

Caldwell Observation

- 1 NGC 188 Cep Open Cluster I 2 r CL,VL,R,150-200***
 Nov 11 2020 36" 31mmT5 (II 1 r),VB,EL,>100 *S, SIM MAG,WELL PLACED IN FOV,CL,(10:31pm),R=FG
 Jul 09 1983 12.5" 24mm MF,PL,~50*S SC,F BG GLOW OF MANY *S
- 2 NGC 40 Cep H58-4 Planetary Neb 3b+3 F,VS,R,VSMBM,*12SP**
 Sep 02 2008 31" 17mmT4 PB,ML,OVAL,LAYERS OF RINGS DET,B CNTR*,GREENISH,F* ON EDGE,OIII NO HELP,R=E
 Jul 09 1983 12.5" 12mm MB,PS,BNEC,B CNTR *,SHARP EDGES,R
 Aug 13 1982 12.5" 16mm BG COLOR,MF,PS,R,B CNTR *,(10TH MAG),SIM TO BLINKING PL,F*W SIDE
 Aug 13 1982 12.5" 7mm EL STARTING TO SHOW UP
- 3 NGC 4236 Dra H51-5 Galaxy SB(s)dm VF,EL,ME160,VGBM**
 Apr 23 2003 12.5" 9mmT6 DIF,MF,EL-PATCH,LG,PATCHES DET,H2 RGN SUSP,R=G
- 4 NGC 7023 Cep H74-4 Brt Nebula R *7IN EF,EL,NEBY**
 Sep 07 2023 12.5" 12mmT4 (Lb 1),DIF,VB,ML,B* IN CNTR,GRAN NED DET,NICE FOV,NEB BKN EDGES,OIII NO
 GOOD,(10:44pm),R=E
 Sep 12 2012 36" 17mmT4 PB,VL,3*S WITH NEB,FINE DETAIL IN WISP OF NEB,GREENISH,OIII NO HELP,PATCHES,DRK
 AREAS,PAIR=CR 427,R=G
 Jul 09 1983 12.5" 12mm DIF,MB,MS,GAS SUR B*,SOME DETAIL IN GAS DET
- 5 IC 342 Cam Galaxy SAB(rs)cd**
 Jan 30 2003 12.5" 9mmT6 PB,EL,R,BNUC,SHISB,FACE ON,SPR STR SUSP,HALO OF ARMS,NUC R & B,HINT OF H2 RGN
 SUSP,R=E
- 6 NGC 6543 Dra H37-4 Planetary Neb 3a+2 PLN,VB,PS,SBMVSN**
 Jun 10 2023 12.5" 17mmT4 VB,MS,R,B BLUE BALL,FUZZY EDGES,SMWHT OF A RING DET ARND BALL,R=GE
 May 19 2009 31" 17mmT4 VB,VL,B GREENISH,CNTR* 10TH MAG,B INNER CORE,GRAN BALL,VF WISPS OF NEB SUR
 BALL,OIII BRINGS OUT OUTER HALO ONLY,PAIR=IC4677,R=E
 Mar 26 2006 31" 17mmT4 VF,PL,B BLUE,CNTR *,DETAIL IN NEB,DARK INNER RING,PAIR=IC4677,R=E
 Jun 23 2003 12.5" 9mmT6 VB,ML,EL-OVAL,VHISB,BNUC,SLT EL,F HALO SUR GLXY,R=E
 Jul 22 1981 12.5" 16mm BLUEISH IN COLOR,PB,MS,NO CNTR * DET
 Jul 14 1980 12.5" 24mm
 Jul 11 1980 12.5" 24mm
 Jun 20 1980 12.5" 24mm
- 7 NGC 2403 Cam H44-5 Galaxy Sc CB,EL,VME,VGMBMN**
 Dec 21 1981 12.5" 16mm SPR STR DET,BEAUTIFUL!!!
 Dec 21 1981 12.5" 24mm PB,PL,HISB,BSNUC,L OVAL PATCH,SOME STR SUSP,B**S IN GLXY
 Sep 18 1980 12.5" 24mm 2*S IN GLXY PRESENT
- 8 NGC 559 Cas H48-7 Open Cluster I 1 m CL,B,PL,PRI**
 Jul 31 1981 12.5" 24mm FEW B**S, MOSTLY FTR *S ~10...11 MAG,~50*S IN ALL
- 9 SH2 155 Cep Brt Nebula**
 Sep 07 2023 12.5" 17mmT4 (Lb 2),DIF,MF,PL,FITS NICE IN FOB,NEB DET IN PATCHES ARND/BET 2**S OF 4*LS IN AN
 ARCH,OIII NO GOOD,(11:48pm),R=FG
 Sep 02 2008 31" 31mmT5 EDIF,EF,EEL,PATCH,SVRL FOV,FEW B PATCHES DET,VF BG GLOW AREAS,R=P
- 10 NGC 663 Cas H31-6 Open Cluster II 3 r CL,B,L,ERI,ST PL**
 Jul 31 1981 12.5" 16mm PL,CL BKN IN HALF,DARK PATCH THROUGH CL
- 11 NGC 7635 Cas H52-4 Brt Nebula E VF,*8INV L EXCENTRIC**
 Sep 07 2023 12.5" 17mmT4 (Lb 1),DIF,MF,PL,NICE IN FOV,PATCHY AREAS,BKN,SOME AREAS BTR THAN OTHERS,EL
 SHAPE,W/OIII EDGES HARD TO DEF,(12:21am),R=G
 Jul 31 1981 12.5" 16mm VDIF,IRR IN SHAPE,NEB SUR B*,BUBBLE NEB

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12	NGC 6946	Cep H76-4	Galaxy SAB(rs)cd	VF,VL,VG,VSBM,RR
Sep 12 2012	36"	17mmT4	PB,VL,BSNUC,SPR ARMS,KNOTS IN ARMS DET,H2 RGN DET,R=E	
