Introduction

Approximately 400 years ago, Galileo Galilei had revolutionized astronomy with the use of telescopes to look up into the heavens. Around the years of 1609, he in fact had improved the basic modelling of telescopes and made discoveries that challenged the original geocentric model of the universe. His findings included the Galilean Moons, which are four moons which orbit Jupiter – Io, Europa, Ganymede, as well as Callisto – which provided solid evidence that not every celestial body orbited the earth. He later also discovered the phases of Venus, which demonstrated and was further proof that Venus orbits the Sun and not the Earth. These discoveries rather supported Copernicus's heliocentric model.

Galileo also further discovered many properties of our local Moon. He noted mountains and craters, contradicting the popular belief that celestial bodies are perfect spheres as the belief followed that the heavens were perfect. His observations of sunspots also showed that even the Sun was not immutable. Lastly he also revealed that the Milky Way consisted of countless stars, which expanded our premise of the known universe.

These observations were extremely significant in changing the perspective and belief of the universe being Geocentric. This was a model in which society had full faith that our planet, Earth, was at the center of the universe and instead he proved a Heliocentric Model. Galileo essentially established the groundwork of modern astronomy by providing empirical evidence and observations which challenged the beliefs at the time.\

Motivated by Galileo's past pioneering work, our group was heavily influenced and inspired to have our own observations of certain celestial objects that he once viewed. Utilizing modern refracting telescopes which mimic Galilean telescopes, we examined Jupiter, Saturn, our Moon as well as the M31 Andromeda Galaxy. While Galileo did work with narrow field of views, and small magnifications with his telescopes, using the same type of telescope today allowed us to further appreciate his discoveries. It definitely gave us more insight and further appreciation for his contributions with the tools he once used. The following observations reaffirm the significant impact of Galileo's work and highlight his progress in our understanding of the universe.

Observations

Jupiter - Appendix A: Jupiter Observations
(INSERT TEXT HERE)

Moon – Appendix B: Moon Observations
(INSERT TEXT HERE)

Saturn - Appendix C: Saturn Observations
(INSERT TEXT HERE)

