

Planetary Nebula Observations

ABELL 4	Per	PI Neb	PK 144-15.1
Oct 07 2010 31"	12mmT4	PF,PS,R,UB,2 PGC GAL CLOSE BY,OIII DOESNOT HELP MUCH,17MM - COMP GAL HARD TO DET,R=F	
Feb 05 2005 31"	17mmT4	DIF,VF,MS,R,OIII,GREENISH,SOME PATCHY AREAS DET,PAIR=PGC10427,R=G	
ABELL 12	Ori	PI Neb	PK 198-6.1
Jan 24 2004 31"	16mmT5	MF,PL,OVAL,UB,SHISB,WITH OIII,R=G	
Jan 24 2004 31"	17mmT4	NEB NOT VISIBLE WITHOUT OIII,R=P	
Jan 24 2004 31"	24mmTP	MF,MS,OVAL,UB,MOD HISB,WITH OIII,* CLOSE BY ALMOST TOUCHING,R=G	
ABELL 20	CMi	PI Neb	PK 214+7.1
Apr 04 2005 31"	17mmT4	DIF,EF,PL,R,W/OIII,NET DET,PATCHY AREAS,VF*S INSIDE NEB,R=F	
Apr 04 2005 31"	17mmT4	VDIF,EF,PL,OVAL,3F*S IN CENTRAL PART OF NEB,R=P	
ABELL 21	Gem	PI Neb	PK 205+14.1
Dec 28 2008 31"	17mmT4	VDIF,PF,VL,L DIF AREA OF NEB,PATCHY IN AREAS,OIII HELPS SOMEWHAT,NEB BRTER,R=F	
Jan 24 2004 31"	24mmTP	DIF,PF,VL,UB,WITH OIII,PATCHY AREAS IN 2 HALVES CENTERED AROUND *,R=G	
ABELL 35	Hya	PI Neb 3a	PK 303+40.1
Mar 20 2009 31"	17mmT4	C* APPROX 9TH MAG,W AND W/O OIII CANNOT DETECT ANY NEB,R=P	
Mar 17 2009 31"	17mmT4	LOC GOOD,SCAN WITH AND WITHOUT OIII,ON MERIDIAN,GOOD SKIES,NO NEB DET,R=P	
ABELL 36	Vir	PI Neb	PK 318+41.1
Mar 20 2009 31"	17mmT4	EF,PL,C* 10TH MAG,F NEB DET AROUND C *,NO NEB OUTER SHELL,OIII DOESNOT HELP,R=P	
Mar 17 2009 31"	17mmT4	BRT BLUEISH FUZZY BALL,NO OUTER SHELL OF NEB DET,OIII DOESN'T HELP,R=F	
ABELL 70	Aql	PI Neb	PK 38-25.1
Jun 25 2003 12.5"	9mmT6	VDIF,VF,MS,R,PATCH,F* ON ONE EDGE,AV,R=F	
ABELL 78	Cyg	PI Neb	PK 81-14.1
Sep 18 2004 31"	17mmT4	VDIF,W/OIII,VF,ML,CENTRAL * APPROX 13TH MAG,R,AREA OF NEB DETECTED,R=F	
ABELL 79	Lac	PI Neb	PK 102-2.1
Sep 18 2004 31"	17mmT4	WOIII,VDIF,VF,MS,PATHC,F* IN PL,OBLONG-PATCHY,VF*S OUTER EDGE,R=F	
ABELL 82	Cas	PI Neb	IC 1454
Sep 02 2008 31"	17mmT4	DIF,EF,ML,OVAL,C* 15MAG,OTHER F*S IN NEB CLOSE TO CENTER,OIII HELPS DET NEB,R=P	
Sep 19 2004 31"	17mmT4	VDIF,W/OIII,VF,ML,OVAL,PATCH,B* IN CTR,3F*S IN NEB ONE SIDE,LG BALL/PATCH,R=F	
HENIZ 2-438	Cyg	PI Neb 4	Henize 2-438 PK 64.7+5.0 PNG 64.7+5.0 Campbell's Hydrogen Star
Sep 02 2008 31"	12mmT4	VB,VS,R,INNER CORE RING REDDISH,C* 12TH MAG,FT NEB AROUND C*,OIII NO HELP,R=F	
Sep 02 2008 31"	17mmT4	VB,VS,R,INNER CORE RING REDDISH,C* 12TH MAG,FT NEB AROUND C*,OIII NO HELP,R=F	
HENIZ 2-450	Cyg	PI Neb 1	PK 68+3.1 Henize 2-450
Jun 19 2004 31"	17mmT4	PF,ES,WITH OIII,VERY STELLAR LIKE,SOMEWHAT BLUE,R=F	
IC 289	Cas	PI Neb 4+2	Hubble 1 PK 138+2.1 PNG 138.8+2.8
Oct 07 2010 31"	12mmT4	MB,ML,C* JUST BARELY VISIBLE,APPROX 17 MAG,NEB PATCHY,R=G	
Oct 07 2010 31"	17mmT4	MB,SM,R,UB,NO C*,OIII HELPS LITTLE,NEB PATCHY NOT ROUND,R=G	
Sep 18 2004 31"	17mmT4	MF,ML,R,UB,W/OIII,GREENISH,DARK PATCH IN CENTER SUSP,NO CENTRAL *,R=E	

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IC	351	Per	PI Neb 2a	PK 159-15.1 PNG 159.0-15.1
	Oct 07 2010	31"	12mmT4	MB,VS,R,BNUC,BRT BLUE,SUDDENLY MBM,BRT NUC,OIII BRIGHTENS NEB,HELPS LITTLE,R=G
	Dec 20 2003	31"	17mmT4	PB,MS,R,VHISB,BRT BLUE,NO CENTRAL *,R=G
IC	418	Lep	PI Neb 4	PK 215-24.1 PNG 215.2-24.2
	Dec 28 2008	31"	17mmT4	VB,PS,R,BRT C*10M,GRANDULAR NEB,C* GETS LOST IN NEB WITH AV,OIII HELPS LITTLE,R=G
	Oct 31 1980	12.5"	9mm	BRT BLUE,NICE!!!
IC	1295	Sct	PI Neb 3b+2	PK 25-4.2 PNG 25.4-4.7
	Aug 23 2009	31"	12mmT4	MF,PL,OV,AL,PATCHY,NO C*,SEVERAL F**S IN NEB,SOME CLOSE TO CENTER,OIII HELPS,DARK INNER HOLE,BREAK IN EDGES,PAIR=SAND2-374,R=F
	Sep 05 2007	31"	17mmT4	W/OIII,MB,ML,OV,AL,PATHC,SHISB,PARCHY AREAS,FEW F**S IN NEB,R=E
IC	1297	CrA	PI Neb	ESO 337-20 Henize 2-431 Sanduleak 2-386
	Sep 02 2008	31"	17mmT4	MF,PS,OV,AL,R,OIII HELPS LITTLE,GREENISH,NO C*,10 DEG ABOVE HORZ AT MERIDIAN,R=F
IC	1454	Cep	PI Neb 4	ABELL 81 PK 117+18.1 PNG 117.5+18.9
	Sep 12 2012	36"	17mmT4	MF,MS,R,PATCH,UB,2F**S ON EDGE,NO CENTRAL *,W/OIII,R NEB WITH DARK INNER CIRCLE,R=G
	Jun 20 2004	31"	17mmT4	W/OIII,PB,PL,R,UB,VERY ROUND,SHARP EDGES,DARK CENTER,2F**S ON OUTER EDGE,R=G
IC	1747	Cas	PI Neb 3b	PK 130+1.1 PNG 130.2+1.3
	Oct 07 2010	31"	12mmT4	PB,MS,R,DARK HOLE IN CENTER,SLIGHTLY BRTER ONE SIDE,OIII DOESNOT HELP MUCH,NO C*,R=G
	Oct 07 2010	31"	17mmT4	MB,VS,R,BRT BLUE,CENTRAL REGION DARK,HOLE,NO C*,OIII HELPS SOMEWHAT,ONE SIDE BRTER THAN OTHER,R=G
	Sep 18 2004	31"	17mmT4	PB,MS,W/OIII,R,DARK CENTER SUSP,BRT R BLUEISH BALL,R=E
IC	2003	Per	PI Neb 2	PK 161-14.1 PNG 161.2-14.8
	Oct 07 2010	31"	12mmT4	MB,VS,R,NO C*,ONE HALF NEB BRTER THAN OTHER,OIII HELPS LITTLE,R=G
	Feb 05 2005	31"	17mmT4	OIII,PB,VS,R,BRT BLUE,BRT AREA ON ONE SIDE,PAIR=MAC,R=E
IC	2120	Aur	PI Neb Planetz 5 18.2 +37 36	Minkowski 2-3 PK 169-0.1
	Dec 15 2004	12.5"	12mmT4	EDIF,EF,VS,DETECTED WITHOUT OIII,VF* WITH FAINT GLOW DET.R=P
	Dec 15 2004	12.5"	12mmT4	EDIF,EF,PS,W/OIII,LOC VERY GOOD,SUSP PATCH AT BEST,R=P
IC	2149	Aur	PI Neb 3b+2	PK 166+10.1 PNG 166.1+10.4
	Dec 28 2008	31"	17mmT4	PB,MS,OV,AL,BRT C*,HISB,BRT BLUE,W/OIII,NO C*,NEB ELONG,R=G
	Feb 17 2004	31"	17mmT4	DIF,PB,MS,ELONG,OV,AL,MHISB,OIII,NO CENTRAL *,UB CENTER,FAINT THIN HALO,R=E
IC	2165	CMa	PI Neb 3b	PK 221-12.1 PNG 221.3-12.3
	Dec 28 2008	31"	17mmT4	MB,PS,R,UB,BRT BLUEISH BALL, NO C*,OIII DOESN'T HELP MUCH,R=G
	Dec 19 2006	31"	17mmT4	VB,PS,R,BRT BLUE BALL,NO CENTRAL *,W/OIII NEB IS BRIGHTER,R=G
IC	3568	Cam	PI Neb 2+2a	PK 123+34.1 PNG 123.6+34.5
	Mar 17 2009	31"	17mmT4	VF,ML,R,F* OFF SIDE,BRT BLUEISH,GMB,BRT CENT REG,OUTTER SHELL GRANDULAR,W/OIII,DOESNOT HELP MUCH,R=E
	Feb 04 2005	31"	17mmT4	PB,ML,R,BNUC,BRT BLUE,BM,HALO AROUND CENTRAL NUC,F* OFF ONE EDGE,R=E
IC	4593	Her	PI Neb 2+2	PK 25+40.1 PNG 25.3+40.8
	Apr 16 2009	31"	17mmT4	VB,MS,R,C* 10TH,BRT BLUEISH GREEN BALL,BRT CENT REGION,GRANDULAR NEB AROUND C*,OIII KNOCKS OUT C*,DOESNOT HELP MUCH,R=E