Jun 22 2003	12.5"	9mmT6	VB,EL,R,NND,SHISB,AREAS OF PATCHES DET,SVRL *S IN GLXY,R=E	
Jul 09 1983	12.5"	24mm	MF,VL,OVAL,3B*S TO ONE SIDE,SVRL F*S IN GLXY,SPR STR SUSP,PAIR/6939	
Aug 14 1982	12.5"	16mm	EDIF,MF,PL,PATCHY,OVAL,NND,*S IN GLXY,SEE CARD FOR DRAWING	
Jun 06 1981	12.5"	16mm	DIF,VL,MB,SOME SPR STR DET,FACE ON,SEVEAL *S IN GLXY,RESEMBLES M33	
Aug 19 1980	12.5"	32mm	VF,COULD NOT FIND IN 24MM	
13	NGC 457	Cas H42-7	Open Cluster II 3 r	CL,B,L,PRI,*7,8,10
Jul 31 1981	12.5"	16mm	B*S,FEW *S ~20,L SC THROT EYEPIECE	
Jul 17 1980	12.5"	24mm		
14A	NGC 869	Per H33-6	Open Cluster I 3 r	CL,VVL,VRI,*7...14
Oct 03 1981	12.5"	32mm	VB,EL,B DIAMOND SHAPE *S IN CNTR,PAIR/884	
Sep 20 1981	12.5"	24mm		
Oct 31 1980	12.5"	24mm		
Sep 18 1980	12.5"	24mm	H & CHI DBL CL	
Jun 20 1980	12.5"	24mm		
14B	NGC 884	Per H34-6	Open Cluster I 3 r	CL,VL,VRI,RUBY*M
Oct 03 1981	12.5"	32mm	VB,EL,PAIR/869,BEST IN 2" EYEPIECE	
Sep 20 1981	12.5"	24mm		
Oct 31 1980	12.5"	24mm		
Sep 18 1980	12.5"	24mm	H & CHI DBL CL	
Jun 20 1980	12.5"	24mm		
15	NGC 6826	Cyg H73-4	Planetary Neb 3a+2	PLN,B,PL,R,*11M
Sep 02 2008	31"	17mmT4	VB,VL,R,GREENISH TECTURE B BALL,CNTR* 10TH MAG,OIII NOT MUCH HELP,R=E	
Jul 24 1981	12.5"	16mm	GREENISH,BLINKING PLANTARY,CNTR* EASILY BLINKS WHEN LOOKING AT CNTR	
Jul 24 1981	12.5"	7mm	CNTR * NO LONGER BLINKS	
Jun 20 1980	12.5"	9mm	B CNTR * EASILY SEEN	
Jun 17 1980	12.5"	16mm	GREAT,GREENISH BLUE COLOR,USE BARLOW AND 16MM	
16	NGC 7243	Lac H75-8	Open Cluster II 2 m	CL,L,P,LC,ST VL
Sep 20 1984	12.5"	24mm	VB,VL,RICH * FIELD,PPEARS TO BE 2 CL,S SIDE BY SIDE,~40*S	
Jul 15 1980	12.5"	24mm	CL WELL PLACED	
17	NGC 147	Cas	Galaxy E5 pec	VF,VL,IR,GSM*11
Sep 28 2013	36"	17mmT4	MF,EL-OVAL,VSNUC,DIF F HALO ACROSS FOV,MANY F*S IN HALO,B*S IN NUC AREA,R=FG	
Jul 31 1981	12.5"	24mm	EL,VDIF,UB,DWARF SATELLITE TO M31	
Jul 15 1980	12.5"	24mm	EF,VS,THIN	
18	NGC 185	Cas H707-2	Galaxy E3 pec	PB,VL,IR,VGMBM,R
Sep 28 2013	36"	17mmT4	PB,PL,OVAL,UB,MHISB,SVRL VF* IN GLXY AREA,R=G	
Jul 31 1981	12.5"	24mm	DIF,SETLLAR NUC,DIF HALO,R TO OVAL IN SHAPE	
Sep 18 1980	12.5"	24mm		
Aug 22 1980	12.5"	24mm		
Aug 19 1980	12.5"	24mm		
Jul 17 1980	12.5"	24mm		
Jul 15 1980	12.5"	24mm	DIF,EF,PL,AV	

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19	IC 5146	Cyg	Brn Nebula E	
Sep 06 2023	12.5"	17mmT4	(Lb 2),DIF,PF,MS,F NEB DET ARND 5-6"S,BKN,PATCHY,OIII NO GOOD,(12:06am),R=RG	
Sep 18 2004	31"	25mm	VDIF,VF,PL,HINT OF NEB DET,S CL OF ~6"S,OIII DOES NOT HELP,R=P	
20	NGC 7000	Cyg H37-5	Brn Nebula E	F,EEL,DIF NEBULOSITY
Sep 06 2023	12.5"	31mmT5	(Lb 1),DIF,VB,EEL,3-4 FOV'S,NEB EASILY DET,GRAN PATCHES,BKN,G-Bish COLOR,GULF OF MEXICO EASILY OUTLINED,W/OIII,NEB DET IN FTR DETAIL,GULF OF MEXICO DARKER,OUTLING OF NORTH AMERICA CAN BE FOLLOWED,(11:47pm),R=EEE	
Sep 19 2012	36"	31mmT5	VB,W/OIII,ABLE TO SLEW ENTIRE OUTLINE OF NA NEB,NUMEROUS AREAS OF FINE NEB DETAIL,GULF AND S END OF MEX BEST CONTRAST,NICE D* IN MEX TIP - PINK & BLUEISH,R=EE	
Aug 13 1982	12.5"	32mm	FITS WELL IN EYEPIECE,FIRST TIME SEEN THIS WELL, IMPRESSIVE!!!	