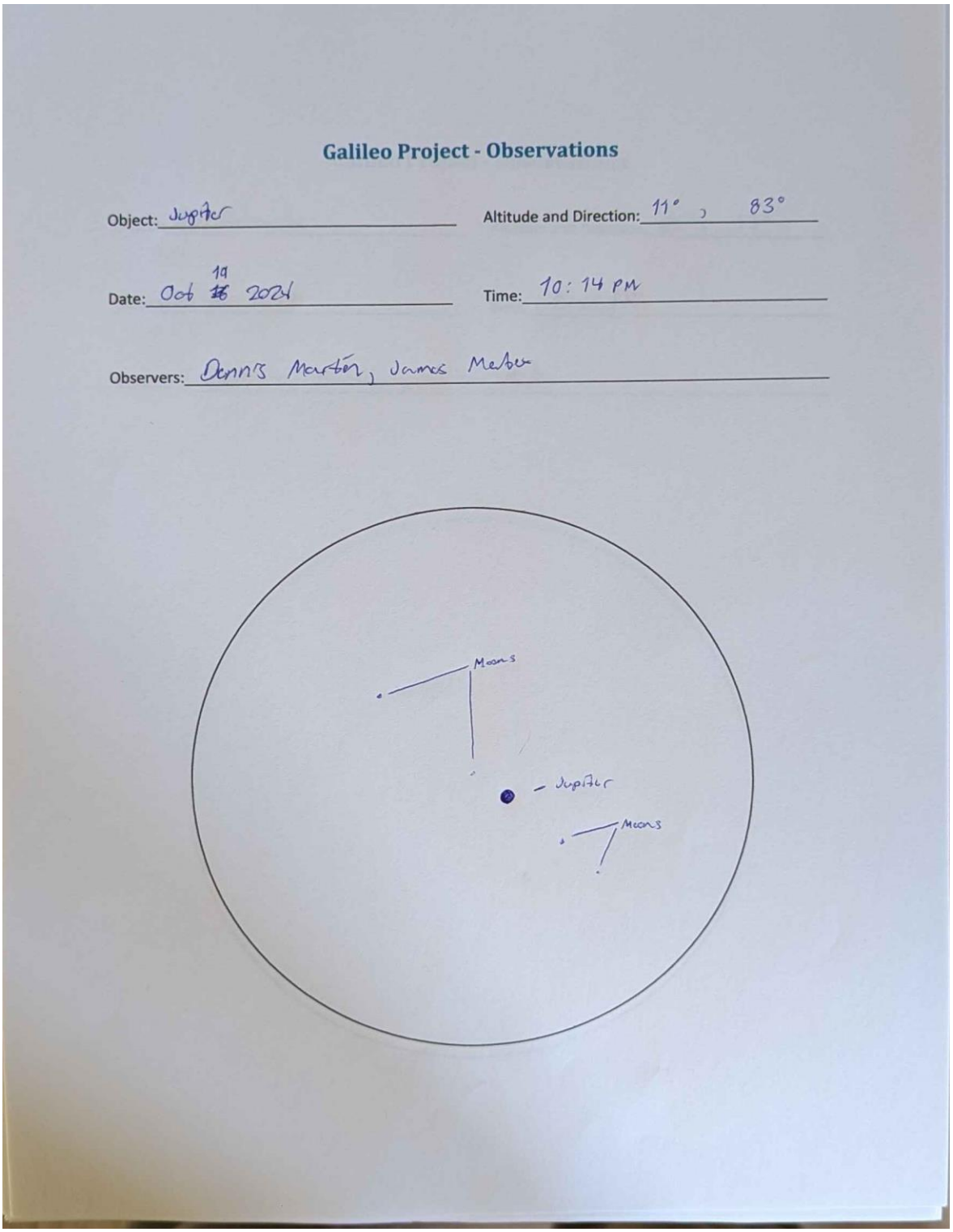
Extra Celestial Body M31 Andromeda - Appendix D: M31 Andromeda Observations
(INSERT TEXT HERE)

Discussion

(INSERT TEXT HERE)

