



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 28: Observing Programs of the Astronomical League - III Deep Sky Programs, part 2

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 advanced deep sky programs. See ASTRONOTE 12 for part 1 of the deep sky programs, ASTRONOTE 25 for solar system observing programs and ASTRONOTE 29 for Activity Award programs.

Galaxy Groups and Clusters Club

If you are ready to step beyond the Herschel objects and further challenge and enhance your observing skills then this program is for you. This program containing 250 galaxy groups and clusters is designed for detailed visual and/or CCD observation. Intended for the mid-level to advanced observer, this guide and program will challenge and enhance your observing skills. It provides not only concrete observing methods and techniques, but also historical facts on galaxy groups and their observers. The Galaxy Groups and Clusters Club is based on the League manual ***Observe Galaxy Groups and Clusters***.

Planetary Nebulae Club

Planetary Nebulae are perhaps the most interesting and beautiful objects in the heavens. A genre full of wonderful variation, they exhibit complex shapes, and may even show vibrant colors. The last hurrah of a sun-like star, their study is essential to the understanding of stellar evolution. If you don't already have an appreciation for these most magnificent of objects, it is hoped this program will inspire you. After observing and documenting 120 of these objects you will be awarded a certificate and pin. The Planetary Nebulae Club is based on the League manual ***Planetary Nebulae Observing Guide***.

Globular Clusters Club

The purpose of this observing club is to introduce observers to some of the finest globular clusters in the heavens. You may use any telescope, although an 8 inch is probably necessary for light polluted skies. This program is meant to allow you to enjoy comparing one type of celestial object to each other. After observing and documenting 50 globular clusters you will be awarded a certificate and pin. The Globular Cluster Club is based on the League manual ***Guide to the Globular Cluster Observing Club***.

Open Cluster Club

Open clusters are of tremendous importance to the science of astronomy, if not to astrophysics and cosmology generally. Star clusters serve as the "laboratories" of astronomy, with stars now all at nearly the same distance and all created at essentially the same time. Each cluster is a running experiment, where we can observe the effects of composition, age, and environment. This program gives you the opportunity to explore these clusters and to appreciate their diversity and complexity. After observing and documenting 125 clusters you will be awarded a certificate and pin. The Open Cluster Club is based on the League manual ***A Guide for the Open Star Cluster Observing Club***.

The Arp Peculiar Galaxies Club

Observing 100 of the 338 objects in the *Arp Catalog of Peculiar Galaxies* will be a challenge for even the most serious amateur observer. Qualify by observing these 12th-18th magnitude galaxies. It may be done either visually, photographically or via CCD imaging. Separate certificates are available for each technique.

Local Galaxy Group and Galactic Neighborhood Club

This club provides an opportunity for us to explore the local neighborhood. It is dominated by three large spiral galaxies, but there are many more companion galaxies that are gravitationally bound to the cluster. Some of the objects are a challenge, but there are objects in all of the groups that should be visible to the backyard astronomer. After observing and documenting 88 objects you will be awarded a certificate and pin. This club is based on the League manual *The Local Galaxy Group & Galactic Neighborhood Visual and CCD Observing Guide*.

The Master Observer's Club

The Master Observer Award will be given to an Astronomical League member who has completed at least ten of the League's observing programs. There is a core requirement of five observing programs (*Messier Club; Binocular Messier Club; Lunar Club; Double Star; Herschel Club*) to be completed by all candidates. You may then choose any five of the remaining AL observing programs to complete the requirements for the Master Observer Award. Once a member has completed ten of the observing programs, she or he will be given a certificate and pin.

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. 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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Galaxy Groups and Clusters website: <http://www.rca-omsi.org/ggc/index.htm>

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