Name: _____

Problem Set 3 (51 points)

Due Friday, September 21 at 10am

Submit Parts A-B on paper in Class or packaged with Part C on Moodle. Submit Part C via Moodle only.

Part A – Conceptual Questions (15 points)

In lieu of standard conceptual questions this week, you should use the platform "Perusall" to annotate the paper "The Mass of the Young Planet Beta Pictoris b through the Astrometric Motion of its Host Star", which was published in *Nature Astronomy* last month. We will use Perusall whenever we read science papers for this course, so be sure to bookmark it. To join the course and see the reading in Perusall, go to app.perusall.com and enter the course code FOLLETTE-RSTS5 to enroll in the course.

A guide will pop up that will walk you through the interface. The Snellen & Brown 2018 reading will be the only one that appears in the Assignments. Open it and follow the guide to learn how to annotate it. You should use the interface to highlight the most important pieces of text and to make at least 7 comments (Perusall will score your comments automatically, and will keep the top 7). There is a small (10%) automatic penalty for concentrating your highlights and comments in one part of the text instead of distributing them around, so pay attention to all parts of the article.

Pay particular attention to the figures. Comments can be comments or questions. Discuss things that you thought were interesting, are confused about, etc. You can (in fact, are encouraged to!) also reply to one another's comments and questions.

Part B – Quantitative Questions (21 points)

Write out your answers neatly or type them up. Show your work, and make sure all answers have appropriate units. Consider significant figures in reporting final answers. Each question or subquestion is worth 3 points.

1. Carroll and Ostlie Problem 3.13
2. Carroll and Ostlie Problem 3.14
3. Maoz Chapter 2 Problem 3

Part C – Computational (15 points)

See supplemental file