



# The Astronomical League's Deep Sky Binocular Club



by **John Wagoner**

American Association of Amateur Astronomers  
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## INTRODUCTION

Welcome to the Astronomical League's Deep Sky Binocular Club. The Deep Sky Binocular Club is a list of sixty selected non-Messier objects which picks up where the Binocular Messier Club leaves off. The purpose of the Deep Sky Binocular Club is not to put your observing skills to the test by including the toughest objects observable with binoculars, but to allow you to observe and enjoy sixty of the most beautiful objects in the heavens: objects other than those discovered and catalogued by Charles Messier.

Just because the Deep Sky Binocular Club comes after the Binocular Messier Club does not mean you have to do your Messier observations before you can do this program. However, it is recommended that you do complete the Binocular Messier program first, because, let's face it, Messier got most of the good (easy) objects already.

Even though the sixty objects in the Deep Sky Binocular Club are the best objects for small binoculars, it doesn't mean that they are all easy. For some of the objects on this list, you will have to go to a good dark sky site on a clear night with good seeing, and then observe those objects on the meridian for best results. But luckily, this is easy to do with binoculars, since they are so portable.

All objects in the Deep Sky Binocular Club were observed with 7X50 Orion Explorer binoculars which retailed for \$149.00. For our northern observers, no object on the list is below minus 35 degrees declination, which is the declination of M7, the most southerly of the Messier objects.

## RULES AND REGULATIONS

To qualify for the AL's Deep Sky Binocular Certificate, you need only be a member of the Astronomical League, either through an affiliated club or as a Member-at-Large, and observe all sixty of the selected objects on this list using binoculars. Any pair of binoculars may be used, but those with objectives between 50mm and 80mm in diameter are recommended.

To record your observations, you may use log sheets similar to those found in the back of the Astronomical League's manual *Observe: A Guide to the Messier Objects*. Or you can use a sheet of plain paper. Your own log sheets should include: object, date, time, power, seeing, type of binocular, and observing notes. You can order a copy the AL's Observe manual through *Astronomical League Sales, P.O. Box 572, West Burlington, IA 52655*.  
[www.AstronomicalLeague.com](http://www.AstronomicalLeague.com)

If you need to become a member of the Astronomical League as a Member-at-Large, contact *Jackie Beucher, AL Executive Secretary, 11305 King Street, Overland Park, KS 66210-3421*. (913) 469-0135. E-Mail: [M31@sky.net](mailto:M31@sky.net).

You may also join **The American Association of Amateur Astronomers, The Internet Astronomy Club**, which is a member society of the Astronomical League. Join on-line at our web page: [www.AstroMax.com](http://www.AstroMax.com). Or send a check for \$20 (\$25 family) for each membership to: **AAAA, P.O. Box 7981, Dallas, TX 75209-0981**. E-Mail: [aaaa@astromax.com](mailto:aaaa@astromax.com)

To receive your Deep Sky Binocular Certificate and pin, send your observations along with your name, address, phone number, and club affiliation, to your club's Awards Coordinator, or to:

Michael Benson,  
AL Binocular Coordinator,  
2116 Crystal Drive,  
Nashville, TN 37210-3333  
Telephone: (615) 883-6571.  
E-mail: [ocentaurus@aol.com](mailto:ocentaurus@aol.com).

Upon verification of your observations, your certificate and pin will be forwarded either directly to you or to your club's Awards Coordinator, whomever you choose.

**AAAA Members** who have completed AL observing projects should submit their observations directly to the AAAA for certification. Be sure to send COPIES only. Do NOT send original photographs or observing logs.

## The LIST

All objects are listed in Right Ascension order so that you can view them as they rise in the east and set in the west. Information provided on each object includes: Catalog Number, Right Ascension, Declination, Magnitude, Type of Object, Size, Constellation, and what chart they are located on in both the *Uranometria* and Wil Tirion's *Sky Atlas 2000*. Notes are provided on a few of the objects to clarify their observation.

All objects are brighter than 9th magnitude and larger than 3 minutes in diameter. Catalogs represented in this list are: New General Catalog, Index Catalog, Stock, Markarian, Trumpler, Collinder, Kemble, and Melotte.

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I hope you enjoy observing this list of objects as much as I enjoyed compiling it. Sometimes, it absolutely amazes me what can be seen with a small objective. Between the Binocular Messier Club and the Deep Sky Binocular Club, there are more than 135 objects that can easily be seen with a small pair of binoculars, which proves that you can do a lot of astronomy for a small amount of money.

Good luck, clear skies, and good observing.

