

of systematic ascents, in order to inquire into the condition of the upper winds, and to measure their deflection or velocity, or their dimensions either in vertical or in horizontal directions.

Some of the readers of NATURE may possibly feel inclined to help me in working out these suggestions practically, or at least to ascertain if they are justified by facts as far as can be ascertained without traveling in the air.

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EARTHQUAKES IN THE PHILIPPINE ISLANDS

A CORRESPONDENCE from Manila, dated Oct. 17-18, gives the following notice of earthquakes occurring there and in the neighbourhood on Oct. 16, which may be of interest to some readers of NATURE :—

Manila.

10.12 A.M.—Hard shock; duration about 1 min.; general direction from E.—W., but moving from S.E.—N.W. to N.E.—S.W.

10.15 A.M.—E. 25° N.—W. 25° S.; duration 5 sec.; rotation from E.—N.

10.20 A.M. till 10.15 P.M.—Thirty-seven other light shocks, *i.e.* in the whole thirty-nine shocks in twelve hours.

The interval of these shocks became at last greater and greater in the following order :—

10.20 A.M.	11.20 A.M.	12.2 P.M.	12.55 P.M.
10.25 "	11.23 "	12.19 "	1.9 "
10.30 "	11.26 "	12.20 "	1.52 "
10.40 "	11.31 "	12.22 "	2.40 "
10.43 "	11.34 "	12.24 "	4.2 "
10.46 "	11.41 "	12.31 "	6.25 "
10.50 "	11.44 "	12.42 "	8.15 "
10.51 "	11.46 "	12.45 "	9.15 "
11.12 "	11.53 "	12.50 "	10.15 "
11.15 "			

Bulacan.

10.8 A.M.—Hard shock.

10.11 A.M. till 1 P.M.—Lighter shocks.

Pampanga.

10.13 A.M.—N.W.—S.E. Hard shock; duration 50 sec.

10.21 A.M.—Duration 20 sec.

12.30 P.M.—Light shock.

Pangasinan.

10.25 A.M.—S.E.—N.W. Duration 26 sec; light shock.

Cavite.

10.11 A.M.—Light shock.

10.45 A.M.—Light shock.

12.13 P.M.—Light shock.

[Batangas.

10.2 A.M.—E.—W. Two shocks, of 10 sec. and 7 sec. duration.

Laguna.

Light shock; 2 sec. duration.

Royal Natural Hist. Museum,
Dresden, Dec. 25

A. B. MEYER

THE TRANSIT OF VENUS

THE following telegrams have been received during the past week :—

From Prof. Peters, *viâ* Wellington, New Zealand :—

"Transit observation great success first contact; photographs, 237."

"New York, Dec. 31.—Intelligence has been received here from Honolulu, dated the 12th inst., respecting the

observations of the Transit of Venus at that station. The atmospheric conditions were favourable for the observations; 150 measures of cusps and limbs and 60 photographs were obtained. A totally unexpected appearance was presented at the internal contact. The disc of the planet became visible as an entire circle some minutes before contact, and from then to the complete establishment no definite or sudden phase was observed. There was no black drop after the internal contact. Twenty out of sixty photographs came out blurred. Valuable results, however, were obtained. The first external contact occurred at 3h. 7m., and the first internal contact at two minutes later than the *British Nautical Almanack* stated. The revelation of the complete circle of the planet occurred before the actual internal contact, owing to the effulgence of the corona, the sun illuminating the whole surface of Venus before the complete immersion."

In connection with the news from Honolulu, an article in the *Times* of Tuesday says :—"The most remarkable part about it is that the observers evidently regarded as an 'unexpected appearance' a phenomenon similar to one observed and recorded in the former transits of 1761 and 1769. In the observations of Chappe d'Aueroche in the latter year, recorded by Cassini, a drawing is actually given of the horns of Venus visible beyond the edge of the sun, and it seems probable from the text that the planet was actually seen on the sun's chromosphere at the moment of egress."

Indeed, this phenomenon need not have caused any surprise if the conditions had been previously clearly understood. In reference to this point, some statements from the *Daily News* Thebes correspondent (Dec. 9) are worth quoting. In speaking of the commencement of the phenomenon the correspondent says Venus "appeared anything but a promising subject for the purpose at first. She seemed literally to dance about the face of the sun, and her limb was jagged like a saw. They both appeared elliptical in an almost extraordinary degree, owing of course to refraction, and they did not lose it entirely till they were at least 7° from the horizon. Gradually the limbs of both got more and more defined, till Venus looked like a small black pea resting on a luminous disc. The sun, however, still remained somewhat troublesome, particularly to the photographers, and it was not till just before internal contact that he was really steady. The atmosphere of Venus was distinctly seen at certain periods. It showed as a pale white circle round part of her edge, and was totally different to the brilliant sunlight. The general remark was that it reminded us of moonlight. This caused a certain difficulty in estimating the true time of contacts, and perhaps any small discrepancy in observation may be accounted for by this phenomenon. . . . There is one curious coincidence to note, and that is, that no one seemed to have observed the black drop which has been so much talked about; a faint haze was seen, and a few jets of black springing out from each side of the point of contact, but nothing more. Neither in the photographs did it show, which perhaps might have been expected. Certainly, the weather could not have been more favourable just at the critical time, though, curiously enough, immediately after, a haze came on, which would seriously have affected the results. Need I say that we are all thankful the observation has passed off so well, and if only the other stations to which expeditions have been sent are equally fortunate, the sun's distance ought to be definitely settled. I fully expect that the appearance of the faint line will give rise to a long discussion in the astronomical world. It will be very curious to note what other stations saw. At all events one thing is certain, and that is that our atmosphere must have been very clear, and also that of Venus; clouds in the planet must have intercepted the sunlight, and have prevented the formation of the luminous ring, or rather partial ring. At one time the whole planet, when