

Caldwell Observation

- 1 NGC 188 Cep Open Cluster 10.0 I 2 r CL,VL,R,150-200***
 Jul 09 1983 12.5" 24mm MF,PL,APPROX 50**S SCATTERED,FAINT BACKGROUND 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,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" 7mm ELONGATION STARTING TO SHOW UP
 Aug 13 1982 12.5" 16mm BG COLOR,MF,PS,R,BRT CENTRAL *,(10TH MAG),SIM TO BLINKING PL,F*W SIDE
- 3 NGC 4236 Dra H51-5 Galaxy SB(s)dm VF,EL,ME160,VGBM**
 Apr 23 2003 12.5" 9mmT6 DIF,MF,EL,ELONG,PATCH,LARGE,PATCHES DET,H2 REGIONS SUSP,R=G
- 4 NGC 7023 Cep H74-4 Nebula R *7IN EF,EL,NEBY**
 Jul 09 1983 12.5" 12mm DIF,MB,MS,GAS AROUND 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 & BRT,HINT OF H2 REGIONS SUSP,R=E
- 6 NGC 6543 Dra H37-4 Planetary Neb 3a+2 PLN,VB,PS,SBMVSN**
 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 OUTER 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
- 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,SMALL BNUC,LARGE OVAL PATCH,SOME STR SUSP,B**S IN GAL
 Sep 18 1980 12.5" 24mm 2**S IN GAL PRESENT
- 8 NGC 559 Cas H48-7 Open Cluster 9.0 I 1 m CL,B,PL,PRI**
 Jul 31 1981 12.5" 24mm FEW B**S, MOSTLY FAINTER **S APPROX 10-11 MAG,APPROX 50**S IN ALL
- 9 SH2 155 Cep Nebula**
 Sep 02 2008 31" 31mmT5 EDIF,EF,EEL,PATCH,SEVERAL FOV,FEW BRT PATCHES DET,VF BG GLOW AREAS,R=P
- 10 NGC 663 Cas H31-6 Open Cluster 9.0 II 3 r CL,B,L,ERI,ST PL**
 Jul 31 1981 12.5" 16mm PL,CLUSTER BROKEN IN HALF,DARK PATCH THROUGH CLUSTER
- 11 NGC 7635 Cas H52-4 Nebula E VF,*8INV L EXCENTRIC**
 Jul 31 1981 12.5" 16mm VDIF,IRR IN SHAPE,NEB AROUND B*,BUBBLE NEBULA
- 12 NGC 6946 Cep H76-4 Galaxy SAB(rs)cd VF,VL,VG,VSMB,RR**
 Jun 22 2003 12.5" 9mmT6 VB,EL,R,NND,SHISB,AREAS OF PATCHES DET,SEVERAL **S IN GAL,R=E
 Jul 09 1983 12.5" 24mm MF,VL,OVAL,3B**S TO ONE SIDE,SEVERAL F**S IN GAL,SPR STR SUSP,PAIR/6939
 Aug 14 1982 12.5" 16mm EDIF,MF,PL,PATCHY,OVAL,NND,STARS IN GAL,SEE CARD FOR DRAWING
 Jun 06 1981 12.5" 16mm DIF,VL,MB,SOME SPR STR DET,FACE ON,SEVEAL **S IN GAL,RESEMBLES M33
 Aug 19 1980 12.5" 32mm VF,COULD NOT FIND IN 24MM
- 13 NGC 457 Cas H42-7 Open Cluster 8.6 II 3 r CL,B,L,PRI,*7,8,10**

