BLUELINE

BLUELINE

A 796
Record
Registre

John Paygant

Astronomy Observations

Feb 1998 –

RECYCLED COLUMNAR BOOKS
LIVRES À COLONNES RECYCLÉS

White paper / Papier blanc
10 1/4" x 7 11/16"
260 mm x 195 mm

Subject/Sujet: _____

_____

From/De: _____ To/À: _____

"In order to better serve you, Dominion Blueline has decided to increase the spacing between the lines of its accounting books. This decision was based on numerous suggestions from many of our loyal customers.

We at Blueline are committed to total customer satisfaction and trust that this modification will meet with your approval."

The Blueline Team

«Afin de mieux vous servir, Dominion Blueline a décidé d'augmenter l'espace entre chacune des lignes de ses livres de comptabilité. Cette décision a été prise à la suite de nombreuses suggestions de la part de plusieurs clients, nous soulignant que ce changement faciliterait et rendrait plus agréable l'utilisation de ce cahier comptable.

Chez Blueline, nous avons comme mission première la satisfaction entière de notre clientèle et nous espérons que vous trouverez ces changements à votre convenance.»

L'équipe Blueline

SÉRIE A 82 SERIES

A 82-01	Record / Registre
A 82-02	2 Cols.
A 82-03	3 Cols.

100 Numbered pages - **100** pages numérotées

SÉRIE A 796 SERIES

A 796-01	Record / Registre
A 796-02	2 Cols.
A 796-03	3 Cols.

200 Numbered pages - **200** pages numérotées

SÉRIE A 7963 SERIES

A 7963-01	Record / Registre

300 Numbered pages - **300** pages numérotées

MEETS ALL U.S. FEDERAL AND STATE ENVIRONMENTAL GUIDELINES

RECYCLED CONTENT/COMPOSANTES RECYCLÉES

PAPER: Made of recycled paper, including a minimum of 10% post-consumer waste
PAPIER: Fait de papier recyclé dont 10% minimum de fibres post-consommation.

BLUELINE®

Made in Canada - Fabriqué au Canada

Questions? Fax 1-800-323-7075
e-mail: blueline@blueline inc.com
http://www.bluelineinc.com

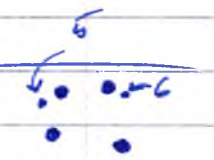
February 22, 1998

Blackfoot ~ 7:30 pm MST

① Obs. 5th star in trapesium (nearer than rest)
Mag x200. Star looked red?

② Obs OC 2335, 2343 (pitiful)
2353 - has star in middle

Saw 6th star in trap. in Larry Ward 12½"



24 Feb 98
Obs M3 @ X200 and it starts to split into stars around the edges, but only @ X200.

28 Feb 98 Also out on Fri 27 Feb 98 until 1AM Saturday AM 11:45
Saw last night and tonight galaxies in Leo.

① Made drawing of NGC 3628, M65, M66
Debatable NGC 3596 & 3593

② Found NGC 3521

③ Star hopped from Sirius via M46/47 to OC. NGC 2539

④ Obs Plan. NGC 2392 in Gemini. I have trouble finding that object.

⑤ Struggled with many Messiers in Virgo starting with M87 + NGC 4478 but NGC 4476 was it - that clear I think.. Must revisit Virgo cluster in more detail. Lousy finder (6x30) makes moving around tough

28 Feb (cont.)

(6) Obs M3, M92 + M13 at X200. What a difference using the high power on these bright objects. I'd never tried it until last night

(7) In Canes Venatici obs
(a) M63, NGC 5005 & 5033
(b) NGC 4490
(c) M94

(8) M104 - hint of dust lane.

Major event of the evening:

At ~8:27 pm MST a very bright meteor went by from E to W thru conc. Orion. Parallel & S horizon. Estimates were that it spanned 120° of sky.

Very bright blue-white central area with bright red edges. Some what irregular as it went along. Mag was estimated at ~ 7 or -8 Not as bright as full moon but say ½ that and much higher surface brightness

Most thought it was the most spectacular meteor they had ever seen. Leroy Lowe says he saw a brighter one @ Waukegan some years ago.

I was very impressed.

1 March 98 . Saw Venus from backyard @ 10AM in 7x50 binoculars. Did not set up scope as I did a week ago when Venus was a 'fat' crescent. Again view on Sat. AM in daylight.

Venus was much thinner crescent when I saw it in telescope from ARC in late Dec. '97.

25 March 98 (Wed) Blackfoot

First clear night that seems like forever. Steady seeing & reasonable temp. Six vehicles.

Obs: PN NGC 3242 in Hydra. Small, bright appeared fairly uniform & circular. In the muck near horizon.

NGC 3115 Spindle galaxy. EDGE on in Sextans.

M5
NGC 5748 Edge in E. Virgo
NGC 4699
+ M104

Identified M60, M59, M58

NGC 3344 in Leo Minor
Looked at M51. Just a double smudge.
M81/82 +3077 Looked at M82 for quite a while @ various mag. Mottled, but I could not see the dark band that is supposed to cross it.

Coma Berenices: NGC 4559, 4494, 4565
M53 - nearby M3 -

SuperNova in NGC 3877. Zhogal. is Mag 10.9 and it has a new star ~ same mag. at one end. Barry says it's a SN.

04

29Mar98 Sunday 8 – 12 midnight.

Looked at a lot of galaxies in a band from Ursa Major thru Virgo. + Coma Berenices

Obs: NGC3877 Next to ~~X~~ U Ma. SN still in lower left hand side of 3877 with X U Ma on right

Gal is Mag = 10.9 + is faint. The SN is 'easy' to see in the 8".

Others 'seen' M109, 4026, 4088

M106 + 4217
4449, 4111
4490
4244, 3941
+ a whole bunch more coming down into Coma + Virgo.

They are all faint fuzzies with diff. PA, aspect ratios and brighter or less bright cores with respect to the glowing halo.
No Structure in any.

~~4565~~ 4565 Examined 4565 with the 6.7mm. U.wide Meade eyepiece and deemed only faint a 'hint' of a dust lane. Not clear for sure.

29/3/98 Cont.

I was quite pleased with my ability to star-hop through the area and find the galaxies.

I got into the Virgo cluster + I'm sure saw most of the M objects, but I must return and look again @ M84/86, 4388 business again.

Had a look at M92 + M13 in Her with the 6.7 mm. ~~Pen~~ eyepiece. Interesting. Streamers of stars, more in M13 than M92.

Must set up nearer time next time for a view of Corvus + ~~Hy~~ and obs M68. + NGC 4361 + 4038.

17 April 98 Blackfoot

Big crowd - 12[illegible] or more cars! Nice night for temperatures + quite good sky. No clouds + only minor aurora.

New finderscope (FX50) + Blackpaint job on inside of tube. Finder very nice, but it takes a while to get used to seeing things right side up.

Obs: M10, M12 + M107 in Ophiuchus. M107 impressive much. Also, M57, M3, M5, M13

Gal. NGC 5746, 4699, M104, 4517 in Corvus B 4565, 4494, 4559

PN: 4361 - faint but big; 3242 - bright but small Looked for 6210 in Her., but couldn't find it.

GC: Found 5466 m = 9.1, 11' in Boötes. Faint + round. Could be anything. On NGC finest list.

Had a look at the SN in NGC 3877, but I could see it in my 8". Dennis B. was saying that it was m = 13.2. I remember it being around the mag. of the galaxy ~~was~~ which (is 10.9 or 11.6) the last time I saw it.

Looked @ Leo gal. M65/66 etc + M95, 96, 105 etc.

17 Apr 98 cont.

Looked in Virgo @ gal., but I'vegot to come back to this. Found M98, 99, but had trouble ~~[illegible]~~ M84, 86 conclusively. Lots of fuzzies.

18 April 98 Saturday. The Virgo Cluster.

Another good night @ Blackfoot. 8-10 cars Murray Paulson looking for Pluto.

Obs M68, just below Corvus in Hydra. Low down. Faint and fuzzy. GC.

Spend ~3hrs star hopping in the Virgo cluster using charts from Roger Fell's Messier Catalogue.

Found M60, 59, M58, M89, 90, 91, 88
M87, M86, 84
Also found M99, 98 & 100
In general I can't see the detail that Mullan sees some hint of it but that is all.

Using charts from May 98 Astronomy I could easily see around M86, 84, NGC 4402, 4387 (faint) 4388.
Also NGC 4438, 4435
4413, 4425
Saw others also, but I was getting tired.

18 April 98 (Cont.)

Also looked at SN in NGC 3877. It's almost overhead + my scope gets into the Dobby hole. I can see the SN but it's near the limit of the scope. Also obs in a 10" equitorially mounted reflector and now it is a steady point of light. Surprising what a diff it is between an 8" and a 10"

Examined M13 + M5 + M92 + M3 with the 6.7mm eyepiece. M13 is very nice, streamers of stars. best of the lot.

Looked at double cluster in Per. with 6.7mm. Not so good, I think it's best @ 100X.

26 April (Sunday) 98 - Blackfoot.

Two of us at darksite - David. Had 10" Meade SCT (can't remember - Western Diversification.

Very hazy night. I think it was the worst I've ever seen. Nevertheless I looked at remaining M's I wasn't sure I'd seen in Virgo. At site until 1:30 AM. Quite the aurora early on.

22 May 98

Time of new moon. Drove out to Blackfoot. Sky more or less clear when I left city. Overcast - sort of when I got to B. A few holes in clouds. Did not set up scope. Strong sunlight glow in the N. It was not as bad as being in the city but not far off. Could see all stars in Boötes + in Cas which was due N.

Rain on way back. Left at ~ 11:30 and sunset was ~ 9:30

Conc: No observing around Edmonton May June + July. April + Aug. are OK.

Thursday ~~23~~ 23 July '98 Saskatchewan Summer Star Party. Central Cypress Hills (EAST!) in Sask.

Thurs. evening wasn't very good. Darkness of sky is quite good, but cloud eventually spoiled the evening, and a constant cross wind shook the scope and blew the charts around.

Obs: M11 - very nice
M26 - Not much
M10, 12 + 107 in Oph.
Saw M4 in Sco., but it was low and just a smudge
M28 in Sag.

Friday 24 July 98 SSSP

Outstanding skys! M31 was an easy naked eye object. I could see the 'dust lane' or 'lower edge' of the G. Ex. seeing. To bed at 3:10 AM.

Saw following M's
M14 Oph
M55, 54, 69, 70 Sag.
M22, 28, 25, 11, 16, ~~18~~, 17, 24, 6, 7 Sco
M4, 80 in Scorpius

- Found Uranus and then with some diff found Neptune I think. Must draw and also obs. again to see if it moves. Had to star hop using main scope for neptune.

- Took some photos of Aurora near Big dipper + also many shots of various parts of the milky way.

- Multiple stars

δ Del. mic 4.0/5.0; Sep = 10.1"

Thurs δ Bootes 3.5/8.7; Sep = 105"C 8.7 is bluish

Flash at some others and they split at 10x or 200x, but don't see much colour, certainly nothing obvious.

25 July Obs: M7, 9, 18, 19, 23, 24, 62 and also looked at a bunch of others in Sag/Scu/Oph area. M75

Noted section of milky way in 50X finder + I think I could see dark lanes like in the pictures.

Mir went over + I may have captured it on film.

Multiple Stars 95 in Her. Yellow + ~~blue~~ blue like. Of all the doubles supposed to be coloured I only found this one to be coloured. It's subtle. It seems to fade with time + sometimes it is best when stars are out of focus

Saw Iridium flash. WOW. Really bright... like Venus?

25 July continued.

Had a long look at Jupiter. It's so bright in my 8" that detail is washed out. I used yellow filter – is ND better? – and could see 3 bands. Two prom. & one thinner and N of the other. Seeing was quite good. Lots of hints of detail. Wish I had a Powerset.

Also Saturn. bands could be seen, shadow of planet on rings and hints of Cassinni's division

I was really tired & at ~1:15 AM I layed down. Got up at ~ 3 AM and looked at the planets, but my heart wasn't in it. Not enough sleep during the day and so damned hot that it is exhausting.

