

to the University of Illinois to be professor of pomology and chief of the department there.

APPOINTMENTS have been made to the directing board of the Buenos Aires Medical School as follows: Drs. Castex, Tamini, Speroni, Acuna and Elizalde, by the professors; Drs. Ivanissevich and Usolenghi, by the students.

## DISCUSSION AND CORRESPONDENCE

### PHOTOGRAPHY OF SHADOW BANDS

As numerous inquiries and press notices have appeared concerning the photography of shadow bands at the eclipse of January 24, 1925, some statement as to the method employed at Middletown by the members of our party may be of interest to readers of SCIENCE.

The success of the undertaking was due primarily to the special method and camera devised and provided by Professor A. E. Douglass, of the University of Arizona, at whose instigation this part of the program was carried out.

The camera consisted of a 13-inch concave mirror and film carrier with focal plane shutter so placed as to operate about six inches outside the focus. The mirror was directed to the sun and a series of exposures made on the out-of-focus image of the slender crescent for a few minutes before and immediately following totality. The method is identical to that used by Professor Douglass in the photography of artificial shadow bands as explained by him at the Washington meeting of the American Association, December, 1924, but so far as known has never before been used at any previous total eclipse.

The most satisfactory exposure was made about five seconds from totality. It shows the bands as atmospheric Schlieren sufficiently distinct for enlargement and reproduction. Measures of the photograph when reduced give for the distance between adjacent bands 2.5 inches, in close agreement with estimates from visual observations. The camera was set up and operated by Mr. D. W. Mann, mechanic at the Jefferson Physical Laboratory, to whose skill much credit is due.

It is of further interest to remark that in contrast to the conspicuous display of shadow bands at Middletown, Conn., Mr. R. F. Field, of the Department of Physics at Harvard, reported no shadow bands whatever visible in open country some twenty miles south of Providence, R. I. This emphasizes the local and atmospheric character of the phenomenon which so far as is known has eluded all attempts at photography until the last eclipse.

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## SMITHSONIAN WEATHER FORECASTS

IN SCIENCE for October 2, 1925, Dr. C. G. Abbot, acting secretary of the Smithsonian Institution, comments adversely concerning a recent review of Smithsonian Publications on "Forecasting Weather." Dr. Abbot says three papers were reviewed; but he is in error, for four papers were included and their titles and serial numbers given. He enters a disclaimer regarding long-range forecasts, adding that "no person connected in any way with the Smithsonian has ventured any such excessively long-range forecasts or knows of any method of making them." It was far from the reviewer's mind to discredit work done by Abbot and Clayton, and I am sorry if injustice has been done to these gentlemen through any text of mine. During the spring and summer, however, we received forecasts from a high official source in New York and were told and our informant so believed that these were forecasts of the weather for New York City, based upon Smithsonian work. Dr. Abbot has stated that for more than a year "definite forecasts of New York temperatures, three, four and five days in advance; average weekly temperature departures forecast two days before the beginning of each; and average monthly temperature departures forecasts two days before the beginning of each month" were made and forwarded daily to the Smithsonian Institution. Our mistake was natural.

His chief objection to the review, however, is that in work of this nature there should be no humor. In my opinion he is unduly sensitive and has taken certain pleasantries about the "unhappy lot of the forecaster" (the heading of the article to which he objects) as applicable to himself. It was not so meant. For example, in speaking of a state of mind bordering on what the Scotch call "feckless indecision" we mentioned that a peace-loving community had served up to them recently the following official forecast:

WEEK-END FORECAST FOR E. AND S. E. ENGLAND.—*Indications are now less definite for unsettled weather though they are not yet definitely favorable for settled fair weather.*

Now it was the people of London, not the citizens of Washington, who had to bear up under this infiction. Surely Dr. Abbot will permit us to see the humor of the situation.

There is an old, old story, which I may be forgiven for repeating here, of the New England farmer who returned from a visit to Boston and proudly showed his wife a barometer. "Well, what good is it,