Exercise 04: Time Flow

One of the nice things about Starry Night is that you can change the rate at which time flows. Just like nature programs use time-lapse photography to show processes which take place too slow to see in real time, you can speed up or slow down time to get the best possible views of an astronomical event.

Instructions:

Multiples of Real Time

1. Press the **Home** button.
2. Press the **Stop Time** button.
3. The rate of time flow is shown immediately to the right of the date and time in the toolbar. Clicking the arrow opens a pull-down menu that displays a list of possible time steps. Select 300x from the list.
4. Press the **Run Time Forward** button. A time step of 300x will cause the time in Starry Night to advance at 300 times the real rate of time flow.
5. Press the **Stop Time** button when night time falls.

Discrete Time Steps

6. Click the arrow on the **Time Flow Rate** control. In the pull-down menu, select **Days**.
7. Press the **Step Time Forward** button a few times.

Question: What changes do you see in the sky when you press the **Step Time Forward** button?

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8. Click the arrow on the **Time Flow Rate** control again. In the pull-down menu, select **Sidereal Days** (Sidereal d.).
9. Press the **Step Time Forward** button a few times.

Question: What changes do you see in the sky when you press the **Step Time Forward** button? How does it compare to the previous question when **Days** was selected?

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On your own time challenge: What is the difference in time between a sidereal day and a day? How can you explain the different between the two?