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? WHY THE WEATHER ?

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COMMON AND UNCOMMON HALOS

Various optical phenomena of the atmosphere due to the effects of ice crystals on the light of the sun or moon are known collectively as "halos". They include luminous circles surrounding the luminary or passing through it, sun pillars, sun-dogs and moon-dogs, luminous arcs in a variety of positions with respect to the luminary, and so on. These phenomena result from the refraction or the reflection of light, or from refraction and reflection combined, and their diversity is due to certain differences in the shapes and positions assumed by ice crystals in the clouds or in the lower air. Some forms of halo are common; some are very rare; and some that are theoretically possible have never been observed.

One of the few places in the world where a constant record is kept of the occurrence of each type of halo is the Observatory of Montsouris in Paris. By far the commonest halo is the ring of 22 degrees radius surrounding the sun or moon. During a period of 20 years this was seen 2,577 times at Montsouris; an average of 129 times a year. Ordinary parhelia and paraselenae (sun-dogs and moon-dogs), seen 22 degrees or a little more on either side of the luminary, come next in frequency. They are observed, on the average, 29 times a year. The beautiful rainbow-tinted circumzenithal arc occurs about once a month. The anthelion (a white mock-sun formed opposite the sun in azimuth and at the same height as the sun above the horizon) was seen only twice in 20 years. A few other types of halo were seen but once during the same period, and some known types were not seen at all.

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