Nevertheless an excellent trip

27 July 98 Sunday evening
@ Campsite on ort. lake near Waterton N.Pk.

Wonderful sky is! Spend a couple hrs obs. Mainly looking at some old favorites, double stars and just looking at the milky way with the naked eye.

I find it difficult to star hop in the Cyg. star area of milky way because there are so many stars

ζ Lyra + ε1, ε2 Lyra very nice No colour.
M 92 in Her.
PN, NGC 6210 in Her. This was a bit of a grunt. I feel quite confident that I star hopped correctly and was looking at the right beast. In the 6.7mm. it appears to be 3" or 4" or so in diameter. The book says it is 14" but no way in my scope.
Double star 61 Cyg. 5.3, 5.9; Sep=28", both yellow orange.
Alberio - always nice
Omega nebula + M11. M17
π + ξ Bootes. Again no colour

* Saw a thin wisp of the veil neb near or extending from 52 Cyg. like a little wing extending 20' or so from the star. Couldn't see anything else

Obs ρ Cephens. Nice and red. I noticed one problem with colour and that is the use

of the red flashlight. I suspect that you have to turn off the flashlight for at least 10 min. before star colours become apparent.

I 5146 Caecum neb. I think I found this, but it need to be obs. again.

Stayed up until 1:15 or so. Jupiter was awful. Poor seeing in that direction.

P.S. Obs. χ Her. 5.3/6.5; Sep 28" yellowed. Again I could not see much colour difference.

22 Aug 98 Blackfoot · Hedgehog Cons. Spoke &

Richard U28 + his friend George. Also Sharon Tenny + Sherry MacLeod.

Seeing fair/good, but hazy · mag. poor. Aurora and I suspect glow from sun in North.

AWFUL DEW!!

Obs Old faves, M2, M15, M13

Also M72, M71 - I can't see this, H2O thing?

* New was PN 7662 - Round no features
* + PN 7009 - Saturn Nebula. Just round to me, I really couldn't see any extensions
* χ Del. I could see the colour difference

Richard suggested that I look at Globulars in Del.

They are on my new star charts

Had a look at Jupiter + Saturn + M31 - Soft.

⇒ Also around 52 Cyg. Threshold - very faint - was the wisp associated with the star. This was obvious @ the lake near Waterton.

29 Aug 98, Saturday, Blackfoot.

Very warm night. Got home @ 2:45 AM.
Richard VdO., George (Square scope), Ed Newcombe.
the club scope and a couple of others were there

Obs: Shadow transit on Jupiter. Easily obs. black dot on surface of S (upper) Eq. band. Moved across over a period of a couple of hours. Moon was seen at other side of planet. I could see the moon on the surface of Jupiter + I think I was looking at the shadow. Seeing was, at times, the best I've ever obs. Some detail was apparent on the belts of Jupiter

Saturn: Cassini's div was steady as was shadow of planet on rings + also shadow of rings on planet.

GC. Obs GC 7006 + 6934 in Delphinius. NGC 6934 is the brighter + larger of the two. They are faint fuzzies. No resolution of stars

Failed to obs M33, + NGC 891. Sky was not v. dark + some cloud was coming in.

Double stars β And, β Ari + a couple in Del.
N-Per - nice colour diff. Alberio.

Obs Uranus - No colour ... grey-hint blue, but differs into disk. Neptune ... bigger than a star, but no real colour.

30 Sept 98 + 1 Oct 98

Obs. asteroid Pallas at ~ 9pm on 30 Sept 98 from my frontyard. Again on 1 Oct early evening. Chart from Sept. 98 S+T was used. Easy to find. Good chart. I was suprised @ how much it moved in one day. I guess you don't notice the background stars with the bright planets.

I obs the 'great red spot' on Jupiter one night. It matched up with the tables from S+T. Seeing poor. Not much colour, but distinct @ times on S Eq. belt.

On even of 6 Oct (7 Oct UT) obs Trg II and then its shadow on Jupiter. Seeing was just awful and on occasion the disk of Jupiter would drift all the way across the 6.7mm eyepiece without the shadow spot being visible. Obs. from frontyard.

20 Oct 98 Obs Ganymede transit + shadow transit on Jupiter. Trans. was diff. obs, but shadow was very obvious. Obs Saturn Looked @ various double stars in Lyra + Cas over the last few nights. Cloudy, however on night of 20 Oct 98.

21 Oct 98 Blackfoot Wed night, 8 until 12

Bob Drew had his 20" f/4 and Larry Woods his 12" f/6.

Seeing poor all night, Jupiter + Saturn not very good.

Obs NGC 1023 (Faint gal) + M34 but could not see NGC 891 in my scope. Saw it in the 20" and dust lane was clear, but sky was not the best. Also saw viel neb with 20" + OIII filter. Very impressive. Much detail. M13 + Cresent nebula. I'm not sure where the cres. neb is but it looked OK. M13 looked better than most photographs. Also M82/81. Could see the dark "slash" thru the centre of the Edge on one.

In 8" looked at M2 + M15 + M57 + M56 + double stars in Lyra. Found Saturn nebula ... It looked a "bit" out of round but that was all. M13 + M92

Looked at quite a number of double stars and OC in the Cass region. I left my star atlas over @ home.

Nice night for observing - quite warm.

23 Oct 98 Friday nt. Kootney Plains: Exceptionally dark skys. Could be the best I've seen. Had only 7 x 50 bino's. Clear to the horizon. WOW!

26 Oct 98 Blackfoot: Poor night. Gray skys. Seeing poor. Clarence was there. No one else.

Obs.: 7331 a gal near sq. of Peg. Faint fuzzy, but with ⟷ shape to it.

PN 6543 in Dra. Cat's Eye. Elliptical shape. Could not see central star, mv 11.

PN 6826 in Cyg. Just see central star m = 10.4

Skys quickly clouded over ~ 11:30

Sat. 21 Nov 98 Blackfoot.

Bad cloud early on but after 2½ hr. or so it cleared and sky was good. Bob & Sherilyn were there with club 18". Rick (8" SCT) + Father-in-law? Hugh with ETX were first on site. A (Amos?) Rivera was there with 13" strut type scope. Later Murray P and Mike Hoskinson (?) with "new" (8" f/4.5"). Interesting design & I'll bet it gives outstanding wide-angle views. Moderate (-5°C) temps. No wind. Ice build-up on eyepiece of scope & finder was a problem.

Scope not collimated properly. I couldn't make the (Double) in Lyra go even at low and resolved

New Things: In Auriga: OC 2281 + PN IC 2149. The OC was nice, but the PN was star like. I star hopped to it using the S.A. chart so I'm sure it was it. OIII filter was in conclusive.

Rosette Neb: In my 8" using OIII filter (new toy) part of the ring was visible as a soft glow. In the 18" with no filter, it was a bright, huge ring with NO OIII filter. Aperature.

Veil Neb: Near 52 @ Cyg. With OIII filter I could see the wispy thing. Did not look for rest of nebula. Not vis. without filter.

Ceres: Found @ the asteroid Ceres using chart from Obs Handbook. Obs 3 or 5 times over a span of 4-5 hours and you could see it move! Next time I'm going to make a drawing.

Frustrating things: ① I spent >1 hr trying to star hop to PN 6543 in Dra. & I just couldn't get it right. ② I began to suspect as the evening went on that my scope wasn't collimated right. Stars weren't points. Next day. Secondary out-

Obs: Saturn, Jupiter, Auriga clusters, Gemini, M 81/82/3077, ~~M42~~ Orion Nebula, χ Aries

30 Nov 98 Obs from backyard. Conditions not very good. Poor to average seeing and trans. ~~was not~~ good. Seemed to be a low lying haze of ice(?) which was reflecting city lites.

Looked at Jupiter, Saturn and the 3/4 moon using 25% ND filter. New toy. Improves things a lot when looking @ the Moon. Glare is still high but much better.

Looked at double stars in Lyra and others near in Perseus. I could only get a hint of splitting ε Lyra with 4. Don't know why.

8 Dec 98 evening From backyard.

Tried to obs. shadow of Io on Jupiter - could not see it at all. Seeing poor. Looked a couple of times @ Saturn. Could only see a couple of moons + faintly a third.

Looked again at the double-double in Lyra - not ε Lyr. Also found the red carbon star in Lyra. It is tough to see anything much fainter than 6 mag. from city. Sky is gray.

11 Dec 98 Blackfoot. Seeing so-so. Trans. variable, but at time poor. I gave up ~ 11:30. Dave Robinson (8" ~~GEM~~ GEM) + 10" f/8 - Larry? + 2 other cars

Obs: Ceres in Hyades + made drawing. My drawing was ok, but very accurate, so over three hrs it made a strange path.

Obs: Again PN 2149+0C 228 in Auriga. OIII shows up the planetary well. Looked at 4 Myn in Aur + Gem. Also the one with red central star in the 10". Very nice 'scope.

Obs PN 6543 in Dra. Easy to find when you can recognize the naked eye stars of Dra. OIII suppresses everything except this. I see the 6-7 mm. the PN appears somewhat oval - No hint of

central star.

Had a look at saturn. Cassini's div was flickering, shadow of planet on rings + band on surface of planet were visible.

Had a look at M78, but haze was moving in. I like the new detailed star atlas combined with the 8x50 finder scope.

Tues. 15 Dec 98 Blackfoot. No one else there. Weekend - new moon - predicted to be very cold. OK this night 8 to 11:30 pm. Seeing poor. Bad cloud @ times combined with v. good trans. Had a nice view of M31. The 'sharp' edge of the dust lane was v. obv. and the 'glow' extended at least 2 eyepiece widths - 1.1°/width.

Obs Carbon Stars: T Lyrae, UU Aurigae and 19 Piscium from Brian Skiff's article in S&T. 19 Piscium is quite bright and very nice. Betelgeuse is pale by comparison.

Obs classic things M42, Auriga clusters, M81/82/3077. Could not split ε, ε, doubles in Lyra although they were elongated.

Obs for second time M74, +M77

New: PN 2392 Esk. in Gem. I could n't see any real structure in this with or without OIII filter. Finest says it is about 13" and that is about right

Not found Looked for PN 2.371/2 in Gem. Finest. $M_V = 13.0$ + 5" double lobe. No wonder I could n't find anything. In the process I 'found' OC 2420 (I think) very nice dusting of stars. A 12" scope would make this thing look awesum.

Looked briefly @ saturn + Jupiter when a Sh was going on, but the seeing was so poor I didn't make much of an effort

Tues 22 Dec 98. Blackfoot. Very cold ~ -22°C with a stiff breeze from the N W. Set up scope down wind of van. No one else there. I wore my "max." outfit. Very comfortable.

Sky was absolutely awful. Dull gray + poor seeing. M31 was mush. I found NGC finest 1514 (PN) in Tau. m_v=10.8, 1¼" they say. Faint glow around 9.7 central star. Star appeared to be slightly + I mean slightly, out of focus straight @ x45. With O III filter, the sky went black and the 'faint glow' was obs. Must re-obs with better skys.

I waited around for 1 hr or more, but the sky was constant gray. It appeared to be less at the zenith. Ice crystals in the air at low altitude? I don't know. Went home.

Sunday 17 January 99 Blackfoot. "Clear" skys, but they slowly were covered with a light haze that made Deep Sky observing very poor. Seeing - as judged by one look at Jupiter - was very poor.

OC 2420 m=8.3 was difficult to see at all (6cm)
Looked at OC 1647 and OC 752 in Aud. - Big cluster. Fills whole eyepiece @ 45X. I could see NGC 1023 m=9.5 as a faint elongated fuzz.

Mike Hodgekiss was there with his 8" Newt scope. I like it. Left after 2.5? hours. Someone else there with boy. Talked about photography.

Tuesday 9 Feb 99. Blackfoot "clear" sky but really it was awful. I was alone. First 'clear' night in ages. A lot of high thin cloud that made the sky gray. Very poor seeing as judged by looking @ Saturn. The trapezium in M42 was very poor.

Found the OC 188 near Polaris $M_v = 8.1$. Could only be seen in its averted vision - I think.

NGC 2419 (GC in ~~Gem~~). Not so bad, but not good. A smudge. Averted vision it was there

NGC 2420 (OC in Gem) - Not good.

