I	Name:		\square 05 \square 06
/26	Date of lab:	Due date:	 □ 07 □ 08

SNC1D

Lab: Spectroscopy

С

/6

Purpose

In this lab, you will be determining the spectrum of various elements, then determining the elements making up various objects seen in the night sky.

Observations

Write the name of the element from the list on the left beside its spectrum of absorption lines on the right.

Element with selected absorption wavelengths in nm	Absorption Spectrum						
	1. <u>Carbon</u>	-	*	*	*	*	
Hydrogen 433, 486, 656			• • *	• • *	• *	- *	
Helium 447, 502, 587, 668		300	400	500	600	700	800
., ,	2		*		K 		
Example: Carbon 427, 515, 600, 678		200	· · · *		* * '		
Sodium 580 589		500	400	500		700	
50010111 500,505	3				NW/A		
Calcium 429, 527, 593, 645		300	400	500	600	700	800
Iron 417 to 433, 516,562, 619			*	*	* *		
	4		· · *	· · *	* *		
Mercury 436, 546, 579		300	400	500	600	700	800
Analysis				*	* *		
2 xii ai y 313	5			· · *	* *		
1. Determine the composition of each		300	400	500	600	700	800
of the Sun & mystery objects. /10	6		*	*		Ж	
Sun:	0		····*	· *·		* • •	
Sun		300	400	500	600	700	800
			X	<u>K X</u>	*	*	
// 1	7		····· >	к ж	*	*	
#1:		300	400	500	600	700	800
	Sun		7407				
		300	400	K XXX 500	**	**** ' 700	' 800
#2:	Mystowy #1		***	(***	KK	
	Mystery #1				***	KK • •	
		300	400	500	600	700	800
#3:	Mystery #2				** *		
				<u>'* *</u>	** • * •		
	Mystery #3	300	400	500 ———————————————————————————————————	ж ж	700	800
	1.1,2001,9 110						
	1	300	400	* * * * 500	₩ % 600	700	 800

2. Which of the mystery objects is most like the Sun? Explain.

3. Which of the mystery objects is least like the Sun? Explain. /3

- 4. Which mystery object, if any, contains calcium?
- Suppose you were to analyse the light from the full Moon with a spectroscope. Predict the spectra 5. that you would see. Explain your answer. /3

/3

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