




2004-04-14-2006-10-09 993-1191


INFO

2004-04-14/15 - 2006-10-08/09

 **GEOFF GAHERTY**
 **309 ORIOLE PARKWAY**
TORONTO, ON M5P 2H6

 **416-482-5539**



 **geoff@gaherty.ca**

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A8P	A8P	-	-	-	-	-	-	-		✓						192
A8Q	A8Q	-	-	-	-	-	-	-			✓					192
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993 e 2004-04-14/15 21:00-23:50 EDT Forks of the Credit 8 28cm r1 32cm r1
Herschels (all 28cm r1)

21:40 NGC 2775 GXY CNC 63x Quite bright, elliptical

22:04 2974 GXY SEX 157x Star just E of galaxy.

22:14 3166 } GXY SEX 157x Next pair of galaxies, easy star hop
3169 } from Reg class!

22:32 2811 GXY HYA 157x Faint, elliptical

22:45 3621 GXY HYA 157x Large faint glow \bar{a} averted vision,
low dom in horizon glow for Georgetown

23:32 3962 GXY CRT 63x Forms triangle \bar{c} 2 field stars

Between last two, I did a quick tour of both Leo Triplets, M104, M51 & NGC 5195. After I pecked up I viewed M51, NGC 5195, M81, M82 \bar{c} Ostap's 12.5" SM. Spiral structure visible in M51, mottling in M82.

It was good to be out under a dark sky again!

994 e 2004-04-15/16 21:30-23:35 EDT Oriole N yard 5 28cm r1 10x50b

Variables: Z CAM, SUMA, R CVN, S BOO, V BOO, R VIR,
U VIR, RV VIR, S VIR, R CRB

995 d 2004-04-24 03:00-15:30 EDT OSC level patio 6-2 12cm r1

Sun: Solar observing at Science Centre for Astronomy Day.
There were at least 3 Hox scopes in use!

996 e 2004-04-24/25 20:00-22:30 EDT OSC entrance Q-4 12cm r1

Moon & Jupiter for Astronomy Day. Sky was so hazy that even Saturn was invisible, but seeing on Jupiter quite good @ 167x. Most people could see 2 belts of 4 moons.

21:38

→ 22:08

TYC 794-1388-1

Dr Prasad, my nephrologist, was there with his son & father?

997e

2004-05-11/12 21:30-00:00 EDT Oriole NE yard 6-0 10x50b 28cmrl
Comet NEAT C/2001 Q4: picked up @ 21:38 @ 10x50b, then followed
with 28cmrl @ 157x until 22:08. At that point it had
approached and nearly covered TYC 794-1388-1 with its
coma. Tiny bright pseudonucleus @ large coma, no
visible tail. $\alpha = \beta$ C-NC = 3.5m

Tested 30mm GSO SuperView eyepiece on comet & M44
- images very sharp across field - only negative is
lack of field stop.

Variables: RU VIR, U UR, R VIR, S VIR, R LEO, R UMA,
Z UMA, T UMA S UMA
tried R' CRB & R BOO, but clouds \rightarrow impossible

998e

2004-05-12/13 21:30-23:05 EDT Oriole NE yard 5-4 10x50b 28cmrl
Comet NEAT C/2001 Q4: spotted @ 10x50s just N of β Canceri,
Observed with 28cmrl @ 63x & 157x

Jupiter & Saturn: quick looks in poor seeing @ 8.8mm Meade UWA
in binoviewer (273x) using "new" used 8.8 bought from Khan
today.

Variables: R CVN, S BOO, V BOO, R BOO, S CRB, R CRB
- stopped because of dew & haze.

999e

2004-05-16/17 21:30-22:40 EDT Oriole driveway & NE yard 6 10x50b 15cmrl
Testing 15cmrl @ optical window (made by Al Misiak) 15cmmln
Comet NEAT: now well N of Beehive 10x50b

Jupiter: ~~Callisto~~ ^{Callisto} in transit, dark grey. 15cmrl seemed out of
collimation, so I switched to INTES M461. Jupiter best @ 225x
in binoviewer, though also very nice @ 205x (8.8mm UWA)

Double stars: γ Leonis easy. γ Virginis not split, even @ 300x in bino, but seeing only fair.

I will need to collimate 15cm r1 by daylight. Also, F_{ring} shoe is too small for side Syntra F_{ring} dovetails, & I can't get at it because of optical window.

Fireball: absolutely beautiful fireball @ 22:14 EDT moving ~~SE~~ SSE through Virgo, just E of Spica. It was pure white, slow moving (but much faster than satellite), very bright (~-4 or 5), very even in brightness after initial brightening until it disappeared in trees to S.

As ever, I'm dazzled by the optical quality of the MN61!

2004-05-19/20 21:40-22:40 EDT Oriole NE yard 5-3 10x50b 28cm r1
Comet NEAT: now in northern Cnc, hint of tail, or at least asymmetry @ 63x

Variables: R LMI, SU UMA, R CRB, R SER, Terminated due to increasing haze & high cirrus,

2004-05-26/27 21:45-00:00 EDT Oriole NW yard 5-6 10x50b 28cm r1
Moon: seeing poor, but view spectacular @ 8.8 in UWA's in binoviewer (273x)

Jupiter: poor image @ 273x

Variables: R CRB, S SER, U HER, SS HER, W HER, AH HER, AS HER, T HER

Deep sky: observed Markov 1 for first time while star hopping to T HER ~ 23:45 EDT; two bright triangles plus extra stars from mini-teapot 63x. Also M13 while hopping to W HER

2002e 2004-05-28/29 22:00-23:30 EDT Oriole mill yard 6-7lx 50b28and
Variables SU UMA, Z CAM, R UMA, CH UMA, Z UMA, T UMA,
S UMA, R DRA, AG DRA, R CRB
M57 @ 63x, 157x, & 288x, & Lyrae split @ 157x

2003e 2004-05-29/30 21:00-22:30 EDT Oriole driveway 7-6 ~~127~~ Binnic 8carr
Comparison between 80ED & 127MC at request of Ottocycle on TT
Jupiter: seeing poor, 80 seemed to show more detail in SEB & NEB.
170x in 80m (8.8UWA + 2.5PM), 175x in 127m (8.9m)
EP: 0.5m 0.7m

Mercury initially 80m had edge but as session proceeded, the
127m pulled ahead: cool down + better seeing, 80m
showed ^{slight} hints of chromatic aberration on mountain tops surrounded
by black, and a warmer image - 127m was more
neutral & showed no c.a. Both scopes gave wonderfully
detailed views of subtle features like the domes of
inside Capuanus, the rumpled floor of Encke, and
the triple peaks to the NNW of Kepler. The difference
in resolution was most apparent in the Rima Hippalus.
The main rille through Hippalus was obvious in both
scopes, but the finer rilles to the east were much
easier to see in the 127m. The "pumice" appearance
of the lunar surface between Copernicus and
Kepler was much more apparent in the 127m.
Neither scope showed craterlets in Plato.

Methodology scopes were mounted astronomically on Super Polaris
mount: 727/80/127/80. Same diagonal (TV stacked 1.25")
and eyepiece (early Japanese model of 88mm Ultraviewer) used
in both scopes. 2.5x TV Powermate used in 80m to convert
60mm f.l. to 1500m to match 127m's 1540mm f.l.

Conclusions: Both these scopes are truly excellent for their size. Both place easily in the top 5% of all scopes I've tested. Both exhibit clean, high contrast images, once the 127cm has cooled down to ambient temperature. Both are real joys to use, simply getting out of the way and showing celestial objects as they really are, without noticeable aberrations. Mechanically, the 127cm has a bit of backlash in its focuser, which was not noticeable when originally tested. However, the focus knob is so smooth, and the image snaps into focus so crisply, that it is only a minor annoyance. The differences in performance are very subtle, only noticeable when comparing fine detail with alternating scopes. The 127's 59% larger aperture gives it a clear advantage in resolution, despite the small amount of contrast lost by its central obstruction.

1004 e

2004-06-03/04 22:10-23:50 EDT Oriole SE yard 6 28cm r 1x5 ob ne

Variables: R VIR, RU VIR, U VIR, S VIR, R CWV, S Boo, U Boo, R Boo, S CRB, R CRB

Doubles: k Boo, + c Boo @ 63x - pretty, double double. γ Vir not split @ 230x (current sep'n $\approx 0.5''$)

Moon: Full Moon observed n.e. Could see Mare Crisium, Aristarchus, Copernicus, Tycho

205 d

2004-06-08 05:00-07:30 EDT Cathedral Bluff 5 13cm mc ne

Transit of Venus: observed Sun rising ^{@ 05:43} at Lake Ontario fog with Venus in silhouette with naked eye. Could observe without filter @ 63x for first few minutes; looked like

a shadow transit on Jupiter! ~~At~~ Just before third contact, movement of Venus was visible. No black drop at 3rd contact. Just after 3rd contact (07:05 EDT) ring of atmosphere could be very faintly seen and ashen light suspected. By fourth contact (07:15 EDT) this had long vanished and all that was visible was a slight notch. ~65 members of Toronto Centre present, plus a small group seen in Bluffer's Park.

1006e 2004-06-19/20 20:45-23:35 EDT Foxmead Obs. 9 20 cm r110x56b n.e.
First light at Foxmead Observatory, 1177 Wainman Line, Severn Township, Simcoe County.

Jupiter: observed at dusk @ 230x. Three moons p. Jupiter forming an equilateral triangle, 1 f. RSH on CM, no sign of colours.

Deep sky: started observing ~22:15 with some twilight still in NW. Bopping all over the sky looking at old friends: M57, M27, Albireo, M13 (Fantastic @ 157x!), M81, M82, M104, M80, M51 & NGC 5195, R CRB, Lagoon, Swan, M11, M25 (naked eye) - or is it M24? the little SGR star cloud. Naked eye could see all 7 stars in Little Dipper, Northern Coal Sack, Scutum star cloud, large & small Sagittarius clouds, rft into Ophiuchus

There is a strong light dome from Orillia, ~10⁹ high due S, and a very slight glow from Coldwater to W. Otherwise sky is excellent

1007e 2004-06-25/26 21:30-22:25 EDT Oriolo N yard 5-3 15cm r/l 15cm mm ^{10x50b}
Comparison between Misuch 6" Newtonian (Sky Watcher mirrors
& optical flat supporting secondary) & Intes MNE1.

Mount Jupiter: MN delivered much sharper & more contrast
than Newt at equivalent magnifications. Image in Newt
seemed smeared, with a haze around it. Image in MN
clean & stark, snapped into focus clearly. Vega star test
in Newt showed spherical aberration while MN was near
perfect.

ε Lyrae: clearly split in Newt @ 8.8mm Meade UV (=136x)
All in all, a disappointment. Seems no better than Sky Watcher
6" with normal spider & diagonal.

Collimation was extremely difficult, but I got it pretty
close. Because of haze, light clouds, & Moon, I decided
not to set up 28cm r/l for variables.

1008e 2004-06-26/27 21:50-^{23:25}~~23:20~~ EDT Foxmead SW 8-2 20cm r/l ne
Jupiter 232x disk getting small. RSH visible on f part of SEBs
Moon 232x 345x Magnificent, many rilles visible, main craters in
Catena Davy, ~~rilles~~ Rima Birt (near Rupes Rectae).

Variable stars: W Her, Z Cam, increasingly cloudy. Stars
are amazingly bright in the gaps in the clouds. Two bright
satellites moving from S to N. I was readily able to
see 11.9 comp stars @ 63x in 20cm r/l despite clouds &
Moon 1 day past 1st quarter.

1009e 2004-06-29/30 21:30-22:10 EDT Oriolo NE yard 5-3 30cm r/l
Collimating & star testing Sky Mentor 12" Newtonian, bought from
Khan today. This is new model @ Pyrex mirrors, built in fan, Teflon
azimuth bearings instead of roller bearings. Observed Moon, Polaris,

♄ in Lyrae, Collimation was way off, Instruction sheet gives f.l. as 1500mm, not 1524mm

→ 22:50 - 00:45 EDT Oriole NE yard 5 30cm r1 10x50b

Variable stars: R CRB, R SER, R UMA, Z UMA, T UMA, S UMA,
R CVN, S BOO, V BOO, R BOO, SS CYG

Bright Moon made observations to S difficult, 12" Dob works very nicely for variable star work. Motions are a little stiff, but better than too loose, i.e. 8" Cas/Discov most. It took a little while to get used to having the focuser on the left side of the tube.

1010e 2004-07-01/02 22:25 - 00:15 EDT Foxmead NW 8 30cm r1 10x50b

Set up on NW side of house to block Full Moon.

Variables: R VIR, R UVIR, U VIR, S VIR, T UMA, S SER, R SER,
SS CYG, R CRB

Limiting magnitude was fainter than 2 nights ago in the city, despite Full Moon. I deliberately reobserved two stars that were too faint to see in the city!

	<u>City</u>	<u>Foxmead</u>
T UMA	<12.4	12.5
R SER	<12.1	<12.6

1011e 2004-07-02/03 22:15 - 23:20 EDT Foxmead SSE (well) 30cm r1 10x50b

Jupiter good steady view @170x - detail in NEB made me suspect a moon was in transit but this was not the case.

I think this ^{scope} will do quite well on the planets.

Variables: U HER, S HER, AH HER, RS HER, T HER, SS CYG, R CRB
- mosquitoes were unbelievably fierce tonight, converged to only a few last night. Tonight was warmer & there was no wind

- 1012e 2004-07-06/07 22:30-00:05 EDT Oriole yard 6-3 28cmr/10x50b
Deep Sky: NGC 6543, Cat's Eye, planetary in Draco, Appears
 as a fuzzy bright star at 63x, not much structure
 visible even @ 288x
Variables: AG DRA, R DRA, CH UMA, AF CYG, R CYG,
 U CYG, SS CYG, R CRB
- 1013e 2004-07-19/20 22:30-23:15 EDT Oriole E yard 4 28cmr/10x50b
Variables attempted R UMA & Z UMA, but gave up due to
 hazy sky; unable to see anything more than the 3
 handle stars in the Big Dipper!
- 1014e 2004-07-20/21 21:30-22:15 EDT OSC Spoking lot 4 12cmrr
Moon: 40x star party to commemorate 35th anniversary of
 Apollo 11 landing, c Chris Hatfield in attendance. Heavy rain all
 day cancelled main star party, but hazy Moon was visible
 for the hardy souls who stayed to look.
- 1015e 2004-07-28/29 20:25-23:45 EDT Oriole E yard 5 29cmr/10x50b
Moon: waxing gibbous @ 276x. Terminator just past Aristarchus.
 Many small rilles to NE of Aristarchus.
Variables: R CRB, Z UMA, R UMA, T UMA, S UMA, R CVN, S BOO, SS CYG
 - extremely heavy dew - everything soaking wet,
- 1016e 2004-08-03/04 21:45-23:45 EDT Oriole NE yard 6 28cmr/10x50b
Variables: V BOO, R BOO, R CRB, S CRB, W HER, AH-HER,
 S SEP, RS HER, T HER, SS CYG

1017e 2004-08-07/08 22:00-23:45 EDT Foxm~~all~~ NW 8 30cm r1 10x50b ne
Variables: R SER, V HER, SS HER, AH HER, R OPH, R CRB
R SCT. Stars were so bright that I couldn't find
SS CYG!*

~~AB~~

Deep sky: M 31, 32, 110 (78x), M 33 (68x), M 8.

Meteors: many early Perseids

Much detail in Milky Way, even though transparency wasn't
the greatest. Spur into Ophiuchus very obvious.

*This deserves some explanation. What I found was that
in the 8x50 finder, the stars all seemed almost equally
bright, and so I couldn't pick out P CYG from the
rest. I could see it quite plainly with the naked eye,
but through the finder, it vanished amid the throng of
blazing stars. Maybe I need a 6x30 or Quik Finder
for situations like this?

1018e 2004-08-14/15 ~22:00 EDT Gordon's Park, Manitowlin Is. 10 ne.
At Manitowlin Star Party to do Q & A session w/ Alan
Ward. Unfortunately, I was coming down w/ a cold & couldn't
go to the dark sky preserve but the Milky Way was
magnificent from behind the B & B.

1019e 2004-08-21/22 ~22:00-00:30 EDT Starfest, 8, ne 10x50b 32cm r1
- observing mainly w/ O Stap M. & his 12.5mm Starmaster, but
also with Guy Nason, Tony Horvath, Dave Sage, &
David Dunham
- M 22, M 8, M 33, M 101, M 51, NGC 5195, S Delphinium, U Cygni,
etc., plus some lunar occultations on video.

Earlier & yesterday two brilliant talks by Nagin Cox of JPL, deputy director of operations for Mars Rover project. I was most interested in the fact that the Rover teams operated for three months on Mars time, 39 minutes per day longer than Earth days. She was wearing the watches to prove it! Very smart lady with wonderful ability to describe situations.

1020e

2004-08-23/24 20:00-23:20 EDT ^{mid}Orion yard 6 10cmrr 12cmrr 28cmrr
First light for Orion 100mm ED f/9 refractor which arrived this morning.

Moon: right @ 1st quarter. Used 4mm Radian in both scopes, 100mm on SkyView Deluxe, 120mm on Super Polaris. 4mm yields 225x in 100mm, 250 in 120mm. 120 had slightly better resolution, but highlands had strong yellowish cast. 100mm seemed to have better contrast & more neutral colour. It was not quite as contrasty as I remember the TV 102, but excellent nonetheless.

Antares beautiful symmetrical diffraction rings in 100mm @ 225x - 120mm looked out of collimation.

8 Delphinus lovely at 102x, just resolved @ 37x. Albireo lovely at both 37x & 102x.

Variables @ 28cmrr: AG DRA, R DRA, U DRA, SSCYG, RUPES
R PEG

100mm ED on SVD makes a really neat package which can be carried out in one piece. I like it!

1021e 2004-09-31/09-01 21:15-00:00 EDT Oriole mid yard G-2 28cmrl 10x50b
Variables: R CRB, EM CYG, CHI CYG, RVVL, T CEP, SS CYG, V CAS,
Z AND, DX AND, AF CYG, R CYG V CYG
Moon: 2 days past full, 34%^x, More Crisium & Petavius
I was repeatedly harassed by a raccoon, who kept approaching me. I must have chase it away 8 or 10 times, but it kept coming back. While writing notes @ grey table, I felt something on my legs, & it was under the table, pawing me!

1022e 2004-09-02/03 21:00-23:00 EDT Oriole SE yard 5 28cmrl 10x50b
Variables: R UMA, Z UMA, T UMA, S UMA, R CVN, S BOO, R CRB,
SS CYG
Very damp & dewy.

1023e 2004-09-09/10 20:40-23:35 EDT Oriole N yard 6 28cmrl 10x50b
Variables: R BOO, V BOO, S SER, R SER, S CRB, U HER, AH HER,
R CRB, W HER, R SER, T HER, SS CYG, RU PEG, DX AND,
X AND.
A particularly fine night, especially as it wasn't predicted to be clear. Mild temperature, ~~and~~ pretty clear sky, & no dew made observing very pleasant.

1024e 2004-09-10/11 21:20-22:50 EDT Foxwood E yard ⁸ 30cmrl 7x50b
Deep sky!

H 21:39 EDT NGC 5557 Baa Galaxy 94x Elliptical

H 21:53 5473 UMa Galaxy 94x Small & fairly bright. (Companion to

H 21:55 5474 UMa Galaxy 94x Large but dwarfed by M101 } M101

M101 " " 94x Hints of spiral structure

M51 & NGC 5195 CVn " 94x Lovely, some circular structure visible

H 22:10 5676 Baa " 94x Hazy ellipse

9 galaxies

$$\begin{array}{l} +9 \quad \quad \quad (53) \quad \quad \quad +3 \quad \quad \quad (62\%) \\ \text{H 400: } 222/400 = 56\% \quad \quad \quad \text{NS06: } 237/378 = 63\% \end{array}$$

4 open clusters

$$\text{H 400: } +3 = 225/400 = 56\% \quad \quad \quad \text{NS06: } +1 = 238/378 = 63\%$$

H	22:13	EDT	NGC 5689	Boo Galaxy	94x	Elongated & faint
	22:20		5585	UMa Galaxy	94x	Large & more diffuse than 5631
H	22:20		5631	UMa Galaxy	94x	Small, sharply defined
H	22:29		5322	UMa Galaxy	94x	Bright elliptical
	22:36		5981	Dra Galaxy	"	Faint, elongated
H	22:36		5982	"	"	Small, bright
	22:36		5985	"	"	Large, fainter than 5982
	22:41		6015	"	"	Large mottled elliptical
H	22:46		6217	UMi	"	Bright oval, close to next asterism

1025e 2004-09-13/14 20:40-23:05 EDT Oriole mid-yard 6 28cm 1 10x50b
Variables R CRB, SS CYG, AG DRA, R DRA, R SCT

Deep Sky:

21:23 EDT NGC 7142 Opn Cl Cep 288x Small, 1 bright ^{against a faint light} & 1/2 dozen fainter stars
 21:36 Berk 94 Opn Cl Cep 157x 5 stars form wedge in front of glow
 21:47 NGC 7296 Opn Cl Lac 157x Broad scattering of ~100 stars
 21:50 NGC 7686 Opn Cl And 63x ~9 bright stars in front of mag field stars

Meteor: Nice 0 mag meteor through northern Cygnus into Cepheus
 Left ~1 sec trail behind as it passed.

Variables: R PEG, T CAS, X AND, R AND, RX AND, SS CYG

SS CYG reobserved because it's in outburst. No change in mag.