Looked at a few Mis, μ Cep - barest star. Also δ Cep. yellow and smaller blue. Nice sep & colour contrast.

⟹ In early evening from White Ave Obs Saturn, Jupiter + Venus by eye just after sunset.

Monday 15 Feb 99. Strathcona Science Centre. Monday was a holiday. At 5PC @ ~6pm and set up scope looking W across city & look at Saturn Jupiter + Venus. Saturn and Jupiter were O.K., but Venus was awful Venus was gibbous (~ 3/4) and ~ 1/2 the diameter of Jupiter. Seeing was very bad that low ... it may have been the city heat? The couple of times I'd seen Ven. before was Dec 97 and during the day in ~ Mar 98 both on side of inferior conjunction. At those times Venus was a crescent 1½ Times the size of Jupiter. Now it was much smaller. Interesting.

~7:30 - 12:30 Blackfoot. Four men out there, me, Mike Hoskinson, Denis Boucher + someone else. Denis had his reburied 16" in a 2 piece sono tube. I'd like to see it in the daylight.

Also Forest Lithe showed up with 3 children. Looked thru my scope. Long discussion: I did a major galaxy hog in Leo as described in the April 97 Sky & Telescope. I must repeat this. The very good finder charts

and photo's in the article make excellent comparison made the exercise very pleasant.

The following were obs (all gal. in Leo)

S+T #	Designation	mv.	
9	M65	9.3	Could see fuzz around core
9	M66	8.9	
9	3628	9.8	Could'n't see dust lane.
10	3593	10.9	
11	3705	11.1	
12	3489	10.3	
18 (Nice star field)	3384	9.9	
18 (Nice star field)	3389	11.9	woow. It's small + faint but there
18 (Nice star field)	M105	9.3	
19	M96	9.2	
20	M95	9.7	

Vesta — Obs asteroid Vesta on Leo/Cancer border.
Also gal. NGC 2903 (Faint) $m_v = 8.9$. Nice shape.

GC — NGC 2419 (Challenge List) $m_v = 10.4$. It is faint fuzzy smudge, round, uniform + I'd say $m_v = 11$ or 11.5

OC — I searched again for NGC 188 $m_v = 8.1$ near Polaris. From Cambridge Star Chart it's $m_v = 8.1$ + 14' with 120×. I can't see anything. $m_v < 11.5$ or I've star hopped wrong.... ??

PN — Looked at M46 + 47 + the PN, NGC 2438 in M46. Used O III filter + this makes it stand out better, but it's good without it

@ 11:40, I went to the van to examine some charts & heard
FOG someone say "Phooey". On looking up the sky was completely
overcast with fog. Big dipper stars barely visible. In 3 min, NO
stars & slight breeze from S.E. After 5 min it was foggy in the
parking lot.

Photos
Feb 17
Moon, Jup, Ven.
23 Jan V
19? Mar
Mars, Sat, Ven

Best obs session since October! Must redo the loo
Cdlogy thing again.

2 Mar 99 Tuesday. Obs Venus, Jupiter & Mercury from river valley at
sundown. Took pictures. Brown Fog. Saturn also visible. I took pictures
of Ven & Jup at closest conj & also a few days before with the crescent
moon. This is 2nd time I've observed Mercury in evening. Saw it
two years ago @ this time of year.

8 Mar 99 Tuesday. Drove to Blackfoot. Sky clear when I left city. "High" Fog when I
got to Blackfoot. Drove back to city. Not as foggy in city, but almost. Venus was
high in the W as the sun set.

19 Mar 99 Friday evening. Photographed Venus, Saturn & Crescent Moon in W sky.
Cloudy

20 Mar 99 Saturday. Clear night. Did not go to Blackfoot. Dinner at Ron
& Barbara's. Walter, Bill & Judy there. Very Memorable meal (4 hrs).

21 Mar 99 Sunday. Blackfoot. Moon didn't go down until ~ 11 pm.
Jason was there. I left at midnight since work called in the
morning.

(over)

Comet Linear C/1998 M5

Jason found Comet Linear C/1998 M5 using his 12.5" and the chart from S+T. April 99 p.111. I could not find it with my 8". Jason reckoned it was mag 10. I dec. 5 agree.

In the 12.5" a soft glow slightly brighter to the centre. I think it looked like mag 10 & 10.5 in the 8" so in the 12.5" I would reckon ~ mag 11 or less.

Leo Galaxy Hop. I repeated the galaxy hop in Leo as on p.24 described in S+T p.56 April 97.

Seeing poor. & Leo (sep 4.4") would almost split using the 6.7 mm.

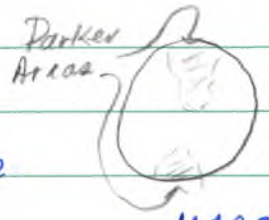
I obs. all the gal listed p.24 plus others below and my comments are the same as the S+T article where a 6" reflector was used.

S+T #	Desig.	Mv.	S+T Comments	Mine
5	3686	11.3	Seen.	Seen
	3684	11.3	Can't see	Can't see
	3681	11.3	"	"
6	3655	11.7		
7	3626	11.0	easy	easy
8	3608	9.9	Lovely pair of glows	ditto
	3607	10.8		
	3599	11.9	No sign	ditto
15	3412	10.5		
16	3377	10.4		
17	3367	11.5	I could see it only when bright star 52 Leonis was out of eyepiece field	

Sat. 10 Apr. 99 Blackfoot. Arrived at ~ 8:30 pm + things got dark in 40 min or so. Got home @ 4AM. woo!

Denis B., Larry W. + Sherry Mockead, later (11:30) Paul Campbell, Suzan + Harris with 5" Celestron SCT on Eqr. E. mount - nice. We look at a lotsy objects together. Two other vehicles at the end of line

Mars: Obs. Mars (opp. is 29-4 Apr). Awful seeing most of the time. At times of fair seeing some surface features could be seen



MARS

Venus: Obs. Venus. Scope still warm. Obs later. Poor seeing. Nevertheless it was ~ the same size as Mars and about 3/4 lit.

Pluto: at ~ 3AM Larry showed everyone Pluto in his scope. It was a relatively steady point of light. Faint, but there.

Galaxy Hop: Most, (> 90%) of the evening was spent doing various galaxy hops. N&C finest stuff + the Virgo Cluster. Obs many M's in Virgo.

Leo Minor: Obs: NGC 3344 ($M_V = 9.9$) + 3432, $m_v = 11.3$. 3344 was easy, but 3432 was threshold, but there. Looked for 3003, $m_v = 11.7$ using SA 2000, but I couldn't see it.

Leo: Obs M65/66, NGC 3628 for the upteenth time. Always nice.
NGC 3521, $m_v = 8.7$ easy - Hop from B Vir.
γ Leo (sep 4.4") would split into two ~ equally bright points.

Coma Berenices Obs: NGC Finest, ~~4631, 4656~~ 4565, 4494, 4559. M64, 4414, and the 4274 area. I could see a couple of more gal maybe, but not 4. Obs M64 (Black Eye) but couldn't see 'eye'.

Canes Venatici Obs NGC Finest 4631, 4656, 5005, 5033, 4214, 4244.

Virgo: From Astronomy May 08 p. 77, obs M86, 84, 87 NGC 4378, 4387(?), 4438/4435, 4461/4458, 4473, 4477. Did not see cluster 4440/4436/4431 or 4478/4471 one. Nearing of 4402, but I think I saw this before.

Star hopped in from ε Vir, Obs 4754/4762, M60/59 Obs others also. There are just so many

Her. Had a look @ M13 + M92 with the 6.7mm. Always look good.

Aurora Photos Aurora appeared in NNW at ~1-2AM. I took 5 or 6 shots. Camera on tripod, 28mm lens @ f/2.8, Fuji SG800. Exposures from 10 to 40 sec.

15 April 99 Thursday. Took Fri off work Kootenay Plains. Very Dark skys

Obs — M68 + M83 - Completes Messier List

Corvus/Hydra — Neither one is much although M68 is 'brighter' while M83 is more diffuse. M83 is barely above the horizon & can only be seen for a few hours in a night. It is difficult & make much comment other than it is about round, big ~10-15' in correct starfield + no central brightness

Corvus PN 4361 - Nice round glow. I've seen it before, but must revisit.

Gal 4038 - Rattail. Fuzzy. Low. Not much shape, but so low it is hard & tell much.

Leo — Gal 3521 & 3640

Leo Minor — 3344, 3432 + 3003 M_U=11.7. Last one was 'easy' from KP, but

NGC 7 misses — I could not see it at all from Blackfoot.

M51 — Both cores visible. Before just double smudge at Blackfoot in my scope.

Mars + Venus — Poor to fair seeing

N. Am. Nebula: Obs North American Nebula near Deneb in finder (8x50). Soft glow. Large. Must revisit

Hor. — M83 + galaxy near it. Gal is quite faint

4565 — It was not equatorial on eyepiece. but I could not see the dust lane. @ x100 it was the width of eyepiece or seemed to be. A star

to it. Of core was steady. Looked great!

Markarian Chain: Astronomy May 98 p. 77. I couldn't see 4431/36/40 but may be higher power. Same with 4478/79 next to M87 All the rest of the gal. were visible.

Photos: Took about 12-15 frames on Fuji SG800, 28 mm lens @ f/2.8 exp from 15 to 40/50 sec. Long (5 min, 20 min + 50 min @ f/16.
Milky way came up later - Wonderful!

16 April 99 Kootenay P. - Overcast, thin high cloud. Some bright stars. Like that all night.

---

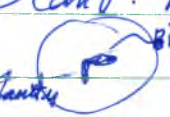
17 April 99 Saturday Blackfoot.

Huge # of cars (25? or more). Talked to Patrick (about 3.5" Mak/Cas). Murray Paulsen, Rob Drew, Paul C. + Sherry Mc. Warm night. ie. didn't freeze. Got home @ 3:55 AM.

Galaxy Hop: Most of the evening 3-4 hrs anyway was spend doing a galaxy hop from Coma B up into Canes V. looking at NGC finest and other galaxies.

NGC 4631 + 4656 - Two edge on galaxies same field 4631 is huge. Very nice. Must observe again

NGC 4485/4490. Near B Can V. Are their ends touching? or is this a line of sight thing



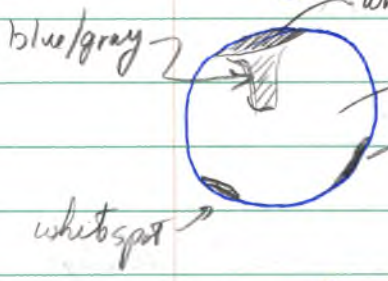
Obs Finest 5005+5033, ASo 4244+4214.

Looked @ a number of M's in the area. Most gal. marked on Sky+T 2000 are visible in my 8". Some are just soft glows but others are quite interesting as indicated on p. 30. Lots of gal. I'm getting better at this star hopping thing using the ST2000 charts. All the stars on the charts are visible in the finder (M_v=8.5) and some others also which can confuse things, so finder must see mag 9 or 9.5?

Mars

Mars was very ~~sick~~ nice. Seeing at times was OK. At times good + at other times poor. Used 6.7mm with barlow which is something like X 350! Tried 21 orange filter and it didn't help much

Some surface features on Mars were steady and obvious



The dark feature had moved & the left since I saw Mars on 10 April.

Murray Paulson told Patrick + me that the dark feature is Syrtis Major + that the white thing is not a polar ice cap, but instead "frost" on "Helles" crator or depression. The white feature was quite obvious as was the dark extension. The white spots on the fringes of the disk were less clear, but something seemed to be there.

Took a couple or 3 pictures of faint aurora.

5 May 99. After Obs. group meeting @ ESSC a few of us went to the deck + had a look @ Mars. Seeing So/So ie. poor.

16 May 99. Sunday. Blackfoot. Monday on vacation. Home @ 3:30AM. Steve (from Llano. 2 kids, 10" reflect - Barry Arnold) + me for most of the night. New obs. with teenage daughter + brand new Meade 8" Dob. Tremendous enthusiasm.

New Deep Sky. Obs. OC I4665 near β Oph. Nice in finder. Coarse in scope at X45. Reminds me of Pleiades.

