## Oregon Star Party Observing Award 2017 Level 0 - Binocular List

Although a telescope provides brighter and higher magnification views of deep-sky objects, binoculars offer several advantages. They provide a much wider field of view, which enhances the views of many objects and makes locating them easier. They are also much more portable and require little or no setup. Most objects in the list below are easily visible in binoculars of all sizes. They are all brighter than ninth magnitude and larger than 3 minutes in diameter. To receive the OSP Level 0 observer pin you must observe and record at least 20 of the 25 listed objects while you are here at OSP. As an added reference, each object's page number in the popular Sky and Telescope Pocket Sky Atlas (PSA) is listed as well.

Most of the objects listed below are visible between civil twilight and midnight during the star party. All are visible before astronomical dawn. Go-to mounts are not permitted for the OSP Level 0 award. You may get assistance in locating objects on star charts or in the sky, but you must locate them yourself with your binoculars. Looking through mounted binoculars, in which someone else has sighted the object for you, is not acceptable. Object sketches are a bonus but they are not necessary if you provide a good description of each object. When finished bring your record of observations to the Observing Program table next to the Information Tent to receive your pin (\$5 cash). The Observing Program table will be staffed by volunteers between 11:00 a.m. and 1:00 p.m. every day from Saturday, August 19 through Tuesday, August 22.

#	Туре	Object	Con	RA	Dec	Mag	PSA	Alternate Name\Comments
1	Ecl	Solar Eclipse						Do not observe with the naked eye! Use a solar filter.
2	GX	M31	And	00h42m	41.16	4.3	3	Andromeda Galaxy
3	OC	M103	Cas	01h33m	60.39	6.9	1	NGC 581
4	GX	M33	Tri	01h33m	30.39	6.4	2	Pinwheel Galaxy
5	Double	Almaak	And	02h03m	42.19	5	2	A = Gamma 1 / B = Gamma 2
6	ОС	NGC 884	Per	02h22m	57.08	4.4	2	Chi Persei
7	OC	M45	Tau	03h47m	24.07	1.5	15	Pleiades
8	Double	Chi Tau	Tau	04h22m	25.37	7.6	15	A = Chi Tau / B = PPM 93460
9	OC	M36	Aur	05h36m	34.08	6.5	12	NGC 1960
10	Planet	Jupiter	Vir	13h14m	-06.39	-1.8	47	
11	GC	M4	Sco	16h23m	-26.31	5.4	57	
12	GC	M13	Her	16h41m	36.27	5.8	52	Keystone Cluster
13	Planet	Saturn	Oph	17h20m	-21.56	0.4	56	
14	OC	M7	Sco	17h53m	-34.47	3.3	58	NGC 6475
15	OC	M20	Sag	18h02m	-22.58	5.2	67	MGC 6514
16	OC	M16	Ser	18h18m	-13.48	6.5	67	Star Queen
17	GC	M22	Sag	18h36m	-23.54	5.2	67	NGC 6656
18	OC	M11	Scu	18h51m	-06.16	6.1	67	Wild Duck Cluster
19	OC	Collinder 399	Vul	19h25m	20.11	4.8	65	OCL 113
20	GC	M72	Aqu	20h53m	-12.32	9.2	66	NGC 6981
21	Dark Neb	Cygnus Rift	Cyg	20h55m	45.16		62	Northern Coalsack
22	Diff Neb	NGC 7000	Cyg	20h58m	44.22	4	62	North American Nebula
23	Double	Alfirk	Сер	21h28m	70.33	3.2	71	A = Beta Cep (Alfirk) / B = STF 2806B
24	GC	M15	Peg	21h29m	12.10	6.3	75	NGC 7078
25	OC	M39	Cyg	21h31m	48.26	5.3	73	NGC 7092