



Activities for the Amateur Astronomer

Amateur Astronomy is not just looking through a telescope, or taking photographs of celestial objects. There are many activities open to those interested in this most ancient of all sciences. Amateur astronomy is one of the few science hobbies where individual observers can still make scientific contributions and discoveries.

Archaeoastronomy - Study, and even visit ancient astronomical ruins around the southwest, and the world.



Asteroid Observing - There are more than just eight or nine planets in the Solar System. Search, observe, and monitor the smallest ones of which there are already thousands known. Report them to IOTA to help stave off a future Earth impact.

Astronomical Art - Create your own astronomical images based on your observations (Paintings, Modeling, Cartoons, Illustrations, or Computer Illustration or Animation.)

Astrophotography - Photograph the many interesting objects and phenomena visible in the sky: the Moon; Planets; the Sun; Sunspots; Galaxies; Nebulae; and Star Clusters; Meteors; Meteor atmospheric entry; and Aurora; etc.

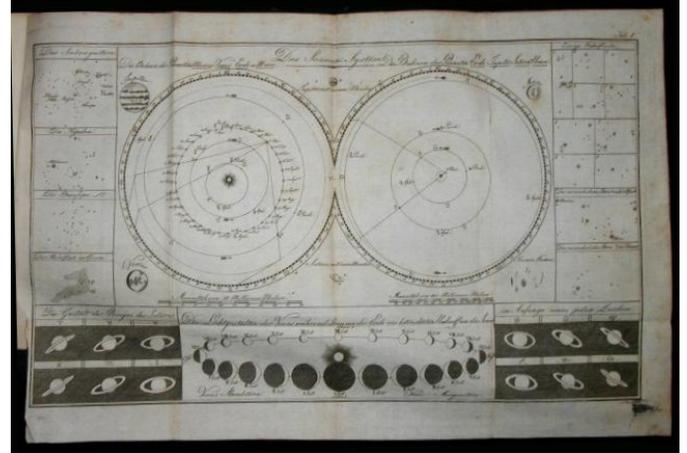


Binocular Observing - Discover the Lunar features, Constellations and various stellar and planetary objects, and "Star-Hop" your way around the sky. Learn what's in the night sky.

CCD Imaging - Trap images electronically for later computer enhancement, and analysis: Galaxies, the Sun; Sunspots; the Moon; Planets; Asteroids; Galaxies; Nebulae; Star Clusters; Stars; Comets; etc.

Celestial Mechanics - Study Newton's Laws of Motion, Kepler's and Kirchoff's Laws, and how the universe works.

Collecting Astronomy - Collect the old, different, or unusual, items that makes astronomy even more interesting: Antique Astronomy Books; Telescopes; Sun Dials and Clocks; Journal Articles; Convention Memorabilia; Star Charts and Maps; Paper Currency and Coins; Special Event Tee-shirts; Stamps; Postcards; and Meteorites, etc.



Comet Hunting - Search for, and possibly, become the first to discover, one of these elusive objects. Comets are named after those who discover them.

Computer Astronomy - Use your computer as a tool to better understand the sky and the various celestial objects in our universe. Use Image Enhancement, Planetarium, and Educational Astronomical Software. Calculate celestial events with your own computer programs.

Deep Sky Observing - Observe the Messier, Herschel, or other lists of galaxies, star clusters, or other objects. Report the results for certificate recognition from the Astronomical League (Certificates: Messier Objects, Herschel Objects, Double Stars, etc.)

Ham Radio - Communicate with celestial objects. Bounce signals off the moon, or meteor trails. Determine Earth atmospheric meteor entry altitudes and velocities.

Historical Research - Learn about how astronomy was done in the past. Study, and even do your own research, about: Early men and women astronomers and their work; Telescope Makers, and the types of equipment they designed and constructed; and Local historical observatories, such as Lowell, and their discoveries. Get involved with the Antique Telescope Society.

Light Pollution - Get involved with the problem of light pollution, the poor or improper lighting that causes difficulty with night driving, degrades home security, and of course, ruins the ability to observe and study our night skies.

Lunar Eclipses – Observe, and photograph the passage of the Moon into the Earth’s shadow from your own back yard.



Moon & Planets - Observe the Moon and/or planets and report the data to the various divisions of the American Association of Lunar and Planetary Observers (ALPO).

Occultations - Observe the eclipsing of a star or planet by the Moon, or an asteroid. Record the timings, and report your results to the International Occultation Timing Association (IOTA).

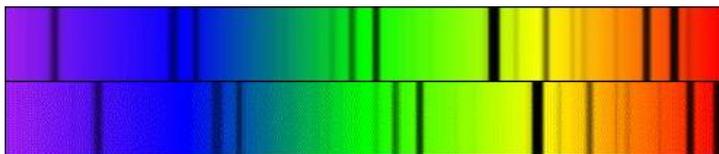
Photometry - Electronically observe and measure light variations in stars and other objects. Results may be reported to the International Amateur-Professional Photoelectric Photometry organization (IAPPP) or the American Association of Variable Star Observers (AAVSO). (Areas of amateur photometry: Stellar Variability; Lunar Transients, Solar Variations.)

Radio Astronomy - Observe the Universe in the Radio Spectrum (Solar Events, Jupiter Eruptions, Map the Milky Way Galaxy) Detect Sudden Ionospheric Disturbances [SIDs].



Solar Eclipses - Travel the globe to observe, photograph and record data about these most spectacular, awe inspiring, and probably the most beautiful of celestial events.

Spectroscopy - Observe and analyze the chemical make-up of the Sun, stars, comets, or planets with your own equipment.



Sunspot Observing – Observe and record the changes in sunspot activity and report your results to ALPO.

Telescope Making - Grind your own mirror, make the mount, and/or build your own observatory. Enter your creation at the annual Stellafane, Riverside Conventions, or other national telescope making events.



Variable Stars - Visually observe stellar light intensity changes and report the data to the AAVSO.

List Compiled and © 2014 by BDM for Coconino Astronomical Society

International Astronomy Organizations available to amateurs

- American Association of Lunar and Planetary Observers (ALPO) – alpo-astronomy.org
- American Association of Variable Star Observers (AAVSO) – www.aavso.org
- Antique Telescope Society – www.oldscope.org
- Astronomical League – www.astroleague.org
- Astronomical Society of the Pacific (ASP) – www.astrosociety.org
- Dark Sky Society - www.darkskysociety.org
- International Amateur-Professional Photoelectric Photometry org. (IAPPP) – www.iappp.org
- International Occultation Timing Association (IOTA) – www.lunar-occultations.com/iota/
- Society of Amateur Radio Astronomy (SARA) - radio-astronomy.org