



Sky Phenomenon: Lenticular Clouds

Lenticular clouds frequently display two or even more layers, and this tendency, together with the clouds' smooth and flat appearance, has meant they're often likened to a stack of pancakes. You'd need a lot of syrup for this stack!

The scientific name for lenticular clouds is *Altostratus lenticularis*, which refers to their appearance – *lenticularis* meaning 'lens-shaped'. More colloquially, these clouds are called 'lennies'. And, when a chain of lenticular clouds appears, each one mounted on the crest of the previous cloud, it creates a formation known as a 'wave cloud'.

-Simone Preuss

Photograph from Environmental Graffiti



Sky Phenomenon: Glory

When light is backscattered (a combination of reflection, refraction and diffraction) back towards its source by water droplets in clouds, the shadow of an object between the cloud and source may be wreathed in coloured bands. Named after the majestic effect it imparts – in some parts of China it is even called Buddha's Light – it is often seen in conjunction with the Brocken Spectre. Here the beautiful bands dramatically surround a plane's shadow against a cloud.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: 22° Halo

Halos are among the most well-known of optical phenomena and appear under a variety of guises. The most frequently scene is the 22° halo, caused by ice crystals in high altitude cirrus clouds, yet the particular shape and orientation of the crystals can create variation in the appearance of the halo. During very cold weather halos formed by crystals close to the ground reflect sunlight between them sending it in several directions at once, an effect known as diamond dust.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Iridescent Clouds

When the sun is positioned at precisely the correct angle behind clouds water droplets in them diffract light away, creating an intense streaking effect. The colouring is, like a rainbow, caused by the differing wavelengths of the light – different wavelengths are diffracted to different degrees, altering the angle of diffraction and consequently the colour of the light as it is perceived. In this image cloud iridescence is accompanied by a sharply coloured rainbow.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Moonbow

The combination of a low moon and dark sky often creates moonbows, essentially rainbows produced by the moon's light. Appearing in the opposite end of the sky to the moon itself, they usually are seen as completely white due to their weak colouring, however long-exposure photography can capture the true colours, as in this example taken at Yosemite National Park, California.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Aurora

The collision of electronically charged particles in the earth's upper atmosphere often creates magnificent light displays over the polar regions. The colour depends on the elemental content of the particles – most auroras appear green or red due to oxygen, however nitrogen sometimes creates a deep blue or violet appearance. This particular display is the famous Aurora Borealis or Northern Lights, named after the Roman goddess of dawn, Aurora, and the ancient Greek for the northern wind, Boreas.

-Thomas Davie

Photograph by Joshua Strang



Sky Phenomenon: Parhelic Circle

The parhelic circle appears like a white band circling the sky and always at the same height above the horizon as the sun. Usually only fragments are seen, extending from 'sundogs' in the directions away from the sun. Millions of vertically facing ice crystals mirror the sun around the sky to form the beautiful phenomenon.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Rainbows

Rainbows can take many forms: multiple bows, bows that cross, red bows, twinned bows, coloured fringes, dark bands, spokes and many more, but they all share in common their range of colours – red, orange, yellow, green, blue, indigo and violet. They are formed when light refracts through water droplets in the earth's atmosphere, most often rain, but mist or fog can create similar effects, and are rarer than one might imagine. Over history many different cultures have ascribed to them a variety of meanings and explanations from the ancient Greek's belief they were a path to the heavens, to the curious saying that the Irish leprechaun's pot of gold lies at their end.

-Thomas Davie

Painting by Neil Thompson



Sky Phenomenon: Contrails

The vapour trails that follow aircraft through the sky cause stunning man-made patterns in the atmosphere. They are created by either aircraft exhaust or airflow over wingtip vortices as it emerges into cold temperatures at high altitudes and condenses into water and ice droplets. In this example a flurry of trails crisscrosses the sky creating an intricate pattern.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Rocket Exhaust Trails

High altitude winds contort the trails of rockets and their small exhaust particles diffract sunlight into vivid iridescent colours, sometimes carried by the same winds thousands of kilometres before dissipating.

The image shows the trails of the Minotaur rocket launched from the US Air Force Base at Vandenberg, California.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Sky Polarization

The sky, like many other things around us, scatters polarised light consisting of a certain electromagnetic orientation. Polarization is always perpendicular to the light path itself and if only a single polarization direction is present in the light, the light is said to be linearly polarized. This image was captured with a wide-angle polarised filter lens to show just how spectacular the electromagnetic charge of the skies are.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Star Trails

Not technically visible to the naked eye, this breathtaking image was captured by leaving a camera with a shutter opening of over an hour at night. The natural rotation of the earth causes the stars in the sky to move across the horizon, creating these wonderful trails behind them. The only star in the night sky that appears stationary at all times is Polaris, the North Star, which hovers above the celestial North. The same would be true in the south but there is no star bright enough over it.

-Thomas Davie

Photograph from Environmental Graffiti

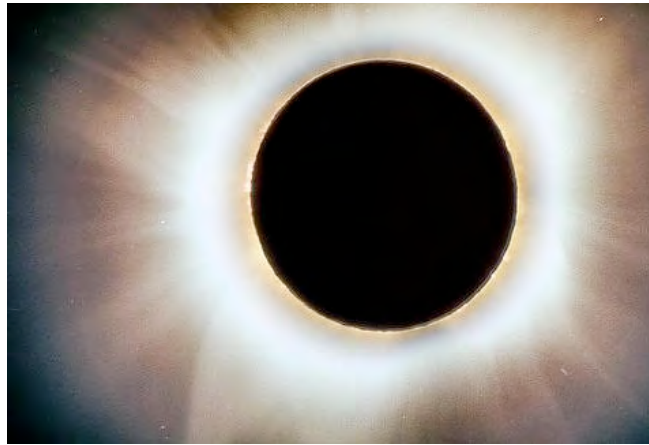


Sky Phenomenon: Zodiacal Light

A faint triangular glow seen in the night sky extending up towards the heavens, the Zodiacal light is easily masked by light pollution or moonlight. It is produced when sunlight reflects off dust particles in the cosmos, known as cosmic dust and consequently its spectrum is the same as the solar system. Solar radiation causes the dust particles to spiral slowly, creating a majestic constellation of delicately sprinkled lights in the sky.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Corona

The Corona is a type of plasma atmosphere that surrounds a celestial body and the most famous example is the sun's which is visible during a total solar eclipse.

It extends thousands of kilometers into space and contains ionized Iron at temperatures of almost 1 million° C (1.8 million° F). During an eclipse its shining light surrounds the darkened sun, an appearance from which its name is taken, derived from the Latin for 'crown'.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Crepuscular Rays

When darkly clouded regions or permeable obstacles such as tree branches filter the sun's beam, rays of sunlight appear as straight columns radiating from a single point in the sky. The phenomenon, often used in horror movies, is most commonly seen at dawn or dusk and can even be witnessed under the ocean as the sun shines through sheets of cracked ice. This beautiful scene was captured at the Arches National Park in Utah.

-Thomas Davie

Photograph from Environmental Graffiti



Sky Phenomenon: Light Pillar

The reflection of light by ice crystals with almost perfect horizontal planar surfaces creates a powerful beam that is reminiscent of sci-fi movies. The light source may be the sun, moon or artificial light and an interesting characteristic is that the pillar will take on the colour of this source – in the image taken in Kaijonharju, Finland, the orange sunlight of dusk creates a similarly coloured magnificent pillar.

-Thomas Davie

Photograph from Environmental Graffiti