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Name (Last, first)

Astronomy 110 Homework 9:

Homework due by 11.20 am April 13th 2005

Imagine that the Solar System had a binary star system at its center, instead of the single star, called Sun, that we have now.

The two stars in the binary system are called Bun and Fun.

Bun has the same mass as our Sun, while Fun has half the mass. Both are “main-sequence” stars.

They revolve round each other in circular orbits and are always 0.3 astronomical units apart.

1. Describe what you would see when you looked towards the center of the Solar System in the middle of the day.

2. What changes would you notice from day to day and from month to month?

3. List some of the other interesting ways in which life with this binary system might be different from life with a single Sun.

Use your imagination.

Hints: think about sunrise & sunset, seasons, eclipses, distance from Earth to Bun.

If you want to use a word-processor, you can submit a printed answer instead of this sheet. Remember to include your name.