

**Physics 174**  
**Homework 6 - Due 11 December**

17 November, 2006

Name: \_\_\_\_\_

**A Peek at the Winter Skies**

Table: \_\_\_\_\_

Back in early September, you observed the positions of the five brightest stars and planets in the night skies. Some of you might have seen Jupiter and Antares setting in the southwest. All of you observed the Summer Triangle, with Vega overhead, Deneb to the east, and Altair to the south, and most of you noticed Arcturus in the west. The Summer Triangle is still visible, but when you look up, you'll see that it has moved considerably. Other stars have gone now, and new ones have risen. If you wait until 10 pm or so, you'll even see Orion rising on the eastern horizon.

1. For each star in the table below, measure its altitude and azimuth. As in Homework 1, you can estimate altitude by counting how many hand widths are between a star and the horizon directly below it. Each hand width is roughly 8-10°.

Star	Name	Altitude (°)	Azimuth
$\alpha$ Lyr	Vega	_____	_____
$\alpha$ Aql	Altair	_____	_____
$\alpha$ Cyg	Deneb	_____	_____
$\alpha$ Aur	Capella	_____	_____
$\alpha$ Tau	Aldebaran	_____	_____
$\alpha$ PsA	Fomalhaut	_____	_____
$\alpha$ Ori	Betelgeuse	_____	_____
$\beta$ Ori	Rigel	_____	_____

2. Please record the date and time of your observations.

3. How has the Summer Triangle moved since Homework 1?

4. Look carefully at the position of the Big Dipper and Cassiopeia. How have they shifted since Homework 1?