Sun halo phenomenon

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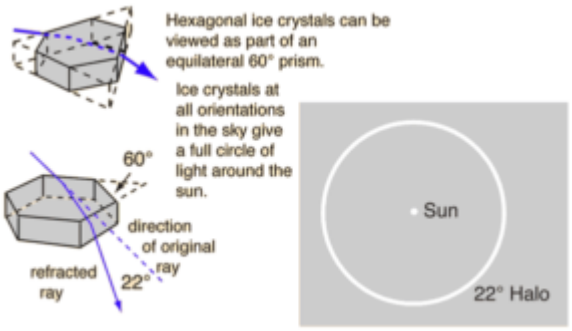
In news- The people in Bengaluru recently witnessed a rare optical and atmospheric phenomenon called '22 degree circular halo'.

About the phenomenon-

- Sun Halo, also known as '22 degree halo', is an optical phenomenon that occurs due to **sunlight reflecting and refracting in millions of hexagonal ice crystals** suspended in the atmosphere and may split into colours because of **dispersion.**
- It takes the form of a ring with a **radius of approximately 22 degrees** around the sun or the moon.
- The halos were used as part of weather lore, which was an **empirical means of weather forecasting** before meteorology was developed.
- They often **indicate that rain will fall within the next 24 hours,** since the **cirrus and cirrostratus clouds** in the **upper troposphere (5–10 km)** that cause them can signify an approaching frontal system.
- Many of these **appear near the Sun or Moon**, but others occur **elsewhere or even in the opposite part of the sky**.
- Among the best known halo **types** are the circular halo, light pillars, and sun dogs.
- In cold weather they can also **float near the ground**, in which case they are referred to as **diamond dust.**
- Just like a rainbow, a halo is **visible when viewed from the right angle**, sometimes appearing just white but often with colours of the spectrum also clearly present.
- Halos can have many **forms, ranging from colored or white rings to arcs and spots in the sky**.


Hexagonal ice crystals can be viewed as part of an equilateral 60° prism.
Ice crystals at all orientations in the sky give a full circle of light around the sun.
60°
direction of original ray
refracted ray
22°
Sun
22° Halo