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IC	4634	Oph	PI Neb 2a+3	ESO 587-1 Henize 2-189 Sanduleak 2-164
	May 17 2009 31"	17mmT4	PB,PS,BRT BLUEISH BALL,NO C*,MEB ELONG W/TAPPERED ENDS,OIII DOES NOT HELP,R=G	
	Jun 19 2004 31"	17mmT4	VF,PS,R,UB,WITH OIII,BRT BLUE,TAPPERED ENDS,NO CENTRAL *,R=E	
IC	4677	Dra	PI Neb Envel.	MCG 11-22-17 VV 121 PGC 61193
	May 19 2009 31"	17mmT4	MB,ML,UB,IRR SHAPE,NO C*,OIII DOESNOT HELP,PAIR=6543,R=G	
	Mar 26 2006 31"	17mmT4	VDIF,VF,MS,OVAL,PATCH,NO CENTRAL *,W/OIII STANDS OUT BETTER,PATCHY,PAIR=6543,R=P	
IC	4732	Sgr	PI Neb 1	ESO 523-1 Henize 2-410 Sanduleak 2-345
	May 19 2009 31"	12mmT4	MF,ES,R,HARD TO DET FROM FOV *S,NO C*,OIII DOES NOT HELP,BLUEISH BALL,R=P	
	Sep 12 2007 31"	17mmT4	PF,PS,R,VERY SM BRT CENTER WITH F NEB AROUND CENTRAL *,OIII DOESNOT HELP,R=F	
IC	4776	Sgr	PI Neb 2a	ESO 396-2 Henize 2-421 Sanduleak 2-363
	Aug 15 2009 31"	17mmT4	MB,VS,R,UB,NO C*,BRT BLUEISH BALL,OIII,STANDS OUT OF FOV,BKGROUND *S FADE,R=F	
	Sep 12 2007 31"	12mmT4	W/OIII,EB,ML,VERY BRT BLUEISH BALL,SOME FAINT NEB AROUND NEC DET.R=G	
	Sep 12 2007 31"	17mmT4	W/OIII,VB,PS,UB,BRT BLUEISH BALL,R=G	
IC	4846	Aql	PI Neb 2	Sanduleak 2-385 PK 27-9.1 PNG 27.6-9.6
	Sep 02 2008 31"	17mmT4	MF,VS,R,NO C*,OIII MAKES NEB STAND OUT,BRT BLUE,VERY SMALL,R=G	
	May 16 2004 31"	17mmT4	PB,VS,R,WITH OIII,BRT BLUE, ROUND DISK,HISB,R=G	
IC	4997	Sge	PI Neb 1	Henize 2-464 PK 58-10.1 PNG 58.3-10.9
	Jul 05 2008 31"	12mmT4	PB,PS,R,CENTRAL REGION BRT,W/OIII,HELPS MUCH,BM,FHALO DET AROUND MIDDLE,R=G	
	Sep 10 2004 31"	17mmT4	VB,MS,BNUC,HISB,W/OIII,BRIGHT BLUE,BRT CENTRAL DISC WITH FAINT HALO,ALMOST *,R=G	
IC	5117	Cyg	PI Neb 2	PK 89-5.1 PNG 89.8-5.1
	Sep 02 2008 31"	17mmT4	MB,VS,R,UB,BLUEISH BALL,CLOSE TO *,OIII HELPS LTTL,F NEB DET ARND BALL,NO C*,R=F	
	Sep 18 2004 31"	17mmT4	MB,VS,R,HISB,W/OIII,* CLOSE BY,BRT BLUE,VERY SMALL DISC,FNEB DET WITH AV,R=F	
IC	5217	Lac	PI Neb 2	PK 100-5.1 PNG 100.6-5.4
	Sep 02 2008 31"	17mmT4	MB,VS,R,UB,BRT BLUE BALL,NO C*,OIII HELPS LTL,FT HALO NEB DET ARND BALL,R=F	
	Sep 18 2004 31"	17mmT4	MB,PS,R,HISB,W/OIII,BRT BLUEISH BALL W/F HALO DET,CENTRAL * SUSP,BM,R=G	
J	320	Ori	PI Neb 2+4	PK 190-17.1 Jonckheere 320
	Dec 28 2008 31"	17mmT4	PF,VS,NO C*,VS UB BALL,BLUEISH,OIII DOESN'T HELP MUCH,R=G	
	Oct 04 2005 31"	17mmT4	VB,PS,R,W/OIII,BRT BLUE,SOME FAINT NEB DET OUTSIDE R BALL,R=G	
J	900	Gem	PI Neb 3b+2	PK 194+2.1 Jonckheere 900
	Dec 28 2008 31"	17mmT4	PB,VS,R,UB,NO C*,VS BRT BLUE BALL,* CLOSE,OIII MAKE NEB BRTER,R=G	
	Feb 17 2004 31"	17mmT4	DIF,PB,MS,BRT BLUE,* CLOSE BY,CENTRAL BRIGHTNESS DET,R=G	
	Feb 17 2004 31"	17mmT4	PB,MS,R,HISB,FAINT HALO AROUND OBJECT DET,OIII,R=E	
JONES 1	Peg	PI Neb 3b	Jones 1 PK 104-29.1 PNG 104.2-29.6	
	Sep 02 2008 31"	17mmT4	DIF,VF,VL,PATCH,OIII HELPS MUCH,2 CRESENT HALVES,SEVERAL VF*S IN CENTRAL REG,C* 16TH MAG,BROKEN IN HALF,R=F	
KOH 4-37	Cyg	PI Neb	Kohoutek 4-37 PK66+2.1	
	Jun 19 2004 31"	17mmT4	VDIF,EF,PS,WITH OIII,EXTREMELY DIF,KOHOUTEK 4-34,R=P	