Finest NGC PN 6572. Very bright (I could see it in the finder) and very blue. As described "Tiny bright blue oval." Examined at various mag and also with OIII filter. The OIII filter "kills" off the other stars showing up just the planetary. Neat!

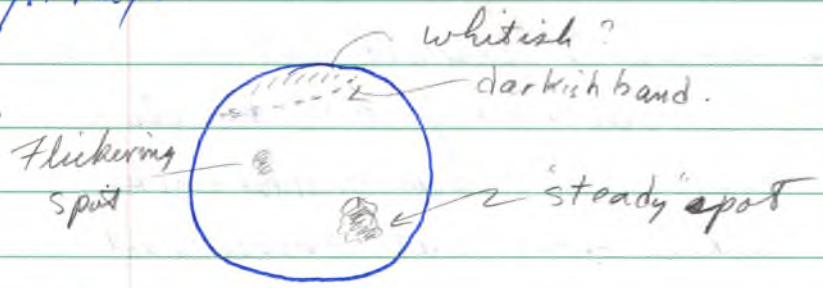
Found GC 6535 - Just a soft smudge. Faint

Obs. M 14, M10, M12 + M107 in Oph. Also M13 + M57 - always great.

Sky Conditions. Sky got 'dark' at ~11:30 + by 2:30 it was starting to show a noticable glow in North. Still a fairly good night. Pleasant temperatures. Took one picture of Aurora, ... ??

Mars + Eyepieces: I spent quite a bit of time obs. Mars. Seeing not good as usual, but some detail was clear. Drawing over.

16/17 May 99



Mars

The steady dark spot at 5 o'clock was clear at all times, and most of the time the 'flickering' spot was there. The whitish top and dark band were usually not visible and were more suggestive than anything else.

The #21 orange filter did enhance the contrast of these dark features.

Using the barlow and the 12.5 mm Plössl it seemed if Mars was 'bigger' than in the Meade 6.7mm SWA. I noticed that putting the Meade 6.7 into the barlow resulted in a larger version of Mars, but the detail went to much. I mean no detail was visible. The image seemed to focus, but all detail was gone.

I don't know. Is it that the fancy Ocular can't handle a Barlow? Sure looks like it.

Moons of Mars: Steve had an interesting idea, and that was to try and observe the moons of Mars. I indicated that I'd read somewhere that the trick is to use an occulting 'line' or sphere to get rid of the glare of Mars (Mars = -1 while moons are 11.6 + 12.7 spacing mag. from planet "25" + 83")

Steve suggested the occulting thingy may have to be at focal point of telescope or of eyepiece - Interesting

16/17 May Cont.

NGC 6181

Sharon Tansey mentioned in 'Stardust' that NGC 6181 in Her was a double core gd. She says it 'looked like a dumb binary'. I found a faint binary that may be what Sharon was talking about, but SA #2000 is not detailed enough to let me be certain if I was looking at the correct thing or not.

Carbon Star 55 Vir 12h 25m ; 0° 48' Chart #14
near η Vir $m_v = 8$.

Very red. Very nice. I like colour in stars!!

Thurs/Fri 20-21 May 99 Barrier Lake, Kananaskis

Went hiking Thurs. Up Ribbon Creek. ~~Clear~~ Overcast most of day, changing to Part. Cl. with light haze later on. Haze in evening. Fuzzy ⅓ moon. Woke up at ~2am by bright light of moon as revealed by clearing skys. Set up 'scope. About 2:30? started obs. Still glow on horizon near moon. Glow from Calgary. Not bad. Less of a glow from sun in N.

Sky soft near Coma. B., 4565 didn't look good. Mars seeing was awful. Started looking at NGC Finest in Oph. when at ~3:15 or so the sky started to get gray from the sun rising! Phooey.

OC. NGC 6633 (Oph) + IC 4756 (Ser. Cauda near 6633).

IC 4756 is huge. Lots of stars. Must be ~2° in size. I'll bet it would look great in a 11x80 finder. Not so good in the 8x50.

Very nice at x45

NGC 6633. Wonderful cluster. Not as sym. as IC 4756. Must obs again. Interesting square (?) like pattern of what appeared to be red & blue stars (at bottom). Nice. Must obs again both clusters and take some time @ it.

Photos: Last exposures on Fuji SG800 (see p. 28+30). A few 1/4 to 1 sec with 28 mm @ f5.6 and Zoom @ 35 mm @ f5.6. in the evening of reflections of mountains in lake.

Later a couple of longer exposures with the 28 mm @ f/16 for 'long' periods 2 min (?) and one for ~ 20 min ? Skyglow could be a problem.

Thurs 12 Aug 99 SSSP Cyprus Hills

Terrible weather, earlier on drizzle, cloud, wind very moist. Odd break in cloud & rental star (singular). At ~1 AM poor, 3:30 AM total overcast. Dawn - dense fog. stayed in sleeping bag until 10:30 AM.

Fri 13 Aug 99 Obs sun in Coumer is 6" f/16 eq. Newtonian. C. is from Montana

Fri evening. Completely overcast after a promising day. Up @ 1 AM. Nothing. Not one star. Sigh!

Date: 14-15 Aug 99. 555p.

After the evening banquet + speaker things looked so-so. I actually got out some eyepieces for the scope. Clouds in the S all night. I got out charts, but the clouds would move in before I could find, let alone examine the target object.

Looked at some fav's like M13 + M92 (57). Went to bed and got up @ 1 AM and stayed up until 4

Obs M31 with my new 30mm Ultima eyepiece. Very nice eyepiece but not obviously superior to the Plossl 26mm. View of M31, I think was the best I've ever had. Sky very dark, as good as Kootney Plains and the seeing was good. The sat. gal's M32 + M110 were obvious. I could see two dust lanes, on down side of M31 at least I think I could. I could move the scope FOV to one end of M31 and move the scope ⊥ to the major axis of M31 and go from black to gray to black. Very clear. What a difference dark skys make. Definitely the best view of M31 I've ever had. In many ways better than the photos.

Obs M27. Looks like an apple core. O III filter did nothing. In fact all it did was make it dimmer. Dark skys. Very Nice

Obs M57. Shocking. In my scope the star near it is almost steady In C-11 (Very nice scope) it more than steady and the 'fuzzy' ends of the ring were quite clear.

Saturn. Wonderful. Cassini's division was nearly steady. Shadow of planet on rings, bright band on globe and it is the shadow of rings on the planet? or the Crepe ring?

Excellent observing for 3 hrs, but is this worth the 3 nights in a tent and 1500 Km?

Tues 17 Aug Went to Blackfoot. Looked like a good night. Can't remember if it was Tues 3rd Mon. Rockard Vd B. George and Georging with 8" f/6 Meade Dob and George's (?) wife.

I looked at a few things, but a very spectacular aurora was present which at time was past the Zenith. No camera. Sigh! Very little real obs. due to aurora. Nice warm night. Dew. Left at near 1 AM.

SSSP. Additional: Obs sun spots thru "Gunner"'s 8" f/6 GEq. Mounted scope. Gunner is from Montana. 8" Thousand Oaks filter. Big spot at 3 o'clock and collection of H at a 7-8 o'clock.

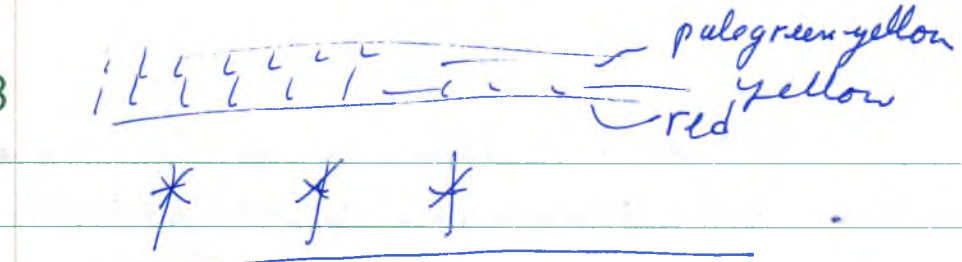
NGC 6866 An OC. Smallish as OC go. I forgot ~5' in a circular pattern. I could only see a few 10-15 stars. Not much to look at. Maybe higher mag. would help. Lots of other stars around.

NGC 7331 - Found it again. Looked for NHC 185 but I just couldn't find it. Cloud was a problem.

Saturday 11 Sept 99. Blackfoot. Partly cloudy skys all night. Clouds seemed to form and then go as opposed to drift in. Left 12:30 or so. AB star party night. Caroline & ~8 cars. Whole bunch of people new to astronomy. Let everyone view my scope. Nice view of Jupiter & Saturn. Red spot on J., S seemed asymmetrical with something on the L.H.S.

Obs Red star in Aquila from Brian Skiff's article. Beautiful

Sunday 12 Sept. Blackfoot. Aurora covered the whole sky. It was like a ½ moon. Left at midnight. Early on A. in north was coloured & theyre. - Talked to Symanthia (??) name!



* * *

The bottom edge of the A was red & the eye. Don't see that very often. Also paler, but distinct g-Y colour on top. Bright white-yellow in middle.

Early evening A. was in big sheets or curtains. I wish I had my camera.

---

14 Sept 99 Tuesday Evening. Blackfoot. Interesting Evening. Had to work the next day. Left @ ~12:15 and to bed @ 1:30

Two of us there. Al with 4" Starfire on G equitorial mount. 810mm focal length
Very nice instrument. Good contrast with this instrument. On Jupiter - Poor seeing, 2 belts + hints of other things - My scope with the 6.7 mm eyepiece has a glow that covers the entire area of the eyepiece. The sky is bright, washed out gray. In the refractor the glow is present only near J. and it's way way less. Some of this may be aperature, but I think a lot of it isn't.

Aurora was bad. I took one picture 28 mm f/2.8, 40S on Fuji SG 800.

PN 6826 Cyg. NGC Finest $M_v = 9.8$, 30" 10.4^m central star
Observed with OIII filter and 6-7 mm. It's it. The other stars go away. I'd estimate that the diameter is in the 10-15" range, not 30". An aurora was here and there so maybe I missed some faint extensions.

but it seemed to have sharp edges and be well defined.
Round. No sign of real asymetry or mottling or structure.
It's known as the blinking planetary and obs with the 11t. 70mm and x2 barlow or the 6.7 the view is similar. Looking straight at it, the central star is visible and the faint round part either "disappears" or becomes much fainter. On looking just to the side, roughly 1 diameter, the central star disappears and the disk is apparent. The central star can only be seen when you look straight @ it.
I looked at this with all the diff. magnifications I had, including the barlow and the 6.7mm. At the highest mag the 'blinking' effect seems a bit less, but not by much.

Comet Lee (C/1999 H1).

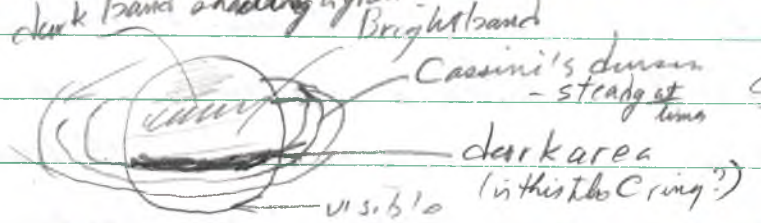
Dennis B. handed out a chart @ the RASC meeting on Monday. It's supposed to be $m_v = 8.4$. Al found it with his refractor first. It's a soft large glow uniform. Good contrast.
I found it near midnight in the Aurora. I guess it was 15' in diameter and ~ the indicated mag. I looked at higher magnification but I could not see a nucleus. I scanned around looking for a 'tail' or extension, but the Aurora made the sky gray. I was quite thrilled at obs. this comet.
Comet was near 1502 on OC. Very nice. Rough 3 pairs of stars. At end of Kimbell's Cascade.

19 Sept 99 Sunday at dawn 0500hrs Waterfall Campground
B Bruff Ntn. Park

I had done Wilcox PK with Dan Hellam + Mike Baker on Sat and was tired. Slept in van. No alarm clock. Woke up at 0501hrs. I tried to find comet Lee, but I could remember the date so I couldn't figure out where it was on Dennis's chart. In add'n the position was near the Zenith and the scope was in the Dobby hole. Dawn was not far away so I gave up.