1026e 2004-09-15/16 21:00-23:00 EDT Oriole N yard 5 28cm 1 10x50b

Variables: SS HER, R CRB, AH HER, T CEP, SS CYG, RU PEG,
 V CAS, Z AND, AF CYG, R CYG, U CYG, RX AND

Hazy muggy night, poor transparency. It's amazing that productive variable star observations can be made under such conditions.

Four nights of observing in the past week: AMAZING! 20 DSOs, 38 VSOs

12 galaxies
5 open clusters

17 nov Hirschds $\rightarrow 242/400 = 60.5\%$

I ended the evening (morning) with my first looks of the season at M42, filling 68x Nagler field, and Saturn, also at 68x, in trees. My feelings of isolation in the wilderness were close to zero, with dogs barking, trains passing, & teenagers partying somewhere to the north. The morning session was short because dew was dripping off everything & Pepe Le Pew was somewhere nearby.

1028e 2004-09-25/26 21:00-23:00 EDT David Dulop Obs. 6 188cm r1 ne
Observations with 74" reflector at DDO of objects I had recommended, for RASC open house.

NGC 7667, planetary in And, "Blue Snowball" 380x Vivid blue color, shells visible inside almost circular disk. Bright star in f.o.v.

NGC 7009, planetary in Aqr, "Saturn Nebula". 380x Ill defined oval due to poor seeing & nearby gibbous Moon.

Neptune, Triton 380x. Several stars in f.o.v., unsure which was Triton. Starry Night later showed Triton as nearest object.

Observing a new 85mm eyepiece installed by Robert Wyss. This yields 380x in 4' diameter field.

6-7

1029e 2004-09-26/27 20:10-22:55 EDT Oriole ~~and~~ Eyed, 28cm r1 19x50b
Variables: R UMA, Z UMA, T UMA, S BOO, R CRB, U DRA, S SCG
R VOL, EM CYG, CH1 CYG

Deep sky: between 21:40 and 22:15 I observed the same three objects as last night @ the DDO. Saturn Nebula was equally hard to focus, Neptune was missing Triton & background stars, but Blue Snowball was lovely @ 157x: darker centre plainly

visible.

Moon: spent ~ 20 minutes at the end viewing the Moon @
binoculars @ 240x, 300x, & 400x.

This was one of those rare nights when seeing & transiting
were both excellent. I was able to observe crop stars
down to 13.4 despite nearly full Moon. This was the
first time I clearly saw U DRA as a convincing speck
at light not needing averted vision.

1030e 2004-09-28/29 20:15-22:10 EDT Oriole NE yard 3-5 28cm r 10x50b

Variables: SS CYG, R BOO, S SER, R SER, S CRB, R CRB,
U HER, AH HER, W HER, ~~RS~~ HER, T HER

Also observed M13 @ 157x. Resolved to some, but insipid
because of bright moonlight.

1031e 2004-09-29/30 20:15-21:25 EDT Oriole W yard 5-3 28cm r 10x50b

Variables: R CVN, V BOO, R CRB, SS CYG, AG DRA, R DRA, T CAS
- high cirrus & moonlight ended session.

1032m 2004-10-02/03 05:55-06:00 EDT Fox road SE w/dar 8 ne

Venus & Regulus: close conjunction ^{-14'}, Regulus barely visible next to
Venus

07:20-07:30 EDT Fox road W ded 8 ne 7x50b

Venus - spotted in 7x50s & then in naked eye just before &
just after sunrise. Regulus not visible in 7x50s

1033e 2004-10-04/05 20:00-22:40 EDT Oriole NW yard 6 28cm r 10x50b

Variables: R CRB, AH HER, R SCT, SS CYG, R UDES, T CEP,

SN 2004 et, V CAS, Z AND, DX AND, X AND, R AND, RX AND

This was the first supernova I've ever observed!

5 new Heuschels $\rightarrow 247/400 = 62\%$

1034e 2004-10-10/11 20:30-22:50 EDT Foxmead SE 8 30cm 17x50b n.e.
 "Dry run" for star party here in two weeks for neighbours. M13,
 M57, 6 Lyrae, Uranus, Double Cluster, M31-32-110,
 NGC 6946 & SN2004et & NGC 6939 (oc near 6946) 94x
 21:35 94x NGC 1961 galaxy Cam large & fairly bright oval.
 21:56 94x R AQR
 22:10 94x NGC 1664 open Aur Tangled chain of stars in front
 22:22 94x NGC 1857 open Aur 7 of cluster
 ↳ Faint scattering of stars with
 one bright orange star in front
 22:32 94x NGC 1907 open Aur Small but very bright, near M38
 22:38 94x NGC 2126 open Aur large faint cluster behind single
 very bright star.
 M31/32/110 best in 40m (38x) — dark dust lane very
 obvious,
 M33 at least on H II area visible — very mottled 94x
 M45, NGC 404
 Sky wasn't super transparent. M31 vis naked eye, but
 not M33. Some sky glow low in S from Orillia, below
 Fomalhaut. Dew very heavy.

1035e 2004-10-12/13 19:50-22:40 EDT Orillia W yard 5 28cm 10x50b
Variables: Z UMA, T UMA, S UMA, S BOO, R CRB, U CYG, AFCYB,
 R CYG, RUPEG, Z AND, PX AND, RX AND, SS CYG, SPER
 R TRI, T ARI, X CAM
Deep sky: NGC 404 — tried @ 63x, 157x, & 230x. Caught
 hints of it, but couldn't really say I saw it.

1036e

2004-10-27/28 20:00-23:00 EDT Ontario Science Centre Q-1 10cmrr
Total Eclipse of Moon: brief glimpses through heavy clouds from
 about half way through umbral ingress to just after umbral
 second contact. About 400 visitors @ 25 Toronto
 Centre scopes in front of OSC.

1037A

2004-10-30/31 23:00-23:55 EDT Oriole NW yard 3-2 10cmrr 13cmrr
 Comparison of 100mm Orion ED rr vs. 127mm Orion Mak-Cass
Moon, mostly 6m or the in 127 (257x) vs 10m Antares & 8m TV Plössl
 in 100 (both with 2.5x ~~Powermate~~ Powermate, in 100m (225x + 221x)
 Sharpness & contrast very similar in both scopes. Very slight
 chromatic aberration visible in 100 when very slightly out of
 focus. Both are really excellent at these "stupid high"
 powers. 100mm seemed a little more comfortable at 225x
 & 127mm definitely better @ 192x (8mm TV Plössl). Very close
 to a tie, with a slight edge to the 127mm. BUT 100mm
 wins on versatility, since it can easily go down to
 wide fields of view at low powers, which 127mm can't.
 100mm can get 3° 07' field @ 22x, while 127mm is limited
 to 1° 04' @ 63x

Pleiades Whole cluster fits in F.o.v. of 22mm Nagler in
 100mm (41x 2° 00'). So does ~~the~~ Sword of Orion.
 Rigel easily split @ 225x

1038n

2004-11-04/05 00:35-00:40 EST Oriole N yard 3-6 ne.
 A cold front just passed through, so I stopped outside for a
 few minutes to admire the winter stars flashing in the
 sky. There's a thick quarter Moon low in the NW, and
 Saturn is quite high. The wind is blowing briskly & some low
 clouds are scudding along before it.

1039m 2004-11-04/05 06:05 - 0655 EST Oriole N yard G-1 28cm r1 ne

Subject: [starrynights] Jupiter and Venus this morning

From: Geoff Gaherty <geoff@gaherty.ca>

Date: Fri, 05 Nov 2004 07:47:11 -0500

To: Starrynights <starrynights@yahoogroups.com>

I'm just in for an early morning session observing with my 11" Starmaster Dob. When I went out at 6am EST, Jupiter and Venus were forming a brilliant pair in the southeast, while Saturn and the third quarter Moon were almost overhead. The seeing was abysmal thanks to a gusty wind when I started observing at 06:05, but I had a lovely view of Venus and Jupiter sharing the field of view in my 22mm Nagler (63x). Jupiter was by far the larger of the two, but Venus' brilliance made up for it. Venus is now almost "full", being 81% illuminated.

As a double shadow transit was about to take place on Jupiter, I concentrated on it using my binoviewer at 192x, the highest the seeing would support. As time went by the seeing slowly improved, but the clouds got worse. The only details I could make out at first were the two equatorial belts. I had a quick look at Saturn, and I couldn't even see the Cassini Division, even with Saturn high in the sky. Seeing was a bit better on the Moon, with the shadow of a peak traversing the whole width of Plato's floor, and several craterlets visible on the floor above and below the band of shadow. Back to Jupiter: still no sign of Europa's shadow, which I knew would be falling on the North Equatorial Belt. Ganymede's larger shadow was supposed to come on the disk at 06:28, but the first signs I saw of it were at 06:36. At that point the clouds rolled in, but I persevered, and around 06:50 I had my first definite sighting of Europa's shadow, now almost at the central meridian. Ganymede's shadow was obvious most of the time by then, and I began to resolve detail in the belts for the first time. I packed it in a few minutes later, but was happy to have had my first look at Jupiter for the season, and a rare early morning view of a close conjunction of the two brightest planets.

Geoff

--

Geoff Gaherty
Toronto Centre RASC
<http://www.gaherty.ca>

1040d 2004-11-9 10:20-12:05 EST Oriole driveway 7-3 10cm r1 r2 s40 ne
Occultation of Jupiter in daylight. Moon located by scanning @
10x50ab, then 100ED locked on @ 102x (8.8mVWA)
Egress observed @ 41x because I wasn't sure where
Jupiter would emerge. Equatorial belts readily visible
@ 102x prior to ingress, but all 4 moons invisible. Temperature
around 0°C.

1 new Herschel \rightarrow 248/400

1907

100 m	114 m	108 m
900 m f.l.	450 m f.l.	1040 m f.l.
24.5 m 37x	2.5x PM	8.8 m 118x
8.8 m 192x	8.8 m 128x	6 m 173x
6 m 150x	6 m 188x	4 m 260x
4 m 225x		

1041m 2004-11-12/13 05:30-05:55am EST Foxmead 9 ne
Aurora: Bright corona in zenith, leaning a bit to E, but nothing in N. By 05:55 corona had disappeared, leaving only a faint arc & beam in E. Jupiter, Venus, & Spica framing the sight in SE. Orion setting in W, having been rising in E when I went to bed.

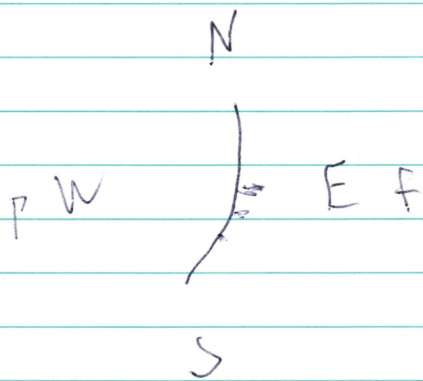
1042e 2004-11-13/14 20:30-00:40 EST Foxmead E yard 8 ne 7x50 30cm r/l
"First Light" @ Foxmead c Dietmar & Millie Kupke (25cm scd, 10cm rr)
Katrina & Fred Lum (8cm rr), Donna G. & Dan, Tony & Travis Horvath,
Denis Gray, & Louise.
Deep sky: M1, M31, 32, 110, NGC 404,
NGC 1407 galaxy in Eridanus 16m moderately bright oval 23:50
EST \rightarrow 94x
Saturn: 170x

1043e 2004-11-22/23 20:15-21:25 EST Oriole driveway 6 10cm rr, 11cm r/l x2
Moon: comparison between Orion 100mm ED @ 225x, Orion StarBlast
113mm Newtonian @ 188x & Edmund 108mm Newtonian @ 173x
The 100 ED was the class winner. At 225x it showed a bit of chromatic aberration on the central peaks of Cassiopeia but the image was sharp & very contrasty. The StarBlast suffered from a haze of scattered light, and its cheap focuser was very imprecise. The Edmund was better, but still lacked the snap & contrast of the 100 ED.

22:15-23:00 EST Oriole NW yard 6 10cm rr
Saturn: lovely @ 225x, Equatorial Belt clearly visible.
Castor & Rigel clearly split @ 102x. Trapezium shared 4 stars in nebula despite Moon. M45, M35.

I need to do side by side of 80mm & 100mm ED. My memory of image in 80 ED of Saturn seems larger than in 100 ED.

- 1044 m 2004-12-04/05 06:15-06:20 EST Foxmead window 3 ne
Parade of planets before sunrise: Venus, Mars, & Zosmaelgenubi in a tight triangle, Jupiter, & crescent Moon. Venus was making a brilliant streak across the frozen water in the field.
- 1045 d 2004-12-14 10:40-10:50 EST Onole NE yard 7 10cm rr
Sun: observing \bar{e} new Kendrick Baader filter. Only two tiny spots close to limb @ 102x. -8.5°C
- 2004-12-15 06:40-16:00 EST
~~Don~~ Assisting Kirsten Vanstone \bar{e} 4 planetarium shows @ Clarkson Secondary in Mississauga, as my first day working as a part time travelling planetarium instructor for the RCM.
- 1046 e 2004-12-15/16 22:15-22:40 EST Orjale observatory 6-5 10x50 b
Comet Machholz 2004: nice & bright fuzz ball \bar{e} 10x50 binoculars in southern Eridanus. Well, actually, middle Eridanus since southern Eridanus isn't visible from Canada! Actually a few degrees SW of 53 Eri
- 1047 e 2006-12-26/27 20:30-20:35 EST Foxmead S basement door 8 7x50 b
Comet Machholz 2004: easily visible in Eridanus despite Full Moon.



13:35

15:00

1048 m 2004-12-26/27 07:15-07:20 EST Foxmed 2nd floor 8 7x50b
Venus & Mercury in conjunction in SE, full Moon in trees to NW.

1049 e 2005-01-14/15 21:15-21:20 EST Oriole driveway, 6 10x50b
Comet Machholz - close to Algal - big Φ bright, no obvious tail. -10°C (compared to $+18^{\circ}\text{C}$ yesterday afternoon!)
Huygens probe landed on Titan today.

1050 e 2005-02-01/02 21:00-21:05 EST Foxmed 8 ne Louise
- quick look at winter stars under quite dark skies while delivering stuff from city house to farm.

2005-02-09 11:00 EST ~~Hemo~~
Hemorrhage in left eye.

1051 n 2005-02-12/13 Foxmed 9 ne
- clear all night. I had many peeks out the windows at various hours of the night, watching the stars move from winter (Orion) to summer (Scorpius, Sagittarius, and Ophiuchus). Large floater in my left eye.

1052 d 2005-03-03 08:30-08:42 EST Oriole driveway, 7 4cmrr
Sun - first light for Coronado Personal Solar Telescope, which I bought yesterday from Khan as my 64th birthday present.
observed 3 prominences @ 4 o'clock - neat! 32x is OK but better @ 54x \bar{c} TV 7.4mm Plössl

09:55-10:05 EST
Sun now there are prominences @ 4 o'clock, 7 o'clock, and a really tall one @ 11 o'clock

18:40

13:35-13:42

3

- now only one prominence @ 3 o'clock

1053d 2005-03-08 11:20-11:25 EST Oriole driveway 7 4cmrr
Sun H α ~~Two~~^{One} very small prominence @ 4 o'clock.

1054d 2005-03-09 10:40-10:50 EST Oriole driveway 7 4cmrr
Sun H α : multiple small prominences between 4 o'clock & 5 o'clock. Small sunspot just in from limb. Possible flares further in. Much detail visible on solar disk. Experimented with 10mm Antares (40x) & 8mm TV Plössl (50x) & 6mm Antares ortho (67x). Not much difference from 12.5mm Kellner & 7.4mm TV Plössl, so I think I'll dedicate these for H α observing.

1055d 2005-03-15 14:50-15:05 EST Oriole driveway 7 4cmrr
Sun H α : tall prom. @ 4 o'clock, wide rectangular @ 7 o'clock, small sunspot near centre of disk, double spot @ 11 o'clock. Lots of faculae on disk. 32x & 54x

1056d 2005-03-22 14:50-14:55 EST Oriole driveway 6 4cmrr
Sun H α ~~low~~ medium festoon @ 6 o'clock 32x & 54x

1057e 2005-03-22/23 19:30-19:45 EST Oriole driveway 5 10cmrr
Saturn: best @ 150x - blurry @ 225x

1058d 2005-03-25/26 11:05-11:15 EST Oriole driveway 6 4cmrr
Sun H α tall prom. @ 10 o'clock 32x & 54x. 32x seems too low and 54x too high - probably 40x (10mm) is about right

1059 e 2005-03-26/27 20:00-21:00 EST Foxmoor 6 15cm mm Louise
Saturn Louise could see Cassini division easily @ 180x 2 bmo
 - I noticed tube currents; diffraction rings concave inside
 Focus & convex outside focus
Rigel: huge split! @ 180x
Jupiter: ~~240x~~ 225x poor seeing due to low altitude
Moon even poorer, even lower

22:10-22:55 EST 6

				I	II
	3 Jupiter				
	03:10 @	Obs. comm.	225x S:6		
1	03:15 DP	RS	Sedge SEB	—	84°
2	03:20 Wc	oval	Sedge NEB	296°	—
3	03:35 Pc	RS	Sedge SEB	—	96°
4	03:54 Pf	RS	S edge SEB	—	108°
	03:55		Obs. disc.		

1060 d 2005-03-29 10:25-10:30 EST Oriole driveway 5 4cm rr
Sun Heli large prominence @ 7, smaller ones @ 2, 2 bright spots on disk 32x

1061 e 2005-03-29/30 18:55-21:20 EST Sharon 5 28cm r1
Star Party @ Our Lady of Good Council School in Sharon, 5 scopes. I shared Saturn, M42, M45, M81, & Jupiter. Very good seeing.

$$\textcircled{1} 248 + 11 = 259/400 = \textcircled{2} 65\%$$

David

1062e

2005-04-8/9 20:45-23:20 EDT Foxmead NW 9 30cm r1 7x50b
Saturn: best @ 170x (8.8m)

Deep sky

- 21:05 NGC 2204 OC CMA 94x Loose faint scattering of stars
21:25 " 1964 GXY LEP 170x Just the faintest hint of a fuzzy oval,
21:33 " 2354 OC CMA 94x Large scattering with about 6 bright stars
21:35 " 2362 OC CMA 94x Spectacular: brilliant cluster surrounding bright star E CMA
21:46 " 2421 OC Pup 94x Three equilateral triangles.
M93 OC Pup 94x Spectacular!
21:55 NGC 2482 OC Pup 94x Faint scattering of stars
22:00 " 2489 OC Pup 170x Faint scattering of many stars
22:07 " 1999 DN Ori 170x Quite bright, like a distant comet (warm up break)
22:44 " 2527 OC Pup 94x Coarse scattering.
22:50 " 2571 OC Pup 94x Elongated E W
22:51 " 2567 OC Pup 94x Faint scattering.
M81, M82, M51, ~~NGC~~ 5195, M104, M65, M66 NGC? (third of Leo Triplet), M42-43 @ 21:35-40 was huge, filling 94x field.
Jupiter: too bright @ 300x!

1063e

2005-04-9/10 20:30-23:00 EDT Foxmead SE 6 30cm r1 RASC + BAC
Star party for Gravenhorst Scouts - 9 kids, 2 scoutmasters.
There were as many telescopes as kids: Guy Mason, Scott Masterton, Charles Darrow, & Denis Grey from the Toronto Centre, Rich Townsend, Chris from Barrie, Kevin Belcher from Victoria Harbour, & 1 guy, probably from Barrie who didn't introduce himself.
I mostly shared M42-43, Denis located M79 & M93 to complete his Messier Certificate. Guy used his GPS to

$$\begin{array}{r} 44.73472 \\ - 79.58405 \\ \hline \end{array}$$

measure my location:

N $44^{\circ} 44' 05.0''$ } 4.0 m accuracy
W $079^{\circ} 35' 02.6''$ }

alt ~~40 m~~ 186 m

datum WGS 84

? cmrr
1' yes

1064 e 2005-04-11/12 20:30-22:30 EDT Oriole NE yard 6 28cm r1 10x50b

Moon, Saturn: seeing poor

Variable stars: R LEO, X LEO, U ORI, SU TAU, S GEM, T GEM
U GEM

Jupiter: seeing still in trees

1065 e 2005-04-13/14 21:00-23:10 EDT Oriole mid yard 6 28cm r1 10x50b

Variables: X CAM, SU UMA, Z CAM, R UMA, CH UMA, Z UMA,
T UMA, S UMA, S BOO, R CRB

1066 e 2005-04-14/15 21:00-23:05 EDT Oriole NE yard 6 28cm r1 10x50b

Moon: Posidonius well placed 157x

Variables: R LMI, R CVN, V BOO, R BOO, R VIR, R U VIR,
U VIR, R CRB. With R BOO & R VIR, 7.9 & 7.7
mag resp, I made estimate by half covering
aperture \rightarrow ~18 cm off. aperture

Jupiter: Quick look @ 157x, RS just coming into
F limb.

For some reason it seemed calder tonight. I've been
observing 5 of past 7 nights. It was actually clear
for the whole week, but I didn't observe Sunday
(tired) or Wednesday (dinner & Di). I've made more variable
star estimates so far this year (25) than in any previous
year to date.

1067e 2005-04-15/16 20:50-22:00 EDT Oriole N York 6 10cm rr 12cm rr
Side-by-side comparison of Orion 100mm ED refractor & Antares
120mm refractor + Chromacor

Moon: 120 shows more detail but \bar{c} yellowish cast 5mm Rad in

Saturn: 120 shows slightly more detail but 100mm crisper 5mm Rad

Procyon 5mm Rad. both star tests excellent

Jupiter: 120 shows more detail but looks slightly mushy.

