

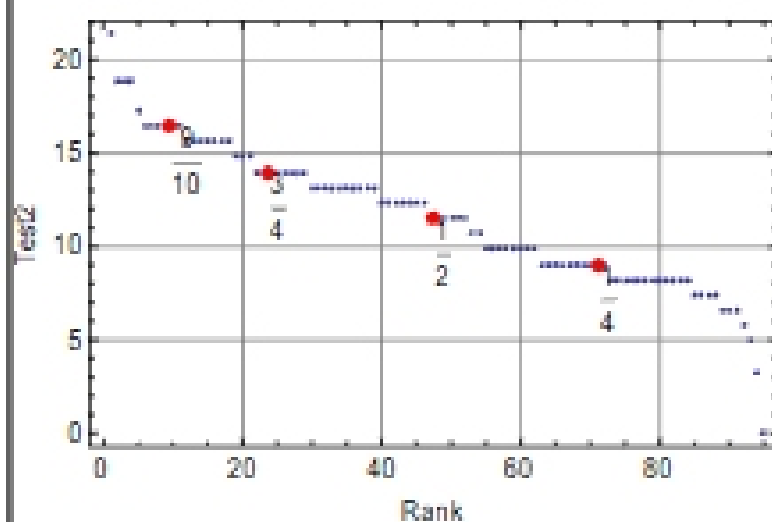
## Hubble's Law; Test 2–27 Oct

- Test 2
  - Answers
  - Lessons
- Intro: What are galaxies?
- Friday is start of Hubble's Law and Big Bang.
  - Essential class
- No pre-class questions for Fri.
- Astronomical Horizons
  - Thurs, October 28, 7:30, Abrams Planetarium
  - Mars Meteorites: Rock Messengers from the Red Planet
  - Prof. Michael Velbel

10/27/2010

AST 210, Fall 2010

Test 2: Average: 11.5 (50%)  
 Test 1: Average: 75%



Aut 2010 F2010

- Answers: Link T2 on syllabus on angel
- Grade is on angel
  - Report>Report Setting
  - Choose "Grades"
  - Overall % (Course grade)
    - Eg., 90% (4.0)
- Course grade
  - Test 1 is weighted 17% and Test 2 46% to make tests count same as all tests at end of course.
  - Average is 3.0
- 50% of grade is in the future.

## Test 2, Q1

- Lost without knowing
  - What is an H-R diagram?
  - Where are dwarfs & giants on H-R diagram?
- Main ideas
  - How are dwarfs in an old and new cluster different?
  - Hot-plate model.  
 $L = R^2 T^4$  What are the two physical parameters that determine location on H-R diagram?
  - Conversion between luminosity & magnitude.

10/27/2010

AST 210, Fall 2010

## Test 2, Q2

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Background           <ul style="list-style-type: none"> <li>– Hot plate model<br/> <math>L = R^2 T^4</math></li> <li>– Flux depends on distance.</li> <li>– Walter Adams' discovery of a white dwarf.</li> </ul> </li> <li>• Clues           <ul style="list-style-type: none"> <li>– Temperature same.</li> <li>– Star B is 15 mag fainter than star A.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Questions           <ul style="list-style-type: none"> <li>– Do Walter &amp; Balter have the same information? If so, then I can reason as Walter did. If not, I cannot reproduce the same arguments.</li> </ul> </li> </ul> |
|--|---|

10/27/2010

AST 210, Fall 2010

## Test 2, Q3

- Main ideas
  - Kepler's Laws
  - Newton's realization.
  - K's 3<sup>rd</sup> Law as amended by Newton.

10/27/2010

AST 210, Fall 2010

## Test 2, Q4

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Main ideas           <ul style="list-style-type: none"> <li>– Parallax. Angle of a star changes over the year.<br/>Conversely, what motions are not due to parallax?</li> <li>– Angle=Baseline/Distance</li> </ul> </li> <li>• Learn from doing homework           <ul style="list-style-type: none"> <li>– Do the problem.</li> <li>– Afterwards               <ul style="list-style-type: none"> <li>• Recapitulate how you did it.</li> <li>• What did you learn?</li> </ul> </li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Bad practices           <ul style="list-style-type: none"> <li>– If it looks sort of like a duck, it must be a duck.</li> <li>– Find a formula with some of the same symbols.</li> <li>– Find an example and use the same numbers.</li> <li>– Balter is the same as Walter.</li> </ul> </li> <li>• Good practices           <ul style="list-style-type: none"> <li>– What is the main idea?<br/>Write it in your own words.</li> </ul> </li> </ul> |
|--|---|

10/27/2010

AST 210, Fall 2010