Characteristics of sunlight

The Sun, like all stars, is an enormous ball of extremely hot, largely ionized gas, shining under its own power. And we do mean enormous. The Sun could fit 109 Earths side-by-side across its diameter, ...

Above the Sun"s surface are its thin chromosphere and the huge corona (crown). This is where we see features such as solar prominences, flares, and coronal mass ejections. The latter two ...

OverviewVariations in solar irradianceMeasurementComposition and powerIntensity in the Solar SystemSolar irradianceSurface illumination and spectrumLife on EarthOn Earth, the solar radiation varies with the angle of the Sun above the horizon, with longer sunlight duration at high latitudes during summer, varying to no sunlight at all in winter near the pertinent pole. When the direct radiation is not blocked by clouds, it is experienced as sunshine. The warming of the ground (and other objects) depends on the absorption of the electromagnetic radiation in the form of heat. The amount of radiation intercepted by a planetary body varies inversely with the square of the distanc...

By mass, the Sun is about 70.6% hydrogen and 27.4% helium. In much smaller amounts, the Sun also contains oxygen, carbon, nitrogen, magnesium, neon, iron, sulfur, aluminum, calcium, sodium, ...

The Sun is the source of an enormous amount of energy, a portion of which provides Earth with the light and heat necessary to support life. It is part of the " observable universe," the region of ...

The Solstices (Summer & Winter) The summer solstice occurs at the moment the earth"s tilt toward/from the sun is at a maximum. Therefore, on the day of the summer solstice, the sun appears at its ...

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Sunlight passing through the earth"s atmosphere is attenuated, or reduced, by about 30% by the time it reaches the earth"s surface due to such effects as (Gast, 1960; Iqbal, 1983):

Sunlight, solar radiation that is visible at Earth"s surface. The amount of sunlight is dependent on the extent of the daytime cloud cover. Some places on Earth receive more than 4,000 ...

Learn about the layers of the Sun. Get a diagram and see the names and features of the different parts of our favorite star.

Learn the Sun"s structure, layers, temperature, composition, and importance. A complete 2025 guide to the characteristics of the Sun for students and educators.

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