TMSPA 2016 OBSERVER'S CHALLENGE

	OBJECT	TYPE	RA, DEC	CONST	Mag -V	Mag-2	SIZE	SEP	COMMENTS
		Planetary	19h 22m 57'		U U				An almost star-like Planetary, you need a large scope to see any disk. This
1	NGC 6790	Nebula	+1deg 30' 46.4"	AQUILA	10.5 - 11.4		5"		PN should show a bluish/green color cast.
			19h 18m 33"						
2	23 Aquila	Double Star	+01deg 05' 06"	AQUILA	5.1	8.76		3.25"	· · · · · · · · · · · · · · · · · · ·
	D100	D 1 1 1	19h 16m 00'						Great curved, semi-vacant lane over 3 degrees in length, enjoy this excellent
3	B138	Dark Nebula	+00deg 13' 19h 18m'	AQUILA					DN.
	B139	Dark Nebula	-01deg 28'	AQUILA					Narrow black spot; 10 mag star on SE edge
	D157	Dark Neoula	19h 11m 12"	AQUILA					Narrow black spot, 10 mag star on 51 edge
5	NGC 6760	GC	+01deg 01' 50"	AQUILA	8.9		9.6'		Globular cluster of very low dimension and unresolved.
	1000,000		or ang or bo	19H 05'	0.7		2.0		An extremely faint, round patch, on the threshold of visibility in 10".
			19H 05' 15"	15.3"+01					Completely unresolved. NGC 6749 has a reputation as the most difficult
6	NGC 6749	GC	+01deg 54' 05"	54' 05"	12		6'		NGC globular in the sky.
		Planetary	19h 00m 02"						Phantom Streak Planetary Nebula, "No central starsmall bright
7	NGC 6741	Nebula	-00deg 31' 23"	AQUILA	11		6"		ovalindistinct ring structure.
			18h 57m 30						
8	LDN 617	Dark Nebula	+1° 04' 00"	AQUILA			3 deg		A large multi-armed blob of dark sky sweeping between the stars in the field.
9	LDN 564 (B316)	Dark Nebula	18h 37m 36" -01deg 12' 00"	SERPENS			45' x 15'		Medium small triangular area that juts into the brighter Milky Way. Located just 1.2 deg NE of LDN 557.
9	LDN 304 (B310)	Dark Nebula	-01deg 12 00 18h 38m 36"	SERPENS			43 X 13		Conspicuous dark nebula bound on the W side by numerous MY stars. Large
10	LDN 557	Dark Nebula	-01deg 46' 59"	SERPENS			1° x 10'		diffuse dark area next to triangular and smaller LDN 564 (B316).
	LDIV 557	Dark Neoula	-01005 +0 57	BERI ENS			1 X 10		B136=Dusky spot; diam. 8'; 10 mag. star near middle. B135=Dusky spot;
			19h 08m 49"						diam. 13'; BD -4 4698 (magnitude 9.2) on N border; BD -4 4702 (magnitude
11	B136 + B135	Dark Nebula	-04deg 00' 00"	AQUILA			8', 13'		9.2) on SE edge
			19H 05'						
12	Aquila 15	Double Star	-04deg 05'	AQUILA	5.5	7	38.4"		Very nice wide double
			19h 04' 27"						
13	LDN 567 (B 132)	Dark Nebula	-04deg 25' 00"	AQUILA			16'		Dark; fairly well-defined. Tadpole-shaped, 16' long E and W.
1 14	D120 / D127 / D120	D 1 M 1 1	19H 02m				71 4 51		B130=dusky; not well defined; length 7' B127=Irregular; diam. 4.5'
14	B130 +B127 + B139	Dark Nebula Planetary	-5deg 19h 05' 9"	AQUILA			7', 4.5', narrow		B139=Narrow black spot; 10 mag star on SE edge. Located in a rich field of 10-13 mag stars. Use 200X for observing the disk.
15	NGC 6751	Nebula	-06deg 00'		11.9				The central star should be visible 12" scopes.
15	NGC 0751	Nebula	-000cg 00		11.9				The central star should be visible 12 scopes.
			19H 06'						Opacity 6. Circular in shape. NGC 6751 is close by, 20' NW and B133 is
16	B134	Dark Nebula	-06deg 14'	AQUILA			6'		close by. Check in binos and then a scope for more details with edge stars.
			19h 06.1'						
17	B133	Dark Nebula	-06deg 50'	AQUILA					Opacity of 6. Compare this with B134 easily seen in a 1.2 deg FOV.
			18h 50.1'						Opacity of 2. Observations show sizes from 15'x5' up to 2 degrees,
18	B111	Dark Nebula	-04deg 48'	SCUTUM			2 deg		depending on how you define the structure.
	D 110	5 I.V.I. 1		COLUMN :			2.01		Irregular dark region; diam5 degree; liberally sprinkled with stars in its
19	B119a	Dark Nebula	18h 55' -05deg 10'	SCUTUM			30'		NW half; several dark lanes in SE part

