

# 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**  
 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 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**  
 Sep 12 2012 36" 17mmT4 PB,VL,SMALL BNUC,SPIRAL ARMS,KNOTS IN ARMS DET,H2 REGIONS DET,R=E  
 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

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<b>12</b>	<b>NGC 6946</b>	<b>Cep H76-4</b>	<b>Galaxy SAB(rs)cd</b>	<b>VF,VL,VG,VSBM,RR</b>
Aug 19 1980	12.5"	32mm	VF,COULD NOT FIND IN 24MM	
<b>13</b>	<b>NGC 457</b>	<b>Cas H42-7</b>	<b>Open Cluster 8.6 II 3 r</b>	<b>CL,B,L,PRI,*7,8,10</b>
Jul 31 1981	12.5"	16mm	B*S,FEW *S APPROX 20.LARGE SCATTERED THROUGHOUT EYEPIECE	
Jul 17 1980	12.5"	24mm		
<b>14A</b>	<b>NGC 869</b>	<b>Per H33-6</b>	<b>Open Cluster 6.6 I 3 r</b>	<b>CL,VVL,VRI,*7...14</b>
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		
<b>14B</b>	<b>NGC 884</b>	<b>Per H34-6</b>	<b>Open Cluster 6.4 I 3 r</b>	<b>CL,VL,VRI,RUBY*M</b>
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		
<b>15</b>	<b>NGC 6826</b>	<b>Cyg H73-4</b>	<b>Planetary Neb 3a+2</b>	<b>PLN,B,PL,R,*11M</b>
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	
<b>16</b>	<b>NGC 7243</b>	<b>Lac H75-8</b>	<b>Open Cluster 8.0 II 2 m</b>	<b>CL,L,P,LC,ST VL</b>
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	
<b>17</b>	<b>NGC 147</b>	<b>Cas</b>	<b>Galaxy E5 pec</b>	<b>VF,VL,IR,GSMBM*11</b>
Sep 28 2013	36"	17mmT4	MF,EL,OVAL,VERY SNUC,DIFF FT HALO ACROSS FOV,MANY F*S IN HALO.BRT *S IN NUC AREA,R=FG	
Jul 31 1981	12.5"	24mm	ELONGATED,VDIF,UB,DWARF SATELLITE TO M31	
Jul 15 1980	12.5"	24mm	EF,VS,THIN	
<b>18</b>	<b>NGC 185</b>	<b>Cas H707-2</b>	<b>Galaxy E3 pec</b>	<b>PB,VL,IR,VGMBM,R</b>
Sep 28 2013	36"	17mmT4	PB,PL,OVAL,UB,MOD HISB,SEVERAL VF* IN GAL 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,AVERTED VISION	
<b>19</b>	<b>IC 5146</b>	<b>Cyg</b>	<b>Nebula E</b>	
Sep 18 2004	31"	25mm	VDIF,VF,PL,HINT OF NEB DET,SMALL CLUSTER OF APPROX 6*S,OIII DOES NOT HELP,R=P	
<b>20</b>	<b>NGC 7000</b>	<b>Cyg H37-5</b>	<b>Nebula E</b>	<b>F,EEL,DIF NEBULOSITY</b>
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 &	

