

Blue Hill Observatories that after 9:00 P.M. the pole was entirely free from clouds for the rest of the night. Previous to that there was partial cloudiness. So the meteors, which passed some minutes after 9:00, were quite possibly visible at both these stations, in the southwest at an angular altitude of not over 11° . A renewed inquiry of the Weather Bureau, asking for details of cloudiness at 8:00 P.M., E.S.T., at all the Weather Map stations in the region concerned, shows that reports on the meteors were to be expected from Minnesota, upper and central lower Michigan, and especially from eastern New York and Pennsylvania, northern New Jersey and southern New England, on account of generally favorable conditions and great density of population.

Two suppositions may be made: that the apparitions were local—which is hard to believe,—and that the call for reports was not sufficiently widespread to attract attention in the northeastern United States. Chant does not mention appealing directly to the press outside of Toronto. Even so, it remains curious that the news collecting agencies of the United States should have ignored the matter, and that it should not have excited the interest of any scientific men in the United States.

With this example before us, it is plain that a paucity of reports about any fireball does not constitute an argument against its reality.

After studying the reports from Ontario, Chant decided that the path of the meteors passed through the zenith of the point $W 80^{\circ} N 43^{\circ} 24'$. Denning and the other computers are inclined to put this point farther south by $3'$. As the width of the procession could hardly have been less than some miles, the choice is immaterial, for this fundamental "Ontario station."

Chant then assumed that the meteors seen in Saskatchewan, Ontario, New Jersey, and Bermuda formed part of the same narrow procession, being in some cases the same objects, and that the projected path was a great circle, passing through Pense, Sask., and the Ontario Station, with an interval of 1206 miles between. This great circle passes 5.3 mi. on the north from Watchung, and 131 mi. northeast of the Bermuda station; thence over the South Atlantic Ocean, 600 mi. away from the Cape of Good Hope.

With information in hand about meteors seen passing to N.E. of S.S. *Bellusia* and to W. of S.S. *Newlands*, both in the tropical Atlantic, Pickering made the same assumptions as to the identity of the meteors and their great circle path, but adopted as fundamental his Ontario Station and a position between the *Bellusia* and the *Newlands*. His great circle then passed through $W 80^{\circ} N 43^{\circ} 21'$, and cut the meridian there with a true bearing $S 55^{\circ} E$, differing $3^{\circ}.8$ from Chant's great circle bearing. He computed the distance of the Pense station from this great circle, and found that Pense lay 108 mi. to S of his great circle, so that the meteors should have been seen passing at an altitude of 26° instead of directly overhead, as reported. While Pickering does not mention the Watchung observation, of meteors passing directly overhead, so

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