

29:52 Exploration of the Solar System
Homework Assignment #1
February 1, 2008

1. Using methods described in the book and class, measure the angular width of Slater dorm as seen from the west steps of Old Capitol.
2. Go outside at 7PM on a clear night in the next week. Get yourself oriented (streets in the central part of Iowa City run EW and NS). Find the planet Mars, and *roughly* estimate its azimuth and altitude angles.
3. The first test in this class will be on March 5. What will be the right ascension and declination of the Sun on that day? What constellation will the Sun be in? You can do this either with *Starry Night* or with the SC1 chart, but be sure you know how to do it with the SC1 chart.
4. What time will Venus rise on Sunday, February 3? This is a good one for *Starry Night*.
5. You have won a *Daily Iowan* contest, and the prize is a Pacific cruise! You get packed and leave on the ship from San Diego for the trip to Hawaii. A few days later, the captain has to admit that the navigator of this ship is a complete nincompoop (having failed “Exploration of the Solar System” while in college), and has no idea where the ship is located. For the last several nights, you have noticed a bright star rise, transit at 10 degrees above the southern horizon, then set. Fortunately, you brought your SC1 chart along with you on the trip. Consulting the chart and checking the constellations around the bright star, you identify it as Canopus, at RA (right ascension)=6h25m, and Dec (declination)=-53 degrees. You immediately realize that you know the latitude of the ship. What is it?