

## Oregon Star Party Observing Award 2019 Intermediate List

Again this year we have a larger number of objects on the list to try, many from Stephen James O'Meara's "Hidden Treasures" list, which has provided many new and interesting items that don't replicate in recent prior lists. Some are relatively easy, some are more of a challenge. The goal is to provide a wide variety of interesting objects to observe.

Though you are encouraged to try them all, to receive the OSP Intermediate List observer pin you must observe and record at least 20 of the listed objects while you are here at OSP. A short description of each object is required and object sketches are strongly encouraged. Sketch double stars noting W (drift direction) or N. (Recommended for all sketches) Go-to and image enhancers (photography) are permitted at OSP for the Intermediate List award. Each object's page number in the popular Sky and Telescope Pocket Sky Atlas (PSA) is listed as well (or the page it would be on to help with location).

When finished bring your record of observations to the Observing Program table next to the Information Tent to receive your pin. *Please check the information tent for updates on when the Observing Program table will be staffed, and where it is going to be for the next session. Typically it will be manned later in the afternoon. (v1.3)*

#	Type	Object	Con	RA	Dec	Mag	Size/Split	PSA	Alternate Name/Comments
1	TS	l Cas	Cas	2h 29' 3.8"	67° 29' 9"	4.4	2.9", 7.3"	1	Itoa Cassiopeiae, mag differences
2	DS	1 Ari	Ari	1h 50' 8.5"	22° 16' 31"	5.8	2.9"	4	One Arietis, tight, color contrast hint: between lambda and 107
3	CS	VY Uma	UMa	10h 45' 2.5"	67° 24' 40"	5.87	-	31	Carbon Star VY Ursae Majoris
4	CS	V Aquilae	Aql	19h 4' 24.2"	-5° 40' 57"	6.6	-	67	Carbon Star V Aquilae
5	EN	NGC1333	Per	3h 29' 18"	31° 25' 0"	10.0	9'	13	Embryo Nebula
6	EN	NGC281	Cas	0h 52' 48"	56° 36' 0"	7.4	35'	3	Pacman Nebula
7	GC	NGC6712	Scu	18h 54' 4.3"	-8° 42' 21"	9.3	9.8'	67	
8	GX	NGC1023	Per	2h 40' 24"	39° 3' 48"	9.6	7.4'	13	Perseus Lenticular Galaxy
9	GX	NGC4214	CVn	12h 15' 38.5"	36° 19' 41"	10.2	8.9'	43	
10	GX	NGC4605	Uma	12h 39' 59.3"	61° 36' 33"	10.8	5.9'	43	Faberge Egg Galaxy
11	GX	NGC4656	CVn	12h 43' 57.9"	32° 10' 11"	9.8	6.5'	43	The Hook Galaxy
12	GX	NGC4725	Com	12h 50' 26.6"	25° 30' 3"	9.9	9.7'	45	
13	GX	NGC5866	Dra	15h 6' 29.5"	55° 45' 48"	10.7	6.3'	42	Fool's Gold Galaxy
14	GX	NGC6503	Dra	17h 49' 26.5"	70° 8' 40"	10.9	5.9'	51	Lost in Space Galaxy
15	GX	NGC772	Ari	1h 59' 19.6"	19° 06' 0"	10.7	4.6'	4	Fiddlehead Galaxy
16	OC	IC4665	Oph	17h 46' 18"	5° 43' 0"	4.5	72'/1.2°	54	Summer Beehive
17	OC	IC4756	Ser	18h 39' 0"	5° 26' 59"	5.0	39'	65	
18	OC	NGC1528	Per	4h 15' 23"	51° 12' 0"	6.8	16"	13	m & m Double Cluster
		NGC1545		4h 20' 57"	50° 15' 0"	7.2	18"		
19	OC	NGC1647	Tau	4h 45' 55"	19° 6' 0"	6.8	40'	15	Pirate Moon Cluster
20	OC	NGC189	Cas	0h 39' 35"	61° 5' 0"	9.1	5'	3	(not shown in PSA)
21	OC	NGC225	Cas	0h 43' 39"	61° 46' 0"	7.4	12'	3	Sail Boat Cluster
22	OC	NGC659	Cas	1h 44' 24"	60° 40' 0"	8.4	5'	2	Ying Yang Cluster
23	OC	NGC6633	Oph	18h 27' 15"	6° 30' 0"	5.0	20'	65	Tweedledum Cluster
24	OC	NGC6709	Aqu	18h 51' 18"	10° 18' 59"	7.2	14'	65	Flying Unicorn Cluster
25	OC	NGC6819	Cyg	19h 41' 16"	40° 11' 0"	8.2	13'	62	Fox Head Cluster
26	OC	NGC6940	Vul	20h 34' 26"	28° 17' 0"	7.8	25'	62	Mothra Cluster
27	PN	NGC1501	Cam	4h 7' 1.2"	60° 54' 55"	11.9	56"	11	Oyster Nebula
28	PN	NGC6210	Her	16h 44' 29.2"	23° 47' 56"	8.8	20"	54	Turtle Nebula
29	PN	NGC6445	Sag	17h 49' 15.2"	-20° 0' 25"	10.9	38"	67	Box Nebula
30	PN	NGC6572	Oph	18h 12' 7.4"	6° 51' 33"	8.0	16"	65	Emerald Eye Nebula
31	PN	NGC6818	Sag	19h 43' 57.9"	-14° 8' 59"	9.4	22"	66	Little Gem Nebula
32	PN	NGC7008	Cyg	21h 0' 33.2"	54° 32' 35"	11.0	1.6'	62	Coat Button Nebula
33	P	Uranus/Moons	Ari	2h 16' 37.9"	13° 8' 48"	5.8	3.6"	4	Any moons serious challenge
34	P	Neptune/Triton	Aqr	23h 17' 31.4"	-5° 42' 9"	7.8	2.3"	76	Triton challenge
35	A	Vesta	Ari	3h 7' 1.2"	10° 17' 8"	7.2	-	4	Challenge, Early Morning
				3h 14' 4.3"	10° 35' 11"	7.2	-		
				3h 19' 19.2"	10° 47' 1"	7.2	-		
36	A	Ceres	Sco	15h 53' 35.5"	-20° 1' 44"	7.4	-	46	Challenge, Early Evening
				15h 55' 27.4"	-20° 27' 34"	7.4	-		
				15h 57' 5.2"	-20° 43' 39"	7.4	-		
	Key:								v1.3
	P	Planet	A	Asteroid					
	GX	Galaxy	SC	Star Cloud					
	GC	Globular Cluster	DS	Double Star					
	OC	Open Cluster	TS	Triple Star					
	PN	Planetary Nebula	MS	Multiple Star					
	EN	Emission Nebula	CS	Carbon Star					
	SN	Supernova Remnant	C	Constellation					
	DN	Dark Nebula	Ast	Asterism					