

ASTR 4880/PHYS 5880 — Fall 2008 – Homework Assignment 2

Due: November 19, 2008

For this homework, you will need a copy of *Stellarium* (<http://www.stellarium.org>) or *Starry Night* (<http://www.starrynight.com>) and will need to know how to operate it.

Each of you is assigned a star as follows.

Table 1: Star for Homework 2

Student	Star	RA (2000)	Dec. (2000)
Davidson	α (alpha) Cet	03:02:17	+04:05:22
Gray	α Hya	09:27:35	-08:39:31
Harrod	γ Ori	05:25:08	+06:20:59
Matteson	β (beta) Ori	05:13:42	-08:12:06
Norton	ϵ (epsilon) Ori	05:36:13	-01:12:07

For your star, use the software to determine the following. Provide screen shots or equivalent documentation to support your answers.

1. The latest date of the year when the star is at an airmass $X \geq 2$ for at least 1 hour after the beginning of evening “spectroscopic twilight” ($z_{\odot} = 102^{\circ}$).
2. The earliest date of the year when the star is at an airmass $X \geq 2$ for at least 1 hour before the beginning of morning “spectroscopic twilight” ($z_{\odot} = 102^{\circ}$).
3. The number of hours during the night when the star is at $X \geq 2$.