

CTSP 2005 Large Telescope Observing List (Sleep? We're not here to sleep.)

This year, we got pins! To qualify, observe at least 24 of the 36 objects on the list.
All observations must be made at the 2005 CTSP star party. Negative observations do not count.
The attached observing notes may prove helpful.

Class	Primary ID	Alternate ID	Con	RA	Dec	Mag	Size	Optimum	Date	Time
									Observed	Observed
PNe	Lo 13	PN G345.5+15.1	Sco	16h09m43.8s	-30°54'00"	15.5	1.2'	10:58p		
PNe	M 2-9	Minkowski's Butterfly	Oph	17h05m37.7s	-10°08'40"	14.6	17"	09:51p		
Dark	B 86	Barnard 86	Sgr	18h02m45.0s	-27°49'55"	5	5.0'	10:34p		
Glob	NGC 6553		Sgr	18h09m17.0s	-25°54'30"	8.3	9.2'	10:41p		
Glob	NGC 6712		Sct	18h53m04.0s	-08°42'18"	8.1	9.8'	11:24p		
Gal	IC 1296	PGC 62532	Lyr	18h53m18.8s	+33°03'57"	15.5	1.0'x 0.6'	01:40a		
Glob	NGC 6723		Sgr	18h59m33.0s	-36°37'54"	6.8	13.0'	01:46a		
Neb	NGC 6729	ESO 396-N*15	CrA	19h01m54.0s	-36°57'00"		25.0'	01:49a		
PNe	Sh 2-71	PN G035.9-01.1	Aql	19h02m00.3s	+02°09'11"	12.3	1.7'	11:33p		
Glob	NGC 6749		Aql	19h05m15.0s	+01°54'06"	12.4	4.0'	11:36p		
PNe	NGC 6751	PN G029.2-05.9	Aql	19h05m55.5s	-05°59'31"	12.5	20"	01:29a		
Glob	Terzan 7		Sgr	19h17m44.0s	-34°39'30"	12		11:49p		
Glob	Arp 2		Sgr	19h28m44.0s	-30°21'12"	13	2.3'	12:00a		
Open	NGC 6802	OCL 114	Vul	19h30m35.0s	+20°16'21"	11.7	3.2'	02:18a		
Glob	Palomar 11		Aql	19h45m14.0s	-08°00'24"	9.8	10.0'	12:16a		
Nebula	NGC 6888	Crescent Nebula	Cyg	20h12m48.0s	+38°19'00"	10	20.0'	12:43a		
Glob	NGC 7006		Del	21h01m29.0s	+16°11'18"	10.6	3.6'	01:31a		
PNe	NGC 7009	Saturn Nebula	Aqr	21h04m10.8s	-11°21'48"	8.3	29"	01:35a		
PNe	NGC 7026	Cheeseburger Nebula	Cyg	21h06m18.6s	+47°51'08"	12.7	20"	01:38a		
Glob	NGC 7078	M 15	Peg	21h29m58.0s	+12°10'00"	6.3	18.0'	02:01a		
PNe	NGC 7293	Helix Nebula	Aqr	22h29m38.4s	-20°50'13"	7.6	16.3'	03:00a		
Galaxy	NGC 7331		Peg	22h37m04.3s	+34°24'59"	10.3	10.7'x 4.3'	03:07a		
Galaxy	NGC 7479		Peg	23h04m57.2s	+12°19'28"	11.8	4.2'x 3.2'	03:35a		
PNe	Jn 1	PN G104.2-29.6	Peg	23h35m53.4s	+30°27'36"	15.1	5.3'	04:06a		
Galaxy	NGC 7741		Peg	23h43m54.6s	+26°04'34"	12.1	4.1'x 2.8'	04:14a		
Galaxy	Arp 86	NGC 7752 + 3	Peg	23h47m05.0s	+29°29'00"	13.9	2.6'x 1.3'	04:18a		
Galaxy	NGC 7771		Peg	23h51m24.5s	+20°06'43"	13.1	2.4'x 1.2'	04:21a		
Open Cl	NGC 7789	OCL 269	Cas	23h57m01.9s	+56°43'42"	7.5	15.0'	04:27a		
Galaxy	NGC 7798		Peg	23h59m25.7s	+20°44'59"	13	1.4'x 1.3'	04:29a		
Galaxy	NGC 7814		Peg	00h03m14.9s	+16°08'43"	11.5	5.8'x 2.8'	04:33a		
Glob	G1 in M31	Mayall II	And	00h32m46.5s	+39°34'41"	13.7	15"	05:03a		
Galaxy	PGC 2248	Cartwheel Galaxy	ScI	00h37m41.3s	-33°42'58"	14.8	1.2'x 0.9'	05:07a		
Galaxy	NGC 253	Sculptor Galaxy	ScI	00h47m33.1s	-25°17'18"	8.2	26.9'x 5.9'	05:18a		
Galaxy	NGC 891	PGC 9031	And	02h22m32.9s	+42°20'46"	10.8	14.1'x 3.1'	05:08a		
Galaxy	PGC 9892	Maffei 1	Cas	02h36m35.4s	+59°39'17"	11.7	56" x 39"	05:24a		
Galaxy	NGC 2276	Arp 25	Cep	07h27m11.4s	+85°45'19"	12.1	2.7'x 2.3'	05:24a		