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<b>20</b>	<b>NGC 7000</b>	<b>Cyg H37-5</b>	<b>Nebula E</b>	<b>F,EEL,DIF NEBULOSITY</b>
			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	
<b>21</b>	<b>NGC 4449</b>	<b>CVn H213-1</b>	<b>Galaxy IBm</b>	<b>VB,CL,ME,DORBIFID,*F</b>
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	
<b>22</b>	<b>NGC 7662</b>	<b>And H18-4</b>	<b>Planetary Neb 4+3</b>	<b>PLN ORRING,VB,PS,R</b>
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		
<b>23</b>	<b>NGC 891</b>	<b>And H19-5</b>	<b>Galaxy SA(s)b? sp</b>	<b>B,VL,VME22</b>
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		
<b>24</b>	<b>NGC 1275</b>	<b>Per H603-2</b>	<b>Galaxy Pec</b>	<b>F,S</b>
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	
<b>25</b>	<b>NGC 2419</b>	<b>Lyn H218-1</b>	<b>Globular</b>	<b>PB,PL,LE90,VGBM,*4F</b>
Oct 16 1982	12.5"	16mm	MF,PL,R,UB,SBM,2 B*S POINT TO IT,COUPLE OF F*S SCATTERED AROUND OBJECT	
<b>26</b>	<b>NGC 4244</b>	<b>CVn H41-5</b>	<b>Galaxy SA(s)cd: sp</b>	<b>PB,VL,EE43,VGBM</b>
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		
<b>27</b>	<b>NGC 6888</b>	<b>Cyg H72-4</b>	<b>Nebula E</b>	<b>F,VL,VME,**ATT</b>
Sep 19 2012	36"	31mmT5	VB,W/OIII,WELL PLACED IN FOV,2 DISTINCT HALVES,ONE BRT THAN OTHER,LARGE LOBS,EXCELLENT DETAIL,AMAZING,R=EE	
Sep 04 2002	12.5"	25mm	PB,PL,BRT NEBULA,2B*S WITH GLOW OF NEB BETWEEN AND AROUND *S	
Sep 04 2002	12.5"	32mm	NEB EASILY DETECTED	
<b>28</b>	<b>NGC 752</b>	<b>And H32-7</b>	<b>Open Cluster 8.0 II 2 r</b>	<b>CL,VVL,RI,*L\$SC</b>
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		
<b>29</b>	<b>NGC 5005</b>	<b>CVn H96-1</b>	<b>Galaxy SAB(rs)bc</b>	<b>VB,VL,VME66,VSBMN</b>
Jan 28 1982	12.5"	16mm	MB,ML,BNUC,SLENDER SHAPE,DIF HALO	
<b>30</b>	<b>NGC 7331</b>	<b>Peg H53-1</b>	<b>Galaxy SA(s)b</b>	<b>B,PL,PME163,SMBM</b>
Sep 17 2003	31"	25mm	EB,EL,EDGE ON,BNUC,HISB,TIGHT BRT NUC,DUST LANE,COMP DET,7331 CLUSTER,R=E	

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<b>30</b>	<b>NGC 7331</b>	<b>Peg H53-1</b>	<b>Galaxy SA(s)b</b>	<b>B,PL,PME163,SMBM</b>
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		
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	
<b>31</b>	<b>IC 405</b>	<b>Aur</b>	<b>Nebula E</b>	
Dec 03 1980	12.5"	32mm	EL AREA,VOID AREA,MOVE TO N RIM,HINT OF BRT AREAS	
<b>32</b>	<b>NGC 4631</b>	<b>CVn H42-5</b>	<b>Galaxy SB(s)d sp</b>	<b>VB,VL,EE70,BMN,*ATTN</b>
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	
<b>33</b>	<b>NGC 6992</b>	<b>Cyg H14-5</b>	<b>Nebula E</b>	<b>EF,EL,EE,EIF,BIFID</b>
Sep 04 2002	12.5"	32mm	VB,EEL,SNR,HISB,ARC GOES 2 FOV'S	
<b>34</b>	<b>NGC 6960</b>	<b>Cyg H15-5</b>	<b>Nebula E</b>	<b>PB,CL,EIF,KAPPACYGIN</b>
Sep 04 2002	12.5"	32mm	PB,EL,SNR,WHIPS ON BOTH SIDES OF B* EASILY DETECTED,PARTS OF SNR HAVE HISB	
<b>35</b>	<b>NGC 4884</b>	<b>Com H391-2</b>	<b>Galaxy E+4</b>	<b>CHIEF OF MULT NEB</b>
May 14 2009	31"	17mmT4	VB,VL,OVAL,GMBM,LARGE BNUC,HISB,AGC 1656,R=G	
<b>36</b>	<b>NGC 4559</b>	<b>Com H92-1</b>	<b>Galaxy SAB(rs)cd</b>	<b>VB,VL,ME150,GBM,3*F</b>
Feb 12 1983	12.5"	24mm	VB,VL,3F*S IN S EDGE,SLIGHTLY ELONG,HISB,NND	
<b>37</b>	<b>NGC 6885</b>	<b>Vul H20-8</b>	<b>Open Cluster 5.9 III 2 m</b>	<b>CL,VB,VL,RI,LC,*6.11</b>
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	
<b>38</b>	<b>NGC 4565</b>	<b>Com H24-5</b>	<b>Galaxy SA(s)b? sp</b>	<b>B,EL,EE135,VSBMN=*10</b>
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		
<b>39</b>	<b>NGC 2392</b>	<b>Gem H45-4</b>	<b>Planetary Neb 3b+3b</b>	<b>B,S,R,*9M,*8NF100"</b>
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	