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13	NGC 457	Cas H42-7	Open Cluster 8.6 II 3 r	CL,B,L,PRI,*7,8,10
Jul 31 1981	12.5"	16mm	B*S,FEW *S APPROX 20.LARGE SCATTERED THROUGHOUT EYEPIECE	
Jul 17 1980	12.5"	24mm		
14A	NGC 869	Per H33-6	Open Cluster 6.6 I 3 r	CL,VVL,VRI,*7...14
Oct 03 1981	12.5"	32mm	VB,EL,BRIGHT DIAMOND SHAPE *S IN CENTER,PAIR/884	
Sep 20 1981	12.5"	24mm		
Oct 31 1980	12.5"	24mm		
Sep 18 1980	12.5"	24mm	H & CHI DOUBLE CLUSTER	
Jun 20 1980	12.5"	24mm		
14B	NGC 884	Per H34-6	Open Cluster 6.4 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 DOUBLE CLUSTER	
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 BRT BALL,C* VERY BRT 10TH MAG,OIII NOT MUCH HELP,R=E	
Jul 24 1981	12.5"	7mm	CENTRAL * NO LONGER BLINKS	
Jul 24 1981	12.5"	16mm	GREENISH,BLINKING PLANTARY,CENT * EASILY BLINKS WHEN LOOKING AT CENTER	
Jun 20 1980	12.5"	9mm	BRT CENTRAL * EASILY SEEN	
Jun 17 1980	12.5"	16mm	GREAT,GREENISH BLUE COLOR,USE BARLOW AND 16MM	
16	NGC 7243	Lac H75-8	Open Cluster 8.0 II 2 m	CL,L,P,LC,ST VL
Sep 20 1984	12.5"	24mm	VB,VL,RICH * FIELD,PPEARS TO BE 2 CLUSTERS SIDE BY SIDE,APPROX 40*S	
Jul 15 1980	12.5"	24mm	CLUSTER WELL PLACED	
17	NGC 147	Cas	Galaxy E5 pec	VF,VL,IR,GSMBM*11
Jul 31 1981	12.5"	24mm	ELONGATED,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
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,AVERTED VISION	
19	IC 5146	Cyg	Nebula E	
Sep 18 2004	31"	25mm	VDIF,VF,PL,HINT OF NEB DET,SMALL CLUSTER OF APPROX 6*S,OIII DOES NOT HELP,R=P	
20	NGC 7000	Cyg H37-5	Nebula E	F,EEL,DIF NEBULOSITY
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	STELL NUC,ANOTHER F* JUST W OF NUC	
Jan 28 1982	12.5"	16mm	DIF,PB,PL,ELONG,FNUC,F* IN W EDGE NEAR NUC,HISB,GMBM,F* FARTHER W	

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22	NGC 7662	And H18-4	Planetary Neb 4+3	PLN ORRING,VB,PS,R
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		
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 BETTER THAN N,DUST LANE DET,CENTRAL BULGE DET	
Sep 23 1981	12.5"	24mm	F* 13MAG NW SIDE, FAINTER * 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,LARGE NUC,HISB,ABELL426	
Aug 25 1982	12.5"	16mm	MB,ML,FNUC,F*N AND W,GMBM,R-OVAL,2 OTHER GAL CLOSE BY/1272 AND 1278	
25	NGC 2419	Lyn H218-1	Globular	PB,PL,LE90,VGBM,*4'F
Oct 16 1982	12.5"	16mm	MF,PL,R,UB,SBM,2 B*S POINT TO IT,COUPLE OF F*S SCATTERED AROUND OBJECT	
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,TAPPERED AT BOTH ENDS	
Oct 31 1980	12.5"	24mm		
27	NGC 6888	Cyg H72-4	Nebula E	F,VL,VME,**ATT
Sep 04 2002	12.5"	32mm	NEB EASILY DETECTED	
Sep 04 2002	12.5"	25mm	PB,PL,BRT NEBULA,2B*S WITH GLOW OF NEB BETWEEN AND AROUND *S	
28	NGC 752	And H32-7	Open Cluster 8.0 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,SCATTERED	
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 BRT NUC,DUST LANE,COMP DET,7331 CLUSTER,R=E	
Jun 27 2003	12.5"	9mmT6	EB,EL,BNUC,VERY HISB,DUST DET,LARGE BRT NUC,FAINT 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,LARGE BNUC,TAPPERED ENDS,DUST LANE SUSP IN 12MM	
Sep 18 1982	12.5"	16mm	MB,ML,EDGE ON,BNUC,DUST LANE SUSP,TAPPERED ENDS,7335 CLOSE BY	
Jul 29 1981	12.5"	24mm	SAME,3 COMP GAL SEEN,7335/7336/7340	
Jul 07 1981	12.5"	24mm	PB,PL,EDGE ON,BRT NUC,DIM AREA	
Sep 18 1980	12.5"	24mm		
Sep 10 1980	12.5"	24mm		