M42: I had a long look at M42 with the 30mm. as the scope cooled down. Very dark sky. Tulip like - I think this was the first time I had ever seen it so well. Filled the entire eyepiece which ~~must~~ is be calc. to be 1.27°. I could see much more detail than O'Meara has drawn. With the barlow all kinds of subtle billowing clouds of dark and light and gray were obvious. Tremendous!

Saturn: By now the sky was suggesting the coming dawn and I looked at Saturn. Scope had cooled down more or less. Seeing was very good. I've only seen it better once. As good, but prob. better than at the SSSP this summer.



I obs with Meade 6.7 and ~~[illegible]~~ the 12.5mm plössl + barlow. I think the plössl combo has slightly, but clearly, better contrast or is it sharpness than the ultra wide angle. Tried barlow with the 6.7mm, but the image appears inferior to eted without it. If I build a Poncet, I'll buy a 4mm Radian.

Jupiter: Brief look at Jupiter. Spent most of my time on M42 and then Sat. Quite a bit of detail. Several bands or partial bands on N eq. belt. Diff in width of N+S Eq. bands quite clear. Lots of blobs of detail, but I was getting tired after Sat.

(10 Nov 99 this partial band was real)

Venus: Had a look at Venus as dawn approached and it appeared over a mountain. Nice crescent, but poor seeing - good for Venus - but terrible compared to Sat + Jup.

---

14 Oct 99 Monday Evening. Blackfoot. Rather dark skys + better than average seeing.

Dennis B. + later Harry W. were there in addition to me.

Viel Nebula: Had a look at part of the viel (near star) in Dennis 16" with OIII filter (~ 70x 90x 100x). I didn't catch to the idea that it was in two parts. Later with my scope (OIII + 30mm Ultima) I "discovered" the second larger 'Reef'. Must be a 1° arc or so. Can't see much without one, but with filter it's obvious. Also 'central' glow part was noted.

Comet Lee - Obs from Dennis's 16". Getting faint

Looked mainly at M's for some reason. Glob. M15, M2, M13 + M92 (Have trouble finding M92) + M13. Also obs. M74 (m_v=11) just a soft glow and M11. I like M11. Also M31

Averted vision make lots of stars 'pop' out in the globulars.

Looked for 6888 (Crescent neb.?) in Cyg with OIII, but I couldn't see it.

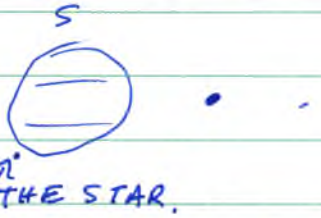
Obs. Jupiter, several belts + flickering suggestive details

Took 1 photo of Aurora at ~ 11:20. Left at midnight.

90Oct99 Saturday night. Blackfoot.

Quite a few people. Ten cars? Mel Rankin, Dennis, Larry, Bob and Sherylyn. Alister, L. Bruce McCurdy!

Occultation: Some people were very interested in the occ. by Jupiter of a fourth? 8 mag star.



I obs. star before the event and noticed that after a while it was gone. I didn't see it reappear as I left. Interesting.

Aurora: Major aurora. @ 0100 hrs it flared up in a very spectacular way. I shot almost a whole role of Fuji SG800, ~~ASA~~ 24mm f/2.5 exposures from 15 to 60 sec. Most in 20 to 40 sec range.

Helix Nebula: NGC 7293. PN, M_v=6.5, 770". Huge. WOW! (12 ½') First time obs. Low down however. With the 30mm it is a soft, almost threshold, glow. It looks bigger than the dimensions given. It was a poor night for trans. & the object was near the trees. The OIII filter really brings out this one!! Huge increase in contrast! Really huge!

The obj. was best seen by shielding the eye from extraneous light which really helps.

The neb. is circular, sort of fuzzy ~~on~~ the edges, perhaps more so ~~on~~ some spots than others, but really there was no structure. I could not see any annular form.

Impressive object. Tried for it in 18", but by then it was too low in the trees.

Saturn Neb: NGC 7009. PN, m_v=8.3, 25". Small bright oval is the description in NGC Finest. I agree. OIII filter dims everything else, but the nebula is pleasantly bright anyway. It is not round, but it was hard to see much else.

M72: Had a look @ M72, Nice starfield. Three bright stars

Blue Snowball NGC 7662, PN m_v = 9.2, 20", annular at high power. NGC Finest description

No colour, OIII did not help much. Some hint of nothing seen in the 18" with OIII, but not clearly annular and the magnification would have been high enough.

NGC 7640: Made a search for this Gal. which is near 7662 using my 8". I could not see anything at all, but the sky was going poor from the aurora.

Herschel 400 says: m_v = 12, 44 x 37", easy, oval silver disk for NGC 6905

Veil neb: Had a look at the veil neb with OIII filter, both sections. Great!!

γ And & δ Ari: I oked at these doubles as the aurora did its thing.

Spent a fair amount of time with Sheralyn doing star hopping from charts & showing objects to various people.

Monday 11 Oct 99 Blackfoot: Thanksgiving Monday ~6 cars.
Larry W., Dennis B. Doug.

Aurora: Big aurora. Exposed rest of Fuji 400 ~6-7 frames 50 mm @ f/2.5 and 24 mm @ f 2.5, 15 to 60+ sec.

Crepe Ring: Saw Crepe ring of Saturn in Larry's scope. It was obvious in the 12.5" but I could not see it in my scope.

Seeing @ times was fairly good. Lots of detail on Jupiter.

Helix Neb Had another look at the Helix neb., but the skyp were grayer than on Saturday night

Looked for a PN on the Del/Sagitta border, but I couldn't star hop to it because I couldn't see the stars on the chart in my view finder. Aurora.

Had another look @ M 7? in Sagitta, the GC.

Viel Neb. Obs Viel neb. in my scope with 40mm Ploss and OIII. The section not around 52 Cyg was very nice. Nice wide angle at ~~4~~ 0x. In Larry's scope @ I would guess 100x or so more detail was visible, but the narrower field of view kind of detracts from the 'big' picture. Section around 52 Cyg. was very nice. ~~[illegible]~~ Without the OIII, only a small portion, the spike, @ 52 Cyg was visible @ all. Filter is very impressive.

Cas: I started the evening with the intention of spending 'all' the evening in Cas looking @ OC etc., but the aurora killed that.

Left @ midnight or so.

---

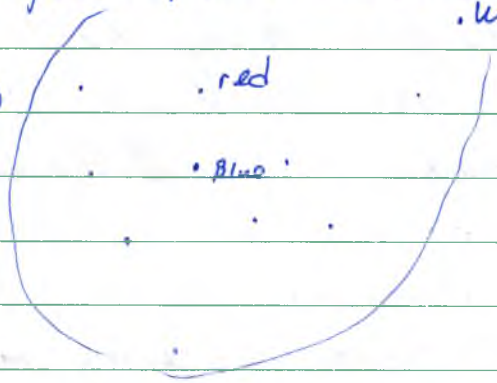
1 Nov 99 Monday. Blackfoot. I was alone. Started to look @ OC in Cas and did for ~1 hr., but then it started to cloud over so I left ~ midnight

---

4 Nov 99 Thursday. Blackfoot. Alone. Stayed past midnight. Main thing was OC in Cas. Around midnight I got into the dobby hole and gone up in Cas + looked at the Auriga M's + return to Jup. Seeing fair to good but transparency not good. Sky light gray.

I wrote down the following obs on Cas. clusters

M103

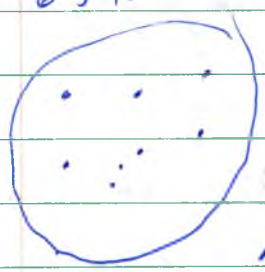


Say 20 stars by direct vision with 6 brighter ones @ 90X

654 ~15 stars, 1 brighter one lower left. Egg shaped 90X ~10' diameter.

663 Visible in finder. Fills eyepiece @ 90X ~70 stars, 20' ~ round, Looks best @ 90X not 40X

659.



90X. Small ~5' or 7', 9 stars visible. Suggestion of unresolved stars.

At 40X it looks fuzzier and not like an OC.

NGC 925 + 891. The sky wasn't so good, M31 barely visible to naked eye, but I decided to look for G since they were well positioned. Looked at M31, but it wasn't very good. Also M33. Visible in finder, but I could see any structure, just brightening toward centre. 40X. Big.

NGC 925. Found 925 M0 = 10.0, round soft glow with some brightening toward centre. It is supposed to be 9.8' X 6.0', but just round to me. Not far above threshold

NGC 891 Star hopped to 891. I've looked a lot for this G, but I've never been able to find it before. SA says $m_v = 9.9$ + 13.5' x 2.8' To me it was half that length at best and if NGC 925 = 10.0 then NGC 891 is approaching $m_v = 11$. My obs. just don't support the publish m_v. I don't know what to think. This G was a threshold item under these skys. I've seen NGC 891 in Bob Drew's 20" + the glow will destroy your night vision. Lots of stars in field as G as a faint line between some stars.

30 mm Ultima vs 26 mm. Plossl. - both by Celestron.

I could see - just so - the 891 with the 30 mm with + without the x2 Barlow, but I could see I'm using the Plossl / either way I guess for this faint fuzzy, the 30 mm in displaying its better coatings (?) or something. The field stars don't show any obvious differences but this threshold fuzzy disappears in the 26 mm. Interesting.

---

10 Nov 99 Wed. Blackfoot, Larry, Allister Lim, Bruce M. + Shelly. Last 3 obs meteor shower. Very few meteors. I left @ 1:30 or later. Bad aurora all evening. Took ~15 frames all but one using 22 mm lens @ f 3.5 on 76ii Sov. One or two @ 50 mm. Most exp. 10 to 20 sec range. Aurora not all the bright but made the sky poor.

NGC 246 PN in Cet. I had a look for this PN, $M_v = 8.0$, 228" in diameter with + without OIII filter. There seemed to be something like a faint OC @ this position. I suspect a problem with hazy clouds in the atmosphere.

Looked briefly in Cas for OC but the aurora ... Seeing on Jup. 3/5 @ times

12 Nov 99 Friday. Took 2 pictures of Aurora from 9 75+ & 6 Aug. ~ 20 sec 24mm f3.5

Late Nov 99 . Obs. Jupiter from my front yard.

Transit of Io : Obs transit of Io on Jupiter - It was on S. Eq Band the white circle of Io stood out 'like a sore thumb' against the dark belt. Seeing 3/5+. Very nice

Eclipse Occ. of ~~Europa~~ Ganymede. I watched III disappear. Crude estimate is that it took ~5 min or so from the start of an obv. of decreasing

light intensity until the moon was becoming near threshold. I wanted to obs. reappearance, but it clouded over.

Sun Dec 5 + Tues Dec 7. Blackfoot. On Sun. the sky was part. cloudy + hazy and got steadily worse. found a couple of new gal in Tri area and looked at a double in Per. Also Sat + Jup. Left at 11 as the cloud got bad.

Tues: Clouded over just after I arrived. Phong, Mike Hodgkinson arrived ~ 1/4 hr after me. Skys never got better. Looked thru two diff Celestron Binols. Both nice. Mike had remounted his 10" reflector on to a home made Dob. We bought Larry Woods Pencil.

Wed 8 Dec - Bought Radian 5 mm eyepiece + set up in front yard & look at Sat and Jupiter - F-eyepiece seems fine. Must investigate more from the dark site.

22Dec99 ~7pm I took a series of photos from the front yard of the full moon. Moon is at closest approach to earth. Kodachrome 64 with 200 mm lens and 2x teleconverter on Canon F-1. Tripod. Exposures from 1/8 to 1/250 sec. f/4. About 11 frames.

Idea is to compare size of moon on negative from this occasion to when moon is farthest from earth.

24Dec99 Xmas-Eve Dinner @ Don + Linda Snider's. Set up scope in front yard to obs ~~Sh~~ Tr Sh. on Jupiter. About 10-14 people had a look at Jupiter + Saturn using the 6.7 mm eyepiece. A chinook was on and temp were near 0°C. The seeing was just awful. The moons were fat blobs, and it was diff. at times to see the Eq. belts on Jupiter. I understand the problem in Calgary with the chinook + seeing.

