2
8, a. m.	.908	2.01	6.2	24, a. m.	1.912	1.53	1.2	30, a. m.	1.910	2.83	2.5	29, a. m.	2.917	1.37	1.5	30, a. m.	.855	4.18	3.7
9, a. m.	.914	2.71	7.0	25, a. m.	1.68	2.5		31, a. m.	2.906	2.34	3.0	30, a. m.	2.910	3.05	5.8				
10, a. m.	.913	2.51	3.8	26, p. m.	1.33	2.5		January:				31, p. m.	2.905	2.87	6.6	September:			
11, a. m.	.913	2.09	5.3	27, p. m.	1.855	1.50	3.9	1, a. m.	.916	1.99	1.1	10, a. m.	2.905	3.45	5.0	1, a. m.	2.96	5.5	
12, a. m.	3.10	5.8	28, a. m.	.915	1.95	1.7		2, a. m.	.914	1.53	.8	11, a. m.	2.905	1.89	.9	2, a. m.	.910	1.95	4.2
17, a. m.	.914	4.31	8.1	29, a. m.	1.923	1.92	2.2	3, a. m.	2.917	1.72	.8	12, a. m.	2.906	1.89	.9	3, a. m.	.875	4.89	8.7
18, a. m.	5.38	7.3	30, a. m.	.916	1.11	1.5		4, a. m.	2.914	2.12	1.2	13, a. m.	.913	1.24	.5	4, a. m.	.902	2.25	5.1
19, a. m.	.910	2.09	2.5	October:				5, a. m.	2.913	2.76	2.1	14, a. m.	2.03	4.1		5, a. m.	.914	2.25	5.1
20, a. m.	.909	.77	1.3	1, a. m.	1.927	1.48	1.5	6, a. m.	2.906	3.47	4.6	15, a. m.	2.912	2.78	5.1	6, a. m.	.915	2.65	2.9
21, a. m.	.92	.6	2, a. m.		1.17	2.3		7, a. m.	2.892	4.14	6.1	16, a. m.	2.904	2.56	1.7	7, a. m.	.916	1.85	1.2
22, a. m.	.931	.98	1.0	3, p. m.				8, a. m.	2.57	6.2		17, a. m.	2.917	1.23	1.0	8, a. m.	.902	2.65	2.9
23, a. m.	.914	1.34	2.9	4, a. m.				9, a. m.	2.914	2.12	1.2	18, a. m.	2.74	1.2		9, a. m.	.910	1.85	1.2
24, a. m.	1.67	1.2	5, a. m.	1.902	1.57	1.3		10, a. m.	2.909	3.34	4.6	19, a. m.	2.914	1.45	1.6	10, a. m.	.900	1.36	.7
25, a. m.	.901	2.01	2.0	6, a. m.	1.923	1.41	1.7	11, a. m.	2.900	2.98	5.4	20, a. m.	2.920	1.10	1.5	11, a. m.	.914	1.42	3.0
26, a. m.	.925	.83	1.4	7, a. m.	1.920	1.74	1.8	12, a. m.	2.896	3.28	5.3	21, a. m.	2.917	1.39	1.1	11, a. m.	.913	3.20	3.1
27, a. m.	.922	.86	7	8, a. m.	1.914	4.62	1.7	13, a. m.	2.902	4.03	6.5	22, a. m.	2.922	1.50	1.0	12, a. m.	.910	2.56	1.8
28, a. m.	.918	.82	1.2	9, a. m.	2.00	2.0		14, a. m.	2.878	3.69	6.2	23, a. m.	2.917	1.28	.9	13, a. m.	.916	.90	.4
29, a. m.	.920	.77	1.4	10, p. m.				15, a. m.	2.872	4.64	8.1	24, a. m.	2.914	2.4		14, a. m.	.927	.87	.5
30, a. m.	.62	.3	10, a. m.	1.915	2.36	2.6		16, a. m.	2.875	5.14	9.9	25, a. m.	2.915	2.23		15, a. m.	.922	.73	.5
July:				11, a. m.	1.910	1.52	2.6	17, a. m.	2.879	5.29	12.3	18, a. m.	2.916	2.25		16, a. m.	.923	1.95	4.2
1, a. m.	.91	.7	12, a. m.	.914	1.61	.8		18, a. m.	2.879	5.29	12.3	19, a. m.	2.916	2.25		17, a. m.	.923	1.95	4.2
2, a. m.	.78	.4	13, a. m.	.923	1.37	.8		19, a. m.	2.874	3.92	12.5	20, a. m.	2.916	1.35		18, a. m.	.923	1.95	4.2
3, a. m.	.70	.6	14, a. m.	.895	2.35	2.4		20, a. m.	2.874	4.07	9.9	21, a. m.	2.916	1.00		19, a. m.	.923	1.21	.6