Just for fun I tried 120 without Chromacor. What a mess!!! It's amazing how the Chromacor cleans up the image. Chromacor definitely lengthens focal length slightly, perhaps 5-10%

I'm still happy keeping 100 rather than 120 because it's shorter, lighter, and has a "cleaner" image. But 120 really is a contender!

1068d 2005-04-16 11:00-13:10 EDT Ontario Science Centre 6 4cm rr 10cm^{x2} rr
Solar observing at the Science Centre with my PST, John Einker's
Traveler & Colorado filter, & Ralph Chau's Oracle with 1000 Oaks filter.
Sky very clear. Nice large filaments on disk and heliogram
prominences on limb.

1069d 2005-04-22 13:00-13:05 EDT Oriole drive 6 4cm rr
Sun Heli huge prominence @ 9 o'clock.

1070e 2005-04-28/29 22:10-22:15 EDT Foxmed S & ne
Cosmos rocket near zenith. Constellations like Crater
and Leo Minor easily visible! 2°C

$$17 \text{ new} + 259 \text{ old} = 276 \text{ out of } 409 = 69\%$$

10712 2005/05/04-05 21:00-22:45 EDT Oriole ^{York} NE_A 5 28cm r 10x50b ne Dan Envais
Jupiter & Saturn 157x0230x

ISS pass @ 21:57 EDT From CMi through zenith, UMa,
 down to Vega

Variables: SS AUR, SCMI, SGEM, TGEM, UGEM, RCRB

1072e 2004-05-05/06 21:50-23:10 EDT Oriole W ^{York} 28cm r 10x50b ne

Variables: X Cam, SU UMa, Z Cam, R UMa, CH UMa, Z UMa, RCRB

Bright satellite passed through zenith ~ 22:56 EDT from NW to SE, parallel to end of Dipper's handle. Quite a bit of fluctuation in brightness \Rightarrow tumbling *Lacrosse 3*

1073e 2004-05-07/08 21:00-00:15 EDT Foxmed ⁸ turn around 30cm r 7x50b ne
Herschels:

Time	NGC	Type	Con	Power	Observing notes
21:49	2169	OPNC	ORI	94	Seven bright stars in front of scattering of faint stars
22:12	2158	OPNC	GEM	94	5 or 6 stars against a faint glow
22:21	2266	OPNC	GEM	94	Three stars against a faint glow
22:31	2304	OPNC	GEM	94	Very very faint glow
22:41	2395	OPNC	GEM	94	Four stars against a faint glow
22:56	2355	OPNC	GEM	94	Very faint scattering of stars
23:10	2420	OPNC	GEM	94	Large and rich with no bright stars--Saturn in field of view!
23:27	4027	GALXY	CRV	94	Ill defined glow--close to "Antennae"
23:38	3640	GALXY	LEO	94	Bright core
23:46	3810	GALXY	LEO	94	Very ill defined--no visible core
23:52	3226	GALXY	LEO	94	Neat pair! Mama bear and baby bear!
23:52	3227	GALXY	LEO	94	Neat pair! Mama bear and baby bear!
23:59	3655	GALXY	LEO	94	Fuzz ball
00:06	3686	GALXY	LEO	94	Large and faint
00:08	3626	GALXY	LEO	94	Large and bright
00:14	3190	GALXY	LEO	94	Fainter than 3193
00:14	3193	GALXY	LEO	94	Brighter than 3190--foreground star

11.4 min/stad

May 27 IntelliScope delivered

6" IntelliScope assembly May 28

- took 2 hours rather than 1/2 hour promised
- instructions sometimes vague, ie. which way to face rocker box front
- bolts & wood screws too similar, confusing
- routing wires vague
- collimation slightly off (locking screws loose)
- The Sky rather than Starry Night in box.
- collimation cap works very well

1074 e 2005-05-09/10 21:45 - 23:30 EDT Oriole NE yard 5 28 cm r1 10x50b
Variables: R Vir, RU Vir, U Vir, S Vir TUMa, S UMa,
 R Leo, X Leo, R CMi, R CrB

1075 e 2005-05-26/26 21:45 - 23:50 EDT Oriole NE yard 5-6 28 cm r1 10x50b

Name	YYYYMMDDHMM	Mag	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R LMI	2005 05 26 02 11	12.5		120	125				5	28cmr1 157
R LEO	2005 05 26 02 15	6.4		56	65				5	5cmb 10
X LEO	2005 05 26 02 27	12.4 <		117	124			12	6	28cmr1 288
SU UMA	2005 05 26 02 50	12.5 <		123	125			23	6	28cmr1 157
Z CAM	2005 05 26 03 02	12.5 <		119	125			12	6	28cmr1 157
R UMA	2005 05 26 03 13	10.6		99	105	110		11	6	28cmr1 63
CH UMA	2005 05 26 03 21	12.8 <		128				8	6	28cmr1 157
Z UMA	2005 05 26 03 31	8.4		80	86	87		10	6	28cmr1 63
T UMA	2005 05 26 03 39	11.5		104	114	117		8	6	28cmr1 157
S UMA	2005 05 26 03 46	10.4		103	106			7	6	28cmr1 157
R CRB	2005 05 26 03 47	5.9		58	62				6	5cmb 10

- earlier observed Jupiter & Saturn, but seeing very poor.

1076 e 2005-05-29/30 22:30-00:20 EDT Oriole SE yard 6 15cm r1
 Testing Orion 6" IntelliScope: 150mm f/8 Dob w digital
 setting circles. (For review in Starry Night newsletter)
 After alignment on Vega & Spica, observed many objects.
 Had to realign once when I bumped the scope. Warp
 factors ~0.2 both times, objects almost always in 25mm
 Plössl field. Tried May tour, but mostly galaxies
 invisible in Toronto muck - M3 & Carinae both fine
 Mostly concentrated in double stars, plus a few clusters
 like M29. Also M57. A number of the doubles are too
 close for 6" to resolve. Optics seem excellent! E
 Lyrae clearly split @ 120x. Observed Jupiter up to
 300x with no breakdown in image. I noticed that I
 almost never looked at the sky! Concert rating on number

12.3 min/st₀₁

12.3 min/st₀₂

on the keypad. I wonder how beginner would know how to find alignment stars, and would know which objects were beyond visibility, such as 10 out of 12 of the objects on the May tour!

1077e 2005-05-31/32 22:15-00:45 EDT Oriole W yard 5-6 28cmrl 10x50b
Variables:

Name	YYYYMMDDHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
V BOO	2005 06 01 02 29	9.4		92	98				5 28cmrl	63
R BOO	2005 06 01 02 36	9.7		92	96	101		7	5 28cmrl	63
S CRB	2005 06 01 02 48	12.5		122	124	127		12	6 28cmrl	157
R CRB	2005 06 01 02 51	6.1		58	62				6 5cmb	10
S SER	2005 06 01 03 07	11.8 <		118				16	6 28cmrl	157
R SER	2005 06 01 03 20	12.6		121	126			13	6 28cmrl	157
U HER	2005 06 01 03 36	7.2		70	72	73		16	6 20cmrl	63
SS HER	2005 06 01 03 54	11.5		112	115	117		18	6 28cmrl	157
W HER	2005 06 01 04 10	11.3		107	113			16	6 28cmrl	63
AH HER	2005 06 01 04 25	12.7 <		127				15	6 28cmrl	157
RS HER	2005 06 01 04 32	8.9		87	91			7	6 28cmrl	63
T HER	2005 06 01 04 41	7.9		78	85	87		3	6 20cmrl	63

DS: M13

1078e 2005-06-01/02 22:15-00:55 EDT Oriole SE yard 5 28cmrl 10x50b
Variables: DS: M57, E Lyrae @ 157x

Name	YYYYMMDDHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R VIR	2005 06 02 02 33	11.0		102	106	110	B		5 28cmrl	157
RU VIR	2005 06 02 02 43	8.7		86	92	96	B	10	5 28cmrl	63
U VIR	2005 06 02 02 55	11.6 <		105	109	116	B	12	5 28cmrl	157
S VIR	2005 06 02 03 06	12.2 <		109	122		B	11	5 28cmrl	157
R CVN	2005 06 02 03 24	9.9		98	101	106		18	5 28cmrl	63
S BOO	2005 06 02 03 35	12.1 <		121				11	5 28cmrl	157
R CRB	2005 06 02 03 42	6.1		58	62				5 5cmb	10
AG DRA	2005 06 02 03 56	10.0		99	103			14	5 28cmrl	63
R DRA	2005 06 02 04 07	11.9		118	120			11	5 28cmrl	157
U DRA	2005 06 02 04 21	12.1 <		120	121			14	5 28cmrl	157
AF CYG	2005 06 02 04 38	6.9		68	71				5 5cmb	10
R CYG	2005 06 02 04 48	8.4		82	84	88		10	5 28cmrl	63

10x50b n.e

1079 e/n 2005-06-03/04 22:30 - 01:15 EDT Foxmead NW to S 8 28 April Kennel
 Herschels: see ~~below~~ 20 galaxies 2 globular clusters ^{102 left}
 Testing 6" Orion IntelliScope. Aligned on Spica &
 Deneb, wamp +0.0. Took towns for June & July, plus
 M80, M11, & SS CYG (dip). Objects were mostly
 just on edge of 25mm field.

Time	NGC	Type	Con	Power	Observing notes
22:44	5054	GALXY	VIR	157	Very faint glow
22:48	4856	GALXY	VIR	157	Bright condensed nucleus
22:55	4781	GALXY	VIR	63	Obvious glow
23:00	4958	GALXY	VIR	157	Bright star-like nucleus
23:02	4995	GALXY	VIR	157	More diffuse than 4958
23:10	4546	GALXY	VIR	63	Bright nucleus
23:15	4666	GALXY	VIR	63	Obviously oval
23:16	4753	GALXY	VIR	63	Big oval
23:19	4845	GALXY	VIR	63	Large oval
23:24	4900	GALXY	VIR	157	Faint glow with star in foreground
23:32	4527	GALXY	VIR	63	Neat pair with 4536, symmetrical around two stars: 4527 brighter and more condensed
23:32	4536	GALXY	VIR	63	Neat pair with 4527, symmetrical around two stars: 4536 more diffuse
23:40	4179	GALXY	VIR	63	Small oval perpendicular to chain of stars
23:45	4030	GALXY	VIR	157	Some knots and structure
23:55	5897	GLOCL	LIB	157	Huge, just beginning to resolve
23:57	5694	GLOCL	HYA	157	Small sparkly glow
00:08	5248	GALXY	BOO	63	Large glow
00:14	5363	GALXY	VIR	63	Nice contrasting pair with 5364: 5363 bright
00:14	5364	GALXY	VIR	63	Nice contrasting pair with 5363: 5364 diffuse
00:21	5566	GALXY	VIR	63	Bright nucleus
00:22	5576	GALXY	VIR	63	Condensed
00:30	5634	GLOCL	VIR	157	Hints of spiral structure

50 d 2005-06-09 11:45-11:55 EDT Oriole driveway, 4cm RR
 Sun - two fairly large spot complexes with much
 bright activity around them in H α . Halcyon & tall
 thin prominence on + limb

314 Herschels done, 86 to go

1081e 2005-06-22/23 21:25-21:40 EDT Foxmed gate 8 7x50b
 Conjunction of Mercury, Venus, & Saturn. Tonight they
 are spread over a gentle arc $5^{\circ}13'$ long, in order E to W
 Saturn, Venus, Mercury. Mercury was easy to spot @ 7x50s,
 but Saturn didn't become visible until 21:40.

1082e 2005-06-25/26 21:50 EDT Foxmed gate 3 7x50b ne
 Conjunction of Mercury, Venus & Saturn. The three are in
 a tight scalene triangle with Venus & Mercury above &
 close, & Saturn below and farther away. Mercury is
 now visible naked eye, & Saturn almost there with averted
 vision. Mosquitoes are numerous & ferocious!

1083e 2005-07-02/03 ~~22:45~~ 22:45-00:25 EDT Foxmed S 8 28cm r1 10x50b
 Comet Tempel 1 (9P): Hint of visibility with averted
 imagination, a little more than a day before "Deep Impact"
 Deep Sky: Looking for Hersshels among the Virgo Cluster!

Time	NGC	Type	Con	Power	Observing notes
23:04	4643	GALXY	VIR	63	Bright
23:05	4636	GALXY	VIR	63	Large diffuse glow
23:06	4665	GALXY	VIR	63	Fainter & more diffuse than 4636
23:23	4281	GALXY	VIR	157	Very faint glow, more obvious at 157x
23:26	4273	GALXY	VIR	157	Very faint glow, more obvious at 157x
23:27	4261	GALXY	VIR	157	Brighter than 4273 and 4281
23:33	4365	GALXY	VIR	63	Large, medium bright
23:38	4570	GALXY	VIR	157	Very faint, averted vision
23:46	4698	GALXY	VIR	63	Between two stars
23:49	4660	GALXY	VIR	63	Small but quite bright
23:52	4689	GALXY	COM	63	Large faint diffuse
23:55	4654	GALXY	VIR	157	Needs 157x to pull out its faint glow
23:59	4866	GALXY	VIR	157	Thin splinter
00:02	4596	GALXY	VIR	63	Bright glow
00:07	4550	GALXY	VIR	157	Nice pair with 4551
00:07	4551	GALXY	VIR	157	Nice pair with 4550
00:12	4478	GALXY	VIR	157	Small bright companion to M87

also reobserved many Messiers + FNGCs, here & in Sgr - Sco

326 Herschels done, 74 to go

1984 d 2005-07-03 16:30-16:35 EDT Foxhead S 8 4cmrr

Sun: Three distinct prominences @ 3:00, 6:00 (double), & 11:00, much activity on surface including long dark streak near centre of disk, & bright areas around sunspot groups. 32x

1985 e 2005-07-03/04 22:55-00:15 EDT Foxhead S 8 28cm r/ 10x50b

Deep sky:

Time	NGC	Type	Con	Power	Observing notes
23:06	3198	GALXY	UMA	63	Extremely diffuse and low surface brightness
23:31	4371	GALXY	VIR	63	Small glow
23:36	4442	GALXY	VIR	63	Diffuse glow with central condensation
23:38	4429	GALXY	VIR	63	Glow close to star
23:48	4473	GALXY	COM	157	Quite bright
23:48	4477	GALXY	COM	157	Quite bright
23:50	4459	GALXY	COM	157	Quite bright
23:58	4419	GALXY	COM	63	Narrow streak
00:00	4350	GALXY	COM	63	Small bright glow
00:02	4450	GALXY	COM	63	Large glow
00:06	4394	GALXY	COM	157	Small glow near M85
00:12	4293	GALXY	COM	157	Faint and very diffuse

Observations discontinued due to clouds in west. Mosquitoes were really fierce tonight - strange after only one mosquito last night.

28 objects: 26 H400 → 352/400 done, 48 to go
8 NSOE → 285/378 done, 93 to go

1086e 2005-07-09/10 22:45-00:35 EDT Foxmead SW 8 28cm r1 10x50b
Deep sky:

Time	NGC	Type	Con	Power	Observing notes
22:57	2950	GALXY	UMA	63	Stellar nucleus, quite bright
23:05	2742	GALXY	UMA	157	Faint glow
23:05	2768	GALXY	UMA	157	Large and bright
23:11	4147	GLOCL	COM	157	Unresolved at 157x
23:30	3900	GALXY	LEO	157	Obvious but faint glow
23:32	3912	GALXY	LEO	157	Very faint glow
23:38	4448	GALXY	COM	63	Big and bright
23:42	4314	GALXY	COM	63	Big and bright
23:44	4278	GALXY	COM	63	Big and bright
23:46	4251	GALXY	COM	63	Bright, condensed
23:47	4245	GALXY	COM	63	Not as bright as nearby galaxies
23:49	4150	GALXY	COM	63	Small but easy
23:50	4203	GALXY	COM	63	Small and bright
23:55	3953	GALXY	UMA	63	Big and bright
23:57	3982	GALXY	UMA	63	Small bright
23:58	3998	GALXY	UMA	63	Very small and bright
00:00	3898	GALXY	UMA	63	Large and bright
00:02	3718	GALXY	UMA	63	Larger of pair with 3729
00:02	3729	GALXY	UMA	63	Smaller of pair with 3718
00:09	3613	GALXY	UMA	63	Brighter than 3619
00:09	3619	GALXY	UMA	63	Dimmer than 3613
00:11	3610	GALXY	UMA	63	Small and bright
00:12	3642	GALXY	UMA	63	Large and faint
00:16	3945	GALXY	UMA	63	Large, bright condensed nucleus
00:22	4618	GALXY	CVN	63	Large and bright
00:29	4151	GALXY	CVN	63	Bright and large
00:32	4143	GALXY	CVN	63	Small and bright
00:33	4051	GALXY	UMA	63	Large, medium bright

One of my best nights ever! [actually, this is my best night!]

~~1087a~~

1087d 2005-07-10 11:15-11:25 EDT Foxmead S 8 4cm r

Sun Very bright prominence @ 7:00: three plumes, one containing a brilliant spot 32x & 54x.

16 objects: 16 H400 \rightarrow 368/400 done, 32 to go

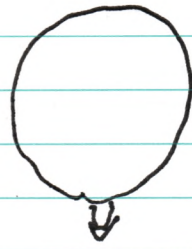
1088e 2005-07-10/11 22:40-00:05 EDT Foxmed SW 8 28cm r1 10x50b
Deep sky:

Time	NGC	Type	Con	Power	Observing notes
22:50	3665	GALXY	UMA	63	Faint oval
22:57	3813	GALXY	UMA	63	Faint glow
23:02	3675	GALXY	UMA	63	Large glow
23:04	3938	GALXY	UMA	63	Medium glow
23:08	3893	GALXY	UMA	63	Bright
23:10	3949	GALXY	UMA	63	Small and bright
23:12	3726	GALXY	UMA	63	Large glow
23:17	3310	GALXY	UMA	63	Small but quite bright, well defined
23:22	3631	GALXY	UMA	63	Diffuse glow
23:28	4346	GALXY	CVN	63	Tiny companion to M106
23:37	4800	GALXY	CVN	63	Small but fairly bright
23:38	5273	GALXY	CVN	63	Faint glow
23:55	2787	GALXY	UMA	63	Small glow
23:57	2976	GALXY	UMA	63	Diffuse glow
23:59	2985	GALXY	UMA	63	Medium diffuse glow
00:01	3147	GALXY	DRA	63	Bright and diffuse

I had to move the scope about 3 metres west to get the last four galaxies, all close to M81 & M82. Nice pass of ISS around 23:28. This completes the Herschels currently visible: 368 out of 400. The remaining 32 will have to wait until the fall, when they again become visible in the eastern sky before dawn.

1089d 2005-07-21 09:20-09:25 EDT Foxmed S 8 4cm r1
Sun H α ; very little activity - a few wisps off N limb.
32x

1090e 2005-08-10 ~ 23:00 EDT Foxmed 3 ne
- nice Perseid ~ 0 mag through broken clouds



Handwritten text at the bottom of the page, possibly a signature or date, which is mostly illegible due to blurring and fading.

1091 d 2005-08-13 10:05-10:10 EDT Focmed S 3 4cm rr
Sun H α 32x Nice arrow shaped prominence @ 6 O'clock
 ←

1092 e 2005-08-15/16 20:55-21:15 EDT Focmed S 8 15cm r1 Orion
 Venus: 120x poor seeing XT6i
 Jupiter: 120x, 240x poor seeing
 Moon: Gassendi ~~close~~ to terminator
 Doubles: ϵ Lyra & Albireo found by IntelliScope after alignment on Arcturus & Altair

— 22:20-23:15 EDT Focmed S 9 15cm r1
 Testing 1.25" Orion O-III filter vs UltraBlock
 August Tour: M7 & M6 very low in S 10.5 day old Moon
 M8 (~~5° from 10.5 day old Moon~~) 48x faint in Sagittarius
 48x

	θ /moon	no filter	UltraBlock	O-III
M8	5°	faintly visible	mainly visible	both phases visible
M20	7°	invisible	invisible	faint hint
M17	13°	diffuse glow	swan shape	crisp swan shape
M27	59°	easily visible	bilobed	some detail within
M57	63°	120x easily visible	dim	dimmer
24.5km NGC 6992	73°	invisible	faint hint	clearly visible

Also M92, M13, M11, Double-Double, M103, NGC 457, M31, M32, M119, Saturn Nebula, Blue Snowball

9 stars in 1 hr 19 min = 8.8 min/star

1 hr 29 min 8 stars: 12.7 min/star
Stars were mostly much fainter than last night
so estimates took longer.

1093e 2005-08-23/24 22:00-23:46 EDT Foxmead S 9 15cm r1

Variable stars

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R CVN	2005 08 24 02 12	12.1			119	121				9 15cm r1	136
S BOO	2005 08 24 02 19	11.4			110	116				9 15cm r1	49
V BOO	2005 08 24 02 26	9.0			82	92	98			9 15cm r1	49
R BOO	2005 08 24 02 42	12.0			117	124				9 15cm r1	136
S CRB	2005 08 24 02 49	8.5			84	90				9 15cm r1	49
S SER	2005 08 24 02 56	8.7			84	89				9 15cm r1	49
R SER	2005 08 24 03 06	9.7			92	100				9 15cm r1	49
U HER	2005 08 24 03 16	9.3			90	94				9 15cm r1	49
SS HER	2005 08 24 03 22	12.8 <			126	128	128			9 15cm r1	136
W HER	2005 08 24 03 31	12.4 <			113	124				9 15cm r1	136
R CRB	2005 08 24 03 39	5.8			58	62				9 5cmb	10

This was an experiment using the DSCs on the Orion XT6i to locate & observe variable stars. I previously entered the coordinates of 20 variables as "User" objects, & worked through the list, with the 15cm aperture at Foxmead. I can go almost as deep as with the ~~28cm~~ 28cm in the city! Result of experiment: I ~~can observe 29 stars~~ take 9 min/star \bar{c} DSCs vs 12 min/star \bar{c} starhopping.