List #9

TMSPA 2016 OBSERVER'S CHALLENGE

	OBJECT	TYPE	RA, DEC	CONST	Mag -V	Mag-2	SIZE	SEP	COMMENTS
			18h 50' 54" -05deg						Faint and small, only 6' diameter and brightest star is 12.2 mag. Located 1
20	NGC6704	Open Cluster	11' 59"	SCUTUM	9.7		6'		deg N of M-11 Located in B-111
21	HVI50 + Sigma2391	Double Star	18h 49.7' -05 11' 59"	SCUTUM	AB 6.1	12.2		23.3"	Two nice doubles located between BAS 1 and M-11.
21	Sigma2391	Double Star	18h 48' 38" -05deg 50' 32"		AC 6,1	8.6		113 7'	'Yellow-White + Blue
	5181112571	Bouole Star	18h 48' 38" -05 50"		110 0,1	0.0		110.7	
22	BAS 1	Open Cluster	32"	SCUTUM	8.9		9'		Look for six faint stars in a ring shape.
23	J107 inside M-11	Double Star	18h 51' 8' -06deg 20'	SCUTUM	8	12.4		5.8"	Have some fun with this fainter DBL with a close connection.
25		Double Stal	-00deg 20 18h 49, 30'	SCOTOM	0	12.4		5.8	Very small; diam. 3'; not black; two narrow diverging lanes extending to the
24	B108	Dark Nebula	-06deg 30'	SCUTUM			3'		N; some small stars within.
			18h 42' 59'						
			-04deg 13' 06'						
			Ra 18:40:24						
25	Trumpler 35 + Do32	Open Cluster	Dec -04:06:00	SCUTUM	9.2		9.0' , 12.0'		Both Trumpler 35 and Dolidze 32 are open clusters in Scutum.
			18h 42' 13.9"						
		Open Cluster	-06deg 12'44" 18h 39' 25"						
26	NGC 6683 + B103	+ Dark Nebula		SCUTUM	9.4, Opacity $= 6$		3.0', 4.0'		NGC is an open cluster. B103 is a dark cloud with Opacity = 6
20	1100 0005 + 1105	Durk Hobulu	18h 3' 24"	5001010	y.i, optiony o		5.0 , 1.0		1000 is an open elaster. Bros is a dark cloud with opacity o
			-06deg 38' 00"						
			18h32'54"						
			-06deg 02'						
			18h34' 54'						
27	Do29 + Do30 + Do31	Open Clusters	-06deg 51'	SCUTUM			18', 18', 18'		All three Dolidze are open clusters, have fun!!
		o	19H 02m						
28	NGC 6664	Open Cluster	-5deg	SCUTUM	7.8		16'		
29	NGC 6712	GC	18h 53' 04' -08deg 42' 22"	SCUTUM	8.1		7.2'		Tight, small open cluster.
									Long, straight, dark line. This dusky line, just S of M-11, extends E and W
			18H 51'						for about 1 1/2 degrees. It is uniformly about 2' wide. A very very difficult
30	B318	Dark Nebula	-06 deg 25'	SCUTUM		1	.5 deg x 2' wide		object, spend a lot of time to study this one!