Aug 11 1982	12.5"	32mm	EL,ONLY CERTAIN OUTLINES DET,HUNDREDS OF "S WITH COSTAL LINE EFFECT	
21	NGC 4449	CVn H213-1	Galaxy IBm	VB,CL,ME,DORBIFID,*F
Jan 28 1982	12.5"	7mm	*NUC,ANOTHER F* JUST W OF NUC	
Jan 28 1982	12.5"	16mm	DIF,PB,PL,EL,FNUC,F* IN W EDGE NEAR NUC,HISB,GMBM,F* FURTHER W	
22	NGC 7662	And H18-4	Planetary Neb 4+3	PLN ORRING,VB,PS,R
Sep 22 2022	12.5"	9mmT6	VB,PL,B CNTR *,GRAN NEB SUR *,NEB FADES,MHISB NEB,R=G	
Sep 02 2008	31"	17mmT4	VB,ML,OVAL-R,B GREENISH,B INNER RING NOT SYM,B GREENISH EDGES IN SPOTS,CNTR* 14TH MAG,R=E	
Aug 31 1984	12.5"	12mm	MB,VS,VR,UNIFORM BLUEISH COLOR,* CLOSE BY	
Sep 23 1981	12.5"	16mm	B BLUEISH GREEN,UB,R WITH FUZZY EDGES,NO CNTR *,MB,PS,15* SW	
Jul 15 1980	12.5"	24mm		
23	NGC 891	And H19-5	Galaxy SA(s)b? sp	B,VL,VME22
Aug 31 1984	12.5"	16mm	MF,ML,EDGE ON,S ARM BTR THAN N,DUST LANE DET,CNTR BULGE DET	
Sep 23 1981	12.5"	24mm	F* 13MAG NW SIDE, FTR * TO S TIP OF ARM,BULGE DET,ML,MB, EDGE ON	
Sep 20 1981	12.5"	24mm		
Sep 10 1980	12.5"	24mm		
Aug 22 1980	12.5"	24mm		
Jul 24 1980	12.5"	32mm	BEAUTIFUL!!!,DUST LANE VISIBLE	
Jul 17 1980	12.5"	24mm		
Jul 11 1980	12.5"	24mm		
24	NGC 1275	Per H603-2	Galaxy Pec	F,S
Sep 12 2002	12.5"	9mmT6	PB,PL,BNUC,GMBM,OVAL,LNUC,HISB,ABELL426	
Aug 25 1982	12.5"	16mm	MB,ML,FNUC,F*N AND W,GMBM,R-OVAL,2 OTHER GLXY CLOSE BY/1272 AND 1278	
25	NGC 2419	Lyn H218-1	Globular II	PB,PL,LE90,VGBM,*4'F
Feb 21 2020	36"	17mmT4	(Class XI),MB,PL,OVAL-R,UB,V LTL CL IN CNTR,E FOV W/B* CLOSE BY,R=G	
Oct 16 1982	12.5"	16mm	MF,PL,R,UB,SBM,2 B*S POINT TO IT,COUPLE OF F*S SC SUR OBJ	
26	NGC 4244	CVn H41-5	Galaxy SA(s)cd: sp	PB,VL,EE43,VGBM
Jan 26 1982	12.5"	24mm	PB,VL,EDGE ON,* ON N TIP,NND,HISB,UB,TAPERED AT BOTH ENDS	
Oct 31 1980	12.5"	24mm		
27	NGC 6888	Cyg H72-4	Brn Nebula E	F,VL,VME,**ATT
Jun 23 2022	36"	31mmT5	(Lb 1)DIF,EB,EL,V RICH FOV,CRESCENT EASILY DET,EPSILON SYM,3 B*S IN NEB,NICE DBL * IN NEB,B PATCHES EL,W/OIII,EXCEL,FILLIMENTS,DUST,HINTS OF COLOR,HISB AREAS,MUCH DET,(3:04am),R=GE	
Sep 19 2012	36"	31mmT5	VB,W/OIII,WELL PLACED IN FOV,2 DISTINCT HALVES,ONE BTR THAN OTHER,L LOBS,E DETAIL,AMAZING,R=EE	

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27	NGC 6888	Cyg H72-4	Brn Nebula E	F,VL,VME,**ATT
Sep 04 2002	12.5"	25mm	PB,PL,B NEB,2B*S WITH GLOW OF NEB BET AND SUR *S	
Sep 04 2002	12.5"	32mm	NEB EASILY DET	
28	NGC 752	And H32-7	Open Cluster II 2 r	CL,VVL,RI,*L\$SC
Aug 31 1984	12.5"	24mm	SAME	
Aug 13 1982	12.5"	24mm	VB,EL,MANY *S,OVERFILLS 24MM FIELD,BEST IN 8X50 FINDER,R,SC	
Sep 10 1980	12.5"	24mm		
29	NGC 5005	CVn H96-1	Galaxy SAB(rs)bc	VB,VL,VME66,VSBMN
Jan 28 1982	12.5"	16mm	MB,ML,BNUC,SLENDER SHAPE,DIF HALO	
30	NGC 7331	Peg H53-1	Galaxy SA(s)b	B,PL,PME163,SMBM
Sep 17 2003	31"	25mm	EB,EL,EDGE ON,BNUC,HISB,TIGHT BNUC,DUST LANE,COMP DET,7331 CL,R=E	
Jun 27 2003	12.5"	9mmT6	EB,EL,BNUC,VHISB,DUST DET,BLNUC,F HALO & ARMS,OTHERS PRESENT,R=E	
