

# Elastic and inelastic scattering

When light passes through a rarefied gas, it is scattered by the gas molecules.

- **Flexible dispersion** – occurs on particles significantly smaller than the wavelength of light, scattered light retains its original wavelength,
- **Inelastic scattering** – on particles comparable to the wavelength of light, scattered light has a different wavelength in different directions.

The intensity of scattered light is **inversely proportional** to the fourth power of its wavelength, i.e. the sky appears **blue** to us because the shortwave radiation has the greatest intensity. If the atmosphere contains more large particles (dust), all components of light are scattered equally and the sky is '*white*'.

At dawn, the path of the sun's rays is the longest and is therefore most affected by scattering. At this moment, the ``red light *passes best (directly) through the atmosphere*.

## Links

### Related articles

- Electromagnetic spectrum
- Visible light
- Infrared radiation
- Ultraviolet radiation (biophysics)

### Used literature

- KUBATOVA, Senta. *Biofot* [online]. [cit. 2011-01-31]. <<https://uloz.to/!CM6zAi6z/biofot-doc>>.