

# Exercise set five

## 1 Catching up

Today's a chance to catch up on a few things.

### Instructions

1. Finish exercise 5 from set 4 ("Orbit Explorer"), if you haven't already. (Don't do the very last part starting with "Now set up...").
2. Make new planet observations for your long-term project. Try to use stars close to your planet. Note the addition to the assignment: also measure the angle between the planets.
3. Plot the positions of the planets based on your new observations. See if the separation you measured between your planets matches what you end up with on your chart.
4. If you're not getting good results, you might want to try re-calibrating your "measuring devices". Either repeat the measurements with ruler and string, or calibrate based on known separations in the sky (which you can measure off your chart).
5. Do the following exercise.

## 2 Telescope observing I

### Materials

telescope set up, lab notebook

### Instructions

*BE CAREFUL ON THE ROOF: there is ice!!!* There is only one telescope available, so share it nicely.

Observe Mars, Saturn, and the Moon through a telescope. Look at at least one of the objects with three different eyepieces.

**Note the focal length of the eyepiece that you are using for each.**

1. Describe what you saw. Feel free to sketch.
2. What surprised you?
3. What's different about the different objects?
4. What's different about the different eyepieces?