

## Astronomy Observing Project

## Observing Project Summary

Over the duration of this semester I slowly worked away at my observing project. At first, I was a bit nervous that I wouldn't be able to distinguish one star from another. However, after slowly easing myself in and making some of the easier observations such as a full moon, I gained confidence and started looking forward to my observing nights.

September and October were the months where I was able to complete the bulk of my observations. I was able to observe the required amount of constellations, which consisted of Ursa Major, Ursa Minor, Lyra and Cassiopeia, as well as their brightest stars. During this time I was also able to observe three of the phases of the moon: full moon, waning gibbous, and waxing crescent. To fulfill the deep sky object requirement I was able to clearly see the Milky Way Galaxy and the NGC 869/884 double cluster. During September and October I also observed many stars, most of which met my naked eye star component, such as Dubhe, Polaris, Vega, Schedar, Capella, and Deneb. November was a very cloudy month, but I did observe three lunar basins, namely, Mare Imbrium, Mare Serenitatis, and Mare Nubium. I finished off my observing project on December 5<sup>th</sup> by observing the big beautiful sun!

I really enjoyed doing this project for many reasons including the fact that it was homework, but that I could use it as a break and an excuse to get outside. I enjoyed that I could observe with friends and family, and that I could use my knowledge from astronomy class and share it with my observing partners! I was thrilled that during my observing project I was able to explain the phenomenon of a shooting star to my observing partner—that it was actually space debris entering our atmosphere.

Overall, I found it a very interesting project and I will definitely continue to observe the night sky. I hope that someday soon I will have the opportunity to observe the beautiful wonders of our solar system through a telescope!

## Observation Pages Colour Codes

### **Constellations and Their Brightest Stars:**

1. Ursa Major- Dubhe & Merak
2. Ursa Minor- Polaris & Kochab
3. Lyra-Vega
4. Cassiopeia- Schedar

### **Phases of The Moon:**

1. Full Moon
2. Waning Gibbous
3. Waxing Crescent

### **Lunar Basins or Impact Craters:**

1. Mare Imbrium
2. Mare Serenitatis
3. Mare Nubium

### **Deep Sky Objects:**

1. The Milky Way Galaxy
2. NGC 869/884 (Double Cluster)

### **Double or Multiple Star:**

1. Polaris (Multiple Star)

### **Naked Eye Stars:**

1. Capella
2. Deneb
3. Polaris
4. Vega
5. Dubhe
6. Schedar

### **Extras:**

1. "Shooting Star"
2. Orion's Belt

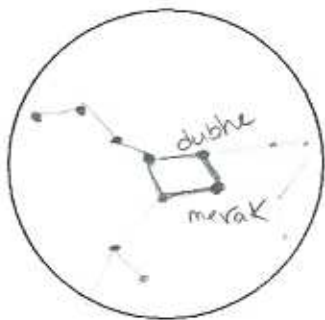
phase of the moon

Big full moon

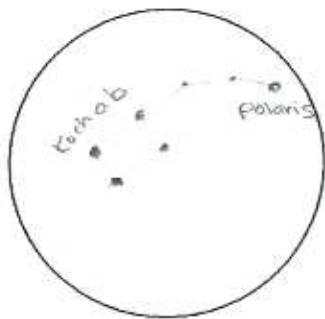
water



Subject/Position: Full moon Date/time: Sept. 8 around 11 pm  
 Observing Location: Sir Sanford Flemming Park Instrument: unaided eye  
 Observing Partners: Matt Weather: clear  
 Ashley  
 Notes: went for a quick late night swim because the water was so lit up by the moon!  
 \* this full moon is known as the "Full corn Moon"



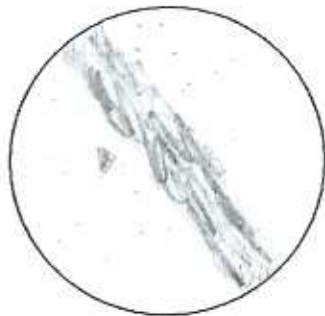
Subject/Position: Ursa major Date/time: Sept. 18 @ 11 pm  
 Observing Location: Hammonds Plains Instrument: unaided eye  
 Observing Partners: Matt Weather: clear  
 Dubhe - naked eye star  
 Notes: used skyview iphone app to double check what I was looking at. At first I only saw the big dipper, but the app helped with the entire constellation



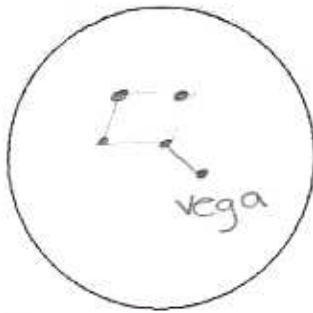
Subject/Position: Ursa minor Date/time: Sept. 18 @ 11 pm  
 Observing Location: Hammonds Plains Instrument: unaided eye  
 Observing Partners: Matt Weather: clear  
 Notes: used skyview iphone app to double check what I was looking at.  
 Polaris - naked eye star + multiple star

Deep sky object

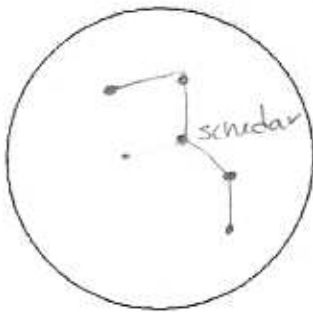
milky way



Subject/Position: The milkyway galaxy Date/time: sept. 22 10:30pm  
 Observing Location: Hammonds Plains Instrument: unaided eye  
 Observing Partners: Matt Weather: clear  
 Notes: It was neat to be able to see this and recognize it as the milky way when I would have previously thought it was a cloudy night sky