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KOH 4-41	Cyg	PI Neb	Kohoutek 4-41 PK68+1.1
Sep 11 2004 31"	17mmT4	EF,ES,PATCH,W/OIII,JUST OUTSIDE 3 F*S,R=P	
MINK 1-1	And	PI Neb	PK 130-11.1 Minkowski 1-1
Oct 20 2006 31"	17mmT4	PB,PS,R,LARGE BNUC,W/OIII/NEB BRTER,NO CENTRAL *,BRT BLUE,F* CLOSE BY,R=G	
MINK 1-2	Per	PI Neb 1	Minkowski 1-2 PK 133-8.1 PNG 133.1-8.6
Sep 02 2008 31"	17mmT4	PF,ES,R,STELLAR LIKE,BLUEISH,OIII DOESNOT HELP MUCH,R=P	
MINK 1-7	Gem	PI Neb 2	PK 189+7.1 Minkowski 1-7
Dec 28 2008 31"	17mmT4	MB,VS,R,UB,BRT BLUEISH,NO C*,OIII DOESN'T HELP MUCH,R=G	
Feb 17 2004 31"	17mmT4	DIF,VF,MS,R,BRT BLUE,R NUC,NO CENTRAL *,FT NEB AROUND CENTRAL REGION,OIII,R=G	
MINK 2-9	Oph	PI Neb ?+6	PK 10+18.2 PNG 10.8+18.0 Minkowski 2-9
May 17 2009 31"	12mmT4	MB,PS,ELONG,VSMALL CENT REGION OR C* APPROX 12TH MAG,NEB ELONG (BAR) FROM C*,LOOKS LIKE EDGE ON GAL W/VERY SNUC,OIII DOES NOT HELP,R=F	
MINK 3-6	Pyx	PI Neb 2a	PK 254+5.1 Minkowski 3-6 Henize 2-12 Sandeak 2-29 Wray 16-25
Dec 28 2008 31"	17mmT4	MB,PS,OVAl-R,UB,NO C*,BRT BLUEISH BALL,OIII HELPS LITTLE,MORE BLUE,R=G	
MINK 1-70	Aql	PI Neb 1	PK 45-2.1 PNG 45.4-2.7 Minkowski 1-70 Vyssotsky 2-2
Sep 02 2008 31"	17mmT4	MF,ES,R,OIII HELPS LITTLE,BLUEISH SM BALL,NO C*,HARD TO DET FROM FOV *S,R=F	
MINK 2-51	Cep	PI Neb 2+3	PK 103+0.1 Minkowski 2-51
Jun 20 2004 31"	17mmT4	PF,MS,R,WITH OIII,VERY F* IN CENTER,R=G	
MINK 3-28	Sct	PI Neb 2+3	PK 21-0.1 Minkowski 3-28
Aug 13 2007 31"	17mmT4	VF,VS,PATCH,UB,W/OIII,CAN SEE LARGER AREA OF NEB,DOESN'T HELP MUCH,R=F	
NGC 40	Cep	H58-4 PI Neb 3b+3 F,VS,R,VSMBM,*12SP	PK 120+9.1 PNG 120.0+9.8
Sep 02 2008 31"	17mmT4	PB,ML,OVAl,LAYERS OF RINGS DET,BRT C*,GREENISH,F* ON EDGE,OIII NO HELP,R=E	
Jul 09 1983 12.5"	12mm	MB,PS,BNEC,BRT CENTRAL *,SHARP EDGES,R	
Aug 13 1982 12.5"	16mm	BG COLOR,MF,PS,R,BRT CENTRAL *,(10TH MAG),SIM TO BLINKING PL,F*W SIDE	
Aug 13 1982 12.5"	7mm	ELONGATION STARTING TO SHOW UP	
NGC 246	Psc	H25-5 PI Neb 3b VF,L,4*IN DIF NEB	PK 118-74.1 PNG 118.8-74.7
Sep 02 2008 31"	17mmT4	VF,ML,OVAl,OIII HELPS GRTLY,TRANSLUCENT BUBLE,C*13MAG,BRT RINGS IN EDGE,R=G	
Sep 27 1981 12.5"	16mm	DIF,BLUE GREEN,MB,BL,SOURROUNDS 4 *S, 1 * S,PATCHY OVAlNESS	
Oct 31 1980 12.5"	24mm		
Oct 29 1980 8"	24mm		
Sep 18 1980 12.5"	24mm	3*S IN NEB,ONE MOST LIKELY CENTRAL *	
NGC 650	Per M76 H193-1	PI Neb 3+6 VB,P OF DNEB	M 76 Little Dumbbell PK 130-10.1 PNG 130.9-10.5
Sep 02 2008 31"	17mmT4	VB,VL,BRT HOUR GLASS CENTRAL REGION,FT WHISPS OF NEB SIDES,OIII NO HELP,F* EDGE OF HOUR GLASS,NO C* DET,R=E	
Mar 19 2004 12.5"	12mmT4	W/OIII. VB,PL,HOUR GLASS SHAPE,BAR,TWO HALVES,MESSIER MARATHON 2004,R=E	
Dec 06 2002 12.5"	9mmT6	PB,PL,2 LOBES EASILY DETECTED,MHISB,BRT REGION IN ONE LOBE. M76	
Mar 02 1984 10"	20mm	SAME	

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NGC 650	Per	M76	H193-1	PI Neb 3+6	VB,P OF DNEB	M 76 Little Dumbbell PK 130-10.1 PNG 130.9-10.5
Aug 25 1982	12.5"	16mm				HOUR GLASS SHAPE,WHIPHS OF NEB AROUND TIPS,SAME AS BEFORE
Oct 03 1981	12.5"	24mm				BLUE GREEN,MB,PS,S PART BRTER,HISB,2 PARTS DET,DARK PATCH
Mar 27 1981	12.5"	24mm				MESSIER MARATHON 1981
Aug 22 1980	12.5"	24mm				
Aug 19 1980	12.5"	24mm				
Jul 24 1980	12.5"	24mm				
Jul 17 1980	12.5"	24mm				
Jul 11 1980	12.5"	24mm				
NGC 1360	For			PI Neb 3	*8IN B,LNEB,E NS	ESO 482-7 Minkowski 1-3 PK 220-53.1
Dec 28 2008	31"	17mmT4				PF,PL.EL.C*11M,OIII HELPS A LOT,ONE HALF BRTER THAN OTHER,SOMEWHAT HISB,R=G
NGC 1501	Cam	H53-4	PI Neb 3	PLN,PB,PS,VLE,1'DIAM	PK 144+6.1 PNG 144.5+6.5	
Oct 09 2010	31"	17mmT4				MB,ML,R,C* 13TH MAG,GRAYISH GREEN COLOR,VERY R,SHARP EDGES,DARKER INNER RING,OIII HELPS LITTLE,C* GOES AWAY,R=E
Oct 03 1981	12.5"	12mm				VERY R,UB,F CENTRAL * 14TH MAG DET,GREEN,DIF,MF,MS
NGC 1514	Tau	H69-4	PI Neb 3+2	*9IN NEB3'DIAM	PK 165-15.1 PNG 165.5-15.2	
Oct 09 2010	31"	17mmT4				PB,PL,OVAL,OIII HELPS BRING OUT MORE DETAIL IN NEB,DARK PATCHES IN NEB,R=E
Oct 09 2010	31"	17mmT4				PB,PL,OVAL,R,C* APPROX 9TH MAG,LARGE NEB,SPRIAL IN STR,DARK INNER RING BROKEN,R=E
Dec 25 1984	12.5"	16mm				PB,ML,BRT CENTRAL *,LOC BETWEEN 2B*S.LARGE BALL OF NEBULA,R,MOD HISB
NGC 1535	Eri	H26-4	PI Neb 4+2c	PLN,VB,S,R,PS,VSBM,R	PK 206-40.1 PNG 206.4-40.5	
Dec 28 2008	31"	17mmT4				VB,ML,R,C*12M,OIII BRT INNER RING,R HALO,HISB MIDDLE, OIII HELPS SOMEWHAT,R=E
Oct 30 1981	12.5"	12mm				BLUE,MB,PL,BRT MIDDLE,12MAG CENTRAL *
Oct 31 1980	12.5"	24mm				SIM IN COLOR TO SATURN NEBULA,FIND 1537 FIRST,GREAT!!!
NGC 2022	Ori	H34-4	PI Neb 4+2	PLN,PB,VS,VLE	PK 196-10.1 PNG 196.6-10.9	
Dec 28 2008	31"	17mmT4				MB,ML,R,PATCH,VF C* WITH AV,EDGES FRAILED,OIII DOESN'T HELP MUCH,R=G
Dec 30 1983	12.5"	12mm				MF,PS,NO CENTRAL * DET,R,UB,LINE OF F*S OFF TO BOTH SIDES
Oct 31 1980	12.5"	24mm				LOOKS LIKE PALE GREY *
Sep 10 1980	12.5"	24mm				
Sep 10 1980	12.5"	32mm				EASILY DET,NICE
NGC 2242	Aur		PI Neb	EEF,VS,R,F*NF	PNG 170.3+15.8	
Feb 17 2004	31"	17mmT4				DIF,MF,VS,OVAL,PATCH,ONE SIDE BRTER THAN OTHER,APPEARS ROUND AT TIMES,OIII,R=G
NGC 2346	Mon	H65-4	PI Neb 3b+4	*10AFF W/ S,VF,NEB	Minkowski 1-10 Sanduleak 2-5 PK 215+3.1	
Dec 28 2008	31"	17mmT4				VB,PL,R,HISB,BRT C*11,BRT GREENISH,MORE NEB WITH AV,OIII DOESN'T HELP MUCH,R=E
Oct 05 2002	12.5"	9mmT6				PB,PS,BNUC,VBM,CENTRAL * APPROX 8 MAG,R,HISB,BLUE GREEN CENTRAL REGION
NGC 2371	Gem	H316-2	PI Neb 3a+2	B,S,R,BMN,P OF DNEB	NGC 2372	
Dec 28 2008	31"	17mmT4				PB,PL,C*15,2 HALVES,LOBS BOTH SIDES,SHISB,HOUR GLASS SH,OIII HELPS V LITTLE,R=E
Feb 21 1984	12.5"	12mm				SAME
Feb 21 1984	12.5"	12mm				SAME,SOUTH PART BRT THAN N,CENTRAL * DET,VF,VS
Oct 23 1982	12.5"	12mm				SEE 2371
Oct 23 1982	12.5"	12mm				MF,MS,2 PARTS EASILY DET,W SIDE BRT,BOTH MOD HISB,NSS
Dec 03 1980	12.5"	24mm				
Dec 03 1980	12.5"	24mm				

