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A11	A11.80	A11.70	-	-	A11.50	-	A11.60	-	✓	-	-	-	-	9 1/4" x 7 1/4" (23.5 cm x 18.4 cm)	9 1/2" x 7 7/16" (24.1 cm x 18.9 cm)	
A11**	A11.M.ASX	A11.M.ASX	-	-	A11.M.ASX	-	A11.M.ASX	-	✓	-	-	-	-	9 1/4" x 7 1/4" (23.5 cm x 18.4 cm)	9 1/2" x 7 7/16" (24.1 cm x 18.9 cm)	
A11**	A11.ASX	A11.ASX	-	A11.ASX	-	-	A11.ASX	A11.ASX	-	-	✓	-	-	9 1/4" x 7 1/4" (23.5 cm x 18.4 cm)	9 1/2" x 7 7/16" (24.1 cm x 18.9 cm)	
A175P*	A1750.BLK	-	-	-	-	-	-	-	-	-	-	✓	-	9 1/4" x 7 1/4" (23.5 cm x 18.4 cm)	9 5/8" x 7 7/8" (24.4 cm x 20 cm)	
B12**	B12.ASX	B12.ASX	B12.ASX	B12.ASX	-	-	-	-	-	-	✓	-	-	9 1/4" x 7 1/4" (23.5 cm x 18.4 cm)	9 1/2" x 7 7/16" (24.1 cm x 18.9 cm)	

Pages - Páginas : 150
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1192

#182 d 2006-10-30 16:20-16:25 EST Foxmed deck 6 4cmrr
Sun nice prominence @ 3 o'clock 32x

1193

#183 e 2006-10-30/31 18:40-21:10 EST Foxmed deck 8-3 28cmr/l 10x50b
Comet SWAN (2006 M4): 10x50b @ 28cmr/l @ 63x large coma,
 spherical, hint of faint tail @ 28cmr/l
Variable stars:

Name	YYMMDDHHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
T HER	2006 10 31 00 01	8.4		78	80	85			8 28cmr/l	63
R PEG	2006 10 31 00 32	10.7		105	109				8 28cmr/l	63
V CAS	2006 10 31 00 48	11.0		109	112				8 28cmr/l	63
DX AND	2006 10 31 01 00	13.3	<	127	133				8 28cmr/l	157
Z AND	2006 10 31 01 10	9.6		94	101				8 28cmr/l	63
X AND	2006 10 31 01 31	13.2	<	129	132				8 28cmr/l	157

Argo Navis: azimuth encoder seems to be slipping.

1194

#184 d 2006-11-01 10:05-10:10 EST Foxmed deck 8-3 4cmrr
Sun: surface quite active today. Some spots & flare
 activity around them 32x

1195

#185 d 2006-11-08 14:00-16:00 EST Foxmed deck 0 15cmrn
Transit of Mercury: unable to observe due to overcast skies.

1196

#186 d 2006-11-09 16:20-16:25 EST Foxmed deck 3 4cmrr
Sun: Now it clears, 24 hours late! Nice sunspot @ 3 o'clock
 prominence below. Seeing very poor as Sun very low (50) 32x

1197

#187 e 2006-11-23/24 20:08-20:15 EST Foxmed deck 8 ne
 Finally, a look at the stars after a month of solid clouds!

Handwritten notes at the top of the page, including the date "1898-01-20" and some illegible text.

Handwritten text: "Mass 1.5"

• Mercur - 0.6

• Mars 1.5

• Jupiter - 1.7

Handwritten scribbles and lines

1198
1188e

2006-11-24/25 18:45-19:00 EST Faxed deck 8 ne
- Another quick photon fix. Too darned cold to set up a scope, but great to be out under the stars again. Nice skinny crescent Moon in the west. Looking at those tough constellations S of Pegasus: Aquarius, Pisces, Piscis Austrinus, Cetus. Forget about Fornax and Sculptor! M31 easy ϵ naked eye, right overhead. But I could sort of see Camelopardalis.

1199
1189d

2006-11-25 11:35-11:45 EST Faxed deck 8 4cm rr
Sun: One small prom @ 8 o'clock, small spot @ 2 o'clock
~ Very quiet 32x

1200
1190m

2006-12-04 ~~06:25~~ 06:30 EST Faxed bathroom 8 ne 7x50b
Mercury: low on SE horizon, soon to be joined by Mars & Jupiter for a triple conjunction.

1201
1191m

2006-12-08 06:40-07:15 EST Faxed bathroom/basement 7x50b 10x50b
Mercury, Jupiter, Mars: triple conjunction Mercury & Jupiter both n.e., but Mars required 10x50b & steady hand. Temp -19.1C
- best around 7:08 am altitudes: (= -2.4F)

Jupiter	5°	} ←
Mars	6°	
Mercury	7°	

50p in 2° 49'

1202
1192e

2006-12-09/10 21:10-21:20 EST Faxed deck 8-3 10x50b ne
- quick look under partially clear skies M42 in 10x50b
-2.1°C.

• Mercury

• Jupiter

• Mars

1203
H93en 2006-12-10 06:45-07:10 EST Foxmed bathcount deck 8 ne 2x50b
Mercury, Mars & Jupiter in conjunction best around 07:05 c
10x50 15x70
15x7ab, but disk of Jupiter visible even c 10x50b
Mercury & Mars too tiny to show disk. Mars faint,
needed at least 10x50b to see. Temp -3.7°C

1204
H94d 2006-12-10 10:00-10:05 EST Foxmed deck 8 4cmrr
Sun: lots of flare and filament activity to left of
sizable spot in centre of disk. Large double prominence
@ 3 o'clock, small one @ 6 o'clock. 32x. +0.7°C.

2006-12-15
Celestron NexStar 6SE, 150mm SCT arrived from Orion.
Assembled and tested computer control. Entire telescope,
including OTA, manufactured in China.

2006-12-16
Testing NS6SE in daylight. Collimation seems very close
to OK and ~~focus~~^{image} shift undetectable, even c 6mm (250x).
Couldn't get finer dot quite on target. Clear aperture
seems to be $\sim 3/4" = 20 \text{ mm} = 46'$

1205
H95d 2006-12-16 time uncertain Foxmed deck 8-3 4cmrr
Sun: spot close to limb, hard to see detail due
to haze.

1206
H96e 2006-12-19 17:55-18:05 EST Foxmed deck 3 ne 10x50b
ISS & STS passing over together about 650 feet apart.
Appeared as one with ne, but split into two equal objects
c 10x50b. A stunning sight! Like a moving double star.

1207
1197n

2006-12-19/20 23:00-23:35 EST Foxmed Deck 8 15cm SC

First light for NexStar 6SE. + 25mm Plössl (60x)

~~did~~ 2 star auto align on Sirius & Procyon (too close for accuracy!)

- M42-43, lovely as always
- Saturn: tiny & perfect @ 60x - not so good @ 170x due to atmospheric dispersion & lack of cool-down
- Rigel: companion visible @ 170x, but image distorted, hopefully due to lack of cool-down
- ~~M41~~ M41 nice @ 60x, filling field of view
- tried for M45, M78, but pointing was off
- tried for M35, but scope slewed right past it & kept going - probably due to low battery power @ -3.4°C .

For next time: allow cooldown & use AC or external battery, more careful alignment on stars farther apart.

1208

1198d

2006-12-20 09:13 EST Foxmed Deck 9 4cm RR

Sun: 1 largish prominence @ 6 o'clock 32x

1209

1199e

2006-12-30/31 ~22:00-23:30 EST Foxmed Deck 3 28cm r1 Doug

- visit from Doug Cunningham Cunningham
- Moon: Gassendi 240x b
- Saturn: 240x b
- M42

1210

1200e

15

2007-01-02/03 19:30-20:50 EST Foxmead deck 8 15cm sc

- testing Celestron NexStar 6SE @ -1.7°C powered by ext battery
- major problems w/ GoTo! Using 2-star auto alignment second star is way off target. Reverted to 1 star alignment. In both cases slewing to anything led to a reset!
- used 1-star alignment on Rigel. Secondary seen @ 170x but image of Rigel bloated. Manually went to M42
 - only 4 stars in Trapezium, again bloated star images - collimation slightly off
- very disappointing! Need to check performance in warm room, but it was only -1.7°C outside!

1211m

2007-01-09 06:55-07:35 EST Foxmead bathroom 3 7x50b ne
Comet McNaught: Scanning through broken clouds for
Sungrazer - not seen.

1212m

2007-01-10 06:30-07:30 EST Foxmead bath room 8 7x50b ne

- because of glitch in Starry Night I started looking for comet an hour too early.

08:00 - 08:05 EST " " " "

- glorious Sun pillar looking like gigantic comet, but sky now too bright to see comet. Ice crystals probably blocked it. No one else in S Antario saw it this morning.

1213d

2007-01-13 13:15 EST Foxmead yard 8 ne 10x50f

- attempt to see Comet McNaught 5.5° from Sun, blocking Sun with Chimney - no luck

- 1214e 2007-02-6/7 ? EST Foxmed living room 8 ne.
Venus & Mercury both n.e.
- 1215e 2007-02-12/13 ^{18:15} ~~06:15~~ EST Foxmed living room 8 10x50 ne
Venus & Mercury needed 10x50s to see Mercury, but then
 could spot it n.e.
- 1216e 2007-02-14/15 18:45-18:55 EST Foxmed living room 8 10x50 ne
Mira around 2nd magnitude - brightest star in the
 area and obviously red.
- 1217e 2007-03-05/06 ~20:00-21:00 MST Tarnac Observatory 9 18 cm tr
 - observing with David and Wendea Levy at their observatory
 outside Tucson
 - Saturn, M42, M41, M46, M47, Double Cluster, Moon
- 1218e 2007-03-17/18 20:10-21:40 EDT Foxmed deck ⁹ 15 cm sc
 - testing Celestron NexStar 6 SE with proper
 corrector & battery pack
 - dot is too bright in red dot filter - Regulus
 hard to see - also finds walt, align = OTA.
 - once aligned, goto placed objects in exactly
 the same part of field of 24.5 mm ep. very
 consistently
 - Saturn, Rigel, M42-3, M78, M41, 45, 44, 47, 48,
 50, 65, 66, 95, 105, 79, 81, 82, 106, 108, 109, 101, 51, NS195
 M67, 1, Eskimo, Ghost of Jupiter, many double stars
 Fran Tarr.
 - LOTS of FUN! -3.7°C
 - hard controller is a real bummer to operate with

gloves on. The buttons are too many, too small, and too close together. The layout is not logical. Of course, I've been spoiled by Argo Navis!

- 1219e 2007-03-18/19 20:20-22:20 EDT Foxwood dock 9 15cm SC
- more testing of NexStar 6SE + 0.63 reducer/corrector
 - alignment problems, probably because cigarette jack wasn't properly seated
 - collimation is slightly off,
 - wider field \bar{c} r/c is very welcome!
 - used sync command to improve pointing accuracy, - very effective
 - mostly used 24.5mm \bar{c} 6mm \bar{c} r/c \rightarrow 39x \bar{c} 158x
 - looked at many of the same objects: M42/3, M45, M1, M78, M79, M35, M41, M46, 47, 48, 50, 51, 101, M3, some doubles (Algieba, Eta Puppis), and of course Saturn. I identified Titan, Iapetus, Rhea, Tethys (Dione too close to pale). Temp -5.5°C

- 1220e 2007-03-29/31 20:00-21:00 EDT Smicon County Museum 8 25cm SC
- mini star party after I gave a talk on "Observing the Stars" at the Smicon County Museum, which is renting the ROM Starlab for 3 weeks
 - Venus, M42, Saturn

- 1221e 2007-03-29/30 20:00-22:00 EDT Sharon OGC school 9 15cm r/l
- Star party @ Our lady of Good Council school in Sharon. Paul & Ryan D'Analia, Dave Gatgood, Guy Nasson, Scott & Masterton, Joyce Sadore, Gilles & Garet, Wings Yung & Blake Moncarrow. Venus, Moon, Saturn, M42

1222d 2007-03-30 17:25-17:35 EDT Foxmed deck 8 4cm rr
- Sun @ 32x - one tiny spot, no prominences, minimal granulation

1223e 2007-03-30/31 21:10-23:10 EDT Foxmed deck 8-3 28cm r1
NEO 2006 VV2 crossing Leo Minor 63X. Took almost
3/4 hr to find it, found ~ ~~22:00~~ 22:04, tracked until
23:00, got good positions @ 22:24, 22:43, 22:50, 22:54,
23:00. Observed position was 14' SE of Starry Night
predicted position. Magnitude ~ 10.0.
- Saturn, Moon @ 230x -2°C

Equipment: starhopping was extremely difficult because of
bright Moon & Rigel QuikFiber. I think I'm going to
go back to the Antares 8x50! [Done!]

1224d 2007-04-21 11:24-11:27 EDT Foxmed deck 8 4cm rr
Sun: 32x, no prominences or spots, lots of granulation.

1225d 2007-04-22 10:38-10:42 EDT Foxmed deck 8 4cm rr
Sun: 32x, no prominences or spots, lots of granulation.

1226e 2007-04-22/23 20:00-21:00 EDT Foxmed deck 8 15cm sc
Moon: Theophilus, Katerina, Posidonius, Brian binoculars
@ 8mm eyepieces > 188x - excellent detail but much
blurring due to wind.
Venus: 150x slightly gibbous
Saturn: 150x, 188x - blurring
Very mild (+19°C) but gusty wind

1227e

2007-05-03/04 22:00-23:45 EDT Foxmead deck 8 28cmrl

Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R LEO	2007 05 04 02 24	7.7			76	78				8	28cmrl 63
R LMI	2007 05 04 02 37	11.9			115	120				8	28cmrl 63
R CRV	2007 05 04 03 01	7.6			74	75	80			8	28cmrl 63
SS VIR	2007 05 04 03 09	8.8			87	89				8	28cmrl 63
R VIR	2007 05 04 03 18	10.0			96	102	106			8	28cmrl 63
U VIR	2007 05 04 03 43	8.0			76	82				8	28cmrl 63

Deep sky: M65, 66, 95, 96, 13, 92, 5, 57, 104, 87
Jupiter: cleared the trees ~ 23:35 +2.2°C

1228d

2007-05-04 12:05-12:15 EDT Foxmead deck 8 4cmrr

Sun: prominences @ 7:30, 9:30, 10:00 (hadgerms - faint)
- sunspot, prominent filament in centre of disk 32x

1229e

2007-05-05/06 22:00-~~23:00~~00:10 EDT Foxmead deck 8 28cmrl

Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S B00	2007 05 06 02 40	8.6			84	88				8	28cmrl 63
R CVN	2007 05 06 02 56	11.8			114	119				8	28cmrl 63
V B00	2007 05 06 03 07	9.3			92	98				8	28cmrl 63
R B00	2007 05 06 03 26	11.5			114	117				8	28cmrl 63
S SER	2007 05 06 03 42	12.7			121	129	130			8	28cmrl 157

Deep sky: used AN tour made on Messiers, starting at
M83: M83, 68, 104, 5, 61, 49, 59, 62, 58, 87, 86, 89, 90
88, 91, 98, 99, 100, 85, 53, 64.

Jupiter: still too low @ ~~23:00~~00:10, mirror tipping forward
+4.4°C

- a lot of trouble w AN tonight - batteries must be low.



to print
OP
at

- 1230 d 2007-05-06⁵ 11:05-11:15 EDT Foxmead deck & 4cm rr
Sun: 5 prominences between 8 and 9 o'clock, over sunspot
 & flare 32x
- 1231 d 2007-05-12 various Carr. A.Q. 3-10 4cm rr x 2 35cm sc
Sun: white light in 14" Celestron SCT, H&K & CaK in 2 PSTs
 CaK is a vague purple ball.
- 1232 d 2007-05-13 12:50-13:00 EDT Foxmead deck & 4cm rr ~~35cm sc~~
Sun: 2 prominences: 1 @ 10 o'clock, 1 @ 3 o'clock. There's a new active
 region just coming into sight on the f. limb, with a flare
 & a tall narrow spike of a prominence rising straight
 ← up from it 32x
- 1233 d 2007-05-13 17:45-17:55 EDT Foxmead deck & 4cm rr
Sun: several prominences just above prominence seen earlier
 today 32x
- 1234 e 2007-05-13/14 22:50-00:10 EDT Foxmead deck & 15cm sc
 Mostly playing E NexStar 6SE and various eyepieces & toys.
 ~ initial alignment on Regulus & Vega proved very accurate. I
 was actually hitting objects @ 6mm Radian r/c (158x)
 Tried Orion binoviewers @ Barlow. Too low mag @ r/c in place.
 @ r/c worked well @ ~~25~~¹⁰mm eyepieces on planets (Jup & Sat
 Saturn) & 25mm eyepieces on DSOs. I need to adjust
 backlash, esp. in altitude, but that should be done in
 daylight. Goto is very accurate! Temp @ 2.3°C
- Battery pack seemed to work fine @ scope tonight - I'd had
 trouble @ it @ AN last week.

1235d 2007-05-17 09:35-09:45 EDT Foxmead deck 8 4cm rr
Sun: very active today: prominences @ 3, 6 (triple) & 9,
active region near centre of disk = flare activity
32x

1236d 2007-05-19 various CAQ 8-0 various
Sun: Beginners Workshop at CAQ. Did presentations
on telescopes & Starry Night. Viewed the
Sun through various scopes in white light. Helped
a couple of people set up their NexStar scopes:
1 8 SE 1 102mm f/6.6 rr. Latter's mount very
flimsy & slow. Red hot finder not working.
Equipment: checked Orion Planetary Camera II on a
Win laptop = native USB 2.0, and it
worked fine.

1237d 2007-05-21 @ 13:05-13:15 EDT Foxmead Deck 8 4cm rr
Sun: large multiple prominence @ 3 o'clock 32x

1238a 2007-05-21/22 21:50-23:15 EDT Foxmead deck 8 15cm sc
Further testing of NexStar SE6. Used SkyAlign tonight
on Vega, Spica, & Saturn → perfect alignment all night
Moon, Saturn, Jupiter, tour of many DSOs & doubles.
Most of the time I was using 8.8mm f/r/c → 107x,
and objects were dead centre every time, except
Jupiter (low alt, tube). Jupiter & Saturn best = 5mm
(189x) Cassini visible about halfway around ring, NEB on Jupiter
obvious, w. hints of detail in E2 & SEB. Europa just
emerging from transit.

1239e 2007-05-28/29 21:45-23:15 EDT Foxmed deck 3 15cm SC ^{Lovise David}
 - takes close to an hour before scope cools down, then

image is very nice

Saturn: Titan, Rhea, Tethys, Dione 158x & 189x

Jupiter: Europa shadow transit barely visible 158x & 189x

Moon: Aristarchus & Vallis Schriberii nicely placed

Double stars Algiba, ϵ Lyra (158x), θ ϵ Boo, α Her; Nu
 Draconis, Zeta Lyr, 54 Leo

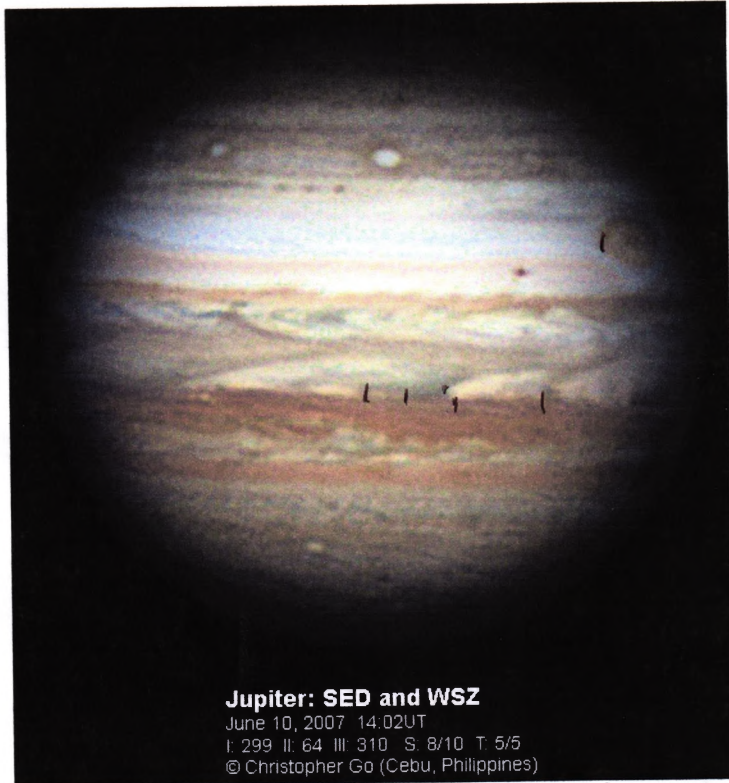
1240d 2007-05-29 15:00-15:10 EDT Foxmed deck 8 4cm rr
Sun: 1 prom. @ 6 o'clock, large, flame shaped 32x

1241d 2007-06-06 16:40-16:45 EDT Foxmed deck 8 4cm rr
Sun: No prominences. Nice double spot near centre of
 disk & flares & filaments 32x

1242e 2007-06-07/08 22:20-00:51 EDT Foxmed deck 8 15cm SC 10x50b
 Vesta: located in 10x50s, too faint for naked eye (5.2)
Variable stars:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn	
V BOO	2007 06 08 02 51	9.1			82	92	98			8	15cm SC	39
R BOO	2007 06 08 03 00	11.9			114	117	122			8	15cm SC	107
S SER	2007 06 08 03 13	12.1			116	118	121			8	15cm SC	107
S CRB	2007 06 08 03 20	11.4			103	116				8	15cm SC	107
R SER	2007 06 08 03 29	12.1			113	116	122			8	15cm SC	107
T CRB	2007 06 08 03 39	10.1			98	103	105			8	15cm SC	39
U HER	2007 06 08 04 04	11.0			109	111				8	15cm SC	107
SS HER	2007 06 08 04 16	11.1			109	113	115			8	15cm SC	107
W HER	2007 06 08 04 21	9.3			92	94	95			8	15cm SC	39
AH HER	2007 06 08 04 29	12.7	<		127					8	15cm SC	107
RS HER	2007 06 08 04 33	9.2			91	96			misidenti	8	15cm SC	39
T HER	2007 06 08 04 42	12.4	<		113	117	124			8	15cm SC	107

Jupiter: seeing very poor 0-1 RS vaguely visible as shading
 Deep sky: M27, 57, 4, 80, 8, 17, 107, 10, 17, 29
 19°C



7 8 10 13 19

Above image made 1 rotation later than my observations

Jupiter looks very different with SEBs gone! Broad white STrZ, NTB dark & ochre colour, EZ very complex & layered, avals & festoons, GRS is floating naked in broad white "zone"

1243 n 2007-06-09/10 22:30-01:47 EDT Foxmed deck 8 28cm r1
Variable stars?