Nevertheless, it was the first time ~~most~~ anyone had looked thru a telescope and everyone was thrilled to see the moons of Jupiter + rings of Saturn.

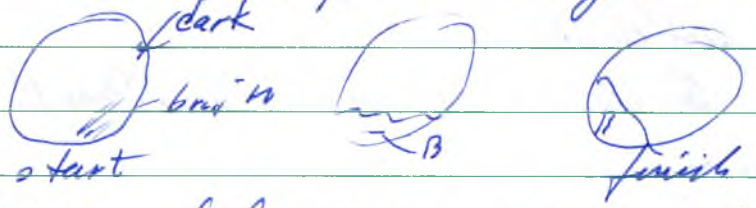
Jan'00 20Jan00 Overcast almost continuously, but sky cleared for the Lunar Eclipse of 20Jan'00. Great skys for this event

Photos: I took ~20 frames of Kodachrome 64 using the 200 mm lens and 2x teleconverter wide open which I guess is f/8 with the 2x. Most exposures from 1/4 to 3 sec.

A few ~5 frames on Fuji Pro 800 with 28 or 24 mm lens fast shutter

A few ~? on Fuji Velvia with 50 + 28 mm lens wide open on tripod. Exposures above

It was interesting to note that as the lunar eclipse proceeded that the "bright" area migrated across the surface



of the moon. Colour was copper-brown like to naked eye. No colour in telescope at 180x. Could see stars moving away from edge, but nothing bright enough to see going in. I think darker skys are required. Obs from back yard.

Saturn: Over the last few nights, on and off, I've been watching Saturn's (4-easily visible) moons go around. Waiting for Tapetus ~~on~~ Feb 10 to be in conjunction

Jupiter: Two (Io + Europa) of Jup. sat. were eclipsed & re-appeared about the same time as the lunar eclipse. Europe re-appeared very close to Io + I missed it (~ 4"?) because of the poor seeing. Neat nonetheless.

Looked @ M42 and could "just" see the 5th star in Trap. using 5mm eyepiece.

24 July Spend an hour or so obs moon - poor seeing near horizon ◯ dark. I had trouble following the craters from Rükl's book. I can see that this is going to require practice.

27 Jan. 2000 Thursday Blackfoot. I had Friday off. Franklin Lakdka was there taking pictures. He left after 30 min. Aurora came upand ruined the ski

Obs the PN 1514 NTC Faint in Taurus. Near P. It is a faint, and I mean faint glow around a star It is there straight, but it is clearer with the OIII filter, but the glow is faint. Book says 114", but I'd estimate that it was ½ that.

Apodizing Screen: Fred Price p. 51. Well, I made one of these screens as described by Price & I think it does improve the seeing, but I'd like to obs this again as the seeing was quite poor & erratic at times & this made comparisons with and without the screen akward. Obs: Saturn & Jupiter.

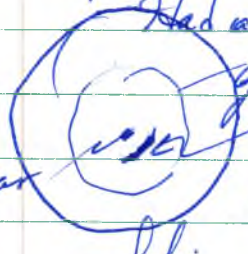
① Objects are fainter & satellites disappear - more or less

② Unreal diffraction pattern around bright objects. Much worse

---

31 Jan 00 Monday Blackfoot. Me, Dennis B & Larry W. I was there from about 9 & 11:45. Fairly cold. ~ -15°C. Had to work the next day. Aurora was weak until the end when some bright columns appeared in the north.

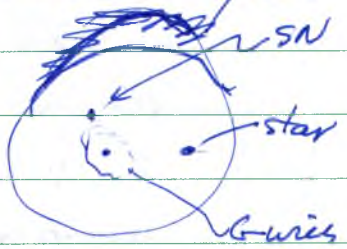
Had a look @ the Eskimo neb. in Dennis' 16" @ 600X Glow is roughly circular. Also in my scope with and without OIII. OIII doesn't make much difference. Sky was somewhat grey due to high cloud I think Looked at a number of quite familiar objects M 1 is near Sirius & all kinds of OC in the area that were



on the SA2000 charts. I think I can see almost all of them if not all. G are another matter due to grey skys.

DS Split Δ Ori which at 240x is yellow (big) and blue (small) Sep is ~4". I could see the colour, but only clearly at high power & then sometimes it would "go away". May be it is an "eye thing" with the red light or it was just late at night.

SN Larry & Dennis showed me a SN in a G I think they said the G was 14 mv. It was there in Larry's scope & clearer in Dennis'



OC Look at M 34 in Gem. There is a small OC very close to the M object and @ 90X it showed some granularity. There is an IC OC nearby but I couldn't see anything.

---

3 Feb'00 Obs Iapetus from backyard. Made drawing. Could see Rhea & Titan but not 2 other inner moons. Made drawing. Matched diagram in Astronomy.

Feb 4/5 Near Colinton with Gina on Fri 4 Feb. Gina's first 'look' thru a scope. Sat 5 Feb Showed her some coloured stars/doubles Mu Cep. γ And. --- and various DSO. M1, M 1 COL, M81/82 M 7 in Gem OC & M42. Sky quite dark and M81/82 was great. Wished I had more time. Cold -20°C.

6 Next night obs Sat + Moons from same sight. Iapetus, Titan & Rhea were spotted, but inner two moons were maybe there with averted vision only.

Big Aurora. Exposed 20 frames f 2.8, 28 mm 15-20 sec for most exposures.

10 Feb 00
early evening
~6:30-7

Saturn from the back yard.

The best view of Saturn I have ever had in my scope. Exceptional seeing & v.g. transparency. At times Cassini's div was steady and all the way around. 5 moons visible Titan, three inner ones and Iapetus. I drew Iapetus a few nights ago and M13 was identified it as a much brighter star. Tonight it was where it should be according to Feb 00 Astronomy. ~10 Mv as the three inner moons to Titan.

The crepe ring was obvious and very steady. Lena saw this also. I have never seen this before in my scope. Saw in L. Woods 12" f/6, but not in mine. Used 5 mm. Radian eyepiece. T = -22°C, H pressure system in - steady seeing. By 9:30 (after dinner) the seeing was still 'good' but nothing like it was before.

S&T Dec 99 p. 128 photo is much like what was seen except the C ring was clearer. Very clear. Also evident was the bright 'outer' edge of the B ring next to (inside) Cassini's division.

The band on the globe was as pictured in the photo, just under the edge of the B ring. Ceng felt it had a yellow-green border. Also a darker, maroon band was above it. The gradually fading to the polar region red band polar 'hood' in the photo p. 128 was not evident.

At times I thought I could see hints of Encke's gap, but I don't really think this could be seen in a scope this small, but there were certainly hints of it, or something, but not for sure.

Amazing seeing & clarity on Saturn.

Titan was 'bright' & other 4 satellites were similar in brightness ~~although~~

25 Feb 00 Friday evening · Blockfest.

Fairly good. Aurora was mild. Seeing was average and transpar. was average for Edmonton, i.e. Zhe sky was somewhat gray in the eyepiece - Larry Woodand Doug .. 10" Meade SCT.

New

Finest ① 2237+ Rosette Neb. Huge. Without the OIII filter the neb. surrounding the OC is visible but just barely. With the OIII filter the contrast is greatly improved. Neb is brightest at bottom right of OC, but goes all the way around. I'd seen it before in the 18" when the glow was quite bright.

② 2261 Hubbles Variable nebula. Comet shaped. Very cute It is smaller than M78 and I think it's surface brightness is greater for HVN. Sky was not that good, and I've seen M78 better.

③ 2403 G in Cam. $m_v = 8.5$. Finest says 25.5' x 13.0' In the 8" f/6 under the conditions available it was more like 4' x 10' ... perhaps this is just the core?? Fairly bright + Lotsy stars around the glow.

Looked at a lot of Jav's, Esk PN, 2024, Trapezium - 5 stars with 5mm and G in Larry's 12.5"

Colours of Double Stars. At the end of the night ~11:30 I looked at a # of double stars in Bootes ; ε (yellow + red-purple); ξ γ + Blue-green ; and I could see these suggested colours clearly using the 5 mm. I've looked at these doubles before but I've never been able

to see much colour. The 240x really helps.

M3 Looked at M3 – Globular – with the 5mm and it was wonderful! Really nice! I was impressed. I'm falling in love with this eyepiece!

2371/2 Gem PN Finest $m_v = 11.3$ 7.5" double lobed PN. Nothing + I'm sure I was at the correct place. OIII filter etc. I think the 8" is inadequate aperature.

Also looked at the M's in Leo. I looked @ 456 5" and the star near the center of the line was vaguely visible with averted vision, but not otherwise. I'm sure it was a steady point of light @ Kootney Plains.

Also noted M51. Both cores were visible.

---

06 March 00 Sunday Blackfoot. Mc.Harry Dennett Davy with (mobo) damaged 10" Meade.

Looked at a number of favourite M's and maybe 20 Gal. and a couple GC. Sky was not very good. Obs 456 5" in D.B. 16". I could see the 'bright spot' on the 'bright star' side of the core from the dust lane. This was not clear from Kurt P. I looked also @ 456 5" in my 8" and it was very good compared to what I remember at Kootie Plains.

Also M51 in the 16". I'm sure it was better one other time when I was at Blackfoot a year or 2 ago when someone else had a 16" truss scope.

29 April – Colinton. Good night, but I was not adequately dressed (Sigh) and I left after ~ 2.5 hrs -

I took ~ 12 frames on the Fuji 800 50mm/f1.8, 20-25sec. of aurora. Mainly with old grain storage bldg in foreground. Illuminated the building for "a few sec" on several frames with a flashlight (white light) to try and bring it up. Sometimes standing beside camera, other times (early) nearer the bldg.

Looked at some M stc in Leo and chased down a few faint fuzzies - always nice. Looked @ Leo trio with 6.7mm, but I could not see any real additional structure, but there were suggestions of things but nothing conclusive

Obs M68 in Corvus. Looked around for M83, but the location may be too far north and there was a glow from Edmonton ~150 km away

1 May · Blackfoot Monday

A fair bit of smoke from fires in Elk Island Park. Left after 1.5 hrs. Looked at a few doubles in Boötes + Leo and at M5 near Oph. A fair haze.

5 May ☺ Blackfoot, Friday

Lots of people ~15 + cars. Started out ~OK but eventually clouds came in & I packed it at 2:35. Looked thru Murray Paulson's 5" on the GEM. Nice piece of machinery. Contrast appears much better than in my scope. Things are brighter in the 8" than the 5" but not 2.5X. I now understand why these ops show up nice detail on bright objects. Looked at M13 + M57 in the 5" and then looked at these in my 8". Wow!

July 31/00 **Partial Eclipse of Sun**

I took a number (~10) photos of the sun during the partial eclipse and they are O.K. Some are 'good'.
Fuji Velvia slide film 50 ASA
200 mm lens at f/22 with 2X Teleconverter.
Exposures were mainly 1/2000 sec, but some as long as 1/250. ~~Many too~~ Also 3X ND filter on lens + I held a polaroid sunglass in front of the lens for most shots. Tripod mounted.

Monday 25 Sept 00 **Blackfoot** ~9:30 - 11:45. I was alone.
Obs: Uranus, Neptune, Saturn + Jupiter.
M13, 92, M57, Globs in Peg + Ag. + M31
I did Star-Hop #12 from Alan MacRobert's book. This is along the 'spine' of the cross Cygnus. Everything was as he described it - neat. Even the asterisms - cowling towers, and house pulling on a rope were 'there'.

Telescope Optics

I had a serious look at the problem with my Telescope, and it suffers from spherical aberation. Using the 5 mm Radian (240x) and the star Vega, I could see that on one side of focus there was a dark spot surrounded by bright/dark diffraction rings.

On the other side the pattern was quite different and appeared more uniform.

I was out at Blackfoot one other time and there was quite the Aurora. After that once at Colinton + it clouded over 15 min after I got set up.

Oct 22/00 Sunday even. Blackfoot. Alone.

Sky clear + fairly dark straight up. Faint glow of aurora which by 11:30 was fairly bright. Left then. I think I struck an animal on the way home.