Appendix

Appendix A: Jupiter Observations



Galileo Project - Observations

Object: Jupiter

Altitude and Direction: 11° , 83°

Date: Oct ~~15~~ 19 2024

Time: 10:14 PM

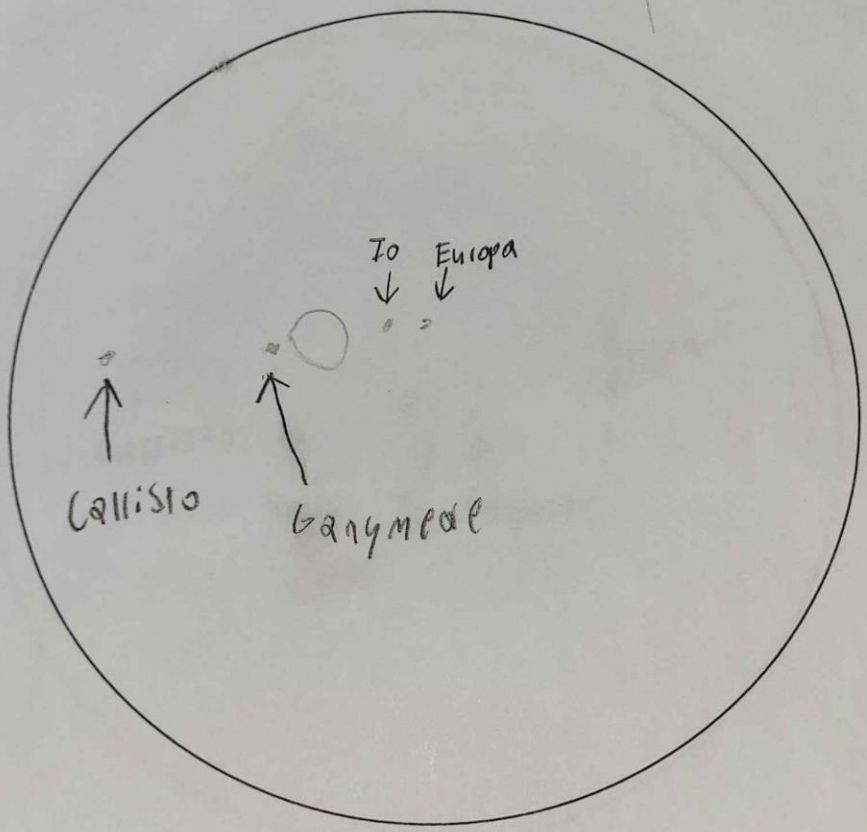
Observers: Dennis Martin, James Melber

Galileo Project - Observations

Object: Jupiter Altitude and Direction: 11°, 83°

Date: Oct 19th 2024 Time: 10:13 pm

Observers: James Dennis

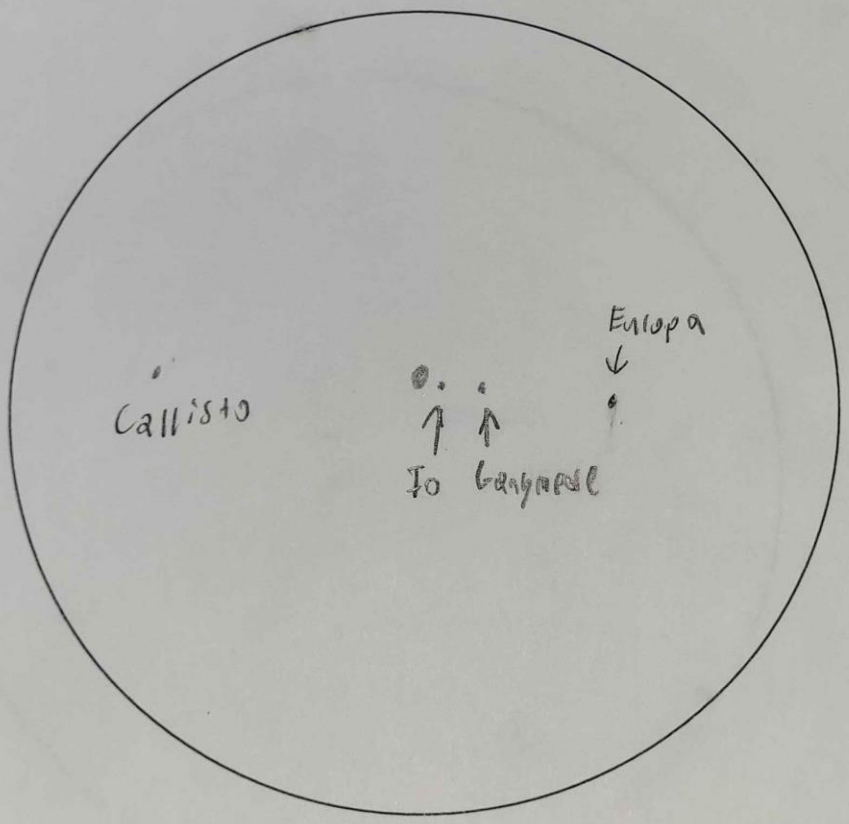


Galileo Project - Observations