Name	YYMMDD	HHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
RS HER	2007	0610	0258	13.1		127	130	133		8	28cm r1 157
AH HER	2007	0610	0312	12.5		122	127			8	28cm r1 157
T HER	2007	0610	0327	12.8		124	130	133		8	28cm r1 157

Reobserved from two nights ago, as RS HER was misidentified & AH HER & THER were below limiting magnitude of 6" SCT. AH HER is in outburst tonight & actually brighter than it was 2 nights ago!

Jupiter: Seeing 3-5

no	object	re...	::nomen	date_ut	long1	lo...	instr	ma...	orie	descr
1	DF1SECT	J1	SEB(N)	2007-06-10 03:41.0	280	48	S279	240	SR	
2	WP1OVAL	L1	EZ(N)	2007-06-10 03:51.0	286	54	S279	240	SR	
3	WC1NICK	N1	NEB(N)	2007-06-10 03:54.0	288	56	S279	240	SR	
4	WF1NICK	N1	NEB(N)	2007-06-10 04:00.0	292	60	S279	240	SR	
5	DP1SECT	J1	SEB(N)	2007-06-10 04:03.0	293	62	S279	240	SR	
6	WC1OVAL	L1	EZ(N)	2007-06-10 04:05.0	295	63	S279	240	SR	
7	DP1PROJ	L2	NEB(S)	2007-06-10 04:15.0	301	69	S279	240	SR	
8	DC1PROJ	L2	NEB(S)	2007-06-10 04:22.0	305	73	S279	240	SR	
9	WP1AREA	J2	EZ(S)	2007-06-10 04:26.0	307	76	S279	240	SR	
10	WP1OVAL	L1	EZ(N)	2007-06-10 04:30.0	310	78	S279	240	SR	
11	DF1PROJ	L2	NEB(S)	2007-06-10 04:32.0	311	79	S279	240	SR	
12	WC1OVAL	L1	EZ(N)	2007-06-10 04:44.0	318	86	S279	240	SR	
13	DP1PROJ	L2	NEB(S)	2007-06-10 04:55.0	325	93	S279	240	SR	
14	DC1PROJ	L2	NEB(S)	2007-06-10 05:05.0	331	99	S279	240	SR	
15	WF1OVAL	L1	EZ(N)	2007-06-10 05:06.0	332	100	S279	240	SR	
16	WP1OVAL	L1	EZ(N)	2007-06-10 05:09.0	334	102	S279	240	SR	
17	DF1PROJ	L2	NEB(S)	2007-06-10 05:15.0	337	105	S279	240	SR	
18	WF1AREA	J2	EZ(S)	2007-06-10 05:18.0	339	107	S279	240	SR	
19	DP1RS	E3	RS	2007-06-10 05:23.0	342	110	S279	240	SR	
20	WC1OVAL	L1	EZ(N)	2007-06-10 05:23.0	342	110	S279	240	SR	
21	DC1PROJ	J1	SEB(N)	2007-06-10 05:34.0	349	117	S279	240	SR	
22	DC1RS	E3	RS	2007-06-10 05:36.0	350	118	S279	240	SR	
23	WF1OVAL	L1	EZ(N)	2007-06-10 05:39.0	352	120	S279	240	SR	
24	DF1PROJ	J1	SEB(N)	2007-06-10 05:43.0	354	122	S279	240	SR	
25	DF1RS	E3	RS	2007-06-10 05:47.0	357	124	S279	240	SR	

1244e 2007-06-17/18 22:30-23:25 EDT Foxmed deck 3-1 10cmrr ne
Lovely lineup of objects in W after sunset: Regulus,
Saturn, Venus, crescent Moon
Testing Orion VersaGo mount: altaz mount on Synta tripod
using Orion 100ED refractor. ~~Head~~ Head itself is well
machined & very smooth, but started Synta tripod
shakes like crazy.

Jupiter: 180x seeing very good. RS visible on Sp
limb of planet, floating in wide bright zone where
SEBs used to be. Very odd looking. As usual, image
in 100ED is magnificent, many festoons clearly
visible in EZ n. No colour visible in RS.

Also looked at Albireo, M59, ϵ Lyra, Antares (B
suspected p A). Clouds getting worse.

Back to mount: Balance critical, but not as bad
as \bar{c} TV Telepod because of altitude clamp.
Better \bar{c} equalizer for Radians vs. 22mm Nagler

1245d 2007-06-22 09:30-09:35 EDT Foxmed deck 8 4cmrr
Sun: large prom @ 9 o'clock, small one @ 3 o'clock 30x

1246d 2007-06-24 09:15-09:20 EDT Foxmed deck 8 4cmrr
Sun: 1 prominence @ 1 o'clock, but limb to left looked very
"hairy". Granulation very pronounced today, 30x

1247e 2007-07-06/07 22:30-23:47 EDT CAO 8-3 28cmssc

Jupiter 11" SCT 16mm Nagler 175x

26 ~~02:46~~ Dp RS SEBs

27 02:56 Dc proj NEBs

28 03:02 Dc RS SEBs

2

$$\frac{2900}{16} = \frac{700}{x} = 175x$$

29 03:10 Wp oval EZn
30 03:18 DF RS SEBS
31 03:20 Wc oval EZn seeing deteriorating

M8, M57 goto very inaccurate!

1248e 2007-07-07/08 21:40-01:43 EDT CAO 6 28 cm sc

Venus, Saturn 70x

Jupiter

01:55 obs cam satellite shadow (Ganymede) just leaving disk,
all 4 satellites on f side of planet, NEB seems
to be fading at pond relative to f and 175x

~~M8~~ E Lyrae, Albireo, M57, M8, M13

Experimenting \bar{c} Mallinca & Luminera on C11 & C14

Jupiter \bar{c} 16 mm on C14: incredible detail in EZ.

2007-07-09

SkyShed PAD delivered by Ed Hitchcock's friend Pete.

2007-07-10

Wheels installed in wall panels. Thunderstorms prevented
further work. Got stung by wasp from nest in storage
cabinet!

2007-07-12

Walls assembled, but bolts not tightened fully. Dome quarters
unpacked.

1249e 2007-07-16/17 23:10-23:15 EDT Farned deep 9 10x50b
Comet LINEAR (C/2006 VZ13) ~9th magnitude, just N of
& B00, large coma, no tail

2007-07-28 Mounted primary & secondary domes on POD
walls w help of David & Kath Landry

2007-07-29 Finished POD & placed Starmaster 11"
inside on 6 patio blocks, ~8" elevation.

1250e 2007-07-29/30 21:50-22:51 EDT Farned obs. 8 28cmr/
First light in POD. A bit cramped, and Starmaster
requires more elevation to see Jupiter over wall.

Jupiter

02:00 Obs. cam. 240xb S:3-4 T:4

32 02:22 DF sect STB ? oval BA on p half of disk?

33 02:28 DF proj NEBs

34 02:35 Wc oval EZn

35 02:43 Sp proj NEBs

02:51 Obs. disc poor seeing & Jupiter getting below
POD walls

1251e 2007-08-01/02 21:40-22:30 EDT Farned POD 7 28cmr (1)

Jupiter

01:23 Obs cam S:1-3 240xb

36 01:30 DF proj NEBs

37 02:10 Dp/Veil EZn

38 02:27 Dc/Veil EZn

02:27 Obs disc poor seeing.

SMTWTFSS

29 30 31 1 2 3 4

5 6 7 8 9 10 "

03/04
~~04/05~~ 22
1252e 2007-08-~~04/05~~ 21:00 EDT CAO 9 20 cm r 25 cm SC Terry Lecker
- quick looks at Jupiter, mainly through 20 cm r

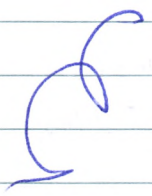
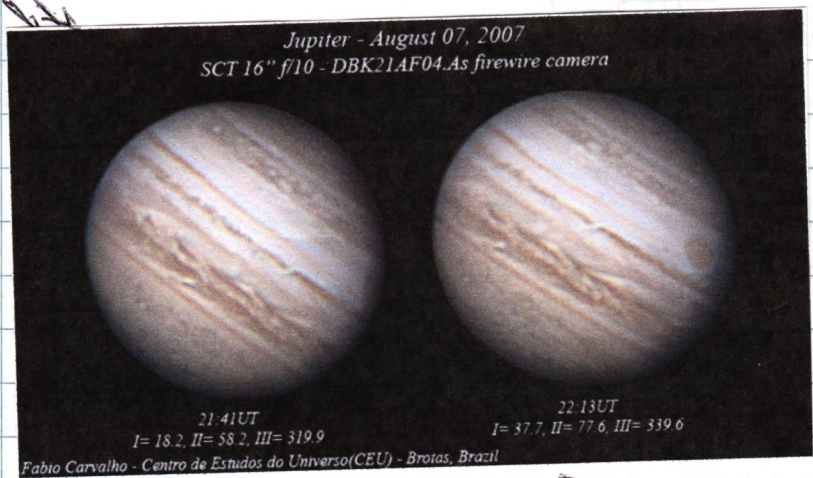
04
1253d 2007-08-05 10:00 EDT CAO 9 8 cm r Terry Lecker
Sun - featureless in white light

04/05
1254e 2007-08-~~05/06~~ 21:30-00:15 CAO 9 28 cm se various
Jupiter excellent view @ C11 @ binoculars @ 224x. Shadow
of Io on disk, Io just off disk, RS on CM
Spent rest of evening doing "show & tell" for visitors
to CAO @ 28 cm se: Jupiter, M8, M17, M57, M27, M51
NGC 5195, M11, M10, etc.
2 passes of ISS.

06/07
1255e 2007-08-~~07/08~~ 21:30-22:30 Faxed POD 8-3 15 cm se
Jupiter seeing poor
Testing GSE in POD, located close to SE wall.
Looked at many DSos & doubles through passing
clouds. GSE works extremely well in POD, lots of
Foam to move around. Tripod @ full extension.
2 legs on deck, 1 on pad. Very solid. Left scope
in "hibernate" mode to see if I can pick up
Venus tomorrow. Observed M8, 16, 17 @ 5 UltraBlack

08 EDT
1256d 2007-08-~~08~~ 04:20-04:30 Faxed POD 8 10 cm r
Sun: in white light. 2 tiny spots near centre of disk 37x

1257a 2007-08-08/09 21:30-23:15 EDT Faxed deck 9 10 cm r ne
- testing Orion 100 ED in POD on GPOX on 44" pier
Jupiter up to 225x - amazing amount of detail, including



these are the thin belts
seen 2 100 ED or SEB_n 9 SEB_s

STB & SEBs? - very thin belts clearly visible
Deep sky: M11, M8, M22, M17, M27. Views $\approx 22\text{mm}$
Nagler are wonderful $41\times$, 2° f.o.v.!
I get a neat "retro" feeling using this scope in the
POD, but the aperture is just a little small to
be entirely satisfying. I want to try the 6" Mak-
Newt next, but need a 30" pier tub for it.

1258d 2007-08-11 11:25 ~~am~~ EDT Foxmed POD 3 15cm mn
Sun; If I hadn't seen 2 spots a few days ago, I
might have said there was only 1 spot, because the
second one has shrunk to a pin prick
15cm mn on 18" pier $\approx 12"$ of blocks under it,

1259e 2007-08-12/13 21:10-00:50 EDT Foxmed Pod/deck 9 15cm mn ne
Jupit^ric superb views as usual $\approx 15\text{cm mn}$ @ 180X (mono &
binoviewer)
M11 best @ 102x swept Milky Way $\approx 22\text{mm}$ ($41\times$) 2° f.o.v.
M22, M8, M17, M24 wonderful wide field
~~to~~ Perseids ~ 25 seen over nearly 3 hours
Louisa & Huguette Fournier
15cm mn is a perfect fit for the POD, 30" pier
may even be too high - can see right to horizon

1260e 2007-08-16/17 20:30-23:10 EDT Awanda P.P. dock 8 15cm sc ne
Moon: slender crescent low over Methodist Point
Double stars: Albireo,
DSOs M13, M27, M81, M82, M51, NGC 5195
Star party @ Awanda PP to Blake Non carrow

UT.

01:28 capture, avi jupiter r/c ~~2.5~~ 2.5x pm

01:33 capture (2), avi moon r/c 2.5x pm

01:37 (3) moon r/c 2.5x pm

01:40 (4) moon r/c

01:45 (5) jupiter 2.5x pm

01:46 (6) jupiter 2.5x pm

01:51 (7) moon 2.5x pm



alt 17°



1261e 2007-08-20/21 20:30-22:55 EDT (8-3) Foxed deck 15cm r/l 15cm^{SC}
Orion XT6i in POD, Celestron Nexstar 6 SE on deck N of
POD.

Moon & Jupiter seeing very poor, much less detail in both
scopes than in Orion 100 ED & Intes MNG1 last
week. Both scopes seem to suffer from
scattered light, images not crisp & contrasty
like 100 ED & MNG1. 6mm Radian was highest power
either could tolerate 158x in SE6 & 200x in XT6i
(and that was too high in the latter)

M17, M11, M27 compared views in both scopes @
49x in XT6i (24.5 mm SWA) & 59x in SE6 (16mm Nagler)
16 mm Nagler works really well in SE6: 1° 23' F.o.v.
- about the same f.o.v. as 25 mm Plössl, but higher mag-
nification - also same f.o.v. as 24.5 in XT6i
Spent the next hour playing @ 6 SE in Tour mode, looking
at dozens of objects - very addictive!

~~1261e~~ 2007-08-22 Ordered a Celestron CPC 1100 GPS (XLT)
from Astro Mechanics in Barrie - should be perfect
in my POD.

1262a 2007-08-26/27 21:00-22:00 EDT Foxed POD & 15cm SC
Testing Orion StarShoot II planetary camera II, I imaged Jupiter
& Moon @ r/l @ 2.5x Powermate, moon @ 5 Powermate, &
then Jupiter & Moon @ Powermate but 5 r/e

1263M 2007-08-27/28 04:20-06:20 EDT Foxmed POD B 15cm sc ne
Mars: tiny disc \bar{c} 8.8mm M45 M42

Lunar eclipse:

04:45 penumbral shading obvious \bar{c} ne to scope (42x)

04:55 umbra approaching Aristarchus

04:59:00 umbra touching Aristarchus - no color in umbra yet

05:10:42 Copernicus - waves of turbulence across Moon

05:13:15 Plato - slight rosy glow in umbra

05:19 Shadow now deep rust, Sirius has just risen

05:30:00 Tycho - N limb definitely bright & more orange than rest of disk. Dawn is lighting up the eastern sky - Castor & Pollux high

05:35 The coyotes are greeting the dawn. Copper color & brighter N limb now obvious to n.e.

05:52:07 2nd contact umbra. Although it's hard to be sure because of atmospheric extinction, this seems like a very dark eclipse. Only color is on N limb & upper limb is almost invisible against the sky.

06:06 Moon has vanished into horizon haze in scope, but still just visible n.e.

06:08 \bar{c} n.e. too.

06:10 Spotted Venus rising before the Sun! Very slender crescent, slightly extended cusps, 6mm

06:15 Slew to Mars \bar{c} 6mm: tiny gibbous disk \bar{c} shading & hint of N polar cap.

1264e 2007-08-30/31 21:00-23:15 EDT Foxmed POD 8 15cm sc
 Jupiter; 189x - not much to see Vesta in same f.e.v @ 192x
Variable stars:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R BOO	200708310117	7.1			69	82				8	15cm sc 39
S SER	200708310124	8.6			84	89				8	15cm sc 39
S CRB	200708310134	7.6			70	78	84			8	15cm sc 39
R SER	200708310139	7.6			74	75	84			8	15cm sc 39
T CRB	200708310149	10.7			103	105	109			8	15cm sc 39
U HER	200708310159	7.1			70	72	73			8	15cm sc 39
SS HER	200708310212	12.3			115	124				8	15cm sc 107
W HER	200708310221	9.2			92	94	95			8	15cm sc 39
AH HER	200708310232	11.5			111	117	127			8	15cm sc 107
RS HER	200708310240	9.0			87	91	96			8	15cm sc 39
T HER	200708310245	7.9			78	80				8	15cm sc 39
R OPH	200708310254	8.1			74	82				8	15cm sc 39
RS OPH	200708310302	11.3			109	115				8	15cm sc 107

Moon: 189x

Temp: 10°C

1265e 2007-08-31/01 21:00-22:29 EDT Foxmed POD 8-3 15cm sc
 Jupiter, M22, M27, M11, M10, M13
Variable stars

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
AF CYG	200709010124	7.0			68	71	76			8	15cm sc 39
EM CYG	200709010142	13.1	<		131					8	15cm sc 107
CHI CYG	200709010153	7.8			73	81				8	15cm sc 39

Obs. disc. due to clouds, Moon, + problems in RVUL that
 VSP chart has at least 8 ~~non~~ non-existent bright
 stars on it!

1266e 2007-09-01/02 20:50-23:20 EDT Foxmed POD 8 15cm sc
 Jupiter, ~~the~~ various Messiers, NGC 457
 Variable stars (over)

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R VUL	2007 09 02 01 13	8.4			78	81	85			8	15cm sc 39
T CEP	2007 09 02 01 19	7.0			67	71				8	15cm sc 39
SS CYG	2007 09 02 01 28	10.2			98	103				8	15cm sc 107
R PEG	2007 09 02 01 49	12.4			120	124				8	15cm sc 107
V CAS	2007 09 02 01 59	11.5			112	113	115			8	15cm sc 107
DX AND	2007 09 02 02 11	12.7	<		121	127				8	15cm sc 107
Z AND	2007 09 02 02 31	10.4			101	104	107			8	15cm sc 107
X AND	2007 09 02 02 41	12.5	<		120	125				8	15cm sc 107
T CAS	2007 09 02 02 47	9.1			90	94				8	15cm sc 39
R AND	2007 09 02 03 00	10.4			102	106				8	15cm sc 39

1267e

2007-09-03/04 20:30-23:30 EDT Foxwood 9 15cm sc

Variable stars: - using 16mm Nagler instead of 24.5mm SWA

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R CYG	2007 09 04 00 51	10.7			99	105	109			9	15cm sc 107
U CYG	2007 09 04 00 57	8.3			78	92				9	15cm sc 59
AH HER	2007 09 04 01 14	12.0			117	127				9	15cm sc 107
SS CYG	2007 09 04 01 27	11.6			114	119				9	15cm sc 107
RU PEG	2007 09 04 01 34	12.7			126	127				9	15cm sc 197
RX AND	2007 09 04 01 59	13.1	<		118	121	131			9	15cm sc 107
S PER	2007 09 04 02 14	10.8			101	109	114			9	15cm sc 59
R TRI	2007 09 04 02 22	9.7			96	101				9	15cm sc 59
R AQR	2007 09 04 03 13	9.7			93	99				9	15cm sc 59
T ARI	2007 09 04 03 22	9.6			95	100				9	15cm sc 59

This was a cleanup operation; stars that I missed earlier in the week because of altitude or dimness. In between I observed DSOs: M31, 32, 100, 33, Double cluster, etc. & tried constellation tours & identify features of NexStar. M30, M72, M73, M77 (or 74, whichever is higher), Saturn neb, Blue Snowball. 6SE continues to work extremely well in the Pod - hopefully CPC 1100 will as well.

