society will be instrumental in effecting such extensions of meteorological applications, for it will bring together various groups. The signs indicate that commercial and industrial institutions will demand meteorologists for their staffs. Through the society the teachers of meteorology, now well represented in its membership, can be led to appreciate and to prepare for this rising demand for a widespread general knowledge of weather processes and for special training on the part of a few. The biggest problem before us is forecasting the weather. One present difficulty is to get away from empirical methods. This organization can do a great deal by farming out various projects among the fellows and members whether or not they may be in governmental meteorological services.

The scientific program comprised 15 papers, of which one was read in abstract and another by title only. The program follows, together with references to the MONTHLY WEATHER REVIEW, where the papers or abstracts of them will appear or have appeared:

Temperature scales and thermometer scales. E. W. Woolard. (This REVIEW, pp. 264–270.)
Shall we adopt a half-degree absolute centigrade scale instead of the Fahrenheit? Charles F. Marvin.
The physics of the aurora. W. J. Humphreys. (*Abstract* probably in June REVIEW.)
The auroras of March 22–25, 1920. Herbert Lyman. (Probably in June REVIEW.)
The most intense rainfall on record. B. C. Kadel. (This REVIEW, pp. 274–276.
New aerological apparatus. S. P. Fergusson. (Probably in June REVIEW.)
Temperatures versus pressures as determinants of winds aloft. W. R. Gregg. (This REVIEW, p. 263.)
Daily wind charts for stated levels. C. LeRoy Meisinger. (This REVIEW, pp. 251–263.)
Cloud base altitudes as shown by disappearance of balloons and kites. O. L. Lewis. (Probably July REVIEW.)
Cloud nomenclature. Charles F. Brooks. (Probably July REVIEW.)
Some meteorological observations of a bombing pilot in France. Thomas R. Reed. (April REVIEW, pp. 216–217.)
Project for local forecast studies. R. H. Weightman. (March REVIEW, pp. 154–155.)
Climatic conditions in a greenhouse as measured by plant growth. Earl S. Johnston. (*Abstract*, April REVIEW, pp. 215.)
Modifying factors in effective temperature. Andrew D. Hopkins (April REVIEW, pp. 214–215.)
Relation of rainfall to the grazing capacity of ranges. J. Warren Smith. (Probably June REVIEW.)

METEOROLOGICAL EXHIBIT BEFORE THE ROYAL SOCIETY.

A note in *Nature* (London), May 20, 1920, pages 373–376, tells of the various exhibits displayed upon the occasion of the Royal Society's Conversazione on May 12. The Meteorological Office contributed the following exhibit:

New instruments and diagrams: (1) Land aneroid and sea aneroid. (2) Barometer and micrometric adjustment. (3) Two similar synchronous charts and the weather of the following 15 days. (4) Normal weather on the Cairo to Cape route. (5) Charts of the average distribution of rainfall, cloudiness, and temperature over the Northern and Southern Hemispheres in January and July. (6) Map of the annual rainfall in the English Lake District. (7) Records of the magnetic disturbance of March 23–24, 1920, and photographs of aurora for height measurements. (8) Frequency of thunderstorms on the route between England and Australia and at selected stations in Africa and South America. (9) The flow of air over Kew Observatory, Richmond, during the last three years.

THE INTENSITY OF NOCTURNAL RADIATION AT HIGH ELEVATIONS.

By A. BOUTARIC.

[Abstracted from Comptes Rendus, Paris Acad., May 17, 1920, pp. 1195–1196.]

The author has shown in his previous work [1] that the intensity of notcurnal radiation, r, may be expressed as a function of the absolute temperature of a black radiating surface and the vapor pressure in its immediate vicinity, as follows:

$$r = \pi\sigma\, \theta_0^4\, F(f_0),$$

in which $\pi\sigma$ is a constant, depending upon the total of directions in which the surface is radiating; θ_0, the absolute temperature, and f_0, the vapor pressure.

Work which was conducted at the Pic du Midi (2,859 meters elevation) between August 11 and 24, 1919, when compared with the results obtained at Montpellier (practically sea-level) in 1913, 1914, and 1915, leads to the conclusion that the value of r is independent of the altitude when the conditions of temperature and vapor pressure are the same. This is shown in the following table:

TABLE 1.

Date.	Time.	t_0	f_0	r [1]	$F(f_0)$.	
					Pic du Midi.	Montpellier.
	h. m	°*C.*	*Mm.*			
Aug. 11	20 24	11.2	4.8	0.161	0.321	0.300
14	21 00	11.3	5.6	0.138	0.275	0.284
16	21 00	9.8	2.3	0.170	0.346	0.362
17	21 00	8.0	2.1	0.168	0.351	0.368
18	21 15	7.4	5.4	0.158	0.333	0.292
19	21 00	10.1	4.2	0.154	0.312	0.312
22	21 00	7.0	3.4	0.139	0.294	0.330
23	21 00	7.9	1.9	0.154	0.322	0.374
24	20 50	8.0	3.4	0.150	0.313	0.330

[1] Gm. cal./sq. cm./min.

—*C. L. M.*

THE INFLUENCE OF THE VARIATION OF THE BAROMETRIC PRESSURE ON THE MICROBIAL DROPLETS IN SUSPENSION IN THE ATMOSPHERE.

By A. TRILLAT.

[Abstracted from Comptes Rendus, Paris Academy, vol. 170, pp. 538–540, Mar. 1, 1920.]

The atmosphere, especially in the vicinity of inhabited regions, contains numerous microbe-bearing droplets projected into the air in the acts of speaking and breathing.

Laboratory experiments have shown that a sudden decrease in the air pressure accelerates the fall of such droplets, through the increase of their weight brought about by condensation upon them as a result of the cooling. A slow decrease of pressure produces but a limited effect. Other factors, such as the purity, relative humidity, etc., of the air also affect the result.

In the light of such experiments it is surmised that a rapid fall in the barometric pressure would precipitate the invisible microbial droplets in the atmosphere; at the same time such a depression would liberate gases from the soil which contribute to the vitality of the organisms; hence the effect of barometric fluctuations on the vitality of the germs in the atmosphere, their concentration in the lower strata, and their precipitation upon the soil may be an important factor in the variation of the bacteriological composition of the atmosphere.—*E. W. W.*

WIRELESS WEATHER REPORTS OF THE METEOROLOGICAL OFFICE.

[Reprinted from *Nature*, June 10, 1920, p. 465.]

In the *Meteorological Magazine* for May a notice is given of the circulation of forecasts by wireless telegraphy from collective weather reports for London and southeast England. Hourly reports of meteorological information prepared by the Forecast Service of the Meteorological

[1] Boutaric, A.: *Thèse*, Paris, 1918 (pages following 138.)