## The Deep Sky Binocular Club List (Epoch 2000)

| [x] | Catalog  | R.A.    | Dec.   | Mag. | Type | Size  | Const | URN | SA | Note                        |
|-----|----------|---------|--------|------|------|-------|-------|-----|----|-----------------------------|
| [ ] | NGC 129  | 00 29.9 | +60 14 | 6.5  | opCl | 21.0' | Cas   | 15  | 1  |                             |
| [ ] | NGC 253  | 00 47.6 | -25 17 | 8.0  | Glxy | 25.0' | Scl   | 306 | 18 |                             |
| [ ] | NGC 457  | 01 19.1 | +58 20 | 6.4  | opCl | 13.0' | Cas   | 36  | 1  |                             |
| [ ] | NGC 663  | 01 46.0 | +61 15 | 7.1  | opCl | 16.0' | Cas   | 16  | 1  |                             |
| [ ] | Cr 463   | 01 48.4 | +71 57 | 5.7  | opCl | 36.0' | Cas   | 17  | 1  |                             |
| [ ] | NGC 752  | 01 57.8 | +37 41 | 5.7  | opCl | 50.0' | And   | 92  | 4  |                             |
| [ ] | Stock 2  | 02 15.0 | +59 16 | 4.4  | opCl | 60.0' | Cas   | 37  | 1  |                             |
| [ ] | NGC 869  | 02 19.0 | +57 09 | 5.3  | opCl | 29.0' | Per   | 37  | 1  |                             |
| [ ] | NGC 884  | 02 22.4 | +57 07 | 6.1  | opCl | 29.0' | Per   | 37  | 1  |                             |
| [ ] | Mark 6   | 02 29.6 | +60 39 | 7.1  | opCl | 4.5'  | Cas   | 17  | 1  |                             |
| [ ] | Me1 15   | 02 32.7 | +61 27 | 6.5  | opCl | 21.0' | Cas   | 17  | 1  |                             |
| [ ] | Tr 2     | 02 37.3 | +55 59 | 5.9  | opCl | 20.0' | Per   | 38  | 1  |                             |
| [ ] | Tr 3     | 03 11.8 | +63 15 | 7.0  | opCl | 23.0' | Cas   | 15  | 1  |                             |
| [ ] | Stock 23 | 03 16.0 | +60 02 | 6.2  | opCl | 15.0' | Can   | 38  | 1  |                             |
| [ ] | Me1 20   | 03 22.0 | +49 00 | 1.2  | opCl | 185'  | Per   | 38  | 4  | Alpha Persei Association    |
| [ ] | NGC 1342 | 03 31.6 | +37 20 | 6.7  | opCl | 14.0' | Per   | 94  | 4  |                             |
| [ ] | Kemble 1 | 03 58.0 | +63 06 | 4.0  | opCl | 180'  | Can   | 18  | 1  | Three Degree Chain of Stars |
| [ ] | NGC 1528 | 04 15.4 | +51 14 | 6.4  | opCl | 23.0' | Per   | 39  | 1  |                             |
| [ ] | Me1 25   | 04 27.0 | +16 00 | 0.5  | opCl | 330'  | Tau   | 133 | 11 | The Hyades                  |
| [ ] | NGC 1582 | 04 32.0 | +43 51 | 7.0  | opCl | 37.0' | Per   | 65  | 5  |                             |
| [ ] | NGC 1647 | 04 46.0 | +19 04 | 6.4  | opCl | 45.0' | Tau   | 134 | 11 |                             |
| [ ] | NGC 1662 | 04 48.5 | +10 56 | 6.4  | opCl | 20.0' | Ori   | 179 | 11 |                             |
| [ ] | NGC 1746 | 05 03.6 | +23 49 | 6.1  | opCl | 42.0' | Tau   | 134 | 5  |                             |
| [ ] | NGC 1807 | 05 10.7 | +16 32 | 7.0  | opCl | 17.0' | Tau   | 135 | 11 |                             |
| [ ] | NGC 1817 | 05 12.1 | +16 42 | 7.7  | opCl | 15.0' | Tau   | 135 | 11 |                             |
| [ ] | NGC 1893 | 05 22.7 | +33 24 | 7.5  | opCl | 11.0' | Aur   | 97  | 5  |                             |
| [ ] | NGC 1907 | 05 28.0 | +35 19 | 8.2  | opCl | 6.0'  | Aur   | 97  | 5  |                             |
| [ ] | NGC 1981 | 05 35.2 | -04 26 | 4.2  | opCl | 25.0' | Ori   | 225 | 11 |                             |
| [ ] | NGC 2169 | 06 08.4 | +13 57 | 5.9  | opCl | 6.0'  | Ori   | 182 | 11 |                             |
| [ ] | NGC 2232 | 06 26.6 | -04 45 | 3.9  | opCl | 29.0' | Mon   | 227 | 11 |                             |
| [ ] | NGC 2244 | 06 32.4 | +04 52 | 4.8  | opCl | 23.0' | Mon   | 227 | 11 |                             |
| [ ] | NGC 2251 | 06 34.7 | +08 22 | 7.3  | opCl | 10.0' | Mon   | 182 | 11 |                             |
| [ ] | NGC 2264 | 06 41.1 | +09 53 | 3.9  | opCl | 20.0' | Mon   | 183 | 11 |                             |
| [ ] | NGC 2281 | 06 49.3 | +41 04 | 5.4  | opCl | 14.0' | Aur   | 68  | 5  |                             |
