reduced the method to practice with results which, while not ideal, already show sufficient prevision to be worth money to men of affairs. One wishes that financial means were available to push Mr. Clayton's line of investigations, which seems to promise much.

(4) Professor Marvin clothes his statistical methods with powers which I am far from conceding. Having shown by his diagram (Figure 6) that the "probable" variation or measure of average scatter of the solar constant in the year 1919 does not exceed 0.6 per cent., he proposes to determine whether that part of it due to real solar changes may not be shown to be still less. Discrimination depends on the consideration that the relative scatter of pyrheliometer values at different air-masses is differently affected by solar and atmospheric causes.

It is well recognized: (a) On many of the best days, changes of transparency materially affect the comparability of pyrheliometer values. (b) This source of error is eliminated in our "short method," so that we observed with good results on many days when the "long method" was inapplicable. (c) Hence, many of the days used by Professor Marvin which were only fit for short methods are not to be regarded even as "best days." (d) Atmospheric dustiness and humidity alter greatly during a year and produce entirely different kinds of effects on different spectral rays. (e) On these and other accounts, Bouguer's formula is inapplicable to pyrheliometry in general and more particularly to some of that used by Marvin. (f) The basic assumption of Professor Marvin (p. 290, lines 30 to 33) nevertheless depends on the applicability of Bouguer's formula thereto. How wrong it is may be seen by comparing, for example, January 6 and January 19, 1919. They show a difference at air-mass unity of 12 per cent. and only 21 per cent. at air-mass four. According to Marvin's assumption, these numbers should be as 1 to 4. (g) Formulae relating to the precision of measurements depend on treating errors as differentials. How can one justify treating quantities like 12 or 21 per cent., or even the halves of them, as differentials?

Notwithstanding these weaknesses and others, Professor Marvin would have us believe that his statistical discussions of pages 290 to 293 have eliminated atmospheric effects from fluctuations ranging 10 to 20 per cent. so thoroughly as to warrant derogatory inferences as to the reality of a solar variation whose average is known to be not exceeding the order of 0.6 per cent. during the period considered. Statistical methods are useful, but they can not work miracles. If one starts with figures he must end with figures of some sort, but their significance may be zero.

(5) Professor Kimball, after tricking the eye with circles, admits apparent day-to-day correlations between Montezuma and Harqua Hala, but regards them as so small as to be meaningless, and like Professor Marvin attributes them to irresponsible fudging of Harqua Hala results. He eliminates the important big correlation of a secular character in 1922 by his grouping. If it be admitted as real, it, at least, might seem of interest.

(6) No one is more conscious than myself that the solar constant data are still imperfect. We are working with all our little force, not only to make new and better determinations, but to rectify as far as possible those published in preliminary fashion hitherto. Old values, as I have elsewhere remarked, are poor, newer ones better, and future ones we hope will be better still. Successive improvements show on Professor Marvin's diagrams. I do not believe, however, as he does, that the total elimination, if it were possible, of the present existing errors will remove the day-to-day variations of Montezuma results to a considerable extent. We are dissatisfied with summer conditions at Harqua Hala, and have just removed to a new station on Table Mountain, California, 2,000 feet higher, and with much better sky conditions. We are making great improvements in procedure at both stations. These should speak for themselves. In the meantime, I can not but wonder whether if Professor Marvin had used as much pains to search for useful correlations between our published values and weather conditions as he has used to discredit our results of 1905 to 1920, we might not have been further along.

C. G. ABBOT,
Assistant Secretary
SMITHSONIAN INSTITUTION

THE KANSAS CITY MEETING OF THE AMERICAN ASSOCIATION

ARRANGEMENTS for the approaching Kansas City meeting (December 28 to January 2 next) are well advanced. It will be a great success.

The usual reduced railway rates have been secured from the regional passenger associations. The certificate plan will again apply for the United States and for eastern Canada. Persons going to the meeting, whether members of the association or not, should purchase one-way tickets, securing a certificate for the American Association for the Advancement of Science and Associated Societies. (A receipt is not what is needed.) After validation at the meeting the certificate will entitle the bearer to purchase a return ticket at half the regular fare.