Moon: Posidonius on terminator } 136x
Mars: SPC visible

1094e 2005-08-24/25 22:00-00:05 EDT Foxmead S 9 15cm r1

Variable stars

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
AH HER	2005 08 25 02 22	12.0			117	122	127			9 15cm r1	136
R OPH	2005 08 25 02 31	12.0 <			116	120				9 15cm r1	136
RS HER	2005 08 25 02 46	12.3			120	123				9 15cm r1	136
T HER	2005 08 25 02 58	13.3			130	133				9 15cm r1	136
AF CYG	2005 08 25 03 06	7.0			68	71				9 15cm r1	49
EM CYG	2005 08 25 03 19	13.0			126	134				9 15cm r1	250
R CYG	2005 08 25 03 28	9.8			91	96	99			9 15cm r1	136
SS CYG	2005 08 25 03 51	12.3			119	123	128			9 15cm r1	136

Also M15, Saturn Neb, Mars, Moon, ~~aurora~~ Aurora was early

in session: E-W bank overhead at right angles to Milky Way & about as bright. Brighter patch in Bootes persisting about 1/2 hour.

1095d 2005-08-25 11:50-11:55 EDT Foxmod 58 4cmrr
Sun: Complex multiple prominences at about 7 to 9 o'clock. ^{32x}

1096e 2005-09-01/02 20:40-23:10 EDT Foxmod Sdak 8-3 28cmrr 15cmrr
 First observations from new deck outside telescope room, 28cmrr on concrete pad, 15cmrr on wood deck.

Variables:

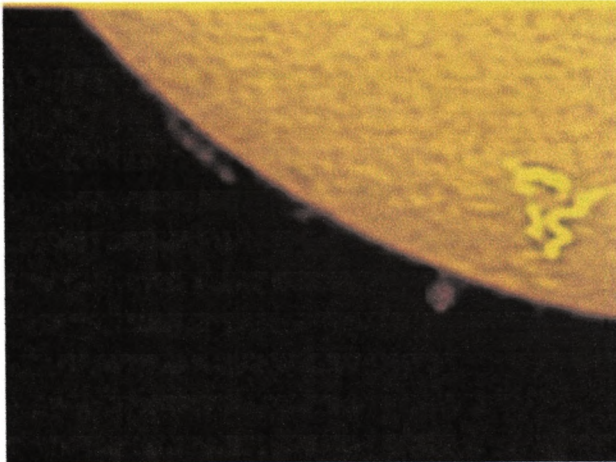
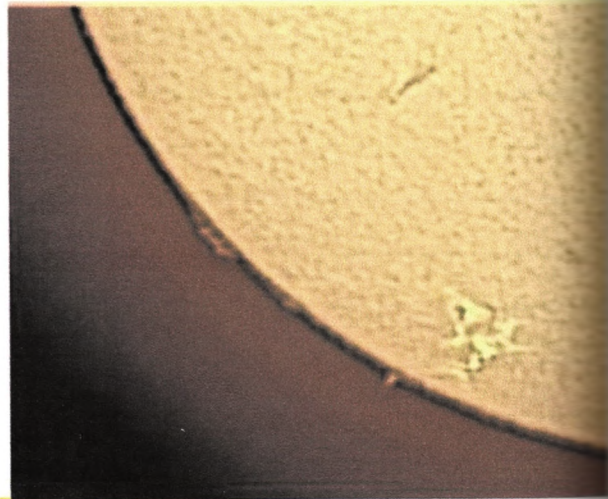
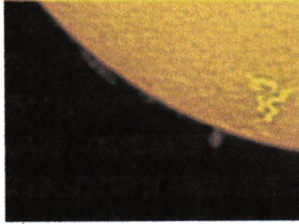
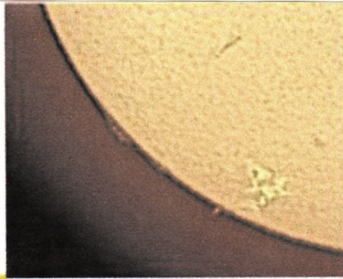
Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
U CYG	2005 09 02 01 55	11.2		111	117				8	15cmrr 136
SS CYG	2005 09 02 02 03	12.0		119	123				8	15cmrr 136
R VUL	2005 09 02 02 20	11.2		110	113				8	15cmrr 136
RU PEG	2005 09 02 02 30	12.6		120	126	127			8	15cmrr 250
R PEG	2005 09 02 02 43	11.4		113	116				8	15cmrr 49
V CAS	2005 09 02 02 54	11.8		117	121	125			8	15cmrr 136
DX AND	2005 09 02 03 08	13.3 <		127	133		U		3	15cmrr 136

1097d 2005-09-03 01:17 EDT Foxmod deck n.e
 Inscripted meridian on telescope pad at local noon with level as gnomon.

1098e 2005-09-03/04 21:30-22:05 EDT Foxmod 8-12 15cmrr
 Deep sky MB, 16, 17, ~~18~~ E & S Q-III
Variables:

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
SS CYG	2005 09 04 01 51	12.2		119	123		U		8-	15cmrr 136
T CEP	2005 09 04 02 02	7.4		71	81				8	15cmrr 49

Clouds suddenly moved in and covered the whole sky!



Sun in Hydrogen Alpha

9/4/2005 14:00 UT
PST, 1.6x Barlow
Celestron NexImage

1099d 2005-09-04 10:15-12:45 EDT Faxed back 3 10cm rr 4cm rr

Sun: both scopes mounted on SP. Need some way of aligning the PST with the main scope, as they're off by a couple of degrees because of slop in the piggyback adapter on the rings. One small spot in white, not visible in PST. Small prominence @ 6 o'clock, with very bright streaks just in front of an disk.

Image by Gary Strumol @ about the same time!

Subject: [Telescopes] My first solar images

From: "gstrumol" <gstrumol@ford.com>

Date: Sun, 04 Sep 2005 18:29:08 -0000

To: telescopes@yahoogroups.com

Hi all,

I've posted my first solar image using the PST and the Celestron Neximage webcam in the Files section under Gary's folder, called "firstSolars.jpg." I took the images this morning around 14:00 UT. Seeing wasn't very good as there was a thin haze (sky light blue, not dark). I used the lens portion of a 2X Barlow to reach focus, though trying to see if I was in focus on screen is VERY hard! I was filming on the PST mounted to my solar rig (PST and 90mm Mak mounted on an Orion Tritech tripod) which made it even more difficult because the image wasn't tracked! So the sun would be sweeping across the screen all the time. I took around 1200 images, but because of the motion only a small portion of the entire view was stacked (always in the FOV).

In any event, I think things came out pretty well for a first try on the PST. Most of the processing was done in Registax, with a little touchup in Photo Editor. I tried to concentrate on the plage region near the edge, small prominences were visible as well but they weren't the subject of the attempt.

Tell me what you think!

Gary



1100e 2005-09-05/06 21:10 - 22:40 EDT Foxmed deck 9 15cm r1
Variables:

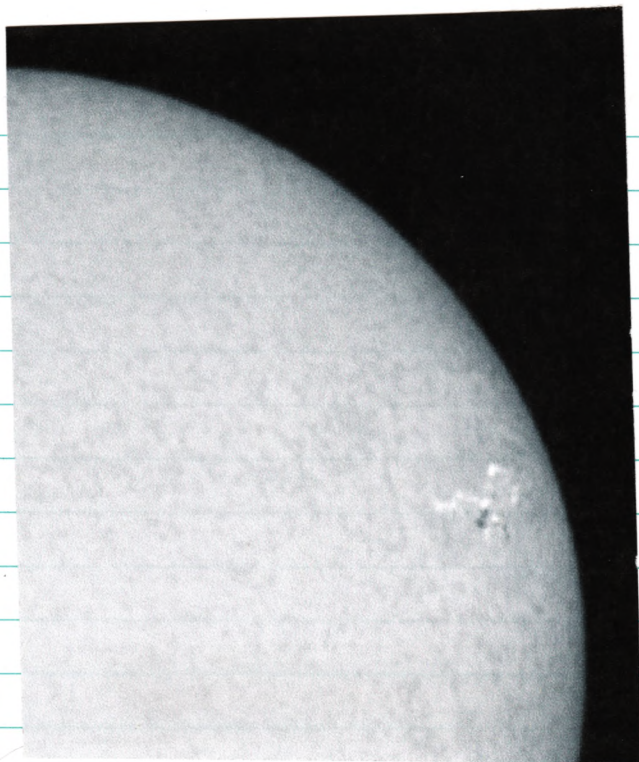
Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
CHI CYG	2005 09 06 01 20	8.0			78	81				8	15cm r1 49
SS CYG	2005 09 06 01 26	11.2			104	114				9	15cm r1 136
U DRA	2005 09 06 01 36	11.4			109	116				9	15cm r1 49
Z AND	2005 09 06 01 46	10.5			101	104	107			9	15cm r1 136
X AND	2005 09 06 02 00	13.2	<		129	132				9	15cm r1 136
T CAS	2005 09 06 02 10	11.8			113	118	121			9	15cm r1 136
R AND	2005 09 06 02 27	11.8	<		116	118				9	15cm r1 136
RX AND	2005 09 06 02 40	10.5			104	104	109			9	15cm r1 49

1101d 2005-09-08 16:20 - 16:35 EDT Foxmed deck 8 4cm rr
Sun: I think I just saw solar flare. Brilliant S-shape, winding through sunspot group close to limb @ 3 o'clock, with several prominences above it - very three dimensional!

1102d 2005-09-09 08:35 - 08:55 EDT Foxmed deck 8 4cm rr
Sun: sunspot group has rotated more into view, but no flare currently. Tried 10mm, 8mm & 6mm eyepieces from binos set, but 12mm Plössl seems to have the best contrast.

1103d 2005-09-09 11:45 - 12:05 EDT Foxmed deck 8 4cm rr 10cm rr
Sun: More activity in H α : rapidly shifting spots of light in & around sunspot group. I set up the 100ED to see what it looked like in white light. Interesting: the bright streak between the pair of large spots & the dark streak closer to the limb actually looked dark in white light!

BB50
21:35 UT



ring of fire
gray streaks
limb

20:55 - 21:18 UT

1104d 2005-09-09 16:55-17:18 EDT Foxmed 8 4cmrr

Sun: This is looking really terrifying! The sunspot group is now the base of a "ring of fire" or almost circular pattern of flares with branches. There are two greyish streaks to the right of the ring.

1105e 2005-09-09/10 21:15-23:30 EDT Foxmed 8 15cmr1

Variables:

Name	YYYYMMDDHHMM	Mag	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R BOO	2005 09 10 01 24	11.8		114	117	124			8	15cmr1 136
S CRB	2005 09 10 01 39	7.2		70	78	84			8	15cmr1 49
S SER	2005 09 10 01 49	9.6		93	97	101			8	15cmr1 49
R SER	2005 09 10 01 55	9.5		92	100				8	15cmr1 49
U HER	2005 09 10 02 00	9.7		94	98	99			8	15cmr1 49
SS HER	2005 09 10 02 10	13.1		128	131				8	15cmr1 136
AH HER	2005 09 10 02 27	11.9		117	122	127			8	15cmr1 136
RS HER	2005 09 10 02 45	11.5		112	120				8	15cmr1 136
T HER	2005 09 10 02 59	13.3	<	130	133				8	15cmr1 136
SS CYG	2005 09 10 03 06	8.4		85	91				8	15cmr1 49

Deep sky: both halves of Veil Nebula @ 49x E OIII, M45, M33, Mars

1106d 2005-09-10 09:13-09:23 EDT Foxmed 8-3 4cmrr

Sun: Flare activity continues unabated - the "ring of fire" is still there

1107n 2005-09-10/11 01:15 EDT Foxmed 8 n.e.

Aurora: glimmering from behind trees as seen from bedroom window, like there was a large city back there

1108d 2005-09-11 10:46-10:54 EDT Foxmed deck 3 4cmrr

Sun: spot group continues to show bright streaks plus deep red spots nice V-shaped prominence @ 3 o'clock

1109d 2005-09-11 18:10-18:15 EDT Foxmed deck 8 4cmrr
Sun: spot group remains complex with about half a dozen
 pin point flares in close triangles. V shaped prominence
 also persists.

1110e 2005-09-11/12 21:30-00:45 EDT Foxmed deck 8 15cmr1
Moon: 1st quarter - seeing poor @ 136x
Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
SS CYG	2005 09 12 01 42	8.3			78	85	91			8 15cmr1	49
R VUL	2005 09 12 02 02	9.7			97	100	104			8 15cmr1	136
T CEP	2005 09 12 02 10	6.8			67	71				8 15cmr1	49
R PEG	2005 09 12 02 26	11.2			109	113	116			8 15cmr1	136
V CAS	2005 09 12 02 39	12.1			119	121	125			8 15cmr1	136
DX AND	2005 09 12 02 50	12.7	<		121	127				8 15cmr1	136
Z AND	2005 09 12 03 01	10.0			97	101	104			8 15cmr1	49
RX AND	2005 09 12 03 11	12.8			121	128				8 15cmr1	136
S PER	2005 09 12 03 22	10.8			100	109	114			8 15cmr1	136
R TRI	2005 09 12 03 33	12.2			117	123				8 15cmr1	136
T ARI	2005 09 12 03 40	9.2			86	91	95			8 15cmr1	49
AF CYG	2005 09 12 03 46	7.0			68	71				8 15cmr1	49
R CYG	2005 09 12 03 53	10.1			99	100	105			8 15cmr1	136
U CYG	2005 09 12 04 08	11.6			111	117	122			8 15cmr1	136
R AQR	2005 09 12 04 21	7.4			69	75	76			8 15cmr1	49
OMI CET	2005 09 12 04 34	7.5			73	80	86			8 15cmr1	49

Deep sky: M45, M31, M33, M110
Mrs: seeing very poor.

1111d 2005-09-13 09:55-10:05 EDT Foxmed deck ~~8~~ 5 4cmrr
Sun: bright areas now form a huge sickle shape ~~enmeshed~~
 with sunspots enmeshed in it. 32x, 40x, 50x, 67x.
 Image seems best @ 32x (GS Plössl)

1112d 2005-09-17 16:20-16:28 EDT Foxmed deck 8 4cmrr
Sun: new complex on fl limb associated prominences & possible flare

1113e 2005-09-17/18 21:10-22:30 EDT Foxwood deck 6 282mm r1 10x50b ne
Variables:

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
W HER	2005 09 18 01 28	12.5		124	135		M		6	28cm r1 157
T HER	2005 09 18 01 54	12.8		124	130		M		6	28cm r1 157
DX AND	2005 09 18 02 17	12.7 <		127			M		6	28cm r1 157

Moon: full Moon @ 157x

1114d 2005-09-18 19:55-16:00 EDT Foxwood deck 8 4cm rr
Sun: a couple of large prominences on f limb associated with new sunspot group 32x

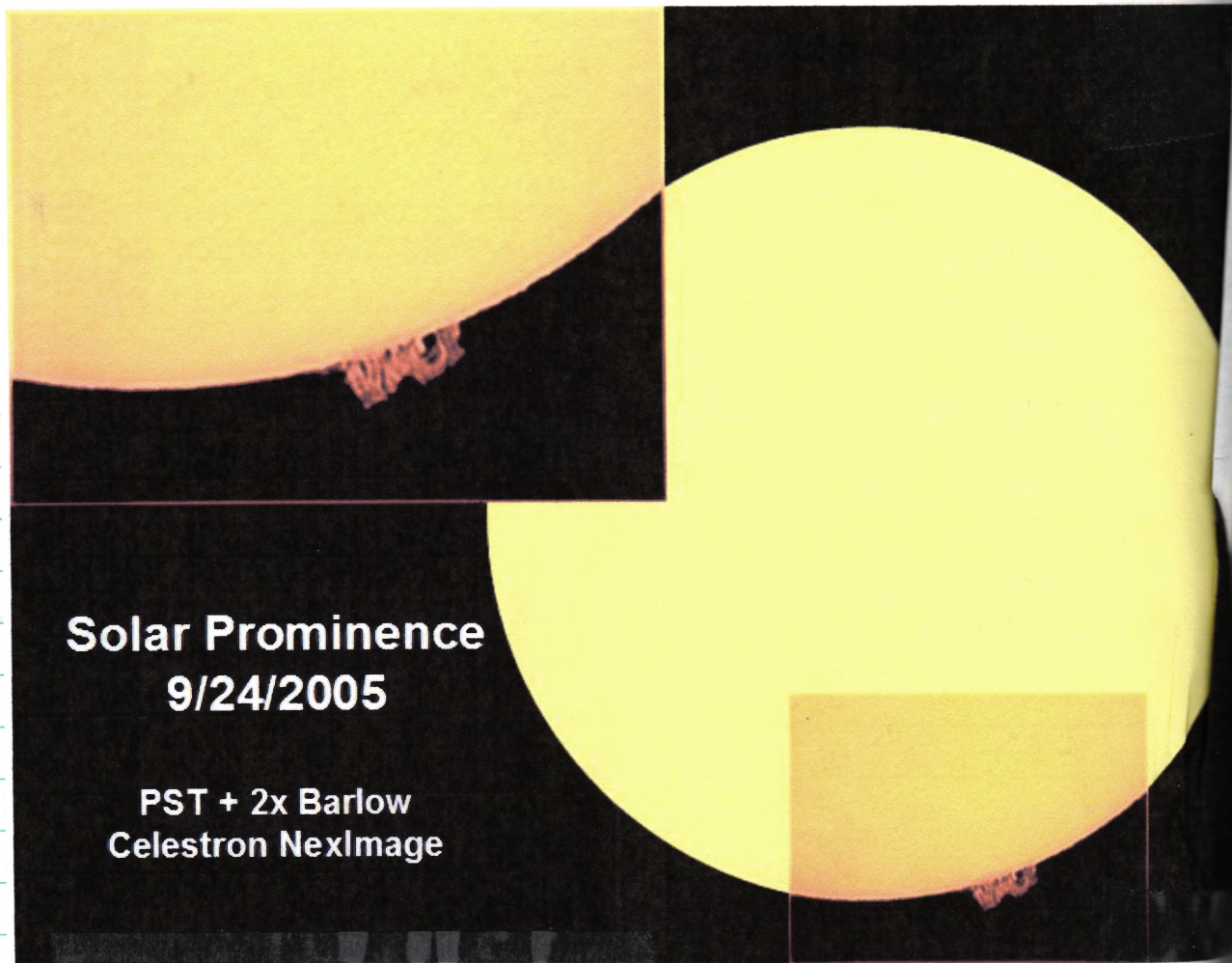
1115d 2005-09-19 10:10-10:15 EDT Foxwood deck 8 4cm rr
Sun: counted 10 prominences around the limb @ 32x

1116d 2005-09-23 09:20-09:27 EDT Foxwood deck 8 4cm rr
Sun: tried 80A filter, no effect. Prominence @ 4 o'clock continues onto disk as dark streak.

1117e 2005-09-23/24 20:30-22:40 EDT Foxwood deck 9 15cm r1
Variables:

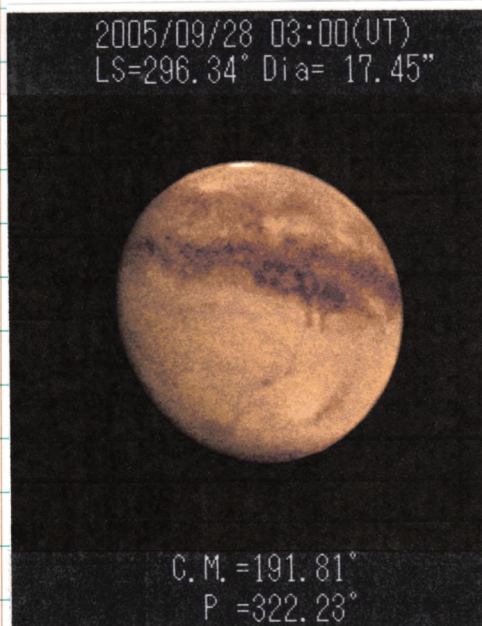
Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S CRB	2005 09 24 00 41	7.1		70	78				9	15cm r1 49
S SER	2005 09 24 00 49	9.8		93	97	101			9	15cm r1 49
R SER	2005 09 24 00 57	8.3		74	75	84			9	15cm r1 49
U HER	2005 09 24 01 04	9.9		94	99	103			9	15cm r1 49
SS HER	2005 09 24 01 12	12.3		121	128	128			9	15cm r1 136
AH HER	2005 09 24 01 23	13.7 <		127	137				9	15cm r1 136
RS HER	2005 09 24 01 28	10.2		96	103				9	15cm r1 49
EM CYG	2005 09 24 01 47	12.6 <		121	126				9	15cm r1 136
CHI CYG	2005 09 24 02 02	9.0		87	90	96			9	15cm r1 49
SS CYG	2005 09 24 02 08	11.2		109	114				9	15cm r1 136

Deep sky: Helix nebula invisible ≤ 0 -III - highest @ 49x
Mars: detail visible @ 290x



**Solar Prominence
9/24/2005**

**PST + 2x Barlow
Celestron NexImage**



2005/09/28 03:00(UT)
LS=296.34° Dia= 17.45"

C. M. =191.81°
P =322.23°

1118d 2005-09-24 13:10-13:15 EDT ^{Foxmed} ~~deck~~ deck 9 4 cm r r
Sun: prominence @ 5 o'clock (see image by Gary Stroud ←)

1119d 2005-09-27 08:20-08:22 EDT Foxmed deck 9 4 cm r r
Sun: 1 prominence, 1 spot - pretty quiet!

