GLOSSARY OF TERMS

Actinic radiation: electromagnetic radiation capable of initiating photochemical reactions; UVB and UVC radiation (180–315 nm)

Albedo: that fraction of the radiation incident on a surface which is reflected back in all directions

Black light: primarily near-UV radiant energy in the 320–380 nm (or 400 nm) range

Effective irradiance: hypothetical irradiance of monochromatic radiation with a wavelength at which the action spectrum of the relevant photobiological effect is equal to unity (see also section 1.1)

Effective exposure dose: time integral of effective irradiance

Erythema: sunburn

Exposure dose: radiant exposure (J/m^2 unweighted) incident on biologically relevant surface

Fluence: radiant flux passing from all directions through a unit area in J/m^2 or J/cm^2; includes backscatter

Global irradiance: the irradiance of solar radiation at the Earth's surface

Global radiation: solar radiation at the Earth's surface comprising the sum of direct radiation from the sun and diffuse radiation from the sky

Minimal erythema dose (MED): the lowest radiant exposure of UVR that produces a threshold erythemal response 8–24 h after irradiation. There is no consensus on this response; a just perceptible reddening of the skin and erythema with sharp margins are both used as end-points.

Photoreactivation: the enzyme-mediated reversal of the biological effects of UVC or UVB radiation mediated by radiation of longer wavelength and associated with the reversion of cyclobutane-type pyrimidine dimers to monomeric pyrimidines

Radiant exposure: radiant energy delivered to a given area (J/m^2)

Radiant flux: rate of flow of radiant energy (in W)

Solar simulated radiation: radiation from an artificial source (e.g., an optically filtered xenon arc lamp) that approximates the terrestrial solar spectrum

Solar zenith angle: angle between the point in the sky directly overhead (the zenith) and the sun

Spectral distribution: relative intensity of radiation of different wavelengths present in a source emission spectrum

Spectral irradiance: surface density of the radiant flux that is incident on a unit surface area per unit wavelength (see Table 1)

UVA: electromagnetic radiation of wavelength 315–400 nm

UVB: electromagnetic radiation of wavelength 280–315 nm

UVC: electromagnetic radiation of wavelength 100–280 nm

UVR: electromagnetic radiation of wavelength 100–400 nm

Zenith angle: the angle between the point in the sky directly overhead (the zenith) and another point or object