Nick Luedtke
Astro 499
Lab 1

Lab 1: Telescope Setup and Alignment

We first balanced the telescope and that went very well. We had to make some small adjustments to our first attempts of balancing. After that, we started to align the telescope. While the beginning of these steps were looking good, the latter half of the steps turned out to be more difficult than we expected. We had trouble positioning the telescope into the 90 degree position, but we corrected this by rotating it around once. Whilst adjusting the mount, we lost Polaris several time and had to find it repeatedly. Then, getting the scope to rotate perfectly around Polaris was very difficult. We finally got it to a place that was very close to perfect. We were finally able to observe and we chose these objects: Ring Nebula, Vega, Mars, and Saturn.

The hand drawn images will be attached on the next page.

a.) Ring Nebula: This is a hot supernova remnant, which has a star in the middle of it, so the gas absorbs the photons from the star and reemits them at different wavelengths depending on composition.

b.) Vega: Stars are blackbodies which emit electromagnetic radiation. Its surface temperature is about 9500 K and it emits at a peak wavelength of about 301.5 nm.

c.) Mars: Mars is actually reflecting light from the Sun.

d.) Saturn: Saturn is also reflecting the light from the Sun.