Object: Jupiter Altitude and Direction: 14 deg, 73 deg

Date: Nov 2nd Time: 9:10 PM

Observers: Dennis James



Appendix B: Moon Observations

Galileo Project - Observations

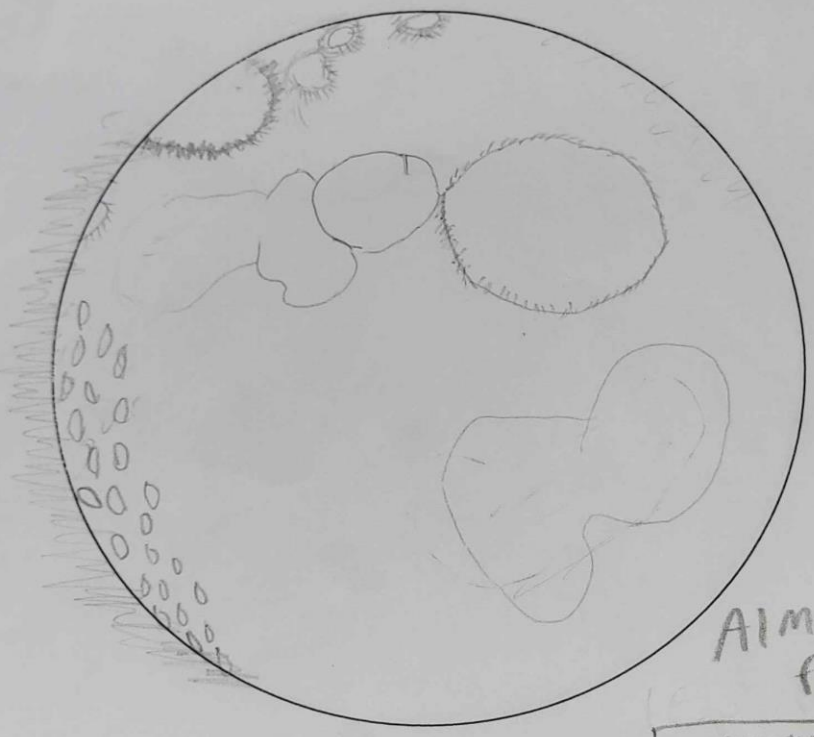
Object: Moon

Altitude and Direction: 18° 73° ENE

Date: October 19th

Time: 9:36 pm

Observers: Dennis James



Almost full moon

actually a waning gibbous

Galileo Project - Observations

Object: Moon

