

Mexican data for January, 1901.

Stations.	Altitude.		Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
	Feet.	Inch.	Max.	Min.	Mean.			Wind.	Cloud.
Chihuahua	4,636	25.85	64.0	28.2	47.5	60	0.00	w.	w.
Leon (Guajuato)	5,934	24.84	76.5	37.0	56.8	58	0.03	nw.	sw.
Linares (Nuevo Leon)	1,186	28.81	56.0	37.4	60.6	78	1.88	s.	s.
Mazatlan	25	29.88	78.3	58.5	70.3	77	0.02	nw.	sw.
Mexico (Obs. Cent.)	7,472	28.09	78.9	36.7	55.6	54	.....	ne.	ne.
Morelia (Seminario)	6,401	.....	.....	.....	.....	.....	.....	.....	.....
Puebla (Col. Cat.)	7,112	23.42	75.2	37.9	57.2	59	.....	e.	ssw.
Saltillo (Col. S. Juan)	5,399	24.83	73.4	33.0	53.8	76	0.87	n.	s.
San Luis Potosi	6,202	.....	.....	.....	.....	.....	.....	.....	.....
Tampico	88	.....	.....	.....	.....	.....	.....	.....	.....
Zapotlan (Seminario)	5,078	.....	.....	.....	.....	.....	.....	.....	.....

RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined list of titles has been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau:

Popular Science. New York. Vol 58.
 Watts, H. M. The Weather vs. The Newspaper. P. 381.
Scientific American. New York. Vol. 84.
 — A New Flying Machine. [Davidson's.] P. 72.
Nederlandsch Tijdschrift voor Meteorologie. Groningen. 1 Jahrg.
 Sieberg, A. Over Veranderlijken der Temperatuur en de oorzaken van de grootere schommelingen in de temperatuur te Aken. P. 98.
Proceedings of the Royal Society. London. Vol. 67.
 Lockyer, Norman, and Lockyer, W. J. S. Solar Changes of Temperature and Variations in Rainfall in the Region surrounding the Indian Ocean. P. 409.
Astrophysical Journal. Chicago. Vol 13.
 Newcomb, Simon. Period of the Solar Spots. P. 1.
Himmel und Erde. Berlin. 13 Jahrg.
 Neesen, F. Ueber Gewitter und Blitzableiter. P. 145.
Comptes Rendus de l'Académie des Sciences. Paris. Tome 132.
 Lannelongue, Achard et Gaillard. De l'influence du climat sur l'évolution de la tuberculose pulmonaire expérimentale. P. 114.
 Angot, Alfred. Sur la relation de l'activité solaire avec la variation diurne de la déclinaison magnétique. P. 254.
Journal of School Geography. Lancaster, Pa. Vol. 5.
 Jefferson, M. S. W. Weather Map Exercises for High School Pupils. P. 51.
La Nature. Paris. 29me année.
 Plumandon, P. R. Les orages à neige. P. 171.
 Cunha, A. da. L'Observatoire Météorologique de Trappes. Cerfs-volants et Ballons-sondes. P. 179.
Meteorologische Zeitschrift. Band 18. Wien.
 Billwiller, R. Bildung barometrischer Theilminima durch Föhne. P. 1.
 Woelkof, A. Klima und Föhne der Dänemark-Insel, Scoresby-Sund. P. 5.
 Valentin, J. Einige Ergebnisse der österreichischen Luftballons bei der internationalen Fahrt am 12 Mai 1900. P. 10.
 — Zur Einführung in die neueren Anschauungen über die Ursachen der Lufterlektricität. P. 17.
 — Meteorologische Preisaufgabe. P. 25.
 Pernter, J. M. Der zweite internationale Wetterschiess-Kongress in Padua. P. 25.
 Hann, J. Teisserenc de Bort über den jährlichen Gang der Temperatur in grossen Höhen der freien Atmosphäre. P. 28.
 Sieberg, A. Temperaturumkehrungen mit der Höhe zwischen Aachen und dem Aussichtsturm im Aachener Walde. P. 33.
 Polls, P. Ergebnisse der Luftdruckbeobachtungen zu Aachen 1838-1851 und 1858-1897. P. 34.
 Wegrosta, K. Föhnsturm in Spital am Pyhrn. P. 35.
 Frub, J. Föhn in Fort Good Hope 66° 20' N. am Mackenzie River (Kanada). P. 36.
 Scholtz, M. Irrlicht oder elektrische Erscheinung? P. 36.
 Less, E. Kugelblitze über Wolken. P. 39.

