AL Asteroid Program Coordinator:

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Introduction.

The Asteroid Program is one of the Astronomical League's observing award programs. Its 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 other 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.

Some amateurs who have mastered the asteroid observing techniques have gone on to make serious scientific contributions. These include: - astrometry, the precise measurement of an asteroid's position at a given time - the discovery of new asteroids - photometry, the measurement of an asteroid's brightness and its variation - the timing of asteroid occultations.

Membership Requirements.

The Asteroid Program offers two levels of awards as shown below. Next to each level there is listed the minimum size telescope that may be needed to observe the specified number of asteroids.

Membership	Asteroids Required	Award	Minimum Telescope Size
Regular	25	certificate	4-inch
Gold	100	certificate & pin	6-inch

To qualify for an AL's Asteroid Program Certificate, you must be a member of the Astronomical League, either through an affiliated society or as a Member-at-Large, and you must observe and confirm the required number of asteroids.

Your observations should be recorded in a notebook or on a computer and should include: the location, date and time of the observation, the number and name of the asteroid, and the instrument used. If working visually, each observation should include a sketch showing the position of the asteroid in relation to the nearby stars. Each asteroid must be observed at least twice in different positions, and at the time of the second observation you must verify that the object is no longer in the position where it was observed the first time. If using CCD imaging, it is sufficient to either print the two positions or measure them and simply report the positions of the asteroid according to standard astrometric procedures.

To receive your certificate, you should send a copy of your observations to:

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For the regular certificate (25 asteroids), copies of your sketches should also be submitted. Please send copies and retain the originals. If measuring astrometry of objects you may simply e-mail your report. If you wish to have the copies returned to you, include a self-addressed stamped envelope. Upon verification of your observations, your certificate (and pin) will be forwarded to you or your society's "Awards Coordinator", whomever you choose. Be sure to specify which you prefer and provide the necessary address.

You may wish to obtain the publication for this program, "A Guide to Asteroid Observing". It contains general information about asteroids, techniques and hints on how to find them, further information on how to sketch an asteroid's position in a star field, and how to record observations. A printed copy is available from Astronomical League Sales.

There are many resources available for observing asteroids. The Minor Planet Center maintains a web page at cfa-www.harvard.edu/cfa/ps/mpc.html which contains many resources to assist you in finding asteroid positions and help you develop a list of targets to observe. Another resource is Lowell Observatory's Asteroid Resource Page at http://asteroid.lowell.edu/

There are numerous computerized planetarium programs that have asteroid features. Some of those are:

- SkyMap (SkyMap Software);
- Guide (Project Pluto);
- xephem (E. Downey);
- Home Planet (J. Walker);
- MyStars! (Relative Data Products);

- TheSky (Software Bisque);
- Starry Night (Sienna Software);
- Deep Space (D. S. Chandler);
- PC-TCS (D. Harvey);
- Earth Centered Universe (Nova Astronomics);
- Dance of the Planets (ARC);
- MegaStar V4.x (E.L.B. Software);
- SkyChart 2000.0 (Southern Stars Software);
- Voyager II (Carina Software);
- SkyTools (CapellaSoft);
- Autostar (Meade Instruments);

You can even go to the Minor Planet Center's Minor Planet Ephemeris Service (cfa-www.harvard.edu/iau/MPEph/MPEph.html) and download a file for any asteroid you may may wish to display on any of these programs and get a file back that allows to you to track the asteroid real time and print your own finder charts.

Asteroid observing can be great fun and if you have access to a CCD camera, it can be exciting to set up your own Observing Station and participate in the excitement of discovery and real science!