

Astronomical League

Planetary Nebula Observing Club

Observed: Yes

| No | Obj | No | Con | M | Her | Type | Mag | Dreyer | Alias/Notes |
|----|-------|------|-----|-----|--------|--------------|------|----------------------|--|
| 1 | NGC | 40 | Cep | | H58-4 | PI Neb 3b+3 | 10.7 | F,VS,R,VSMBM,*12SP | PK 120+9.1 PNG 120.0+9.8 |
| 2 | NGC | 246 | Psc | | H25-5 | PI Neb 3b | 8 | VF,L,4*IN DIF NEB | PK 118-74.1 PNG 118.8-74.7 |
| 3 | NGC | 650 | Per | M76 | H193-1 | PI Neb 3+6 | 12.2 | VB,P OF DNEB | M 76 Little Dumbbell PK 130-10.1 PNG 130.9-10.5 |
| 4 | IC | 1747 | Cas | | | PI Neb 3b | 13.6 | | PK 130+1.1 PNG 130.2+1.3 |
| 5 | ABELL | 4 | Per | | | PI Neb | 14.8 | | PK 144-15.1 |
| 6 | IC | 289 | Cas | | | PI Neb 4+2 | 12.3 | | Hubble 1 PK 138+2.1 PNG 138.8+2.8 |
| 7 | NGC | 1360 | For | | | PI Neb 3 | 9.6 | *8IN B,LNEB,E NS | ESO 482-7 Minkowski 1-3 PK 220-53.1 |
| 8 | IC | 351 | Per | | | PI Neb 2a | 12.4 | | PK 159-15.1 PNG 159.0-15.1 |
| 9 | IC | 2003 | Per | | | PI Neb 2 | 12.6 | | PK 161-14.1 PNG 161.2-14.8 |
| 10 | NGC | 1501 | Cam | | H53-4 | PI Neb 3 | 13.3 | PLN,PB,PS,VLE,1'DIAM | PK 144+6.1 PNG 144.5+6.5 |
| 11 | NGC | 1514 | Tau | | H69-4 | PI Neb 3+2 | 10 | *9IN NEB3'DIAM | PK 165-15.1 PNG 165.5-15.2 |
| 12 | NGC | 1535 | Eri | | H26-4 | PI Neb 4+2c | 9.6 | PLN,VB,S,R,PS,VSBM,R | PK 206-40.1 PNG 206.4-40.5 |
| 13 | SH2 | 216 | Per | | | PI Neb 3 | | | NIM, PK158+00.1 See AL Planetary Club Manual |
| 14 | J | 320 | Ori | | | PI Neb 2+4 | 12.9 | | PK 190-17.1 Jonckheere 320 |
| 15 | IC | 418 | Lep | | | PI Neb 4 | 10.7 | | PK 215-24.1 PNG 215.2-24.2 |
| 16 | NGC | 2022 | Ori | | H34-4 | PI Neb 4+2 | 12.4 | PLN,PB,VS,VLE | PK 196-10.1 PNG 196.6-10.9 |
| 17 | IC | 2149 | Aur | | | PI Neb 3b+2 | 11.2 | | PK 166+10.1 PNG 166.1+10.4 |
| 18 | IC | 2165 | CMa | | | PI Neb 3b | 12.9 | | PK 221-12.1 PNG 221.3-12.3 |