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NGC 2371	Gem	H316-2	PI Neb 3a+2	B,S,R,BMN,P OF DNEB	NGC 2372
Oct 31 1980	12.5" 16mm			DOUBLE NEBULA,2 NEB ON TOP OF EACH OTHER,NICE!!	
Oct 31 1980	12.5" 16mm			DOUBLE NEBULA,2 NEB ON TOP OF EACH OTHER,NICE!!	
NGC 2392	Gem	H45-4	PI Neb 3b+3b	B,S,R,*9M,*8NF100"	Eskimo Nebula PGC 21128
Nov 22 2006	12.5" 12mmT4			EB,VL,BRT CENTRAL * GOES AWAY WITH AV,BRT BLUE BALL,PATCHY AREAS DET OUTER,R=E	
Dec 04 2004	31" 17mmT4			VB,VL,WITH OIII,CENTRAL * EASY,RINGS AROUND CENTRAL *,DARK RINGS BETWEEN,OUTTER NEBULA LOOKS MATTED,BRIGHT BLUE,BEST EVER SEEN TO DATE,R=E	
Feb 21 1984	12.5" 12mm			MB,PS,ESKIMO NUBULA,CENTRAL * EASILY DET,PATCHED IN NEB DET,FORMS TRI W2"S	
Oct 23 1982	12.5" 12mm			CENTRAL * DET,SOME DARK AREAS IN GAS DET	
Oct 16 1982	12.5" 12mm			BLUE,MF,VS,R,UB,NO CENTRAL *	
Oct 31 1980	12.5" 24mm			ESKIMO NEBULA,NON STELL,GREAT!!	
NGC 2438	Pup	H39-4	PI Neb 4+2	PLN,PB,PS,VLE,R	Sanduleak 2-13 PK 231+4.2 PNG 231.8+4.1
Dec 28 2008	31" 17mmT4			VB,ML,R,2"S INSIDE CENT RING,INNER AREA DKER,MOD HISB INNER RING,OIII HELPS,R=E	
Mar 19 2004	12.5" 12mmT4			W/OIII. PLANETARY IN M46,RING SHAPE,CENTRAL DARKNESS,DONUT APPEARANCE,R=E	
Mar 27 1982	12.5" 12mm			MF,PS,24MM-NO CENTRAL * DET,R,UB,12MM-CENTRAL * DET,UB,R,SOME DARK PATCHES SUSP	
Dec 03 1980	12.5" 24mm			PLANETARY IN M46,GREAT!!	
NGC 2440	Pup	H64-4	PI Neb 5+3	PLN,CB,NOT VWELL DEF	ESO 560-9 Sanduleak 2-14 PK 234+2.1
Dec 28 2008	31" 17mmT4			VB,PL,EL,NO C*,IRR,2 HALVES/LOBS,HISB MIDDLE,F OUT SHELL,OIII HELP DETAIL,R=E	
Dec 03 1980	12.5" 24mm			SIM TO SATURN NEBULA,BRT BLUE,SLIGHT DIF NEB AROUND OBJECT	
NGC 2452	Pup		PI Neb 4+3	PLN,F,S,LE,AM60*	ESO 493-11 RCW 17 Henize 2-4
Dec 28 2008	31" 17mmT4			MB,MS,OV,AL,DARK AREA IN NEB DET,NO C*,OIII DOESN'T HELP MUCH,GREENISH COLOR,R=G	
Nov 22 2006	12.5" 12mmT4			MF,VS,R,PAIR=2453,S BLUEISH BALL,OIII HELPS SOMEWHAT,R=G	
Dec 03 1980	12.5" 24mm			NOT MUCH SURFACE BRT,PAIL GREY,OV,AL,PATCH,BESIDE CLUSTER - 2453	
NGC 2610	Hya	H35-4	PI Neb 4+2	F,S,ATTTO*13,*7NF	Sanduleak 2-27 PK 239+13.1 PNG 239.6+13.9
Dec 28 2008	31" 17mmT4			PB,ML,OV,AL,UB,B* IN FOV,* IN EDGE,VF C*15,OIII DOESN'T HELP MUCH,R=G	
Nov 22 2006	12.5" 12mmT4			MF,PS,R,F* ON EDGE OF NEB,OIII HELPS OUT SLIGHTLY,R=F	
Mar 29 2006	31" 17mmT4			DIF,MB,ML,R,UB,* IN EDGE,W/OIII,PATCHY,DARK AREAS,OV,AL WITH BRT EDGES,R=G	
NGC 2818	Pyx		PI Neb PN	PLN,PB,PL,R,VGLBM	ESO 372-13 Henize 2-23 Sanduleak 2-39
Dec 28 2008	31" 17mmT4			MB,MS,UB,NO C*,NEB INSIDE CLUSTER CR 206,W/OIII,NEB HAS PATCHY AREAS,R=G	
NGC 3132	Vel		PI Neb 4+2	PLN,VB,VL,LE*9M	Eight-burst Planetary
Dec 28 2008	31" 17mmT4			VB,PL,OV,AL,BRT C*,DARK INNER RING,BRT BLUEISH GREEN,8 DEG ABOVE H,OIII HELPS,R=E	
NGC 3242	Hya	H27-4	PI Neb 4+3b	PLN,VB,LE147,45"D	Ghost of Jupiter ESO 568-5
Dec 28 2008	31" 17mmT4			VB,PL,R,HISB,C*13,OUT SHELL,BRTER INNER RING W/TAP SIDES,BRT BLUEISH,OIII HL,R=E	
Feb 12 1983	12.5" 16mm			MB,PS,R,BLUE FUZZY EDGES,UB,NO CENTRAL *	
Dec 03 1980	12.5" 24mm			GHOST OF JUPITER,PAIL GREENISH COLOR,GREAT!!	
NGC 3587	UMa M97		PI Neb 3a	PLN,VB,VL,R,VVG,VSBM	M 97 Owl Nebula PK 148+57.1 PNG 148.4+57.0
Mar 08 2013	36" 17mmT4			MESSIER MARATHON 2013	
Mar 16 2009	31" 17mmT4			EB,EL,W/OIII,LOOSE C*,DOESNOT HELP MUCH,LITTLE MORE DARK PATCHES DET,R=E	
Mar 16 2009	31" 17mmT4			EB,EL,C* DET APPROX 15TH MAG,DARK PATCHES,BROKEN EDGES,GREYISH GREEN,R=E	

Planetary Nebula Observations

NGC 3587	UMa M97	PI Neb 3a	PLN,VB,VL,R,VVG,VSBM	M 97 Owl Nebula PK 148+57.1 PNG 148.4+57.0
Feb 04 2005 31"	17mmT4	OIII,VB,EL,OVAL,HISB,2	DARK PATCHES,CENTRAL *	BEST TO DATE,PATCHY AREAS,DET,R=E
Mar 19 2004 12.5"	12mmT4	MESSIER MARATHON 2004		
Dec 26 2003 31"	17mmT4	PB,VL,MOD HISB,CENTRAL *	DARK PATCHES,EDGES FRAILED,ANOTHER F* OFF CENTER,R=E	
Mar 15 1985 12.5"	12mm	VERY R,DARK PATCHES DET,BG COLOR,BEST VIEW EVER!!!		
Mar 15 1985 12.5"	16mm	SAME,EB,VL		
Mar 02 1984 10"	20mm	MB,ML,R,B* OFF ONE SIDE,UB WITH SOME DARK AREAS		
Mar 27 1981 12.5"	24mm	MESSIER MARATHON 1981		
Oct 31 1980 12.5"	24mm			
Sep 18 1980 12.5"	24mm			
Sep 10 1980 12.5"	24mm			
May 07 1980 5"	9mm			
Apr 18 1980 6"	24mm			
Apr 16 1980 6"	24mm	IN SAME FOV WITH M108		
NGC 4361	Crv	H65-1	PI Neb 3a+2	VB,L,R,VSMBMN,R
ESO 573-19 PK 294+43.1 PNG 294.1+43.6				
Mar 16 2009 31"	17mmT4	VB,EL,BRT C*,SQUARE SHAPE NEB,GREENISH,W/OIII,NEB MORE PRONOUNCED,HELPS A LITTLE,NEB MORE SQUARE LIKE,R=E		
May 03 1981 12.5"	16mm	BLUE GREEN,PB,PL,CENTRAL * APPROX 11MAG DET		
NGC 5873	Lup	PI Neb 2	PLN,STELLAR=9.5MAG	ESO 328-34 Henize 2-121 Sanduleak 2-117
Mar 20 2009 31"	12mmT4	MB,VS,R,V SM BLUEISH BALL,NO C*,VF* OFF ONE SIDE,OIII HELP LITTLE,R=G		
NGC 6026	Lup	PI Neb 4	F,S,R,GPMBM,TRI* NP	ESO 389-7 Henize 2-144 Sanduleak 2-131
Mar 20 2009 31"	17mmT4	MF,MS,R,B CENT REGION,C* 13TH MAG,W/OIII,C* VERY DIM,MORE NEB DET,R BALL,R=F		
NGC 6058	Her	H637-3	PI Neb 3+2	PF,VS,R,STELLAR
PK 64+48.1 PNG 64.6+48.2				
Mar 20 2009 31"	17mmT4	MF,MS,R.B C* 12TH MAG,GRANULAR NEB,OIII KNOCKS OUT C*,DOESNOT HELP MUCH,R=F		
Sep 06 2002 12.5"	16mm	PB,ML,R,DIF HALO,BM		
Sep 06 2002 12.5"	9mmT6	BM,MOD HISB,CENTRAL *		
NGC 6072	Sco	PI Neb 3a	PF,R,VGVLBM,R	ESO 389-15 Sanduleak 2-134 PK 342+10.1
May 17 2009 31"	17mmT4	PB,PL,NO C*,R,UB,FRAILED EDGES,OIII HELPS NEB A LITTLE,R=G		
NGC 6153	Sco	PI Neb 4	PLN,STELLAR	ESO 331-6 RCW 112 Henize 2-167
May 17 2009 31"	17mmT4	VB,ML,R,UB,HISB,NO C*,BRT BLUEISH GREEN,OIII HELPS,R=E		
NGC 6210	Her	PI Neb 2+3b	PLN,VB,VS,R,DISC	PK 43+37.1 PNG 43.1+37.7
May 17 2009 31"	17mmT4	VB,ML,C* APP 12TH MAG,INNER REGION GRANULAR,F WHISPS OF NEB BEYOND BALL,BRT B-G,BRT INNER REGION AROUND C*,OIII SHOWS MORE FAINT NEB AROUND BALL,R=E		
Jul 14 1980 12.5"	24mm			
Jul 12 1980 12.5"	24mm			
Jul 11 1980 12.5"	24mm			
Jul 05 1980 12.5"	24mm			
Jun 17 1980 12.5"	9mm	FIRST SIGHTING,BRT BLUE WITH 9MM AND NEBULA FILTER		
NGC 6302	Sco	PI Neb 6	PB,E PF,(SWIFT,TRIP)	Bug Nebula ESO 392-5 Gum 60 RCW 124 Henize 2-204 PK 349+1.1

