to the northeast, but this conclusion may be a weak argument, since the properties of the hissing sounds produced by meteors are very poorly known. (The sound is presumed to have been due to radio waves transformed into sound by various objects on the ground.[10]) It will be noted that this hissing sound is recorded for only the Pennsylvania and New Jersey observations; in one of the Michigan observations (Caro), it was specifically listened for, but was not heard.

Another aberrant observation, which *may* refer to the "procession," comes from Warren in northwestern Minnesota, where Miss Esther Erickson saw "a vast area of strange lights coming and going" in the east or southeast, the phenomenon fading out after 20 minutes. The date is not certain, but it was in the winter of 1912-13.

In East Salem, Pennsylvania (near Lewiston), 110 miles to the southwest of the Chant trace, Miss Cora Clouser saw a group of some 20 or more orange "stars" moving slowly toward the *north*, somewhat to the east of her position. The date and time have been definitely verified as correct, and the observation would agree with expectations if it were possible to suppose that a mistake had been made as to the direction; however, this interpretation is uncertain. No newspaper in the surrounding area reports anything similar. The whole eastern half of Pennsylvania was canvassed as a "control area" to test the possibility that fireballs might have been seen generally on the night in question (rather than in the neighborhood only of Chant's line), but this was the only positive result obtained from some 34 replies. Its interpretation is not clear.

In conclusion, we may state that there have been 3 observations with the unexpected property of agreeing in all respects except *time*. In Munising, Michigan (upper peninsula), a few miles north of the Chant trace, nothing is recorded for 8 PM, but Mrs. Bessie Kelly replied to a newspaper inquiry that she had seen a fireball with a long tail of sparks like a skyrocket, passing slowly from northwest to southeast on a trajectory north of Munising, "some time after midnight — early morning of February 9th." This fireball, characteristically, was visible for "several minutes," and "disappeared over the horizon," and so it was clearly of a processional character, but it cannot be assimilated to the known 8 PM display. The date and time have been verified. What may have been the same fireball in a later state of disruption was seen at 2:30 AM on the morning of February 10th (not 9th as reported by Mrs. Kelly), 700 miles to the southeast of Munising, at Delaware Water Gap, between Pennsylvania and New Jersey. The observer, Mr. Arch Keller, remembers the awe-inspiring spectacle in detail, and has described and sketched a parade of meteors of gradually decreasing size, each size-class arranged in regular ranks except for the "go-as-you-please brigade" of red sparks that brought up the rear. "The main body, which oc-