Sep 01 2002	12.5"	12mm	SAME	
Sep 21 1984	12.5"	12mm	MB,ML,EDGE ON,SAME,COMP CLOSE BY	
Jul 06 1983	12.5"	16mm	MB,PL,EDGE ON,BLNUC,TAPERED ENDS,DUST LANE SUSP IN 12MM	
Sep 18 1982	12.5"	16mm	MB,ML,EDGE ON,BNUC,DUST LANE SUSP,TAPERED ENDS,7335 CLOSE BY	
Jul 29 1981	12.5"	24mm	SAME,3 COMP GLXY SEEN,7335/7336/7340	
Jul 07 1981	12.5"	24mm	PB,PL,EDGE ON,BNUC,DIM AREA	
Sep 18 1980	12.5"	24mm		
Sep 10 1980	12.5"	24mm		
Sep 07 1980	12.5"	24mm		
Jul 17 1980	12.5"	24mm		
Jul 15 1980	12.5"	24mm		
Jul 12 1980	12.5"	24mm		
Jul 11 1980	12.5"	24mm		
Jun 20 1980	12.5"	24mm		
Jun 17 1980	12.5"	24mm	TWILIGHT STARTING,OBJ WASHED OUT	
31	IC 405	Aur	Brn Nebula E	
Oct 18 2023	12.5"	31mmT5	(Lb 2),DIF,VF,EEL,SCAN AREA,NE PART HAS F NEB PATCHES DET,V RICH * FOV,DET CHANGE IN BG BRIGHTNESS,(2:31am),R=F	
Dec 03 1980	12.5"	32mm	EL AREA,VOID AREA,MOVE TO N RIM,HINT OF B AREAS	
32	NGC 4631	CVn H42-5	Galaxy SB(s)d sp	VB,VL,EE70,BMN,*ATTN
Mar 17 2007	31"	17mmT4	EB,EL,EL,HISB,ONE SIDE THICKER,MILKY,BH2 RGN,DUST,F* OFF NUC/TIP,R=E	
Jan 28 1982	12.5"	12mm	VB,VL,EDGE ON,* N OF NUC,F* W TIP,MHISB,PATCHES DET IN EQ PLANE	
33	NGC 6992	Cyg H14-5	Brn Nebula E	EF,EL,EE,EIF,BIFID
Sep 06 2023	12.5"	31mmT5	(Lb 1),DIF,VF,EEL,2 FOV'S,EASTERN VIEL SNR,EASY TO FOLLOW NEB,PATCHY,WISPS,BKN AREAS,W/OIII,FTR DET DET,SEE PREVIOUS 31" DESC,(11:41pm),R=EEE	
Sep 26 2019	36"	17mmT4	W/OIII,EB,EEL,HISB,5 FOV'S,LOOKS MUCH LIKE 6960,B FILIMENTS,STRANDS,STRINGY ROPES V HISB,BNEON GLOW,R=EEEE	
Sep 04 2002	12.5"	32mm	VB,EEL,SNR,HISB,ARC GOES 2 FOV'S	
34	NGC 6960	Cyg H15-5	Brn Nebula E	PB,CL,EIF,KAPPACYGIN
Sep 06 2023	12.5"	31mmT5	(Lb 1),DIF,VB,EEL,W VEIL SNR,SEE 31" DESC PREVIOUSLY,SVRL FOV'S,FINE WISPS,FILAMENTS,W/OIII,AWESOME,MORE NEB DET,SOFT EDGES,SMWHT BG COLOR,DARK AREAS,(10:53pm),R=EEE	
Sep 26 2019	36"	17mmT4	W/OIII,EB,EEEL,HISB,5 FOV'S,START AT E MOST PART,NEON LIGHT LIKE,STRANDS,EDGES VB,TWISTED ROPE,BEST TO DATE,VIEWED THE OTHER NON-IDENTIFIED AREAS LISTED IN MEGASTAR,SOME WERE VF AND S BUT DET,SOME VB AND VL,HISB,R=EEE	

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- 34 NGC 6960 Cyg H15-5 Brt Nebula E PB,CL,EIF,KAPPACYGIN**
 Sep 04 2002 12.5" 32mm PB,EL,SNR,WHIPS ON BOTH SIDES OF B* EASILY DET,PARTS OF SNR HAVE HISB
- 36 NGC 4559 Com H92-1 Galaxy SAB(rs)cd VB,VL,ME150,GBM,3*F**
 Feb 21 2020 36" 17mmT4 VB,VL,EL-OVAL,?NUC,PATCHY,BKN PARTS,GRAN,R=GE,TIME 2:19AM
 Mar 17 2018 36" 17mmT4 VB,VL,OVAL,PATCH,NND,BKN PATCHES,MHISB IN ARMS,3*S TRIANGLE OUTER EDGE,R=E
 Feb 12 1983 12.5" 24mm VB,VL,3F*S IN S EDGE,SLT EL,HISB,NND
- 37 NGC 6885 Vul H20-8 Open Cluster III 2 m CL,VB,VL,RI,LC,*6.11**
 May 30 2022 36" 31mmT5 (II 2 m),EB,EL,80% OF FOV,~100*S VAR MAG,B* IN CNTR,CL DET,(3:19am),R=G
 Sep 19 1984 12.5" 16mm SAME,MB,PL,B* CLOSE TO CNTR
 Jul 06 1983 12.5" 24mm MB,VS,JUST N OF 6885,B* IN OBJ,~15 *S,OBLONG IN SHAPE