Planetary Nebula Observations

NGC 6302	Sco		PI Neb 6	PB,E PF,(SWIFT,TRIP)	Bug Nebula ESO 392-5 Gum 60 RCW 124 Henize 2-204 PK 349+1.1
May 18 2009 31"	17mmT4			VB,VL,ELONG,BRT BLUE-GREEN,IRR IN SHAPE,HISB,BRT CENTRAL REGION AROUND C*,BM,NO C* JUST BRT REGION,TAPPERED ENDS,ONE SIDE THINNER AND THICKER THAN OTHER,OIII HELPS,NEB GRANULAR BROKEN IN PARTS,NEB S-SHAPE,R=E	
May 28 2008 31"	17mmT4			VB,VL,ELONG,HISB,B CENTRAL * REGION,PATCHY AREAS OF NEB DET,BRT AREAS,W/OIII,MORE DETAIL IN NEB,BRT GREEN,EXCELLENT,R=E	
NGC 6309	Oph		PI Neb 3b+6	B,S,BET2*VNR	Box Nebula Henize 2-206 PK 9+14.1 Sanduleak 2-281
May 18 2009 31"	17mmT4			VB,ML,BRT BLUEISH,HISB,F* ON END,VF* OFF SIDE TOUCHING,NO C*,BOX LIKE NUC REGION, FAINT NEB EXTENDED OFF SIDES,RECTANGLE SHAPE,OIII DOESNOT HELP MUCH,R=E	
Jul 21 1984 12.5"	12mm			VF,ES,DOUBLE * TO W,F* JUST N SIDE,BRT BAR N-S DET,NSS,MHISB	
Jun 04 1981 12.5"	16mm			WITH 2X BARLOW,BLUE,BESIDE F*,NO CENTRAL * DET	
NGC 6337	Sco		PI Neb 4	RINGNEB,EF,S,AM ST	ESO 333-5 Henize 2-215 Sanduleak 2-191
May 18 2009 31"	17mmT4			MB,ML,TRANSLUCENT BALL WITH C* OFF CENTERED,APPROX 14TH MAG,PATCHES OF NEB IN BALL DET,OUTTER RING BRTER,OIII HELPS,LIKE M57,KNOCKS OUT C*,R=G	
NGC 6369	Oph	H11-4	PI Neb 4+2	RINGNEB,PB,S,R	ESO 520-3 Henize 2-232 Sanduleak 2-207
May 18 2009 31"	17mmT4			MB,ML,R,RESEMBLES M57,C* APPROX 15TH MAG,RING WITH FT NEB INSIDE,SOMEWHAT BRIGHTER AROUND C*,OIII DOESNOT HELP MUCH,NEB SLIGHTLY BRIGHTER,R=E	
Jun 04 1981 12.5"	24mm			GREEN,MF,MS,NO CENTRAL * DET	
Jun 18 1980 12.5"	9mm			GOOD,LOC BESIDE F*,DISK DET	
NGC 6445	Sgr	H586-2	PI Neb 3b+3	PB,PS,R,GBM,R,*15NP	Little Gem ESO 589-9 Henize 2-290
May 18 2009 31"	17mmT4			VB,PL,HISB,LOOKS LIKE A BIG MAC SANDWITCH,2 HAMBURGER BUNS,NO C*,SEPERATED IN 2 HALVES,BOX-SQUARE SHAPE,OIII, OUTTER SIDES OF NEB BRTER,R=E	
Sep 20 1984 12.5"	12mm			DIF,MF,PS,F* NW EDGE,B* TO W,PATCHY	
Aug 13 1982 12.5"	16mm			PF,VS,BLUE GREEN,F* ON NW EDGE,OVAL-PATCHY,SBM,PAIR/6440	
NGC 6537	Sgr		PI Neb 2a+6	PLN,B,S,STELLAR	ESO 590-1 Henize 2-340 Sanduleak 2-294
May 19 2009 31"	12mmT4			PB,PS,UB,NO C*,BLUEISH GREEN,SMALL BALL,OIII DOESNOT HELP,R=G	
NGC 6543	Dra	H37-4	PI Neb 3a+2	PLN,VB,PS,SBMVSN	the Cat's Eye Nebula
May 19 2009 31"	17mmT4			VB,VL,BRT GREENISH,C* 10TH MAG,BRT INNER CORE,GRANULAR BALL,VF WHISPS OF NEB AROUND BALL,OIII BRINGS OUT OUTTER HALO ONLY,PAIR=IC4677,R=E	
Mar 26 2006 31"	17mmT4			VF,PL,BRT BLUE,CENTRAL *,DETAIL IN NEB,DARK INNER RING,PAIR=IC4677,R=E	
Jun 23 2003 12.5"	9mmT6			VB,ML,ELONG,OVAL,VERY HISB,BRT NUC,SLIGHTLY ELONG,FAINT HALO AROUND GAL,R=E	
Jul 22 1981 12.5"	16mm			BLUEISH IN COLOR,PB,MS,NO CENTRAL * DET	
Jul 14 1980 12.5"	24mm				
Jul 11 1980 12.5"	24mm				
Jun 20 1980 12.5"	24mm				
NGC 6563	Sgr		PI Neb 3a	PLN,F,L,CE,HAZY EDGE	ESO 394-33 Henize 2-361 Sanduleak 2-308
May 19 2009 31"	17mmT4			PB,PL,UB,NO C*,GREENISH,PARTS AROUND EDGE NOT WELL DEFINED,OIII MORE NEB,R=E	
Sep 21 1984 12.5"	12mm			VDIF,VF,VS,VF* OFF TO W,PATCHY-R,UB	
NGC 6565	Sgr		PI Neb 4	PLN,STELLAR	ESO 456-70 Henize 2-362 Sanduleak 2-307
May 19 2009 31"	12mmT4			PB,VS,UB,NO C*,GREENISH-BLUE BALL,OIII DOESNOT HELP MUCH,R=G	

Planetary Nebula Observations

NGC 6565	Sgr	PI Neb 4	PLN,STELLAR	ESO 456-70 Henize 2-362 Sanduleak 2-307	
Sep 21 1984 12.5"	12mm	VF,VS,3F*S TO N IN A LINE,BLUEISH COLOR,R,UB			
NGC 6567	Sgr	PI Neb 2a+3	PLN,STELL,11M,IN ACL	ESO 590-8 Henize 2-369 Sanduleak 2-314	
May 19 2009 31"	12mmT4	MB,VS,UB,VF* OFF TO SIDE,RICH * FOV,VF C* SUSP,OIII DNOT HELP,BLUEISH SBALL,R=F			
Sep 21 1984 12.5"	12mm	DIF,MF,MS,R,BRT BLUE,ALMOST STELL			
NGC 6572	Oph	PI Neb 2a	PLN,VB,VS,R,LHAZY	PK 34+11.1 PNG 34.6+11.8	
May 19 2009 31"	17mmT4	VB,ML,BRT BG (TORQUOISE),UNIQUE COLOR,BM,OIII LG HALO NEB AROUND BALL,R=E			
Jun 27 2003 12.5"	9mmT6	EB,PL,BRT BLUE,FAINT HALO AROUND CENTRAL REG,OUTTER SHELL DET OIII FILTER,R=E			
Sep 21 1984 12.5"	12mm	PB,PS,BRT R BALL,CENTRAL * NOT DET,UB,HISB			
Jun 04 1981 12.5"	24mm	BLUE,MB,PS			
Jun 18 1980 12.5"	24mm	LOOKS LIKE BRT * AT TIP OF TRI			
Jun 18 1980 12.5"	24mm	WITH BARLOW,LOOKS LIKE B* AT TIP OF TRI			
Jun 18 1980 12.5"	9mm	WITH BARLOW SHAPE EASILY DET			
Jun 18 1980 12.5"	9mm	VERY BRT BLUE WITH BARLOW AND 9MM,SHAPE EASILY DET			
NGC 6578	Sgr	PI Neb 2a	PLN,STELLAR=13MAG	ESO 590-12 Henize 2-381 Sanduleak 2-322	
May 19 2009 31"	12mmT4	PB,MS,,VF* OR PIECE OF NEB OFF ONE SIDE,VF C* APP 15TH SUSP,GBM,OIII DNH,R=G			
Sep 12 2007 31"	17mmT4	W/OIII,PB,MS,R,BRT MIDDLE,BLUEISH BALL,HISB MIDDLE,* OFF SIDE,FT HALO AROUND,R=G			
NGC 6620	Sgr	PI Neb 2b	PLN,STELLAR	ESO 522-22 Henize 2-394 Sanduleak 2-332	
May 19 2009 31"	12mmT4	MB,VS,SOME BRTING MIDDLE DET,NO C*,GREENISH,OIII HELPS BR TEN NEB,R=F			
Sep 05 2007 31"	17mmT4	MB,VS,GREENISH BALL,SMBM,OIII DOESN'T HELP MUCH,R=F			
NGC 6629	Sgr	H204-2	PI Neb 2a	PLNORGCL,PB,EES,R	ESO 522-26 Henize 2-399 Sanduleak 2-335
May 19 2009 31"	12mmT4	MB,PS,R,C* APPROX 13TH MAG,BLUEISH-GREEN,BRT TOWARDS MIDDLE,OIII DNH,R=G			
Aug 13 1982 12.5"	7mm	MF,VS,BETWEEN 2*S IN FIELD OF VIEW,HARD TO LOC,R,BLUE GREEN COLOR			
NGC 6644	Sgr	PI Neb 2	PLN,STELLAR	ESO 522-23 Henize 2-408 Sanduleak 2-343	
May 19 2009 31"	12mmT4	MB,VS,R,UB,BLUEISH,NO C*,OIII BRIGHTENS NEB,R=G			
Sep 05 2007 31"	17mmT4	W/OIII,PB,MS,R,BRT BLUE BALL,STANDS OUT WELL,W/O OIII,SOME FNEB AROUND CREG,R=G			
NGC 6720	Lyr M57	PI Neb 4+3	RINGNEB,B,PL,CE,LYRA	M 57 Ring Nebula PK 63+13.1 PNG 63.1+13.9	
Aug 23 2009 31"	12mmT4	VB,VL,OV,AL,HISB,BRT THICK SIDES,FT NEB INSIDE.C*15TH MAG,EXT NEB ONE SIDE,OIII HELPS LITTLE,KNOCKS OUT C*,R=E			
Mar 22 2004 12.5"	12mmT4	MESSIER MARATHON 2004			
Sep 23 2003 31"	17mmT4	EB,EL,FIRST LIGHT WITH 17MM,CENTRAL * DET,BEST OBSERVATION TODATE.OBLONG RING			
Sep 01 2002 31"	9mmT6	CENTRAL * SEEN. FAINT DETAIL IN NEB,BEST VIEW TO DATE			
Sep 20 1981 12.5"	24mm				
Jun 04 1981 12.5"	9mm	WITH BARROW,CENTRAL * COMES AND GOES WITH AVERTED VISION,2B*S INSIDE RING			
Mar 27 1981 12.5"	24mm	MESSIER MARATHON 1981			
Sep 10 1980 12.5"	24mm				
Sep 07 1980 12.5"	24mm				
Sep 03 1980 12.5"	24mm				