Deck shed delivered & assembled.

1120e 2005-09-27/28 21:00-23:10 EDT Foxmed deck 8 15 cm r l
 Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
U DRA	2005 09 28 01 14	10.4			103	106	109			8	15cm r l 136
R VUL	2005 09 28 01 20	8.9			88	94				8	15cm r l 49
T CEP	2005 09 28 01 29	7.4			67	77				8	15cm r l 49
RU PEG	2005 09 28 01 39	12.7			126	127				8	15cm r l 200
R PEG	2005 09 28 01 47	11.1			109	113				8	15cm r l 49
V CAS	2005 09 28 02 07	12.5			117	125	128			8	15cm r l 136
Z AND	2005 09 28 02 14	10.6			104	107				8	15cm r l 49
AF CYG	2005 09 28 02 20	7.0			68	71				8	15cm r l 49
R CYG	2005 09 28 02 28	10.7			105	109				8	15cm r l 136
U CYG	2005 09 28 02 39	11.3			111	117				8	15cm r l 136

Mars: 240x 22:40-23:10 EDT: experimenting w/ #23 orange & 2003 Mars filters. #23 gives most pleasing view. Dark band across shaft of disk quite obvious, no sign of S polar cap.

1121e 2005-10-08/09 19:00-20:30 EDT Debbie's 8 15 cm r l
 Moon, Venus, Mizar-Alcor, Albireo, & Lyrae, M2, M15, & Del,
 etc.

1122e 2005-10-08/09 21:15-21:28 EDT Foxmed deck 9 4 cm r r
 Observed Lacrosse 3 satellite & David's friend Senny.

1123d 2005-10-09 11:50-11:55 EDT Foxmed 9 4cm r/r
Sun: nice prominences @ 3 and 6 o'clock 32x

1124d 2005-10-17 14:30-14:40 EDT Foxmed deck 8 4cm r/r
Sun: one small spot, many low prominences all around the
Sun 32x

1125e 2005-10-29/30 20:00-22:00 EDT Foxmed deck 8 28cm r/l

Subject: Re: [BAC] Re: Mars Viewing
From: Geoff Gaherty <geoff@gaherty.ca>
Date: Sat, 29 Oct 2005 23:20:39 -0400
To: barriastro@yahoo.com

Geoff Gaherty wrote:

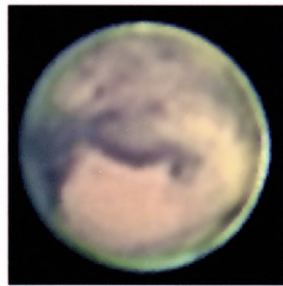
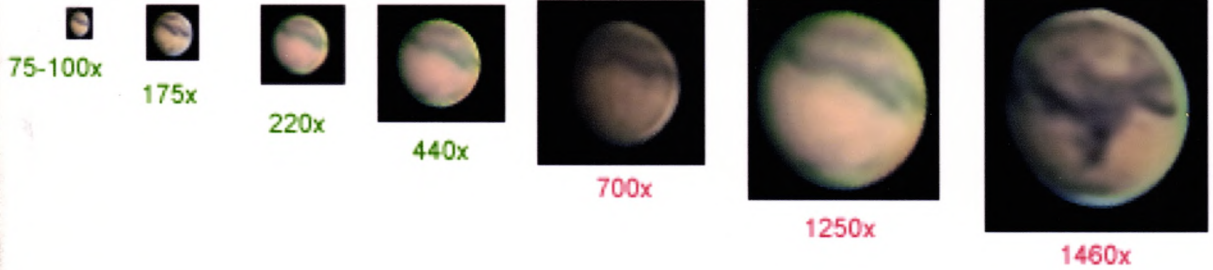
Two people turned up at my farm for observing tonight: Robert Adye and Mike Pupeza. I had my 11" Starmaster Dob set up, and Robert brought his highly modified 10" Sky-Watcher Dob. We checked out a number of favourite deep sky objects, including NGC457 (the Owl Cluster or the E.T. Cluster), M31, M32, M101, the Double Cluster in Perseus, and M33. I decided to try my new Orion O-III filter on M33, to see if the nebulae in the galaxy would be visible and, sure enough, there was a mottling over the extent of the galaxy. This is the first time I have ever observed nebulae in another galaxy. While the O-III filter was in place, we also checked out M27 and both halves of the Veil Nebula. The detail visible in all three was amazing! Then I switched to the binoviewer and we observed Mars, though the seeing was very unstable. Mike left for home, and I helped Robert make a brightness estimate of the variable star RX Andromedae. Robert had been at a variable star workshop sponsored by the RASC Toronto Centre last weekend, so this was his first chance to try out the techniques we had taught there. It was really interesting for me to observe the star myself, and then mentor Robert as he tracked down the field, found the star, and made his own estimate. Just at that point, the whole field of his telescope dimmed, and he discovered that just about every optical surface had dewed up. I went back to my scope and found the same thing, so we packed it in for the night!

Geoff

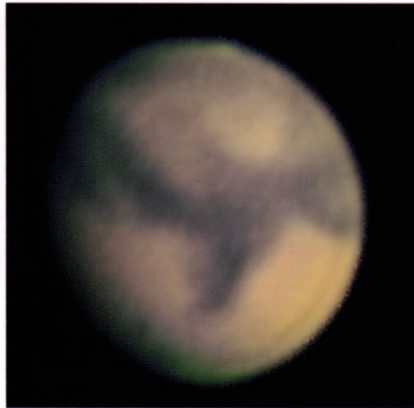
1126d 2005-10-30 09:00-09:10 EST Foxmed deck 8 4cm r/r
Sun: not much activity in H α - a ~~small~~ bit of a "hairy" limb.

~~1126d 2005-10-30~~

Mars Sizes as seen Visually through a Telescope

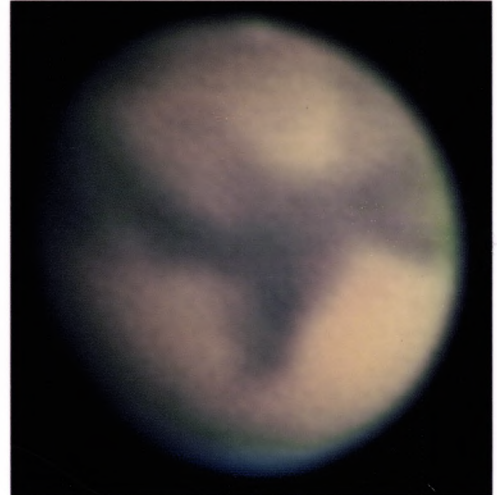


2200x



4400x!

very rough est., almost filled
the entire FOV of the 2-4mm
Nagler zoom @2mm + 5X
Powermate+ TV 2X Barlow!



Unownk??? Ran out of
Powermate & Barlow!!!

Instructions: print out the image (best on glossy photo paper). Hold the print at arm's length. The indicated magnification should give you an estimate of the magnification at the eyepiece.

Mars 2005 Images courtesy of 127mm Tele Vue NP127 APO refractor and 102mm Tele Vue TV-102 APO refractor and ToUCam camera.

Magnification visually estimated with Tele Vue Radian and Nagler zoom eyepieces, Tele Vue 2X Barlow and 5X Powermate

Handwritten notes in blue ink at the bottom of the page, including a date '10/20/05' and some illegible text.

1127e 2005-10-30/31 19:45-20:35 EST Foxmead deck 8-3 10cm vr
Mars* Best @ 225x. Binoculars does not reach focus with
either 1.25" or 2" diagonal because nosepiece doesn't enter
far enough. First light for William 2" dielectric diagonal
Pleides & Double cluster 2.4cm MK70 22.5x Hazy sky made
view dim & lacking contrast.
* image @ 225x almost identical to Ron B's 220x image at
left.

1128e 2005-10-31/32 21:00 EST Foxmead deck 3-2 ne
- after reading about John Bohdanowicz's experience, I
looked outside to see Mars shining brightly, but
nothing else in the sky. Then it winked out &
Capella winked on. Then Capella winked out &
Aldebaran winked on. Then Aldebaran vanished &
Mars returned. Sucker holes in the clouds playing
trick or treat!

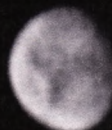
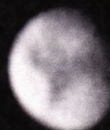
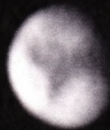
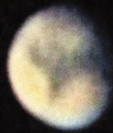
1129e 2005-12-7/8 18:45-18:53 EST Foxmead deck 8 10x50b ne
Venus: phase not really visible yet in 10x50s
Mars: 10x50
Moon: 10x50 just short of 1st quarter
Pleides Nice in 10x50s
- First look at sky in over 5 weeks - endless clouds,
rain, snow, wind, and more snow (about 10" on the
ground right now!)

MARS
January 10, 2006
Ls - 354°
D - 11.1"

Frank J Melillo
Holtville, NY
Celestron 8-inch
Toucam Pro II
Seeing: 5/10

SOUTH

EAST



1:02 UT
CM - 285°

379 frames stacked

1130 m 2006-01-06 05:25-05:28 EST Foxmead bromwitar 9 ne
Meteor: nice ~~1st~~ 2nd magnitude meteor observed
below Polaris, almost horizontal, heading into ~~Auriga~~
Auriga. Probably not a late Quadrantid.

1131 e 2006-01-10/11 19:30-21:00 EST Innisdale SS Barrie 4 10cm rr

Subject: [BAC] Star party in Barrie
From: Geoff Gaherty <geoff@gaherty.ca>
Date: Wed, 11 Jan 2006 08:06:51 -0500
To: undisclosed-recipients;

Much to everyone's amazement, after two months of clouds, we had clear, though hazy, skies for last night's star party at Innisdale Secondary School in Barrie. Earlier in the day, I gave a talk to about 125 students gathered in the school cafeteria.

About 80 students, some with their families, attended, along with many of the school staff. We had eight telescopes on hand, ranging from a 60mm refractor to a 12.5" Dobsonian, manned by seven members of the Barrie Astronomy Club and the RASC Toronto Centre: Cliff Harding, Jeff Howard (a student at the school), Harry McMullen, Brian Mould, Irv Yee, WingKo Yung, and myself. Because of the haze, we concentrated on brighter objects: the Moon, Mars, Saturn, Castor and the Pleiades, though a few people caught glimpses of the Orion Nebula and the Andromeda Galaxy through the murk. At the end of the evening, the teachers responsible, Danielle Blackwell and Erin Elder, were busy planning a similar event for the spring!

Many thanks to all involved -- I hope I didn't forget anyone!

Geoff

--

Geoff Gaherty
Foxmead Observatory
Coldwater, Ontario, Canada
<http://www.gaherty.ca>

2006-01-11 Testing ETX-90 on loan from Starry Night with
BlueStar wireless adapter and Bluetooth dongle on Dell laptop.
Seemed to perform flawlessly (albeit incoarsely!)

2006-01-12 Tested Orion XT6i in Blue Star & Dell laptop.
Always ended up pointing at N horizon in Starry Night. Will
have to test with real star alignment at night.

Tested Orion binoviewer in XT6i. Would reach focus in Shady
Barlow and Vltira Barlow, but at very high magnification.
Tried lens cell of Shady screwed directly onto bino, but
would not reach focus. The best results were with
TV 2.5x Powermate - about half the magnification as
with Barlow, because image doesn't change size as
you move away from Powermate. Would like to experiment
with long-focus Barlow.

Tested binoviewer in Orion 100ED refractor ^{with 2" WA diagonal}. Basically the
same as XT6i. I noticed it did come to focus in Shady
cell directly on bino inlet, so also tried this on XT6i with
success. Magnification still around 5x though! I'm using
~~the~~ the pair of 24.5mm Meade SWAs for this. Tonight
looks like being clear but hazy. I think I'll try
a pair of Sirius 25mm Plössls as they're much lighter.
That is, if the one from my old 127mm Mak Cass & the
one from the XT6i match!

1132@ 2006-01-12/13 18:00-18:20 Foxment deck 3 15cm r1

Magn: testing magnifications with Orion binoviewer, in 25mm Plössls

Shady Barlow = 8m

- " " cell = 9m

TV PM 25x = 12m

11
19:00-20:40 EST Foxwood deck 5-6 15cm r1
Saturn: ~~Ultina~~ Ultina Barlow is noticeably sharper than Orion
Shorty - Cassini division much clearer. Shorty
cell directly gives slightly lower magnification
than ~~Shorty~~ Shorty or Ultina. ~~TV~~ TV Powermate is
sharpest of all, much lower power.

By increasing power:

TV PM 2.5 $\approx 12m$

Shorty cell $\approx 9m$

Shorty Barlow $\approx 8m$

Ultina Barlow $\approx 7m$

Also tried 12m orthos in Powermate - excellent

Maeni: Ultina seems best

Orion nebula: best in Powermate

earlier tried twice to set up XT6i with Starry Night
via Blue Star. Connection seems stable, alignment
goes fine, but centering object points at N
Horizon. This is Dell laptop - need to repeat
on Mac laptop.

1133 e 2006-01-16/15 20:30-21:30 EST Foxwood deck 6 15cm r1
Testing Blue Star/Starry Night/iBook control. Worked with both
USB cable & Bluetooth wireless, but only after doing IntelliScope
align - i.e. had to do alignment twice. If I tried
just turning IntelliScope on and then connecting, I got SN
reporting communication errors, & SN showed scope pointing
@ zenith. Viewed Orion Nebula, Mizar/Alcor, Pleiades,
Moon, Mars. Temp -10°C

1134d 2006-01-15 12:45-13:05 EST Foxwood deck 7 4cm rr
Sun; quick check \bar{c} Orion bino viewers to see if it would
reach focus \bar{c} TV Powermate. 1 small prominence @ 1 o'clock
~~at 1:00~~

1135m 2006-01-26/27 06:18 EST Foxwood window 8 ne
Venus; first ne. view in morning sky, right on horizon
Meteor; \sim mag 1 heading down towards horizon to left
of Venus

————— 07:00 EST " " " "
Moon; tiny sliver of crescent just clear of trees, really
far to S, about 15° \bar{c} zenith from Venus, which is
now high and bright

1136e 2006-03-11/12 20:25-21:00 EST Foxwood deck 6 9cm mc
- attempt to set up & use ETX90 on loan from Imaginara
- doesn't seem to work in cold! After several attempts
at alignment I gave up, since fine slow wasn't working
- this was one of the first clear nights, with a fog-
above freezing, but Moon nearly full. Also first
time deck was clear of snow in a month!

1137e 2006-03-17/18 20:00-21:00 EST Foxwood deck 7 15cm r1
- helping Alec & Joyce Munra with their new Orion 15cm
SkyQuest XT.
- Saturn, Mars, M42, M45, M44, M35, M65, M66

23:00-23:30 EST
- Moon & Jupiter

6 objects: 6 H400 → 374/400, 26 to go
2 NSQG

1138n 2006-03-28/29 various ^{S of} Jalul Libya 7-8 ne
 Quick naked eye looks at the desert night sky, hazy and by dust in the air and light pollution. Sky probably was inky black, but horizon limited by airborne dust.

1139d 2006-03-29 09:30 - 13:00 Libyana time (+2hr) S of Jalul Libya 8 4cm r
 Total eclipse of Sun. PST worked spectacularly well during partial phases, including H & Bailey's Beads. Colour & detail seemed to be enhanced as exposed portion of Sun shrank. At totality, switched to 10x50 binoculars to observe corona & prominences. Corona small in extent but rich in detail with many streamers. Prominences were bright pink. Venus was visible about 15 minutes before totality. Mercury not seen, even sweeping c 10x50. Also alternated observing with naked eye with ^{light} ~~polymer~~ glasses & nothing during totality. Showed H & Sun to many members of RASC Toronto expedition & general public.

1140e 2006-04-16/17 21:15 - 23:00 EDT Foxned deck 8 28cm r | 10x50b
Deep sky:

Time	NGC Type	Con	Power	Observing notes
21:43	2627 OPNC	PYX	63	Faint scattering of stars
22:00	2613 GALXY	PYX	157	Extremely faint elliptical glow with averted vision
22:10	2509 OPNC	PUP	63	Small cluster with a few bright stars
22:13	2479 OPNC	PUP	63	Faint scattering with 2 bright stars
22:35	2264 CL+NB	MON	63	Nebula a faint glow in UltraBlock
22:47	2251 OPNC	MON	63	4 brighter stars forming diamond with faint stars behind

Can't Schwassman-Wachman 73P - observed B & C components @ B3e
 a ~~B~~ brighter \bar{c} tail, B fainter & diffuse oval

14 objects: 13 H400 → 387/400 13 to go
2 MS06

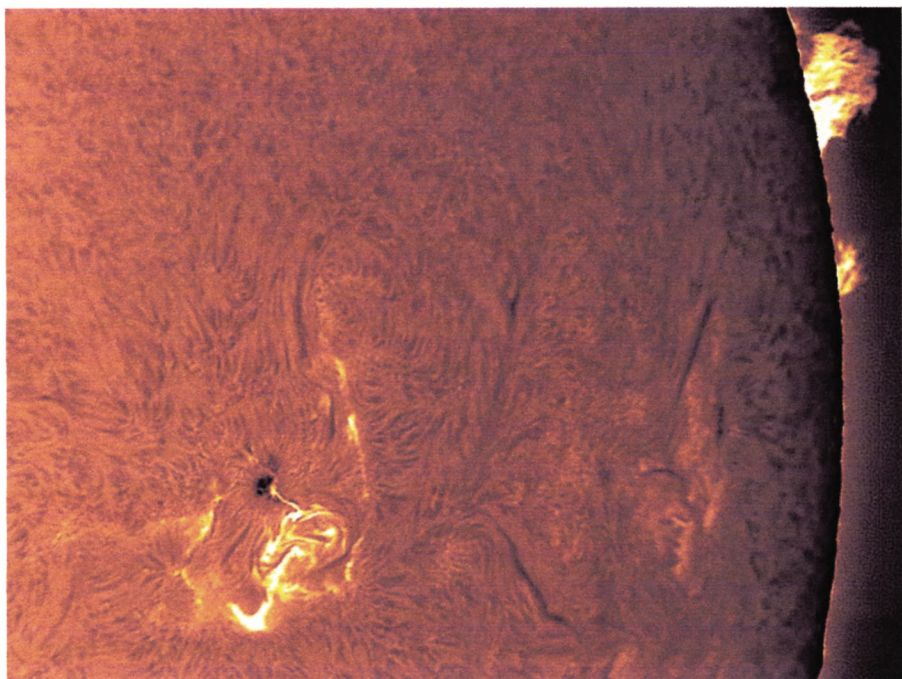
1141 e 2006-04-17/18 21:15-23:15 EDT Focused deck 8 28 cm x 1 10x59b
Deep sky:

Time	NGC	Type	Con	Power	Observing notes
21:43	2185	BRTNB	MON	157	Very faint glow with averted vision. UltraBlock didn't help.
21:50	2215	OPNC	MON	63	Faint scattering behind 3 brighter stars.
21:52	2232	OPNC	MON	63	Large coarse cluster with many bright stars.
21:59	2360	OPNC	CMA	63	Nice evenly distributed cluster with many stars.
22:03	2353	OPNC	MON	63	Coarse scattering of bright stars with many faint stars behind.
22:08	2343	OPNC	MON	63	5 bright stars with fainter stars behind.
22:10	2335	OPNC	MON	63	Irregular scattering of moderately bright stars.
22:15	2423	OPNC	PUP	63	A faint echo of M47.
22:18	Mel 71	OPNC	PUP	63	Isosceles triangle with faint stars behind.
22:33	2506	OPNC	MON	63	Barely resolved glow.
22:49	2311	OPNC	MON	63	Faint scattering of stars.
22:54	2286	OPNC	MON	63	Faint coarse scattering.
22:58	2301	OPNC	MON	63	Faint scattering behind bright chain of stars.
23:06	2324	OPNC	MON	63	Irregular cross shape.

Comet Schwassman-Wachmann 73P. C component is much brighter than B & has fan-shaped tail 23:10 EDT
of R not seen.

P.T.O.

16 objects: 13 H β 00 \rightarrow 400/400. Complete!
2 N50E \rightarrow 303/400 97 to go
610 total DSOS



1142e 2006-04-25/26 21:15-23:16 EDT Foxmead 9 28cm r1 10x50b 15x7a b

Time	NGC	Type	Con	Power	Observing notes
21:41	2186	OPNC	ORI	157	3 brighter stars forming flat triangle against faint sprinkling.
21:50	2281	OPNC	AUR	15	Beautiful bright cluster (blocked by house).
22:08	2681	GALXY	UMA	63	Bright stellar nucleus, fairly bright galaxy.
22:23	2782	GALXY	LYN	63	Faint glow, disappears at 157x!
22:27	2859	GALXY	LMI	63	Compact condensed glow.
22:34	2964	GALXY	LEO	63	3 galaxies in a row, ever fainter (2964>2968>2970).
22:34	2968	GALXY	LEO	63	3 galaxies in a row, ever fainter (2964>2968>2970).
22:34	2970	GALXY	LEO	63	3 galaxies in a row, ever fainter (2964>2968>2970).
22:42	3245	GALXY	LMI	63	Nice little glow.
22:44	3277	GALXY	LMI	63	Faint glow.
22:50	3414	GALXY	LMI	63	Quite large, evenly illuminated.
22:55	3486	GALXY	LMI	63	Large diffuse glow.
22:57	3504	GALXY	LMI	63	Bright condensed glow.
23:04	3294	GALXY	LMI	63	Diffuse glow.
23:16	3395	GALXY	LMI	157	Very faint, very small glow. <u>Last of the Herschel 400!</u>
23:16	3430	GALXY	LMI	157	Bright glow, much nicer than 3395!