| [ ] | NGC 2301 | 06 51.8 | 00 28  | 6.0  | opCl | 12.0' | Mon   | 228 | 11 |                             |
| [ ] | NGC 2343 | 07 08.3 | -10 39 | 6.7  | opCl | 6.0'  | Mon   | 273 | 12 |                             |
| [ ] | NGC 2360 | 07 17.8 | -15 37 | 7.2  | opCl | 12.0' | CMa   | 274 | 12 |                             |
| [ ] | NGC 2403 | 07 36.9 | +65 36 | 8.4  | Glxy | 18.0' | Cam   | 21  | 1  |                             |
| [ ] | NGC 2527 | 08 02.5 | -28 11 | 6.5  | opCl | 22.0' | Pup   | 320 | 20 |                             |
| [ ] | NGC 2539 | 08 10.7 | -12 50 | 6.5  | opCl | 21.0' | Pup   | 275 | 12 |                             |
| [ ] | NGC 2571 | 08 18.9 | -29 44 | 7.0  | opCl | 13.0' | Pup   | 362 | 20 |                             |
| [ ] | Me1 111  | 12 25.0 | +26 00 | 1.8  | opCi | 275'  | Con   | 148 | 7  | Coma Star Cluster           |
| [ ] | IC 4665  | 17 46.3 | +05 43 | 4.2  | opCl | 70.0' | Oph   | 203 | 15 |                             |
| [ ] | NGC 6520 | 18 03.4 | -27 54 | 7.6  | opCl | 6.0'  | Sgr   | 339 | 22 |                             |
| [ ] | NGC 6633 | 18 27.7 | +06 34 | 4.6  | opCl | 20.0' | Oph   | 205 | 15 |                             |
| [ ] | IC 4756  | 18 39.0 | +05 27 | 4.6  | opCl | 40.0' | Ser   | 205 | 15 |                             |
| [ ] | NGC 6709 | 18 51.5 | +10 21 | 6.7  | opCl | 13.0' | Aql   | 205 | 15 |                             |
| [ ] | NGC 6716 | 18 54.6 | -19 53 | 7.5  | opCl | 6.0'  | Sgr   | 340 | 15 |                             |
| [ ] | Cr 399   | 19 25.4 | +20 11 | 3.6  | opCl | 60.0' | Vul   | 161 | 8  | The Coathanger              |
| [ ] | NGC 6819 | 19 41.3 | +40 11 | 7.3  | opCl | 5.0'  | Cyg   | 94  | 8  |                             |
| [ ] | NGC 6823 | 19 43.1 | +23 18 | 7.1  | opCl | 12.0' | Vul   | 162 | 8  |                             |
| [ ] | NGC 6910 | 20 23.1 | +40 47 | 7.4  | opCl | 7.0'  | Cyg   | 84  | 9  |                             |
| [ ] | NGC 6934 | 20 34.2 | +07 24 | 8.7  | GbCl | 5.9'  | Del   | 209 | 16 |                             |
| [ ] | NGC 6940 | 20 34.6 | +28 18 | 6.3  | opCl | 31.0' | Vul   | 120 | 9  |                             |
| [ ] | NGC 7063 | 21 24.4 | +36 30 | 7.0  | opCl | 7.0'  | Cyg   | 121 | 9  |                             |
| [ ] | NGC 7160 | 21 53.7 | +62 36 | 6.1  | opCl | 7.0'  | Cep   | 33  | 3  |                             |
| [ ] | NGC 7209 | 22 05.2 | +46 30 | 7.7  | opCl | 25.0' | Lac   | 87  | 9  |                             |
| [ ] | NGC 7235 | 22 12.6 | +57 17 | 7.7  | opCl | 4.0'  | Cep   | 57  | 3  |                             |
| [ ] | NGC 7243 | 22 15.3 | +49 53 | 6.4  | opCl | 21.0' | Lac   | 57  | 9  |                             |
| [ ] | NGC 7789 | 23 57.0 | +56 44 | 6.7  | opCl | 15.0' | Cas   | 59  | 3  |                             |



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Observer: \_\_\_\_\_ Location: \_\_\_\_\_ Page: \_\_\_\_\_

| INDEX         | Period - Instrument |        | Notes |
|---------------|---------------------|--------|-------|
| <b>Object</b> | Date                | Time   |       |
|               | Power               | Seeing |       |
|               | Type Instrument     |        |       |
| <b>Object</b> | Date                | Time   |       |
|               | Power               | Seeing |       |
|               | Type Instrument     |        |       |
| <b>Object</b> | Date                | Time   |       |
|               | Power               | Seeing |       |
|               | Type Instrument     |        |       |
| <b>Object</b> | Date                | Time   |       |
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|               | Power               | Seeing |       |
|               | Type Instrument     |        |       |
| <b>Object</b> | Date                | Time   |       |
|               | Power               | Seeing |       |
|               | Type Instrument     |        |       |

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