4, a. m.	.32	.7	15, a. m.		2.20	1.8		21, a. m.	2.889	4.44	9.9	22, a. m.	2.916	.99		20, a. m.	.916	1.27	.6
5, a. m.	.68	.8	16, p. m.		2.14	2.8		22, a. m.	2.889	3.86	8.2	23, a. m.	2.917	2.32		19, a. m.	.924	2.09	2.3
6, a. m.	.918	.63	17, a. m.	1.887	2.66	4.9		23, a. m.	2.889	3.04	3.7	24, a. m.	2.918	2.17		18, a. m.	.924	3.46	8.4
7, a. m.	.927	.44	19, a. m.		2.38	4.0		24, a. m.	2.892	5.94	9.8	25, a. m.	2.918	2.04		17, a. m.	.924	3.76	6.2
8, a. m.	1.32	2.0	20, a. m.	1.913	1.88	1.8		25, a. m.	2.870	6.3	6.3	26, a. m.	2.918	2.04		16, a. m.	.927	4.4	4.4
10, a. m.	1.22	2.0	21, a. m.	1.912	1.87	1.6		26, a. m.	2.885	6.80	5.8	27, a. m.</td							

MONTEZUMA PYRHELIOMETRY

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TABLE 2.—Apparent atmospheric transmission coefficient *a*, water vapor pressure, *e*, and precipitable water, *p. w.*, at Montezuma, Chile, on days when pyrhelemetric readings were obtained, 1920–1926—Continued

Date	<i>a</i>	<i>e</i>	<i>p. w.</i>	Date	<i>a</i>	<i>e</i>	<i>p. w.</i>	Date	<i>a</i>	<i>e</i>	<i>p. w.</i>	Date	<i>a</i>	<i>e</i>	<i>p. w.</i>	Date	<i>a</i>	<i>e</i>	<i>p. w.</i>	
1924				1925				1925				1925				1926				
November—				March—				June—Con.				September—				January—				
Continued		<i>mm.</i>	<i>mm.</i>	Continued		<i>mm.</i>	<i>mm.</i>									Continued		<i>mm.</i>	<i>mm.</i>	
13, a. m. 2, 877	2.72	2.9		1, 903	6.05	12.0		14, a. m. 0, 919	2.37	2.3		22, a. m. .912	2.55	3.9		7, a. m. 2, 896	3.47	4.9		
14, a. m. 2, 26	1.2			6, a. m. 0, 894	7.90	13.1		15, a. m. .920	2.17	3.2		23, a. m. .913	2.2	8, a. m. 2, 93	3.9					
15, a. m. 20, 911	1.97	1.1		8, a. m. 7, 60	17.4			16, a. m. .914	2.76	2.5		24, a. m. .913	2.51	2.2		9, a. m. 3, 03	4.4			
16, a. m. 2, 896	2.29	1.5		9, a. m. 7, 17	12.2			17, a. m. .915	1.91	2.5		25, a. m. .927	1.95	2.5		11, a. m. .907	3.39	5.2		
18, a. m. 3.00	3.1			10, a. m. 5.08	9.2			18, a. m. .913	2.79	3.0		26, a. m. .918	1.83	2.1		12, a. m. 2, 900	4.04	6.3		
19, a. m. 3.58	4.2			11, a. m. .906	5.73	10.3		19, a. m. .922	1.92	1.3		27, a. m. .907	3.61	5.2		13, a. m. 2, 878	5.07	6.0		
20, a. m. .903	2.68	3.3		12, a. m. .896	5.94	12.5		21, a. m. .906	3.57	4.1		28, a. m. 1, 904	3.46	4.3		14, a. m. 3.94	4.3			
21, a. m. 2.45	1.6			13, a. m. .896	6.44	12.4		22, a. m. .913	3.22	2.8		29, a. m. .914	1.55	2.4		15, a. m. 3.80	3.2			
22, a. m. .919	2.74	1.5		14, a. m. .897	6.00	10.1		24, a. m. .914	1.23	1.0		30, a. m. .916	1.64	2.1		18, a. m. 1, 895	4.05	2.6		
23, a. m. 2.65	1.7			15, a. m. .899	5.22	11.0		25, a. m. .919	1.15	1.3		October:				20, a. m. 2, 900	4.04	6.3		
24, a. m. 2.96	1.3			16, a. m. .902	5.34	8.7		26, a. m. .923	1.05	.9		1, a. m. 1, 922	1.52	1.4		21, a. m. 5.29	7.1			