Also Rosette Nebula @ 21:55 = 15x7a b

1143d 2006-04-27 12:20 EDT Foxmead deck 9 4cm r1
Sun: Spectacles flare just below sunspot group, 32x

1144d 2006-04-28 17:13-17:20 EDT Foxmead deck 9 4cm r1
Sun: More flare activity N of sunspot group. 32x

1145e 2006-04-28/29 21:30-23:05 EDT Foxmead 8-9 15cm r1 nr
 Variables:

Name	YYYYMMDD	HHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
S GEM	2006	04 29 01	55	10.4		101	105				8	15cm r1 49
T GEM	2006	04 29 02	07	9.1		89	93				8	15cm r1 49
U GEM	2006	04 29 02	17	12.0	<	116	120				8	15cm r1 133
YZ CNC	2006	04 29 02	25	11.7	<	115	117				8	15cm r1 133
R LMI	2006	04 29 02	45	12.0		109	115	120			8	15cm r1 49
R LEO	2006	04 29 02	48	5.8		56	65				8	15cm r1 49

Const S-W 73P: ~~Comp~~ Component C visible in 6x30 Finder, pseudo-nucleus appeared double^{133x}. B getting brighter too.

1146d 2006-04-30 12:43-12:48 EDT Foxmad deck 8 4 cm fr
Sun: no prominences, but quite a few bright lines. 32x

1147e 2006-05-2/3 20:30-00:15 EDT Foxmad deck 9 15cm n 15cm r ^{10x50b} ne
Moon & Saturn: compared Intes MN61 vs Orion XT6i, TV binovue vs Orion binovue, cell from Orion Shorty Barlow vs TV Powermate 2.5x. TV binovue better than Orion wide field, brighter image, better collimation, but Orion quite decent. Powermate better than Shorty cell; lower magnification, much sharper @ high powers. Orion bino @ TV 2.5 gives about 15% more magnification than ~~the~~ TV, Orion @ Barlow ~ 4x TV. Orion + Barlow + 25mm Sirius gives good medium power - probably would work @ 18 inch tele. For high power. MN61 slightly sharper than XT6i, but not as bright.

~~Variables~~ Const S-W 73P. Both B & C components visible in 6x30 Finder. Both quite bright in XT6i, but C brighter & with tail (fan shaped)

Variables

Name	YYYYMMDDHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R CRV	2006 05 03 03 18	11.0			102	109	112			9	15cm r 133
SS VIR	2006 05 03 03 25	8.2			77	83	87			9	15cm r 49
R VIR	2006 05 03 03 32	8.0			79	82	90			9	15cm r 49
RU VIR	2006 05 03 03 37	10.7			103	106	116			9	15cm r 49
U VIR	2006 05 03 03 44	9.1			82	93	103			9	15cm r 49
R HYA	2006 05 03 03 53	8.1			73	80	85			9	15cm r 49
S VIR	2006 05 03 03 58	10.7			96	106	109			9	15cm r 49
R CRB	2006 05 03 04 01	6.2			58	62				9	5cm b 10

Jupiter: low in sky, poor seeing.

1148d 2006-05-03 10:50-11:00 EDT Foxmead dock 8 4cmrr
Sun: large prominence on p limb 32x

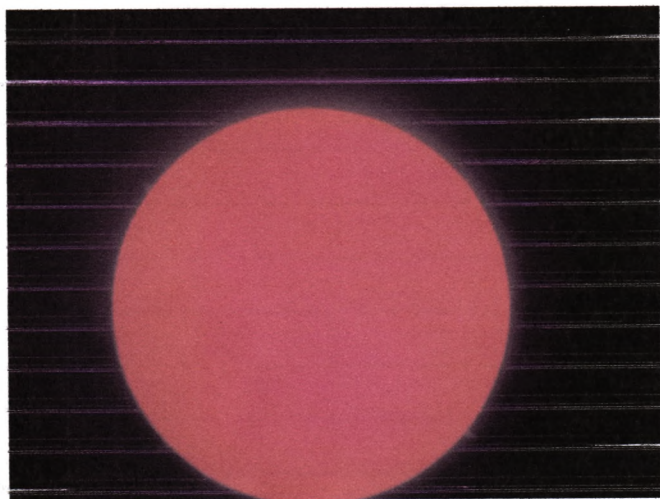
1149e 2006-05-03/04 21:30-00:10 EST Foxmead dock 8 15cmr1 10x50b
Moon & Saturn $\bar{\epsilon}$ Orion binocular $\bar{\epsilon}$ 2x Barlow cell + 25mm Plössl
 $\sim 200x$, Many fine rilles visible on Moon.
Variables:

Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	Sky	Aper	Magn
R CVN	2006 05 04 01 52	10.8			101	106	112			8	15cmr1	49
S BOO	2006 05 04 02 01	12.2			121	125				8	15cmr1	136
V BOO	2006 05 04 02 13	8.0			75	82				8	15cmr1	49
R BOO	2006 05 04 02 20	10.0			96	101	105			8	15cmr1	49
S CRB	2006 05 04 02 31	12.7			124	127				8	15cmr1	136
S SER	2006 05 04 02 43	11.8	<		116	118				8	15cmr1	136
R SER	2006 05 04 02 54	12.1	<		116	121				8	15cmr1	136
U HER	2006 05 04 03 02	11.3			111	115				8	15cmr1	136
SS HER	2006 05 04 03 11	8.9			83	88	94			8	15cmr1	49
W HER	2006 05 04 03 22	12.4	<		113	124			Comet SW3B *	8	15cmr1	136
AH HER	2006 05 04 03 34	12.7			122	127				8	15cmr1	136
RS HER	2006 05 04 03 41	9.4			87	91	96			8	15cmr1	136
T HER	2006 05 04 03 45	7.9			78	80				8	15cmr1	136
R CRB	2006 05 04 03 52	5.9			58	62				8	5cmb	10

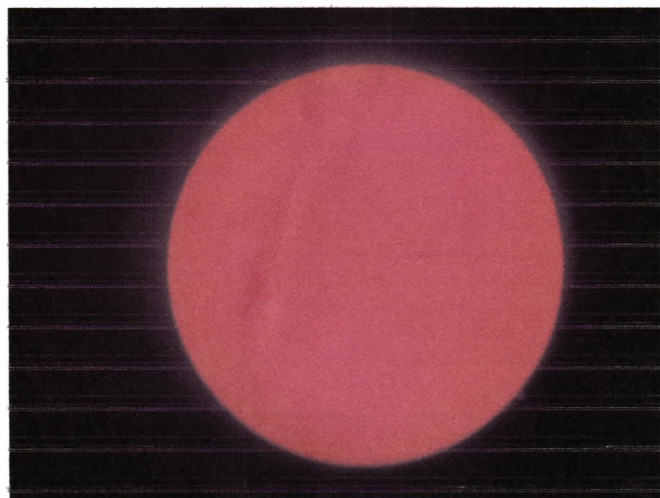
* Comet Schwassmann-Wachmann 73P/B in same f.o.v. as
W HER & M13! Also observed C component in 10x50b.
Jupiter: Quite lonely in same bino setup as above. Seeing
excellent. Faston & white oval clearly visible on S edge NEB
just past CM. Time to start observing CM transits
again!

1150e 2006-05-06/07 \sim 20:30 MST Lowell Observatory, Flagstaff ³ 60cmrr
Moon: observed $\bar{\epsilon}$ 24" Alvan Clark refractor - seeing poor

Earlier I gave a short talk to the Coconino Astronomical Society
on beginning variable star observing.



← prommer



← prommer

1151e 2006-05-12/13 ~ 20:30 MST Lowell Obs. Flagstaff 4 60cmrr
Double stars Observed γ Leo with 24" Alvan Clark refractor.
 Beautiful subtle colours and exquisite Airy disk & diffraction rings.

1152d 2006-05-23 12:10-12:25 EDT Foxmed dock 8 4cmrr
Sun: Small prominence @ 5 o'clock @ 32x. Attempted images @ CP4500 & 25m exp., autofocus off, zoomed to fit \leftarrow
 - focus could be better, & need to set camera to higher resolution.

1153e 2006-05-23/24 22:00-00:20 EDT Foxmed dock 8 15cmrl ne
Jupiter, Saturn, Mars poor seeing, Saturn close to Bechwe
Variables: Mars is catching up with Saturn

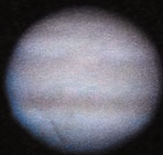
Name	YYYYMMDDHHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
SY CNC	2006 05 24 02 47	12.6	<		123	126				8	15cmrl 136
R LMI	2006 05 24 02 52	12.9			125	129	132			8	15cmrl 136
R LEO	2006 05 24 03 03	6.7			65	69				8	15cmrl 49
X LEO	2006 05 24 03 08	13.5	<		135					8	15cmrl 136
TW VIR	2006 05 24 03 16	12.4			121	125	131			8	15cmrl 136
R CRV	2006 05 24 03 24	9.1			90	96				8	15cmrl 49
SS VIR	2006 05 24 03 32	7.8			77	83				8	15cmrl 49
R VIR	2006 05 24 03 38	7.7			71	76	79			8	15cmrl 49
RU VIR	2006 05 24 03 46	10.5			103	106				8	15cmrl 49
U VIR	2006 05 24 03 50	10.0			95	103	105			8	15cmrl 49
S VIR	2006 05 24 04 02	11.6			109	117	122			8	15cmrl 136

Jupiter: seeing better 240 in binoculars (TV)
Day Sky: Triad several "Taur" DSOs; M3, M5, M104

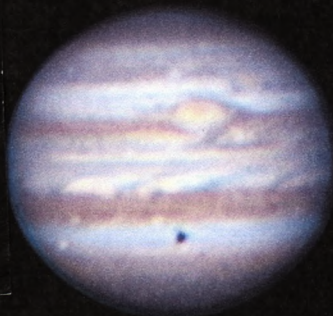
1154e 2006-05-27/28 21:45-00:15 EDT Carr Astro. Obs. 8 10cmrr, ~~8cmrr~~ ^{he}
 Refractor bakeoff at CAO, Richard Jordan & I did extensive comparisons of his TV85 & my Orion 100ED - close tie.
 Jupiter was spectacular GRS in transit plus Europa & Io ~~and~~

Jupiter & Europa - May 28, 2006

C8 SCT ToUcam 840 II Bill Dickinson Glen Allen, Virginia USA

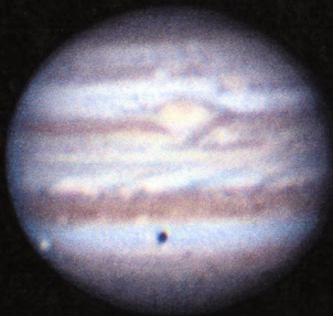


Wingka Yu 200mm Dob



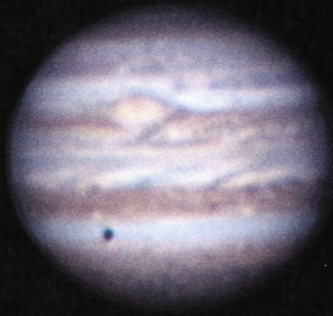
2:10UT

I:330.63 II:103.63 III:247.18



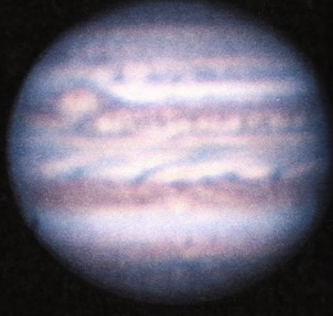
2:18UT

I:335.51 II:108.46 III:252.02



2:48UT

I:353.80 II:126.60 III:270.16



3:28UT

I:18.19 II:150.77 III:294.34

in transit. In 100ED, GRS had no colour, but there was a fine line enclosing it, like a festoon into the STRZ. After seeing turbulence detail in a 14.5" Portaball, I could also see it in the 100ED, I was unable to see the new little Red Spot, but someone said it requires at least 10" aperture. Guy Masm & I did compares between his (formerly my) 127m Orion MC & 100ED on Jupiter. Once again 127 seemed to resolve more fine detail but 100ED had more contrast. Compare CIV85 based on Jupiter, Vega & Lyrae.

Wingko's image at left is a good representation of what I saw, though the image in my 100ED was sharper. I could see no sign in any of the scopes I looked through of the little Red Spot or the chunk of the STB between it and the GRS. The STB following the LRS was very clear in the 100ED. The fellow with the 14.5" Portaball had never heard of the Paracass, and I suspect his collimation was none too good. Certainly the image of Jupiter in his scope was nowhere near as good as I'd expect.

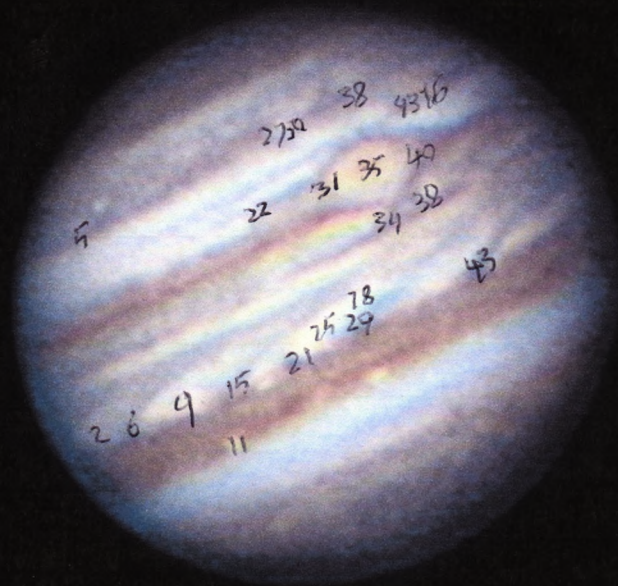
1155e 2006-05-29/30 21:40-00:45 EDT Fanned deck 4 28cm 1
Jupiter: 47 cm transits in 3 hours! Including GRS
and LRS (Little Red Spot = oval BA) 240x bino

P.T.O.

Jupiter - May 30, 2006

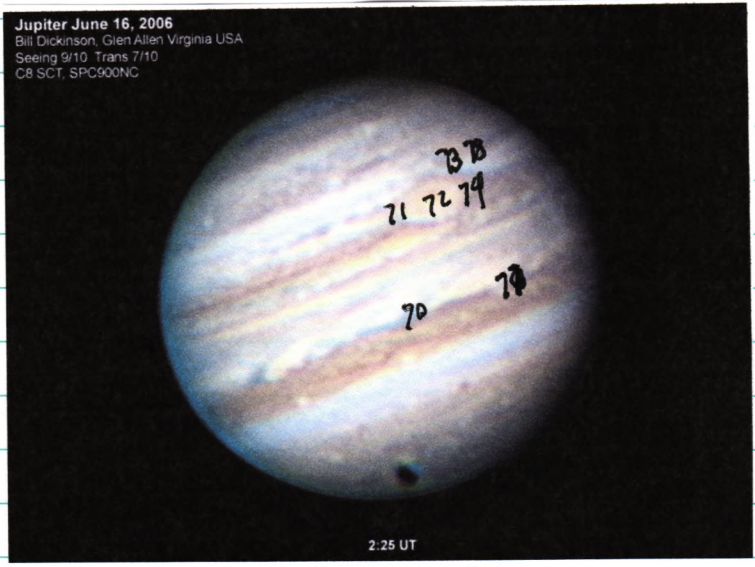
C8 SCT SPC900NC Bill Dickinson Glen Allen, Virginia USA

Seeing 6-8/10 Trans 6/10



03:32 UT

REC	OBJECT	REC	DESCI	DATE_UT	LONG_1	LONG_2	SY	INSTR	MAGN
1	DC1BAR	N1		01:42.0	269.4	27.2	2	S279	225
2	WC1OVAL	L1		01:48.0	273.0	30.8	1	S279	225
3	DP1PROJ	L2		01:57.0	278.5	36.3	1	S279	225
4	WF1OVAL	L1		02:01.0	281.0	38.7	1	S279	225
5	DP1SECT	B2		02:04.0	282.8	40.5	2	S279	225
6	DC1PROJ	L2		02:06.0	284.0	41.7	1	S279	225
7	WP1OVAL	L1		02:10.0	286.4	44.1	1	S279	225
8	DF1PROJ	L2		02:12.0	287.7	45.3	1	S279	225
9	WC1OVAL	L1		02:26.0	296.2	53.8	1	S279	225
10	WP2NICK	N1		02:31.0	299.2	56.8	2	S279	225
11	WC2NICK	N1		02:36.0	302.3	59.8	2	S279	225
12	DP1PROJ	L2		02:37.0	302.9	60.5	1	S279	225
13	WF2NICK	N1		02:41.0	305.3	62.9	2	S279	225
14	WF1OVAL	L1		02:44.0	307.2	64.7	1	S279	225
15	DC1PROJ	L2		02:48.0	309.6	67.1	1	S279	225
16	WP1SPOT	L2		02:51.0	311.4	68.9	1	S279	225
17	WC1SPOT	L2		02:55.0	313.9	71.3	1	S279	225
18	DF1PROJ	L2		02:58.0	315.7	73.1	1	S279	225
19	DP1PROJ	L2		02:59.0	316.3	73.7	1	S279	225
20	WF1SPOT	L2		03:06.0	320.6	78.0	1	S279	225
21	DC1PROJ	L2		03:09.0	322.4	79.8	1	S279	225
22	DP1SECT	E2		03:10.0	323.0	80.4	2	S279	225
23	WP1AREA	L1		03:11.0	323.6	81.0	1	S279	225
24	DF1PROJ	L2		03:13.0	324.9	82.2	1	S279	225
25	WC1AREA	L1		03:20.0	329.1	86.4	1	S279	225
26	DP1PROJ	L2		03:24.0	331.6	88.9	1	S279	225
27	DF1SECT	B2		03:27.0	333.4	90.7	2	S279	225
28	WF1AREA	L1		03:28.0	334.0	91.3	1	S279	225
29	DC1PROJ	L2		03:30.0	335.2	92.5	1	S279	225
30	WC1SECT	B2		03:35.0	338.3	95.5	2	S279	225
31	DP1RS	E3		03:39.0	340.7	97.9	2	S279	225
32	DF1PROJ	L2		03:40.0	341.3	98.5	1	S279	225
33	DP1SECT	B2		03:44.0	343.8	100.9	2	S279	225
34	DP1STRK	J1		03:47.0	345.6	102.8	1	S279	225
35	DC1RS	E3		03:55.0	350.5	107.6	2	S279	225
36	DC1SECT	B2		03:56.0	351.1	108.2	2	S279	225
37	DC1STRK	J1		03:58.0	352.3	109.4	1	S279	225
38	DF1SECT	B2		04:00.0	353.5	110.6	2	S279	225
39	DF1STRK	J1		04:10.0	359.6	116.7	1	S279	225
40	DF1RS	E3		04:13.0	1.4	118.5	2	S279	225
41	DP2SECT	C2		04:16.0	3.3	120.3	2	S279	225
42	DC1PROJ	L2		04:18.0	4.5	121.5	1	S279	225
43	DC2SECT	C2		04:20.0	5.7	122.7	2	S279	225
44	DF2SECT	C2		04:22.0	6.9	123.9	2	S279	225
45	DF1PROJ	L2		04:23.0	7.5	124.5	1	S279	225
46	WC2SECT	C2	LRS?	04:30.0	11.8	128.7	2	S279	225
47	DP2SECT	C2		04:40.0	17.9	134.8	2	S279	225



Jupiter June 16, 2006
Bill Dickinson, Glen Allen Virginia USA
Seeing 9/10 Trans 7/10
C8 SCT, SPC600NC

2.25 UT

1156e

2006-06-04/05 20:40-22:40 EDT Foxwood 815cmmn
 Testing Orion Star Shoot Planetary Camera, Made several
 single exposures of Lunar features, and then shot 100
 frames of Jupiter, all with TV 2.5x Powermate. Dell
 laptop only has USB 1.1 ports, so resolution reduced.
 Also did some viewing of Jupiter c TV binocular @
 180x @ 225x, & Orion binocular c 25 mm Plössl &
 12.5 mm arthos. These seem to give ~225x, roughly
 the same as TV c 8 mm Plössl, so "1/2x" Barlow
 screwed into port = 3x.

