

ASTRONOMICAL LEAGUE PROGRAMS

By CARROLL IORG, AL PRESIDENT

Highlighting the Urban and Sky Puppies Observing Programs and

Astronomical Observing for the Underserved Populations

One of the major reasons why astronomers join the Astronomical League is the wide variety of observing award programs offered. Our latest exciting new programs are the Solar Neighborhood Observing Program and the Bennett Observing Program. The Solar Neighborhood Observing Program is intended to introduce observers to the stars located near our Sun. The Bennett Observing Program is a direct substitute for the Messier Observing Program for those south of the equator.

For this year's submission to the *Observer's Handbook*, we slightly change the focus of our article.

At ALCon 2022, the national convention of the Astronomical League, the feedback from the President's Diversity Panel discussion reaffirmed our membership's concerns that we have large, underserved populations related to options for observing the night sky. This appears to be a recurring theme regardless of which country we are referring to.

For purposes of taking more beginning steps in addressing these concerns, we concentrate on two of our more specialized observing programs, the Urban Observing Program and the Sky Puppies Observing Program.

Urban Observing Program

The purpose of the League's Urban Observing Program is to bring amateur astronomy back to the cities. With the reduced options for dark-sky observing, this program allows an organized option for observing some of the brighter objects from the city. Telescopes with six to ten inches of aperture are recommended for this



exercise.

To qualify for the certificate and pin, earned upon completion of the program, one must observe 100 objects on the program's list in light-polluted skies. Our definition for purposes of the program is skies where one cannot see the Milky Way with the unaided eye. There are two lists of objects: deep-sky objects and double and variable stars. Objects are listed in RA order so that one can view them as they rise in the east and set in the west.

Log sheets are required and must include the object name, date and time, seeing and transparency, latitude and longitude, type of instrument, and magnification and brief observing notes.

For more specific information regarding this Astronomical League program, please visit www.astroleague.org/al/obsclubs/urban/urban.html.

If a League Society is not available locally, then one can join the League as a member at large to fulfill the membership requirement.

Sky Puppies Observing Program

While most of our other Observing Programs are designed for adult observers, this program is designed just for the younger observer. Why should we emphasize this program?

As the average age of the ranks of amateur astronomy gets older, it is imperative that we introduce the younger generation to astronomy so they can carry the torch of astronomy forward.

The purpose of the program is to help young observers become more familiar with the night sky. Many of the adult observing programs are not interesting to a young child, and the Sky Puppies program is designed to fill that gap. Scout groups,



youth groups, school groups, etc. may find this program beneficial.

The young observer must be 10 years of age or younger. Participants must complete all of the Sky Puppy projects by submitting log notes, drawings, or other relevant documents.

Some of the examples of the projects that are included in this program are freehand drawing constellation patterns, being able to tell different constellation stories from a cultural tradition, and locating a deep-sky object such as M31 (the Andromeda Galaxy) or the Pleiades, with binoculars.

To receive the pin and certificate, complete information can be found at

www.astroleague.org/al/obsclubs/skypuppy/skypuppy2.htm.

Addressing the Underserved Astronomical Populations

This brings me to the final part of this discussion—the many people who face not ever having the opportunity to see the Milky Way or other wonders of the night sky.

How many youthful attendees do you or your astronomical group see at your public observing events? Do your attendees look like your community as a whole?

So, what is possible to foster more inclusion in astronomy? A small representative portion of our 22 000 members say that perhaps we can do some of the following in helping to reach more people in our individual communities:

- Going to people where they are, since we cannot assume we've all had the same experiences or resources.
- Include physical access to eyepieces, tactile tools for visually impaired, and in-person visits when there are internet/computer restrictions.
- Piggybacking on existing programs such as summer public library programs, summer lunch deliveries, and sharing programming with other local groups.
- Create a relationship with your local library or science museum.
 - ◆ Library telescope programs have been successfully implemented in many parts of our country.
 - ◆ Perhaps local astronomers would have the opportunity to schedule with the local library or museum an occasional weekend online session featuring a remote telescope in another part of the world. The Astronomical League anticipates being able to assist with such efforts.



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DEEP-SKY OBSERVING HINTS

BY ALAN DYER

In the 1960s and 1970s, few observers owned telescopes larger than 200-mm aperture. Today, 250-mm to 600-mm Dobsonian-mounted reflectors are commonplace. Using computerized telescopes, observers can now find thousands of objects at the push of a button. As a result, deep-sky observing has soared in popularity.

However, owners of less-sophisticated, small-aperture instruments shouldn't think they are shut out of deep-sky viewing. In a dark sky, an 80-mm to 100-mm telescope will show all the Messier objects and reveal hundreds of brighter NGC (New General Catalogue) objects. In fact, many large objects are best seen in fast ($f/4$ to $f/6$), small-aperture telescopes or in giant 70-mm and 80-mm binoculars. Contrary to popular belief, even slow f-ratio instruments ($f/11$ to $f/16$) are useful; their only disadvantage is the difficulty of achieving a low-power wide field. No matter what telescope you use, follow these techniques to get the most out of a night's deep-sky viewing:

- Always plan each night's observing: Prepare a list of a dozen or so objects for the night. Hunt them down on star charts or with computer programs first during the day to become familiar with their location.
- Seek out dark skies; a black sky improves contrast and makes up for lack of aperture.
- To preserve night vision, always use a dim red flashlight for reading charts.
- Avoid prolonged exposure to bright sunlight earlier in the day (such as a day at the beach); it will reduce your ability to dark adapt and make for tired eyes at night.
- Use averted vision; looking to one side of an object places it on a more sensitive part of the retina.
- Another technique for picking out faint objects is to jiggle the telescope (and the image) slightly.
- Don't be afraid to use high power; it often brings out small, faint objects such as planetary nebulae and galaxies, and resolves detail in globulars, in small, rich open clusters, and in bright galaxies.
- Use a nebular filter on emission and planetary nebulae (see FILTERS on p. 64); even in a dark sky, filters can dramatically enhance the view of these kinds of objects, often making obvious an otherwise elusive nebula.
- Be comfortable; sit down while at the eyepiece and be sure to dress warmly.
- Collimate and clean your optics; a poorly maintained telescope will produce distorted star images, reduce image contrast, and make it more difficult to see faint stars and other threshold objects.
- Don't expect to use analog setting circles; in a portable telescope "dial-type" circles will rarely be accurate.
- Digital setting circles and Go To telescopes can find objects precisely. While they are wonderful observing aids, they can overwhelm observers with thousands of targets, often supplying scant information about each one. When making a list for a night's viewing, books such as the three-volume *Burnham's Celestial Handbook* and the two-volume *Night Sky Observer's Guide* by Kepple and Sanner are still the best guides.
- Don't be in a rush to check off targets; take time to examine each object, and take notes or make drawings. Both will help train your eye to see subtle detail; you'll learn to see the most through your telescope.
- Consider keeping a logbook or journal of your nightly tours of the sky; including eyepiece impressions and drawings provides a record of your improving observing skills that is fun to look back upon in future years. See the section THE OBSERVING LOGBOOK (immediately following) for suggestions on organizing a journal.