Being actively in charge of the work of the American Meteor Society, most of the observations of meteors by amateurs in America go through my hands, and therefore I am in better position than most others to judge of its amount and value. Due to official connections with the International Astronomical Union, I am kept more or less informed of similar work done by amateurs abroad. This being the case, I can affirm that were it not for the work of the amateur, meteoric astronomy on the observational side would come almost to a standstill. This is especially true of America. As to the newspaper publicity, it is quite true that the writer did not give out personal articles: he does not know about the one "from Cambridge." But he was certainly responsible for getting Science Service to try to arouse the interest of amateurs. If the articles grew somewhat as various reporters "edited" them to suit home consumption, as they saw it, no great harm was done, as is proved by the fruits of the campaign.

To speak only of the Leonids, thanks very largely to this publicity, to date good reports have come (and they are still coming, as one arrived to-day) from New Zealand, Alabama, California, Kansas, Oklahoma, Pennsylvania, Texas, and Wisconsin, and poorer ones from other states. Several observers have also joined the A. M. S. who never knew of it before. Thanks to the aid of the U. S. Weather Bureau and the Hydrographic Office, U. S. N., also through publicity, Leonid fireballs have been reported from several ships at sea.

Briefly, the writer will eventually be able to publish from this data: Proof that the Leonid stream is wider than before thought as undoubted Leonids were seen from November 10 to November 19 inclusive; a good idea of the hourly rate and consequent density of the stream; good radiants on several dates; heights of a number of Leonids from duplicate observations in Texas; and the obvious result that this year's shower furnished unexpected numbers of fine fireballs and was twice as good as we expected. This increases our hopes for great showers between 1932 and 1934. But careful observations should be made from many stations every intervening year to give the best possible idea of what to prepare for as the time of maximum draws near. The Perseids also gave a good shower in August, as is usual, but lack of space forbids further mention of them here.

The writer therefore affirms that the results of the newspaper campaign, even with its obvious faults, more than justify it. As to people seeing no Leonids this November, there were just two reasons and no more: either they were not out in the cold observing for them or they did not have a clear sky. For many Leonids, and some very beautiful ones, certainly were seen from all stations where a proper watch was kept and where the sky was favorable.

FLOWER OBSERVATORY, CHAS. P. OLIVIER
UNIVERSITY OF PENNSYLVANIA,
DECEMBER 18, 1928

TERMINOLOGY OF "VITAMIN B"

THOSE who make a study of nutrition have no doubt been interested and pleased to see that from the British side an attempt has been made[1] to reach unanimity in the much-needed revision of the terminology of the so-called "vitamin B." It has been suggested that we shall continue to use the letter B to designate the "complex," B_1 for the antineuritic, less heat-stable factor, and B_2 for the more heat-stable factor—the vitamin that ensures a normal increase of bodily weight, stimulates appetite and has probably still other functions.

It stands to reason that the letter B does not suffice now that it has been proved that there are two, probably more, factors which differ considerably in physiological action and in stability.

Meanwhile in the United States objections have been raised to the British proposal which make it appear doubtful that this terminology will be accepted. It is not considered logical to go on using the old letter B—even when accompanied by a figure for nearer indication—for substances which are only in so far related as to occur together in certain vegetable products, for instance in brewers' yeast, and can be liberated from them by the same means of extraction.

Unfortunately no agreement has been reached among the American workers themselves. Sherman, to avoid any suggestion of connection, wants to do away with the letter B, and in accordance with the custom to indicate the vitamins alphabetically in the order of their discovery, proposes the letters F and G—F to designate the less heat-stable factor and G to identify the more heat-stable, growth-promoting one.

McCollum, who with Davis some years ago chose the letter B to refer to the antineuritic factor, wishes to keep it for this, and suggests the letter F—or G—for the more heat-stable factor. Steenbock concurs with McCollum's proposal, but Mitchell prefers new letters, namely, F and G.

It does not seem likely that unanimity will be reached unless the two sides will give and take, and so serve the interests of the cause. Therefore, we suggest a compromise here, namely, to designate the antineuritic, less heat-stable vitamin, which Funk was the first to examine chemically and for which McCollum and Davis have chosen the letter B, by F(B), and the vitamin stimulating appetite and growth by G(B). The advantage of this nomenclature is that

[1] SCIENCE, 68: 206. August 31, 1928.

it meets everybody's wishes and is not entirely arbitrary.

