



A Level Physics Online

Eduqas Physics – Component 2

Module 7: Using radiation to investigate stars

This topic studies the continuous emission and line absorption spectra of the Sun. It uses Wien's displacement law, Stefan's law, and the inverse square law to also investigate properties of stars, such as luminosity, size, temperature and distance.

You should be able to demonstrate and show your understanding of:	Progress and understanding:			
	1	2	3	4
The idea that the stellar spectrum consists of a continuous emission spectrum, from the dense gas of the surface of the star, and a line absorption spectrum arising from the passage of the emitted electromagnetic radiation through the tenuous atmosphere of the star				
The idea that bodies which absorb all incident radiation are known as black bodies and that stars are very good approximations to black bodies				
The shape of the black body spectrum and that the peak wavelength is inversely proportional to the absolute temperature (defined by: $T \text{ (K)} = \theta \text{ (}^\circ\text{C)} + 273.15$)				
Wien's displacement law, Stefan's law and the inverse square law to investigate the properties of stars – luminosity, size, temperature and distance [N.B. stellar brightness in magnitudes will not be required]				
The meaning of multiwavelength astronomy and that by studying a region of space at different wavelengths (different photon energies) the different processes which took place there can be revealed				