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<b>39</b>	<b>NGC 2392</b>	<b>Gem H45-4</b>	<b>Planetary Neb 3b+3b</b>	<b>B,S,R,*9M,*8NF100"</b>
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!!	
<b>40</b>	<b>NGC 3626</b>	<b>Leo H52-2</b>	<b>Galaxy S0-a</b>	<b>B,S,VLE,SBM</b>
Mar 03 1984	12.5"	12mm	MB,PS,BNUC,R,BM	
Jan 30 1981	12.5"	24mm	VB,PS,BNUC,PAIR/M65/M66/3628	
<b>41</b>	<b>MEL 25</b>	<b>Tau</b>	<b>Open Cluster</b>	
Mar 17 2010	12"	32mm	VB,EEL,SEVERAL FOV'S,**S VARIOUS MAG,APPROX 200**S,LOOSLY SCATTERED,MODERATE CLUSTERING,R=F	
<b>42</b>	<b>NGC 7006</b>	<b>Del H52-1</b>	<b>Globular</b>	<b>B,PL,R,GBM</b>
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	
<b>43</b>	<b>NGC 7814</b>	<b>Peg H240-2</b>	<b>Galaxy SA(s)ab: sp</b>	<b>CB,CL,E,VGBM</b>
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		
<b>44</b>	<b>NGC 7479</b>	<b>Peg H55-1</b>	<b>Galaxy SB(s)c</b>	<b>PB,CL,ME12,BET2ST</b>
Oct 07 2010	31"	17mmT4	PB,PL,SMALL BNUC,SCORPIN TAIL,BARRED SPIRAL,ONE SIDE,BRTER ARM THAN OTHER,ARMS,R=E	
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		
<b>45</b>	<b>NGC 5248</b>	<b>Boo H34-1</b>	<b>Galaxy SAB(rs)bc</b>	<b>B,L,E150,PSBMRN</b>
May 06 1981	12.5"	24mm	VB,VL,BNUC,DIM HALO	
<b>46</b>	<b>NGC 2261</b>	<b>Mon H2-4</b>	<b>Nebula E+R</b>	<b>B,VME330,N COM=*11</b>
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	
<b>47</b>	<b>NGC 6934</b>	<b>Del H103-1</b>	<b>Globular</b>	<b>GCL,B,L,R,RRR,*16...</b>
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		
<b>48</b>	<b>NGC 2775</b>	<b>Cnc H2-1</b>	<b>Galaxy SA(r)ab</b>	<b>CB,CL,R,VGVSBM,R</b>
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	