Planetary Nebula Observations

NGC 6720	Lyr M57		PI Neb 4+3	RINGNEB,B,PL,CE,LYRA	M 57 Ring Nebula PK 63+13.1 PNG 63.1+13.9
Aug 19 1980	12.5" 24mm				
Jul 15 1980	12.5" 24mm				
Jul 12 1980	12.5" 24mm				
Jul 11 1980	12.5" 24mm				
Jul 05 1980	12.5" 24mm				
Jun 20 1980	12.5" 24mm				
Jun 18 1980	12.5" 24mm				
Jun 17 1980	12.5" 24mm				
Jun 10 1980	6" 24mm				
May 07 1980	5" 9mm				
Apr 18 1980	6" 24mm				
Apr 16 1980	6" 24mm				
NGC 6741	Aql		PI Neb 4	PLN,STELLAR	Sanduleak 2-380 Jonckheere 475 PK 33-2.1
Sep 02 2008	31" 17mmT4	VF,PS,R,OIII HELPS,NEB BRTER,BETTER,BRT BLUE,SLIGHT HINT OF ELONG,RINGS,R=G			
Aug 31 1984	12.5" 12mm	MB,ES,1/3 WAY BETWEEN 2F*S,VF GLOW DET WITH AVERTED VISION			
Jul 10 1981	12.5" 12mm	JUST S OF 11MAG *,BLUE GREEN COLOR,VB,ES			
NGC 6742	Dra	H742-3	PI Neb 2c	VF,STELLAR	ABELL 50 PK 78+18.1 PNG 78.5+18.7
Aug 23 2009	31" 12mmT4	MF,MS,R,UB,GREENISH-GREY,NO C*,VF* IN EDGE OF NEB,OIII HELP A LITTLE,UB,R=G			
Mar 26 2006	31" 17mmT4	MB,ML,OVAL,MHISB,2F*S IN NEB,PALE GREENISH,DARK AREA SUSP/WOIII,NEB BRTER,R=E			
NGC 6751	Aql		PI Neb 3	PB,S	Sanduleak 2-382 PK 29-5.1 PNG 29.2-5.9
Sep 02 2008	31" 17mmT4	MB,PL,R,BRT GR,C* 15TH MAG,OIII DOESNOT HELP MUCH,PATCHY AREAS IN NEB,R=E			
Jul 10 1981	12.5" 12mm	R,BLUE GREEN,MF,VS			
NGC 6765	Lyr		PI Neb 5	F,S,E	Minkowski 1-68 PK 62+9.1 PNG 62.4+9.5
Sep 02 2008	31" 17mmT4	MF,MS,ELONG,OIII HELPS,HISB IN CENT REG,BROKEN HALVES 1 SM & FAINTER,C* BM,R=G			
Sep 19 2004	31" 17mmT4	PB,ML,ELONG,HSIB,W/OIII,COMET LIKE,PATCHY,2 HALVES ONE BRT THAN OTHER,R=E			
NGC 6772	Aql	H14-4	PI Neb 3b+2	VF,L,R,VVLBM,R	Sanduleak 2-384 PK 33-6.1 PNG 33.1-6.3
Jul 10 1981	12.5" 12mm	VDIF,R,LOCATED IN BARREN * FIELD,EF			
NGC 6778	Aql		PI Neb 3+3	S,E,ILL-DEFINED DISC	Sanduleak 2-388 PK 34-6.1 PNG 34.5-6.7
Sep 02 2008	31" 17mmT4	PB,MS,OVAL,R,GREENISH,OIII HELPS LITTLE,NO C*,BRTER AREAS DET,MORE OVAL,R=G			
May 16 2004	31" 17mmT4	MB,MS,R,WITH OIII,PATCHY AREA DET,MOD HISB,SOFT BLUE,R=E			
Jul 10 1981	12.5" 12mm	BLUE,MF,MS			
NGC 6781	Aql	H743-3	PI Neb 3+3	PLN,F,L,R,VSBM DISC	PK 41-2.1 PNG 41.8-2.9
Sep 02 2008	31" 17mmT4	MB,VL,OVAL,NO C*,ONE SIDE BROKEN,OIII HELPS SOMEWHAT,LG CENT DK AREA BK SIDE,R=E			
Aug 31 1984	12.5" 12mm	MF,PL,R,PATCHY,RESEMBLES HELIX NEB			
Jul 10 1981	12.5" 12mm	VL,DIF,R,DARK PATCHES SEEN IN CENTRAL AREA,GRAYISH COLOR DIF NEB			
NGC 6790	Aql		PI Neb 2	PLN,B,ES,STELL=9.5M	PK 37-6.1 PNG 37.8-6.3
Sep 02 2008	31" 17mmT4	PB,VS,R,GREENISH BRT BALL,OIII HELPS,NO C*,BRT BLUEISH,VF HALO AROUND BALL,R=G			

