

ticed an incandescent star-like object low in the northwest sky.

The object appeared to separate into a number of pieces, and by the time the first fix—azimuth 340 deg., altitude 8 deg. above the horizon—was made, six separate pieces, glowing with an estimated astronomical magnitude of -6, were discernible moving rapidly southeast in a cruciform pattern with the largest body leading the formation.

Largest Object

Largest object was at an azimuth of 0 deg. (true north) and altitude of 12 deg. at 4:49:47 local time, as recorded by stopwatch and later compared with the National Bureau of Standards WWV radio time signal. By this time, only the leading object was visible. It was tracked out over Lake Michigan to azimuth 16 deg. and altitude 11 deg., where it finally became invisible.

Two team members at the observatory witnessed the event and corroborated the report of the downtown observer, although they were unable to obtain theodolite fixes.

Several persons along the re-entry path in northern Wisconsin observed the passage of the fragments, which ranged in number from five to more than 25 in the various accounts. While part of the discrepancy in the reported number of pieces can be attributed to confusion, it is likely that the smaller fragments dissipated their heat more

rapidly than the larger ones during the passage through the lower regions of the atmosphere, so that the visible number of incandescent fragments decreased along the re-entry path.

Many witnesses believed they had observed the disintegration of the satellite, but their accounts generally placed this event at a low elevation, which indicates that their observations probably were affected by parallax.

However, one Canadian reported that he saw the vehicle break up near zenith, which increases the likelihood that he witnessed the actual disintegration. There were several reports of a thunder-like noise in the direction from which the fragments came after they had passed; this was probably due to the shock wave created by hypersonic re-entry.

Impact point of the disk-shaped fragment was at the north side of an intersection in Manitowoc. Noise of the impact was heard by a woman asleep in a nearby house, but she could not see the fragments because of the darkness.

Impact in Street

Apparently the fragment had been decelerated to low subsonic velocity at the time of impact, for the impression it made in the street at the time of impact was only about three inches deep.

Two policemen patrolling the area at 5:30 a.m. noticed the fragment lying