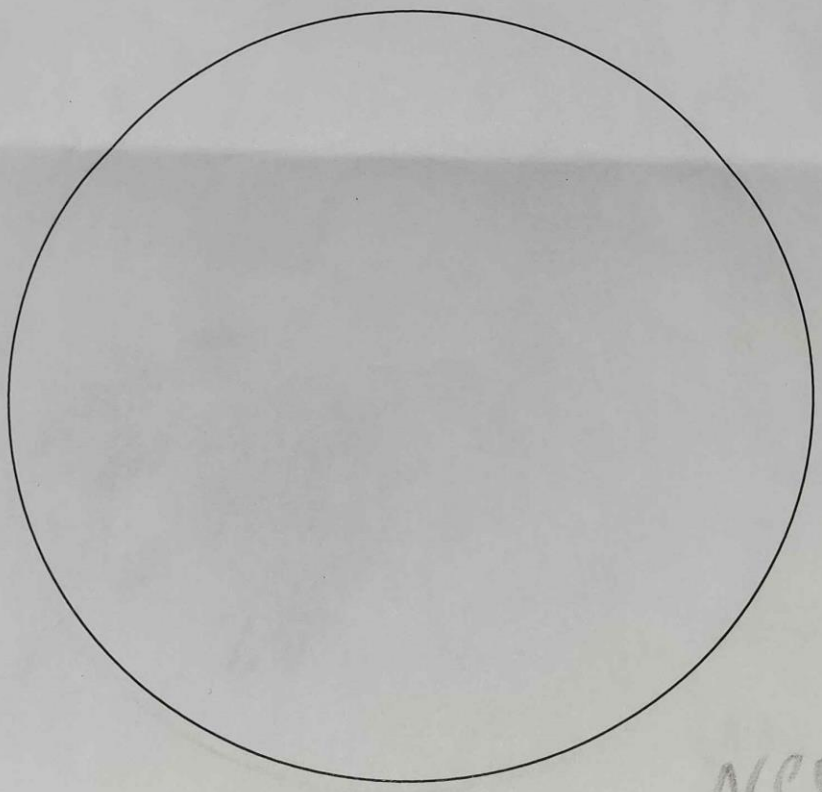
Altitude and Direction: 25° 195° SSW

Date: NOV 1ST 2024

Time: 2:00 PM

Observers: Conceptual

use This fact during your analysis of The moon's phases



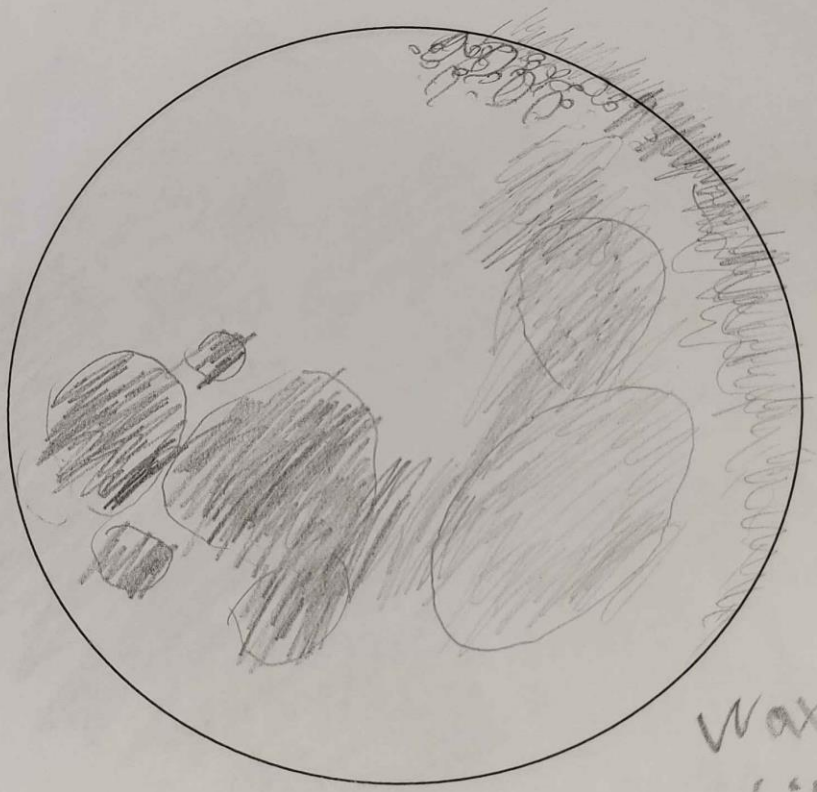
NEW MOON

Galileo Project - Observations

Object: The Moon Altitude and Direction: 44° 142° SE

Date: Nov 12th Time: 7:10 PM

Observers: Dennis James



Waxing Gibbons

Galileo Project - Observations

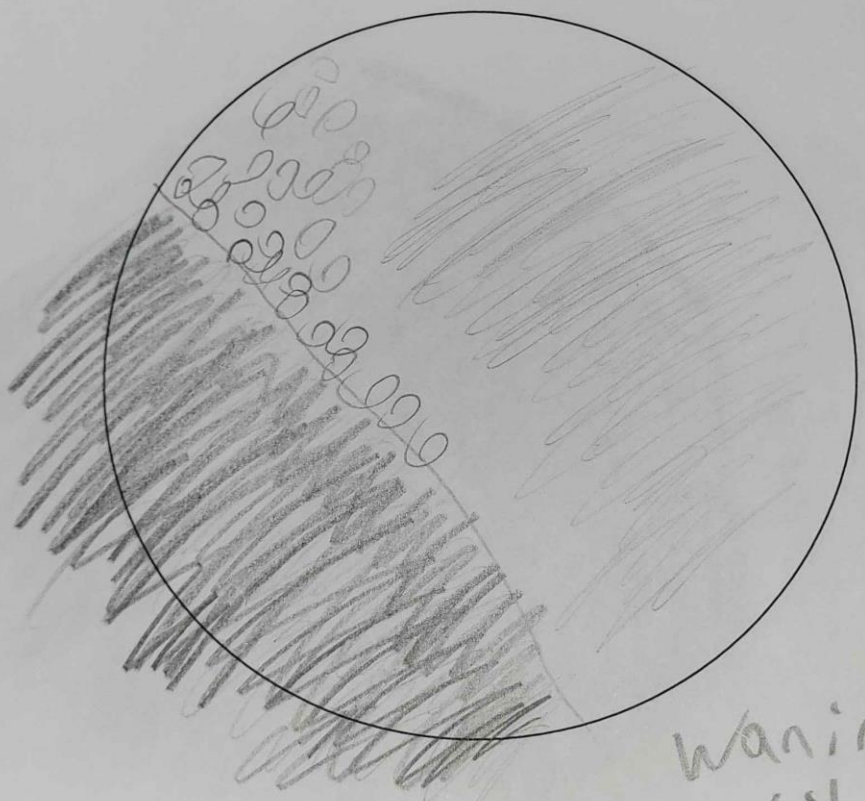