 Aug 13 1982 12.5" 24mm EB,EL,OVERFILLS EYEPIECE FOV,SVRL B*S
 Jul 30 1981 12.5" 12mm VB,VL,B* IN CNTR OF CL,~15-20*S
- 38 NGC 4565 Com H24-5 Galaxy SA(s)b? sp B,EL,EE135,VSBMN=*10**
 Mar 17 2018 36" 17mmT4 EB,EEL,EDGE ON,BNUC,HISB,ABSOLUTELY AMAZING,DUST LANE THROUGH NUC RGN AND BEYOND,S BNUC ONE SIDE OF DUST, EDGE TO EDGE,R=EE
 Feb 05 2005 31" 17mmT4 EB,EEL,EDGE ON,BLNUC,HISB,FILLS FOV,2 HALVES,GMBM,TAPERED ENDS,R=E
 Feb 05 2005 31" 31mmT5 EB,EL,EDGE ON,BNUC,BTR THAN 17MM,JUST FITS IN FOV,DUST LANE,BEST TO DATE,R=E
 Feb 27 1982 12.5" 16mm MB,PL,V EDGE ON,BNUC,DIM HALO,F*N OF NUC,DUST LANES,CNTR BULGE,!!!
 Mar 27 1981 12.5" 24mm
- 39 NGC 2392 Gem H45-4 Planetary Neb 3b+3b B,S,R,*9M,*8NF100"**
 Nov 22 2006 12.5" 12mmT4 EB,VL,B CNTR * GOES AWAY WITH AV,B BLUE BALL,PATCHY AREAS DET OUTER,R=E
 Dec 04 2004 31" 17mmT4 VB,VL,WITH OIII,CNTR * EASY,RINGS SUR CNTR *,DARK RINGS BET OUTER NEB LOOKS MATTED,B BLUE,BEST EVER SEEN TO DATE,R=E
 Feb 21 1984 12.5" 12mm MB,PS,ESKIMO NUBULA,CNTR * EASILY DET,PATCHED IN NEB DET,FORMS TRI W2*S
 Oct 23 1982 12.5" 12mm CNTR * DET,SOME DARK AREAS IN GAS DET
 Oct 16 1982 12.5" 12mm BLUE,MF,VS,R,UB,NO CNTR *
 Oct 31 1980 12.5" 24mm ESKIMO NEB,NON STELL,GREAT!!
- 40 NGC 3626 Leo H52-2 Galaxy S0-a B,S,VLE,SBM**
 Mar 21 2020 36" 17mmT4 EB,EL-OVAL,VBLNUC,VHISB,HISB HALO,GRAN,VBLNUC,VHISB CNTR,SUDLY VBM,R=E
 Mar 03 1984 12.5" 12mm MB,PS,BNUC,R,BM
 Jan 30 1981 12.5" 24mm VB,PS,BNUC,PAIR/M65/M66/3628
- 41 MEL 25 Tau Open Cluster**
 Mar 17 2010 12" 32mm VB,EEL,SVRL FOV'S,*S VAR MAG,~200*S,LOOSELY SC,M CL,R=F
- 42 NGC 7006 Del H52-1 Globular I B,PL,R,GBM**
 Jul 01 2019 36" 17mmT4 (Class III),PB,ML,OUTER *S RSLV,L MHISB CORE,PAIR=PGC 65907,R=G
 Jul 31 2002 12.5" 12mm SAME
 Jul 08 1983 12.5" 12mm DIF,MF,MS,FNUC,R,SBM,SOFT GLOW
 Jul 30 1981 12.5" 24mm BNUC,NO *S IN HALO SEEN,R,S VDIF
- 43 NGC 7814 Peg H240-2 Galaxy SA(s)ab: sp CB,CL,E,VGBM**
 Sep 21 1984 12.5" 16mm MB,PL,EL,SOFT LNUC,HISB,NO *S
 Jul 07 1981 12.5" 24mm DIF,MF,ML,VF HALO
 Sep 10 1980 12.5" 24mm
- 44 NGC 7479 Peg H55-1 Galaxy SB(s)c PB,CL,ME12,BET2ST**
 Oct 07 2010 31" 17mmT4 PB,PL,BNUC,SCORPIN TAIL,BARRED SPR,ONE SIDE,BTR ARM THAN OTHER,ARMS,R=E

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44	NGC 7479	Peg H55-1	Galaxy SB(s)c	PB,CL,ME12,BET2ST
Sep 21 1984	12.5"	16mm	SAME,MB,PL,VF* ON N TIP,FACE ON,SPR STR DET,S ARM BTR THAN N	
Jul 07 1981	12.5"	24mm	DIF,MF,PL,DIM ARMS,F* (15MAG) ON N SIDE	
Jul 15 1980	12.5"	24mm	EF,PL	
Jul 11 1980	12.5"	24mm		
45	NGC 5248	Boo H34-1	Galaxy SAB(rs)bc	B,L,E150,PSBMRN
May 06 1981	12.5"	24mm	VB,VL,BNUC,DIM HALO	
46	NGC 2261	Mon H2-4	Brn Nebula E+R	B,VME330,N COM=*11
Mar 04 2021	36"	17mmT4	(Lb 1),DIF,VB,VL,W/OIII,NEB MORE DETAILED,GRAN,(10:25pm),R=E	
Mar 04 2021	36"	31mmT5	(Lb 1),DIF,VB,ML,W/O OIII,V SHARP 'V' SHAPE WITH BGN/BL * AT POINT,BEST VIEW TO DATE,SOFT DET IN NEB,TAIL FADES AWAY,(10:23pm),R=EE	
