

Correspondence.

All letters should be addressed—"Walter H. Smith, 31 Arcade Street, Montreal, Canada." For a personal reply enclose stamp.

CONDITION OF VENUS—THE DANSVILLE MAN'S THEORIES.

[20.] 1. I have been thinking of the planet Venus a good deal lately, and have about concluded that it is in the same condition that the Earth was before the advent of man, viz. a thick atmosphere causing darkness on the planet—you know we cannot see its surface as we do Mars and the Moon. After a while, when it cools, its atmosphere will change and life—perhaps human—will appear. 2. The Dansville man is "decidedly off" on one or two things, still there should be no doubt as to our future world having an atmosphere—without it there would be no sound. Revelations speak of a new "heaven" (atmosphere) and a new "earth." This is not our present firmament and dry land, I take it, but a great globe and its atmosphere.

Omaha.

E. F. TEST.

Ans.—(1.) My opinion coincides with yours. The planet is, we may fairly presume, as much "younger" than the Earth as Mars is "older" in the stage of planetary existence. It is my ambition—should "Seybold Melvin" meet with sufficient encouragement, and ASTRONOMY AND METEOROLOGY pay actual cost—to write an Astronomical Romance on "The World of Venus," to follow the one on "The World of Mars." Unless I get another 100 subscribers, however, there will not likely be any issue of ASTRONOMY AND METEOROLOGY after March, 1888. (2.) On such subjects, we can of course only theorize, but what you say, has the recommendation of feasibility.

SIGNAL SERVICE PROBABILITIES—AN ANSWER WANTED.

[21.] I believe that a full and explicit account of the way in which the "Weather Probabilities," prepared at the Meteorological Offices are got up, would be highly acceptable to not a few readers.

(Rev.) G. B.

Ans.—Having only a "general" idea of "how it is done," I should be much obliged if some of my Signal service observers who are subscribers to ASTRONOMY AND METEOROLOGY, would kindly send in "particular" answers to this query.

RELIABLE EPHEMERISES—SMITH'S PUBLICATIONS.

[22.] 1. Do you know of any reliable and correct publication giving the aspects and positions of the planets. Common almanacs differ sometimes as much as two or three days. By referring me to

something correct, you will much oblige. 2. What publications have you for sale? Trivoli, Ill. J. J.

Ans.—Most of the gratis almanacs are worthless as regards calculations, and are only useful to burn, or to keep as advertising sheets, for which purpose they are circulated. The so-called "astronomical and meteorological" portions are usually nothing better than a printer's hodge-podge. (1.) If you understand astronomical tables, signs and figures, the best work is *The American Ephemeris and Nautical Almanac*, [Bureau of Navigation, Washington, price \$1.00]. Similar information prepared to suit the general reader will be found in *Smith's Planetary Almanac*, [31 Arcade Street, Montreal, current year 12c., back nos. 25c. each]. (2.) ASTRONOMY AND METEOROLOGY, monthly, \$1.00 per year in advance; *Smith's Planetary Almanac*, price 12c. each; *Peck's Handy Star Map*, showing over 2,000 stars, nebulae, variable, double, clusters, etc., price \$1.00.

TIME TAKEN TO CIRCUMNAVIGATE THE GLOBE.

[23.] Is it possible to make "a journey around the world in eighty days" as described by Jules Verne? If so, when was it accomplished?

Mass.

J. B. K.

Ans.—Undoubtedly. The journey has recently been made under 70 days. From London, Eng., to Auckland, N.Z., via Suez Canal, took 39 days and from San Francisco to London 15 days. The S.S. "Alameda," from Sydney to San Francisco, via Auckland, occupied 23 days 6½ hours, the fastest time on record.

WHY METEORS FALL AFTER CANNON FIRING.

[24.] During the war, when much firing of heavy cannon was carried on at night, I have many a time sat and watched the flash of a gun, some five miles away, and just after the report would reach me, I would see a meteor or falling star shoot across the sky. Sometimes the meteor would burst with a loud report. Sometimes without noise. The report or concussion of the cannon appearing to me to have jarred out of the atmosphere these meteors or shooting stars. Could these meteors have been caused by electricity in the atmosphere, being jarred out by the concussion of the cannon? My observation was not confined to one night—but many a clear night during that trying time. The theory that rain follows the firing of heavy cannon I also noticed and I am a convert to that theory.

Charleston, S. C. H. M. SIMMONS.

Ans.—The cause in this case may be similar to that which is supposed to

cause the fall of meteorites prior to severe storms. The atmospheric waves in both cases probably became agitated sufficiently to draw down or suck in meteorites from above the atmosphere.

WORKS THAT TEACH ASTRONOMY.

[25.] I wish my son to obtain the rudiments of astronomy. Please state what books, etc., you would recommend and their price.

Montreal.

SUBSCRIBER.

Ans.—*The Heavens Above*, by Gillet Rolfe (W. Drysdale & Co., Montreal, price \$1.50) is a very useful handbook. As a guide to the constellations get *Burrit's Geography of the Heavens* which may be used to advantage in conjunction with my *Handy Star Map* (Walter H. Smith, Montreal, price \$1.00). As a general instructor, and for current astronomical literature, you have my ASTRONOMY AND METEOROLOGY and *Planetary Almanac*. The cost of the whole would be about \$5.00.

BAROMETER AND ATMOSPHERE.

BY THOS. BIRT, UTICA, N. Y.

The ever-varying weight of the atmosphere shows with the constant rise and fall of the barometer. Prof. Espy says: "as soon as one storm is over, nature begins to prepare for another, and so in general, the longer the preparation, the more abundant the result." Here, then, is the ever varying cause of the barometer's rise and fall, but not the main one. The mercurial column gradually rises from one storm to another, and then suddenly falls. Some other cause must modify these sudden changes in the barometrical column. I am acquainted with some meteorologists who have hinted that vapor does not add to the weight of the atmosphere. The barometer often remains stationary for days together, and then makes rapid changes.

The heat from the sun, and not the moon's gravitation, must be the cause of the atmosphere's disturbance, certainly it sets the wind in motion. Its heat often proves less intense in varying localities, and that heat is modified by the clouds above and the surface of the tract below. That grand luminary goes on augmenting centres of disturbance, throwing into commotion vast regions, and causing all the barometrical changes peculiar to our climate. Vapor may modify, but the winds caused by heat break up all its regularity, and leave matters in seeming confusion. This atmospheric commotion may be compared to ocean waves, and the barometer, like a vessel, must rise and fall.