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30	NGC 7331	Peg H53-1	Galaxy SA(s)b	B,PL,PME163,SMBM
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,OBJECT WASHED OUT	
31	IC 405	Aur	Nebula E	
Dec 03 1980	12.5"	32mm	EL AREA,VOID AREA,MOVE TO N RIM,HINT OF BRT AREAS	
32	NGC 4631	CVn H42-5	Galaxy SB(s)d sp	VB,VL,EE70,BMN,*ATTN
Mar 17 2007	31"	17mmT4	EB,EL,ELONG,HISB,ONE SIDE THICKER,MILKY,BRT H2 REGIONS,DUST,F* OFF NUC/TIP,R=E	
Jan 28 1982	12.5"	12mm	VB,VL,EDGE ON,* N OF NUC,F* W TIP,MOD HISB,PATCHES DET IN EQ PLANE	
33	NGC 6992	Cyg H14-5	Nebula E	EF,EL,EE,EIF,BIFID
Sep 04 2002	12.5"	32mm	VB,EEL,SNR,HISB,ARC GOES 2 FOV'S	
34	NGC 6960	Cyg H15-5	Nebula E	PB,CL,EIF,KAPPACYGIN
Sep 04 2002	12.5"	32mm	PB,EL,SNR,WHIPS ON BOTH SIDES OF B* EASILY DETECTED,PARTS OF SNR HAVE HISB	
35	NGC 4884	Com H391-2	Galaxy E+4	CHIEF OF MULT NEB
May 14 2009	31"	17mmT4	VB,VL,OVAL,GMBM,LARGE BNUC,HISB,AGC 1656,R=G	
36	NGC 4559	Com H92-1	Galaxy SAB(rs)cd	VB,VL,ME150,GBM,3*F
Feb 12 1983	12.5"	24mm	VB,VL,3F*S IN S EDGE,SLIGHTLY ELONG,HISB,NND	
37	NGC 6885	Vul H20-8	Open Cluster 5.9 III 2 m	CL,VB,VL,RI,LC,*6.11
Sep 19 1984	12.5"	16mm	SAME,MB,PL,B* CLOSE TO CENTER	
Jul 30 1981	12.5"	12mm	VB,VL,B* IN CENTER OF CLUSTER,APPROX 15-20*S	
38	NGC 4565	Com H24-5	Galaxy SA(s)b? sp	B,EL,EE135,VSBMN=*10
Feb 05 2005	31"	31mmT5	EB,EL,EDGE ON,BNUC,BETTER THAN 17MM,JUST FITS IN FOV,DUST LANE,BEST TO DATE,R=E	
Feb 05 2005	31"	17mmT4	EB,EEL,EDGE ON,LARGE BNUC,HISB,FILLS FOV,2 HALVES,GMBM,TAPPERED ENDS,R=E	
Feb 27 1982	12.5"	16mm	MB,PL,VERY EDGE ON,BNUC,DIM HALO,F*N OF NUC,DUST LANES,CENTRAL 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,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!!	
40	NGC 3626	Leo H52-2	Galaxy S0-a	B,S,VLE,SBM
Mar 03 1984	12.5"	12mm	MB,PS,BNUC,R,BM	
Jan 30 1981	12.5"	24mm	VB,PS,BNUC,PAIR/M65/M66/3628	
42	NGC 7006	Del H52-1	Globular	B,PL,R,GBM