Subject/Position: Lyra Date/time: oct. 6/14 @ 9:00pm  
 Observing Location: enfield (marlee's roof) Instrument: unaided eye  
 Observing Partners: marlee Weather: clear  
 Notes: the star vega was very visible and bright!  
- used iphone app  
Vega - naked eye star

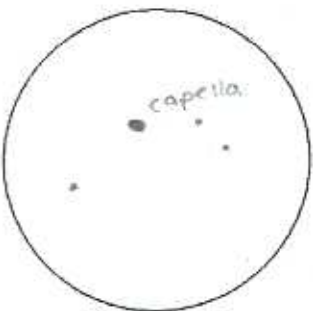


Subject/Position: Cassiopeia Date/time: oct. 6/14 @ 9:00pm  
 Observing Location: enfield (marlee's roof) Instrument: unaided eye  
 Observing Partners: marlee Weather: clear  
 Notes: schedar was very bright  
- used iphone app  
Schedar - naked eye star

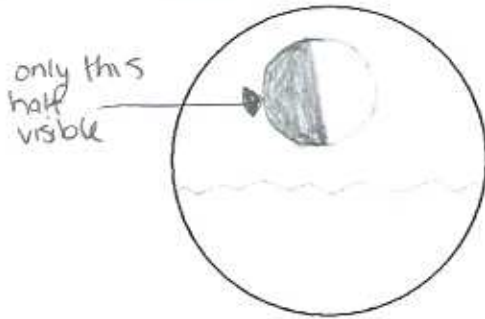


Subject/Position: NGC 869/884 Date/time: oct. 6/14 @ 9:00pm  
 Observing Location: enfield (marlee's roof) Instrument: unaided eye  
 Observing Partners: marlee Weather: clear  
 Notes: just below cassiopeia - we weren't able to distinguish the two separate clusters very easily, but it did appear brighter since there were 2

part of Perseus

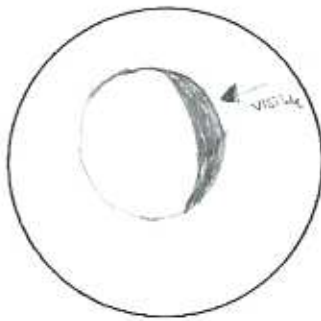


Subject/Position: capella Date/time: oct. 6/14 @ 9:00pm  
 Observing Location: enfield (marlee's roof) Instrument: unaided eye  
 Observing Partners: marlee Weather: clear  
 Notes: - used iphone app  
- very cold outside now!!  
- brightest star in auriga



Subject/Position: Waning Gibbous Date/time: Oct. 12/14 @ 11pm  
 Observing Location: Peggy's Cove Instrument: naked eye  
 Observing Partners: Matt Weather: clear

Notes: I saw this while at Peggy's Cove over Thanksgiving weekend. It was almost a third quarter moon and very orange.



Subject/Position: Waxing crescent Date/time: Oct. 26/14 @ 8:00pm  
 Observing Location: Lacewood drive Instrument: naked eye  
 Observing Partners: N/A Weather: clear

Notes: saw this while driving!



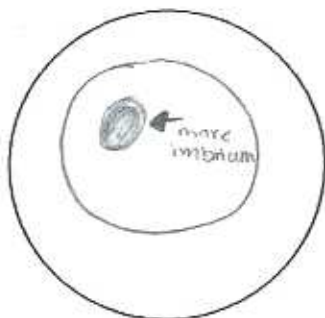
Subject/Position: Deneb Date/time: Oct. 30/14 @ 11:30pm  
 Observing Location: Hammonds plains Instrument: naked eye  
 Observing Partners: Matt Weather: clear/cold!!

Notes: In the constellation Cygnus although the other stars in the constellation were very faint! Super cold night!



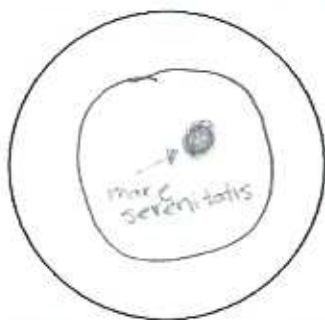
Subject/Position: Orion's Belt Date/time: Oct 30/14 @ 11:45pm  
 Observing Location: Hammonds plains Instrument: naked eye  
 Observing Partners: matt Weather: clear/cold

Notes: These stars were almost perfectly aligned and very bright



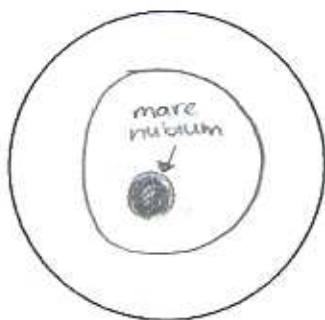
Subject/Position: Mare Imbrium Date/time: NOV. 5, @ 6:30p  
 Observing Location: Clayton Park Instrument: unaided eye  
 Observing Partners: Ashley Weather: clear

Notes:



Subject/Position: Mare Serenitatis Date/time: NOV. 5 @ 6:30p  
 Observing Location: Clayton Park Instrument: unaided eye  
 Observing Partners: Ashley Weather: clear

Notes:



Subject/Position: Mare Nubium Date/time: NOV. 5 @ 6:30p  
 Observing Location: clayton park Instrument: unaided eye  
 Observing Partners: Ashley Weather: clear

Notes:  
 when these 3 basins are together  
 they look like a face (mare imbrium =  
 left eye, mare serenitatis = right eye, mare nubium =  
 mouth)