Startrails Took 3 or 4 ~45 min exposures on Fuji Velvia, f/2.8, 28 mm.

Aurora " 2 ~20 sec exp 50 mm on Superia 800, f 1.8.

Note: A very bright meteor (2nd brightest I've seen) crossed the first exposure.

Obs: Before Aurora

New EN 281 in Cas. On NGC 7 finder. Used SA 20 charts. It is a faint glow around a star (+ 5-10 stars), best obs by comparing glow to that of another star nearby. Spent quite a bit of time.

New NGC 185 + 147. NGC 185 I've seen several times before and it was easy compared to 147. 147 was obs, but only at best by removing my glasses. Def. threshold.

NGC 7331 + PN 7662. I think 7662 had a blue tinge to it.

I could not find the gal. NGC 7640 near PN 7662.

Looked at M31 + M33, Later M71 + M27

Sup + Sat were poor due to poor seeing.

Oct 27/28 Skillotter L. Astronomy Workshop.

Enjoyable event. Good speakers and nice to socialize with people. Venia came Sat. night and enjoyed Bruce McCardy's Visual Astronomy session. Bad fog moved in on Friday night and I left around midnight

to Coliston. On Saturday night there was a spectacular Aurora. I took quite a few photos ~20s 28mm f2.8 and some of them came out quite good. Last frame was ~60 or 90 sec.

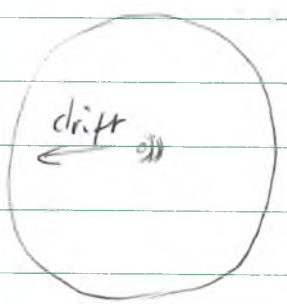
Nov 14-16 Mercury: The planet mercury was visible at 0600 hrs from my house in the pre-dawn light. Very bright. Near Spica. Over a period of 3 days or so I could note it move reference to Spica. On 15 Nov, I left my scope out overnight and looked at mercury using the 6.7 mm. Awful seeing. It was the first time I have looked at mercury in a telescope.

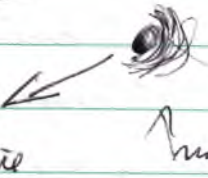
According to S&T mercury is 6.6" and 62% illuminated on 16 Nov @ mag −0.6. I could not honestly say that I could see any asymmetry in the image. I also found what I thought was Mars -- at least it waxed in roughly the correct place and of ~the right brightness.

15 Dec 00 I'm not so sure I was obs. Mercury. It may have been confused with Spica.

---

20 Nov 00 6 AM, my backyard. Left scope out overnight and obs Mercury with 5 mm. Seeing is better than before. The image of Mercury is still a 'blob' with lots of diff rings. Most of the rings are on the side opposit to which the planet is drifting. It was not clearly a crescent, but the image was asymetric.





Planet is a long way from ellipse as crescent moon was way (big dipper length) to

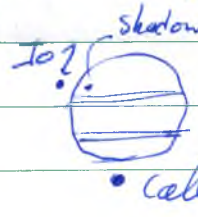
Sh. Transit of Europa

26 Nov 00 Backyard Edmonton. This was the 2nd time I used my tracking platform. I made a modification to 'snug-up' the tracking mechanism. Used house 115V 60Hz AC + the tracking was very good.

Seeing was poor with clouds. I could see the shadow just 'above' the band and watched it on and off for 1 hr or so. Clouds. Seeing got worse as clouds disappeared. Obs bright division in SEB

Aurora: Bright Aurora in city. Took a bunch of photos 800 ASA Superia 28mm f/2.8 15-20 sec exposures.

15 Dec 00 Coleiton. Set up scope on Gina's porch. T = -31°C. Power platform. 5 mm. Radian eyepiece would barely come to focus at extreme end of travel (out) of focuser. Scope shrinking due to cold?



25 Dec. 00 Took photo of partial eclipse of sun. Some cirrus clouds. 4 sunspots.

Seeing was poor and shadow only flickered in and out. It was neat to obs moon so close to Jup + its shadow. Very interesting was the position of Callisto under J. as this was going on.

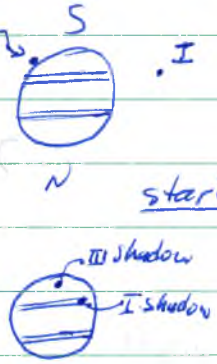
31 Dec 00 Evening from backyard. Obs Transit of Io on Jupiter. Also had a look at saturn. Used 'new' tracking platform. Seeing, at times OK. Other times ... well.

UT	
0:25 ~~2:15~~	I. Tr. I.
1:17 ~~3:12~~	I. Sh. I.
2:38	I. Tr. E.
3:28	I. Sh. E.

The shadow of Io is just to the L. of the GRS when the shadow was about halfway across the disk in the SEB. The egg shape of the GRS could be seen on occasion. Many bands and detail were visible in glimpses.

Sunday
7 January 60
2001

Backyard Double Shadow transit on Jupiter



Jan 8
0:50 III Tr.E.
2:15 I Tr.I
2:35 III Sh.I
3:12 I Sh I
4:26 I Tr E.
4:44 III Sh E.
5:28 I Sh E.

Obs III just as it was detaching from planet limb. Seeing was its best then and became steadily poorer. The two black spots could be easily seen. III shadow was in the polar region, like Io's shadow was on SEB. I couldn't see Io on the planet and I also couldn't see Io against the planet. A couple or three bands were occasionally visible N of NEB.

Very interesting to see two shadows on Jupiter at the same time!

---

14 Jan 01
Sunday Evening

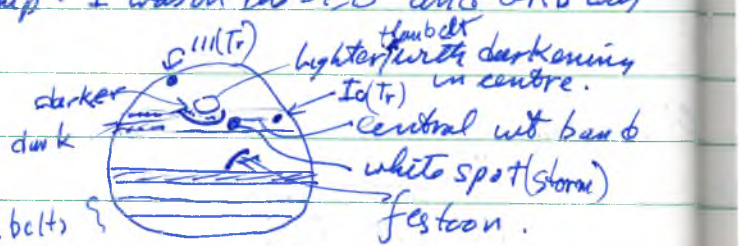
Backyard. Double transit on Jupiter

UT from S+T

5 mm Radian (240X) Nodrune.

Jan 15
2:20 III Tr I
4:05 I Tr I
4:25 III Tr E
5:08 I Sh I
6:15 I Tr E
6:38 III Sh I
7:19 I Sh E

Obs both III and I when they were Tr Jupiter. Both near limb. I was on the SEB and GRS was central



Late III came off the limb, but I couldn't see I - GRS moving toward limb. Both moons could be easily seen in Tr at the same time as they were both near opposite limbs

Interesting to see III 'budding' off the disk of Jupiter

Obs shadow of I on SEB. Very obvious. Dick Hill could not see Io against Jupiter. Went to bed at this time before the Sha

TII started. Quit @ 10:5[illegible].

Saturn - very nice. Three inner moons (Adjusted vision for 2) and Titan Cassini div. clear and hints of C ring. Small shadow of planet on rings since we are just past opposition. Light yellow eq. band and darker belts band with darker edge closest to ~~belts~~ lighter colour equitorial band.

Rigel. Could split 2nd star easily several time throughout the evening.

Had scope to Columbus for weekend, but it was overcast all the time.

---

24 January 2001 Wed. Blackfoot

Denis B, Larry W. & Philip (?). Left at ~11:30 after 3+hrs. Poor seeing. Transparency so-so. Looked at quite a few OC in milky way from ~Sirius up thru Auriga. Some I had seen before, some not. Looked at Cats of M's + 1931 Nebula which looked to me like a PN.

I think I saw part of 237 1/2, but it was faint, but I did spend quite a bit of time on it.

A couple of BIG OC in the horns of Taurus.

M's around Ursa Major.

First night of Deep Sky obs in a long time

25 Jan 01 Thurs Visitors parking Lot at ARC

At 5-6 pm as sun was going down, I + 4 others from ARC who had not looked thru a 'scope before looked at Venus Jupiter + Saturn. The contrast on Jupiter and detail

that could be seen, ~~pot~~ plus the color was the best Dave ever seen. This was while the Sun was setting + the sky was blue. Later ~45-60 min after the sun set, Jupiter was much brighter and the detail was washed out.

I wonder if the problem of observing Jupiter with my scope is a light scatter / contrast problem. I'm going to set up my cyl. bearing platform and try out the apodizing screen again.

---

5 Feb 01 Set up telescope on platform in the back yard and had a look at Jupiter. Obs Europa on the limb of Jupiter. Tried out apodizing screen. Unfortunately it clouded over and stayed that way for the next few hrs. Sigh!

The results with the Apo screen were not conclusive, however it appeared to offer some improvement in detail at the expense of brightness + the colour (wow!). Problem was the sky was not dark when these obs were made + later when sky was dark it was overcast. Moon (¾) even disappeared.

Repeat obs with Apo-screen.

---

19 Feb 01 Blackfoot Monday (Holiday)

Larry, Doug + Me + later another van. Cold -15 to -20C. Stopped at Str. Sc. Park and had a look at the planets as the sun was going down. Seeing very good. Venus was a very nice crescent about the size of Jupiter. Again, a nice view of Jupiter against the blue sky + the Cassini div was all the way around and the C ring appeared to be there. Also gradient of brightness/colour on B ring was very apparent. Titan not visible due

to Sun.

A couple with kids came by and I showed them the planets and they like that. Went to Blackfoot.

Seeing very poor at Blackfoot later. I did note the shadow Tr of Io on Jupiter.

OC NGC 2169 Looked at a lot of the usual M's etc, but perhaps most interesting was the OC NGC 2169 which has unusual distribution of stars. Two "stick-man" or Egyptian writing strings. NSOG calls it an inverted 37, which on reflection I guess it is. Very nice + the highlight of the evening.

I looked mainly at OC from Sirius up thru Auriga.

Left ~11 pm.

---

24 Feb 01 Colenton

The previous night it was overcast. On Sat the sky was covered with thin clouds. Venus had a glow around it to the eye. Gina looked at Venus - nice crescent now - Jupiter + Saturn. You could barely make out two bands on Jupiter. Titan was visible. That is it.

Gina liked Venus

---

14 March 01 Obs Venus at ~7 pm by looking down alley behind my house. It was a very thin crescent. I've never seen it so thin before. Wonderful. Must show Gina.

16 March 01 Fri: Gina and I obs. Venus again as above. Very nice.

17 May 01 From Ceby at River Mercury + Jupiter
– 10:30 pm. In the glow of the setting sun, Jupiter was obs in 7x50 binos & mercury was almost vertically rel. & low jus above it. Considerablely less bright.

---

16 Aug 01 Cypress Hills Prov. Pk. 55SP
Thursday

Arrived after all-day drive from Edmonton. Bob and Sherrlyn Jurny & daughter were here with club scope. I was tired. Obs until a bit after midnight. Great skys and temps, but I was so tired from the drive etc. Sit and looked naked eye for a long time. Nice.

Saturn: Got up at ~ 4 AM and had a look at Saturn. Nice. Sky was getting a touch soft at that time, but milky way was still clear.

M 17 Omega : Nice
M 8 Lagoon : Naked-eye object as were a couple of other M's in that area
Bright glow on left side with dark dense in middle and faint glow on right side.

Mars: Mars was a shimmering orange disk with a white bottom (N) end. I don't know if that was because of atmospheric things or not. Not very good

M 22, M 28 + NGC 6638 : 6638 is a fuzzy ball, M 28 is nice & and M 22 is spectacular. M 22 must be quite the sight from Arizona in a large instrument

17 Aug 01
Friday

One of the more enjoyable nights I have had observing. Skies were not very good as a weak Aurora prevaded everything. Last night was much better - very clear - perhaps the clearest I have ever seen. Nevertheless, I had a wonderful time on Fri nt. Went to some talks at the lodge - good, very interesting. The night was comfortable with a slight wind that was a bit annoying at times. Bed at ~2:15 AM.