| 19 | J | 900 | Gem | | | PI Neb 3b+2 | 12.4 | | PK 194+2.1 Jonckheere 900 |
| 20 | MINK | 1-7 | Gem | | | PI Neb 2 | 13.4 | | PK 189+7.1 Minkowski 1-7 |
| 21 | NGC | 2346 | Mon | | H65-4 | PI Neb 3b+4 | 11.8 | *10AFF W/ S,VF,NEB | Minkowski 1-10 Sanduleak 2-5 PK 215+3.1 |
| 22 | NGC | 2371 | Gem | | H316-2 | PI Neb 3a+2 | 13 | B,S,R,BMN,P OF DNEB | NGC 2372 |
| 23 | ABELL | 21 | Gem | | | PI Neb | 10.7 | | PK 205+14.1 |
| 24 | NGC | 2392 | Gem | | H45-4 | PI Neb 3b+3b | 9.9 | B,S,R,*9M,*8NF100" | Eskimo Nebula PGC 21128 |
| 25 | NGC | 2438 | Pup | | H39-4 | PI Neb 4+2 | 10.1 | PLN,PB,PS,VLE,R | Sanduleak 2-13 PK 231+4.2 PNG 231.8+4.1 |
| 26 | NGC | 2440 | Pup | | H64-4 | PI Neb 5+3 | 10.8 | PLN,CB,NOT VWELL DEF | ESO 560-9 Sanduleak 2-14 PK 234+2.1 |
| 27 | NGC | 2452 | Pup | | | PI Neb 4+3 | 12.6 | PLN,F,S,LE,AM60* | ESO 493-11 RCW 17 Henize 2-4 |
| 28 | JNER | 1 | Lyn | | | PI Neb 4 | 14 | | PK 164+31.1 PNG 164.8+31.1 |
| 29 | NGC | 2610 | Hya | | H35-4 | PI Neb 4+2 | 13.6 | F,S,ATTTO*13,*7NF | Sanduleak 2-27 PK 239+13.1 PNG 239.6+13.9 |
| 30 | MINK | 3-6 | Pyx | | | PI Neb 2a | 10.7 | | PK 254+5.1 Minkowski 3-6 Henize 2-12 Sanduleak 2-29 Wray 16-25 |
| 31 | NGC | 2818 | Pyx | | | PI Neb PN | 11.6 | PLN,PB,PL,R,VGLBM | ESO 372-13 Henize 2-23 Sanduleak 2-39 |
| 32 | NGC | 3132 | Vel | | | PI Neb 4+2 | 8.2 | PLN,VB,VL,LE*9M | Eight-burst Planetary |
| 33 | NGC | 3242 | Hya | | H27-4 | PI Neb 4+3b | 8.6 | PLN,VB,LE147,45"D | Ghost of Jupiter ESO 568-5 |
| 34 | NGC | 3587 | UMa | M97 | | PI Neb 3a | 12 | PLN,VB,VL,R,VVG,VSBM | M 97 Owl Nebula PK 148+57.1 PNG 148.4+57.0 |
| 35 | NGC | 4361 | Crv | | H65-1 | PI Neb 3a+2 | 10.3 | VB,L,R,VSMBMN,R | ESO 573-19 PK 294+43.1 PNG 294.1+43.6 |
| 36 | IC | 3568 | Cam | | | PI Neb 2+2a | 11.6 | | PK 123+34.1 PNG 123.6+34.5 |
| 37 | ABELL | 35 | Hya | | | PI Neb 3a | 12 | | PK 303+40.1 |

