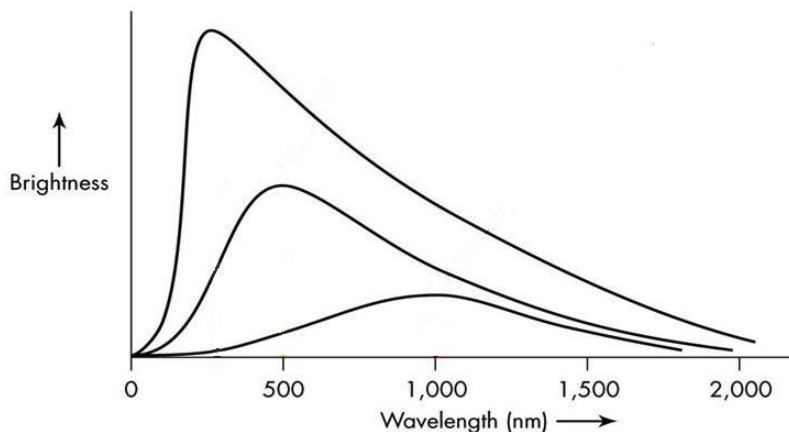


Theme	Video	Baccalauréat	Session
2-1 Le rayonnement solaire	Non	GENERAL	2025

SECTION EUROPEENNE
Épreuve orale de Physique-Chimie en anglais

How analysing emission spectra gives information about the stars?

Document 1: Records of emission spectra of 3 different stars



Document 2: Wien's law

Wien's law relates the peak wavelength to the surface temperature of a black body:

$$\lambda_{\max}(nm) = \frac{2,9 \times 10^6 (nm.K)}{T (K)}$$

where T is the surface temperature in kelvin.

Document 3: Approximate surface temperatures of known stars



TASK: You are working in an observatory. Your task is to identify the stars revealed by the 3 emission spectra you recorded (document 1). Prepare an argued speech in which you to proceed to this identification in front of an audience.

You can use the previous documents and the following clues to organize your presentation but feel free to use them in any order you like.

Clues:

- black body emission – Wien's law
- spectrum analysis
- colour of a star...