1268m

2007-09-06 06:30 am EDT Foxwood bathroom 8 7x50b

Venus tiny crescent in 7x50b

1269e 2007-09-08/09 20:30-22:35 EDT Foxmed 8-3 15cm SC ne

Variable stars:

Name	YYYYMMDD	HHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R BOO	2007	09	09	00	51	6.7		58	69		8 15cm SC 39
S SER	2007	09	09	00	56	8.8		84	89		8 15cm SC 39
S CRB	2007	09	09	01	05	7.2		70	78		8 15cm SC 39
R SER	2007	09	09	01	10	7.0		68	74	75	8 15cm SC 39
T CRB	2007	09	09	01	18	10.4		103	105	109	8 15cm SC 39
U HER	2007	09	09	01	24	7.1		70	72	73	8 15cm SC 39
SS HER	2007	09	09	01	32	11.4		113	115		8 15cm SC 107
W HER	2007	09	09	01	36	10.2		101	105		8 15cm SC 39
AH HER	2007	09	09	01	49	12.8		127	129		8 15cm SC 107
RS HER	2007	09	09	01	54	8.3		81	87		8 15cm SC 39
T HER	2007	09	09	01	59	8.0		78	80	85	8 15cm SC 39
T CEP	2007	09	09	02	23	6.8		67	71		8 15cm SC 39
V CAS	2007	09	09	02	33	11.4		112	115		8 15cm SC 107

Increasing high cirrus cloud & ground fog Temp: 11°C

1270e 2007-09-09/10 20:30-23:10 EDT Foxmed 8-9 15cm SC

Variable stars:

Name	YYYYMMDD	HHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
CHI CYG	2007	09	10	00	52	6.1		61	64		8 15cm SC 39
SS CYG	2007	09	10	00	59	11.7		109	114	119	8 15cm SC 107
R OPH	2007	09	10	01	18	7.8		74	82	86	8 15cm SC 39
RS OPH	2007	09	10	01	25	11.3		109	115		8 15cm SC 107
R VUL	2007	09	10	01	36	8.9		88	91		8 15cm SC 39
RU PEG	2007	09	10	01	47	12.7		126	127		8 15cm SC 107
R PEG	2007	09	10	01	55	12.4		118	124		8 15cm SC 107
DX AND	2007	09	10	02	08	13.3 <		127	133		8 15cm SC 107
Z AND	2007	09	10	02	19	10.3		101	104	107	8 15cm SC 107
X AND	2007	09	10	02	32	12.5 <		120	120	125	8 15cm SC 107
RX AND	2007	09	10	02	40	11.5		113	118		8 15cm SC 107
R AND	2007	09	10	02	49	9.8		97	98		8 15cm SC 39
T CAS	2007	09	10	03	03	9.0		86	90		8 15cm SC 39

Deep sky: M 31, 32, 110, 33, 34, 76, 74

1271e 2007-09-12/13 20:10-23:10 EDT Foxmed POD 8 15cm SC

Imaging Jupiter

00122 150cm f.l. 10 exp X10

00125 375cm f.l. 10 exp X10

00:26 3759 m.f.l. 10 exp X10
 00:29 3759 m.f.l. 5 exp X10
 00:31 3759 5 X10
 00:35 3759 5 X10

Variable stars:

Name	YYYYMMDDHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
AH HER	200709130108	12.7 <		127					8	15cmsc 170
SS CYG	200709130127	11.8		114	119	123			8	15cmsc 170
RX AND	200709130150	12.6		118	121	127			8	15cmsc 107
S PER	200709130253	11.4 <		114					8	15cmsc 107
AF CYG	200709130303	7.6		71	76				8	15cmsc 39
R CYG	200709130308	9.1		91	99				8	15cmsc 107

1272m 2007-09-14 04:00 EDT Foxmead bathroo 9 he
Meteor: lovely 1st magnitude meteor just to left of
 Eastar of Pollux

2007-09-14 Celestron CPC 1100 arrived & installed
 in PoD.

12732 2007-09-15/16 20:15-21:45 EDT Foxmead PoD 8-3 28cmsc no
Moon quick glimpse of very narrow crescent light on horizon betw
 clouds 70x

Jupiter: dodging clouds, best @ 175x

Deep sky: M13, M5, M10, M14, M27, Saturn Nebula, NGC 7331
 (Stephan's Quintet) ~~M42~~ NGC 404, M31, 32, 110, 33, &
 And

Star test: on Sabik (7.9m) should good symmetry on either
 side of focus @ 300x, no diffraction rings because
 of poor seeing. Quite a bit of mirror shift.
 Deep sky objects should good contrast & faint background stars

GOTo not quite as accurate as SE6, but still excellent. Scope fits very well in Pod, off set to S edge of pad. Pilot light on on/off switch ridiculously bright! I kept for 3 eyepieces: 40 mm UO MK-70 (70x), 16 mm Nagler 2 (175x) & 8.8 mm VWA (318x), Temp 7.6°C but didn't feel cold (wearing winter coat & toque)

1274d 2007-09-16 13:00-13:15 EDT Foxmed POD 8-3 28cm sc
Venus: I put CPC1100 into hibernation at the end of last night's session, & woke it up this afternoon to have a look at Venus. Venus was well within the 70x 1° f.o.v. Also tried for Mercury, but couldn't see it. Neat!

1275e 2007-09-16/17 20:20-23:10 EDT Foxmed POD 8 28cm sc
Jupiter: getting low, poor seeing
Moon: very low, poor seeing
Variable stars:

Name	YYYYMMDDHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
T CRB	2007 09 17 00 51	10.6			103	105	109			8	28cm sc 70
SS HER	2007 09 17 01 03	11.4			109	113	115			8	28cm sc 70
W HER	2007 09 17 01 10	10.6			105	107	113			8	28cm sc 70
AH HER	2007 09 17 01 17	11.9			117	122	127			8	28cm sc 70
RS OPH	2007 09 17 01 22	11.4			109	115	121			8	28cm sc 70
EM CYG	2007 09 17 01 34	13.2			131	134				8	28cm sc 175
SS CYG	2007 09 17 01 42	11.8			114	119	123			8	28cm sc 70
RU PEG	2007 09 17 01 48	12.5			120	126				8	28cm sc 175
R PEG	2007 09 17 01 55	12.2			120	124				8	28cm sc 175
V CAS	2007 09 17 02 13	11.0			109	112				8	28cm sc 70
DX AND	2007 09 17 02 28	14.1	<		133	141				8	28cm sc 318
Z AND	2007 09 17 02 33	10.5			104	107	112			8	28cm sc 70
X AND	2007 09 17 02 44	14.2	<		134	142				8	28cm sc 175
RX AND	2007 09 17 02 50	11.4			113	118				8	28cm sc 70
S PER	2007 09 17 02 55	10.9			100	109	114			8	28cm sc 70

Deep sky: NGC 404, M76, M34, M31-32-110, X And

One of my most productive observing sessions in a long time. I did 15 vs estimates in 2 hours, probably an all time record. I had only entered stars observed at less than 10th magnitude in the past couple of weeks, CR1100 found all of them flawlessly, though I needed to realign, replacing Rasalhague with Algierba when moving into Andromeda. Image in 40mm MK70 is big & bright, & I was able to make most of my estimates without going to a higher magnification. The views in this scope are spectacular, especially fields like EMCYG and VCAS. I need to expand my list of variables if I can do all on < 10 mag stars in one night! 4.9°C

1276e 2007-09-17/18 20:00-23:00 EDT Foxmed POD 8-4 28cm sc
Variable stars Tonight I began "the Andromeda Project": I added 12 new stars in Andromeda: 8 Miras, 2 SR, 1 UG, 1 LB. Observed 10 before haze blocked view!

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesex	Sky	Aper	Magn
RY AND	2007 09 18 01 10	13.0	<		128	130				8	28cm sc	175
ST AND	2007 09 18 01 28	9.6			91	93	105			8	28cm sc	70
HP AND	2007 09 18 01 38	13.3	<		133					8	28cm sc	175
T AND	2007 09 18 01 50	12.4			123	126				8	28cm sc	70
RW AND	2007 09 18 02 10	13.0			125	126	131			8	28cm sc	70
V AND	2007 09 18 02 15	10.1			100	102				8	28cm sc	70
RR AND	2007 09 18 02 24	14.2	<		133	139	142			8	28cm sc	175
U AND	2007 09 18 02 33	11.9			118	121	124			8	28cm sc	70
RU AND	2007 09 18 02 41	11.5			111	115	116			8	28cm sc	70
Y AND	2007 09 18 02 47	10.2			99	101	105			8	28cm sc	70

Tap 9.1°C

1277d 2007-09-18 12:00 EDT Foxmed POD 8 28cm sc
Venus: 70x in daylight

1278e 2007-09-18/19 19:45-21:45 EDT Foxmed POD ~~8~~ 3 28cm sc
 Star party for 3 of Deb Tice's friends: Moon, Jupiter, Altair, M11, M57, M8, M17, M2, M31+32, NGC 457, Double Star
 13.9°C

4 people in dome at once is maximum!

1279e 2007-09-22/23 20:00-23:55 EDT Foxmed Pod 8 28cm sc
 Moon & Jupiter seeing really poor @ 175x
Variabe stars:

Name	YYYYMMDD	HHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S CRB	2007	092300	49	7.2		70	84				8	28cm sc 70
U HER	2007	092300	58	7.5		73	82	84			8	28cm sc 70
T CRB	2007	092301	05	10.4		103	105				8	28cm sc 175
AH HER	2007	092301	16	14.1		137	141				8	28cm sc 70
R VUL	2007	092302	14	9.5		88	97				8	28cm sc 175
RU PEG	2007	092302	19	12.6		120	126	127			8	28cm sc 70
W AND	2007	092302	42	10.7		104	106	112			8	28cm sc 70
UY AND	2007	092302	54	10.5		103	105				8	28cm sc 70
RX AND	2007	092303	11	11.9		113	118	121			8	28cm sc 70
R TRI	2007	092303	22	10.4		101	102	104			8	28cm sc 70
T ARI	2007	092303	26	9.8		95	100	107			8	28cm sc 70
OMI CET	2007	092303	32	9.2		88	92				8	28cm sc 70
T CAS	2007	092303	40	8.5		82	86	90			8	28cm sc 70
R AND	2007	092303	45	11.4		110	116	118			8	28cm sc 70

Deep sky: M27, M32, M110, M31, M9, M10 9.3°C

1280e 2007-10-03/04 19:15-23:30 EDT Foxmed Pod 8-9 28cm sc
V. s. h. stars:

Name	YYYYMMDD	HHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
T CRB	2007	100400	11	10.4		98	103	105			8	28cm sc 70
SS HER	2007	100400	20	10.6		105	106	109			8	28cm sc 70
W HER	2007	100400	25	11.8		113	118	121			9	28cm sc 70
AH HER	2007	100400	44	13.5		134	137	141			9	28cm sc 175
RS OPH	2007	100400	51	11.3		109	115				9	28cm sc 70
EM CYG	2007	100401	01	12.9		128	131	134			9	28cm sc 175
SS CYG	2007	100401	08	11.9		119	122				9	28cm sc 70
RU PEG	2007	100401	17	12.5		120	126	127			9	28cm sc 175
R PEG	2007	100401	24	11.7		116	118				9	28cm sc 70
V CAS	2007	100401	39	10.1		100	103	105			9	28cm sc 70
DX AND	2007	100401	53	14.9<		145	149				9	28cm sc 175
Z AND	2007	100401	58	10.5		104	107	112			9	28cm sc 70
X AND	2007	100402	12	13.8<		132	134	138			9	28cm sc 175
R AND	2007	100402	18	11.7		116	118				9	28cm sc 70
RX AND	2007	100402	23	11.3		104	113	118			9	28cm sc 70
S PER	2007	100402	43	10.7		101	109	114			9	28cm sc 70
R TRI	2007	100402	50	11.2		108	113	117			9	28cm sc 70
T ARI	2007	100402	58	9.6		91	95	100			9	28cm sc 70

18 estimate - the most I've ever made in one session!
 I think it's a combination of POD (contrast) & goto efficiency.

Jupiter & Mercury (right on horizon) @ 175x. Had a lot of trouble w goto because of loose dec clamp.

DSOs & double stars, including M74 M77, M33, M31, ~~M32~~,
 M110 NGC 253 7331 404

Mars low in trees 'ta E.

Great World Wide Star Count 20:30 Mag 6 skies

1281e 2007-10-09/05 20:20-23:10 EDT Foxmed POD 9 28cm sc
 Variable stars:

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	Sky	Aper	Magn
RY AND	200710050106	12.8<		128					8	28cm sc	175
ST AND	200710050115	9.5		93	101	102			8	28cm sc	70
HP AND	200710050122	14.0<		133	140				9	28cm sc	175
T AND	200710050131	11.6		115	118				9	28cm sc	70
RW AND	200710050147	13.5		131	135				9	28cm sc	175
V AND	200710050155	10.2		100	102	107			9	28cm sc	70
RR AND	200710050204	14.2<		139	142				9	28cm sc	175
U AND	200710050213	10.7		106	108				9	28cm sc	70
RU AND	200710050219	12.2		116	121	126			9	28cm sc	175
UY AND	200710050245	10.6		105	116				9	28cm sc	70
W AND	200710050257	11.1		104	112	119			9	28cm sc	70

I had a terrible time towards the end of the session reading the chart (the last three in particular), especially Y AND, which is one of the worst of the "measles" charts. The next day I reprinted many of my charts using VSP, which are much more readable!

1282e 2007-10-09/10 19:30-2230 EDT Foxmed POD 28cm sc ne
 Variable stars:

P T O

Name	YYYYMMDDHHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
T CRB	2007 10 10 00 26	10.6		103	105	109			9	28cm sc 70
AH HER	2007 10 10 00 35	13.4		127	133	137			9	28cm sc 175
RS HER	2007 10 10 00 41	8.9		81	91	96			9	28cm sc 70
RS OPH	2007 10 10 00 46	11.2		109	115				9	28cm sc 70
T HER	2007 10 10 00 57	8.7		87	89	94			9	28cm sc 70
EM CYG	2007 10 10 01 10	13.4 <		131	134				9	28cm sc 175
R VUL	2007 10 10 01 27	11.3		110	114				9	28cm sc 70
RU PEG	2007 10 10 01 33	10.5		104	111				9	28cm sc 70
Y AND	2007 10 10 01 48	10.3		98	105				9	28cm sc 70
RX AND	2007 10 10 02 02	11.2		109	113				9	28cm sc 70
R CYG	2007 10 10 02 17	9.1		91	96	99			9	28cm sc 70
U CYG	2007 10 10 02 21	8.1		78	92				9	28cm sc 70

Great World Wide StarCard: 6th mag at 21:15 EDT

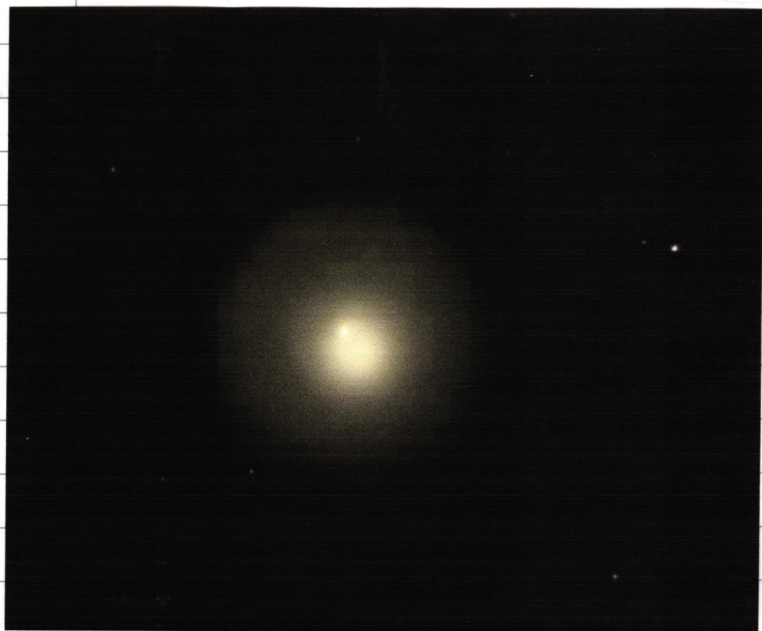
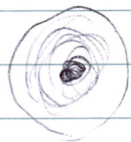
1283m 2007-10-20/21 ~ 4am & 6am EDT Foxmed bathroom 9 ne
Metem's: observed 2 Orionids while looking out bathroom
 windows

1284 e 2007-10-21/22 20:00-23:50 EDT Foxmed POD 8 28cm sc
Variable stars:

Name	YYYYMMDDHHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
T CRB	2007 10 22 00 08	9.6		93	98				8	28cm sc 70
U HER	2007 10 22 00 13	8.5		84	94				8	28cm sc 70
SS HER	2007 10 22 00 21	9.6		93	99				8	28cm sc 70
AH HER	2007 10 22 00 34	11.9		117	122	127			8	28cm sc 175
RS HER	2007 10 22 00 41	9.1		91	96				8	28cm sc 70
T HER	2007 10 22 00 46	9.6		94	99				8	28cm sc 70
RS OPH	2007 10 22 00 53	11.4		109	115	121			8	28cm sc 70
R VUL	2007 10 22 01 04	11.5		114	119				8	28cm sc 70
RU PEG	2007 10 22 01 09	12.4		120	126				8	28cm sc 175
R PEG	2007 10 22 01 16	10.4		101	105	109			8	28cm sc 70

High clouds moving in. Moon @ 175X Gassendi right on
 Foxmed star

22:50-23:50 Moon & Mars observed @ TV @ Orion binoculars



translucent coma → ↙
see stars through it

1285m 2007-10-24/25 06:40^{-06:45} EDT Foxmed W deck 8 7x50 b ne
Comet Holmes (19P): stellar in binocs, except not
 twinkling $\mu = 8$ ~~Persei~~ Cas = 2.6 - this comet
 was magnitude 17 two nights ago - amazing
 outburst! $\Delta = 14$ magnitudes!

1286e 2007-10-27/28 22:50-23:20 EDT Foxmed E deck 8 7x50 b ne
Comet Holmes (19P): easy naked eye object despite
 nearby bright Moon. Obvious fuzball in 7x50 binocs
 with internal structure. Used Orion 80 ED vr 24.5mm
 ep. (24x) from E deck. Looks like a gigantic bright planetary
Mars: paint like in 80m @ 24x 3,2°C, very windy.

1287e 2007-10-29/30 21:45 EDT Foxmed E deck 8 7x50 b ne
Comet Holmes: about = δ Persei n.e. - slightly fuzzy.
 - large disk \bar{c} eccentric ~~comet~~ nucleus in 7x50s

1288e 2007-10-30/31 22:20 EDT Foxmed E deck 5 7x50 b ne
Comet Holmes poor transparency. Still brighter than
 δ Persei in defocused 7x50 b. Not much change
 from last night.

1289e 2007-11-2/3 19:30-21:40 EDT Foxmed PED 28cm sc n.e.
Comet Holmes 70x & 175x in 28cm sc much sharper on
 me side than the other. M31, 32, 110, 33, 1 +1.5°C

Name	YYYYMMDD	HHMM	Mag	<	Un	Co1	Co2	Co3	C codes	Codesexp	Sky	Aper	Magn
RU PEG	2007	110300	19	12.6		120	126	127			8	28cm sc	175
R PEG	2007	110300	28	10.6		105	109	113			8	28cm sc	70
DX AND	2007	110300	37	14.5	<	145					8	28cm sc	175
Z AND	2007	110300	43	10.5		104	107				8	28cm sc	70
X AND	2007	110301	02	14.2		138	142				8	28cm sc	175
R AND	2007	110301	11	12.7		126	129				8	28cm sc	175
RX AND	2007	110301	20	11.4		113	118	121			8	28cm sc	70
S PER	2007	110301	29	10.8		101	109	114			8	28cm sc	70

$$\begin{array}{r} \cancel{254} \\ 254 \\ \hline 19 \\ \hline 1016 \\ 254 \\ \hline 3556 \end{array}$$

- 1290d 2007-11-3 15:00-17:00
 8:00-5:00 EDT CAO GBO 3 10cm tr
Sun: Sun through Coronado filter on 10cm TVapo. One
 tall thin prominence @ 3:00 NOVA observing session.
- 1291e 2007-11-3/4 19:00-22:00 EDT CAO GBO 9-336cm sc
 NOVA observing session. Comet Halmes, Uranus, Albireo,
 ε Lyrae, M57, M27, M38, etc.
- 1292e 2007-11-10/11 20:15-20:20 EST Fox med E deck 8 7x50b ne
Comet Halmes: Becoming more diffuse & larger -3°C
- 1293m 2007-11-10/11 02:50-02:55 EST Fox med windows 4 ne.
 checked sky for possible observation of Delta Four
 rocket fuel dump @ 03:00 EST, but only Sirius & Rigel
 visible -6°C
- 1294m 2007-11-15/16 04:25 EST Fox med W deck 9 7x50b ne
Comet Halmes: getting very close to Mirfak - hard to
 separate the two ne. In 7x50b, comet is huge in
 diameter but getting fainter, no pseudonucleus visible.
- 1295m 2007-11-16/17 05:10 EST Fox med W deck 9 7x50b ne.
Comet Halmes: "the ghost at Mirfak" looks like it's
 about to swallow Mirfak up. Getting very diffuse
 around the edges, no pseudonucleus. Now larger in
 diameter than the Sun!
- 1296
~~1295m~~ 2007-11-17/18 23:10-23:20 EST Fox med E deck 9 7x50b ne
 Comet Halmes overhead Mirfak touching cone.
 M42 in 7x50b, Mars blazing brightly. -6.9°C



Image by Paul Mastfield 4" refractor

66

1297
~~1295~~n

2007-11-17/18 ~~did~~ looked for Leonids several times during the night, none seen.