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42	NGC 7006	Del	H52-1	Globular	B,PL,R,GBM
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,SMALL VERY DIF		
43	NGC 7814	Peg	H240-2	Galaxy SA(s)ab: sp	CB,CL,E,VGBM
Sep 21 1984	12.5"	16mm	MB,PL,ELONG,LARGE SOFT NUC,HISB,NO *S		
Jul 07 1981	12.5"	24mm	DIF,MF,ML,VERY FAINT HALO		
Sep 10 1980	12.5"	24mm			
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 SHAPE DET,S ARM BRT 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	Nebula E+R	B,VME330,N COM=*11
Oct 05 2002	12.5"	9mmT6	PB,ML,TRIANGLE SHAPE,F* AT HEAD,COMET LIKE,NEB UB,MOD HISB		
Oct 31 1980	12.5"	24mm			
Sep 10 1980	12.5"	24mm	COMET LIKE APP,NICE		
47	NGC 6934	Del	H103-1	Globular	GCL,B,L,R,RRR,*16...
Aug 20 2003	31"	25mm	VB,VL,RESOLVED TO CORE,HUNDRED'S OF *S,MANY *S DETECTED IN CORE,R=E		
Jul 31 2002	12.5"	12mm	SAME		
Jul 08 1983	12.5"	12mm	MB,MS,BNUC,B* TO W,RESOLVED OUTER *S,GBM		
Jul 30 1981	12.5"	16mm	DNUC,GMBM,SOFT HALO OF *S RESOLVED,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
Feb 21 1984	12.5"	16mm	SAME		
Oct 24 1981	12.5"	12mm	DIF,MF,ML,BRT CENTRAL REGION,UB,GOOD DEFINITION WHERE ARMS WIND AROUND NUC		
Dec 03 1980	12.5"	24mm			
49	NGC 2237	Mon		Nebula E	PB,VVL,DIF,(2238)
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 7.0 II 3 r n	CL,BEAUTIFUL,STSC
Mar 18 2007	31"	31mmT5	EB,EEL,SEVERAL FOV'S,NICE,FEW B*S WITH VARIOUS MAGNITUDES,LOOSLY SCATTERED,R=G		
Feb 25 1984	12.5"	24mm	SAME		
Aug 21 1982	12.5"	24mm	MB,VL,SCATTERED,7..9 MAG *S,APPROX 20*S,ALMOST 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,SEVERAL FOV'S,BG GLOW AV,R=P		

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52	NGC 4697	Vir	H39-1	Galaxy E6	VB,L,LE45,SMBMN
Mar 27 1982	12.5"	12mm		MB,ML,ELONG,OVAL,F* TO W,GMBM,TAPPED ENDS	
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,CENTRAL BULGE	
54	NGC 2506	Mon	H37-6	Open Cluster 11.0 I 2 r	CL,PL,VRI,C,*11...20
Oct 16 1982	12.5"	24mm		MF,ML,SCATTERED 'S AROUND CLUSTER,DENSE CLUSTERING TOWARDS CENTER,APPROX 60"S	
55	NGC 7009	Aqr	H1-4	Planetary Neb 4+6	PLN,VB,S,ELLIPTIC
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		VF,VL,ELONG,R,HISB,THICK INNER RING,BRT BLUE,CENTRAL *,RINGS DET,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 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	
56	NGC 246	Psc	H25-5	Planetary Neb 3b	VF,L,4*IN DIF NEB
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 *	
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,ELONG,PATCHY,RESEMBLES OPEN CLUSTER	
Sep 20 1984	12.5"	24mm		EDIF,EF,ML,SEEMS TO BE LOC IN BARREN AREA,SOME HINT OF BACKGROUND GLOW	
Sep 20 1981	12.5"	24mm		BERNARDS GALAXY,JUST N OF 10*S (11-12TH MAG) SCATTERED E TO W	
Sep 10 1980	12.5"	24mm		EF,EDIF,LARGE	
58	NGC 2360	CMa	H12-7	Open Cluster 10.4 I 3 r	CL,VL,RI,PC,ST9...12
Oct 16 1982	12.5"	24mm		MB,ML,APPROX 50*S SAME MAG,RESEMBLES WILD DUCK CLUSTER	
Oct 31 1980	12.5"	24mm		LOOKS LIKE SMALL 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,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!!	
60	NGC 4038	Crv	H28.1-4	Galaxy SB(s)m pec	PB,CL,R,VGBM
Mar 16 2009	31"	17mmT4		VB,VL,ELONG,PATCHY AREAS IN GAL,SHISB,NND,DARK AREA SPLITS TWO,INTER=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,ELONG,BOTH NUC OF BOTH GAL SEEN,RING TAIL GAL,ARMS DET,PAIR/4039	
61	NGC 4039	Crv	H28.2-4	Galaxy SA(s)m pec	PF,PL

