City Lights Astronomical Society for Students

www.classusa.org

Welcome to the City Lights Astronomical Society for Students' (CLASS) Binocular Observing Program. This is a beginning program to familiarize everyone with the night sky. The rules are simple, just observe the 20 required objects from the lists provided. To get the 20 objects, you will need to observe and record any fifteen deep sky objects, then observe and record the five lunar objects listed. That's it. That is a total of twenty objects observed using only binoculars. When recording your observations, you need only log the date and time observed. At the completion of the program you will receive recognition from CLASS and a nice lapel pin to wear proudly. There is no time limit in completing the program, and you may observe the objects from either the city or the country. Any size binocular may be used, but a minimum of 7x35 is recommended. All deep s ky objects are listed in Right Ascension order so that you will know if they are observable at the time of year that you attempt this program. Right Ascension is in hours and minutes, while Declination is in degrees and minutes. Types of objects are open clusters, globular clusters, planetaries, nebulae, and galaxies. Finally, size is in minutes.

Once you have completed the program and have filled out the accompanying logs, send your observations to:

John Wagoner
CLASS
1409 Sequoia Dr.
Plano, Tx. 75023

When sending in your log sheets, please include your name and address, what grade you are in, and what school you go to. We will then send you your CLASS Binocular Observing Program lapel pin. To help in recognizing the twenty objects, you may want to check out a book at your local or school library, or you can purchase a planisphere or a simple sky map online at www.skyandtelescope.com. And if you need a little help from a parent or friend, that is ok too. Good luck, clear skies, and good observing.

John Wagoner – President – CLASS
john@classusa.org

Deep Sky Objects (any 15)

Messier	Catalog	Type	R.A.	Dec.	Mag	Size	Con	Date Observed	Time Observed
31	N224	Gal	00 43	41 16	4.5	178'	And		
103	N581	OCl	01 33	60 42	7.0	06'	Cas		
	Stock 2	OCl	02 15	59 16	4.4	60'	Cas		
	N869	OCl	02 19	57 09	5.3	29'	Per		
	N884	OCl	02 22	57 07	6.1	29'	Per		
34	N1039	OCl	02 42	42 47	6.0	35'	Per		
	Mel 20	OCl	03 22	49 00	1.2	185'	Per		
45	N1432	OCl	03 47	24 07	1.4	110'	Tau		
	Hyades	OCl	04 27	16 00	0.5	330'	Tau		
38	N1912	OCl	05 29	35 50	7.0	21'	Aur		
42	N1976	Neb	05 35	-05 23	5.0	85'	Ori		
36	N1960	OCl	05 36	34 08	6.5	12'	Aur		
37	N2099	OCl	05 52	32 33	6.0	24'	Aur		
35	N2168	OCl	06 09	24 20	5.5	28'	Gem		
41	N2287	OCl	06 47	-20 44	5.0	38'	CMa		
50	N2323	OCl	07 03	-08 20	7.0	16'	Mon		
47	N2422	OCl	07 37	-14 30	4.5	30'	Pup		
46	N2437	OCl	07 42	-14 49	6.5	27'	Pup		
93	N2447	OCl	07 45	-23 52	6.5	22'	Pup		
48	N2548	OCl	08 14	-05 48	5.5	54'	Hya		
44	N2632	OCl	08 40	19 59	4.0	95'	Cnc		
67	N2682	OCl	08 50	11 49	7.5	30'	Cnc		
	Mel 111	OCl	12 25	26 00	1.8	275'	Com		
3	N5272	GCl	13 42	28 23	7.0	16'	CVn		
5	N5904	GCl	15 19	02 05	7.0	17'	Ser		

Deep Sky Objects (continued)

Messier	Catalog	Type	R.A.	Dec.	Mag	Size	Con	Date Observed	Time Observed
4	N6121	GCl	16 24	-26 32	7.5	26'	Sco		
13	N6205	GCl	16 42	36 28	7.0	17'	Her		
12	N6218	GCl	16 47	-01 57	8.0	14'	Oph		
10	N6254	GCl	16 57	-04 06	7.5	15'	Oph		
92	N6341	GCl	17 17	43 08	7.5	11'	Her		
6	N6405	OCl	17 40	-32 13	4.5	15'	Sco		
7	N6475	OCl	17 54	-34 49	3.5	80'	Sco		
23	N6494	OCl	17 57	-19 01	6.0	27'	Sgr		
8	N6523	Neb	18 03	-24 23	5.0	60'	Sgr		
24	N6603	OCl	18 18	-18 25	4.0	90'	Sgr		
16	N6611	Neb	18 19	-13 47	6.5	07'	Ser		
18	N6613	OCl	18 20	-17 08	8.0	09'	Sgr		
17	N6618	Neb	18 21	-16 11	7.0	11'	Sgr		
25	I4725	OCl	18 29	-19 17	4.9	40'	Sgr		
22	N6656	GCl	18 36	-29 54	6.5	24'	Sgr		
11	N6705	OCl	18 51	-06 16	7.0	14'	Sct		
	Cr 399	OCl	19 25	20 11	3.6	60'	Vul		
55	N6809	GCl	19 40	-30 58	7.0	19'	Sgr		
27	N6853	PIn	20 00	22 43	7.5	08'	Vul		
29	N6913	OCl	20 24	38 32	9.0	07'	Cyg		
15	N7078	GCl	21 30	12 10	7.5	12'	Peg		
39	N7092	OCl	21 32	48 26	5.5	32'	Cyg		
2	N7089	GCl	21 34	-00 49	7.5	13'	Aqr		
52	N7654	OCl	23 24	61 35	8.0	13'	Cas		

Lunar Objects

Object	Date Observed	Time Observed
Albategnius Crater		
Copernicus Crater		
Mare Serenitatis		
Mare Tranquillitatis		
Mare Crisium		