[28cmm]

1157e

2006-06-05/06 22:00-00:07 EDT Foxwood deck S: 2-3 T: 4-0
Jupiter:

REC	OBJECT	REC DATE_UT	LONG_1	LONG_2	SY INSTR	MAGN
48	DF2SECT	B2 02:06.0	309.6	13.9	2 S279	225
49	DF1PROJ	L2 02:11.0	312.7	17	1 S279	225
50	WP1AREA	L1 02:56.0	340.1	44.1	1 S279	225
51	DF1PROJ	L2 02:58.0	341.3	45.4	1 S279	225
52	WC1AREA	L1 03:15.0	351.7	55.6	1 S279	225
53	DP1PROJ	L2 03:25.0	357.8	61.7	1 S279	225
54	WF1AREA	L1 03:32.0	2.1	65.9	1 S279	225
55	DC1PROJ	L2 03:35.0	3.9	67.7	1 S279	225
56	WP1AREA	L1 03:45.0	10	73.8	1 S279	225
57	DF1PROJ	L2 03:47.0	11.2	75	1 S279	225
58	WC1AREA	L1 03:52.0	14.3	78	1 S279	225

Also Moon

1158e 2006-06-12/13 22:33-04:17 EDT Faxmed deck 9-3 28cm r1
Jupiter seeing 5-0

no	object	re...	date_ut	long1lo...	instr	ma...	orie
59	WC1OVAL	L1	2006-06-13 02:33.0	352 2	S279	240	SR
60	DF1SECT	B2	2006-06-13 02:38.0	355 5	S279	240	SR
61	DP1PROJ	L2	2006-06-13 02:48.0	1 11	S279	240	SR
62	DC1PROJ	L2	2006-06-13 02:50.0	2 13	S279	240	SR
63	DF2FEST	K2	2006-06-13 02:54.0	4 15	S279	240	SR
64	WF1OVAL	L1	2006-06-13 02:55.0	5 16	S279	240	SR
65	DF1PROJ	L2	2006-06-13 02:55.0	5 16	S279	240	SR
66	WP2SPOT	L1	2006-06-13 02:57.0	6 17	S279	240	SR
67	WC2SPOT	L1	2006-06-13 03:06.0	12 22	S279	240	SR
68	DP1PROJ	L2	2006-06-13 04:11.0	51 62	S279	240	SR
69	DP2SECT	B2	2006-06-13 04:15.0	54 64	S279	240	SR

1159e 2006-06-15/16 22:05-23:30 EDT Faxmed deck 8-9 28cm r1 ne
Jupiter seeing 3-4

02:05 Obs. com. Io emerging from Jupiter's shadow, Ganymede's shadow on CM (NPR)

no	object	re...	date_ut	long1lo...	instr	ma...	orie
70	DC2PROJ	L2	2006-06-16 02:29.0	103 91	S279	240	SR
71	DP1RS	E3	2006-06-16 02:34.0	106 94	S279	240	SR
72	DC1RS	E3	2006-06-16 02:57.0	120 108	S279	240	SR
73	WP3OVAL	C2	2006-06-16 03:08.0	127 114	S279	240	SR
74	DF1RS	E3	2006-06-16 03:14.0	130 118	S279	240	SR
75	DP1PROJ	L2	2006-06-16 03:17.0	132 120	S279	240	SR
76	WC2OVAL	C2	2006-06-16 03:19.0	133 121	S279	240	SR
77	DC1PROJ	L2	2006-06-16 03:24.0	136 124	S279	240	SR
78	WF1OVAL	C2	2006-06-16 03:28.0	139 126	S279	240	SR
79	DF1PROJ	L2	2006-06-16 03:30.0	140 128	S279	240	SR

BA

BA

BA

Satellites: 02:22 Tumbling rocket baby, followed 2 minutes later by steady satellite on same N-S track - both very fast moving. Cygnus to Ophiuchus (falling)
 Possibly COSMOS rocket baby + ?

03:30 Obs. disc. poor seeing

$$\begin{array}{r} 112 \\ 120 \\ 126 \\ \hline 36 \overline{) 58} \\ \underline{18} \end{array}$$

1160

1150e 2006-06-20/21 21:50-00:13 EDT Foxmed dock 9 28cm 10x50b ne
 Jupiter S-4-9! Best view of Jupiter in my life!*

no	object	re...	::nomen	date_ut	long1lo...	instr	ma...	orie	descr
80	DP1RS	E3	RS	2006-06-21 01:52.0	150 100	S279	240	SR	
81	DC1PROJ	L2	NEB(S)	2006-06-21 01:54.0	151 101	S279	240	SR	
82	WF1OVAL	L1	EZ(N)	2006-06-21 01:59.0	154 104	S279	240	SR	
83	DF1PROJ	L2	NEB(S)	2006-06-21 02:02.0	156 106	S279	240	SR	
84	DC1RS	E3	RS	2006-06-21 02:05.0	158 108	S279	240	SR	
85	WP3OVAL	C2	STB	2006-06-21 02:13.0	163 112	S279	300	SR	BA
86	DP1SECT	G1	SEB(C)	2006-06-21 02:15.0	164 114	S279	300	SR	
87	DP1PROJ	L2	NEB(S)	2006-06-21 02:19.0	166 116	S279	300	SR	
88	DF1RS	E3	RS	2006-06-21 02:24.0	169 119	S279	300	SR	
89	WC2OVAL	C2	STB	2006-06-21 02:25.0	170 120	S279	300	SR	BA
90	DC1PROJ	L2	NEB(S)	2006-06-21 02:27.0	171 121	S279	300	SR	
91	WP1STRK	G1	SEB(C)	2006-06-21 02:27.0	171 121	S279	300	SR	
92	WP1OVAL	L1	EZ(N)	2006-06-21 02:30.0	173 123	S279	300	SR	
93	DF1PROJ	L2	NEB(S)	2006-06-21 02:34.0	175 125	S279	300	SR	
94	WF1OVAL	C2	STB	2006-06-21 02:35.0	176 126	S279	300	SR	BA
95	WC1OVAL	L1	EZ(N)	2006-06-21 02:42.0	180 130	S279	300	SR	
96	DF1FEST	K1	EB	2006-06-21 02:52.0	186 136	S279	300	SR	
97	WF1OVAL	L1	EZ(N)	2006-06-21 02:54.0	188 137	S279	300	SR	
98	DC1PROJ	L2	NEB(S)	2006-06-21 02:54.0	188 137	S279	300	SR	
99	WP1AREA	L1	EZ(N)	2006-06-21 02:55.0	188 138	S279	300	SR	
100	WC1AREA	L1	EZ(N)	2006-06-21 03:02.0	192 142	S279	300	SR	
101	DP1PROJ	L2	NEB(S)	2006-06-21 03:04.0	194 143	S279	300	SR	
102	DP1SECT	K1	EB	2006-06-21 03:13.0	199 149	S279	300	SR	
103	DC1PROJ	L2	NEB(S)	2006-06-21 03:14.0	200 149	S279	300	SR	
104	WF1AREA	L1	EZ(N)	2006-06-21 03:15.0	200 150	S279	300	SR	
105	DP1PROJ	L2	NEB(S)	2006-06-21 04:03.0	230 179	S279	300	SR	
106	DC1PROJ	L2	NEB(S)	2006-06-21 04:06.0	231 181	S279	300	SR	
107	DF1SECT	C2	STB	2006-06-21 04:12.0	235 184	S279	240	SR	
108	DF1PROJ	L2	NEB(S)	2006-06-21 04:13.0	236 185	S279	240	SR	

23:15-23:37 Interrupted CMTs to check location of Philomela
 & star it will occult Thursday night.

* Seeing was rock steady & I was able to use 300x in bino.
 Detail in EZ was overwhelming, like a Hubble image!

1161
H57n

2006-06-22/23 00:05 - 00:45 EDT Foxmead deck 28 cm r1 ne
Occultation by Asteroid Philomela

Re: Philomela plans to date

Subject: Re: Philomela plans to date
From: Geoff Gaherty <geoff@gaherty.ca>
Date: Fri, 23 Jun 2006 01:33:39 -0400
To: Guy Nason <gnason@rogers.com>
CC: David Dunham <dunham@erols.com>

Hi Guy,

The sky cleared here about half an hour before the event. I was set up with shortwave and recorder by 04:05 UT. I acquired Philomela easily with my 11" at 157x, but was unable to see the star as a separate object. I watched Philomela continuously from 04:30 to 04:44 UT. A couple of times I thought I saw a brief fade, but the comp star just south of Philomela was fading in and out a lot more often...clearly an effect of poor seeing. So I basically had a probable miss. I'm not sure, in retrospect, that I would have been able to detect a 0.5 magnitude drop under those seeing conditions, although, as a regular variable star observer, I can usually detect such a difference easily.

Geoff

--

Geoff Gaherty
Foxmead Observatory
Coldwater, Ontario, Canada
<http://www.gaherty.ca>

1162

H52d 2006-06-24 10:00 - 16:00 EDT Carley Hall 8 4 cm r1
Solar observing @ Coldwater Studio Tower

Subject: [RASC Toronto List] Asteroid 2004 XP14

From: Geoff Gaherty <geoff@gaherty.ca>

Date: Mon, 03 Jul 2006 10:13:03 -0400

To: undisclosed-recipients: ;

I successfully observed near Earth asteroid 2004 XP14 this morning from my home near Coldwater, Ontario.

One essential for observing a faint fast moving body is to know exactly where it is. The easiest way to do this is to use a planetarium program to plot its path, in my case Starry Night. The problem is finding accurate orbital elements. Because near Earth asteroids pass close to the Earth, their trajectory across the sky is very slight until they are very close. Also, because they are small and passing close to large objects like the Moon and the Earth, their orbits are often perturbed at the last moment. The trick is to use the most recent elements calculated just prior to the pass. I figured the elements provided by Starry Night's asteroid data file would be at least a few days old, so I used elements from the IAU's Minor Planet Centre downloaded a few hours before the pass.

I figured that the earliest I could observe the asteroid was at 01:30 am EDT (2006 July 02 05:30 UT). I set up my 11" Newtonian with a Nagler 22 eyepiece, yielding magnification of 63x and a field of view of 1.3 degrees. The transparency was poor, the Milky Way being just barely visible overhead. I aimed my telescope for the point where the asteroid was predicted to be at 01:30, and waited for it to cross my field of view. Nothing. I tried the same at 02:00, and again came up empty. I began to suspect that the MPC elements were off, so I switched to the Starry Night elements and tried again at 2:30. Again, nothing. In a previous observation of a near Earth asteroid some years ago, I recalled that I'd almost missed it because the asteroid was way ahead of its predicted position, so I located the spot where 2004 XP14 would pass at 03:00, through a nice little asterism centered on 1 Persei. I was on target at 02:50. A couple of minutes later I noticed a tiny speck of light motoring along. I quickly glanced at my watch and saw the time was 02:53 (06:23 UT), no idea how many seconds past. I looked back in the eyepiece and caught a second glimpse a bit further along the path, then lost track of it. It was much fainter than I had expected, no more than 10th magnitude judging by the stars around it.

On rechecking the Starry Night predictions, I saw that Starry Night's prediction had the path almost right, but it showed the asteroid in the position I observed at a time of 03:01, so the asteroid was eight minutes ahead of its predicted position. I rechecked the predictions from the MPC elements and they were even worse: the track was shifted to the northeast and the position as off by eleven minutes! This morning I located the elements I now know I should have used, on the JPL Horizons web site:

<http://ssd.jpl.nasa.gov/?horizons>

When I entered these elements into Starry Night, both the track and the times were in very close agreement with what I observed.

Given the inaccuracy of the predictions I was using, it's a miracle I saw the thing at all. What saved the day was choosing a spot well ahead of the predicted position and then waiting in ambush for it to pass through. For the record, the asteroid was 444,424 km away when I spotted it, as compared to a distance of 405,624 km to the Moon.

Geoff

--

Geoff Gaherty
Foxmead Observatory
Coldwater, Ontario, Canada
<http://www.gaherty.ca>

1163

1153e 2006-06-30/01 21:00-00:00 EDT Foxmed deck 8 28cmrl 10x50b ne
 Star party for friends: Walt, Dave & Mary Ann, Deb, her
 daughter Jannie, and her friends James & April.
Moon, Jupiter, ϵ Lyrae M57, Albireo, M13, M11, Mizar/Alcor,
 M8, ISS, Cosmos rocket body.

1164

1154e 2006-~~06~~07-02/03 21:00-23:00 EDT Foxmed deck 8 28cmrl ne
 Star party for friends: Heather Pauline & Dan, Sophy, Alan &
 their kids Phillip & Tapsin. Moon, Jupiter (RS on CM),
 ϵ Lyrae, Albireo, Mizar/Alcor, M57, M. 11, ET cluster, ISS

1165

1155m 2006-07-02/03 01:20-03:10 EDT Foxmed deck 8 28cmrl 10x50b
 Near Earth asteroid: 2004 XP14. See report opposite.

1166

1156e 2006-07-05/06 21:55-22:25 EDT Foxmed deck 8 10x50b ne
ISS: observed passing under Moon & Jupiter in
 conjunction. I followed it down into Earth's
 shadow, and missed the Shuttle Discovery following
 5 min after, because Randy Atwood had posted
 a message saying it would be 12-15 minutes
 after.

1167

1157e 2006-07-07/08 21:10-23:15 EDT Foxmed deck 5 28cmrl ne
 Moon: 240x & 300x
Jupiter CMTs (over)

no	object	re...	::nomen	date_ut	long1	lo...	instr	ma...	orie	descr
109	WP3OVAL	C2	STB	2006-07-08 01:18.0	292	113	S279	240	SR	BA
110	DF1PROJ	L2	NEB(S)	2006-07-08 01:22.0	295	115	S279	240	SR	
111	WC2OVAL	C2	STB	2006-07-08 01:26.0	297	118	S279	240	SR	BA
112	DF1RS	E3	RS	2006-07-08 01:28.0	298	119	S279	240	SR	
113	WF1OVAL	C2	STB	2006-07-08 01:37.0	304	124	S279	240	SR	BA
114	DC1PROJ	L2	NEB(S)	2006-07-08 02:25.0	333	153	S279	240	SR	
115	WF1OVAL	L1	EZ(N)	2006-07-08 02:27.0	334	154	S279	240	SR	
116	DF1PROJ	L2	NEB(S)	2006-07-08 02:35.0	339	159	S279	300	SR	
117	WP2AREA	L1	EZ(N)	2006-07-08 02:49.0	348	168	S279	240	SR	
118	WC2AREA	L1	EZ(N)	2006-07-08 02:58.0	353	173	S279	240	SR	
119	DF3SECT	C2	STB	2006-07-08 03:00.0	355	174	S279	240	SR	

1168

1178e

2006-07-08/09 21:00-2300 EDT Fox med deck #5 28cm r1 10x50b ne
 Impromptu star party for Deb Teice & her parents, Moon,
 Jupiter, & Lyrae, Alhira, Antares, Cosmos rocket body. Haze
 & bright near full Moon prevented finding much else.

1169

1159e

2006-07-15/16 21:15-22:21 EDT Fox med deck 8 28cm r1 10x50b ne
Jupiter: made images for first time in Orion Planetary Camera

jup1 01:21 UT prime focus 10 images

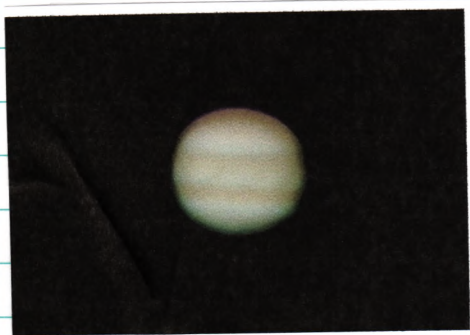
jup2 01:24 UT prime focus 20 images

jup3 01:29 UT 2.5x P. normal 20 images

jup4 01:32 UT 2.5x P. normal 40 images

Transits (01:55-02:21):

no	object	re...	::nomen	date_ut	long1	lo...	instr	ma...	orie	descr
120	DC1PROJ	L2	NEB(S)	2006-07-16 01:58.0	139	258	S279	240	SR	
121	WP1AREA	L1	EZ(N)	2006-07-16 02:02.0	142	261	S279	240	SR	
122	DF1PROJ	L2	NEB(S)	2006-07-16 02:04.0	143	262	S279	240	SR	
123	DF1FEST	K1	EB	2006-07-16 02:08.0	145	264	S279	240	SR	
124	WC2AREA	L1	EZ(N)	2006-07-16 02:19.0	152	271	S279	240	SR	



↑↑
2 festoons visible

1170

H60e 2006-07-18/19 21:20-23:30 EDT Foxmead deck 8-9 Z8cmr 10x50bue

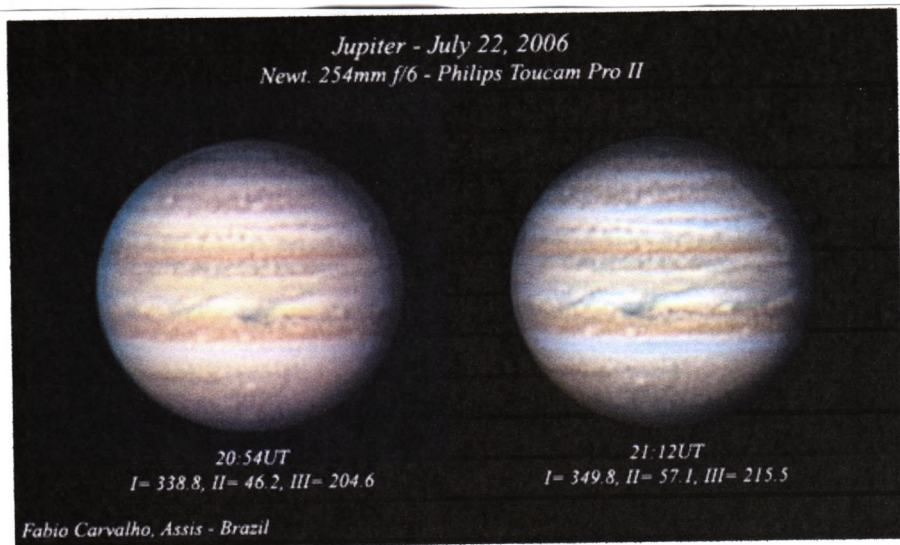
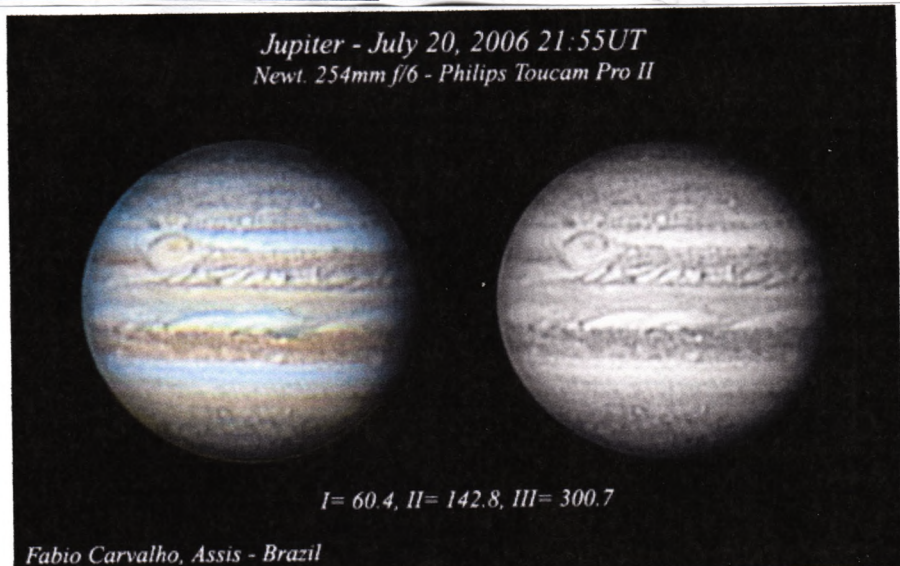
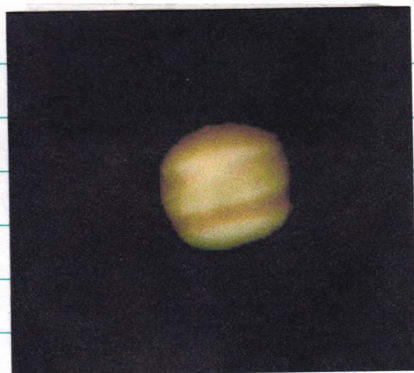
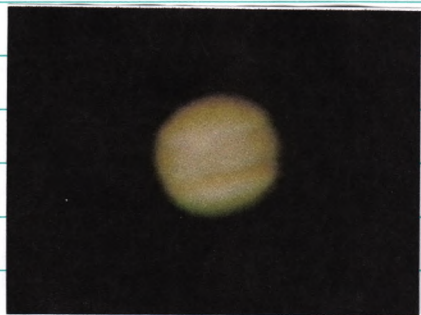
Jupiter imaging E Orion StarShoot Planetary Camera

Capture1.avi 21:27 EDT 01:27 UT 1 sec 30 frames
 Capture2.avi 21:28 01:28 1 sec 30 frames
 Capture3.avi 21:34 01:34 20 sec 600 frames
 jup5.fit 21:36 01:36 30 images
 jup6.1.fit 21:37 01:37 30
 6.2 21:39 01:39 30
 6.3 21:40 01:40 30

Jupiter transits 01:53-02:37 UT S:4-5 T:5

no	object	re...	::nomen	date_ut	long1	lo...	instr	ma...	orie	descr
125	WC1OVAL	L1	EZ(N)	2006-07-19 01:53.0	250	346	S279	240	SR	
126	DF1FEST	K1	EB	2006-07-19 01:58.0	253	349	S279	240	SR	
127	DP1PROJ	L2	NEB(S)	2006-07-19 02:05.0	257	353	S279	240	SR	
128	WF1OVAL	L1	EZ(N)	2006-07-19 02:10.0	260	356	S279	240	SR	
129	DP2SECT	C2	STB	2006-07-19 02:14.0	262	359	S279	240	SR	
130	DC1PROJ	L2	NEB(S)	2006-07-19 02:16.0	264	360	S279	240	SR	
131	WP1OVAL	L1	EZ(N)	2006-07-19 02:22.0	267	3	S279	240	SR	
132	DF1PROJ	L2	NEB(S)	2006-07-19 02:23.0	268	4	S279	240	SR	
133	DF1FEST	K1	EB	2006-07-19 02:34.0	275	11	S279	240	SR	
134	WC2OVAL	L1	EZ(N)	2006-07-19 02:36.0	276	12	S279	240	SR	

Deep sky: I noticed while timing transits that the Cat's Eyes in Scorpion were clearly visible, could see M7 with 10x50s really well, so decided to do some deep sky observing. Without any atlas, I observed M6, M7, M8, M20, M19, M62, M22, M23, M16, M17, M27, both sides of Veil Nebula, NGC 6940, NA Nebula, and finally M31, M32, & M110.



