

4. Electrical Effects

"Ball lightning" will certainly be accompanied by radio static in some form. Electrical static is possible when the phenomenon starts from streak lightning. Disruptive mechanical effects to nonconductors especially if semiconductor nature, or crushing effects on hollow conducting tubes may occur in cases where actual static was drawn, lightning currents pass through the objects.

5. Optical Anomalies

Some of the cases of "ball lightning" observed have displayed characteristics of the appearance of little flames emanating from the rain body of the luminous mass, or luminous streamers have developed from it and propagated short-wise toward the ground. In rare instances, it has been reported that the luminous body may break up into a number of smaller balls which may appear to fall towards the earth like a rain of sparks. It has been been reported that the ball has suddenly ejected a whole bundle of many luminous, radiating streamers toward the earth, and then disappeared.

Jensen³ has quoted the following report of electrical streamers appearing in a violent storm. "A tornado which occurred on the evening of July 9, 1932, near Stone Rapids, Iowa, gave evidence of a closely related type of luminous display according to the report of Mr. George Swelling, U. S. Weather Bureau observer. From the sides of the building, dust-laden clouds of heavy stream poured out like water through a sieve, breaking into spheres of irregular shape as they descended. In streak lightning of the usual type was observed and no noise attended the fire-balls other than the usual roar of the storm."

(c) Possible Objects to Which Attracted

Lightning strikes are more likely to hit at or near the top of high, pointed objects, than on the surfaces of low objects with flat or concave exteriors. If the tips of the high objects are grounded via conductors such as wires or metal pipes, they will tend to show a higher frequency to strikes than ungrounded objects. This is especially true if, in the former case, the

³ L. Jensen, J. C., Physics, vol. 4, p. 274 (1933).