

# PS:Earth Science

## Star Trails Lab

©2004 by Steve Kluge

Name \_\_\_\_\_

Period \_\_\_\_\_

### Getting Started:

Open a browser window and go to

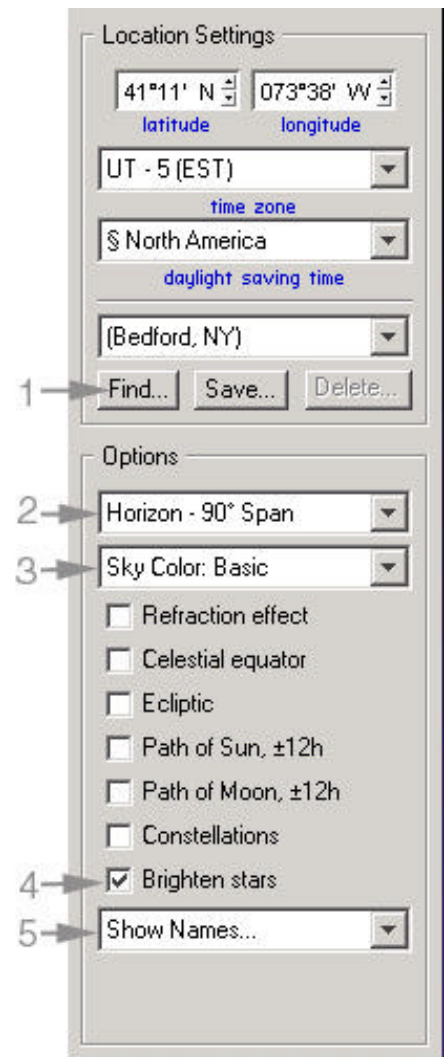
<http://www.skyviewcafe.com/>

Click “Use the Skyview Café interactive planetarium now...”

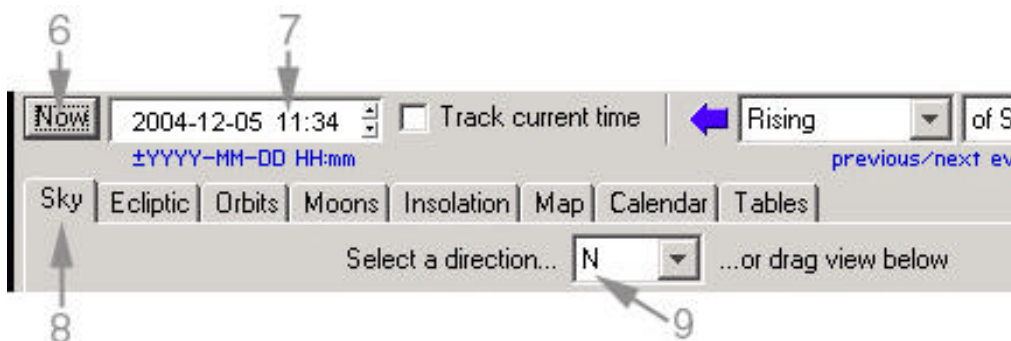
### Procedure:

The screen shot to the right shows the right hand side of the Skyview planetarium display. The numbered arrow on the image correspond to the numbered steps below.

1. Use the “Find...” feature to locate Bedford, NY. Doing so will set the latitude, longitude, time zone, etc. You may have to set the “daylight saving time” to North America.
2. Set the view option to “Horizon – 90° Span”
3. Set the Sky Color to “Sky Color: Basic”
4. Click off all options except “Brighten Stars”
5. Click “Show Names...” and select “Mark One Specific Object...” and select “Polaris” from the menu that pops up, and click “OK”



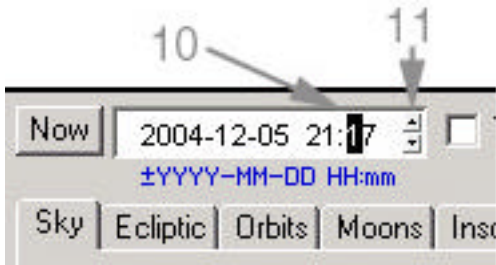
The screen shot below shows the upper left hand corner of the Skyview planetarium display. Follow steps 6 through 9 below to set the time and view on the display.



6. Set the date to “Now” (upper left hand corner of screen)
7. Set the hour to 9 PM or so (21 hours!)
8. Make sure you’re viewing the “Sky” tab (click it if you’re not)

9. Use the drop down menu to select the direction “N”

Now you’re ready to see some pretty cool stuff.....