W71

1161e 2006-07-19/20 21:00-22:47 EDT Foxmed deck 8 28cm r1 ne

Jupiter imaging

jup7_0001-0030 01:31 UT

0031-0060 01:34

0061-0090 01:36

0091-0120 01:38

} combined into image at right
note RSH & veil in EZs

capture.avi (20sec) 01:39

Jupiter transits:

no	object	re...	::nomen	date_ut	long1	lo...	instr	ma...	orie	descr
135	DP2PROJ	L2	NEB(S)	2006-07-20 02:28.0	69	157	S279	240	SR	
136	DC2PROJ	L2	NEB(S)	2006-07-20 02:37.0	74	163	S279	240	SR	
137	DF2PROJ	L2	NEB(S)	2006-07-20 02:46.0	80	168	S279	240	SR	

1172

13/24

1162e 2006-07-23/24 21:16- EDT Foxmed deck 8 28cm r1

Jupiter transits

01:16 Obs com S: 2-3 T: 5

01:21 Just noticed shadow of moon (Io?) starting transit

138 01:22 Wc2 OVAL EZn

139 01:32 Dp2 PROJ NEBs

140 01:35 Wf2 OVAL EZn

141 01:37 Dc2 PROJ NEBs

~~01:40~~

142 01:41 Wp2 AREA EZn

143 01:45 Df2 PROJ NEBs

144 02:10 Wc2 AREA EZn

- 02:11 DeLa shadow

145 02:13 Dp1 proj NEBs

- 02:15 Io coming off transit

146 02:23 Wf2 AREA EZn

147 02:28 Dc1 proj NEBs

148 02:40 Df2 proj NEBs

(see image at left)

Obs dico S: 1-0

1173
H63e

EDT

~~2006-07-29/29~~ 2006-07-29/29 ~~20:35-22:17~~ ^{he} Formed deck 28cm r/l 10x50b

Jupiter transits

- 00:56 Obs cam 240x 5:6-7 T:4
149 00:57 Df1proj NEBs
150 01:08 Wcloval EZn
- 01:09 1st contact III Sh I
151 01:17 Df2fest EZn
- 01:18 2nd contact IV Sh I
152 01:22 Df2sect SEBs
153 01:29 Wcloval EZn
154 01:34 Df2sect NTB or? NNTB
155 01:49 Dec2veil EZn Column?
- 01:52 III Sh on CM
156 01:59 Wp2 oval EZn
- 02:04:30 Satellite passing star just N of Altair W to E
157 02:10 We2 oval EZn
- 02:17 Obs disc due to poor seeing (0-2)

Moon - observed while waiting for sky to get dark enough to observe Jupiter. Position Petavius well placed, seeing excellent.

1174
H64e

2006-07-31/01 21:10-21:30 EDT Formed deck 28cm r/l ne

Moon: For the first time in my life, it was too humid to observe. Though I'd put the scope out an hour before, the binoculars & eyepieces were thoroughly chilled and immediately fogged up. Clouds over Jupiter blocking view of RS.

1175
#652

2006-08-04/05 20:40-22:10 EDT Foxmed deck 8 28cm r10x5ab ne
Moon gibbous terminator along Sino Iridium. Dome in
Hesodus visible seeing 1-2 ~~200~~ x time

Jupiter

- 158 00:47 picked up in twilight Obs. com 1-2
00:51 Df1 veil EZs
Ganymede is in transit in NPR, but wouldn't know
it if I hadn't looked it up in Starry Night!
- 159 00:55 Dplproj NEBs
160 01:01 Dpl veil EZs ~~EZs seems~~
161 01:06 Dclproj NEBs
162 01:14 Nplaval ~~EZn~~
163 01:16 Df1 proj NEBs [dark light areas]
164 01:17 Dcl veil EZs EZs seems to be breaking up into
165 01:18 Df1 fest EZn
166 01:22 Df1 veil EZs
167 01:33 Wclaval EZn
168 01:47 Dplproj NEBs
169 01:50 Wflaval EZn
= 01:54 Ganymede transit 3rd contact (SN=01:51)
170 01:56 Dclproj NEBs
02:03 Ganymede transit 4th contact (SN=02:05)
171 02:04 Df1proj NEBs S=0-1 obs disc.

Moon seeing horrible wobbling like crazy!

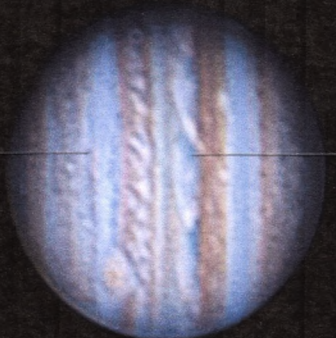
Vor χ Cyg very bright, orange coloured

181

181

181

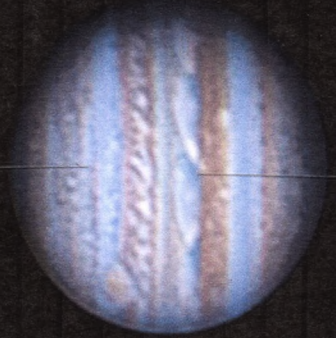
Jupiter - August 06, 2006
Newt. 254mm f/6 - Philips Toucam Pro II



21-22UT
I= 202.2, II= 155.0, III= 317.4

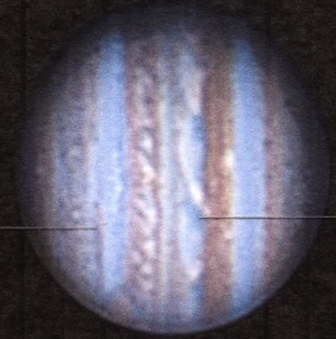
Fabio Carvalho, Assis - Brazil

Z rotacion lateral 185



21-37UT
I= 211.3, II= 164.1, III= 326.5

185



21-59UT
I= 224.7, II= 177.4, III= 339.8

185

476

466e 2006-08-05/06 20:40-22:05 EDT Fanned deck 8 28cm r1 ne
Moani 240xb Fassendi, Aristarchus, Grathuisen
Jupiter

20:45 Obs comm S: 4-5 ^{240xb} RSH past CM, RS very pale
pink, no longer enclosed by festoon. BA too
far from CM to be visible, now well past RS.

172	00:56	Dpl proj NEBs	174
173	01:03	Dcl proj NEBs	179
174	01:04	Wpl oval EZn	179
175	01:08	DF1 proj NEBs	182
176	01:15	Wcl oval EZn	186
177	01:25	Wpl oval EZn	192
178	01:26	Dcl proj NEBs (small)	193
179	01:28	Wpl oval EZn	194
180	01:36	Wcl oval EZn	199
181	01:37	DF2 sect STB	159
182	01:43	Dpl proj NEBs	203
183	01:44	Wpl oval EZn	204
184	01:46	Dpl veil EZs	205
185	01:49	Dcl proj NEBs	207
186	01:52	Wpl oval EZn	208
187	01:55	DF1 proj NEBs	210
	02:02	Obs. disc Sp 1-0	

U27

1167e 2006-09-07/08 20:44-21:58 EDT Foxwood deck 8 28cm r/n

- 00:44 Obs comm S: D-2
- 188 00:50 Wc2 OVAL EZn
- 189 00:55 Dp2 SECT STB
- 00:59 1st contact ~~at~~ occultation
- 190 01:02 Wf2 OVAL EZn
- 191 01:03 Dp2proj NEBs
- 01:03 2nd contact occultation
- 192 01:10 Dc2proj NEBs
- 193 01:13 Dc sect STB
- 194 01:14 Wp2oval EZn
- 195 01:17 Df proj NEBs
- 01:18 S → O laminar flow W → E
- 196 01:33 Wp1RSH SEBs
- 197 01:35 Wc3 OVAL STB BA
- 01:36 heavy clouds passing over Jupiter
- 198 01:40 Wf2oval EZn
- 01:44 in heavy cloud
- 199 01:47 Wf1oval STB BA
- 01:58 Obs disc. heavy clouds

1178

~~1188~~ 2006-08-08/09 20:54-21:45 EDT Foxmed deck 8 28cm 1 ne

- 00:54 Obs cam S-1-2 24x6 [NEB]
 200 00:57 Dclproj NEBs Io's shadow in transit on Maje
 201 ~~01:00~~ 01:00 Dpl veil EZs
 202 01:07 Df1 proj NEBs
 203 01:10 Dp2 sect STB SEBs
 204 01:16 Wc2 oval EZn EZn
 205 01:22 Dcl veil EZs
 206 01:25 Dp2 proj NEBs
 207 01:28 Wf2 oval EZn
 208 01:31 Dc2 proj NEBs
~~01:33 Df1 veil~~
 209 01:35 Df1 veil EZs
 210 01:39 Df2 proj NEBs
 01:45 Obs disc S: 1-0

1179

~~1169e~~ 2006-08-13/14 22:28-23:02 EDT Foxmed deck 8 ne
Perséids: saw one Earth grazer.
Lacrosse 5:

1180

~~1172~~ 2006-08-14/15 21:10-21:45 EDT Foxmed deck 8 28cm 1 ne
Jupiter - seeing 0 - belts barely visible!
 - seeing getting worse!
Albino, Altair (boiling & bloated)

1181

1171m 2006-08-20/21 04:00-05:00 EDT Foxmed deck 8 28cm 110x50b
Occultation by Vibia: observed through 04:40-04:45, no
 occultation - too far N of central line 157x - asteroid
 observed before & after @ 288x

Deep Sky: M42, M45, M33 (close to zenith). M33
 suspected \bar{c} n.e., easy \bar{c} 10x5 ob.
Moon: very thin crescent @ 63x

1182

1172a 2006-08-22/23 20:47-23:19 EDT Fox med deck 8 28cmrl ne ^[15cmrl] 25x100b.

Jupiter

- 00:47 Obs cam 240x b S-0-2
 211 00:55 Dpl proj NEBs
 212 01:01 Wc2 notch NEBn
 213 01:04 Dp2sect STB S: 3-4
 214 01:06 Wf2area EZn
 215 01:07 Dc1proj NEBs
 216 01:08 Wf1notch NEBn
 217 01:10 Wpl^{oval} ~~NEB~~ EZn
 218 01:11 Df1proj NEBs
 219 01:26 Wc2oval EZn
 — 01:27 Obs. disc. S=0

Deep sky: testing Ori α 25x100b. Badly out of collimation
 Sagittarius Milky Way, Jupiter, M11, M31, ~~M32~~/32/110,
 Double Cluster in Perseus.

Variable stars:

Name	YYYYMMDDHHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magr
R BOO	2006 08 23 02 13	9.1		84	88	92			8 15cmrl	49
S CRB	2006 08 23 02 23	9.2		90	93	103			8 15cmrl	49
S SER	2006 08 23 02 28	8.5		84	89				8 15cmrl	49
R SER	2006 08 23 02 40	10.9		107	109				8 15cmrl	49
T CRB	2006 08 23 02 49	9.9		98	103				8 15cmrl	49
U HER	2006 08 23 02 54	8.9		84	90	94			8 15cmrl	49
SS HER	2006 08 23 03 00	10.4		103	105	106			8 15cmrl	49
W HER	2006 08 23 03 05	10.0		95	101	105			8 15cmrl	49
AH HER	2006 08 23 03 13	12.7 <		127					8 15cmrl	136
R OPH	2006 08 23 03 19	10.1		95	102				8 15cmrl	49

1183

H73e 2006-08-30/31 20:45-23:20 EDT Foxmed deck 8 15cm r1 25x400bue
Moon & Jupiter: quick looks @ 15cm r1 @ 134x, but seeing horrible.
Testing 25x100b: lots of chromatic aberration on Moon & Jupiter, but views of summer Milky Way are absolutely spectacular! All the big nebulae show up wonderfully, even with 1st quarter Moon nearby. M31 also lovely.

Variable stars:

Name	YYYYMMDDHMM	Mag	<	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
R CRB	2006 08 31 01 19	6.1			58	62				8	5cmb 10
RS HER	2006 08 31 01 25	10.2			96	103				8	15cm r1 49
RS OPH	2006 08 31 01 35	12.2			15	121	129			8	15cm r1 136
T HER	2006 08 31 01 48	9.1			89	94				8	15cm r1 49
EM CYG	2006 08 31 02 09	12.0			114	120				8	15cm r1 136
CHI CYG	2006 08 31 02 18	4.9			48	51				8	5cmb 10
SS CYG	2006 08 31 02 26	12.3			119	123				8	15cm r1 136
R VUL	2006 08 31 02 41	11.9			114	119				8	15cm r1 136
T CEP	2006 08 31 02 48	8.1			81	82				8	15cm r1 49
RU PEG	2006 08 31 02 56	12.6			126					8	15cm r1 136
R PEG	2006 08 31 03 06	12.7			120	127				8	15cm r1 136

Deep sky: ended up the evening looking at some September tour objects: M15 & M30. Also Uranus & Neptune.

1184

H74d 2006-09-10 11:54-11:58 EDT Foxmed deck 8 4cm r1
Sun: 2 sunspot groups, 4 prominences, 2 large filaments, on disk
 2 bright flare areas. 32x

~~H74~~ 2006-09-12 11" Starmaster "in the shop": washed mirror (which had become filthy over the winter in the Robbermaid shed), replaced centre ring, installed DSCs, reinstalled Rigel Quickfinder. Whole thing took about 4 hours!

1185

1175e 2006-09-15/16 20:30-21:25 EDT Foxmed deck 8 28cm r1

Testing Argo Navis; works like a charm! Aligned on Arcturus & Altair, and the spent nearly an hour hopping around the sky looking at many different objects, M15, M2, M11, M10, M12, M14, M31, M103, M52, M27, M8, M20, M16, M22, M25, M30. Also Saturn nebula, Veil nebula, SS Cygni, & Deneb, X Cyg, Uranus, Neptune.... Every time the object was comfortably in the 63x field. User interface is mostly great, very easy in the dark: 2 buttons & 1 dial! I called it quits because it was getting very dewy, & I didn't want to muck up my nice clean mirror.

1186

1176e 2006-09-25/26 21:45-22:15 EDT Foxmed deck 3-8 11cm r1

Testing Orion 114mm f/5 Newtonian on EQ1 mount. Windy, passing clouds after thunderstorms. M31/32/110 fit nicely in 15mm Expanse ($30 \times 2.2^\circ$) as do M45 & double cluster in Perseus. Tried ^{unsuccessfully} to split ϵ Lyrae a 75x (6mm Expanse). Star test on Vega @ 75x shows excellent correction of spherical aberration, some surface roughness. Internal reflections in 15mm when pointed at bright objects. EQ1 mount is adequate for short tube & powers to 75x. Thumbscrew lacks on axes hard to find in the dark. Lots of backlash in dec slow motion but RA slow motion very good. Red dot finder is mostly too bright & coating on glass cuts light from stars. Finder controls confusing in dark (3 knobs on same side).

487
177e

2006-09-26/27 20:00-22:20 EDT Foxmad deck 8 11cmrl 28cmrl ne
 Moon & Jupiter 114m StarBlast @ 30x675x both very low
 Variable stars - first run e Argo Navis User db. Some difficulty
 identifying field because of large depth of stars in 28cmrl.
 Deep sky after vs observing tried AN Tour feature. Startp
 @ RX And, did Messier tour M31, 32, 110, 33, 34, 76, 103,
 74, 77, 72, 73, 15, 2, 27, 57, 56, then some double stars, then
 some "~~favorite objects~~" "popular deep sky". Really neat!

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Mag
SS CYG	2006 09 27 00 21	12.2		119	123				8	28cmrl 157
V CAS	2006 09 27 00 38	8.5		84	85	86			8	28cmrl 63
DX AND	2006 09 27 00 50	12.2		121	122	127			8	28cmrl 63
Z AND	2006 09 27 01 01	9.1		90	94				8	28cmrl 63
X AND	2006 09 27 01 14	13.4 <		129	134				8	28cmrl 157
T CAS	2006 09 27 01 25	10.8		105	110				8	28cmrl 63
R AND	2006 09 27 01 38	12.3		116	118	124			8	28cmrl 157
RX AND	2006 09 27 01 52	13.8		133	139				8	28cmrl 157

488

178e 2006-09-29/30 22:00-23:20 EDT Foxmad deck 8 28cmrl
Variables:

Name	YYYYMMDDHHMM	Mag <	Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Mag
S SER	2006 09 30 00 26	9.2		89	93				8	28cmrl 63
S CRB	2006 09 30 00 33	7.2		70	78				8	28cmrl 63
R SER	2006 09 30 00 39	9.7		92	100				8	28cmrl 63
T CRB	2006 09 30 00 45	9.7		93	98				8	28cmrl 63
U HER	2006 09 30 00 56	8.9		86	90				8	28cmrl 63
SS HER	2006 09 30 01 03	11.3		113	115				8	28cmrl 63
AH HER	2006 09 30 01 16	11.9		117	122	127			8	28cmrl 157
RS HER	2006 09 30 01 24	12.1		120	123				8	28cmrl 157
T HER	2006 09 30 01 30	8.0		78	80	85			8	28cmrl 63
U DRA	2006 09 30 01 43	11.1		106	109	116			8	28cmrl 63
AF CYG	2006 09 30 01 57	7.2		68	71	76			8	28cmrl 63
EM CYG	2006 09 30 02 06	13.0		128	134				8	28cmrl 157
R CYG	2006 09 30 02 15	9.8		91	96	99			8	28cmrl 63
U CYG	2006 09 30 02 26	10.6		100	108				8	28cmrl 157
R VUL	2006 09 30 02 49	12.8 <		126	128				8	28cmrl 157

05:28:10

05:28:10

D

R

1:06:76x

00:59.03

1:06:85

00:59.08

1:06:91

00:59.17x

1:06:89

00:59.09

1:06:83

00:59.09

1:06:84

00:58.97x

1:06:92

00:59.07

1:06:86

00:59.08

mean 1:06:86

00:59.07

05h 27m 03.14s

05h 27m 10.93s

$\sigma = 7.79s$

Deep sky: Helix Nebula - 63x visible $\bar{3}$ filter, but much larger & better defined = OIII filter, Saturn nebula M33 in OIII & $\bar{3}$ filter M31/32/110, M45.

Testing Exposure 15m & 6m exp. in Starmaster on Double Cluster & Capella. Really quite good for the money. Temp 1.0°C.

1189

1179z 2006-10-01/02 20:10-21:40 EDT Foxwood deck 8-3 28cm r1
Variables?

Name	YYMMDDHMM	Mag	< Un	Co1	Co2	Co3	Ccodes	Codesexp	SkyAper	Magn
W HER	200610020038	9.1		85	95				8	28cm r1 63
T CEP	200610020121	6.8		67	70		U		3	28cm r1 63
S PER	200610020140	10.7		101	109		U		3	28cm r1 63

Frustrating session because of big fluffy clouds & moonlight

1190

1180n 2006-10-06/07 00:30-01:50 EDT Foxwood deck 8 28cm r1

Asteroid occultations:

31 Euphrasine occulting TYC 2979-00969-1 157x successful

119 Althaea occults UCAC2 30781099 batteries failed in AN & radial

~~119~~ -2°C

1191

1187e 2006-10-08/09 20:40-21:40 EDT Foxwood deck 8-3 28cm r1

Star party for Colin, Lorna, Ben, and Jan Bolden Louise & David
M11, M57, M15, M31-32, δ And, ϵ Lyr, Moon 2 days past full.

	Starmaster	Starmaster	5K, Mentar	
	279mm f/4.3		305mm f/4.9	400mm
	<u>1382mm (Para)</u>	<u>no Paracorr</u>	<u>1500mm</u>	<u>900mm</u>
40mm Mk70	35x 8.1mm 2°02'	30x 9.3mm 2°20'	38x 8.1mm 1°52'	22x 3°07'
22mm Nagler	63x 4.4mm 1°18'	55x 5.1mm 1°30'	68x 4.5mm 1°12'	41x 2°00'
16mm Nagler	86x 3.2mm 57'	75x 3.7mm 1°06'	94x 3.3mm 52'	56x 1°27'
8.8mm WWA	157x 1.8mm 32'	137x 2.8mm 37'	170x 1.8mm 30'	102x 40'
6mm Radian	230x 1.2mm 16'	200x 1.4mm 18'	250x 1.2mm 14'	150x 24'
5mm Radian	276x 1.0mm 13'	240x 1.2mm 15'	300x 1.0mm 12'	180x 20'
4.8mm Nagler	288x 1.0mm 17'	250x 1.1mm 20'	312x 1.0mm 16'	188x 26'
4mm Radian	345x 0.8mm 10'	300x 0.9mm 12'	375x 0.8mm 10'	225x 16'
Binovianer	2403mm			
24.5mm SWA	98x 2.8mm 41' →			73x 55'
12.5mm ortho	192x 1.5mm 14' →			144x 19'
10mm Athares	240x 1.2mm 13' →			180x 17'
8mm Plössl	300x 0.9mm 10' →			225x 13'
6mm ortho	400 x 0.7mm 7' →			300x 9'

- 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 = dark: very clear
 - 10 = absolutely fantastic

- 7) Instrument used: ne b rl rr sc mh, eg. 10x50b 28cm r1
- 8) Others present