27, a. m. .912	2.07	.8		17, a. m. .894	5.92	9.9		27, a. m. .919	1.01	1.1		2, a. m. 1, 902	1.75	2.1		23, a. m. 5.28	7.3			
28, a. m. .903	2.39	.8		18, a. m. .893	5.94	13.7		28, a. m. 1, 900	5.33	1.3		3, a. m. 2, 873	2.36	6.6		24, a. m. 5.09	9.0			
30, a. m. .903	2.82	1.8		20, p. m. 7, 52	11.9			29, a. m. .921	1.17	2.2		4, a. m. 1, 865	1.65	1.8		25, a. m. 6.22	16.8			
December:				21, p. m. 5.78	11.2			30, a. m. .914	1.62	2.0		5, a. m. .911	.81	.6		26, a. m. 5.53	13.7			
				22, a. m. 7.31	9.3			6, a. m. .897	1.08	.7		7, a. m. 2, 877	.7			27, a. m. 6.68	6.5			
1, a. m. 2.28	1.4			23, a. m. .903	6.52	9.0		1, a. m. .914	1.63	2.9		8, a. m. .916	.99	1.0		31, a. m. 6.62	5.6			
2, a. m. .916	2.13	1.7		24, a. m. .907	4.79	9.0		2, a. m. .914	1.58	2.7		9, a. m. 1, 903	2.23	3.5		1, a. m. 6.14	7.8			
3, a. m. 2.06	1.0			25, a. m. .903	5.09	9.8		3, a. m. .912	1.83	4.4		10, a. m. 1, 900	3.22	4.3		2, a. m. 5.48	18.8			
4, a. m. 1.90	1.5			26, a. m. .909	4.42	9.8		4, a. m. .918	2.18	3.5		12, a. m. .897	2.28	6.1		7, a. m. 1, 871	5.68	15.4		
5, a. m. 2.76	.9			27, a. m. .904	5.09	10.2		5, a. m. .924	1.4			13, a. m. .905	2.34	2.5		8, a. m. 1, 880	5.82	13.6		
6, a. m. .901	3.25	2.7		28, a. m. .900	6.18	11.8		6, a. m. .68	2.0			14, a. m. .903	3.06	1.5		10, a. m. 7.88	---			
9, p. m. 5.36	13.0			29, a. m. .887	6.99	13.1		7, p. m. .899	3.5			15, p. m. .923	2.83	3.7		11, a. m. 8.00	20.5			
10, a. m. .877	4.62	10.0		30, a. m. .895	5.98	9.3		8, a. m. 1, 910	2.63	3.0		16, a. m. .911	2.10	2.6		12, p. m. 7.38	15.0			
11, a. m. .908	3.08	4.8		31, a. m. .898	5.91	9.5		9, a. m. .915	1.75	4.4		17, a. m. .920	2.06	2.0		14, a. m. 6.60	5.4			
12, a. m. 4.28	5.7			April:				10, a. m. .918	2.92	4.8		18, a. m. .915	2.21	2.7		15, a. m. 6.60	5.4			
13, a. m. 4.19	7.6			1, a. m. .908	5.68	7.2		11, a. m. .914	2.92	4.8		19, a. m. .918	3.03	6.3		18, a. m. 6.68	10.1			
15, a. m. 3.88	7.4			2, a. m. .909	5.26	7.6		12, a. m. .914	1.87	3.8		20, a. m. 1, 912	2.21	2.7		19, a. m. 7.38	15.0			
17, a. m. 3.37				3, a. m. .905	5.01	6.2		13, a. m. .914	1.39	2.5		21, a. m. .896	2.48	2.2		20, a. m. 6.60	5.4			
18, a. m. .909	3.24	3.9		4, a. m. .899	4.45	8.6		14, a. m. .915	1.58	3.9		22, a. m. 1, 894	2.07	1.6		18, a. m. 6.63	5.2			
19, a. m. .909	2.88	3.4		5, a. m. .903	4.04	6.3		15, a. m. .915	2.18	4.6		24, a. m. .904	1.64	1.1		19, a. m. 2, 887	4.45	6.0		
21, a. m. .903	2.46	4.0		6, a. m. .905	3.01	4.8		16, a. m. .915	2.75	4.2		26, a. m. .896	1.33	2.1		20, a. m. .890	4.71	9.2		
22, a. m. .902	2.81	5.3		7, a. m. .915	3.65	4.4		17, a. m. .915	2.70	4.1		27, a. m. .873	1.97	3.7		21, a. m. 5.55	14.4			