CTSP 2005 Large Scope List Observing Notes

Primary ID	Notes
Lo 13	Longmore 13, a low surface brightness planetary nebula, is almost circular. A filter is needed, preferably O-III, but a UHC will suffice. At low power it has an almost speckled appearance, but fades and ultimately vanishes with increasing power.
M 2-9	Minkowski's Butterfly is a famous, although tiny and dim, bi-polar planetary nebula. High power is needed to reveal the hourglass shape of the two opposing lobes.
B 86	Barnard 86, a dark nebula, is immediately adjacent to NGC 6520, a tight open cluster, and the pair framed in a common field of view provide a lovely contrast. Take time to note ESO 456-SC38, a faint globular cluster about ½ degree west of B 86.
NGC 6553	A modest globular cluster buried among the stars of the Milky Way about 2 degrees southeast of M8.
NGC 6712	A compact globular cluster in Scutum, embedded in the Milky Way near the Wild Duck.
IC 1296	This face-on barred spiral galaxy, located only 4 arcminutes from M57, is famous for being difficult to see. Excellent seeing will allow detection of the exaggerated "S" of the spiral arms. Average seeing will allow detection of the brighter core, maybe.
NGC 6723	Technically in Sagittarius, but appearing to lie at one end of Corona Australis, this fairly bright globular cluster is a pleasant treat. Its age is variously estimated at 15-18 billion years. Not too shabby for an object in a 13.7 billion year old universe.
NGC 6729	A comet-shaped reflection nebula streaming away from a dim star. Sharing the field of view are a pair of reflection nebulae, NGC 6726/7, centered on a pair of bright stars and forming a figure eight shape, and a variable double star, HR 7170.
Sh 2-71	A fairly bright planetary nebula, somewhat irregular and showing some internal detail. On nights of good seeing, a fainter extension (outer shell?) can be detected. Best with a UHC or O-III, takes power well.
NGC 6749	A challenging globular cluster, bracketed by a pair of 12 th magnitude stars. With good seeing, granularity is visible, although actual resolution of individual stars is difficult.
NGC 6751	Double-shell planetary, inner and outer distinctly separate at higher power. Moderately bright, easily seen with no filters.
Terzan 7	The brightest of the Terzan globular clusters, 7 may not even belong to our galaxy. It's probably a member of the Sagittarius Dwarf Galaxy, in the process of being captured by the Milky Way. Terzan 7 is small; maybe 3' across, and relatively dim. Some stars may be resolved.
Arp 2	Terzan 7's kissing cousin. Another Sagittarius Dwarf Galaxy resident, Arp 2 is similarly small, but not quite as bright.
NGC 6802	A fun little open cluster situated at the eastern end of Collinder 399 (The Coathanger). The juxtaposition of the bright final star of the Coathanger with the small, dim fine-grained open cluster results in a visual treat.
Palomar 11	One of the brightest of the Palomar globulars. Pal 11 resides inside of a hexagonal asterism, is concentrated towards one end of the hexagon, and quite irregular.
NGC 6888	The Crescent Nebula, so-called because that's all you see in smaller scopes, is a quite complex emission nebula. In larger scopes, it forms a complete oval, although concentrated on one side, with lots of intricate interior detail. UHC or O-III filter needed.
NGC 7006	A small, compact, very round globular cluster. Resolving individual stars is quite difficult, not surprising given its rather large distance, variously estimated at 135,000 to 185,000 ly.
NGC 7009	The Saturn Nebula is amazing in a large scope on a good night. A complex planetary nebula with a cat's eye almond-in-an-oval shape. A visible central star and fliers on each end of the cat's eye complete the package. Shows well without filters, and takes power well.