1298e

2007-11-18/19 18:30-19:15 EST Foxmed Pod 9 28cm sc
Comet Halnes: ~~at~~ almost fills 55' field of 31m Naglar
@90x, Mirfak & surrounding stars shining thru the mist of the ^{coma}
M30, M34, M76, M45, Double Cluster -5,9°C

" 21:35 - 22:05 EST

← Comet Halnes - now has started to move off Mirfak
M42 - lonely, as usual @90x. Trapezium E visible @175x
but not F

M78, M35, Eskimo

Mags! @175x - albedo features visible, still low, -8.1°C

1299e

2007-11-22/23 22:55 EST Foxmed E deck 8 7x50b ne
Comet Halnes: right in zenith. Much more diff. Fuse but
still quite easy @ 7x50s despite bright Moon (33%) -9.3°C

1300

~~1300~~ m

2007-11-30/31 04:00-04:05 EST Foxmed bathroom window 8 7x50b ne
Comet Halnes: getting fainter - couldn't see ne. needed 7x50b

1301e

2007-12-12/13 21:10-21:15 EST Foxmed deck 8 10x50b ne
Comet Halnes: directly overhead in 10x50b huge ^{faint} coma, bright
core

M42

-10.3°C

1302m

2007-12-14/15 04:00-04:05 EST Foxmed bathroom window 7x50b
Comet Halnes: still easily visible in 7x50b, round & diffuse

1303_m 2007-12-16/17 02:50-02:55 EST Foxmed bedroom 8 7x50b ne
Comet Holmes: - very diffuse \bar{c} 7x50b, visible n.e.
near K Per, around 4th magnitude, similar to Double Cluster

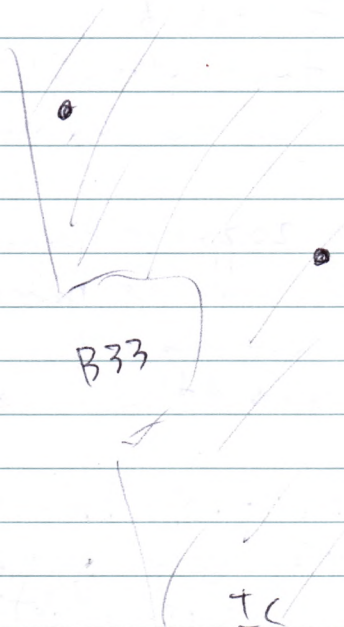
1304_n 2007-12-23/24 12:50 EST Foxmed deck 8 ne
Moon & Mars conjunction $1^{\circ}50'$ separation

1305_{e^v} 2008-01-02/03 20:45-20:50 EST Foxmed deck 10 10x50b ne
Comet Tuttle - small & diffuse in Aries \bar{c} 10x50b
Comet Holmes - huge & diffuse, near Alkar in Perseus
 \bar{c} 10x50b \swarrow actually in Pisces
I think this is the first time in my life I've seen
two bright comets in the sky simultaneously, -17.3°C !

1306_e 2008-01-09/10 20:10-20:25 EST Foxmed deck 10-3 10x50b ne
Comet Holmes: just visible n.e. near Algal 20x50b
Mira: near maximum - very red
Comet Tuttle: large & diffuse in Cetus \bar{c} 10x50b.
 $+1^{\circ}\text{C}$

1307_n 2008-01-12/13 02:10-02:15 EST Foxmed bedroom 8 7x50b
Comet Holmes: in 9x50, barely visible as extremely diffuse
cloud, huge in size, edges ill defined. Probably the
last time I'll see it. -3°C

1308_{ne} 2008-03-01/02 20:00 AST Musswellbrook NSW 8 ne
 α & β Centauri & Southern Cross from motel parking lot.



B33

TC

434

1309 e ✓ 2008/03/02/03 20:30³⁰ - 23:00 AST Warrumbungles Motor Hotel 9 ne 10x50b, 18"
DSO: 25" r.l.

NGC 2070 Tarantula nebula Dor EN/AC 25" 18"

NGC 4755 Jewel Box Cru OC 7x50 25x150b Fuji

NGC 104 47 Tuc Tuc GC 18" 25"

NGC 362 ~~NGC 362~~ Tuc GC 18"

NGC 2808 Car GC 18"

NGC 2516 Beehive Car OC 18"

NGC 2547 Heart Cluster Vel OC 18"

IC 2394 oVel Cluster Vel OC 18" 10x50b

NGC 3293 Gem Cluster Car OC 18"

NGC 3532 Football Car OC 18"

① — Coal Sack Cru DN ne 10x50b

NGC 5139 ω Centauri Cen GC 10x50b

NGC 5128 Centaurus A Cen Gxy 10x50b

IC 434 + B33 Horsehead Ori EN/DN 18" 25"

NGC 2244 Rosette Mon EN/OC 18"

— LMC Dor Gxy ne 10x50b

— SMC Tuc Gxy ne 10x50b

NGC 3372 Eta Carinae Car EN

— Kephale ~~Car~~ DN

Geganschein visible near Saturn



Horsehead: IC 434 visible \bar{c} direct vision with HB filter in
John's 18" \bar{c} 17mm & Andrews 25" \bar{c} 26mm (but not 17mm)
HH just visible \bar{c} averted vision against IC 434.

13/10 ✓ 2008-03-03/04 20³⁰00-23:00 AST Warrumbungles 9 m 10x50b 18" x 1

DSO

NGC 1261

→ Har GC
~~GC 1261~~

NGC 1851

Cal GC

47 Tuc NGC 104

Tuc GC

NGC 1365

For Gxy

Barred spiral

NGC 1316 Fornax A

For Gxy

Fornax cluster dozens of galaxies

Fornax cluster

For Gxy G

NGC 1360

Eri PN

Bright central star

1395

Eri Gxy

1566

Dor Gxy

1559

Ret Gxy

Mottled

2997

Ant Gxy

Face on

2442

Vol Gxy

Barred spiral

M 42

Ori EN

E & F visible in Trapezium

ESB 365 Ruby Crucis Cru DS DY Cru deep orange

NGC 4755 Jewel Box Cru OC

NGC 4609

Cru OC

? Callinder 240

Car OC

? Feinstein 1

Car OC

NGC 3228

Vel OC

IC 2391 o Vel

Vel OC

? IC 2395

Vel OC

NGC 2547 Hart Cluster Vel OC

2451

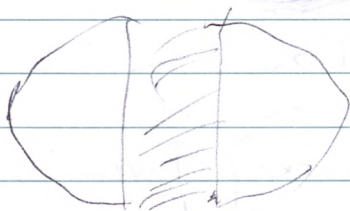
Pup asterism

M 46

Pup OC & PN

M 41

C Ma OC

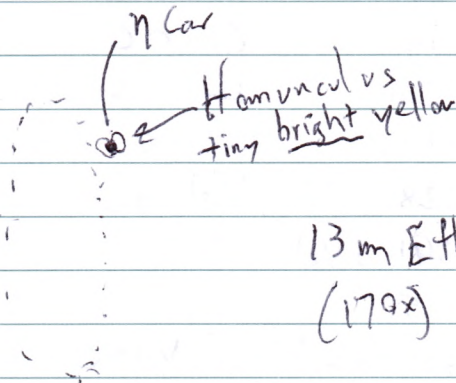


Cartarus A



Ringtail

Keproke
nebula



13 m Ethos in 18" f/4.5
(170x)

1311 n 2008-03-03/04 23:45-01:15 AST Warrumbungles 9 ne 10x50b 18" r1
D50 distributed,

NGC 5139 ω Cen Cen GC Stars very evenly background not resolved
 NGC 5286 Cen GC O' Meara
 4945 Cen Gxy Huge edge on "Tweezer Galaxy" A
 ← 5128 Centarus A Cen Gxy "Chopped with an axe" "J. Bamberg"
 A cruz α Cru Cru triple star
 α Centauri Cen double star Blinding!

← NGC 4038-39 Ringtail Cor Gxy Size & shape differences ←
 M104 Vir Gxy
 NGC 3242 Ghost of Jupiter Hya PN Inner shell
 NGC 5189 Spiral Planetary Mus PN Very strange, torn apart
 M83 Hya Gxy Spiral arms huge, small nucleus
 NGC 6067 Nor OC
 6087 Nor OC

1312 e 2008-03-04/05 20:30-22:30 AST Warrumbungles 9 ne 10x50b 18" r1
D50 & double stars

X Vel quadruple star
 NGC 104 47 Tuc
 NGC 2070 Tarantula
 NGC 1763
 ← 3372 Eta Corinae
 NGC 602
 342
 Lance's tour of LMC:
 NGC 1712, 23, 27
 NGC 1743, 69, 61
 NGC 1850, 58, 55, 56
 and many many more!

1313 m 2008-03-04/05 04:30-04:45 AST Warrumbungles 9 ne 10x50 b
-got up before dawn to view "Summer" Milky Way. Thin
crescent Moon in E horizon, Jupiter nearly overhead in Sagittarius,
Saturn setting in W in Leo. Sagittarius - Scorpions MW
comparable to Cassiopeia MW. Ophiuchus, Hercules (incl M13),
M6 & M7 overhead, M22, M8 etc.

1314 e 2008-03-05/06 21:00-22:30 AST Warrumbungles 9 ne 10x50 b 18" r1
DSO:
Hubble's Variable Nebula
Cone Nebula
Rosette Nebula
47 Tuc
ω Cen
"Northern" Jewel Box (KMa)

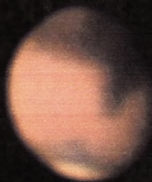
1313d 2008-03-29 16:50-16:55 EDT Foxmead dock 9 4cm rr
Sun: 1 sunspot ~~one~~ with flares, 1 area of ~~flare~~ flare
activity, 1 large filament, no prominences 32x
-entered spring variables into CPC1100 database

1314 e 2008-04-05/06 20:30-23:00 EDT Foxmead POD 8 28cm SC +4°C
Mars: tiny @ 255x, hint of polar cap & albedo markings
Saturn: rings really flat, best @ 75x Titan, Rhea, Iapetus, Dione,
& Tethys
Messiers 65, 66, 95, 96, 105, 44, 67, 41, 42, 43, 78, 46, 47, 48, 50
Variables: U QR1 too bright, H6 KMA too much glare fra
Sivius, IR GEM too many stars too close together

P.T.O.

C14 f/47 SkyNyx 2.0 M
Astronomik RGB

April 15, 2008
D = 6.3
P = 0.90



00:58 UT
CM = 279



02:03 UT
CM = 295

Rolf Meier
Ottawa, Ontario

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
V1159 ORI	2008 04 06 01 41	13.2	<		130	132				8	28cm sc 175
SU TAU	2008 04 06 01 51	10.3			102	105				8	28cm sc 90
CN ORI	2008 04 06 02 01	12.5	<		125					8	28cm sc 175
SS AUR	2008 04 06 02 11	13.9			131	139				8	28cm sc 175
CZ ORI	2008 04 06 02 20	14.0	<		135	140				8	28cm sc 175
X MON	2008 04 06 02 35	7.6			69	78				8	28cm sc 90
S CMI	2008 04 06 02 43	7.9			71	81				8	28cm sc 90

1315e 2008-04-13/14 21:00-22:00 EDT Foxmed POD 8³ 28cm sc

Saturn: beautiful @ 175x

Variables

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S GEM	2008 04 14 01 22	13.5	<		122	135				8	28cm sc 175
T GEM	2008 04 14 01 30	13.0	<		129	130				8	28cm sc 175

- clouded over just after acquiring U GEM field

Mars: 255x N polar cap & Syrtis Major visible on tiny 6.4" dish. Almost colourless. Image very crisp.

Moon: 255x Seeing quite good despite passing clouds. Almost certain I can see rille in Alpine Valley. Floor of Plato covered in shadows. Straight wall just emerging from shadow. Hadley Rille very clear

1316d 2008-04-14 ~~15:00~~ 14:50-15:05 EDT Foxmed POD 9 28cm sc

Venus: wake telescope from hibernation to look at nearly circular Venus in deep blue sky @ 70x

[Mercury] too close to Sun to risk a look

[Capella] not visible

[Mars:] not visible



1317e 2008-04-15/16 20:30-22:30 EDT Foxmed PoD 8 28cm sc

Moon: 255x Ramsden rilles well placed

Saturn: 255x crisp

Mars: 285x seeing poor

Variables (increasing haze & bright moonlight)

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Mag:
U GEM	2008 04 16 01 17	13.9 <		131	139		BU		8	28cm sc 175
YZ CNC	2008 04 16 01 27	12.1		116	127		BU		8	28cm sc 175
SY CNC	2008 04 16 01 38	12.6 <		126			BU		8	28cm sc 175
R LMI	2008 04 16 01 51	10.1		94	104		BU		8	28cm sc 70
R LEO	2008 04 16 01 56	8.5		65	92		BU		8	28cm sc 70
X LEO	2008 04 16 02 03	12.4 <		124			BU		8	28cm sc 175
TW VIR	2008 04 16 02 16	12.5 <		121	125		BU		8	28cm sc 175
R CRV	2008 04 16 02 20	8.4		83	87		BU		8	28cm sc 70
SS VIR	2008 04 16 02 23	8.5		83	87		BU		8	28cm sc 70

R VIR too bright for d chart comp stars
- sky became too hazy while observing RU VIR

318e 2008-04-26/27 21:00-00:00 EDT Foxmed PoD 8 28cm sc

Saturn: imaged at prime focus c 2" diagonal of Canon Rebel, manual,

1/60 sec, 1/15 sec @ ISO 100, 1/15 sec @ ISO 800

- visual @ 175x & 255x

Mars 175x 255x

Variables:

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Mag:
SU TAU	2008 04 27 02 03	10.3		103	105				8	28cm sc 70
U ORI	2008 04 27 02 09	8.9		91	95				8	28cm sc 70
CZ ORI	2008 04 27 02 16	13.4 <		128	134				8	28cm sc 175
IR GEM	2008 04 27 02 24	13.7 <		135	137				8	28cm sc 175
S CMI	2008 04 27 02 32	9.6		89	98				8	28cm sc 70
S GEM	2008 04 27 02 44	13.5 <		122	135				8	28cm sc 175
T GEM	2008 04 27 02 50	13.0 <		129	130				8	28cm sc 175
U GEM	2008 04 27 02 55	13.1 <		131					8	28cm sc 175
YZ CNC	2008 04 27 03 00	11.6		114	116				8	28cm sc 70
SY CNC	2008 04 27 03 08	14.0		140	143				8	28cm sc 175
R LMI	2008 04 27 03 16	11.7		116	120				8	28cm sc 70
R LEO	2008 04 27 03 20	8.8		92	98				8	28cm sc 70

Deep sky Caldwells (all previously observed):

- 39 Eskimo
- 48 Little fuzzbull galaxy in Cnc
- 25 faint globular in Lynx
- 46 Hubble's variable nebula
- 50 Rosette cluster

M104 175x dark lane

~~M~~ Ringtail galaxies - very faint

M68, M61, M49

1319e

2008-05-04/05 20:30-23:30 EDT Foxwood POD 9 28cm sc

Saturn: imaging \bar{c} Color StarShoot II prime focus normal exposure,
2.5x per minute max exposure/contrast

~~Variables~~ Porrina unable to split clearly @ 254x

Variables

Name	YYYYMMDD	HHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
X LEO	2008	0505	0212	13.3		133	135				9	28cm sc 175
TW VIR	2008	0505	0221	15.0	<	150					9	28cm sc 175
R CRV	2008	0505	0226	8.7		83	87				9	28cm sc 70
SS VIR	2008	0505	0232	9.1		87	95				9	28cm sc 70
RU VIR	2008	0505	0245	12.2		119	123				9	28cm sc 70
U VIR	2008	0505	0250	10.7		105	109				9	28cm sc 70
R HYA	2008	0505	0253	8.5		90	95				9	28cm sc 70
S VIR	2008	0505	0259	10.4		99	106				9	28cm sc 70
R CVN	2008	0505	0308	11.9		114	120				9	28cm sc 70
S BOO	2008	0505	0316	12.2		116	123				9	28cm sc 70

Deep sky M13 & M57 @ 175x

1320e

2008-05-06/07 20:45-23:30 EDT Foxwood POD 8-9 28cm sc

Mars: polar cap & albedo markings visible @ 175x & 254x

Saturn: trial binoviewer \bar{c} 12.5mm & 10mm - needs William 2" 1/25" adapter because TV adapter slips - mag \bar{c} 12.5mm looks similar to 11mm \bar{c} 2" diagonal - latter

Variables: new stars from Leamy & Mike's NMA list:

Name	YYYYMMDD	HMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
SU VIR	2008	051402	01	10.3		91	108	B		6	28cm sc 70
Y VIR	2008	051402	06	12.4	<	124		B		6	28cm sc 175
RV VIR	2008	051402	11	11.3		111	118	B		6	28cm sc 175
V VIR	2008	051402	17	10.0		95	110	B		6	28cm sc 175
SY VIR	2008	051402	23	12.3		116	125	B		6	28cm sc 175
Z BOO	2008	051402	28	10.5		102	111	B		6	28cm sc 70
Z VIR	2008	051402	34	10.2		101	102	B		6	28cm sc 70
BC SER	2008	051402	39	12.7		120	127	B		6	28cm sc 175
RU HER	2008	051402	46	12.1		117	124	B		6	28cm sc 175
S HER	2008	051402	50	8.5		83	89	B		6	28cm sc 70
RT Lyr	2008	051403	00	12.8		125	128	B		6	28cm sc 175

User object list in 28cm sc is now full = 99 stars!

Deep sky: M57, M13, M92 clouds moving in.

1323e 2008-05-15/16 20:00-22:20 EDT Foxwood POD + W deck 3-4 28cm sc 8cm vr

Moon: very hazy 175x in 28cm sc

Saturn: testing to see minimum power needed to see rings in ^{or} _^

24x 24.5mm SWA easily visible as rings

19x 32mm Erfle just barely visible as rings

15x 40mm Plössl two spokes on either side, obviously bigger than Regulus

1324d 2008-05-24 15:45-18:00 EDT Foxwood ^S _^ look 9 4cm vr

Sun: not much activity; a couple of prominences on the top limb, no flares, spots, or filaments on disk 30x

1325e 2008-05-24/25 22:00-00:10 EDT Foxwood POD 9 28cm sc

Variables: PTF

DSO: M68, M83 (pitiful after aiz!), M104 (beautiful), ~~M~~ Ring tail ~~Cal~~ _^
M4, M80, M10, M12, M107, M14, M9, M19, M62, M11, M27

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
YZ CNC	2008 05 25 02 22	14.1	<		141					8	28cm sc 175
SY CNC	2008 05 25 02 36	13.4			134	136				9	28cm sc 175
R LMI	2008 05 25 02 44	11.7			116	120				9	28cm sc 70
R LEO	2008 05 25 02 47	9.7			92	98				9	28cm sc 70
X LEO	2008 05 25 02 51	12.2			117	124				9	28cm sc 70
TW VIR	2008 05 25 03 00	14.3	<		143					9	28cm sc 175
R CRV	2008 05 25 03 06	10.4			102	109				9	28cm sc 70
SS VIR	2008 05 25 03 21	8.3			83	87				9	28cm sc 70
RU VIR	2008 05 25 03 30	12.4			123	125				9	28cm sc 70
U VIR	2008 05 25 03 34	10.2			95	103				9	28cm sc 70
S VIR	2008 05 25 03 45	10.1			99	106				9	28cm sc 70

1326d 2008-05-27 14:50-14:55 EDT Fox med S dark 9 4cm rr
Sun: no prominences, no flares, no spats 30x

1327e 2008-05-27/28 22:00-23:50 EDT Fox med P09 8 28cm sc
Variables?

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R BOO	2008 05 28 02 23	8.5			85	90				8	28cm sc 70
S SER	2008 05 28 02 28	11.5			103	116				8	28cm sc 70
S CRB	2008 05 28 02 32	11.5			114	116				8	28cm sc 70
R SER	2008 05 28 02 39	13.3			132	133				8	28cm sc 70
T CRB	2008 05 28 02 48	9.8			98	102				8	28cm sc 70
U HER	2008 05 28 02 55	11.0			108	111				8	28cm sc 70
SS HER	2008 05 28 03 02	9.9			94	104				8	28cm sc 70
W HER	2008 05 28 03 07	10.5			102	106				8	28cm sc 70
AH HER	2008 05 28 03 14	12.4			122	127				8	28cm sc 70
RS HER	2008 05 28 03 17	9.4			92	96				8	28cm sc 70
T HER	2008 05 28 03 22	12.2			122	129				8	28cm sc 70
SU VIR	2008 05 28 03 32	10.3			91	108	Z			8	28cm sc 70
Y VIR	2008 05 28 03 39	14.6			141	147				8	28cm sc 175
RV VIR	2008 05 28 03 44	12.1			121	123				8	28cm sc 70

DSOs: M57, M83 (70x & 175x)

900 m
40 22x 3.1°
16 56x 1.5°
11 82x 1.0°
6 150x
5 180x
4 225x

1328e 2008-05-28/29 22:00-23:50 EDT Foxmed POD 8 28cm sc

Variables:

Name	YYYYMMDDHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
V VIR	2008 05 29 02 29	10.7		95	110				8	28cm sc 70
SY VIR	2008 05 29 02 38	12.8		125	136				8	28cm sc 175
Z BOO	2008 05 29 02 43	11.5		111	116				8	28cm sc 70
Z VIR	2008 05 29 02 46	10.9		108	111				8	28cm sc 70
BC SER	2008 05 29 02 54	13.0		127	138				8	28cm sc 175
RU HER	2008 05 29 02 58	12.3		117	124				8	28cm sc 70
S HER	2008 05 29 03 03	9.1		90	103				8	28cm sc 70
RT Lyr	2008 05 29 03 12	14.2	<	142					8	28cm sc 175

Another clear cool (+6°C) night.