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|----|-------|------|-----|-----|--------|-------------|------|----------------------|---|
| 38 | ABELL | 36 | Vir | | | PI Neb | 11.8 | | PK 318+41.1 |
| 39 | NGC | 5873 | Lup | | | PI Neb 2 | 13.3 | PLN,STELLAR=9.5MAG | ESO 328-34 Henize 2-121 Sanduleak 2-117 |
| 40 | NGC | 6026 | Lup | | | PI Neb 4 | 13.2 | F,S,R,GPMBM,TRI* NP | ESO 389-7 Henize 2-144 Sanduleak 2-131 |
| 41 | NGC | 6058 | Her | | H637-3 | PI Neb 3+2 | 13.3 | PF,VS,R,STELLAR | PK 64+48.1 PNG 64.6+48.2 |
| 42 | IC | 4593 | Her | | | PI Neb 2+2 | 10.9 | | PK 25+40.1 PNG 25.3+40.8 |
| 43 | NGC | 6072 | Sco | | | PI Neb 3a | 14.1 | PF,R,VGV LBM,R | ESO 389-15 Sanduleak 2-134 PK 342+10.1 |
| 44 | NGC | 6153 | Sco | | | PI Neb 4 | 11.5 | PLN,STELLAR | ESO 331-6 RCW 112 Henize 2-167 |
| 45 | NGC | 6210 | Her | | | PI Neb 2+3b | 9.3 | PLN,VB,VS,R,DISC | PK 43+37.1 PNG 43.1+37.7 |
| 46 | IC | 4634 | Oph | | | PI Neb 2a+3 | 10.7 | | ESO 587-1 Henize 2-189 Sanduleak 2-164 |
| 47 | MINK | 2-9 | Oph | | | PI Neb ?+6 | 14.6 | | PK 10+18.2 PNG 10.8+18.0 Minkowski 2-9 |
| 48 | NGC | 6302 | Sco | | | PI Neb 6 | 12.8 | PB,E PF,(SWIFT,TRIP) | Bug Nebula ESO 392-5 Gum 60 RCW 124 Henize 2-204 PK 349+1.1 |
| 49 | NGC | 6309 | Oph | | | PI Neb 3b+6 | 10.8 | B,S,BET2*VNR | Box Nebula Henize 2-206 PK 9+14.1 Sanduleak 2-281 |
| 50 | NGC | 6337 | Sco | | | PI Neb 4 | 11.9 | RINGNEB,EF,S,AM ST | ESO 333-5 Henize 2-215 Sanduleak 2-191 |
| 51 | NGC | 6369 | Oph | | H11-4 | PI Neb 4+2 | 12.9 | RINGNEB,PB,S,R | ESO 520-3 Henize 2-232 Sanduleak 2-207 |
| 52 | NGC | 6445 | Sgr | | H586-2 | PI Neb 3b+3 | 13.2 | PB,PS,R,GBM,R,*15NP | Little Gem ESO 589-9 Henize 2-290 |
| 53 | IC | 4670 | Sgr | | | PI Neb PN | 12 | | Henize 2-305 ESO 589-20 Sanduleak 2-264 Hubble 6 PK 7+1.1 PNG 7.2+1.8 the Cat's Eye Nebula |
| 54 | NGC | 6543 | Dra | | H37-4 | PI Neb 3a+2 | 8.8 | PLN,VB,PS,SBMVSN | ESO 590-1 Henize 2-340 Sanduleak 2-294 |
| 55 | NGC | 6537 | Sgr | | | PI Neb 2a+6 | 12.5 | PLN,B,S,STELLAR | ESO 456-70 Henize 2-362 Sanduleak 2-307 |
| 56 | NGC | 6565 | Sgr | | | PI Neb 4 | 13.2 | PLN,STELLAR | ESO 394-33 Henize 2-361 Sanduleak 2-308 |
| 57 | NGC | 6563 | Sgr | | | PI Neb 3a | 13.8 | PLN,F,L,CE,HAZY EDGE | PK 34+11.1 PNG 34.6+11.8 |
| 58 | NGC | 6572 | Oph | | | PI Neb 2a | 9 | PLN,VB,VS,R,LHAZY | ESO 590-8 Henize 2-369 Sanduleak 2-314 |
| 59 | NGC | 6567 | Sgr | | | PI Neb 2a+3 | 11.7 | PLN,STELL,11M,IN ACL | ESO 590-12 Henize 2-381 Sanduleak 2-322 |
| 60 | NGC | 6578 | Sgr | | | PI Neb 2a | 13.1 | PLN,STELLAR=13MAG | ESO 522-22 Henize 2-394 Sanduleak 2-332 |
| 61 | NGC | 6620 | Sgr | | | PI Neb 2b | 15 | PLN,STELLAR | ESO 522-26 Henize 2-399 Sanduleak 2-335 |
| 62 | NGC | 6629 | Sgr | | H204-2 | PI Neb 2a | 11.6 | PLNORGCL,PB,EES,R | ESO 522-23 Henize 2-408 Sanduleak 2-343 |
| 63 | NGC | 6644 | Sgr | | | PI Neb 2 | 12.2 | PLN,STELLAR | ESO 523-1 Henize 2-410 Sanduleak 2-345 |
| 64 | IC | 4732 | Sgr | | | PI Neb 1 | 13.3 | | ESO 396-2 Henize 2-421 Sanduleak 2-363 |
| 65 | IC | 4776 | Sgr | | | PI Neb 2a | 11.7 | | M 57 Ring Nebula PK 63+13.1 PNG 63.1+13.9 |
| 66 | NGC | 6720 | Lyr | M57 | | PI Neb 4+3 | 9.7 | RINGNEB,B,PL,CE,LYRA | PK 25-4.2 PNG 25.4-4.7 |
| 67 | IC | 1295 | Sct | | | PI Neb 3b+2 | 15 | | ABELL 50 PK 78+18.1 PNG 78.5+18.7 |
| 68 | NGC | 6742 | Dra | | H742-3 | PI Neb 2c | 15 | VF,STELLAR | |