Object: Moon

Altitude and Direction: 10,7° 83,40° E

Date: Nov 23rd

Time: 12:46 am

Observers: James M Dennis



Waning Gibbous

Galileo Project - Observations

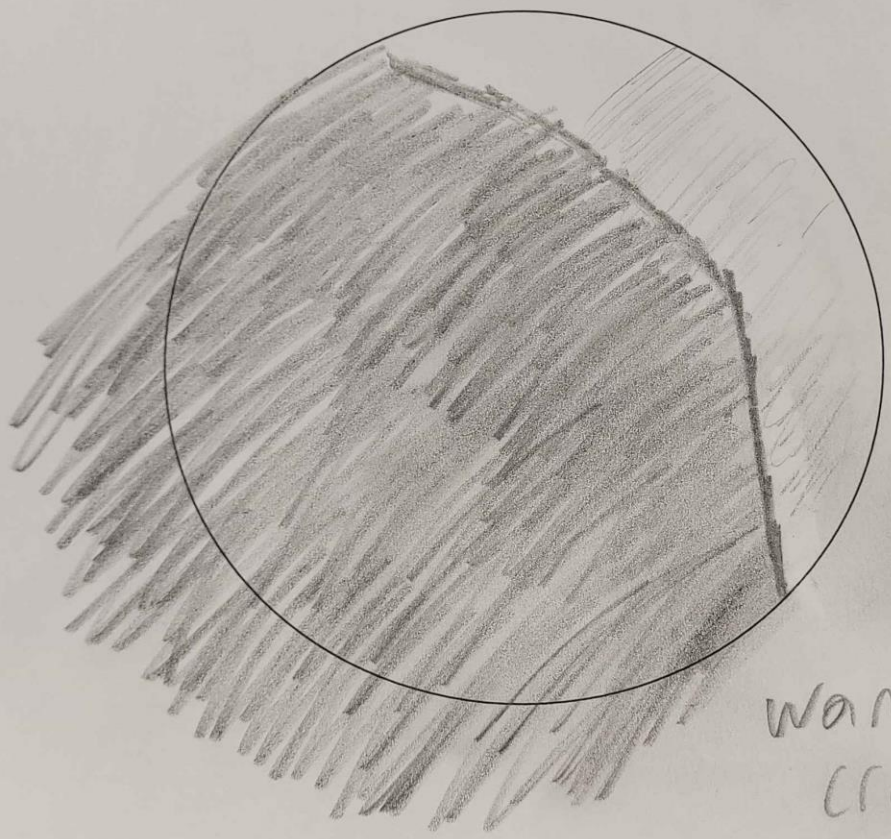
Object: The Moon

Altitude and Direction: 4° 100° ESE

Date: Nov 26th 2024

Time: 3:17 am

Observers: James Mata



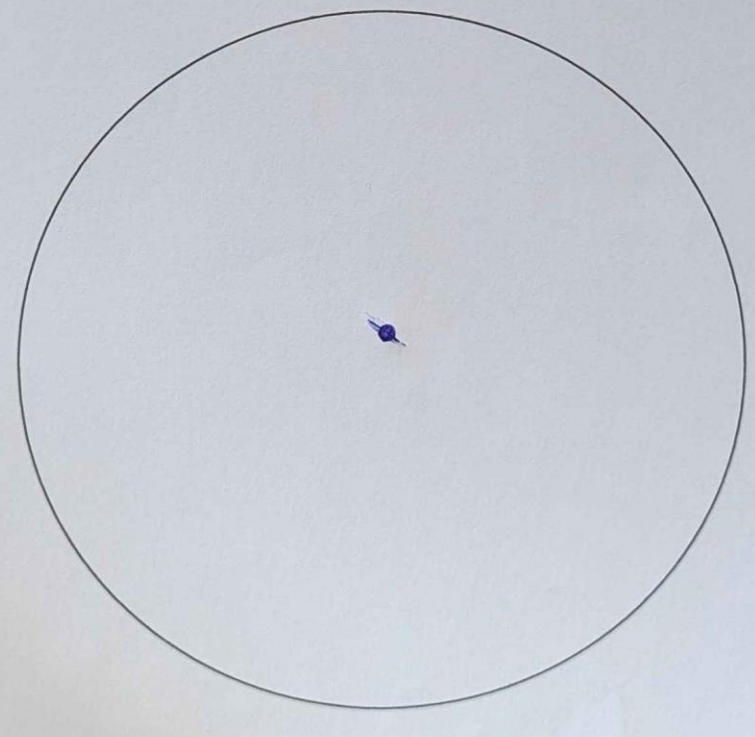
Appendix C: Saturn Observations

Galileo Project - Observations

Object: Saturn Altitude and Direction: 37°) 187°