Doubles: couldn't split Porrima, ε Boo, X Boo, Albireo, 17 Cys, 61 Cys etc.

DSO: M57, M27, M56, M3, M5, M9, M10, M12, M14, M71, M29

1329e 2008-06-01/02 22:00-23:00 EDT Foxmed S deck 8-9 12cm rr

- testing Orion EON 120mm f/7.5 ED refractor

Saturn sharp up to 225x, Cassini suspected

Doubles: Algol golden @ 150x, Porrima peanut shaped @ 225x (1.1"), ε Lyrae needs 225x to split

~~M57~~ DSO: M57 - nice snake ring @ 56x, M104 @ 56x - some kind of dark lane, M13 resolved @ 82x

23:35 - 23:45

W deck

ISS shuttle passages ~ 1 minute apart. Shuttle rose above trees just as ISS faded in W. *Bright fireball in NE

~ 22:20.

23:45 - 00:35

Jupiter low φ blurry

Albireo

DSO M27 ε + 5 O III, Veil invisible ε O III but both halves easy ε O III @ 22x - don't quite fit in same field (3.0°)

1330d 2008-06-08 11:45-11:52 EDT Focmed S deck 8 4cm rr
Sun: nothing on disk except convective cells.* A couple of
tiny prominences, and one really big one on S limb.
*"granules" 32x

1331d 2008-06-08 16:30-16:35 EDT Focmed S deck ~~8~~ 3 4cm rr
Sun: prominence faded, haze over Sun 32x

1332de 2008-06-14/15 21:50-22:49 EDT Focmed S deck 8 12cm rr
Testing Orion 120mm EDW ED refractor
Moon: Cassendi wall placed, rille hard to see @ 825x
~~Star~~ Doubles & Viv Parrina: elongated @ 225x
ε Lyrae split cleanly @ 8.8m (102x) but not @ 11m
(82x)
M57 dim in moonlight @ 82x

01:45-01:55 narrow 8
Jupiter NEB dark brown, very intense 180x
SEB broad, hints of internal detail
no detail visible in EZ

03:00-03:50 3-8
Jupiter 150 & 180x dodging clouds, heavy dew
RSH visible in SEBs - contrast poor because
of dew on objective, but much mottling visible
within SEB

1333 e 2008-06-20/21 22:00-00:05 EDT Foxmed POD 8 28cm sc
 Mars & Saturn 175x

Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R CRV	2008 06 21 02 48	10.8			102	109				8	28cm sc 175
R VIR	2008 06 21 02 55	9.5			93	96				8	28cm sc 70
RU VIR	2008 06 21 03 04	12.5			125	132				8	28cm sc 175
S VIR	2008 06 21 03 15	11.6			110	118				8	28cm sc 70
R CVN	2008 06 21 03 21	12.0			114	120				8	28cm sc 70
R BOO	2008 06 21 03 32	9.9			93	101				8	28cm sc 70

Many stars were too bright for comp stars on DR charts, eg SS Vir, U Vir, R Hya, V Boo. Stars in Leo & Cancer gone for the season.

Jupiter: RSH just past CM @ 175x, NEB dark & featureless ^{narrow}
 M = no festoon activity in EZ. NTB just barely visible
 SEB broad, mottled

Mars: Terminus bisecting Mare Crisium 175x.

1334 e 2008-07-03/04 22:00-01:00 EDT Foxmed POD 8 28cm sc

Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
SU VIR	2008 07 04 02 30	10.5			91	108				8	28cm sc 70
Y VIR	2008 07 04 02 37	12.6			124	132				8	28cm sc 175
RV VIR	2008 07 04 02 46	13.9			133	139				8	28cm sc 175
V VIR	2008 07 04 02 51	10.7			95	110				8	28cm sc 70
SY VIR	2008 07 04 03 02	14.1			138	141				8	28cm sc 175
Z BOO	2008 07 04 03 10	13.4			132	138				8	28cm sc 175
Z VIR	2008 07 04 03 19	12.7			127	131				8	28cm sc 175
BC SER	2008 07 04 03 27	14.1			138	150				8	28cm sc 175
RU HER	2008 07 04 03 33	10.9			100	114				8	28cm sc 70
S HER	2008 07 04 03 38	11.4			111	115				8	28cm sc 70
S SER	2008 07 04 03 42	11.7			116	117				8	28cm sc 175
S CRB	2008 07 04 03 52	11.9			118	123				8	28cm sc 70
R SER	2008 07 04 03 56	12.4			124	126				8	28cm sc 70
T CRB	2008 07 04 04 01	10.7			106	108				8	28cm sc 70
U HER	2008 07 04 04 05	10.9			108	111				8	28cm sc 70
SS HER	2008 07 04 04 12	12.6			125	128				8	28cm sc 70
AH HER	2008 07 04 04 18	11.4			111	117				8	28cm sc 70
RS HER	2008 07 04 04 24	10.6			108	112				8	28cm sc 70
T HER	2008 07 04 04 28	8.8			88	94				8	28cm sc 70
RT LYR	2008 07 04 04 36	14.3 <			142	143				8	28cm sc 175

Deep sky: M27, M8, M20, M16, M17, Veil Nebula
Jupiter: excellent @ 175x much detail within SEB.

1335e 2008-07-05/06 22:30-01:00 EDT Foxmead 8 28cm sc
 Variables

Name	YYYYMMDD	HMM	Mag	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S BOO	2008	070602	59	13.3		129	133			8	28cm sc 175
RS OPH	2008	070603	12	11.2		110	115			8	28cm sc 70
AF CYG	2008	070603	29	7.2		72	76			8	28cm sc 70
EM CYG	2008	070603	36	13.3		131	134			8	28cm sc 175
R CYG	2008	070603	46	14.0		136	140			8	28cm sc 175
CHI CYG	2008	070604	01	12.4		121	125			8	28cm sc 175
U CYG	2008	070604	07	8.5		80	96			8	28cm sc 70
R VUL	2008	070604	13	12.2		119	123			8	28cm sc 70
W HER	2008	070604	22	12.0		113	124			8	28cm sc 70
T CEP	2008	070604	27	10.0		97	102			8	28cm sc 70
SS CYG	2008	070604	31	11.8		114	119			8	28cm sc 70
RU PEG	2008	070604	38	11.2		111	119			8	28cm sc 175
R PEG	2008	070604	53	12.2		119	123			8	28cm sc 175

Deep sky: M27, M13, M15
Jupiter: 175x

— 2008-07-08: surgery: auto transplant of R kidney after
 excision of renal cell carcinoma.

1336e 2008-09-21 19:45 EDT Foxmead 19cm sc
Venus: first sighting 24x

1337e 2008-10-06 18:45 EDT Foxmead deck 19cm mm
 - testing Orion 190mm f/5.3 Mak Naut on GPDx
 - Moon 40mm (doesn't reach focus), 11mm, 6mm, 5mm
 - still cooling down

19:50-20:10 EDT
Jupiter: moons are clean little disks - belts show

excellent contrast 200x

Moani time detail in rilles, eg. Higgins, Jones etc.
M31 32 110 45x (22m) - all three in field, background stars crisp right to edge of Nagler f.o.v.

Very hard not to touch corrector, since it's not protected by dew shield - I left a few fingerprints which I'll try to remove tomorrow. Crawford focuses ~~has~~ lacks fine focus, hard to adjust on Moon & planets

1338d 2008-11-05 15:35-1600 EST Foxmed deck 6 4cm rr
Sun: One prominence @ 5:00 no spots 33x

1339e 2008-12-31/32 48:00 EST Foxmed ^{living room} drive, 8 ne 8cm rr
Venus - Moon conjunction - lovely sight \bar{c} crescent Moon, earthshining & slightly gibbous Venus
3° apart

1340e 2009-01-03/04 17:00-17:30 EST Foxmed living room ne 10x50 8cm rr
Venus - Mercury - Jupiter conjunction. Couldn't see Mercury or Jupiter at first - spotted \bar{c} 10x50 ab around 17:15, then with n.e. & 8cm rr @ 24x.

1341e 2009-01-09/10 17:25-17:40 EST Foxmed living room ne, 10x50 8cm rr
Venus - Mercury - Jupiter Jupiter very close to horizon 24x
Moon nearly full n.e.

1342m 2009-01-09/10 06:00-06:30 EST Foxmed bathroom ne,
Looked for Comet Lulin @ 06:00 + 06:30, but cloudy in SE

25 38x

11 86x

5 189x

1343 n 2009-02-23/24 23:15-23:20 EST Foxmed obs. 9 10x50b ne
Comet Lulin: 2° SW of Saturn in Leo, Easy in 10x50b,
not visible ne. clearly elongated NW-SE, quite
large in 10x50b.

1344 e 2009-02-27/28 18:45-18:50 EST Foxmed living room 8 8cmrr
Moon & Venus in 24.5mm 24x: big and little crescents!

1345 n 2009-02-27/28 22:55-23:00 EST Foxmed obs. 9 10x50b
Comet Lulin: just W of Regulus in 10x50s. -14.4C

1346 e 2009-03-13/14 20:20-21:30 EDT Foxmed obs 8 15cm sc
Saturn 38x, 86x, 189x - like a cocktail onion with a
toothpick through it! Titan and Rhea off to the
left

Comet Lulin 38x amorphous glow, a bit elongated
Star M46, 47, 41, 35, 48, Algol, M44, M67, M65 etc
This is the first real observing session I've had since
my surgery in July! Warm enough at -4°C in the POD
The NexStar SE6 continues to be a delight!

1347 e 2009-03-15/16 20:30-23:20 EDT Foxmed obs 8 15cm sc
Comet Lulin 39x dim glow, elongated
Comet Holmes 39x supposedly brighter than Lulin but I
Variables (PTO) couldn't see it.
Saturn @ 89x exquisite c Titan on one side & Rhea on
the other.

Variables had to delete 3 observations because they were
estimated way too bright.

4/9 16:05 obs
10 19

Name	YYYYMMDD	HMM	Mag	Un	Co1	Co2	Co3	Ccodes	Codesexp	Sky	Aper	Magn
SU TAU	2009	03	16	00	52	10.2		100	107		Deleted	8 15cm sc 86
U ORI	2009	03	16	01	03	7.7		67	80			8 15cm sc 39
HL CMA	2009	03	16	01	15	11.7		117	120			8 15cm sc 86
X MON	2009	03	16	01	22	8.2		74	82			8 15cm sc 39
S CMI	2009	03	16	01	30	8.9		85	90			8 15cm sc 39
S GEM	2009	03	16	01	38	12.4		122	124		Deleted	8 15cm sc 86
T GEM	2009	03	16	01	47	11.8	<	114	118			8 15cm sc 86
U GEM	2009	03	16	02	41	11.7		114	116		Deleted	8 15cm sc 86
R LEO	2009	03	16	03	04	9.8		92	98			8 15cm sc 39

1348d 2009-~~03~~-20 13:30-13:50 EDT Foxmed obs. 9 15cm sc
 Venus: 39x & 86x thin thin crescent 3% illuminated in deep blue sky. A week away from inferior conjunction.

1349d 2009-03-22 11:50-12:15 EDT Foxmed obs. 9 15cm sc
 Venus: 39x & 86x Now down to 2% illuminated 5 days from conjunction.
 Moon: 39x 25.7 day old crescent 16% illuminated
 Tried to spot Mercury & Jupiter without success.

1350d 2009-03-23 10:20-10:50 EDT Foxmed obs 9 15cm sc ne.
 Venus 39x & 86x skinny crescent
 Jupiter 39x & 86x tiny pale disk
 Moon: 39x & 86x 10% illuminated - also visible ne.
 - couldn't see Mercury

1351d 2009-03-24 10:45-11:00 EDT Foxmed obs 8 15cm sc
 Venus: 39x & 86x skinny crescent - seeing more steady than last 3 sessions

1352d 2009-03-25 11:20-11:30 EDT Foxmed obs. 8 15cm sc
 Venus: 39x - sky rather hazy, but Venus still punches through
 1% illumination

1353d 2009-04-15 11:30-12:10 EDT Foxmed POD/deck 15cm sc 4cm^{rr}
Venus: now quite a fat crescent @ 39x in 15cm sc
 - unable to see either Mercury or Jupiter
Sun: PST @ 30x, nice hedge-row prominence @ 11 o'clock,
 lots of granulation, no sun spots

1354e 2009-04-15/16 21:50-23:40 EDT Foxmed POD 15cm sc
Variables:

Name	YYMMDD	HHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	Sky	Aper	Magn
SU TAU	2009	0416	0205	9.3		92	100			Not reported	8	15cm sc	39
U ORI	2009	0416	0210	9.1		91	95				8	15cm sc	39
X MON	2009	0416	0238	8.0		76	82				8	15cm sc	39
S CMI	2009	0416	0250	10.3		102	106				8	15cm sc	86
S GEM	2009	0416	0303	11.1		109	113				8	15cm sc	39
R LEO	2009	0416	0316	10.1		98	105				8	15cm sc	39

Other stars on list too faint to observe. SU TAU must
 have been misidentified, as star much fainter than observed.

Deep sky: M44, M67, M65, M66, M104, Ghost of Jupiter
 mostly @ 39x

Saturn: 86x, still looking like cocktail onion on toothpick

1355d 2009-05-03 11:30-11:55 EDT Foxmed POD 15cm sc
Venus: 39x - melted hole in 25mm Plössl cap by
 accidentally having main scope uncapped while aligning
 on Sun!

1356d 2009-05-04 11:30-12:00 EDT Foxmed POD/deck 15cm sc 4cm^{rr}
Venus: 39x unable to find Jupiter or Mercury - slightly hazy
Sun: 39x 1 small prominence @ 2 o'clock.

180 mm f/15 Mak-Cass/Sirius EQ-G mount / 24mm Stratus ^{5mm}
2900 mm f.l.

24 mm Stratus 112x 1.6mm 36'

16 mm Nagler 169x 1mm 29'

11 mm Nagler 245x 0.7mm 20'

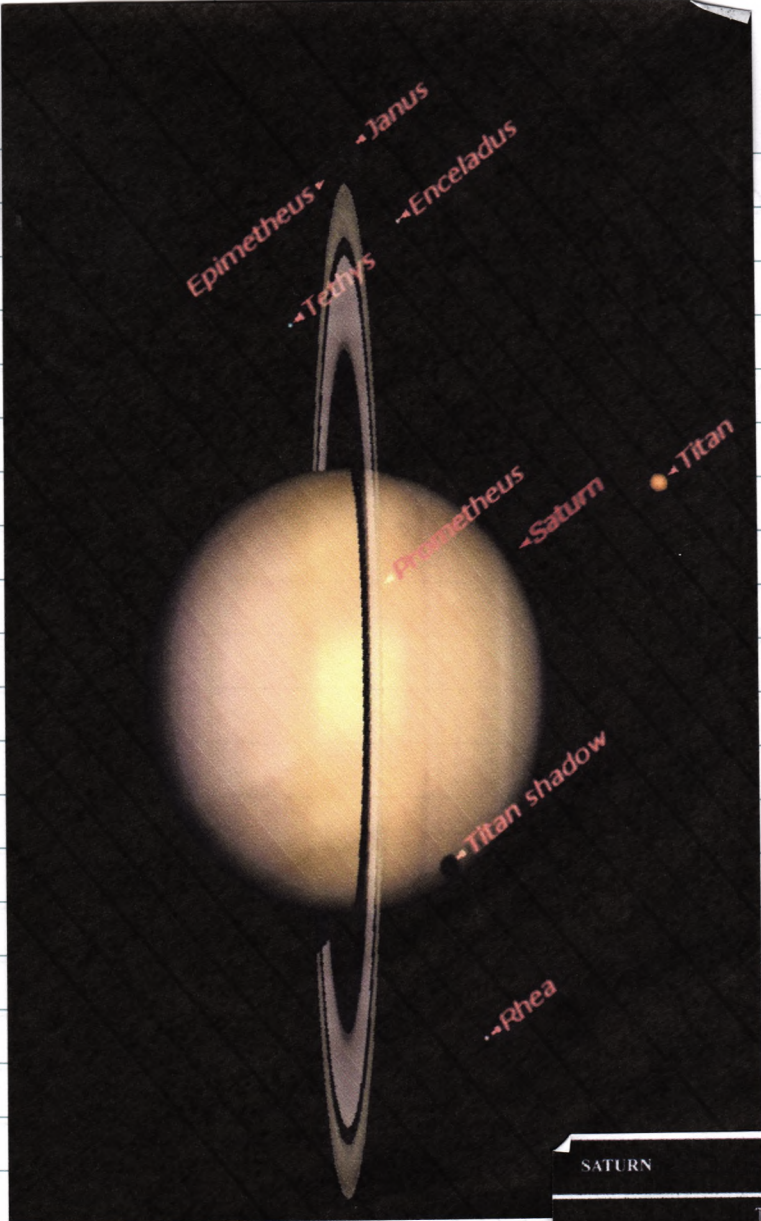
8.8mm UWA 309x

5mm Placoy 540x

6mm Radian 450x


1357e 2009-05-04/05 21:30-23:15 EDT Foxmed POD 8 18cmmc Louise
Testing Orion 180mm F/15 Mak-Cass on Sirius EQ-G mount
Alignment difficult because it was hard to get to
eyepiece. Also, many alignment stars are pretty obscure.
Finally aligned on Alpheratz & Spica. Polar alignment
poor, & long & lat approximate, so Gato, very inaccurate.
Optics are exquisite! Mostly ≈ 11 mm Naylor = 245x,
Moon - mostly ≈ 245 x, though I tried 6mm/450x just for
giggles! 2 craterlets in Plato, Rima in Hippalus B,
dunes west of Copernicus. \rightarrow central & one of twins
Saturn - rings are like gossamer, shaded, dark thin
shadow across globe 245x

1358e 2009-05-08/09 21:30-23:10 EDT Foxmed POD 5 18cmmc
Testing Orion 180mm Mak-Cass on Sirius EQ-G mount
Alignment went quite well tonight. I realized that mount
assumes proper polar alignment in home position, so it isn't
necessary to see Polaris. You can polar align on any star.
I used 3 star alignment. ① Arcturus. Adjusted azimuth
& altitude of Polar axis until Arcturus nearly central,
then used motors to set as alignment point. ② Vega ③ Deneb
This alignment was good enough to always place target
within 24mm eyepiece f.o.v. (36').
Saturn: best @ 112x; OK @ 245x, but not as sharp as
on first night - seeing not great, Deneb, Rho Cas, Tetys, Titan
& Igeus
Full Moon low in sky, poor seeing 112x
Doubles: Jota Gauri, Algieba 54 Leonis, Epsilon Lyra (not split) blum
suspected elongation at γ Virginis @ 45°
Variable R Leo
DSO: M57, 67, 44




Starry Night 04:5 ED
 ←


Denis Fell →

SATURN  12" Newtonian Reflector f/5

Titan Shadow transit on Saturn May 14/15 2009



0559 UT 0602 UT 0609 UT 0620 UT



Starry night sim.

NextImage Barlowed to f/10, 5 fps, 130 to 300 frames processed in RegiStax 5 and Gimp 2.0

Comments:
 Variable cloud and seeing made for challenging imaging, visually stunning at 250X to 300X

Date: 15 May 2009	Phase: 99.7%	Diameter: 18.5"
CM: Sys I: 313 to 325 degrees	Filters: Baader UV/IR cut vis. Moon & SGLow	
Seeing: II - IV (Antoniadi)	Observer: Denis Fell (www.spacealberta.com)	
Transparency: 3-4/5	Location: Wetaskiwin Alberta Canada	
	52.59 north 113.29 west 761 M -7 UT	

-testing 24mm Stratus - clearly better than 24.5mm MeadosWA. Better contrast, better performance at edge of field, (covered Saturn @ edge of field), image slightly bigger, but much crisper. This is a nice eyepiece with f/15 scope - need to test a short focal ratio.

-24mm Stratus & 11mm Nagler make a great pair!

1359 d 2009-05-10 10:00-10:35 EDT Foxmed POD 8 18cm mc
Venus: perfectly centered @ 112x from parked position!
In slewing around to Jupiter, the mount lost its positioning. May also have been because I moved scope & direction keys to take photographs of scope for review.

1360 n 2009-05-14/15 00:50-02:05 EDT Foxmed POD 8 18cm mc
Saturn: 245x shadow transit of Titan, Titan itself really close to planet. Shadow appeared as notch in limb @ 1:45 EDT. Neat! Seeing poor. Shadow of rings Moon just above horizon. [an inky line across equator.]

1361 d 2009-05-18 11:38-11:43 EDT Foxmed Deck 8 4cm r
Sun: no prominences, no flares, no spots, no nuthin'.
30x

1362 e 2009-05-18/19 22:10-00:05 EDT Foxmed POD 8 18cm mc
Saturn 245x Titan on one side, Rhea on the other.
Double stars 17 Cyg, 6 Lyrae/split @ 245x, but not @ 112x, 95 Hor
-amazing: Albireo isn't in database!
Deep sky M5, M104, M65, M66, M57, M29, M49, M64, M87, M89, M98, M99, M100, M95, M96, M105, M13, M92 - mostly @ 112x, a few @ 245x

180mm shows a lot of scattered light around bright objects like Saturn.

More Messiers, M49, M91, M64. M49 looks like face-on galaxy.