The Hotel Muehlebach (12th St. and Baltimore Ave.) is to be the general headquarters for the meet-

A LIST OF KANSAS CITY HOTELS

Name of Hotel	Address	Number of Rooms	Prices, without Bath		Prices, with Bath	
			Single	Double	Single	Double
Baltimore	12th & Baltimore Ave	500	$2.50 to $3.50	$4.00 to $5.00	$3.00 to $12.00	$5.00 to $15.00
Bray	1114 Baltimore	100	1.50 to 2.00	2.50 to 3.00	2.00 to 3.00	3.00 to 5.00
Central	12th & Central	100	1.50	2.50	2.00 to 2.50	3.00 to 3.50
Coates House	10th & Broadway	250	1.25 to 3.00	2.00 to 4.00	2.50 to 5.00	4.00 to 7.00
Cordova	515 West 12th	100	1.50 to 2.00	2.00 to 2.50	2.00 to 3.00	3.00 to 4.50
Densmore	912 Locust	200	1.00 to 1.50	2.00 to 2.50	2.00 to 3.00	3.00 to 4.00
Dixon	12th & Baltimore Ave.	250	1.50 to 2.00	2.50 to 3.00	2.50 to 3.00	4.00 to 5.00
Glennon	106 West 12th	100	2.00	3.50 to 4.00	2.50 to 4.00	4.00 to 6.00
K. C. A. C. (No Ladies)	11th & Baltimore	350	All Rooms with Bath		3.50 to 5.00	4.50 to 7.50
Keystone	12th & Broadway	100	1.25 to 1.50	1.75 to 2.00	2.00 to 2.50	3.00 to 3.50
Kupper	11th & McGee	200	1.50 to 3.00	3.00 to 4.00	3.00 to 5.00	4.00 to 8.00
Lucerne	Linwood & Harrison	100	All Rooms with Bath		2.50 to 3.00	3.00 to 5.50
Mercer	12th & McGee	100	1.50 to 2.50	2.50 to 3.50	2.50 to 5.00	3.50 to 6.00
Muehlebach	12th & Baltimore Ave.	500	3.00 to 3.50	4.50 to 5.00	3.50 to 9.00	5.00 to 12.00
New Oxford	1222 Locust	100	1.25	2.00	1.50 to 1.75	2.25 to 2.50
Rasbach	12th & Wyandotte	100	1.50 to 3.00	2.50 to 4.00	2.00 to 4.00	3.00 to 6.00
Savoy	9th & Central	250	1.50 to 2.50	2.50 to 3.50	2.00 to 4.00	3.00 to 6.00
Sexton	15 West 12th	150	1.50 to 2.50	2.50 to 3.50	2.50 to 4.00	4.00 to 6.00
Snyderhof	917 Oak	150	All Rooms with Bath		2.50 to 3.50	3.50 to 5.00
Stats	12th & Wyandotte	250	All Rooms with Bath		2.00 to 3.50	3.50 to 7.50
Tanner	917 Locust	100	1.25 to 1.50	2.00 to 2.50	1.50 to 2.00	3.00 to 4.00
Washington	1201 Washington	100	1.50 to 2.00	2.00 to 3.00	2.00 to 3.00	3.00 to 5.00
Westgate	9th & Main	250	All Rooms with Bath		1.50 to 3.50	3.00 to 5.00

ing. Numerous other hotels are to be available and some of the societies meeting with the association at Kansas City will have other headquarters. A list of Kansas City hotels follows, with prices.

Those who plan to attend the meeting should arrange for rooms as soon as possible, addressing the hotel managements.

The lists of members of the local committee for this meeting and the local representatives of the several sections have been published in SCIENCE for July 17, 1925.

The preliminary announcement of the meeting will this year be published in SCIENCE for November 27, instead of as a separate pamphlet. It will be sent to all members.

Those who are to present papers or addresses at the Kansas City meeting are asked to prepare two copies of their papers for the publicity service. One copy is to be sent to Science Service, Washington, D. C., and the other is to be sent to Mr. Lyle Stephenson, care of Mr. W. M. Symon, Chamber of Commerce, Kansas City, Mo. It is also asked that each copy be accompanied by an abstract or summary of the paper, worded as far as possible so that it may be useful to the daily press without rewriting. It needs to be emphasized that the press wishes to report, as well as may be, just what is said rather than an outline of the subject discussed. In recent years many members have sent in such outlines instead of abstracts of their remarks, with the result that much valuable material failed to receive proper publicity. It should be noted that, although the full paper and its abstract ought to be in the hands of the publicity editors weeks before the meeting, yet nothing will be given out till the day on which the paper or address is actually to be presented. *For the good of our association and of American science, authors of papers and addresses are asked and urged to send their material in early, just as soon as possible, and to send like copies to both Washington and Kansas City.* This applies to all who are to take part in the programs of the meeting, whether they are members of the association or not.

As the society and section programs come to the permanent secretary, each person whose name occurs in any program will receive a request asking for the manuscripts mentioned above, together with blue sheets for the abstracts. But it is specially asked that manuscripts and abstracts be prepared and sent to Washington and Kansas City just as soon as that can be done, without awaiting the special request. The program manuscripts from the secretaries are often necessarily very late in arriving at the Washington office and the special requests are consequently often greatly delayed in such cases.

B. E. LIVINGSTON,
Permanent Secretary