



# ASTRONOMICAL LEAGUE

A FEDERATION OF ASTRONOMICAL SOCIETIES  
A NON-PROFIT ORGANIZATION

- ★ *To promote the science of astronomy;*
- ★ *By fostering astronomical education;*
- ★ *By providing incentives for astronomical observation and research;*
- ★ *By assisting communication among amateur astronomical societies.*

## ASTRO NOTES

Produced by the Astronomical League

### **Note 25: Observing Programs of the Astronomical League - II Solar System Programs**

The Astronomical League sponsors over 30 observing and activity award programs for its members, and others are being developed. The equipment required for the observing programs ranges from the unaided eye to telescopes with solar filters. The objects of study range from the very near solar system to the very deep sky and there are observing programs to challenge both beginner and experienced observers.

The award programs presented on this ASTRONOTE are for solar system programs. See ASTRONOTES 12 and 28 for programs based on deep sky observing and ASTRONOTE 29 for Activity Award programs.

#### **The Comet Observers Club**

In observing the wonders of the universe, there are perhaps no more wondrous and beautiful objects than comets. Comets are important members of our solar system and their study is important to mankind. Observers can receive a certificate from the Astronomical League for two different levels of observations. Silver Level – observe at least 12 different comets. Gold Level – observe at least 18 additional comets. A pin is awarded for the Gold Level.

#### **The Meteor Club**

The Meteor Club is an ideal project for small groups of observers or for an individual. The information gathered from these meteor observations is of scientific value and is forwarded to the Association of Lunar and Planetary Observers. The only equipment needed is a pencil and a photocopy of the appropriate reporting forms, available in *The ALPO Guide to Watching Meteors* manual. A reclining lawn chair may also be desirable. Observers record the number and magnitude of meteors observed during various meteor showers. Meteor Club certificates are sent for each six hours spent observing. An honorary certificate and pin is available for those who have completed 36 hours of observations. The Meteor Club is based on *The ALPO Guide to Watching Meteors*, available from League Sales.

#### **The Lunar Club**

This is the program for deep sky observers who are frustrated by moonlight! This is the program for city dwellers that are frustrated by light pollution! This is the program for young and old, new and seasoned observers alike! Remember: full moons bring clear skies! The Lunar observing club introduces our nearest celestial neighbor in a systematic way. Starting with naked eye observations and continuing with binocular and telescopic observations, you need only examine 100 specific aspects and features of the moon to qualify. All observations have been accomplished with binoculars as small as 7x35 and telescopes as small as 60mm refractors. For a real challenge, see how small an aperture will reveal the requisite detail!

#### **Lunar II Club**

This Lunar program will require participants to make at least 100 observations of the Moon. It is designed to help members improve their observing skills and expand their knowledge of the visible lunar surface. It is similar in some ways to the Messier Club, and it requires participants to go farther than the Lunar Club. For example, prominent features like the Sea of Crises and Tycho Crater will be revisited, observing them in greater detail and/or in varied sun-lighting. Additional targets, such as the Cordillera Mountains have been added. Some observations will be relatively easy, such as finding and describing the Sea of Isles; others, like hunting domes and rilles will be more challenging and require greater observing skill. Participants will also create a small, basic map of the visible face of the Moon.

#### **The Sunspotter Club**

The Sunspotter observing program is intended for those with an interest in solar observing. Observers will need a good quality telescope and a quality solar filter. In this program, the observer will learn the various features of solar activity and how these change during their passage across the solar disk. A regular certificate is awarded for a series of detailed and labeled sunspot drawings done over the course of at least five days. Honorary status is earned when the observer completes whole disk drawings of the Sun during three solar rotations. The Sunspotter observing program is based on the League manual *Observe and Understand the Sun*.

### **The Planetary Observers Club**

This Club is a list selected projects designed to introduce you to the pleasures of observing objects within our solar system. To qualify for the Planetary Observers/Solar System Club certificate and pin, complete twenty-five of the suggested projects. Record your observations on copies of the included log. Some observations may require sketches, but don't panic; artistic prowess is not required.

### **The Asteroid Observing Club**

The Asteroid Observing Club's purpose is to encourage amateurs to learn to identify and observe asteroids. While the deep sky objects observable by amateurs remain the same, year after year, the asteroids (like the planets) are constantly moving against the background of the constellations. By learning to identify asteroids, you will greatly enhance your observing skills. Since asteroids appear as points of light rather than extended objects, they do not suffer from light pollution as much as deep sky objects. Hence an asteroid observing program can be carried out quite successfully from urban or suburban locations.

### **Earth Orbit Satellite Observing Club**

This observing program is designed to get those new to satellite observing familiar with the terminology and techniques of tracking satellites. The list of objects required for the basic award include targets that can be easily tracked using the unaided eye or binoculars. After meeting all of the program requirements an award certificate and pin are issued to the observer.

### **Galileo Observing Club**

The Galileo Club will take you on a journey much like the one that Galileo himself made. You will observe many of the same objects that Galileo did and at low magnification similar to what he used. The objectives of this program are to replicate the observations Galileo made that led to realizations such as the Earth was not the center of the universe, there is more to see in our skies than naked-eye observations reveal, and that there is much more yet to be discovered. A certificate and pin are awarded upon completion of the program.

### **For More Information**

The observing manuals, containing detailed information and forms helpful to complete many of these programs, are available from Astronomical League Sales. The address and current price are listed in the current issue of the League's quarterly newsletter, the **REFLECTOR**, and on the League's web site at [www.astroleague.org](http://www.astroleague.org). All of these observing programs require that the observer be a member of the Astronomical League, either through an affiliated club or as a member-at-large, or as a patron or lifetime member.

**If you have further questions, email or send a self-addressed, stamped envelope to the appropriate person:**

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