Oct 05 2002	12.5"	9mmT6	PB,ML,TRIANGLE SHAPE,F* AT HEAD,COMET LIKE,NEB UB,MHISB	
Oct 31 1980	12.5"	24mm		
Sep 10 1980	12.5"	24mm	COMET LIKE APP,NICE	
47	NGC 6934	Del H103-1	Globular VIII	GCL,B,L,R,RRR,*16...
Jul 01 2019	36"	17mmT4	(Class VI),PB,PL,BNUC,OUTER & CORE **S RSLV,MORE F**S DET LONGER VIEWED,R=E	
Aug 20 2003	31"	25mm	VB,VL,RSLV TO CORE,HUNDRED'S OF **S,MANY **S DET IN CORE,R=E	
Jul 31 2002	12.5"	12mm	SAME	
Jul 08 1983	12.5"	12mm	MB,MS,BNUC,B* TO W,RSLV OUTER **S,GBM	
Jul 30 1981	12.5"	16mm	DNUC,GMBM,SOFT HALO OF **S RSLV,R	
Jul 11 1980	12.5"	24mm		
Jun 20 1980	12.5"	24mm		
Jun 18 1980	12.5"	24mm		
Jun 17 1980	12.5"	24mm		
48	NGC 2775	Cnc H2-1	Galaxy SA(r)ab	CB,CL,R,VGVSMBM,R
Apr 02 2021	36"	17mmT4	VB,VL,R,BLNUC,HISB,LOOKS LIKE GLOB CL,GRAN HALO,NUC VB WELL DEFINED,SUDLY MBM,R=E	
Feb 21 1984	12.5"	16mm	SAME	
Oct 24 1981	12.5"	12mm	DIF,MF,ML,B CNTR RGN,UB,GOOD DEFINITION WHERE ARMS WIND SUR NUC	
Dec 03 1980	12.5"	24mm		
49	NGC 2237	Mon	Brn Nebula E	PB,VVL,DIF,(2238)
Nov 13 2020	36"	31mmT5	(Lb 1),DIF,VB,EEEL,W/OIII,VB PATCHES,DARK AREAS,DEF EDGES SOME AREAS,FINE DETAIL WHEN SCANNING,N2244 IN LBN,(3:54am),R=GE	
Mar 18 2007	31"	31mmT5	VB,EEL,HISB,W/OIII,4-5 FOV'S,SCAN AREA,PATCHY,DUST,DISTINCT FEATURES,R=E	
Oct 31 1980	12.5"	24mm		
50	NGC 2244	Mon H2-7	Open Cluster II 3 r n	CL,BEAUTIFUL,STSC
Nov 13 2020	36"	55mm	(II 3 m n),EB,EL,JUST FITS IN FOV,~60**S,SVRL VB**S,LOC IN N2237,NEB W/OIII,(3:42am),R=PF	
Mar 18 2007	31"	31mmT5	EB,EEL,SVRL FOV'S,NICE,FEW B**S WITH VAR MAG,LOOSELY SC,R=G	
Feb 25 1984	12.5"	24mm	SAME	
Aug 21 1982	12.5"	24mm	MB,VL,SC,7...9 MAG **S,~20**S,ALM FILLS 24MM FOV	
Sep 10 1980	12.5"	24mm		
51	IC 1613	Cet	Galaxy IB(s)m	
Sep 02 2008	31"	31mmT5	EDIF,EEF,EEL,PATCH,UB,ONE PATCHY AREA DET,SVRL FOV'S,BG GLOW AV,R=P	
52	NGC 4697	Vir H39-1	Galaxy E6	VB,L,LE45,SMBMN
Mar 27 1982	12.5"	12mm	MB,ML,EL-OVAL,F* TO W,GMBM,TAPERED ENDS	

Caldwell Observation

53	NGC 3115	Sex	H163-1	Galaxy	S0- sp	VB,L,VME46,VGSMBMEN
Mar 27 1982	12.5"	16mm		MB,ML,EDGE ON,BNUC,F HALO,F*S BORDER,F* FARTHER SW,CNTR BULGE		
54	NGC 2506	Mon	H37-6	Open Cluster	I 2 r	CL,PL,VRI,C,*11...20
Oct 16 1982	12.5"	24mm		MF,ML,SC 'S SUR CLDENSE CL TOWARDS CNTR,-60"S		
55	NGC 7009	Aqr	H1-4	Planetary Neb	4+6	PLN,VB,S,ELLIPTIC
Aug 15 2009	31"	17mmT4		VB,VL,HISB,B BLUEISH,RING DET,F NEB AR CNTRBALL,NO CNTR*,OIII,DOESNOT HELP THAT MUCH BUT RING IS EASIER TO DETECT,R=E		
Sep 27 2005	31"	17mmT4		WITH O/III, EB,VL,EL-R,MORE NEB DET BOTH SIDES OF RING,BTR W/O,R=E		
Sep 27 2005	31"	17mmT4		VF,VL,EL-R,HISB,THICK INNER RING,B BLUE,CNTR *,RINGS DET,R=E		
