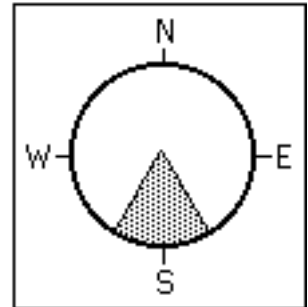


## Where Are They Now? An Investigation Of Planets, Constellations, and Stars

Introduction - Astronomers use a program such as the one you are about to use. It allows them to locate the position of stars and planets without having to go through laborious calculations. You will be finding the location of constellations, information about stars, and seeing what was in the sky on the night you were born.

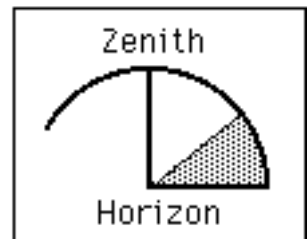
How to use MPjAstro software. Double click on the MPjAstro icon on the desktop to open the program. On the right side of the screen you will see the following tools.

**Direction Observer is Facing** - The wedge-shaped area of the circle indicates the direction the observer is facing. (South, in this illustration)



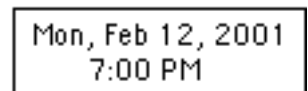
**To change direction**, click once inside the circle. In the **Chg Directn** window at the bottom of this area, use the navigation buttons to cause the direction of view to change. Clicking on the right arrows will cause the direction of view to rotate clockwise. (It would shift towards the west in your illustration.)

**Angle Of View** - The wedge-shaped area indicates where the observer is looking, relative to the horizon.



**To change the angle of view**, click once inside the arc, between the zenith and the horizon. Use the navigation buttons in the Change View box to change your angle of view above the horizon.

**Date/Time indicator** - This will show the current date and a pre-selected time.



**To change the date/time** - click once inside the box. Then in the Change Time box below, use the buttons to change the date or time. The right arrow buttons will move date or time ahead.

To set the date or time to **another month or year**, go to the **SETUP** menu on the Menu Bar at the top of the screen and pull down to **Setup**, or type **⌘** (command) and **D**. In the Setup window, select the information to be changed by highlighting it, and type in the month / day / year that you need. Click on **OK** (NOT "Save Setup") to exit.

To locate a constellation, planet, or star, go to **Edit** on the Menu Bar and pull down to the one you need. In the side menu that will open, drag down to the name of the constellation, planet or star, and **unclick**.

1. Find the constellation **Canis Major** (the Big Dog).

Draw the constellation and include the names of the stars where they are given. To get more information about a single star, move the green cross-hairs over it and click once. Information about the star will be show in the box at the lower right of the screen.

What is the magnitude for Sirius?

What is its spectral type?

What is its color?

What is its "Claim to Fame"?

2. Find the constellation **Orion**. (the Hunter)

Draw the constellation and include the names of the stars where they are given.

What part of the sky is Orion in at 9 pm?

What magnitude is Betelgeuse (Beetle juice)?

What spectral type is it?

What color star is it?

What does 4 AU diameter mean?

3. Find the constellation **Ursa Minor** (the Little Bear or Little Dipper).

Draw the constellation and include the names of the stars where they are given.

What part of the sky is Ursa Minor in at 9 pm?

What kind of star is Polaris?

What color is it?

Why is it called the "Pole Star"?

4. What planets are visible at 7 pm tonight?

5. When (what date) is the next meteor shower due?

6. Which meteor showers have the highest per hour rates? How many per hour? What dates?

7. What planets were visible on the night you were born?

8. What direction do the stars appear to move across the sky?