Pockels, F. Zur Bestimmung der Maximalstromstärke von Blitzen. P. 40.
 Wolfer, A. Provisorische Sonnenflecken-Relativzahlen für das IV Quartal 1900. P. 42.
Philosophical Magazine. London. Vol. 1. 6th Series.
 Townsend, J. S. Conductivity produced in Gases by the Motion of negatively charged Ions. P. 198.
 Schuster, A. Electric Inertia and the Inertia of Electric Convection. P. 227.
Quarterly Journal of the Royal Meteorological Society. London. Vol. 27.
 Ekholm, Nils. On the Variations of the Climate of the Geological and Historical Past and their Causes. P. 1.
 Curtis, Richard H. An improved Mounting for the Lens and Bowl of the Campbell-Stokes Sunshine Recorder. P. 63.
 Dines, W. H. Weekly Death rate and Temperature Curves 1890 to 1899. P. 69.
 Mellish, Henry. Seasonal Rainfall of the British Isles. P. 79.
Nature. London. Vol. 63.
 — Audibility of the Sound of Firing on February 1. P. 372.

LONG RANGE SEASONAL FORECASTS FOR THE PACIFIC COAST STATES.

By ALEXANDER McC. ASHLEY.

While some advances in the art of practical forecasting have been made during the past two decades, the trained meteorologist, whose investigations are conducted along conservative scientific lines, candidly admits, that for the present, at least, weather conditions can not be accurately forecast for any considerable period in advance of their occurrence. The greater portion of his time, therefore, has been devoted to the perfection of a method or system which enables him to give to the public an accurate and practical forecast of the weather conditions which may be expected to prevail over a given area during the following thirty-six hours. Under favorable circumstances these forecasts may be extended to embrace a two-day, or even a slightly longer period; on the other hand, weather conditions may change with such rapidity that to forecast successfully, for even a twenty-four-hour period, is attended with the greatest difficulty.

There are those, however, who have the hardihood to publish long-range forecasts which are couched in such ambiguous terms that they seem to be verified no matter what may actually be the subsequent weather conditions that they purport to foretell, or else upon rigid verification, are proven to be absolute failures. Indeed, the field of long-range forecasting is so overrun by unscrupulous persons of this class that the honest scientific investigator is loath to enter it. Nevertheless, long-range forecasting must be regarded as the ultimate aim of the meteorologist, and there can be no doubt that the persistent efforts of scientific men will at last be rewarded, and a process evolved whereby general conditions may be foretold with reasonable accuracy months in advance. Such forecasts are of two distinct kinds:

- (1) Forecasts of the actual meteorological phenomena will occur upon a specified date.
- (2) Seasonal forecasts, i. e., forecasts of the variations in average weather conditions during corresponding seasons in successive years.

Forecasts of the first class can be made only after the many and complex laws underlying meteorological manifestations have been discovered, but long before this has been accomplished, success in the formulation of seasonal forecasts, for certain sections, at least, will have been realized.

Several years ago an official of the United States Weather Bureau invited attention to some very interesting and instructive data in connection with a severe drought which had been experienced throughout the State of California. The data collected suggested the possibility of a long-range seasonal forecast of average rainfall conditions for the Pacific coast States, more especially for California, and the ingenious and attractive theory advanced created quite a stir and