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|-----|---------|-------|-----|-----|--------|--------------|------|----------------------|--|
| 69 | SH2 | 71 | Aql | | | PI Neb 3b+3 | 13.2 | | PK 36-1.1 PNG 35.9-1.1 SH2-71 |
| 70 | NGC | 6741 | Aql | | | PI Neb 4 | 10.8 | PLN,STELLAR | Sanduleak 2-380 Jonckheere 475 PK 33-2.1 |
| 71 | NGC | 6751 | Aql | | | PI Neb 3 | 12.5 | PB,S | Sanduleak 2-382 PK 29-5.1 PNG 29.2-5.9 |
| 72 | NGC | 6765 | Lyr | | | PI Neb 5 | 13.1 | F,S,E | Minkowski 1-68 PK 62+9.1 PNG 62.4+9.5 |
| 73 | IC | 4846 | Aql | | | PI Neb 2 | 12.7 | | Sanduleak 2-385 PK 27-9.1 PNG 27.6-9.6 |
| 74 | IC | 1297 | CrA | | | PI Neb | 10.6 | | ESO 337-20 Henize 2-431 Sanduleak 2-386 |
| 75 | NGC | 6778 | Aql | | | PI Neb 3+3 | 13.3 | S,E,ILL-DEFINED DISC | Sanduleak 2-388 PK 34-6.1 PNG 34.5-6.7 |
| 76 | NGC | 6781 | Aql | | H743-3 | PI Neb 3+3 | 11.8 | PLN,F,L,R,VSBM DISC | PK 41-2.1 PNG 41.8-2.9 |
| 77 | NGC | 6790 | Aql | | | PI Neb 2 | 10.2 | PLN,B,ES,STELL=9.5M | PK 37-6.1 PNG 37.8-6.3 |
| 78 | MINK | 1-70 | Aql | | | PI Neb 1 | 12.7 | | PK 45-2.1 PNG 45.4-2.7 Minkowski 1-70 Vyssotsky 2-2 |
| 79 | NGC | 6803 | Aql | | | PI Neb 2a | 11.3 | PLN,STELLAR | PK 46-4.1 PNG 46.4-4.1 |
| 80 | NGC | 6804 | Aql | | H38-6 | PI Neb 4+2 | 12.2 | CB,S,IR,RRR | PK 45-4.1 PNG 45.7-4.5 |
| 81 | NGC | 6807 | Aql | | | PI Neb 2 | 13.8 | PLN,STELLAR | PK 42-6.1 PNG 42.9-6.9 |
| 82 | HENIZ | 2-438 | Cyg | | | PI Neb 4 | 9.6 | | Henize 2-438 PK 64.7+5.0 PNG 64.7+5.0 Campbell's Hydrogen Star |
| 83 | NGC | 6818 | Sgr | | H51-4 | PI Neb 4 | 9.9 | PLN,B,VS,R | Sanduleak 2-392 PK 25-17.1 PNG 25.8-17.9 |
| 84 | NGC | 6826 | Cyg | | H73-4 | PI Neb 3a+2 | 9.8 | PLN,B,PL,R,*11M | Blinking Planetary PK 83+12.1 PNG 83.5+12.7 |
| 85 | NGC | 6833 | Cyg | | | PI Neb 2 | 13.8 | PLN,STELLAR | PK 82+11.1 PNG 82.5+11.3 |
| 86 | NGC | 6853 | Vul | M27 | | PI Neb 3+2 | 7.6 | VB,VL,BIN,IE,DUMBBEL | M 27 Dumbbell Nebula Henize 2-452 PK 60-3.1 PNG 60.8-3.6 |
| 87 | NGC | 6884 | Cyg | | | PI Neb 2b | 12.6 | PLN,STELLAR | PK 82+7.1 PNG 82.1+7.0 |
| 88 | NGC | 6879 | Sge | | | PI Neb 2a | 13 | PLN,STELLAR=10M | Henize 2-455 PK 57-8.1 PNG 57.2-8.9 |
| 89 | NGC | 6881 | Cyg | | | PI Neb 2a+3 | 14.3 | PLN,STELLAR | Henize 2-456 PK 74+2.1 PNG 74.5+2.1 |
| 90 | NGC | 6886 | Sge | | | PI Neb 2+3 | 12.2 | PLN,STELLAR=10M | Henize 2-458 PK 60-7.2 PNG 60.1-7.7 |
| 91 | NGC | 6891 | Del | | | PI Neb 2a+2b | 11.7 | PLN,STELLAR=9.5M | PK 54-12.1 PNG 54.1-12.1 |
| 92 | NGC | 6894 | Cyg | | H13-4 | PI Neb 4+2 | 14.4 | RINGNEB,F,S,VVLE | Henize 2-460 PK 69-2.1 PNG 69.4-2.6 |
| 93 | IC | 4997 | Sge | | | PI Neb 1 | 11.6 | | Henize 2-464 PK 58-10.1 PNG 58.3-10.9 |
| 94 | NGC | 6905 | Del | | H16-4 | PI Neb 3+3 | 11.9 | PLN,B,PS,R,4S*NR | Henize 2-466 PK 61-9.1 PNG 61.4-9.5 |
| 95 | NGC | 7008 | Cyg | | H192-1 | PI Neb 3 | 13.3 | CB,L,E45,R,**ATT | PK 93+5.2 PNG 93.4+5.4 |
| 96 | NGC | 7009 | Aqr | | H1-4 | PI Neb 4+6 | 8.3 | PLN,VB,S,ELLIPTIC | Saturn Nebula PK 37.7-34.5 |
| 97 | NGC | 7026 | Cyg | | | PI Neb 3a | 12.7 | PB,BIN,PLN | PK 89+0.1 PNG 89.0+0.3 |
| 98 | NGC | 7027 | Cyg | | | PI Neb 3a | 10.4 | PLN,STELLAR=8.5M | PK 84-3.1 PNG 84.9-3.4 |
| 99 | SH1 | 89 | Cyg | | | PI Neb 3a | 14.5 | | PK 89-0.1 PNG 89.8-0.6 Moth Nebula |
| 100 | NGC | 7048 | Cyg | | | PI Neb 3b | 11.3 | PF,PL,DIF,IR,VLBM | Hubble 9 PK 88-1.1 PNG 88.7-1.6 |
| 101 | PEASE 1 | | Peg | | | PI Neb 1 | 14.9 | | CENTRAL STAR 14.9 MAG |

