

Title: “Astronomy 101: A Retiree’s Guide to Backyard Skywatching”

OLLI Fall, 2021

Description/Outline:

Learn the basics of practical backyard astronomy in this series focusing on the casual skywatcher. Learn how to use a star chart, locate constellations and planets, why the Moon changes phase, and how to observe meteor showers. There will be optional activities to do and observations to make on your own. There will be a session on buying a telescope and a session devoted to your astronomy questions. *No prior knowledge is assumed!*

The following topics will be discussed over the 8 weeks:

Week #1: The sky, how it’s arranged, and apparent motions

- Introduction
- The Celestial Sphere
- Latitude
- The Sky & star charts
- Apparent motions of the sky
- Ecliptic and the Zodiac

Week #2: Distance, brightness and how to find things in the sky

- Constellation review
- Coordinates in the sky
- Finding things in the sky
- Star distances
- Star brightnesses

Week #3: Observing and understanding the Moon

- Motions of the Moon
- Moon phases
- Rise/set times
- Eclipses
- Viewing the Moon & lunar features
- Occultations

Week #4: The planets and how to see them

- The “wanderers”
- Role of astrology
- Motions of the planets
- How we see them

Week #5: Comets, asteroids and meteor showers

- Comets vs asteroids
- How to see them
- Comets and meteor showers
- How to observe meteor showers and when

Week #6: The deep sky (nebulae, star clusters, and other fun stuff)

- The Milky Way Galaxy – what is it and how do we see it?
- Double stars
- Star clusters
- Nebula
- Other galaxies
- How to find and see deep sky objects
- Catalogs & observing guides

Week #7: A buyer's (and user's) guide to telescopes & binoculars

- What do telescopes do?
- Concept of "power"
- Telescopes types
- Telescopes mounts
- Things to consider
- Binoculars
- Phone apps
- Prairie Winds Observatory
- Light pollution

Week #8: Your questions about astronomy

- Your questions answered (I hope)