

Clouds Reflections

Reflections of light from cloud banks are also a possible source of reports of illuminated objects in the sky at night. The source of light may be any kind of a searchlight, such as ceiling projectors, defence units, aircraft landing-lights, etc. Usually a beam of the light is visible from the source up to illuminated spot, so this condition is not likely to deceive a careful observer.

Optical Phenomena

Rainbows are common optical phenomena caused by a refraction and reflection of light from the sun by water drops in the atmosphere. A small portion only of a rainbow may be seen at times which might give the appearance of a small object in the sky. However, because rainbows are fairly common occurrence, they are unlikely to deceive anyone.

Optical phenomena caused by reflections of light from ice crystals suspended in the atmosphere may result in the appearance of unusual lighting effects in the sky. The halo around the sun or moon is the most common of this class of phenomena. The halo is usually seen as a ring of 22° radius around the sun or moon, but under some conditions it is possible for only part of the ring to be formed. Sundogs or mock-suns may appear at an angle of 22° either to the right or left of the sun - these appear as bright spots of light in the sky. Mock-suns sometimes are seen at angles of 46° or 90° from the sun. The possibility of halo phenomena should always be considered when any bright spot is seen in the sky - such spots will remain relatively fixed in position. Halo phenomena are most commonly caused by the sun because of the large amount of light available from this source, but the complete halo ring is frequently seen around the moon at night and it is possible that under unusual conditions other halo phenomena may also be seen at night.

Meteors

A meteor, or shooting star, always pursues a nearly straight (or great circle) path across the sky. Faint meteors last about half a second, brighter ones rarely more than two or three seconds. Bright meteors may burst and shower sparks or may leave a faint luminescence in their wake that is sometime visible for several minutes. Bright meteors may appear of almost any colour and in exceptional cases produce detonations and rumbling sounds. When coming head on a meteor seems to have almost no motion across the sky but when moving perpendicular to the line of sight its apparent velocity is rapid.

Stars and Planets

Stars and planets can generally be recognized without difficulty but on certain occasions appear with unusual brilliance thus exciting comment. In any case they never move rapidly but have a slow general motion from the east to the west part of the sky, except for the stars in the north where the motion is counter-clockwise about the pole star. Venus at its greatest brilliance can appear in the sunlit-sky as a faint white dot visible to the naked eye. It either precedes or follows the sun on these occasions.

The Aurora

The aurora, or northern light, produces various luminous forms of numerous pastel shades. In most parts of Canada northern lights may appear in any part of the sky though they are seen most frequently in the north. Although sharp rays may appear as part of the display most of the illumination is of a very diffuse type and is subject to rapid motion and change of intensity reminding one of the great flickering flames or searchlight playing over clouds. Sometimes small, restricted auroral glows remain almost stationary in one place for some period of time. In general outlines are diffuse.