Caldwell Observation

- 61 NGC 4039 Crv H28.2-4 Galaxy SA(s)m pec PF,PL**
 Mar 16 2009 31" 17mmT4 VB,VL,ELONG,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 GAL
- 62 NGC 247 Cet H20-5 Galaxy SAB(s)d F,EL,VME172**
 Sep 24 1981 12.5" 16mm DIF,MF,VL,B* S EQ PLANE,* OFF E SIDE,NND,PATCHY,ELONG,SIM TO 253
 Sep 10 1980 12.5" 24mm
 Sep 07 1980 12.5" 32mm EL,SEEN BY SWEEPING AREA,LARGE
- 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,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!!!
- 64 NGC 2362 CMa H17-7 Open Cluster 8.0 I 3 r CL,PL,RI,30CMA**
 Oct 16 1982 12.5" 24mm APPROX 30**S,VB,VL,B* IN CENTER,TRI SHAPE,**S APPROX SAME MAG
 Oct 31 1980 12.5" 24mm 6TH MAG CENTRAL * SURROUNDED BY 9TH **S,EXCELLENT
- 65 NGC 253 Scl H1-5 Galaxy SAB(s)c VVB,VVL,VME54,GBM**
 Sep 06 2002 12.5" 9mmT6 VB,VL,SPRIAL STR,GAL 2 FOV IN SIZE,DUST LANES,BREAKS DETECTED,BRT REGIONS DET
 Sep 23 1981 12.5" 24mm DIF,MB,EL,EDGE ON,DARMS,DUST LANE,F * CENTER-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 EXCELLENT!!,BEST SIGHTING TO DATE
 Sep 07 1980 12.5" 24mm
 Aug 22 1980 12.5" 24mm VL
- 66 NGC 5694 Hya H196-2 Globular CB,CS,R,PSBM,R,*9SP**
 Jun 11 1983 12.5" 20mm MF,PS,BNUC,R,2**S SE,1*SW 1 GAL DIA,1F* SW 2 GAL DIA,MOD HISB
- 67 NGC 1097 For H48-5 Galaxy SB(s)b VB,L,VME151,VBMN**
 Sep 16 2009 31" 17mmT4 EB,EL,OVAL,EXT LARGE BNUC,SUDDENLY MBM,CENTRAL REG UB,LARGE HALO OF
 ARMS,INTER=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,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
- 70 NGC 300 Scl Galaxy SA(s)d PB,VL,VMIE,VGPMBM**
 Sep 23 1981 12.5" 16mm DIF,EF,ML,ENCOMP 5F**S IN 24MM,N SIDE BRTER,MILKY GLOW
- 71 NGC 2477 Pup Open Cluster 12.0 I 2 r CL,B,RI,L,LC,*12**
 Dec 03 1980 12.5" 24mm LOOKS LIKE MINATURE BEEHIVE,RESEMBLES GLOBULAR TYPE X

Caldwell Observation

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 GALAXY BY NUC,NND	
74	NGC 3132	Vel	Planetary Neb 4+2	PLN,VB,VL,LE*9M
Dec 28 2008	31"	17mmT4	VB,PL,OVAL,BRT C*,DARK INNER RING,BRT BLUEISH GREEN,8 DEG ABOVE H,OIII HELPS,R=E	
75	NGC 6124	Sco	Open Cluster 9.0 I 3 r	CL,B,L,PRI,LCM,*9.11
May 28 2008	31"	17mmT4	EB,EEL,APPROX 50-70*S,VARIOUS MAG,SEVERAL FOV'S,MOD CLUSTERING MIDDLE,R=F	
76	NGC 6231	Sco	Open Cluster 6.0 I 3 p	CL,B,CL,PRI,ST10..13
May 28 2008	31"	17mmT4	EF,EL,APPROX 50-70*S,GOOD CLUSTERING,FILLS FOV,B*S VARIOUS 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,VERY LARGE,CAN ONLY SUSP,LG AREA OF F BACKGROUND HAZE,SUSP,R=P	
Mar 20 2009	31"	17mmT4	VDIF,VF,ML,OVAL,PATCH,6 DEG ABOVE HOR,* IN GAL,F GLOW DET,R=P	
<i>Total:</i>		75		