

Name: _____

Answer Sheet For CLEA Lab

Classification of Stellar Spectra

From p. 8

a. Choose any point on the continuum of HD 124320 and record its wavelength and intensity below.

Wavelength _____ **Intensity** _____

b. Measure the wavelength and intensity of the deepest point of the deepest absorption line in the spectrum of HD 124320.

Wavelength _____ **Intensity** _____

Question: If you were to look at this range of wavelengths with your eyes, what color would they appear?

From p. 9

a. As you look through the stars in the Atlas, can you tell from the continuum which spectral type is hottest? Identify the hottest spectral type? _____.

Explain your answer. (Remember that, on all these graphs, 3900 Å is at the left, and 4500 Å is at the right).

b. At about what spectral type is the peak continuum intensity at 4200 Å ? (4200 Å is about the middle along the x axis).

c. What would be the temperature of this star? _____

From p. 10

Your estimate of the spectral type of HD124320 _____.

Give reasons for your answer. (For this example: The strength of lines at 4340.4 Å and 4104 Å are almost exactly those of type A1 or A5, and the strength of the 3933 Å line lies somewhere between them.)

From p. 11

Now identify the line at 3933 Å _____.

Give a physical description of the absorption lines in the photographic spectrum.

In the graphical trace?

Data Table: Practice Spectral Classification

STAR	SP TYPE	REASONS
HD124320	A3	HI lines very strong, CaII line betw. A0 and A5
HD 37767		
HD 35619		
HD 23733		
O1015		
HD 24189		
HD 107399		
HD 240344		
HD 17647		
BD +63 137		
HD 66171		
HZ 948		
HD 35215		
Feige 40		
Feige 41		
HD 6111		
HD 23863		
HD 221741		
HD 242936		
HD 5351		
SAO 81292		
HD 27685		
HD 21619		
HD 23511		
HD 158659		