

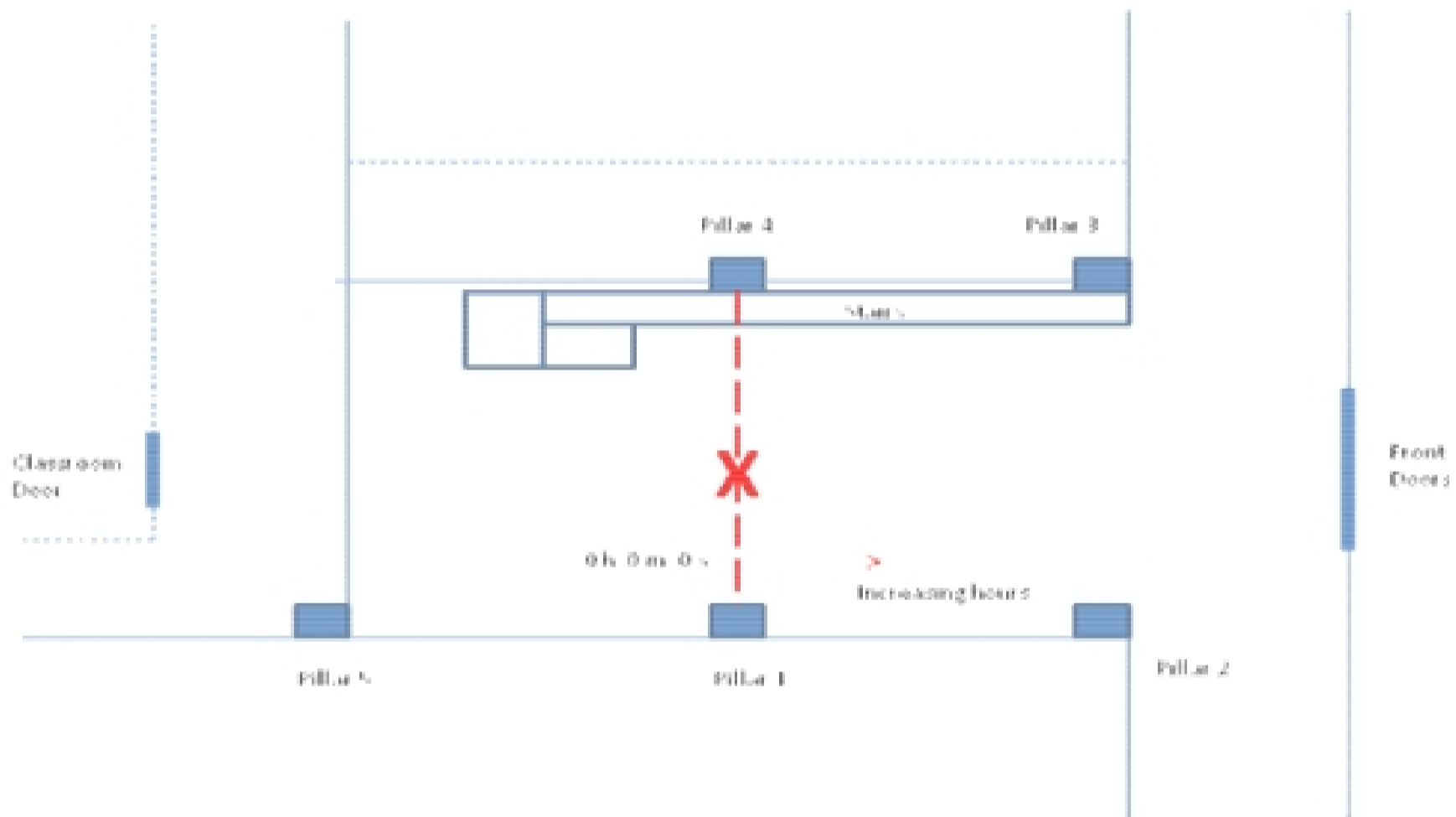
Exercise 1
The Celestial Sphere and the Night Sky
Page 1

Group Number:

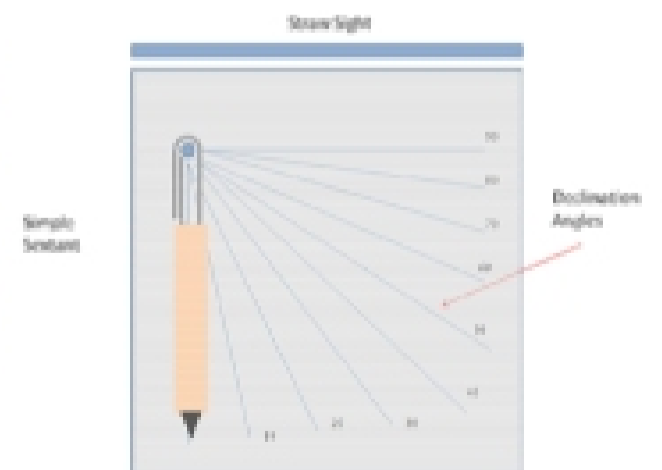
Names of members of lab group (alphabetical please)			
Coordinator(s):		Acknowledged Members:	

Part 1. Using Right Ascension (r.a.) and Declination (dec.). In this exercise, you will use the walls of the Science Center Atrium as a “Celestial Sphere.”

Familiarize yourself with the Atrium, and then stand between Pillar 1 and Pillar 4 at the location of the “X” in the image below (half way between the Pillars). Assume that Pillar 1 identifies 0 h 0 m 0 s r.a. and that increasing r.a. is associated with rotation toward the front doors.



When you are ready to complete this part of the exercise, visit the Department of Physics main Office (SC111) and pick up a box containing a simple sextant. Each box is identified by your group number, so be sure to get your group’s sextant. The box with the sextant must be returned to the Physics Department Office. Any group not returning the box and all parts of the sextant will receive a grade of 0 for Exercise 1.



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Once you are familiar with the Atrium and the sextant, answer the following questions. Although what you are doing is a rough estimation, you should be able to be fairly accurate. I

1. What is the r.a. for Pillar 5? Estimate the hours of r.a. only, do not try to give minutes and seconds.

2. Describe, with as much detail as possible, the object that resides at 9 h r.a. and 10 degrees dec.

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Part 2. Take care in how you decide to complete this exercise. Do not wait to the last day possible to complete this exercise (it might be cloudy or raining). In viewing the sky charts, choose an optimum day for viewing, and have backup days in case you cannot view on the day you have chosen.

Step 1. Use the Sky Map link in the PHY250 website to access the Your Sky software. Set the sky map for views from Dayton, Ohio. Print a copy of the sky AS YOU EXPECT TO SEE IT based upon class discussions and time and date information. Please list in the tables below the settings that you used to print your sky chart. Use as a reference the Powerpoints in the PHY250 website on Stellar Magnitudes and Using the *Your Sky* Software. You can also use the sky charts in the back of the book as well. Attach your printout of the sky chart to this report.

Note: since your ability to observe the sky will be based upon the clarity of the night, your printout of the sky chart might not match the EXACT time and date you go out. Since the sky doesn't changer that much from day to day, what you print out should be close enough.

	<input checked="" type="checkbox"/> Now	
Date and Time	<input type="checkbox"/> Universal time: <input type="text"/>	
	<input type="checkbox"/> Julian day: <input type="text"/>	
	Latitude: <input type="text"/>	<input checked="" type="checkbox"/> North <input type="checkbox"/> South
Observing Site	Longitude: <input type="text"/>	<input checked="" type="checkbox"/> East <input type="checkbox"/> West
	Set for nearby city	