satellitic meteors; there must have been some falling downward, even if the angle was so shallow as to be not easily noticeable by the observers. The westernmost data, at Bemidji and Bovey, mention the thundering sounds of air-racked meteorites; it is not certain whether this phenomenon was noticed at Hibbing, but, if all the observations refer to the same display, we can assume that it was. Yet all across Michigan nothing of the sort was heard, and explosive sounds began to be noticed for the first time only 35 miles west of Hamilton, Ontario; thereafter, they were conspicuous at least to Elmira, and they were probably the same sounds heard 50 miles farther on in Pennsylvania. At Watchung, the display was again without aural component. It is clear that the Michigan meteors must have begun at a higher level in the atmosphere, gradually dropped downwards, and finally burnt themselves out somewhere in Pennsylvania after roaring over western New York at a destructively low altitude. If continuity be assumed from Petoskey to Elmira, the path-length of individual objects was at least 500 miles; if continuity be assumed from the 90th meridian (west of the Keweenaw Peninsula) to Elmira, the path-length was 750 miles. Path-lengths of this order are commonplace in processional fireballs.

An estimate of the inclination of the trajectory must await treatment of the data by someone more competent than the present author; what is needed is to get two altitude estimates of the same group of bodies at different points. From the East Lansing and Alpena data, one may tentatively place the Michigan fireballs about halfway between East Lansing and Alpena, and at a height of about 50 miles, but these bodies could not have been the same ones as those measured by Chant at Toronto, but must have passed at least 50 miles south of his trace. (Conceivably, these meteors made up the procession seen at Costello, Pennsylvania.) Thus, the two altitudes cannot be directly compared.

Perhaps the most remarkable result of the present investigation was its revelation of the extreme spottiness with which celestial phenomena are observed. There can be no possible doubt that spectacular sights were visible in such places as Marquette and Detroit, Michigan, and Corning, New York, yet the newspapers of those cities gave no indication of anybody's having noticed anything out of the ordinary. The more southerly procession passed directly over the "thumb" of Michigan; in one newspaper there (in Caro) it was reported as having caused a sensation, but in 8 others, nearby, there was no mention whatever of the event. This pattern of unpredictable observation appears to be characteristic; the only region in which a majority of the towns reported noticing the phenomenon over their heads was western New York, where loud noises forced it upon the attention of the inhabitants. It is likely that much of this neglect