

## Homework 9

Complete Part I first, by taking notes that you will keep for yourself. (*Do not turn these in.*) Type up your answers to each of the questions in Part II and submit it in one double-spaced, Word document with your name on the top under the title. Use 12-point Times New Roman Font with 1" margins on all sides. If you have to do a calculation, solve the problem by hand on a separate sheet of paper. Then take a picture of your work and paste it into your word document in an appropriate place. When you are done upload this into the [Dropbox on Blazeview](#). If you are unable to use Word for the assignment, you may use another software package and upload a pdf instead.

### **PART I: Notes**

1. Read and take notes on the video "Space the final frontier".

### **PART II: Assignment (25 points total)**

1. Explain why Venus was not able to get rid of its CO<sub>2</sub>. (3 points)
2. Why does Mercury have such a large metallic core? (3 points)
3. What evidence is there that Uranus and Neptune experienced an extremely massive impact in their distant past? (3 points)
4. What is the asteroid belt? Between which two planets does the asteroid belt appear? (3 points)
5. What is the Kuiper belt? Where is it located? (3 points)
6. How does the moon's orbit compare to the ecliptic plane? (3 points)
7. Jupiter has an enormous magnetic field. What does that tell us about the interior of Jupiter in general? What, specifically, is the source of Jupiter's magnetic field? (3 points)
8. The larger the body, the longer it takes to cool inside. Calisto, a moon of Jupiter's, is much larger than Io. However, Calisto has a cold interior and Io has a hot interior. How can this be? (4 points)