It would be better to retain the letter B for the present, till those who are not workers in this field of research have become used to the single F and G, for the letter B stands for a certain conception which, untenable though it may have proved to be, will but slowly disappear from popular literature to make place for a more correct term. The history of anti-rachitic vitamin is there to remind us that new conceptions take time to penetrate, even now and then one finds it identified with the vitamin A, and that in circles where one would not expect this. It is to be feared that the uninitiated, when suddenly confronted with the letters F and G, will not know to what they refer. Of course the British proposers, who only want to prevent confusion, will not mind whether this aim is reached by means of letters or figures. Figures, with their quantitative character, would seem to be less desirable than letters to distinguish qualitatively different matter. It would be quite possible for any one not to know, for the moment, whether 1 or 2 referred to the antineuritic vitamin, a doubt which will not be so likely to arise concerning letters, especially not if, as in this case, they offer a mnemo-technical advantage, F being the initial of the name of the man who first tried (and at what pains!) to detect the chemical nature of the anti-neuritic vitamin, while G reminds of Goldberger, who found the P(ellagra) P(reventive) vitamin, which there is reason to suppose is identical with the more heat-stable, growth-promoting component. If Funk could have made up his mind to agree to the designation of the antirachitic vitamin by the letter D, as the majority of workers do, instead of by the letter E, the latter having already been taken by Evans to indicate the anti-sterility vitamin, a provisional agreement would have been reached and in the realm of the vitamins it would be *tout pour le mieux dans le meilleur des mondes.*

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ULTRA-VIOLET EXHIBITS

I NOTE in SCIENCE for December 7, 1928, a very readable account of an operating ultra-violet exhibit in the Natural Science Museum in London.

I am wondering if a great number of readers of SCIENCE might not get the idea from the article that such a demonstration as there depicted is new, or, even more, that it is the first time such a demonstration has been arranged in a museum. I believe it is quite generally known that such exhibits in ultra-violet have been shown in laboratories, lectures and the like in this country hundreds of times, and that many thousands of people have witnessed them. I particularly wish to call attention to the fact that this museum in New York has an ultra-violet exhibit whereby the visitor may see the fluorescence and phosphorescence of a variety of materials by pressing a button and thereby illuminating the stage with ultra-violet.

The Museums of the Peaceful Arts has now had this visitor-operated exhibit working for a period of about nine months. The museum makes no claim that there is any new science presented by this exhibit, but it is found to be very interesting to all classes of visitors and is typical of a large number of exhibits in the institution. It shows not only the different fluorescent effects of various materials but also the effect upon a statue from the Bureau of Standards, revealing it in dress under ordinary illumination and with its dress disappearing under ultra-violet light.

I might mention that the Buffalo Museum of Science has recently set up a similar very interesting exhibit, possibly antedating the one described in the London *Times*. Also the Newark Museum of Science and the Philadelphia Museum are planning similar educational exhibits.

F. C. BROWN

SPECIAL ARTICLES

A PRELIMINARY REPORT UPON THE UTILIZATION OF THE SPECTROPHOTOMETER IN THE DETERMINATION OF MINUTE AMOUNTS OF ALUMINUM[1]

THE ready employment of spectrophotometric data for the successful quantitative determination of dyestuffs used as food colors[2] as well as for the micro-analytical determination of boron[3] has suggested the employment of the spectrophotometer as an aid for the accurate determination of aluminum.

The introduction of aurine tri-carboxylic acid as a qualitative test for aluminum by Hammett and Sottery[4] and its progressive employment as a quantitative reagent by Yoe and Hill[5] have led to its adoption by physiological and agricultural chemists.[6] The test consists in the formation of a red compound or absorp-

[1] Contribution from the Utensil Fellowship, Mellon Institute of Industrial Research, University of Pittsburgh.

[2] Mathewson, *Jour. Assoc. Off. Agric. Chem.*, 2: 164 (1916). Bureau of Standards Technical Paper No. 440.

[3] Holmes, *Jour. Assoc. Off. Agric. Chem.*, 10: 522 (1927).

[4] Hammett and Sottery, *Jour. Amer. Chem. Soc.*, 47: 142 (1925).

[5] Yoe and Hill, *Jour. Amer. Chem. Soc.*, 49: 2395 (1927).

[6] Myers et al, *Jour. Biol. Chem.*, 58: 598 (1928).