Planetary Nebula Observations

NGC 6790	Aql	PI Neb 2	PLN,B,ES,STELL=9.5M	PK 37-6.1 PNG 37.8-6.3	
Jul 10 1981	12.5" 12mm	ES,JUST E OF 12MAG *,DIF OUTER HALO JUST VISIBLE			
NGC 6803	Aql	PI Neb 2a	PLN,STELLAR	PK 46-4.1 PNG 46.4-4.1	
Sep 02 2008	31" 17mmT4	MB,ES,R,GREENISH SM BALL,OIII HELPS LITTLE,BLUEISH,VERY SMALL BRT BALL,R=F			
Jul 10 1981	12.5" 12mm	GREENISH,CENTRAL * DET,F* ON W EDGE OF NEB			
NGC 6804	Aql	H38-6	PI Neb 4+2	CB,S,IR,RRR	PK 45-4.1 PNG 45.7-4.5
Sep 02 2008	31" 17mmT4	MB,BL,OVAL,GREENISH,SEVERALF**S IN NEB,C* 15TH MAG,OIII DOESNOT HELP MUCH,R=G			
Aug 31 1984	12.5" 12mm	PF,MS,BNUC,R-OVAL,SBM,F* TOWARDS OUTER EDGE,PATCHY			
Jul 10 1981	12.5" 12mm	GREEN,DIF,PF,MS,CENTRAL * APPROX 14MAG			
NGC 6807	Aql	PI Neb 2	PLN,STELLAR	PK 42-6.1 PNG 42.9-6.9	
Sep 02 2008	31" 17mmT4	MB,ES,R,OIII HELPS DET FROM FOV **S,BLUEISH,NO C*,VERY SMALL AND ROUND,R=F			
Jun 25 2003	12.5" 5mmT6	BLUEISH,VERY FAINT HALO AROUND *,STELLAR			
Jun 25 2003	12.5" 9mmT6	MB,ES,R=F			
NGC 6818	Sgr	H51-4	PI Neb 4	PLN,B,VS,R	Sanduleak 2-392 PK 25-17.1 PNG 25.8-17.9
Sep 02 2008	31" 17mmT4	VB,ML,R,OIII HELPS MUCH,BRT BLUEISH GREEN,CENTRAL REGION DARK,NO C* DET,R=E			
Jul 30 2002	12.5" 16mm	MB,ML,BRT BLUE GREEN,VERY ROUND			
Sep 20 1984	12.5" 12mm	PB,PS,F* JUST TO W,UB,R			
Sep 20 1981	12.5" 24mm				
Jul 15 1980	12.5" 24mm				
Jun 18 1980	12.5" 24mm				
Jun 17 1980	12.5" 9mm	GREAT,LOOKS LIKE 6210			
NGC 6826	Cyg	H73-4	PI Neb 3a+2	PLN,B,PL,R,*11M	Blinking Planetary PK 83+12.1 PNG 83.5+12.7
Sep 02 2008	31" 17mmT4	VB,VL,R,GREENISH TECTURE BRT BALL,C* VERY BRT 10TH MAG,OIII NOT MUCH HELP,R=E			
Jul 24 1981	12.5" 16mm	GREENISH,BLINKING PLANTARY,CENT * EASILY BLINKS WHEN LOOKING AT CENTER			
Jul 24 1981	12.5" 7mm	CENTRAL * NO LONGER BLINKS			
Jun 20 1980	12.5" 9mm	BRT CENTRAL * EASILY SEEN			
Jun 17 1980	12.5" 16mm	GREAT,GREENISH BLUE COLOR,USE BARLOW AND 16MM			
NGC 6833	Cyg	PI Neb 2	PLN,STELLAR	PK 82+11.1 PNG 82.5+11.3	
Sep 02 2008	31" 17mmT4	MB,ES,R,GREENISH-BLUEISH,OIII NOT MUCH HELP,NO C*,BM,BARELY DET IN FOV,R=P			
Sep 11 2004	31" 17mmT4	VB,PS,R,HISB,W/OIII,BRT BLUE BALL,FAINT OUTER HALO DET,R=G			
NGC 6842	Vul	PI Neb 3b	F,PL,VLE	SH2 -95 LBN 19 Henize 2-451	
Jun 27 2003	12.5" 9mmT6	MB,ML,PATCHY AREAS DET,R,SHISB WITH OIII FILTER,R=E			
Jul 30 1981	12.5" 12mm	VDIF,LOC IN SOMEWHAT BARREN * FIELD,VF,MS,F**S INSIDE OF GLOW,NOT SURE OF DET			
NGC 6852	Aql	PI Neb 4	F NEB,AM ST	Kohoutek 1-18 PK 42-14.1 PNG 42.5-14.5	
Jun 25 2003	12.5" 5mmT6	KEEP B* OUT OF FOV,NEBULOSITY ELONGATED IN SHAPE,R=G			
Jun 25 2003	12.5" 9mmT6	PF,MS,UB,NEBULA,F* ON EDGE OF NEBULA,R=G			
NGC 6853	Vul M27	PI Neb 3+2	VB,VL,BIN,IE,DUMBDEL	M 27 Dumbbell Nebula Henize 2-452 PK 60-3.1 PNG 60.8-3.6	
Jul 05 2008	31" 17mmT4	VB,EL,W/OIII,MORE DETAIL,ONE SIDE MORE NEB THAN OTHER,BULGE,FINE DETAILS,C*,R=E			

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NGC 6853	Vul M27	PI Neb 3+2	VB,VL,BIN,IE,DUMBBEL	M 27 Dumbbell Nebula Henize 2-452
				PK 60-3.1 PNG 60.8-3.6
Mar 22 2004	12.5" 12mmT4	MESSIER MARATHON 2004		
Aug 20 2003	31" 25mm	EB,EL,EXTREMELY HISB,ABOUT DOZEN *S INSIDE NEB,DETAILED AND PATCHY,R=E		
Jun 27 2003	12.5" 9mmT6	EB,EL,OIII FILTER ABSOLUTLY UNBELIEVABLE.DETAIL IN NEBULOSITY.BEST TO DATE,R=E		
Sep 19 1984	12.5" 12mm	VB,VL,HOUR GLASS SHAPE VERY EASILY DET,FAINT OUTER LOB DET BOTH SIDES		
Sep 20 1981	12.5" 24mm			
Jul 30 1981	12.5" 12mm	BLUE GREEN,*S SEEN IN NEB,VB,EL,CENTRAL * DET		
Mar 27 1981	12.5" 24mm	MESSIER MARATHON 1981		
Sep 10 1980	12.5" 24mm			
Sep 07 1980	12.5" 24mm			
Jul 15 1980	12.5" 24mm			
Jul 11 1980	12.5" 24mm			
Jul 05 1980	12.5" 24mm			
Jun 20 1980	12.5" 24mm			
Jun 17 1980	12.5" 24mm			
Jun 10 1980	6" 24mm			
NGC 6879	Sge	PI Neb 2a	PLN,STELLAR=10M	Henize 2-455 PK 57-8.1 PNG 57.2-8.9
Aug 15 2009	31" 17mmT4	MB,VS,R,UB,NO C*,BRT BLUEISH,RICH FOV,OIII,DOESNOT HELP MUCH,VF NEB AR NUC,R=F		
Aug 20 2003	31" 25mm	EF,VS,R,UB,AV,SUSP,LOC GOOD,R=P		
Aug 20 2003	31" 9mmT6	VDIF,VF,MS,PATCH,UB,ABLE TO DETECT WITH 9MM,R=F		
NGC 6881	Cyg	PI Neb 2a+3	PLN,STELLAR	Henize 2-456 PK 74+2.1 PNG 74.5+2.1
Aug 15 2009	31" 17mmT4	MF,VS,R,GREENISH,SMALL NUC WITH THIN FAINT OUTER NEB,OIII,DOESNOT HELP MUCH,R=F		
Sep 18 2004	31" 17mmT4	W/OIII,VF,VS,R,FIND FIRST WITH 25MM & * HOPPING,BLUEISH,VF HALO DET,R=F		
NGC 6884	Cyg	PI Neb 2b	PLN,STELLAR	PK 82+7.1 PNG 82.1+7.0
Sep 02 2008	31" 17mmT4	MB,PS,R,UB,OIII HELPS,BLUEISH BALL,NO C*,EASILY DET IN FOV,R=F		
Jul 24 1981	12.5" 12mm	NOT SURE OF FIND,IN VOID BARREN * FIELD,DIF NEB SUSP		
NGC 6886	Sge	PI Neb 2+3	PLN,STELLAR=10M	Henize 2-458 PK 60-7.2 PNG 60.1-7.7
Aug 15 2009	31" 17mmT4	PB,PS,R,UB,BRT BLUEISH,RICH FOV,OIII DOESNOT HELP MUCH,R=G		
Aug 20 2003	31" 25mm	MB,PS,R,BRT BLUE ROUND BALL,R=E		
Aug 20 2003	31" 9mmT6	VP,PL,BRT BLUE,RING OF NEB,BOTH SIDES TAPPERED,SLIGHTLY BM,CENTRAL * SUSP,R=E		
NGC 6891	Del	PI Neb 2a+2b	PLN,STELLAR=9.5M	PK 54-12.1 PNG 54.1-12.1
Aug 15 2009	31" 17mmT4	VB,ML,R,BNUC,C* 13TH,GMBM,BLUEISH,NEB AR C*,OIII,NEB BRTER,NO C*,BLUEISH,R=E		
Jul 08 1983	12.5" 12mm	MB,VS,BNUC,BLUEISH,VERY R,BM,APPEARS AS A *,NEB COMES OUT WITH AVERTED VISION		
Jul 30 1981	12.5" 12mm	R,GMBM,SMALL,GREENISH BLUE		
NGC 6894	Cyg	H13-4	PI Neb 4+2	RINGNEB,F,S,VVLE
				Henize 2-460 PK 69-2.1 PNG 69.4-2.6
Aug 15 2009	31" 17mmT4	MB,ML,OVAL,NO C*,VF* IN EDGE OF RING,MINI M57,OIII,MORE NEB,EDGES FRAILED,R=E		
Sep 04 2002	12.5" 9mmT6	MF,PS,UB,OVAL,CENTRAL REGION DARK PATCH,ONE SIDE SLIGHTLY BRIGHTER		
NGC 6905	Del	H16-4	PI Neb 3+3	PLN,B,PS,R,4S*NR
				Henize 2-466 PK 61-9.1 PNG 61.4-9.5
Aug 15 2009	31" 17mmT4	PB,ML,OVAL,C* 14TH,PATCHY AREAS,GREENISH,ONE SIDE BRTER THAN OTHER,OIII,HELPS, MORE PATCHY AREAS,ENDS BROKEN,R=E		
Jul 08 1983	12.5" 12mm	MF,PS,R,TRI OF *S AROUND OBJECT,OUTER EDGES FAINTER THAN MIDDLE		
Jul 30 1981	12.5" 12mm	BLUEISH GREEN COLOR,R,EDGES WELL DEF,CENTRAL * VERY FAINT,UB		
				PK 93+5.2 PNG 93.4+5.4