Date: Oct ~~18~~ 19 2024 Time: 10:42 PM

Observers: Dennis Martin, James Mercer

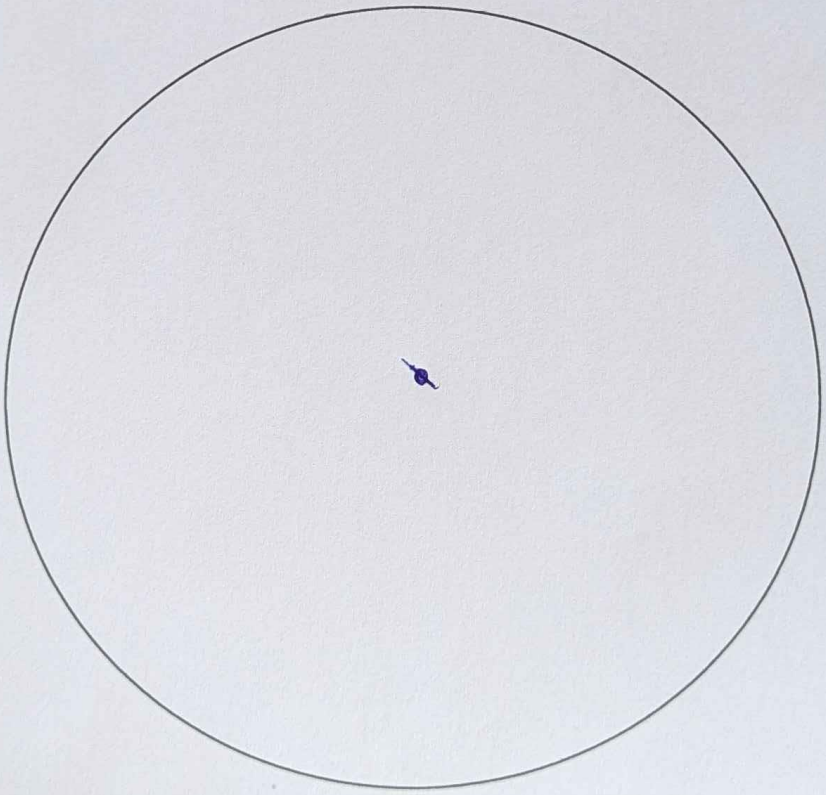


Galileo Project - Observations

Object: Saturn Altitude and Direction: 35°, 180°

Date: Oct 26 2024 Time: 8:40 PM

Observers: Dennis Meyer, James Meyer



Galileo Project - Observations

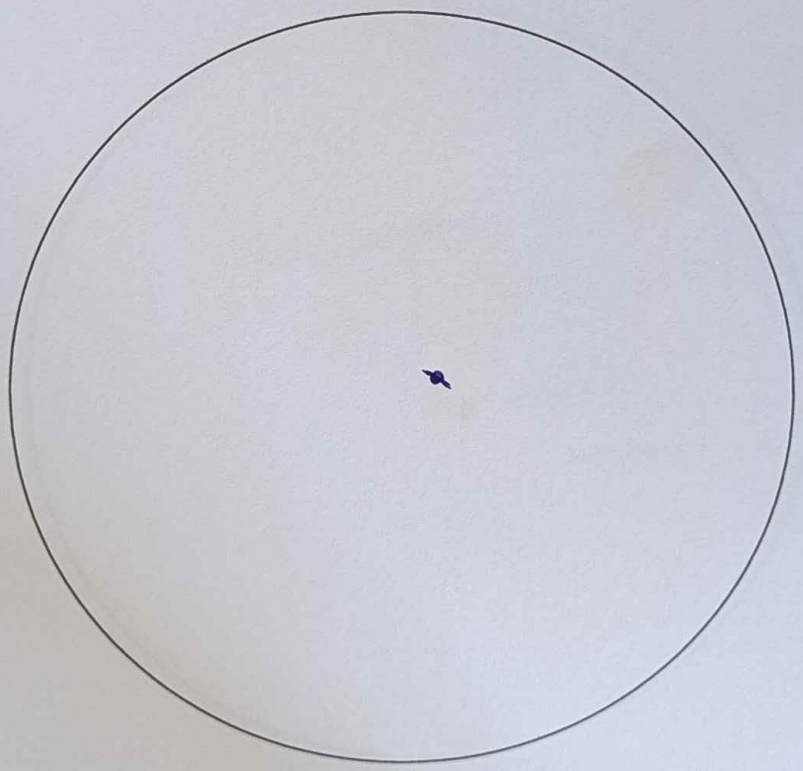
Object: Saturn

Altitude and Direction: 37°, 180°

Date: Nov 2 2024

Time: 9:30 PM