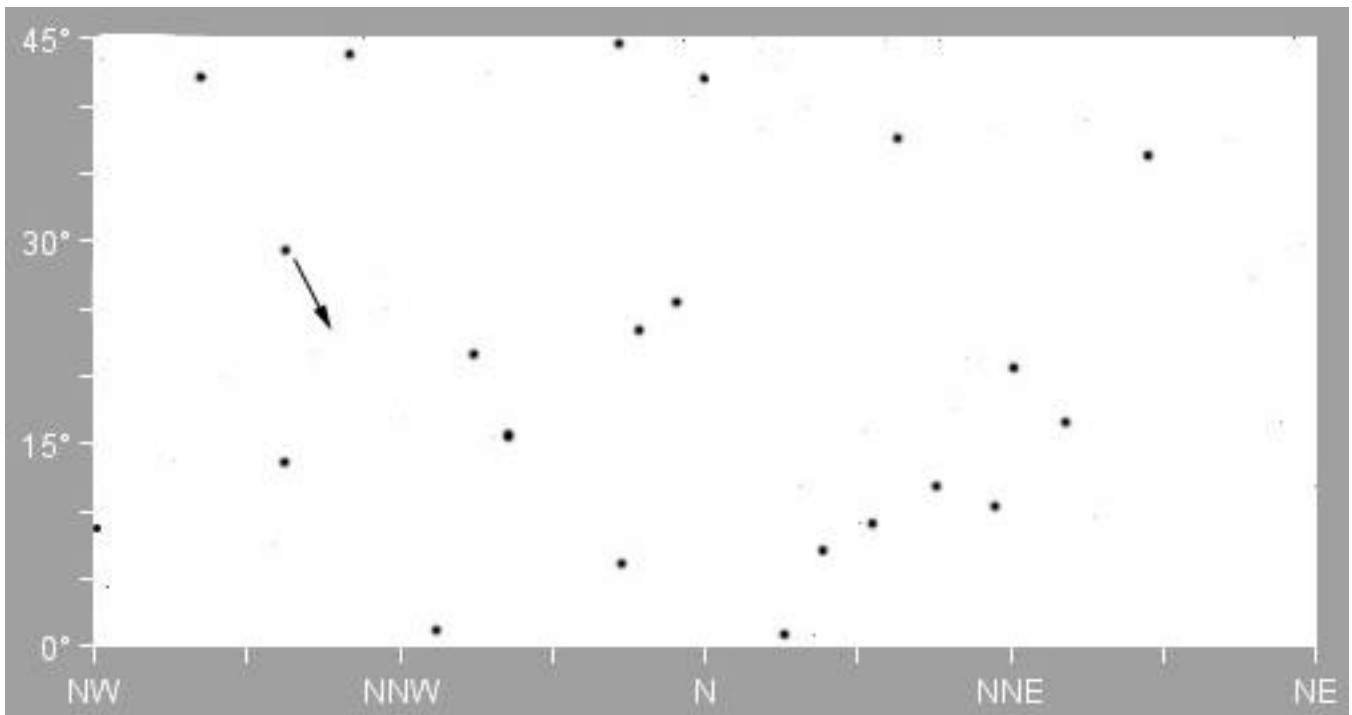
10. Click on the 10 minute digit to highlight it.

11. Click and hold the up arrow in the right hand corner of the time window . Doing so will animate the sky view in 10 minute intervals.

Observe the motions of the stars as you animate the display, and answer the following questions:

A. What star does not move (or just barely moves)? \_\_\_\_\_

B. On the diagram below, the black dots are stars. Label Polaris, and use half inch long arrows to show the direction the other stars in the diagram will move in the course of the night. One star is done for you.



