AUGUST BRINGS MANY METEORS

Meteors or "shooting stars" may be looked for on almost any clear night this month. They belong to one of the best known of the meteor "swarms", the Perseids, and have a regular place in the heavens, from which part of them are dragged by the earth's gravity when our planet crosses their path. The Perseids appear to be following in the orbit of the great comet 1862,III, better known as Tuttle's comet, which has a period of 120 years. Unlike the Andromedes, which appear in November and are bunchedin their orbit so that greater displays occur some years than others, the Perseids show about the same frequency every year. So evenly are they distributed around their orbit that every yearein August when the orbit of the earth intersects the orbit of this swarm, a display of several weeks duration invariably occurs. The number seen in any one locality on any particular night may not be large, several in an hour, possible but the persistent watcher will find that there are few evenings this month when his search for meteors will not be rewarded by the appearance of at least several members of this swarm. They will come from the northeast late in the evening from the direction of the constellation of Perseus, whence their name Perseids, and they will leave a yellowish trail and move with the average meteoric velocity of twenty-five miles or so per second. In color and velocity they differ noticeably from the Andromedes, which are sluggish in their motion and reddish in color because they overtake the earth instead of meeting it. Also they are unlike the Leonids which also appear in November, but which we meet "head on" so thay they are very swift and leave vivid and persistent trails of green or bluish light.

Meteors or shooting stars, as they are sometimes misleadingly called, are but cosmic dust weighing individually, at most, but a few grains and made luminous only by the friction produced by their encounter with the earth's atmosphere. The color and vividness of their light and length of their trails depend on the velocity with which they are moving relative to the earth when they penetrate our atmosphere. The morning meteors, not "head on", being swift, brilliant and bluish, the meteors of the early evening, which overtake the earth, slowly moving and reddish. The Perseids come midway between these two types for, appearing around midnight, they move with average speed and are yellowish in color.

Why some swarms of meteors, such as the Andromedes, should be so densely packed in one part of their orbit, while others, such as the Perseids, are distributed in a uniform ring around their orbit is not very clear, unless a swarm becomes more evenly distributed with age. The Perseids are traveling in the orbit of a brilliant comet of long period while the Andromedes are the remmants of Biela's small comet of six year period which after very close encounters with the earth in the earlier part of the nineteenth century divided into two comets and finally went literally to pieces in the form of bunchedswarms of meteors scattered along its path, which we now call the Andromedes because they come from the general direction of the constellation of Andromeda, or the Bielids, in recognition of their connection with the former comet of this name.

It is a noteworthy fact that there appears to be little if any connection between the periodic swarms of meteors and the large meteorites or fire-balls, which weigh many pounds or even tons, and which fall to the surface of the earth and are frequently recovered and placed in our museums. There is but one instance of a meteorite being seen to fall to the earth during a shower of meteors. In fact it has been found that in general meteorites are more frequently seen in May and June when meteor showers are fewest.