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<b>48</b>	<b>NGC 2775</b>	<b>Cnc H2-1</b>	<b>Galaxy SA(r)ab</b>	<b>CB,CL,R,VGVSMBM,R</b>
		NUC		
	Dec 03 1980	12.5" 24mm		
<b>49</b>	<b>NGC 2237</b>	<b>Mon</b>	<b>Nebula E</b>	<b>PB,VVL,DIF,(2238)</b>
	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		
<b>50</b>	<b>NGC 2244</b>	<b>Mon H2-7</b>	<b>Open Cluster 7.0 II 3 r n</b>	<b>CL,BEAUTIFUL,STSC</b>
	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		
<b>51</b>	<b>IC 1613</b>	<b>Cet</b>	<b>Galaxy IB(s)m</b>	
	Sep 02 2008	31" 31mmT5	EDIF,EEF,EEL,PATCH,UB,ONE PATCHY AREA DET,SEVERAL FOV'S,BG GLOW AV,R=P	
<b>52</b>	<b>NGC 4697</b>	<b>Vir H39-1</b>	<b>Galaxy E6</b>	<b>VB,L,LE45,SMBMN</b>
	Mar 27 1982	12.5" 12mm	MB,ML,ELONG,OVAL,F* TO W,GMBM,TAPPERED ENDS	
<b>53</b>	<b>NGC 3115</b>	<b>Sex H163-1</b>	<b>Galaxy S0- sp</b>	<b>VB,L,VME46,VGSMBMEN</b>
	Mar 27 1982	12.5" 16mm	MB,ML,EDGE ON,BNUC,F HALO,F*S BORDER,F* FARTHER SW,CENTRAL BULGE	
<b>54</b>	<b>NGC 2506</b>	<b>Mon H37-6</b>	<b>Open Cluster 11.0 I 2 r</b>	<b>CL,PL,VRI,C,*11...20</b>
	Oct 16 1982	12.5" 24mm	MF,ML,SCATTERED *S AROUND CLUSTER,DENSE CLUSTERING TOWARDS CENTER,APPROX 60*S	
<b>55</b>	<b>NGC 7009</b>	<b>Aqr H1-4</b>	<b>Planetary Neb 4+6</b>	<b>PLN,VB,S,ELLIPTIC</b>
	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	
<b>56</b>	<b>NGC 246</b>	<b>Psc H25-5</b>	<b>Planetary Neb 3b</b>	<b>VF,L,4*IN DIF NEB</b>
	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 *	
<b>57</b>	<b>NGC 6822</b>	<b>Sgr</b>	<b>Galaxy IB(s)m</b>	<b>VF,L,E,DIF</b>
	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	

# Caldwell Observation

<b>57</b>	<b>NGC 6822</b>	<b>Sgr</b>		<b>Galaxy IB(s)m</b>	<b>VF,L,E,DIF</b>
Sep 10 1980	12.5"	24mm	EF,EDIF,LARGE		
<b>58</b>	<b>NGC 2360</b>	<b>CMa H12-7</b>		<b>Open Cluster 10.4 I 3 r</b>	<b>CL,VL,RI,PC,ST9...12</b>
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		
<b>59</b>	<b>NGC 3242</b>	<b>Hya H27-4</b>		<b>Planetary Neb 4+3b</b>	<b>PLN,VB,LE147,45"D</b>
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!!		
<b>60</b>	<b>NGC 4038</b>	<b>Crv H28.1-4</b>		<b>Galaxy SB(s)m pec</b>	<b>PB,CL,R,VGBM</b>
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		
<b>61</b>	<b>NGC 4039</b>	<b>Crv H28.2-4</b>		<b>Galaxy SA(s)m pec</b>	<b>PF,PL</b>
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		
<b>62</b>	<b>NGC 247</b>	<b>Cet H20-5</b>		<b>Galaxy SAB(s)d</b>	<b>F,EL,VME172</b>
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		
<b>63</b>	<b>NGC 7293</b>	<b>Aqr</b>		<b>Planetary Neb 4+3</b>	<b>PF,VL,E OR BIN</b>
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!!!		
<b>64</b>	<b>NGC 2362</b>	<b>CMa H17-7</b>		<b>Open Cluster 8.0 I 3 r</b>	<b>CL,PL,RI,30CMA</b>
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		
<b>65</b>	<b>NGC 253</b>	<b>Sci H1-5</b>		<b>Galaxy SAB(s)c</b>	<b>VVB,VVL,VME54,GBM</b>
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		
<b>66</b>	<b>NGC 5694</b>	<b>Hya H196-2</b>		<b>Globular</b>	<b>CB,CS,R,PSBM,R,*9SP</b>
Apr 11 2015	36"	17mmT4	PB,MS,SM BRT NUC WITH HISB,HALO OF RESOLVED *S CLOSE TO NUC,19 DEG ALT,~TYPE III,R=G		