C. Describe the motion of the stars in our northern sky.

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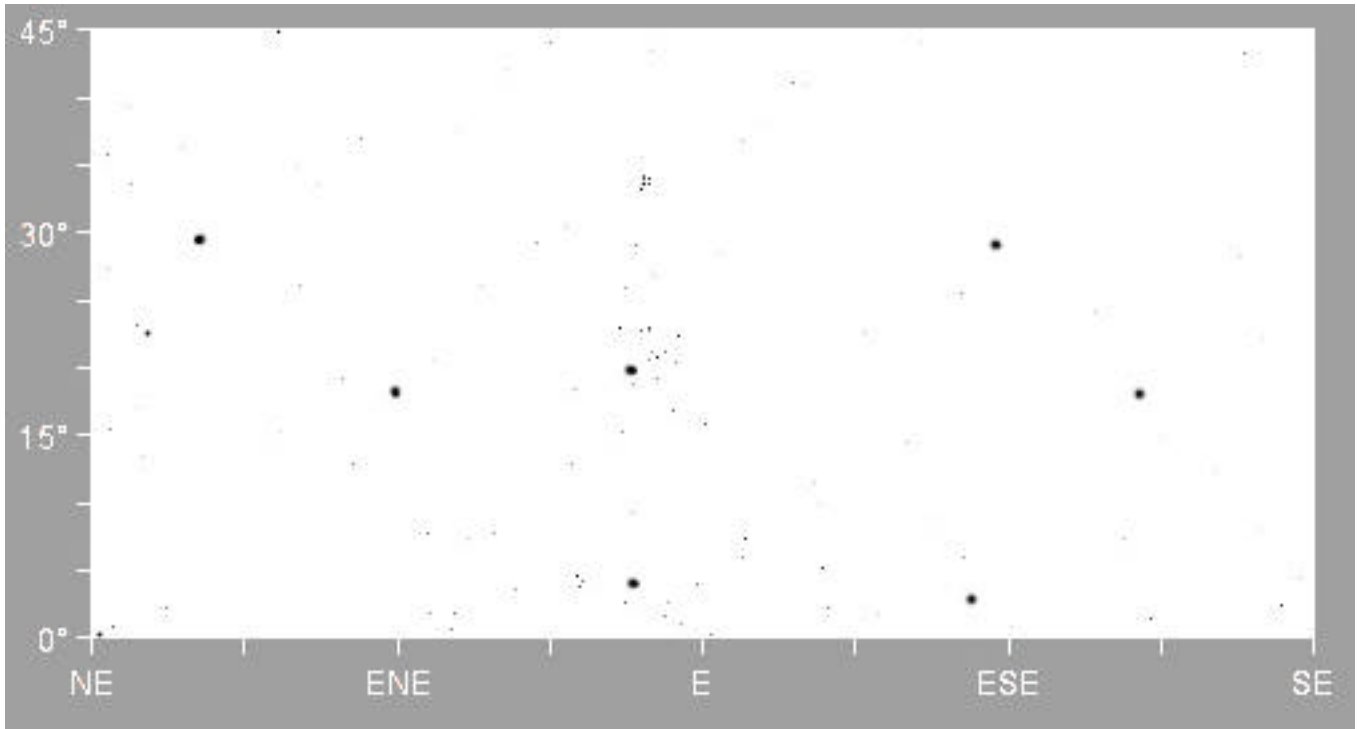
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Reset the direction to “E” (see step 9 above), and animate the display as you did in steps 10 and 11 above.

D. On the diagram below, the black dots are stars. Use inch long arrows to show the direction the stars in the diagram will move in the course of the night.



E. Describe the motion of the stars in our eastern sky.

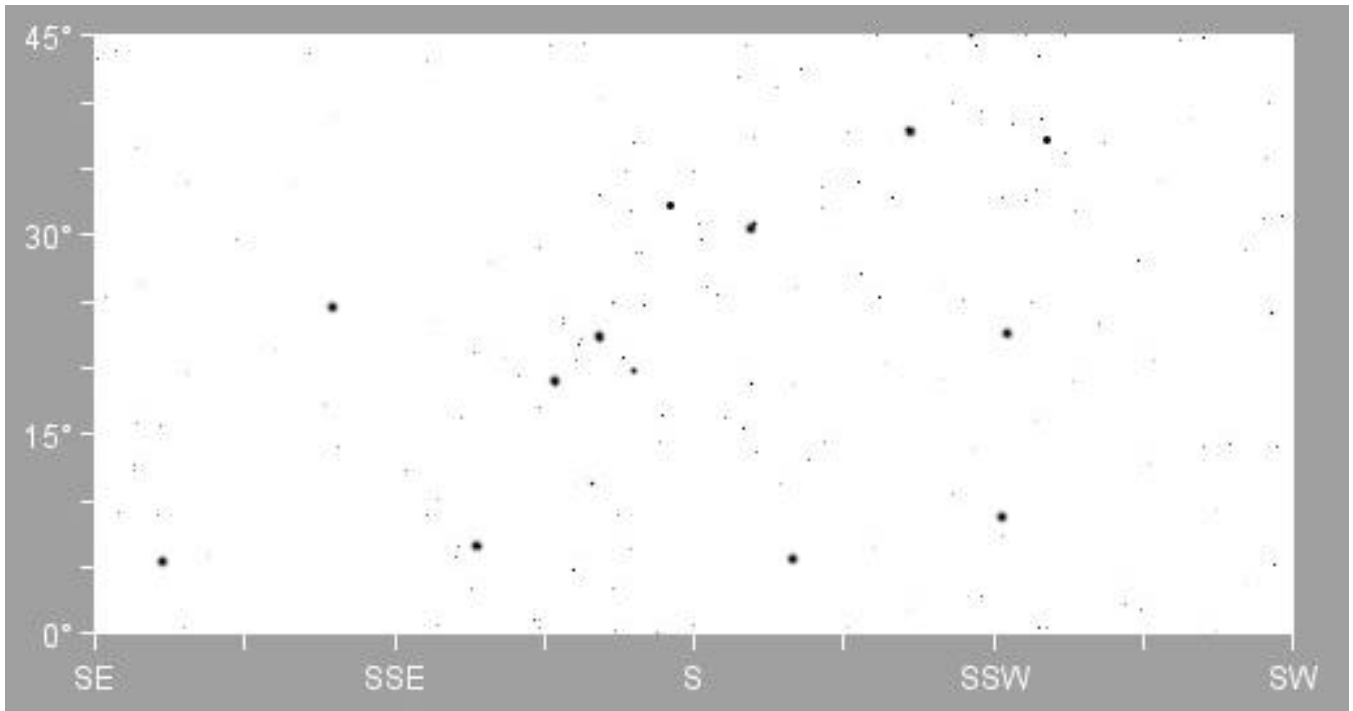
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Reset the direction to "S" (see step 9 above), and animate the display as you did in steps 10 and 11 above.