Sep 01 2002	31"	9mmT6		B BLUE,RING SEEN,DETAIL IN NEB DET,BEST VIEW TO DATE		
Aug 31 1984	12.5"	12mm		VB,MS,R B BLUEISH NEB,SLT EL,UB		
Jul 10 1981	12.5"	16mm		SATURN NEB,RING EASILY SEEN,B 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		
56	NGC 246	Cet	H25-5	Planetary Neb	3b	VF,L,4*IN DIF NEB
Sep 02 2008	31"	17mmT4		VF,ML,OVAL,OIII HELPS GRTLY,TRANSLUCENT BUBLE,CNTR* 13MAG,BRINGS IN EDGE,R=G		
Sep 27 1981	12.5"	16mm		DIF,BLUE GREEN,MB,BL,SOURRS 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 CNTR *		
57	NGC 6822	Sgr		Galaxy	IB(s)m	VF,L,E,DIF
Sep 12 2007	31"	31mmT5		PF,EL-OVAL,2 FOV'S,SCAN AREA,KNOTS DET,PATCHY NUC AREA,PAIRS=PGC'S,R=F		
Jul 30 2002	12.5"	25mm		IRR,VDIF,VF,VL,EL,PATCHY,RESEMBLES OPEN CL		
Sep 20 1984	12.5"	24mm		EDIF,EF,ML,SEEMS TO BE LOC IN BARREN AREA,SOME HINT OF BG GLOW		
Sep 20 1981	12.5"	24mm		BERNARDS GLXYAXY,JUST N OF 10*S (11...12TH MAG) SC E TO W		
Sep 10 1980	12.5"	24mm		EF,EDIF,LG		
58	NGC 2360	CMa	H12-7	Open Cluster	I 3 r	CL,VL,RI,PC,ST9...12
Oct 16 1982	12.5"	24mm		MB,ML,-50*S SAME MAG,RESEMBLES WILD DUCK CL		
Oct 31 1980	12.5"	24mm		LOOKS LIKE S BEE HIVE		
59	NGC 3242	Hya	H27-4	Planetary Neb	4+3b	PLN,VB,LE147,45"D
Dec 28 2008	31"	17mmT4		VB,PL,R,HISB,CNTR*13,OUT SHELL,BTR INNER RING W/TAP SIDES,B BLUEISH,OIII HL,R=E		
Feb 12 1983	12.5"	16mm		MB,PS,R,BLUE FUZZY EDGES,UB,NO CNTR *		
Dec 03 1980	12.5"	24mm		GHOST OF JUPITER,PAIL GREENISH COLOR,GREAT!!		
60	NGC 4038	Crv	H28-4	Galaxy	SB(s)m pec	PB,CL,R,VGBM
Mar 16 2009	31"	17mmT4		VB,VL,EL,PATCHY AREAS IN GLXY,SHISB,NND,DARK AREA SPLITS TWO,INTRACT=4039,R=G		
Mar 22 2004	12.5"	12mmT4		MF,PL,OVAL,PATCH,UB,NND,CLOSE COMP=4039,R=G		
May 03 1981	12.5"	24mm		DIF,PB,VL,EL,BOTH NUC OF BOTH GLXY SEEN,RING TAIL GLXY,ARMS DET,PAIR/4039		
61	NGC 4039	Crv	H28-4	Galaxy	SA(s)m pec	PF,PL
Mar 16 2009	31"	17mmT4		VB,VL,EL,SHISB,UB,NND,DARK AREA SPLITS THE TWO,COMP=4038,R=G		
Mar 22 2004	12.5"	12mmT4		MF,PL,OVAL,PATCH,UB,NND,CLOSE COMP=4038,R=G		
May 03 1981	12.5"	24mm		PAIR/4038,RING TAIL GLXY		

Caldwell Observation

62	NGC 247	Cet	H20-5	Galaxy SAB(s)d	F,EL,VME172
Sep 22 2022	12.5"	12mmT4		MB,VL,EL-EDGE ON,LNUC AREA,NND,SHISB,PATCHY,SVRL F*S OUTER TIP,R=FG	
Sep 24 1981	12.5"	16mm		DIF,MF,VL,B* S EQ PLANE,* OFF E SIDE,NND,PATCHY,EL,SIM TO 253	
Sep 10 1980	12.5"	24mm			
Sep 07 1980	12.5"	32mm		EL,SEEN BY SWEEPING AREA,LG	
63	NGC 7293	Aqr		Planetary Neb 4+3	PF,VL,E OR BIN
Sep 02 2008	31"	31mmT5		DIF,PF,EEL,FILLS 17MM,OIII HELPS GREATLY,SVRL F*S CNTR RGN,CNTR* 13MAG,L DARK AREA SUR CNTR,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 NEB FILTER E!!!	
