

Answers to selected questions in Lab #5

- (8) Summer = Sun highest at noon = day longest = more direct sunlight = hotter
- (20) Polaris must be on/near the north pole directly above the Earth's spin axis. As Earth spins, stars appear to move in circles. On the spin axis itself, ie, directly above north and south poles, there is virtually no motion, so Polaris seems fixed while other stars appear to move in circles around it.
- (25) Polaris is no longer the north star.
- (27) The new north star is due to the precession of Earth's axis, i.e. wobbles of the spin axis. Note that the Universe as a whole is quite static over a timescale of thousands of years.
- (31) The change in your location is tiny compared to the size of the Universe, so constellations change very little / do not change at all.
- (32) Enceladus's north pole doesn't point right at Polaris, so Polaris wobbles a bit more when viewed from Enceladus.