F. On the diagram below, the black dots are stars. Use inch long arrows to show the direction the stars in the diagram will move in the course of the night.



G. Describe the motion of the stars in our southern sky.

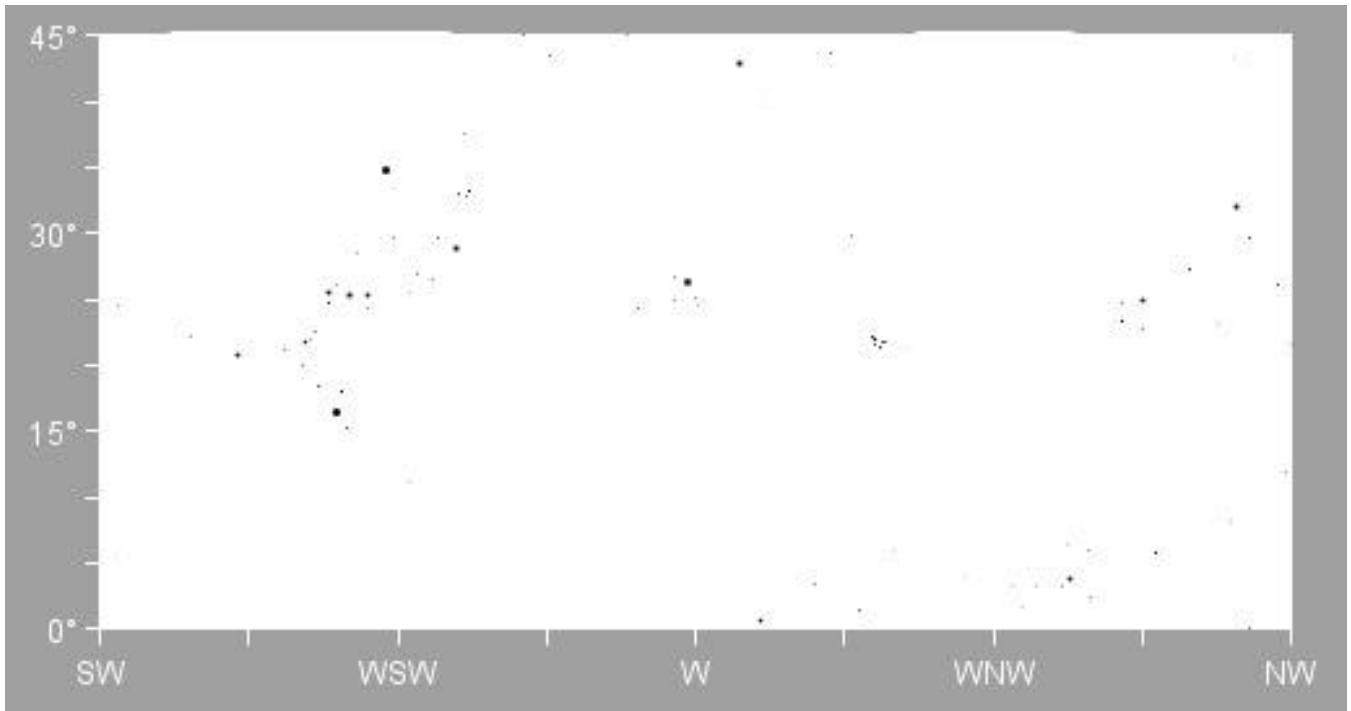
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Reset the direction to “W” (see step 9 above), and animate the display as you did in steps 10 and 11 above.

H. On the diagram below, the black dots are stars. Use inch long arrows to show the direction the stars in the diagram will move in the course of the night.



I. Describe the motion of the stars in our western sky.

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