64	NGC 2362	CMa	H17-7	Open Cluster I 3 r	CL,PL,RI,30CMA
Oct 16 1982	12.5"	24mm		~30*S,VB,VL,B* IN CNTR,TRI SHAPE,*S ~SAME MAG	
Oct 31 1980	12.5"	24mm		6TH MAG CNTR * SUR BY 9TH *S,E	
65	NGC 253	Sci	H1-5	Galaxy SAB(s)c	VVB,VVL,VME54,GBM
Sep 22 2022	12.5"	12mmT4		EB,EL,EL-EDGE ON,NND,HISB,CNTR AREA BKN,MANY F*S IN GAL,PATCHES,H2 RGNS,DUST,FILLS FOV EDGE TO EDGE,BEST TODATE,R=EEE	
Sep 06 2002	12.5"	9mmT6		VB,VL,SPRIAL STR,GLXY 2 FOV IN SIZE,DUST LANES,BREAKS DET,B RGN DET	
Sep 23 1981	12.5"	24mm		DIF,MB,EL,EDGE ON,DARMS,DUST LANE,F* CNTR-W ARM S OF NUC,B* SE&W,KNTY STR SP	
Oct 31 1980	12.5"	24mm			
Oct 29 1980	8"	24mm			
Sep 09 1980	12.5"	24mm		E!!,BEST SIGHTING TO DATE	
Sep 07 1980	12.5"	24mm			
Aug 22 1980	12.5"	24mm		VL	
66	NGC 5694	Hya	H196-2	Globular VII	CB,CS,R,PSBM,R,*9SP
Apr 11 2015	36"	17mmT4		(Class III),PB,MS,BSNUC WITH HISB,HALO OF RSLV *S CLOSE TO NUC,19 DEG ALT,R=G	
Jun 11 1983	12.5"	20mm		MF,PS,BNUC,R,2*S SE,1*SW 1 GLXY DIA,1F* SW 2 GLXY DIA,MHISB	
67	NGC 1097	For	H48-5	Galaxy SB(s)b	VB,L,VME151,VBMN
Sep 16 2009	31"	17mmT4		EB,EL-OVAL,EXT BLNUC,SUDLY MBM,CNTR REG UB,L HALO OFARMS,INTRACT=1097A,R=E	
Sep 10 1980	12.5"	24mm			
Sep 09 1980	12.5"	24mm			
69	NGC 6302	Sco		Planetary Neb 6	PB,E PF,(SWIFT,TRIP)
May 18 2009	31"	17mmT4		VB,VL,EL,B BLUE-GREEN,IRR IN SHAPE,HISB,B CNTR RGN SUR CNTR*,BM,NO CNTR* JUST B RGN TAPERED ENDS,ONE SIDE THINNER AND THICKER THAN OTHER,OIII HELPS,NEB GRAN BKN IN PARTS,NEB S-SHAPE,R=E	
May 28 2008	31"	17mmT4		VB,VL,EL,HISB,B CNTR * RGN,PATCHY AREAS OF NEB DET,B AREAS,W/OIII,MORE DETAIL IN NEB,B GREEN,E,R=E	
70	NGC 300	Sci		Galaxy SA(s)d	PB,VL,VMIE,VGPMBM
Sep 23 1981	12.5"	16mm		DIF,EF,ML,ENCOMP 5F*S IN 24MM,N SIDE BTR,MILKY GLOW	
71	NGC 2477	Pup		Open Cluster I 2 r	CL,B,RI,L,LC,*12
Dec 03 1980	12.5"	24mm		LOOKS LIKE MINATURE BEEHIVE,RESEMBLES GLOB CLASS X	
72	NGC 55	Sci		Galaxy SB(s)m: sp	VB,VL,VME,TRIN
Sep 23 1981	12.5"	24mm		VDIF,MF,PL,EDGE ON,F* SIDE OF GLXYAXY BY NUC,NND	

Caldwell Observation

73	NGC 1851	Col	Globular	GCL,VB,VL,R,VSVVBM
Oct 12 2012	36"	17mmT4	EB,EL,BLNUC,HISB,V SIM TO M15,RSLV TO CORE,8,8 DEG ABOVE HRZN,HUNDREDS OF F* SUR CORE,HISB CNTR,R=GE	
74	NGC 3132	Vel	Planetary Neb 4+2	PLN,VB,VL,LE*9M
Dec 28 2008	31"	17mmT4	VB,PL,OVAL,B CNTR*,DARK INNER RING,B BLUEISH GREEN,8 DEG ABOVE H,OIII HELPS,R=E	
75	NGC 6124	Sco	Open Cluster I 3 r	CL,B,L,PRI,LCM,*9.11
May 28 2008	31"	17mmT4	EB,EEL,~50-70*S,VAR MAG,SVRL FOV'S,M CL CNTR,R=F	
76	NGC 6231	Sco	Open Cluster I 3 p	CL,B,CL,PRI,ST10..13
May 28 2008	31"	17mmT4	EF,EL,~50-70*S,GOOD CL,FILLS FOV,B*S VAR MAG,7 DEG ALT,R=G	
77	NGC 5128	Cen	Galaxy S0 pec	VB,VL,VME122,BIFID
Apr 16 2009	31"	31mmT5	EDIF,EF,EL,CAN ONLY SUSP,L AREA OF F BG HAZE,SUSP,R=P	
Mar 20 2009	31"	17mmT4	VDIF,VF,ML,OVAL,PATCH,6 DEG ABOVE HRZN,* IN GLXY,F GLOW DET,R=P	
78	NGC 6541	CrA	Globular	GCL,B,R,EC,GBM,RRR
Jul 01 2019	36"	17mmT4	(Class VI),PB,PL,L HISB CNTR,5 DEG ALT,LOWEST OBJ TO DATE,R=F	
<i>Total:</i>	<i>77</i>			