Lecture 4

Learning Goals:
By the end of class today you should be able to …
•Describe how stars move across the sky depending on latitude
•Explain why the stars move across the sky as they do.

Reading for Today: Unit 5
Reading for Next Time: Units 6, 7

Daily Motion
•As Earth rotates, stars rise in the East, move across the sky, and set in the West.
•We see stars rise in the East and Set in the West because the Earth rotates counterclockwise (as looking down on the North Pole)

•Stars near celestial poles never set
→Circumpolar – they appear to circle around the pole
→Polaris is very close to North Celestial Pole
•Called the 'North Star'
•Useful for navigation
–True North
–Latitude

Circumpolar Stars
•Circumpolar Stars – circle around the pole – they never rise or set (they are always above the horizon)
•E.g. In BG these Stars will be up all day and all night, but will rotate around Polaris on the sky.

Using Polaris For Navigation
•As we change locations on Earth, the altitude of Polaris in our sky also changes.
•By measuring the altitude of Polaris you have also determined your latitude

Lecture 4

Height of Polaris above horizon = Northern Latitude

- At north pole –_____stars are circumpolar
- At equator –_____ stars are circumpolar
- At mid-latitudes - _____stars are circumpolar

What Does the Sky Look Like From Different Latitudes?

Equator

What does the sky look like from different latitudes?

Mid-latitudes