1363m

2009-05-20/21 04:10-05:15 EDT Foxmead POD 9 180mmc

Jupiter best in TV binoculars 25mm Plössl = 216x Seeing poor 0-2. As usual, I couldn't see any detail when I first looked, not even NEB or SEB. Gradually my eyes became more sensitive to subtle contrast differences, and the belts began to resolve. Towards end of session, I could begin to see the RSH, ~~and~~

Venus bailing

Mars incredibly tiny disk!

Moon Wargentin with illumination from the other direction!

A wonderfully mild (12°C) morning with the planets, until the mosquitoes realized there was fresh meat. It reminded me of that other morning with planets 9/11/2001

2009-05-24 Removed 180mmc/Sivius from Pod & installed 280mm sc on CPC/NexStar mount

1364e

2009-05-24/25 22:10-00:30 EDT Foxmead Pod⁹ 280mm sc

Saturn Image much crisper than in 180mmc. Beautiful array of moons: Titan Dione Tethys Saturn Rhea

Doubles Elyr easily split @ 70x

DSO: M57, M65, M66, M95, M96, M105

Variables PTO:

Name	YYYYMMDDHHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R LEO	2009 05 25 02 51	9.2			92	98			9	28cm sc 70
X LEO	2009 05 25 02 58	14.4 <			138	144			9	28cm sc 175
TW VIR	2009 05 25 03 05	12.9			125	131			9	28cm sc 70
R CRV	2009 05 25 03 11	11.9			116	121			9	28cm sc 70
SS VIR	2009 05 25 03 16	8.4			84	87			9	28cm sc 70
R VIR	2009 05 25 03 21	10.5			104	105			9	28cm sc 70
RU VIR	2009 05 25 03 27	11.3			105	115			9	28cm sc 70
U VIR	2009 05 25 03 33	13.4			129	136			9	28cm sc 70
S VIR	2009 05 25 03 50	11.3			110	114			9	28cm sc 70
S SER	2009 05 25 04 14	12.5			121	129			9	28cm sc 175

More DSO: M5, M12, M107, M10, M80, M4, M13, NGC 6207

What a wonderful telescope! Great images, easy to use, incredible magnitude depth. The Orion 180mm MC just isn't in the same league. The only problem is that the azimuth drive is making horrible clicking noises.

1365 d. 2009-06-03 10:30-10:45 EDT Foxmed, deck 9 40cm rr 8cm rr
Sun: The sunspots which were visible a couple of days ago have vanished, leaving a blank disk in white light. There is a flare & a lot of activity in H α where there ~~was~~ the spots were, & a wonderful tall thin prominence @ 3 o'clock more easily seen @ 16x (25m) than at 32x (12.5m).

1366 d. 2009-06-03/04 22:40-00:15 EDT Foxmed PoD 8 28cm SC
Moon, best @ 175x, Plato, Cassendi
Variable stars P10

Name	YYYYMMDDHHMM	Mag	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
SU VIR	2009 06 04 03 05	11.7					116 118	B	8	28cmsc 70
Y VIR	2009 06 04 03 12	11.4					113 115	B	8	28cmsc 70
RV VIR	2009 06 04 03 20	11.8 <					118	B	8	28cmsc 175
SY VIR	2009 06 04 03 30	11.6 <					116	B	8	28cmsc 70
Z BOO	2009 06 04 03 35	12.4 <					124	B	8	28cmsc 70
Z VIR	2009 06 04 03 40	11.6 <					116	B	8	28cmsc 70
BC SER	2009 06 04 03 47	12.7					122 127	B	8	28cmsc 175
RU HER	2009 06 04 03 56	13.2 <					132	B	8	28cmsc 175
S HER	2009 06 04 04 02	11.6					111 117	B	8	28cmsc 70
R BOO	2009 06 04 04 13	10.6					100 107	B	8	28cmsc 70

1367e 2009-06-12/13 22:45-00:00 EDT Fanned POD 8 28cmsc
Variables:

Name	YYYYMMDDHHMM	Mag	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S CRB	2009 06 13 02 52	12.4					123 125		8	28cmsc 175
R SER	2009 06 13 03 00	12.4					123 124		8	28cmsc 70
T CRB	2009 06 13 03 05	9.8					93 99		8	28cmsc 70
U HER	2009 06 13 03 13	12.0					118 132		8	28cmsc 70
SS HER	2009 06 13 03 20	12.4					124 125		8	28cmsc 70
W HER	2009 06 13 03 26	13.6					134 139		8	28cmsc 175
AH HER	2009 06 13 03 35	11.9					117 122		8	28cmsc 70
T HER	2009 06 13 03 43	9.9					97 103		8	28cmsc 70
RS OPH	2009 06 13 03 56	10.1					98 103		8	28cmsc 70

Deep sky: M27, 29, 56, 57, 80, 4, 62, 71, 14, 12, 10, 9

1368a 2009-06-15/16 23:30-01:40 EDT Fanned POD 8 28cmsc ne

Saturn: 175x

Variables (see next page)

Deep sky: M6, M7, M8, M20, M17, M16, M25



Jupiters June 2009 Toronto

C8 @ f20, PGR Flea ccd approx 300-400/1300 stacked/RGB channel

JimChung 06/14 07:45 UT

06/23 09:30 UT

06/24 09:15 UT

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
TW VIR	200906160342	13.3	<		133					8	28cm sc 70
R CRV	200906160348	11.3	<		113					8	28cm sc 175
SS VIR	200906160355	8.5			84	87				8	28cm sc 70
R VIR	200906160400	9.3			93	96				8	28cm sc 70
RU VIR	200906160406	12.2			117	123				8	28cm sc 70
U VIR	200906160411	12.3			121	125				8	28cm sc 70
S VIR	200906160422	12.3			117	125				8	28cm sc 70
R CVN	200906160429	10.2			101	107				8	28cm sc 70
S BOO	200906160442	9.8			85	100				8	28cm sc 70
SU VIR	200906160448	11.7			116	118				8	28cm sc 175
Y VIR	200906160455	12.4			123	124				8	28cm sc 175
RV VIR	200906160501	11.8	<		118					8	28cm sc 175
V VIR	200906160507	12.5	<		125					8	28cm sc 70
SY VIR	200906160513	12.1			116	125				8	28cm sc 70
Z BOO	200906160520	13.5	<		135					8	28cm sc 175
Z VIR	200906160526	13.7	<		137					8	28cm sc 175

1369n 2009-06-21/2 00:00-02:17 EDT Foxmead POD 9 28cm sc ne
Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
BC SER	200906220409	11.8			112	120				9	28cm sc 70
RU HER	200906220417	13.1			128	132				9	28cm sc 175
S HER	200906220432	12.6			125	128				9	28cm sc 70
RT LYR	200906220441	10.5			104	107				9	28cm sc 70
R BOO	200906220457	9.2			90	94				9	28cm sc 70
S SER	200906220504	11.9			118	121				9	28cm sc 70
S CRB	200906220508	12.4			123	125				9	28cm sc 70
R SER	200906220515	12.1			121	124				9	28cm sc 70
T CRB	200906220519	11.0			108	112				9	28cm sc 70
U HER	200906220538	13.1			129	132				9	28cm sc 175
SS HER	200906220544	11.0			109	112				9	28cm sc 70

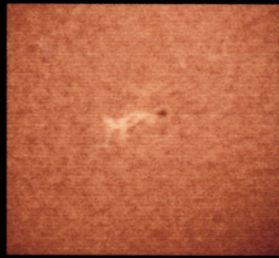
Jupiter:

- 05:55 Obs cam 224x (bino) S13-4
- 1 06:04 Wc avar NTrZ
- 2 06:09 Wp RSH SEBs
- 06:17 Obs. disc poor seeing → 0

Solar Images



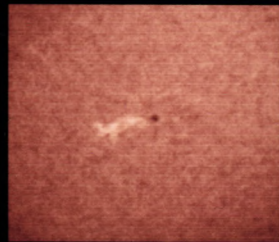
Towa 339 achromatic refractor 80mm f/15
Coronado PST refractor 40mm f/10



AR 1024

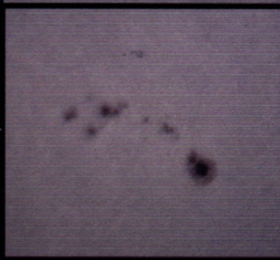
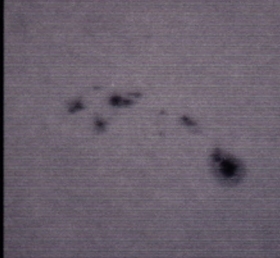
1622 UT

1758 UT



1625 UT

1611 UT



Date: 05 July 2009

Transparency: 4.5/5 haze

Seeing: A III (Antoniadi)

PST f/14.6 1/50 sec, 80mm f/23.6 1/200 sec iso 200

Observer: Denis Fell (www.spacealberta.com)

Location: Wetaskiwin, Alberta, Canada

52.59 north 113.29 west 761 M -7 UT

1370 d 2009-06-24 11:10-11:40 EDT Foxmed deck 9 4cmrr 8cmrr
Sun: In H α (30x) no prominences, but 1 or 2 tiny spots, lots of granulation. Mounted } ST on Celestron NexStar mount, works like a charm!
 In white light (24x) couldn't see spots.

1400-1415 UT

1371 d 2009-07-05 10:00-10:15 EDT Foxmed deck 9 4cmrr 8cmrr
Sun: H α sunspots & associated flare activity. 2 prominences close to 6 o'clock: 1 spike, 1 tiny hedgerow. Black cloth improves contrast enormously 30x
White: nice sunspot group \bar{E} one largish spot \odot about 6 smaller ones 24x

1372 n 2009-07-12/13 22:20-23:55 EDT Foxmed PDD 9 28cm sc
Saturn 175x setting over upper deck, rings very narrow
Doubles: Parrina - low, seeing poor 175x
Deep sky: M4, M80, M62, M107, M10 70x & 175x
Variables:

Name	YY	MM	DD	HH	MM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
W HER	2009	07	13	03	00	12.9			124	133				9	28cm sc 70
AH HER	2009	07	13	03	06	12.6			126	127				9	28cm sc 70
RS HER	2009	07	13	03	11	9.2			83	94				9	28cm sc 70
T HER	2009	07	13	03	16	9.7			97	103				9	28cm sc 70
R OPH	2009	07	13	03	22	11.1			109	114				9	28cm sc 70
RS OPH	2009	07	13	03	27	11.3			110	115				9	28cm sc 70
EM CYG	2009	07	13	03	45	13.5			134	141				9	28cm sc 70

175

Jupiter: Featureless blur @ 175x 23:40
Moon: ~1 day before 3rd Quarter 70x & 175x

Jim Chung:



Jupiter & Io with dual transit of Europa & Ganymede (left to right) 08282009
C8 @ f20, PGR Flea ccd @ 15 fps, stacked 200/650 frames per RGB channel

1373n 2009-08-12/13 22:15-01:10 EDT Foxmead PAD dock 8 28cm sc
 Antares; Sebastian Orero posted on AAUSO list that
 Antares is remarkably faint currently - confirmed
 Jupiter 224x binoculars - just too late to see impact
 scar in SPR

M15 M13

Variables:

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
U HER	2009 08 13 03 22	11.3		110	114				8	28cm sc 70
SS HER	2009 08 13 03 30	10.0		95	104				8	28cm sc 70
W HER	2009 08 13 03 33	11.5		113	124				8	28cm sc 70
T CRB	2009 08 13 03 38	10.5		102	106				8	28cm sc 70
R SER	2009 08 13 03 43	9.5		95	105				8	28cm sc 70
S CRB	2009 08 13 03 47	9.7		96	107				8	28cm sc 70
S SER	2009 08 13 03 50	10.4		102	116				8	28cm sc 70
AH HER	2009 08 13 03 57	12.6		126	127				8	28cm sc 70
RS HER	2009 08 13 04 02	10.3		99	107				8	28cm sc 70
T HER	2009 08 13 04 05	10.8		105	110				8	28cm sc 70
RS OPH	2009 08 13 04 12	10.4		103	110				8	28cm sc 70

Jupiter 224x binoculars - higher, very clear, few trouble
 features

Perseids ~~at~~ 12:44-01:06 15 Perseids & 1 sporadic in
 22 minutes. Many Perseids were long & fast &
 left white trains which lasted a fraction of
 a second. Sporadic short path in Cygnus going
 towards Perseus. 3/4 Moon interfering - lay on
 west deck to block it.

1374n 2009-08-26/27 21:00-01:05 EDT Foxmead PAD 28 cm sc

Jupiter: Transit of Europa & Ganymede & their shadows

Deep sky: Sagittarius Messiers, Saturn (small bright) & Helix (huge
 faint, needs QIII filter), both halves of veil, M31, 32, 110, 76
 39, 15, NGC 7331, 424, etc. etc.

Orion eyepieces

I recently received two of Orion's newer eyepieces for testing purposes: a Stratus 24mm and an Edge-On Planetary 5mm. These are two of my most used focal length eyepieces, so serve as a good test for their respective series.

Stratus 24mm

I've always been a bit concerned over an eyepiece series named for a type of cloud. However I've heard good things about this series, and have long wanted to test one.

The Stratus series is unusual in being useable in both 2" and 1.25" focusers. There is a normal 1.25" barrel, but the lower part of the main body of the eyepiece is 2" in diameter, and so fits perfectly in 2" focusers. Since the Stratus series covers a wide range of focal lengths, it means that you can switch eyepieces in any telescope without fiddling around with adapter rings.

Stratus eyepieces are available in 24mm, 21mm, 17mm, 13mm, 8mm, 5mm, and 3.5mm focal lengths. All offer a 68° field of view and 20mm eye relief, with the exception of the 24mm which has only 15mm eye relief. The eyepieces are finished in a matte black, with knurled rubber grips.

The 24mm is a particularly useful focal length because it offers just about the widest actual field of view possible in a 1.25" eyepiece, delivered at a high magnification so that contrast with the background sky is maximized. For many years I have used a Meade Super Wide 24.5mm eyepiece to fulfill this function, so naturally that was the main eyepiece I compared the Stratus with.

The telescope used for these tests was a Starmaster 11" f/4.3 Newtonian equipped with a Tele Vue Paracorr coma corrector. This lengthens the focal length by 15% but corrects all aberrations, delivering an aberration-free f/4.9 image. This is an "acid test" for eyepieces, as most are not designed to function well at focal ratios as short as f/5. If an eyepiece does well at f/5, it will be excellent in just about any telescope.

My main test for eyepieces is to examine a critical image at both the center of the field of view and at the very edge of the field of view. Both images should be identical; I look particular for a variety of aberrations: chromatic, spherical, defects in contrast, etc.

The Stratus 24mm passed all of these tests with flying colors. It was noticeably better than the Meade eyepiece at the edge of the field, where the Meade lost color and contrast. It's worth noting that the Meade eyepiece, now discontinued, cost twice as much as the Stratus does.

In the 11" Starmaster, the 24mm yielded a pleasing 58x: powerful enough to show detail in galaxies but with an actual field of 1° 11', putting the objects in context. As I said, this is one of the most useful combinations of focal length and field of view.

If the rest of the Stratus series is comparable to the 24mm, this makes an excellent choice for a high-quality eyepiece with a wide field of view.

Edge-On Planetary 5mm

It used to be that using a 5mm eyepiece for planetary observation was literally a pain. Classic designs like the orthoscopic and Plössl had an eye relief so short that the observer needed to cram their eye into the eyepiece to even begin to see its rather narrow field of view. About ten years ago a series of new designs incorporating Barlow elements changed all this, allowing comfortable eye relief so that anyone, even with glasses, could observe in a relaxed manner.

Orion's new design represents the next generation of these comfortable short-focus eyepieces. Like the latest designs of ED refractors, it has a classy high-tech look with a gleaming black anodized finish. As expected, it delivers a bright, high contrast image, which can be viewed in total comfort thanks to its 20mm eye relief and large eye lens. It has a moderate 55° field of view, larger and far better corrected than any Plössl. This series of eyepieces is available in 14.5mm, 12.5mm, 9mm, 6mm, 5mm, and 3mm focal lengths.

I tested it in my 11" Starmaster the same way I tested the 24mm Stratus. Once again, the image was identical whether in the center or at the edge of the field of view. This eyepiece produced 276x magnification, which proved to be the perfect magnification for Jupiter. It passed one of the best subjective tests of an eyepiece: within seconds I'd forgotten it was even there, and was totally absorbed in the detail visible in Jupiter's atmosphere. Once it was in the focuser, I really didn't want to take it out...ever!

These two series of eyepieces are representative of what is now possible with computer-designed eyepieces manufactured with care in the Far East. They outperform even the most expensive eyepieces of a decade ago and yet sell for prices a fraction of the so-called premium brands. Truly, we have never had it so good!

Variables:

Name	YYYYMMDDHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S HER	200908270128	10.7		105	111				8	28cm sc 70
RU HER	200908270135	12.4		124	126				8	28cm sc 70
BC SER	200908270142	10.8		99	112				8	28cm sc 70
Z BOO	200908270152	12.4		123	124				8	28cm sc 70
EM CYG	200908270216	13.8		134	138				8	28cm sc 175
CHI CYG	200908270224	12.1		120	125				8	28cm sc 70
R VUL	200908270350	12.0		119	123				8	28cm sc 70
RU PEG	200908270355	12.5		125	127				8	28cm sc 175
R PEG	200908270404	12.5		123	131				8	28cm sc 70
SS CYG	200908270409	12.0		119	121				8	28cm sc 70

Temp.: 5.9°C!

1375 e 2009-08-30/31 20:45-23:25 EDT Formed Pod/disk 8-3 28cm sc
Testim Orion eyepieces in Starmaster c Paracorr: 24mm Stratus
& 5mm Edge-On Planetary. CF.
24mm 68° 58x 4.8mm 10" \$133 ~~Paracorr 24 \$310~~ Meade SWA 24x5
5mm 55° 276x 1.0mm 12" \$103 Radian 5 \$250

Jupiter ←

24 Stratus vs Meade: Meade loses contrast at edge of field
Stratus shows slight chromatic aberration at edge. Stratus
cooler, higher contrast. Both sharp on eye relief.
Edge-On vs Radian. Edge-On cooler. EO has less
ghosting. Excellent contrast & sharpness right to edge
of field. Very comfortable.

131 & 32 excellent contrast despite gibbous Moon. in Jupte
Comparison of 11" Starmaster & 11" Celestron: detail is
much finer, sharper, and more contrasty in the Starmaster.
Using 5mm Edge-On in SM (276x) & 11mm Nagler in Set (255x)

PTO

Variables:

Name	YYYYMMDDHHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S SER	200908310156	9.9			83	102			8	28cm sc 70
R BOO	200908310204	9.1			90	94			8	28cm sc 70
S CRB	200908310207	7.4			69	84			8	28cm sc 70
R SER	200908310214	7.0			61	73			8	28cm sc 70
T CRB	200908310219	9.9			99	102			8	28cm sc 70
U HER	200908310300	11.4			114	119			8	28cm sc 70
SS HER	200908310311	12.4			114	124			8	28cm sc 175

Jupiter:

3 02:36 Wp oval NEBs

4 02:48 Wc oval NEBs

5 03:04 WF oval NEBs

6 03:13 Dc proj NEBs

03:25 Obs. disc

Temp: 6.3°C

1376e 2009-09-2/3 20:45-22:20 EDT Foxmed POD black 28cm sc & 8cm rr

Jupiter exquisite in Orion 80ED refractor @ 120x & 150x

- beautiful transit of GRS - spot visible but no colour. Pale pink in 28cm sc. Image in 28cm looks trilobed, nowhere near as sharp as in 8cm.

Moon near full

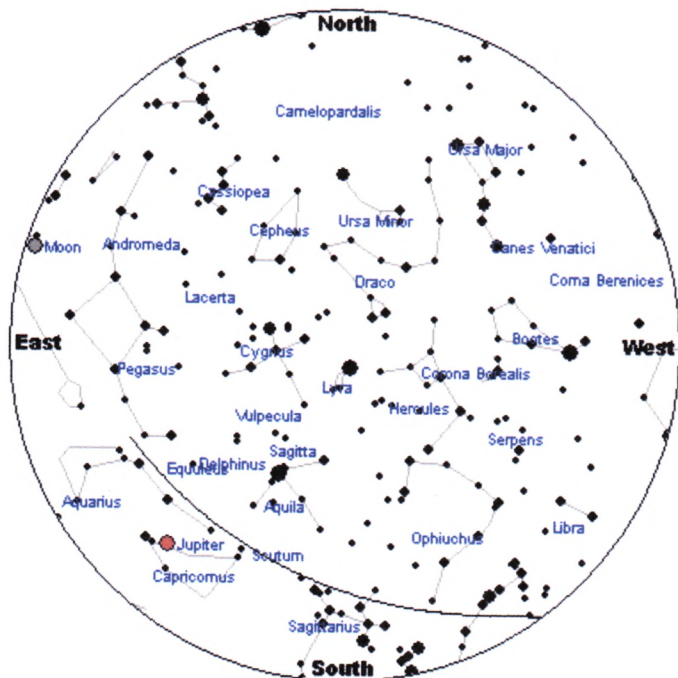
Neptune & Uranus in 28cm Uranus tiny & bright, blue white, Neptune tiny & faint, blue green 255x Temp 10.9°C

1377d 2009-09-04: 16:10-16:15 EDT Foxmed black 4cm rr

Sun: one tiny prominence @ 9 o'clock, A lot of granulation on Sun, but no spots.