23, a. m. .898	3.23	9.1		8, a. m. .897	5.22	6.5		18, a. m. .901	2.66	3.8		28, a. m. 1, 867	2.08	2.5		25, a. m. 2, 895	5.21	13.2		
24, a. m. .883	3.31	9.2		9, a. m. .911	3.14	6.5		19, a. m. .913	1.52	1.0		30, a. m. .910	2.29	3.3		March:				
25, a. m. .907	2.88	4.0		10, a. m. .917	5.55	3.1		20, a. m. .914	1.39	1.2		31, a. m. 1, 912	2.31	4.0		1, a. m. .890	6.17	11.2		
26, a. m. .906	3.44	4.7		11, a. m. .920	6.10	1.0		21, a. m. .915	1.29	2.2		2, a. m. .896	6.67	6.8		3, a. m. 2, 865	7.78	15.1		
27, a. m. .869	5.55	11.7		12, a. m. .911	5.46	2.8		22, a. m. .914	1.60	2.0		3, a. m. 6, a. m. 2, 887	7.32	10.1		4, a. m. .895	5.77	7.4		
28, a. m. .877	2.24	0.2		13, a. m. .902	2.85	3.3		23, a. m. .914	1.22	1.6		5, a. m. .905	2.41	5.6		6, a. m. .890	7.44	12.2		
29, a. m. .803	8.0			14, a. m. .907	3.48	4.8		24, a. m. .913	1.34	4.2		7, a. m. .907	2.82	9.1		7, a. m. 2, 882	7.36	9.1		
30, a. m. .857	14.0			15, a. m. .905	2.33	5.7		25, a. m. .907	1.73	4.3		8, a. m. .912	3.03	4.0		8, a. m. 1, 906	5.77	10.1		
31, a. m. 1, 889	4.37	13.6		16, a. m. .901	3.01	6.0		26, a. m. .910	2.09	4.4		9, a. m. .914	2.49	4.4		9, a. m. 2, 870	7.80	20.0		
January:				17, a. m. .905	3.91	4.2		27, a. m. .907	1.73	4.3		10, a. m. .909	1.97	6.1		10, a. m. 2, 870	7.48	10.3		
1, a. m. 4.52	13.6			18, a. m. .903	3.20	4.2		19, a. m. .911	2.19	4.9		11, a. m. .907	2.19	7.0		11, a. m. 2, 877	7.22	11.2		
2, a. m. 3.37	14.0			20, a. m. .903	2.61	3.0		20, a. m. .912	1.91	1.0		12, a. m. .907	2.34	3.0		12, a. m. .904	5.77	6.7		
3, a. m. .888	3.66	11.6		21, a. m. .905	3.91	4.7		21, a. m. .909	2.67	.8		13, a. m. .904	3.33	5.8		13, a. m. 8.34	8.2			
4, a. m. 3.84	12.0			22, a. m. .906	4.46	12.4		22, a. m. .904	3.67	4.6		14, a. m. .909	2.16	5.9		14, a. m. 8.55	16.2			
5, a. m. .878	5.06	16.2		23, a. m. .904	5.25	14.0		23, a. m. .905	3.48	4.2		15, a. m. .908	2.88	5.3		15, a. m. 2, 870	7.80	20.0		
6, a. m. 5.07	16.0			24, a. m. .904	4.05	7.6		24, a. m. .902	1.81	1.0		16, a. m. .910	3.92	4.5		16, a. m. 2, 870	7.48	10.3		
7, p. m. 5.65	10.9			25, a. m. .904	3.54	4.3		25, a. m. .904	.95	.7		17, a. m. .907	3.27	4.0		17, a. m. 2, 877	7.32	11.2		
8, a. m. .896	3.81	9.0		26, a. m. .911	3.15	2.6		26, a. m. .913	1.19	.6		18, a. m. .902	3.24	6.0		18, a. m. .904	5.00	6.7		
9, a. m. .894	4.20	6.6		27, a. m. .911	1.54	2.6		27, a. m. .918	1.23	1.4		19, a. m. .905	3.83	7.7		19, a. m. .897	5.38	8.7		
10, a. m. .883	4.36	5.7		28, a. m. .911	2.17	2.0		28, a. m. .917	.91	.9		20, a. m. .904	3.03	5.1		20, a. m. 2, 914	4.76	5.5		
11, a. m. .902	3.79	5.4		29, a. m. .916	1.86	1.2														