

Astronomy 2110

Final Project

Spring 2024

Due: May 2, 5:00pm

The final project for the class will be the creation of a fictional extrasolar planet along with a report on its characteristics.

The Planet:

- 1) Not based on a known planet (in our solar system or elsewhere).
- 2) Should be appropriately colored using paints, markers, etc.
- 3) Needs to be placed on a stand (should not roll off the table).
- 4) All quantities should be self-consistent (e.g., mass, radius and density).
- 5) Choice of 3 or 4" polystyrene ball.

The Report:

Should describe the following characteristics of the planet:

- 1) Mass in kg and Earth masses
- 2) Radius in km
- 3) Average density in g/cm^3
- 4) Length of the day in Earth days, hours, minutes
- 5) Surface gravity in m/s^2
- 6) Escape velocity
- 7) Surface temperature
- 8) Albedo
- 9) Orbital semi-major axis in AU, eccentricity, sidereal period in days
- 10) Spectral type of host star and if main sequence or giant
- 11) Atmospheric composition
- 12) Presence or absence of life (if present provide characteristics and adaptations)
- 13) Anything else of relevance

Submitting your final project:

Submit your planet and report at the beginning of class on May 2nd.

Grading:

Grading will be based on completeness and accuracy of the data sheet (35%), creativity (25%), clarity and style (25%) and presentation (15%).

Collecting your final project:

We will have a planet viewing party on May 7, from 1pm – 2pm. Refreshments will be served. You can collect your planet then. Any planets not collected will be assumed donated to UNM.