- NGC 7026** The Cheeseburger Nebula, oddly enough, looks more like a plain hamburger. Using a UHC or O-III, this bi-polar planetary nebula will at low power appear as a rectangular smudge. At high power it can resolve into two gray stripes with rounded ends and a black stripe in between. Think “yoyo on edge”.
- NGC 7078** M15. In large scopes this is a spectacular globular cluster with a densely packed core and tendrils of resolved stars scattered about. For those with patience and really good charts, M 15 contains a planetary nebula, Pease 1. I will have a few copies of a Pease 1 finder chart set with me at the party.
- NGC 7293** The Helix Nebula, a ring-type planetary, in larger apertures with a UHC or O-III filter is big and bright with lots of detail visible.
- NGC 7331** This large, bright spiral galaxy and its six companion galaxies are known as the Deerlick group, located only a half degree away from the much better known Stephan’s Quintet.
- NGC 7479** A highly asymmetrical barred spiral galaxy with a massive bar and sweeping, deeply recurved spiral arms. With good seeing it will yield a lot of detail.
- Jn 1** Jones 1, a planetary nebula, while essentially invisible in small scopes is a real treat in larger apertures through a UHC or O-III filter. The brightest part of the nebulosity forms a horseshoe shape, while fainter material completes the circle and provides detail on the interior.
- NGC 7441** A face-on barred spiral galaxy with a bright bar and fainter, somewhat distorted spiral arms.
- Arp 86** NGC 7753 is a face-on spiral galaxy with a knot at the end of one spiral arm. With higher power and closer inspection, the knot is revealed to be NGC 7752, another galaxy that is interacting with NGC 7753.
- NGC 7771** A barred spiral galaxy sharing the field of view with two companions, NGC 7772, which appears to be interacting with 7771, and NGC 7769, a face-on spiral with a large, bright core. Three 16th and 17th magnitude galaxies are also present, but are difficult to detect in less than pristine skies.
- NGC 7789** This open cluster is underwhelming in smaller scopes, but with aperture is revealed as dense and fine-grained with hundreds of faint stars forming intricate chains. A historical note, NGC 7789 is one of the objects discovered by William Herschel's sister Caroline.
- NGC 7798** A face-on spiral galaxy, 7798 isn't just spiral, it's round. A large core and tightly wound spiral arms lend it the appearance of a disc. With better seeing and more power, some detail emerges, revealing that this is an irregular galaxy, with one spiral arm seeming to come unwound.
- NGC 7814** An edge-on spiral galaxy with a fat core bisected by a dark dust lane. This would be a mini-Sombrero, except it's almost exactly edge-on.
- G1 in M31** Also known as Mayall II, G1 is the brightest globular cluster in M31. At low power, G1 is one of three stars tightly clustered in an almost right triangle. With enough power (700x +) and good seeing, the center star of the three appears non-stellar. That's G1.
- PGC 2248** The Cartwheel Galaxy, a polar ring type galaxy, shares the field of view with two dim companions. Under less than ideal conditions, the Cartwheel looks more like a dim planetary nebula than a galaxy, and typically is visible only at high power.
- NGC 253** The Sculptor Galaxy. A large, bright, nearly edge-on spiral galaxy. In large scopes shows a wealth of detail.
- NGC 891** A thin edge-on galaxy bisected by a prominent dust lane. Exquisite detail in larger apertures. Another Caroline Herschel discovery.
- PGC 9892** Maffei 1, one of five members of the Maffei 1 group, discovered only about 40 years ago, is close but obscured by our galactic disk. The result is a difficult object with very low surface brightness, visible mainly as a hazy patch behind some bright foreground stars.
- NGC 2276** Arp 25, a massively distorted face-on spiral galaxy, lies only 8 arcminutes from another galaxy, NGC 2300. Arp 25 appears to stream away from the adjacent mag 8 star as if blowing in the wind. Good seeing can reveal detail in the spiral arms.