Some Recent Mexican Contributions to Meteorology

The publication, "Memorias y Revista de la Sociedad Cientifica 'Antonio Alzate'," which is published at Mexico City about 4 times a year, contains a number of meteorological articles:

Breves apuntes sobre la climatologia del Valle de Tulancingo, Estado de Hidalgo, by D. M. Uribe. July-Sept., 1922, vol. 40, pp. 485-496, 5 tables.

The station is on the Mexican plateau not far north of Mexico City. It is at latitude 20° 5' N. and 3' E. of the Mexican prime meridian (about 99° W. long.). Its altitude is 2180 m. The author cites some notable rainfalls, snows, and frosts. The most intense rainfall mentioned was 20 mm. (about 0.8 in.) in 15 min. The heaviest snowfall was 2 inches Jan. 20, 1910, the earliest frost October 2, 1918, and the latest, May 28, 1913. The annual rainfall averages (9 yrs.) 537.2 mm. (about 21 in.). 1917 was the driest (327.6 mm.) and 1919 the wettest (749 mm.). The highest temperature observed was 30.0° C. (86° F.) May 12, 1918, and the lowest, —8° C. (17.6° F.) Jan. 11, 1919. The greatest daily range was 25 degrees C. The average vapor pressure is 11.2 mm., wind direction NE., wind velocity 3.6 m./s. for the years 1919-1921.

Estudio sobre "Nortes," by Prof. E. López. Nov.-Dec., 1922, vol. 41, pp. 91-108, 8 maps.

The maps show pressure distribution and temperature departures. The most severe Norther shown was that of Nov. 14, 1916, when the temperatures were more than 16° C. below normal in northeastern Mexico. The isobars show a Low over Yucatan (under 50.0 cm.) and a High (over 75.0 cm.) in Texas. The pressure corresponding to a barometer indication of 60 cm. is shown as normal. This pressure is the average at about 2130 m. altitude.

Determinacion de la constante psicrométrica en el Valle de México. By Prof. E. López, ibid., pp. 151-158.

Experimental determination of the psychrometric constant yields exactly the same result found by Ferrel, Marvin and Hazen, namely 0.00066. The use of the old Angot constant and Regnault's tables as is (?) the practice in the Mexican meteorological service, leads to errors in vapor pressure exceeding 1 mm. and occasionally gives negative values.

GODDARD'S ROCKET FOR EXPLORING UPPER AIR

A rocket that will travel from the earth to the moon in less than eleven hours may soon be a reality. Only one more step and such a rocket will invade the abysses of space and will make possible invaluable scientific data from the almost unknown region of the upper atmosphere. Prof. R. H. Goddard of Clark University, who has been carrying on investigations aimed at this result for the past 14 years, announced to the meeting of the American Association for the Advancement of Science that he was now near his goal.

In his earlier experiments under the auspices of the Smithsonian Institution, Professor Goddard used smokeless powder as a propelling force, but he has recently solved the problem of utilizing liquid fuel, burning it continuously and gradually in pure oxygen without overheating the combustion chamber. By this means it is possible to give the rocket a speed of 6.6 miles a second. This is all that is necessary to carry it out of range of the force of the earth's gravitation, once free of which the rocket would proceed on indefinitely until it struck some heavenly body.

The average distance of the moon from the earth is close to 240,000 miles. A rocket traveling at a rate of six and six-tenths miles a second would traverse this distance in about ten hours and five minutes or about the time it takes mail planes to go from New York to Chicago.

A Roumanian professor, H. Oberth, in a paper published recently, suggests the possibility of some such over-night limited service to the