Astronomical League Planetary Nebula Observing Club

Observed: Yes

| No | Obj | No | Con | M | Her | Type | Mag | Dreyer | Alias/Notes |
|-----|----------|-------------------|-----|---|--------|-------------|------|----------------------|--|
| 102 | IC | 5117 | Cyg | | | PI Neb 2 | 13.3 | | PK 89-5.1 PNG 89.8-5.1 |
| 103 | HU | 1-2 | Cyg | | | PI Neb 2 | 12.7 | | PK 86-8.1 PNG 86.5-8.8 Baby Dumbbell |
| 104 | NGC | 7094 | Peg | | | PI Neb 4 | 13.6 | *IN EEF NEBY,VDIFFIC | Kohoutek 1-19 PK 66-28.1 PNG 66.7-28.2 |
| 105 | IC | 5217 | Lac | | | PI Neb 2 | 12.6 | | PK 100-5.1 PNG 100.6-5.4 |
| 106 | NGC | 7293 | Aqr | | | PI Neb 4+3 | 7.5 | PF,VLE OR BIN | Helix Nebula PK 36-57.1 PNG 36.1-57.1 |
| 107 | NGC | 7354 | Cep | | H705-2 | PI Neb 4+3b | 12.9 | PLN,B,S,R,PGVLBM | PK 107+2.1 PNG 107.8+2.3 |
| 108 | NGC | 7662 | And | | H18-4 | PI Neb 4+3 | 9.2 | PLN ORRING,VB,PS,R | Blue Snowball PK 106-17.1 |
| 109 | JONES 1 | | Peg | | | PI Neb 3b | 12.1 | | Jones 1 PK 104-29.1 PNG 104.2-29.6 |
| 110 | ABELL 82 | | Cas | | | PI Neb | 12.7 | | IC 1454 |
| | | <i>Sub Total:</i> | | | | 110 | | | |
| | | <i>Total:</i> | | | | 110 | | | |