1378e 2009-09-04/05 21:30-22:15 EDT Foxmed POD 3-2 28cm sc

Mars & Jupiter trying to eliminate "ticking" in azimuth drive by rotation mount 120° & 240° clockwise on tripod - no luck!



Pass Details

Date: Monday, 07 September, 2009
 Satellite: ISS
 Observer's Location: Coldwater (44.7170°N, 79.8170°W)
 Local Time: Eastern Daylight Time (GMT - 4:00)
 Orbit: 341 x 354 km, 51.6° (Epoch 06 Sep)
 Sun altitude at time of maximum pass altitude: -12.8°

Event	Time	Altitude	Azimuth	Distance (km)
Rises above horizon	20:49:59	0°	216° (SW)	2,119
Reaches 10° altitude	20:52:05	10°	206° (SSW)	1,286
Maximum altitude	20:54:40	31°	141° (SE)	625
Enters shadow	20:55:19	28°	113° (ESE)	685

1379e 2009-09-07/08 20:45-22:55 EDT Foxmed POD 8-3 28cm sc ne
 Jupiter GRS in transit 175x
 ISS + Shuttle nice pass ←
Variables:

Name	YYYYMMDDHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	Sky	Aper	Magn
W HER	2009 09 08 01 14	9.6			86	98		B		8	28cm	70
AH HER	2009 09 08 01 18	12.7			126	127		B		8	28cm	70
RS HER	2009 09 08 01 22	10.7			99	112		B		8	28cm	70
T HER	2009 09 08 01 28	12.4			122	129		B		8	28cm	70
RS OPH	2009 09 08 01 35	11.0			110	115		B		8	28cm	70
EM CYG	2009 09 08 01 45	13.4			131	130		B		8	28cm	175
CHI CYG	2009 09 08 01 55	10.7			104	107		B		8	28cm	70
R VUL	2009 09 08 02 07	12.6			123	126		B		8	28cm	175
RU PEG	2009 09 08 02 41	12.5			120	125		B		8	28cm	175
R PEG	2009 09 08 02 46	11.0	<		110			B		8	28cm	70

Temp 12.4°C

1380d 2009-09-16 11:25-11:35 EDT Foxmed Deck 8 4cm r r
 Sun: hedge row prominence @ 6 o'clock 33x

1381e 2009-09-18/19 20:40-22:10 EDT Foxmed POD 9 28cm sc
 Jupiter: 175x
Variables:

Name	YYYYMMDDHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	Sky	Aper	Magn
X PEG	2009 09 19 00 58	9.8			90	99				9	28cm	70
RR PEG	2009 09 19 01 04	10.2			102	105				9	28cm	70
V PEG	2009 09 19 01 11	13.5			127	136				9	28cm	70
RT PEG	2009 09 19 01 18	12.7			124	129				9	28cm	175
RZ PEG	2009 09 19 01 25	12.3			119	123				9	28cm	70
T PEG	2009 09 19 01 30	13.8	<		138					9	28cm	70
Y PEG	2009 09 19 01 36	12.0			120	124				9	28cm	70
RS PEG	2009 09 19 01 44	12.8			123	128				9	28cm	70
RW PEG	2009 09 19 01 48	9.7			97	99				9	28cm	70
W PEG	2009 09 19 01 52	10.3			102	103				9	28cm	70
S PEG	2009 09 19 01 57	11.6			115	122				9	28cm	70
Z PEG	2009 09 19 02 01	12.5			123	125				9	28cm	70
T ARI	2009 09 19 02 05	8.6			86	90				9	28cm	70

Temp: 3.9°C

The Department
of
Physics and Astronomy
The University of
Western Ontario

Meteor Physics

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Fireball Events

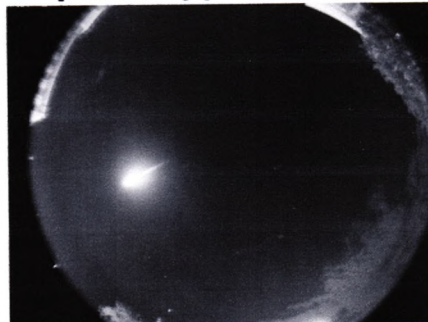
The Grimsby Meteorite [25-Sept-2009]

Overview of the Event

At 9:03 pm on Friday night September 25, 2009 (01:03 UT Sept 26) seven all-sky cameras of Western's Southern Ontario Meteor Network (SOMN) recorded a brilliant fireball in the evening sky over the west end of Lake Ontario.

The fireball was seen widely by observers throughout southern Ontario and adjacent areas. The fireball was first detected by Western's camera systems at an altitude of 100km over Guelph moving southeastwards at 20.8 km/s. The meteoroid was initially the size of a child's tricycle. At its brightest, the fireball was approximately 100 times as bright as the full moon.

Composite photo [\[click to enlarge\]](#)



Composite all-sky camera image of the end of the fireball as seen from Hamilton (Camera #3, McMaster). Available below are movies of the event as seen by several of the SOMN cameras, as well as animations of the object's arrival at Earth. [\[click to enlarge\]](#)

Analysis of the all-sky camera records as well as data from Western's meteor radar and infrasound equipment indicates that this bright fireball was large enough to have dropped meteorites in a region south of Grimsby on the Niagara Peninsula, providing masses that may total as much as several kilograms.

[Research Activities](#)

MORE ⇒

1382e 2009-09-20/21 20:15-22:00 EDT Foxmed POD⁹ 28cm sc
 Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
DX AND	2009 09 21 00 36	15.2	<		152					9 28cm sc	175
Z AND	2009 09 21 00 43	9.7			92	98				9 28cm sc	70
X AND	2009 09 21 00 53	13.4	<		134					9 28cm sc	70
R AND	2009 09 21 00 58	9.0			93	95				9 28cm sc	70
RX AND	2009 09 21 01 01	12.0			118	122				9 28cm sc	70
RY AND	2009 09 21 01 08	13.2	<		132					9 28cm sc	70
ST AND	2009 09 21 01 12	9.7			95	102				9 28cm sc	70
HP AND	2009 09 21 01 17	14.0	<		140					9 28cm sc	175
T AND	2009 09 21 01 20	12.4			120	125				9 28cm sc	70
RW AND	2009 09 21 01 23	10.5			103	109				9 28cm sc	70
V AND	2009 09 21 01 29	11.2			112	116				9 28cm sc	70
RR AND	2009 09 21 01 35	13.5			133	136				9 28cm sc	175
U AND	2009 09 21 01 41	10.1			96	101				9 28cm sc	70
RU AND	2009 09 21 01 46	11.8			114	118				9 28cm sc	70
Y AND	2009 09 21 01 49	11.1			110	117				9 28cm sc	70
W AND	2009 09 21 01 52	9.2			92	98				9 28cm sc	70
UY AND	2009 09 21 01 56	11.3			110	114				9 28cm sc	70

1383e 2009-09-25/26 19:30-22:20 EDT Wye Marsh plng lot 8 15 cm sc
 "Backyard Astronomy 101" evening at Wye Marsh ~ 12 participants.

Jupiter, Maen, M57, M11, M31, M13, Albireo
 Bright Fireball near S horizon ~ 21:00.

1384d 2009-10-18 12:30-12:40 EDT Foxmed deck 8 4cm rr
 Sun: 30x 4 prominences @ 12 o'clock, 1 at 9 o'clock

1385d 2009-10-19 11:50-12:00 EDT Foxmed deck 8 4cm rr
 Sun: 30x 7 prominences @ 12:00-1:00, 1 at 9 o'clock

1386d 2009-10-25 10:30-10:45 EDT Foxmed deck 8 4cm rr 8cm rr
 Sun: 30x 5 proms @ 9 o'clock, 3 proms @ 12 o'clock, spots & flare just S of centre of disk. Spots visible in 8cm rr @ 24x.



Stamford Hearing Clinic
Hearing is Happiness

NEWS LOCAL

Grimsby meteorite found

MATTHEW VAN DONGEN/Sun Media
Thursday, October 15, 2009 10:37:08 EDT PM

GRIMSBY - The Grimsby meteorite has been found.

But the space race is far from over, said Phil McCausland, an astrophysicist at the University of Western Ontario.

"Now it will get busy out here," McCausland predicted on Thursday, hours after searchers announced they had found a meteor fragment the size of a golf ball in Grimsby. "I would say now interest in meteor hunting is going to peak."

Scientists have scheduled a news conference for Friday to show off the fragment of space rock, which apparently hurtled into the windshield of a Grimsby family's sport utility vehicle on Sept. 25.

McCausland said heavy media coverage helped the as-yet unnamed family "connected the dots" between their mysteriously smashed windshield and the meteor that streaked across the skies of southern Ontario three weeks ago.

The fireball was first picked up by cameras operated by the University of Western Ontario's physics and astronomy department 100 kilometres above Guelph as it streaked southeastward at a speed of about 75,000 km/h.

Scientists released that footage Oct. 7 and began searching a 12-square-kilometre area near Grimsby where they thought the meteor fell.

Only about a dozen meteorite falls in history have been so well-documented from start to finish, McCausland said.

He wouldn't say exactly where the rare fragment landed. "But it ended up in the area where we thought it would end up, which is great," he said.

Now, the search is on for larger chunks of meteor debris that McCausland hopes are nearby.

"There is more to find, definitely," he said Thursday by phone from a field in Grimsby. "I think kilogram-sized fragments are still in the cards."

That's why scientists continued to scour the area non-stop, even as academics back at the university study the newly found fragment on loan.

McCausland expects more help in the search now from scientists and other astro-enthusiasts - but also competition from less academic-minded collectors.

"We think this is just the first find. We'll be out here until the snow starts sticking to the ground," he said.

McCausland said searchers would still welcome information from residents who witnessed the plummeting meteorite on Sept. 25.

He can be contacted at pmccausl@uwo.ca.

2009-10-30 rec'd Orion 120mm EQN ED refractor

2009-11-04 rec'd Orion 76mm reflector "Fun Scope" for testing

2009-11-06 delivered Townsend Memorial Lecture to MTL Centre:
Cosmic Birdwatching

1387 d 2009-11-08 10:00-10:20 EST Foxmead W deck / S deck @ 7.6cm r 4cm r r
Moon: testing 76mm r l 20mm ~~15x~~ (15x) OK, 10mm (30x) blurry
Sun: 4cm r r helge row on 12 o'clock limb e' dark notch to left
no spots.

1388 e 2009-11-09/09 17:30-17:40 EST Foxmead W deck @ 7.6cm r l
Jupiter @ ~~15x~~ 15x, 30x, 60x (6m ortha) - scope needs collimation
much coma! Moons visible, but no belts.

~~1389~~

1389 e 2009-11-09/09 18:30-20:55 EST Foxmead obs @ 28cm s c 7.6cm r l
Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
RU PEG	2009 11 08 23 49	12.7			125	127				9	28cm s c 175
R PEG	2009 11 08 23 55	10.7			106	110				9	28cm s c 70
DX AND	2009 11 09 00 03	15.9	<		159					9	28cm s c 175
Z AND	2009 11 09 00 07	9.1			91	92				9	28cm s c 70
X AND	2009 11 09 00 18	10.2			96	103				9	28cm s c 70
R AND	2009 11 09 00 22	9.6			95	97				9	28cm s c 70
RX AND	2009 11 09 00 30	14.3	<		143					9	28cm s c 70
T ARI	2009 11 09 01 28	8.6			86	90				9	28cm s c 70
R TRI	2009 11 09 01 32	9.7			97	101				9	28cm s c 70

- a2 motor still clicking & jumping, even after update in MC software
to 5.14

- Fun Scope: M45, M31 & B2, Double Cluster

+4°C

Sun



- 1390d 2009-11-11 11:20-11:25 EST Foxmead S deck 9 4cmrr
Sun: 2 small prominences @ 2:30 o'clock - bright area on disk
- 1391e 2009-11-12/13 21:10-21:20 EST Foxmead W deck 9 7.6cmrr
Jupiter 15x + 30x moons, no bands
Albiree @ 30x
Vega @ 30x -2.5°C
- 1392e 2009-11-13/14 17:40-17:50 EST Foxmead W deck 8 8cmrr
 Testing Orion 80mm GoScope achromatic refractor
Jupiter @ 18x, 35x, 58x (6mm ortho) - belts not visible, image looks pale green
- 1393e 2009-11-13/14 19:00-21:15 EST Foxmead Obs 8 28cm SC
 Orillia Stars star party: Donald McDonald & Mark Rieckenberg
 Jupiter, M15, MGC 7331, M11, Helix, Saturn Nebula, M31, M33, M76,
 Double Cluster, M35, M36, M37, M38, M1, M42, +5.5°C
- 1394d 2009-11-16 12:40-12:45 EST Foxmead S deck 8 4cmrr
Sun: 30x small dog-shaped prominence group @ 2 o'clock ←
- 1395e 2009-11-16/17 19:55-20:40 EST Foxmead W deck 8 8cmrr
 Testing GoScope @ 18x + 47x (7.4mm Plössl)
Jupiter: can see NEB @ 47x
Albiree: nicely split @ 18x
ε Lyrae: can't split pairs @ 47x
M57: too small @ 47x to distinguish from stars
 Testing Fun Scope @ 18x + 47x
Jupiter: smeared @ 41x
Altair: star test @ 41x shows severe undercorrection!

1396d 2009-11-18 14:10-14:15 EST Foxmed ^S deck 8 8 cm rr
Sun: 2 active regions on disk, "dog" prominence

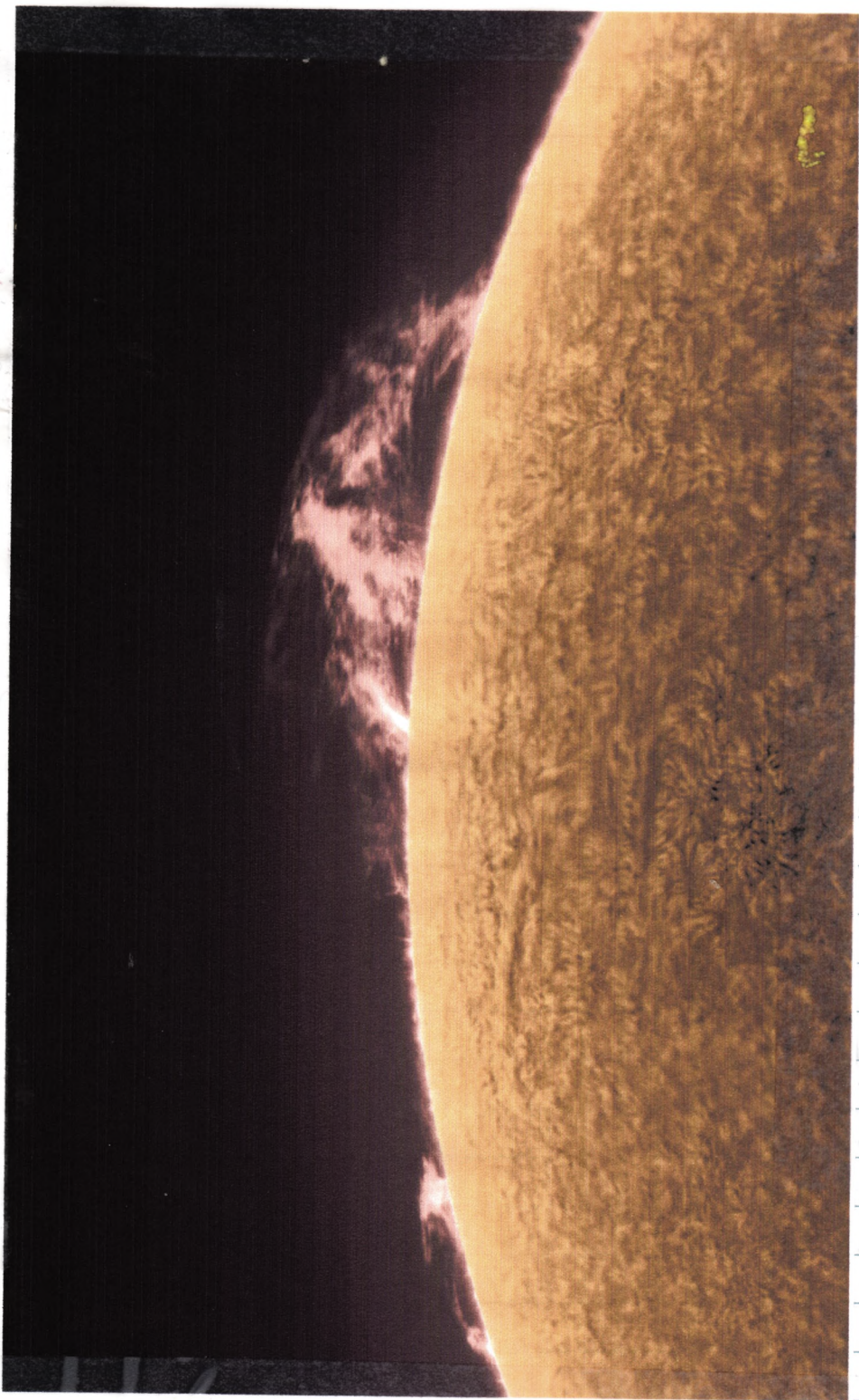
1397e 2009-11-18/19 17:10-17:30 EST Foxmed S deck 8 12 cm rr
First light \bar{c} 120 mm Eon refractor
Jupiter: beautiful @ 180x - much detail in NEB. $\pm 6.3^\circ\text{C}$

" 18:30-19:45 EST Foxmed S deck 9 12 cm rr
Jupiter BSH visible, but not RS @ 180x (Orion Planetary)
Deep sky: M11, M45, M31, M32, M110, M33, Almach (16m), 30 Arctis,
E Pegasus, M15. Mostly 40mm & 16mm. (82x & 56x)
Images are crisp & level. Sirius mount is accurate & quiet.
 $\pm 4.6^\circ\text{C}$

1398e 2009-11-30/12-01 18:00 EST Foxmed W deck 8 - 15 cm rr
Testing Galileoscope: 50m f/10 achromatic refractor \bar{c} 20mm Plössl
eyepiece. Quick glimpses of Jupiter & Moon through passing
clouds. Image ~~is~~ shows no chromatic aberration. Sliding
focuser doesn't work well - a lot of play.

1399e 2009-12-04/05 21:05-21:10 EST Foxmed living room 8 5 cm rr
Jupiter @ 25x & 50x in Galileoscope. Nice crisp image, only
colour is atmospheric refraction, NEB just visible.

1400m 2009-12-04/05 07:05-07:15 ^{07:30} EST Foxmed living room 9 5 cm rr
Moon @ 50x \bar{c} Orion 10mm & Gal. 20mm + Barlow. Macalup, 20mm
+ Barlow hard to focus, huge eyerelief. Changing eyepieces
very tricky because of tight fit, & looseness of focusing
tube in main scope. Much better \bar{c} Orion 10mm. Best \bar{c} 20mm
G. eyepiece.




1401 m 2010-01-20/21 04:00-04:05 Foxmed between 9 ne
- checked N & E sky for possible aurora - negative

1402 d 2010-03-07 15:30-15:45 EST Foxmed obs 8 4cm rr 8cm rr
Sun: 3 proms @ 6:00 o'clock. large filament. No spots in
white light. $+7.1^{\circ}\text{C}$

1403 e 2010-03-07/08 19:50-20:45 EST Foxmed POD 8 28cm se
Mars, Saturn, PSOs, doubles -0.5

22:00-22:10 10x50b
Saturn, Vega -1.0

1404 d 2010-03-17 12:45-12:55 EDT Foxmed obs. 4cm rr
Sun: large prominence @ 7:00, small one @ 2:00 $33\times$
 $+12.7^{\circ}\text{C}$

1405 e 2010-03-21/22 19:30 EDT W deck 8 NE
Venus: seen first time as "evening star"

20:50-20:55 EDT W deck 10x50b
Mars, Hyades, Pleiades, M42 -1.7°C

1406 d 2010-03-22 11:55-12:05 EDT Foxmed S deck 3 4cm rr 8cm rr
Sun: 2 proms @ 4:00, heliogram @ 8:00, single spot $33\times$ in 4cm rr
white: 1 spot, tiny but intense $24\times$ $+8.3^{\circ}\text{C}$

1407 e 2010-03-29/30 19:40-20:40 EDT Foxmed W deck 8 10x50b
Moon: Full Moon rising blood red in trees. Mars very red
overhead. Venus & Mercury in west. 0°C

1408m 2010-04-03 07:00^{EDT} ³ Farned E deck ne 1x50 b
 Looked for Jupiter in sunrise sky, but view blocked by
 thin high clouds. 10°C

1409e 2010-04-05/06 20:00-23:10 EDT Farned 8-B Various
Venus & Mercury ne, 1x50 b, 7.6cm x 175x
Saturn & Mars 28cm sc, 8cm rr
Algebra 28cm sc 70x
Variable Stars

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
V1159 ORI	201004060125	13.0	<	124	130				8	28cm sc 175
SU TAU	201004060134	13.7	<	131	137				8	28cm sc 175
U ORI	201004060149	7.5		67	80				8	8cm rr 32

M42, M45, M41 28cm sc 8cm rr
 mounted 8cm achro. on piggy back mount
 6.5°C

Mars is fine, but MPC clearly visible @ 175x. Saturn's rings
 are a thickish needle through the disk & a hairline
 shadow on the globe. Rings are visible @ 32x in 8cm
 rr.

