

ASTRONOMY 121
HELPFUL HINTS FOR SECOND MIDTERM (7 APRIL 2008)

Coverage: The midterm will cover material concerning *spacecraft orbits; science & technology; the structure of matter, atoms, and spectroscopy; the systematics and formation of the solar system; telescopes; and the Earth, Moon, Mercury, Venus, and Mars* in the lectures and textbook. That is, all lectures from Feb. 27 through April 2 and the following reading assignments: Study Guides 8 (last half) through 17 (including Supplements II & III); Seeds textbook chapters 19 through 22. (Seeds chapters 6 and 7 were optional reading.)

Emphasis: The emphasis will be *weighted toward the lectures/Study Guides*, but you should read the textbook as well. Any topic which was given prominence in both the reading and the lectures is a good candidate for exam questions.

Style: This exam will be very similar to the first exam: mainly objective (true/false, multiple choice, fill-in), with a few brief answer (3-4 sentences) questions (see the "sample questions" for the first exam on the home page). [I am not posting new "sample questions." Those were intended to give you a feel for the *style* of questions I ask, not the content. For hints on content, see below and on the reverse.]

You must answer objective parts of the exam on a scantron (bubble) sheet. **Be sure to bring a #2 pencil with you.**

Review: There will be a question-answer session covering the material on the exam on **Friday, April 4 at 3 PM in Clark 107**. Please come prepared with questions.

Things to Study:

All the *reading assignments*.

All the relevant *Study Guides and your lecture notes*. Study guides covered by the exam are numbers 8 (last half) through 17.

The sections at the end of each chapter titled "*Summary*," "*New Terms*," "*Review Questions*," & "*Discussion Questions*." The "*Problems*" are mostly more difficult or involved than is appropriate for the exam. You are not responsible for materials under "*Critical Inquiries for the Web*" or "*Exploring TheSky*."

Key topics on the reverse of this sheet

Things to Ignore:

Numerical values of quantities such as Mars' mass, the exact percentages of different gases in the planetary atmospheres, and so forth. However, you should be familiar with the *relative scales* of quantities we have discussed in class. For example: Mars is about half the diameter of the Earth and has an orbital period about twice the Earth's. You should know how to put the material into *quantitative perspective*.

Tabulated material, such as the details in the "Earth Celestial Profile" on p. 479.

Specific historical *dates*, except to be able to place the progress of scientific thought into context.

War of the Worlds (not assigned yet).

Details of the various minor spacecraft missions sent to each planet. But you should know what the more important missions (e.g. Apollo, Magellan, Viking) contributed to our astrophysical understanding of the solar system.

Names of topological features on the various planets (e.g. Olympus Mons, Aphrodite Terra, ...)