# Caldwell Observation

<b>66</b>	<b>NGC 5694</b>	<b>Hya H196-2</b>	<b>Globular</b>	<b>CB,CS,R,PSBM,R,*9SP</b>
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	
<b>67</b>	<b>NGC 1097</b>	<b>For H48-5</b>	<b>Galaxy SB(s)b</b>	<b>VB,L,VME151,VBMN</b>
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		
<b>69</b>	<b>NGC 6302</b>	<b>Sco</b>	<b>Planetary Neb 6</b>	<b>PB,E PF,(SWIFT,TRIP)</b>
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,TAPPED 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	
<b>70</b>	<b>NGC 300</b>	<b>Sci</b>	<b>Galaxy SA(s)d</b>	<b>PB,VL,VMIE,VGPMBM</b>
Sep 23 1981	12.5"	16mm	DIF,EF,ML,ENCOMP 5F*S IN 24MM,N SIDE BRTER,MILKY GLOW	
<b>71</b>	<b>NGC 2477</b>	<b>Pup</b>	<b>Open Cluster 12.0 I 2 r</b>	<b>CL,B,RI,L,LC,*12</b>
Dec 03 1980	12.5"	24mm	LOOKS LIKE MINATURE BEEHIVE,RESEMBLES GLOBULAR TYPE X	
<b>72</b>	<b>NGC 55</b>	<b>Sci</b>	<b>Galaxy SB(s)m: sp</b>	<b>VB,VL,VME,TRIN</b>
Sep 23 1981	12.5"	24mm	VDIF,MF,PL,EDGE ON,F* SIDE OF GALAXY BY NUC,NND	
<b>73</b>	<b>NGC 1851</b>	<b>Col</b>	<b>Globular</b>	<b>GCL,VB,VL,R,VSVVBM</b>
Oct 12 2012	36"	17mmT4	EB,EL,LARGE BNUC,HISB,VERY SIM TO M15,RESOLVED TO CORE,8.8 DEG ABOVE HORIZON,HUNDREDS OF F* AROUND CORE,HISB MIDDLE,R=GE	
<b>74</b>	<b>NGC 3132</b>	<b>Vel</b>	<b>Planetary Neb 4+2</b>	<b>PLN,VB,VL,LE*9M</b>
Dec 28 2008	31"	17mmT4	VB,PL,OVAL,BRT C*,DARK INNER RING,BRT BLUEISH GREEN,8 DEG ABOVE H,OIII HELPS,R=E	
<b>75</b>	<b>NGC 6124</b>	<b>Sco</b>	<b>Open Cluster 9.0 I 3 r</b>	<b>CL,B,L,PRI,LCM,*9.11</b>
May 28 2008	31"	17mmT4	EB,EEL,APPROX 50-70*S,VARIOUS MAG,SEVERAL FOV'S,MOD CLUSTERING MIDDLE,R=F	
<b>76</b>	<b>NGC 6231</b>	<b>Sco</b>	<b>Open Cluster 6.0 I 3 p</b>	<b>CL,B,CL,PRI,ST10..13</b>
May 28 2008	31"	17mmT4	EF,EL,APPROX 50-70*S,GOOD CLUSTERING,FILLS FOV,B*S VARIOUS MAG,7 DEG ALT,R=G	
<b>77</b>	<b>NGC 5128</b>	<b>Cen</b>	<b>Galaxy S0 pec</b>	<b>VB,VL,VME122,BIFID</b>
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>				<i>77</i>