

**Table Mountain Star Observer's Challenge List # 3**  
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#	ID	Magnitude	Constellation	Type	Size	RA	DEC	Description
1	NGC7640	10.9	Andromeda	Galaxy S(B)b+	10.7'x2.5'	23h 22.1m	+40 51m	An edge on galaxy of medium size about 28 million light years away.
2	NGC7293	7.3	Aquarius	PlanetaryNebula	769.0"	22h 29.6m	-20 48m	The Helix Nebula or the hockey puck. It looks like a round oval patch of grey light.
3	NGC972	11.3	Aries	Galaxy Sc	3.6'x2.0'	02h 34.2m	+29 19m	A bright galaxy that is slightly elongated only 73 million light years away.
4	NGC6939	7.8	Cepheus	Open Cluster	7.0'	20h 31.4m	+60 38m	This a bright rich cluster of 100 stars or more is in a circular pattern...for bonus try and find NGC6946 face on galaxy one field away.
5	NGC246	10.9	Cetus	PlanetaryNebula	225.0"	00h 47.0m	-11 53m	The Pizza Nebula in Cetus with OIII or UHC filter the nebula is round around a cluster of stars.
6	NGC247	8.9	Cetus	Galaxy S-	20.0'x7.4'	00h 47.1m	-20 46m	A big galaxy seen up and down in the eyepiece. It is located just below Beta Cetus.
7	NGC6888	N/A	Cygnus	EmissionNebula	20.0'x10.0'	20h 12.0m	+38 21m	Crescent Nebula it looks like the letter "E". Break out the UHC or OIII filter on this one.
8	NGC7000	N/A	Cygnus	EmissionNebula	120.0'x100.0'	20h 58.8m	+44 20m	North American Nebula. This is naked eye object and visible in binoculars. Filters help and the Gulf of Mexico is easily visible from Table Mtn.
9	NGC7008	10.7	Cygnus	PlanetaryNebula	83.0"	21h 00.6m	+54 33m	A blue planetary nebula by a double star which is blue and gold. Close by only 2600 light years away.
10	NGC7006	10.50	Delphinus	GlobularCluster	2.8'	21h 01.5m	+16 11m	This is one of the farthest globular clusters at 185,000 lights years from us.
11	NGC4236	9.6	Draco	Galaxy SB+	18.6'x6.9'	12h 16.7m	+69 28m	A huge galaxy with very low surface brightness. Distance 7 million light years away.
12	NGC6925	11.3	Microscopium	Galaxy SA(s)bc	4.7'x1.3'	20h 34.3m	-13 59m	An edge on galaxy with a star lying just off the end fo the galaxy. Distance 111 million light years away.
13	NGC6384	10.4	Ophiuchus	Galaxy SAB(r)bc	6.4'x4.3'	17h 32.4m	+07 04m	A spiral galaxy located in the milky way. Distance 78 million light years away.
14	NGC7479	10.8	Pegasus	Galaxy SB(s)c	4.0'x3.1'	23h 04.9m	+12 19m	This barred spiral galaxy shows a distinctive shape and with averted vision the spiral arms are visible.
15	NGC7814	10.6	Pegasus	Galaxy	6.0'x2.5'	00h 03.3m	+16 09m	This is another elongated edge on galaxy. Bright even in small scopes.
16	NGC1003	11.5	Perseus	Galaxy Sc	5.4'x2.1'	02h 39.3m	+40 52m	An edge on galaxy with knot on one end. Distance 34 million light years away.
17	NGC1023	9.5	Perseus	Galaxy E7p	8.7'x3.3'	02h 40.4m	+39 04m	Lens shaped galaxy of good size. Distance 34 million light years away.
18	NGC1245	8.4	Perseus	Open Cluster	10.0'	03h 14.7m	+47 15m	A circular cluster of 60-70 stars. A medium power eyepiece helps to see the cluster in smaller scopes.
19	NGC7314	10.9	Pisces Austrinus	Galaxy SAB(rs)c	4.2'x1.7'	22h 35.8m	-26 03m	The brightest galaxy in this constellation. It lies between two 8th and 9th magnitude stars. Distance 74 million light years.
20	NGC288	8.1	Sculptor	GlobularCluster	13.8'	00h 52.8m	-26 35m	A round globular cluster that resolves into stars at higher powers.
21	NGC5921	10.8	Serpens Caput	Galaxy SB(r)bc	4.9'x4.2'	15h 21.9m	+05 04m	A barred spiral galaxy face on and oval in shape. Distance 65 million light years away.
22	NGC784	11.7	Triangulum	Galaxy SB	6.2'x1.7'	02h 01.3m	+28 50m	This elongated galaxy sits between two 11th magnitude stars.
23	NGC2841	9.3	Ursa Major	Galaxy Sb-	8.1'x3.8'	09h 22.0m	+50 58m	An edge on galaxy and easy to find between a triangle of stars. Distance 30 million light years away.
24	NGC6217	11.2	Ursa Minor	Galaxy Sc	3.1'x2.7'	16h 32.6m	+78 12m	A galaxy in Ursa Minor? This will give you two things to view in Ursa Minor. Distance 73 million light years away.
<b>Double Star Separation</b>								
25	Beta Scorpii	2.6 /4.9 /10.3	Scorpius	Triple Star	.5/13.6	16h 5.4m	-19 48m	This is triple star system. Two are easy to split A and C but B is bonus challenge if you can split it due to being 8 magnitudes dimmer than A star.
26	Epsilon Arietis	4/6/5.2	Aries	Double Star	1.4	2h 59.2m	+21 20m	Stars are of equal brightness and show stars as blue or pale blue.
27	Comet Kopff	8th	Aquarius	Comet	July 23rd	22h 58.9m	-09 48.7m	Periodic Comet Kopff is close to Jupiter this month and might sport an anti-tail at end of July on 25th and 26th.
					July 28th	22h 59.9m	-10 15.9m	
<b>These three Asteroids from John L. Goar Olympic Astronomical Society...thanks John.</b>								
28	Hebe	9.9	Virgo	Asteroid	July 23rd	14h 36.9m	+1 43.3m	With these asteroids you may have to watch them two nights in a row...or earlier one evening then come back and hour or two later and see which dot has moved against the background stars. It will help to draw the field of view or find someone with coordinates who can dial up that area of the sky. Good luck. Find John on the mountain he can help you find them.
					July 24th	14h 37.4m	+1 34.8m	
					July 25th	14h 37.9m	+1 26.2m	
29	Astraea	10.8	Sagittarius	Asteroid	July 23rd	20h 9.0m	-17 11.4m	
					July 24th	20h 8.1m	-17 15.7m	
					July 25th	20h 7.2m	-17 19.9m	
30	Laetitia	10.2	Libra	Asteroid	July 23rd	15h 37.6m	-6 19.4m	
					July 24th	15h 37.8m	-6 24.5m	
					July 25th	15h 38.0m	-6 29.7m	