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NGC 7008	Cyg	H192-1	PI Neb 3	CB,L,E45,R,**ATT	PK 93+5.2 PNG 93.4+5.4
Aug 15 2009 31"	17mmT4	MB,PL,PATCH,C* 13TH,2 HALVES,BROKEN,ANOTHER 13TH * IN NEB,BLOBS BOTH ENDS,OIII,HELPS,MORE NEB,BRT BLOBS BOTH ENDS,C* STILL VISIBLE,R=E			
Aug 11 1982 12.5"	16mm	MF,PL,BG COLOR,NW PART BRT,PATCHY-R,CENTRAL 14* DET,LOC E OF A FEW *S			
NGC 7009	Aqr	H1-4	PI Neb 4+6	PLN,VB,S,ELLIPTIC	Saturn Nebula PK 37.7-34.5
Aug 15 2009 31"	17mmT4	VB,VL,HISB,BRT BLUEISH,RING DET,FT NEB AR CENTRALBALL,NO C*,OIII,DOESNOT HELP THAT MUCH BUT RING IS EASIER TO DETECT,R=E			
Sep 27 2005 31"	17mmT4	WITH O/III, EB,VL,ELONG,R,MORE NEB DET BOTH SIDES OF RING,BETTER W/O,R=E			
Sep 27 2005 31"	17mmT4	VF,VL,ELONG,R,HISB,THICK INNER RING,BRT BLUE,CENTRAL *,RINGS DET,R=E			
Sep 01 2002 31"	9mmT6	BRT BLUE,RING SEEN,DETAIL IN NEB DETECTED,BEST VIEW TO DATE			
Aug 31 1984 12.5"	12mm	VB,MS,R BRT BLUEISH NEB,SLIGHTLY ELONG,UB			
Jul 10 1981 12.5"	16mm	SATURN NEB,RING EASILY SEEN,BRT BLUE,MB,MS			
Oct 31 1980 12.5"	24mm				
Sep 10 1980 12.5"	24mm				
Jul 17 1980 12.5"	24mm				
Jun 18 1980 12.5"	9mm	DISK SHOWN WELL			
NGC 7026	Cyg		PI Neb 3a	PB,BIN,PLN	PK 89+0.1 PNG 89.0+0.3
Aug 23 2009 31"	12mmT4	MF,MS,HISB,SQ SHAPE,2 BARS BOTH SIDES OF CENT REG,NO C *,NEB EXTENDS BEYOND BARS BOTH SIDES,F* OFF ONE SIDE,OIII HELPS LITTLE,R=E			
Jul 24 1981 12.5"	12mm	DIF THROUGHOUT,9-10* W APPROX 20 SEC,UB,ELONG IN SHAPE			
NGC 7027	Cyg		PI Neb 3a	PLN,STELLAR=8.5M	PK 84-3.1 PNG 84.9-3.4
Aug 23 2009 31"	12mmT4	VB,ML,HISB,BRT GREENISH BLUE,13TH MAG * IN NEB OFF CENTER,BRT NEB AROUND *,NO C*,IRR IN SHAPE,BROKEN PARTS,F NEB DET AROUND BROKEN PARTS,OIII,HELP LITTLE,BLENDS BROKEN PARTS INTO ONE,R=E			
Jun 06 1981 12.5"	16mm	BLUE GREENISH,MB,PL			
NGC 7048	Cyg		PI Neb 3b	PF,PL,DIF,IR,VLBM	Hubble 9 PK 88-1.1 PNG 88.7-1.6
Aug 23 2009 31"	12mmT4	MF,ML,OVAL,UB,3F*S IN NEB ONE SIDE,NO C*,OIII,NOT UB,PATCHY,DARK AREAS,R=G			
Jun 06 1981 12.5"	16mm	GREENISH,DIF,MF,PL			
NGC 7076	Cep	H936-3	PI Neb 3b	VF,ER	ABELL 75 PK 101+8.1 PNG 101.8+8.7
Jun 20 2004 31"	17mmT4	W/OIII,PF,ML,R,ONE SIDE BRIGHTER THAN OTHER,R=F			
NGC 7094	Peg		PI Neb 4	*IN EEF NEBY,VDIFFIC	Kohoutek 1-19 PK 66-28.1 PNG 66.7-28.2
Sep 02 2008 31"	17mmT4	VF,ML,R,NEB BARELY DET,C* 12MAG,OIII HELPS MUCH,C* W/RND NEB,DK CENT AREA,R=F			
Sep 20 2003 31"	25mm	PF,VL,R,BRT CENTRAL *.AREAS OF PATCHES IN NEB.R=G			
NGC 7139	Cep	H696-3	PI Neb 3b	VF,CS,R,R	PK 104+7.1 PNG 104.1+7.9
Sep 12 2012 36"	17mmT4	MB,ML,R,UB,W/OIII,SOME PATCHY DARK AREAS,OIII HELPS BRING OUT MORE DETAIL,R=G			
Aug 25 1982 12.5"	24mm	VDIF,VF,ML,R,BARELY VISIBLE IN 24MM,F* IN S PART OF NEBULA,UB			
NGC 7293	Aqr		PI Neb 4+3	PF,VL,E OR BIN	Helix Nebula PK 36-57.1 PNG 36.1-57.1
Sep 02 2008 31"	31mmT5	DIF,PF,EEL,FILLS 17MM,OIII HELPS GREATLY,SEVERAL F*S CENT REGION,C* 13MAG,LARGE DARK AREA AROUND CENTER,FINE DETAIL OUTER EDGES,BEST TODATE,R=E			
Jul 10 1981 12.5"	24mm	EL,MF,DIF GAS CLOUD WITH *S WITHIN ITS BOUNDARIES,HELIX NEB			
Oct 31 1980 12.5"	24mm				
Sep 18 1980 12.5"	24mm				
Sep 10 1980 12.5"	24mm	HELIX NEB,WITH NEBULA FILTER EXCELLENT!!!			
NGC 7354	Cep	H705-2	PI Neb 4+3b	PLN,B,S,R,PGVLBM	PK 107+2.1 PNG 107.8+2.3

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NGC 7354	Cep	H705-2	PI Neb 4+3b	PLN,B,S,R,PGVLBM	PK 107+2.1 PNG 107.8+2.3
Sep 12 2012 36"	17mmT4	PB,ML,R,UB,MHISB,BLUEISH GREEN,NO C*,OIII DARKENS NEB AND BRINGS OUT MORE DET,PATCHY,DARK AREAS,R=E			
Sep 02 2008 31"	17mmT4	PB,ML,R,UB,GREENISH,NO C*,SOFT,OIII DOESNOT HELP MUCH,R=E			
Jul 09 1983 12.5"	12mm	VF,PS,2F*S ON EDGE,VERY R,SOFT UB GLOW			
NGC 7662	And	H18-4	PI Neb 4+3	PLN ORRING,VB,PS,R	Blue Snowball PK 106-17.1
Sep 02 2008 31"	17mmT4	VB,ML,OVAL,R,BRT GREENISH,BRT INNER RING NOT SYM,BRT GREENISH EDGES IN SPOTS,C* 14TH MAG,R=E			
Aug 31 1984 12.5"	12mm	MB,VS,VERY R,UNIFORM BLUEISH COLOR,* CLOSE BY			
Sep 23 1981 12.5"	16mm	BRT BLUEISH GREEN,UB,R WITH FUZZY EDGES,NO CENTRAL *,MB,PS,15* SW			
Jul 15 1980 12.5"	24mm				
PEASE 1	Peg	PI Neb 1		CENTRAL STAR 14.9 MAG	
Jul 05 2008 31"	17mmT4	MF,ES,R,W/OIII,HELPS NEB LITTLE BY KNOCKING OUT *S,ALMOST DEAD CENTER,NO C*,R=P			
Sep 23 2003 31"	9mmT6	VF,ES,NEBULA FILTER,R,STANDS OUT,VERY CLOSE TO CENTER OF CLUSTER,R=F			
Sep 20 2003 31"	25mm	EDIF,EF,VS,PLANTARY IN M15,BLUIISH GREY BALL OFF CENTER OF CLUSTER,R=G			
SAND 2-21	Pup	PI Neb		Sanduleak 2-21 PK 238+7.2 PNG 238.9+7.3 ESO 561-16	
Nov 22 2006 12.5"	12mmT4	DIF,VF,MS,PATCH,UB,VF OVAL PATCH,NO CENTRAL *,OIII MAKE NEB STAND OUT BETTER,R=F			
SAND 2-348	Sgr	PI Neb 2		Sanduleak 2-348 PK 10-6.2 PNG 10.7-6.7 Perek 1-13 ESO 523-3	
Sep 12 2007 31"	17mmT4	W/OIII,PF,PS,UB,GRAYISH GREEN BALL,R=F			
SAND 2-374	Sct	PI Neb		Sanduleak 2-374 PK 25-4.1 PNG 25.3-4.6 Kohoutek 4-8	
Aug 23 2009 31"	12mmT4	VF,VS,R,UB,VERY SM BLUEISH-GREY BALL,NEED TO STAR HOP FROM IC1295,USE OIII TO MAKE IT STAND OUT.F*S CLOSE BY,R=P			
Sep 05 2007 31"	17mmT4	W/OIII,VF,ES,STANDS OUT AS VERY SM BLUE BALL,LOC IN CLOSE ARC OF *S,R=F			
SH2 71	Aql	PI Neb 3b+3		PK 36-1.1 PNG 35.9-1.1 SH2-71	
Sep 02 2008 31"	17mmT4	MF,ML,FLD * CLOSE TO C* 13TH MAG,WHISPS OF NEB,IRR,OIII HELPS LITTLE,C* DET,R=F			