Observers: Dennis Martin, James Martin



Appendix D: M31 Andromeda Observations

Galileo Project - Observations

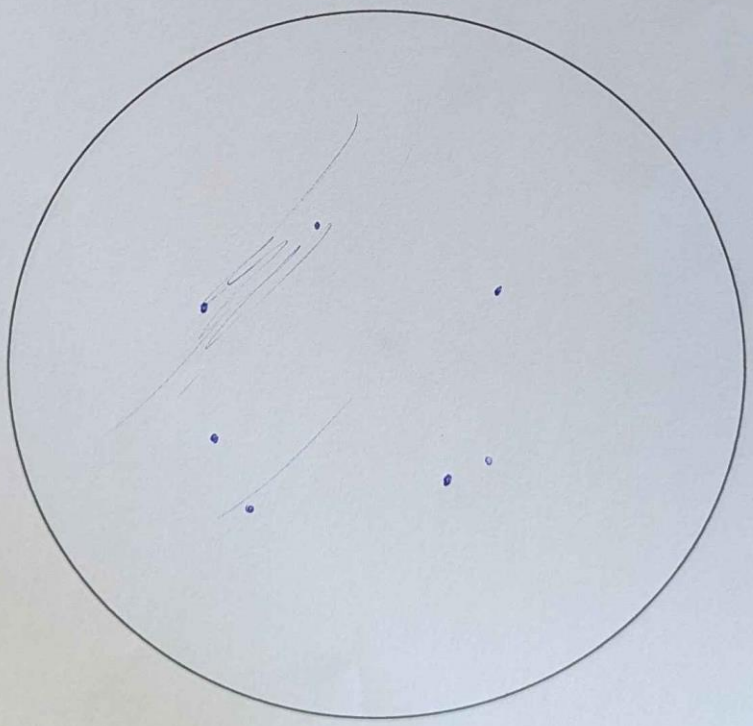
Object: M31 Andromeda

Altitude and Direction: 68°, 93°

Date: Oct 19 2024

Time: 10:08 PM

Observers: Dennis Martin, James Mather



Galileo Project - Observations

Object: M31 Andromeda

Altitude and Direction: 85°, 357°

Date: Oct 26 2024

Time: 9:00 PM

Observers: Dennis Morton, James McAra