1412e 2010-04-18/19 20:40-22:40 EDT Farned S deck tabs. 8 ~~8~~ 28cm sc
Mars, Saturn, M42
Variables

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
IR GEM	201004190155	13.5	<	125	135				8	28cm sc 175

Very frustrating - 28cm sc was not working properly - most
 got as were 5 or 6° off. Removed 8cm rr as I thought this
 might be cause.

Cor Cordi	19.4"	2.9	5.5	8cmrr 32x
Mizar	14.4"	2.3	4.0	8cmrr 32x
Algieba	4.4"	2.2	3.5	10cmrr 25x
Izar	2.8"	2.4	4.9	13cmrr 30x
Porrma	1.5"	3.5	3.5	28cmSC 175x

1411e 2010-04-19/20 22:00-23:45 EDT Faxed S deck & PAD 8 Camr 28csc.
 - much better than last night - CPC 1100 performed
 flawlessly.
 Double stars

x Mizar ~~2.8"~~ 14.4" 2.3m 4.0m 709" 4.0m (Alow)

x Izad 2.8" ~~2.2m 3.5m~~

✓ Algjeda 4.4" ✓ 2.2m 3.5m

~~Dikem 19.4"~~

x Cor Caroli 19.4" 2.9 5.5

✓ Rorrima - just barely @ 175x in 28csc 3.5m 3.5m 1.5" ✓

Delta Carvi 24.2"

1412d 2010-05-03 11:20-11:35 EDT Faxed S deck 9 4cmrr 8cmrr
Sun: 4 small prominences on right limb. No spots in
 white light in 80mm Go Scope rr @ 18x

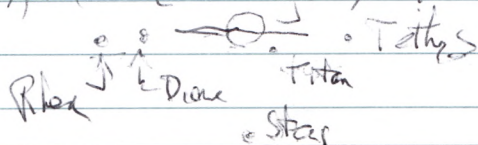
1413d 2010-05-10 11:45-11:50 EDT Faxed S deck 8 4cmrr
Sun: 1 medium prominence @ 80°c, 1 spike @ 90°c, a few whiskers
 @ 30°c 32x

1414d 2010-05-16 12:00-12:10 EDT Faxed S deck 9 4cmrr
Sun: medium hedges @ 40°c, small prom @ 70°c 32x

1415e 2010-05-16/17 22:30-00:41 EDT Faxed obs. 8 28csc
 Variables (Pro)

Messiers: M104, M61 (face on spiral), M49 (face on spiral), M60
 (face on spiral) M59 (blob), M83 (nucleus & hint of stuff
 at end), M68 (faint glow) 70x

Saturn





Name	YYYYMMDDHHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R LMI	2010 05 17 02 59	10.8		108	111				8	28cm sc 70
R LEO	2010 05 17 03 02	9.2		92	98				8	28cm sc 70
X LEO	2010 05 17 03 08	13.8 <		138					8	28cm sc 175
TW VIR	2010 05 17 03 25	13.9		137	143				8	28cm sc 175
R CRV	2010 05 17 03 33	13.1		129	131				8	28cm sc 175
RU VIR	2010 05 17 03 43	10.6		103	106				8	28cm sc 70
U VIR	2010 05 17 03 48	11.3		111	113				8	28cm sc 70
R HYA	2010 05 17 03 53	9.1		91	98				8	28cm sc 70
S VIR	2010 05 17 03 56	10.9		109	110				8	28cm sc 70
SU VIR	2010 05 17 04 12	13.4 <		134					8	28cm sc 175
Y VIR	2010 05 17 04 16	11.6		115	124				8	28cm sc 70
RV VIR	2010 05 17 04 22	13.9 <		139					8	28cm sc 175

1416d 2010-05-19 12:15-12:20 EDT Foxmed S deck 8 4 cm r/r
Sun: No prominences but two nice filaments in lower
right quadrant. 32x

1417e 2010-05-28/29 23:00-23:30 EST Foxmed W deck ⁴ 10x50b
E+V: Lunar basins - all 12! - Moon 1 day past Full
Impact craters: Petavius, Plato, Tycho, Copernicus, Cassini
(Aristarchus)
Phase: Waning Gibbous beautiful orange Moon low
17.2d 93% in the Southeast
Observed Venus ~ 21:00 in twilight
Observed Jupiter @ 04:45 in morning twilight

1418m 2010-06-04 08:10 EDT Foxmed W deck 3 ne 10x50b Canon DSLR
← Moon: observed at last quarter (6:13 pm twilight) in hazy
blue sky - contrails, ne + 10x50b 21.7d 54%

1419m 2010-06-06/07 05:20 EDT Foxmed bedroom window 8 ne
Moon: waning crescent in dawn sky 24.4d 27%

1420d

2010-06-07 11:40-11:50 EDT Foxmead S deck 8/3 4 cmrr
Sun: Neg spots, 4 prominences @ 3 o'clock - 4 o'clock, including a
nice double prominence & 1 prom @ 9 o'clock 32x

1421e 2010-06-07/08 22:20-22:30 EDT Foxmead W deck 8 10x50b ne

ETU Solar System:

Mars: Located close to and northeast of Regulus in Leo, east of line joining Regulus and Algieba. Noticeably red in colour compared to Regulus. ne 10x50b

Saturn: Located in Virgo south of Denebola in Leo. ne 10x50b

ETU Constellations:

Ursa Major: Big Dipper almost overhead. Identified Dubhe and Merak (pointer stars). ne

Leo: Sickle and right angled triangle low in west. Identified Regulus and Denebola. ne

Bootes: Followed arc of Big Dipper's handle: "arc to Arcturus." Identified kite shape. ne

Virgo: "Sped on to Spica." Large rambling constellation, few bright stars. ne

Libra: Two stars to left of Spica: Zuben Eschamali above and Zuben El Genubi below. ne 10x50b

ETU double stars:

Mizar and Alcor: Easy in binoculars, not possible ne.

Alpha Librae: Easy in binoculars, unequal in brightness.

1421e 2010-06-07/08 22:55-23:30 EDT Foxmead E deck 8 10x50b ne

Ursa Major: Head of Bear identified. ne

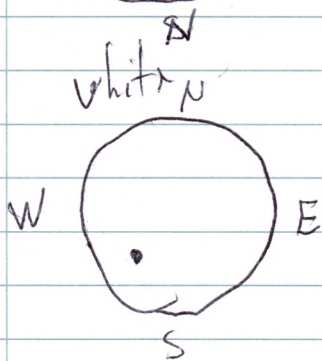
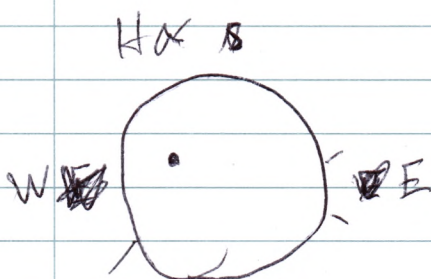
Ursa Minor: Polaris identified with pointers from Ursa Major. 6 of 7 stars visible ne, Eta Ursae Minoris needed 10x50b

Mu Bootis: Secondary is south of primary, and fainter. Difficult with 10x50b because hard to hold steady.

Messier 5: spotted accidentally while sweeping. Alpha and Beta Librae point to it. 10x50b

W deck

Zeta Leonis: 10x50b 35 Leonis is on the far side of Zeta from Regulus,



1422m
~~1422m~~

55

2010-06-14/15 03:35-03:55 EDT Foxmed bathroom N 8 70x50b
Looking for Comet McNaught. By the time I got the location right, there were light clouds in the area and I couldn't see it.

04:03 Now @ exact position & cloudy more I can see stellar pseudonucleus @ magnitude 5.4 based on stars in neighborhood in Starry Night Pro. Earlier misidentification was M34 (much larger in size & brighter).

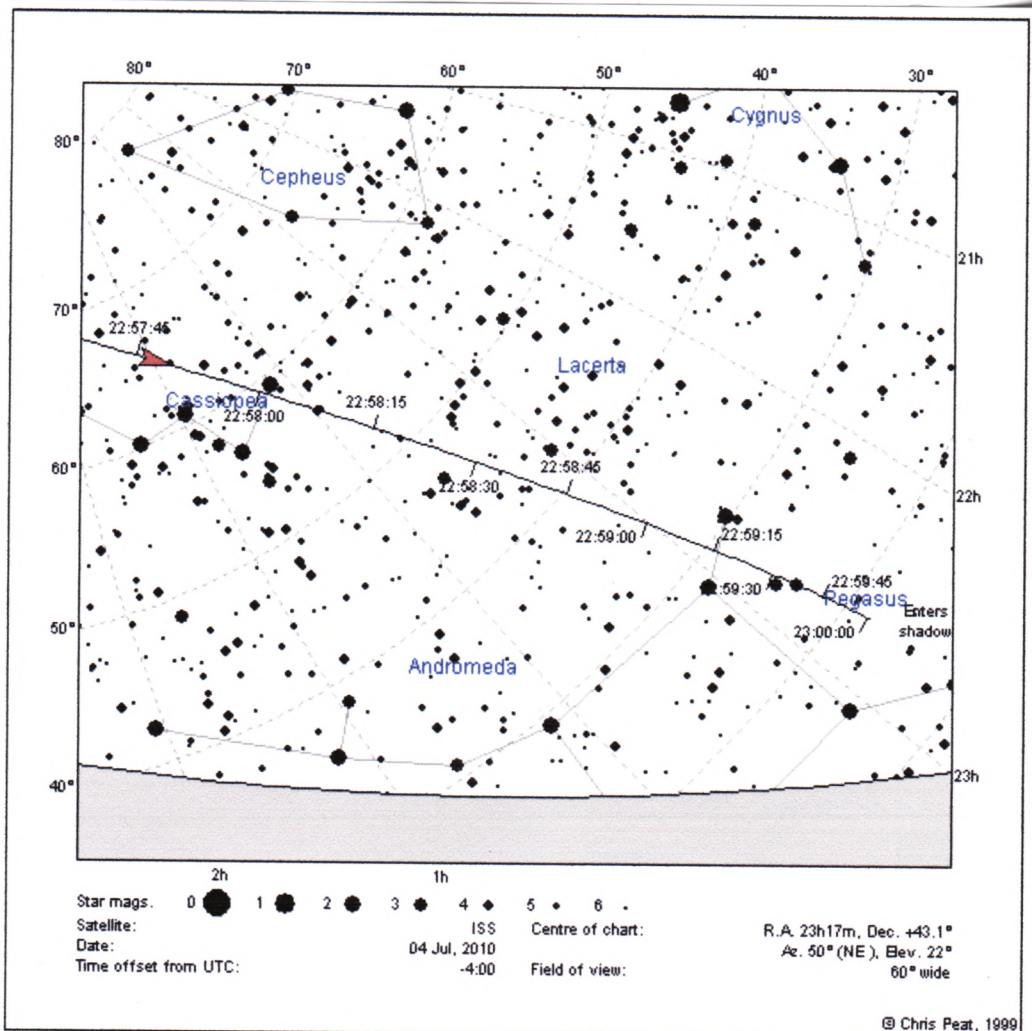
1423e 2010-06-17/18 23:00 EDT Foxmed living room 8ne.
Moon: waxing crescent

1424e 2010-06-18/19 23:00 EDT Foxmed living room 8ne.
Moon: first quarter (00:29 EDT)

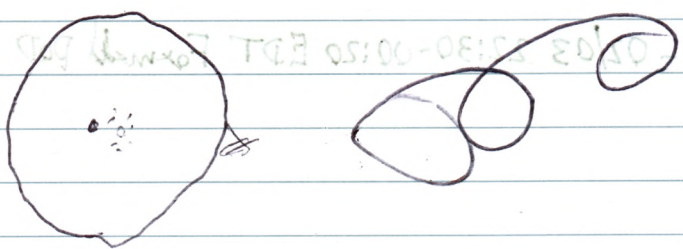
1425d 2010-07-02 11:30-11:40 EDT Foxmed S deck 8 4cmrr & 8cmrr
Sun - prominences @ 2:30, 3:30, 7:00, all small
- small sunspot in SW quadrant, bright lines circling it in H α

1426e 2010-07-02/03 22:30-00:20 EDT Foxmed P&D 8 28cmSC

Name	YYMMDDHHMM	Mag <	Un	Co 1	Co 2	Co 3	C codes	Codes exp	Sky	Aper	Mag n
V BOO	2010 07 03 03 05	9.2		92	99				8	28cmSC	70
R BOO	2010 07 03 03 11	11.7		113	117				8	28cmSC	70
S SER	2010 07 03 03 15	11.8		116	118				8	28cmSC	70
S CRB	2010 07 03 03 21	12.8		126	134				8	28cmSC	70
R SER	2010 07 03 03 26	12.4		121	124				8	28cmSC	70
T CRB	2010 07 03 03 34	10.9		106	112				8	28cmSC	70
U HER	2010 07 03 03 42	13.0		118	132				8	28cmSC	175
SS HER	2010 07 03 03 48	9.4		90	95				8	28cmSC	70
W HER	2010 07 03 03 53	9.7		86	98				8	28cmSC	70
AH HER	2010 07 03 03 58	12.5		122	126				8	28cmSC	70
RS HER	2010 07 03 04 01	11.5		112	121				8	28cmSC	70
T HER	2010 07 03 04 06	10.2		97	103				8	28cmSC	70



ISS 2010-07-04 03:30-00:50 EDT Form 100 2 25cm



- Saturn

- Mars

- Messiers: M 57, 4, 8, 20, 21, 22, 23, 24, 16, 17

1427d 2010-07-04 12:00-12:10 EDT Foxmed S deck 8 4cm rr
Sun: 32x prominences @ 6:00 & 10:00, 1 spot, 2 Filaments.
8

1428e 2010-07-04/05 22:40-00:25 EDT Foxmed POD, 28cm SE
Variable stars:

Name	YYMMDDHMM	Mag	< Un	Co1	Co2	Co3	C codes	Codesexp	SkyAper	Magn
RT Lyr	2010 07050250	14.3	<	142	143				8 28cm sc	175
S HER	2010 07050256	9.0		89	90				8 28cm sc	70
RU HER	2010 07050309	13.2		128	132				8 28cm sc	175
BC SER	2010 07050316	12.3		122	124				8 28cm sc	70
Z VIR	2010 07050320	13.0	<	130					8 28cm sc	175
Z BOO	2010 07050327	10.0		99	100				8 28cm sc	70
SY VIR	2010 07050331	13.7	<	137					8 28cm sc	175
Y VIR	2010 07050338	10.5		100	107				8 28cm sc	70
R CVN	2010 07050348	9.5		95	99				8 28cm sc	70
S VIR	2010 07050353	12.4		110	125				8 28cm sc	175
RS OPH	2010 07050404	10.3		103	110				8 28cm sc	70
EM Cyg	2010 07050422	13.4		128	134				8 28cm sc	175

ISS: short passage into Earth's shadow low in E ←
8cm r/l

1429e 2010-07-28/29 21:30-22:10 EDT Foxmed W deck ne. 10x50b
Venus, Saturn, Mars moving towards triple conjunction
- Mars obviously red, Saturn yellow, Venus white
Viewing @ 76mm "FunScope" @ 115x, colors are very intense
w/ slight gibbous Moon rising in E.

1430d 2010-08-03 10:30-10:35 EDT Foxmed S deck 4cm rr
Sun: nice spot near centre of disk @ flare to its right +
triangular prominence on limb @ 3 o'clock 30x

- 1431a 2010-08-03/04 23:00-01:00 EDT Foxmed E deck Wainman Line ne
Aurora: Not visible from E deck because of trees,
 Drove out to Wainman Line to view N horizon ~ lam
 homogeneous arc @ 50° altitude - foggy
- 1432a 2010-08-04/05 23:00-01:00 EDT Foxmed E deck Wainman Line ne
 No aurora visible despite better transparency
- 1433e 2010-08-05/06 21:10-22:00 EDT Foxmed W deck ne 10x50b
 Triple conjunction of Venus, Saturn & Mars, all three
 fit in 10x50 f.o.v.
- 1434e 2010-08-06/07 21:30-22:00 EDT Foxmed W deck ne 10x50b
 Triple conjunction: slightly tighter triangle in 10x50b.
- 1435e 2010-08-08/09 21:40-21:45 EDT Foxmed W deck n.e. 10x50b
 Triple conjunction: Saturn now well to the right of
 Venus.
- 1436h 2010-08-12/13 20:50-01:30 EDT Foxmed E deck ne 10x50b 8cm
 Triple conjunction & ~~young~~ crescent Moon in 10x50b + 76 mm
 FunScope @ 20x no phase visible yet on Venus
 23:00-23:25 3 Perseids
 00:00-00:15 quite cloudy
 01:00-01:15 1 Perseid - transparency poor
- 1437e 2010-08-16/17 22:00-00:50 EDT Foxmed ⁹POD 28cm sc
Deep sky: M8, M16, M17, M20, M21, M24, M25, M27, M31, M32, M110,
 M33, M71, M74, ~~M77~~ M11, M13, Blue Snowball, Saturn Nebula,
 Deer Lick Galaxy (NGC 7331)

Double stars Albireo

Jupiter, Uranus, Neptune

Moon (setting behind tree cut by Waiman Line)

Variables:

Name	YYYYMMDDHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn	
S HER	201008170330	7.6			76	81				9	28cm	70
RU HER	201008170339	13.5			132	144				9	28cm	175
BC SER	201008170346	13.8	<		138					9	28cm	175
R SER	201008170402	9.6			95	105				9	28cm	70
T CRB	201008170411	9.9			99	102				9	28cm	70

T = 17°C

1488 e 2010-08-18/19 21:00 - 00:00 EDT Wdwd & Pap⁸ he 10x50 b 29 cm sc
Triple conjunction: Mars right above Venus, Saturn off target
Manni Tycha, Plato & Clavius \bar{c} 10x50 b
Variables:

Name	YYYYMMDDHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn	
Z BOO	201008190232	10.1			100	102				8	28cm	70
R BOO	201008190239	10.7			107	108				8	28cm	70
S SER	201008190244	9.0			75	102				8	28cm	70
S CRB	201008190248	9.6			93	96				8	28cm	70
U HER	201008190253	11.3			110	114				8	28cm	70
SS HER	201008190302	11.2			112	114				8	28cm	70
W HER	201008190306	9.1			86	98				8	28cm	70
AH HER	201008190313	12.7	<		126	127				8	28cm	175
RS HER	201008190319	8.4			83	94				8	28cm	70
T HER	201008190326	12.9			129	131				8	28cm	175

Jupiter Bino Vue \bar{c} 25 mm Plössl = 224x ~~8~~

- S half of EZ looked grey & shaded. RS visible on F limb, "SEB" is brighter than EZn. NEB is dark reddish brown. Image seemed sharp & contrasty but somewhat degraded by seeing. "Clicking" of azimuth drive very annoying.

Celestron 28 cm

2800 mm

Star master 28 cm

1382 mm p/c

Celestron 15 cm

945 mm r/c

40 mm MKP

70 x 4.2 mm 1°00'

35 x 8.1 mm 2°02'

31 mm N

90 x 3.1 mm 0°54'

45 x 6.3 mm 1°50'

24.5 mm SW

~~70~~ x

39 x 3.9 mm 1°44'

22 mm N

127 x 2.2 mm 39'

63 x 4.4 mm 1°18'

16 mm N

175 x 1.6 mm 28'

86 x 3.2 mm 57'

59 x 2.5 mm 1°23'

11 mm N

255 x 1.1 mm 19'

126 x 2.2 mm 39'

86 x 1.7 mm 57'

8.8 mm UW

318 x 0.9 mm 16'

157 x 1.8 mm 32'

107 x 1.4 mm 47'

4.8 mm N

583 x 0.5 mm 8'

288 x 1.0 mm 17'

197 x 0.8 mm 25'

Starmaster	Celestron
279mm f/4.3	¹⁵⁰ 95 mm f/6.3
1382 mm (Para)	945 mm (r/c)

40mm Mk70 35x 8.1mm 2°02'

22mm Nagler 63x 4.4mm 1°18' 24.5mm 39x 3.9mm 1°44'

16mm Nagler 86x 3.2mm 57' 59x 2.5mm 1°23'

8.8mm VWA 157x 1.8mm 32' 107x 1.4mm 47'

6mm Radian 230x 1.2mm 16' 158x 1.0mm 22'

5mm Radian 276x 1.0mm 13' 189x 0.8mm 19'

4.8mm Nagler 288x 1.0mm 17' 197x 0.8mm 25'

4mm Radian 345x 0.8mm 10' 236x 0.6mm 15'

B maviewer 2403mm 1500mm (no r/c)

24.5mm SWA 98x 2.8mm 41' 61x

12.5mm or the 192x 1.5mm 14' 120x

10mm Antares 240x 1.2mm 13' 150x

8mm Plössl 300x 0.9mm 10' 188x

6mm or the 400x 0.7mm 7' 250x

- 1) Number of observing session
- 2) Time of day or night: e n m d.
- 3) Date: YYYY-MM-DD/DD
- 4) Time: (start & end) & zone
- 5) Location
- 6) Sky conditions:
 - 0 = almost totally overcast
 - 1 = very cloudy
 - 2 = mainly cloudy
 - 3 = partly cloudy
 - 4 = city: very hazy/murky
 - 5 = city: hazy/murky
 - 6 = city: slightly hazy/murky
 - 7 = city: acceptably clear
 - 8 = dark: quite clear
 - 9 = day: very clear
 - 10 = absolutely fantastic
- 7) Instrument used: ne b rl rr sc mn
- 8) Others present