Planets: Mars was the same quivering blob as it was last night
Uranus & Neptune: I had a look at these planets. Always nice to find them again. Uranus has moved quite a bit ~~one~~ one side of Capricornus to the other - since I started observing, Neptune, hardly at all. Both were clearly disks although with Neptune it required comparison with a star of the same mag to see the size diff. A brighter star is about the same size. My optics aren't very good.

DSO: I looked at more G - mainly M's - than I seem to be able to remember. Some were classical - M92, M13 etc, but others were different

M71 in Sagitta: An unresolved smudge in my scope, but in the club 18" the foreground stars are brighter and the G appears as a 'background' object. This gives the G a "three D" type of appearance.

M14 I think it was M14, but one of the G in Oph. was just a unresolved fuzz ball. Interesting.

M73 and Saturn Nebula: Had a look at these in Aquarius just above Cap. Close OIII on Saturn N and it was it. The nebula somewhat 'out of round' but I must try and obs. in 18" tomorrow night.

Double Stars: Had a look early in ev. at several doubles in Bootes and also α Her.

Photographs: I set up to take photos of the Tridium Flash, open the shutter and nothing happened. Later I discovered that ~~the~~ I had read the time incorrectly from the chart.

Milky Way: Tried various times to ~~a~~ obtain photo ~~M~~ Milky Way using 28mm f2.8 Fuji 800.

I took several long 30 min to 60 min exposures looking SW and then NNE. For the last it was Velvia 28m f2.8 and Fuji 800 28m f/8. We'll see.

Comet C/2001 A2 Linear: Obs comet with 8". Faint, soft glow. No structure. Languish, say 5' or 6' in diameter. Faint and uniform with no edg. Also obs with 18". It was also faint. I was surprised at how little an improvement the 18" made. Looked again with 8" & figures it was to be expected.

Not.: Small objects, the framing or 'background' stars are much brighter than in my 8". On focusing the 18" f6 1900 using the Meade 4 mm, I noticed that the stars focused to much better points.

18 Aug 01
Saturday — Cloudy skies with a few holes, but not many. Lots of wind. Mild temperatures + lots of lightening in the distance to the N. + NE.
No observing. To bed ~ midnight.

THE BIG NEWS

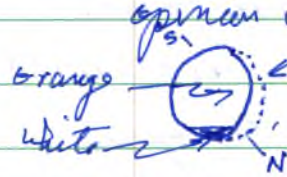
It was announced at the Sat. pm. meeting at the Lodge that a comet had apparently been discovered at the SSSP the night before. A guy (from Saskatoon I think) had a 20" Obsession and there were the usual line-ups to see what is to be seen. Just before dawn (as the story goes) the new owner of the Obsession decides to have a look at M1 which was just rising. Pk 1 is just off one of the 'horns' of Taurus, I can never remember which one, but anyway he looked off the "wrong" star and found this fuzzy.

Apparently he announced that it was M1 in the eyepiece - this was a new toy to this guy - but when a more seasoned observer looked it was clearly not M1. Apparently it is a comet, moving at ~ 2'/hr. It was reported and there were no other reports.

It was observed the next night also near dawn.

Sunday 19 Aug. — The Edmonton gang, Paul Campbell, Bob + Sherilyn Tarrig + Daughter + me gathered together for the evening. Very good evening. Skies were a bit poored than Fri + apparently Wed. night was the best of them all. Paul's 12" f/dobber and laughed Nagler first and broke the focuser. Also his 'own scope' was blown over by the wind + broke the eyepiece.

Mars — Looked at Mars in my scope. It is white at the bottom, in my opinion where the limb of the 'phase' bottoms out.

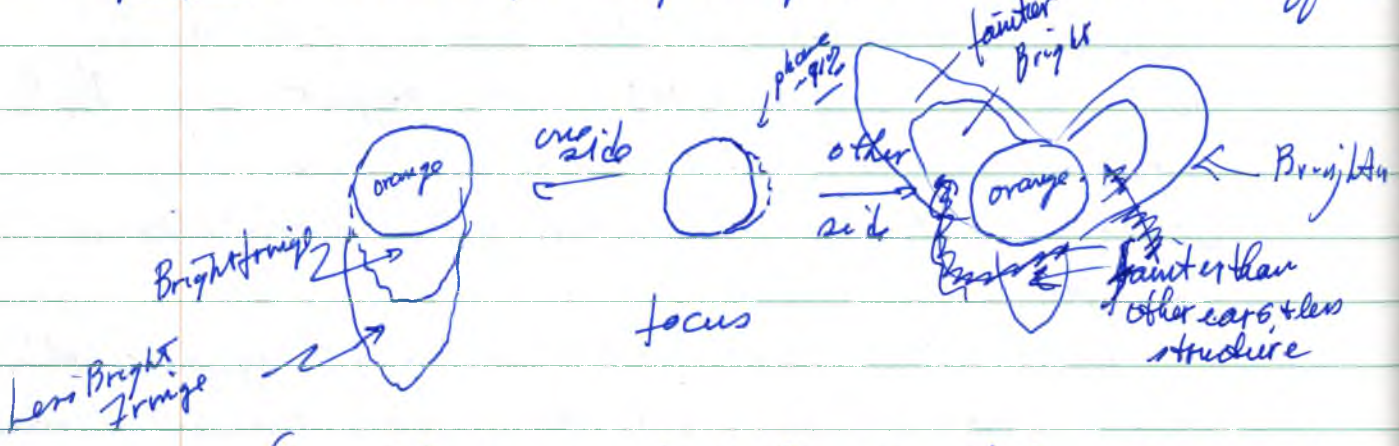


According to Paul's computer, this is not where the N (?) pole is, but near enough for

it is where I obs the white spot. Seeing was "fair-good so the plane was clear. The white may be some optical thing, I'm not sure. There were suggestions of surface patches, and Syrtis M. was supposed to be visible, but I couldn't see anything.

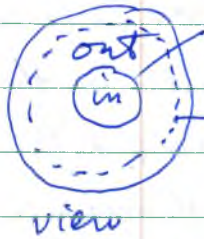
Sky was quite hazy, apparently due to smoke from Siberia.

18" Scope Optics: This scope has poor optics. Mars on either side of focus



Something is wrong with the optics. Views with 9mm Nag.

Effect of Paracor: Around 1:30 to 2AM we had a look at the double cluster using the 31mmN with + without the Paracor. Without P, with central stars in focus, the outer 1/3 to 1/2 of the view was distorted



Of the 60-90% out stars were rectangular with 1:3 or 1:4 length to width ratio. Also the 'long' axis of the stars did not Not comet like. line up with the radius of the eyepiece. The angle of the axes varied from one side of the eyepiece to the other as I looked around. Distortion was more on one side the other. Bob T. had lined-up the mirrors with a hologram laser collimator as I think the optics

were lined up. Is this an effect of the primary optical defects?

With the P. in it is night + day. The elongated stars disappear for ~ 80-90% of the field and the distortion even at the outer most parts of the field was certainly acceptable. A considerable improvement.

Apparent the f ratio of the scope is 4.33 + focal length = 1900mm.

$\therefore$ Mirror diameter = $\frac{1900}{4.37}$ = 438.8 mm = 17.28"

In any event the 31 mm is some eyepiece. Wonderful views of M 31, + double cluster. Like really wonderful.

→ As the focus was shifted the 'rectangular' lines of the stars went through complex shifts in aspect ratio and in angle of orientation with respect to the radius of the eyepiece. The distortions varied in a complex way around the outer part of the FOV and as the eyepiece was racked from one side of focus to the other.

Paul C. made a search for the S "intergal' galaxy. It is in the Camel area. and from a deep print it is an edge on G with a turned up end. Very faint. We found it in the 18" and a (15 may?) a Gal (round) was visible but the edge on (UGC 39xx) was perhaps visible 20% of the time. Everyone had trouble seeing it. We were in the correct field and it has a distinctive : : pattern.

Or maybe an elongated barred spiral

Photographs: I took several exposures on Velvia 50 and Fujicolor of the Iridium flashes .. We'll see what they look like.

I took a 40-60 minute 28mm f/2.8 on V-50 of the club scope and finished it off with a 'flash' with f 5.6 and a couple people in front.

Observing I looked at quite a number of DSO things over the night, but the sky was hazy so I didn't get too excited. On the other hand the seeing was fair to good and I looked @ doubles in Her.

From NSOG: K Her. (7 Her) nice yellow

β Her

α Her 3.5, 5.4 Sep 4.7". NSOG: Orange primary + greenish secondary. I don't see the green, but there is something 'strange' about the color. Nice star. I also obs. ~~it~~ on Fri Friday night

65 Her 3.1, 8.2 Sep 8.9" White + Bluish-purple according to NSOG

Again I'm weak in the colours

There were a number of others that I can't remember, but I must try again for these 'purple' and 'green' stars.

Veil Nebula: I had a look at the Veil in my 8" with OIII filter and around 51(?) Cyg. Without OIII, it is really hard to see anything but with OIII the Veil around this star is wonderful.

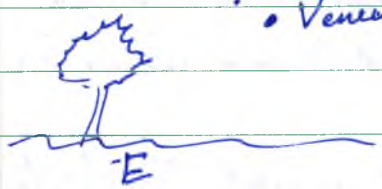
In the 18" we had trouble. The Veil (other half) was there but only poorly. Bob & I changed filters etc. but the contrast was always poor. I don't know why. Later,

a couple of hrs later ~~at~~ we had the correct arrangement and both sections of the viel were glorious.

NGC 281: Obs. 'packman' nebula in Cass with/without O III. Neo III does it.

Glob in Del: I found the two Globs in Del again. The faintone is always an exercise.

Nov 1/01 Obs Venus and Mercury at dawn in the East near horizon. This was the first clear morning in ages.



The spacing between them is about one moon diameter. Tomorrow AM I'll try with the 'scope 8" which is outside all night.

11/2/01 I had a look in am, but there was a lot of cloud and I could only occasionally see Venus & never Mercury.

Nov 14/01 First light for my 16" was last night. Also tonight when I attached Telrad. Looked at Jupiter last night. All 4 moons on one side. Bandlight Saturn & Jupiter. Slope 1/2 in garage. Terrible warm air currents but everything came to focus. Tomorrow to Judy's for cloth cover making.

Nov 17/01 Leonid Meteor Shower – Colinton

I set up scope 8" + two camera on the usual spot on the hill at ~ 2200 hrs Nov 16/01 and left for home at ~ 0410 hrs Nov 17/01.

Quite the meteor shower. Definitely the most spectacular ~~event~~ meteor shower I have ever seen. By say 0230 hrs the meteors were coming quite frequently. I did not estimate, but certain from say 0315 to 0350 hrs rates of 10/minute sounds reasonable. They were all over the sky but radiating from the constellation Leo which rose before ~~and~~ than

Awful Aurora however. I exposed ~25 shots on old, very old I'm afraid for times from 30 sec to 10 min - 28 mm f/2.8. Film was Extachrome P1600. Also a few on Fuji 800 print

No Moon!

At least 5-7 meteors left visible trails that persisted for 1 min or more say. I tried to photograph one. I wasn't expecting this.

Many ~~Most~~ meteors had "sparkley" trails that disappeared quickly. Lots of small ~~tiny~~ meteors - short trails and not very bright. All over the sky, N + S sometimes overhead.

Trails in Leo were usually short and slow moving. I guess that is a perspective thing. Also, when Leo was up enough, trails going down from Leo to horizon.

There were several (5-10 times) when 4-6 meteors were seen at once. When Leo up, only brightest stars could be seen, but Milky Way was just vis at Zenith.

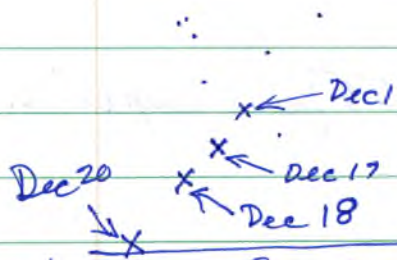
I forgot to look for the comet or the asteroid Vesta.

Dec 17/01 Some of the photo (Ektachrome P160a) turned out O.K. but only just. Fuji 800 still (3 frames) in camera.

Dec 16/17, 2001 Astoroid Vesta

Last night + tonight 2 obs. the field of the asteroid Vesta from my backyard and it moved. The chart was from Nov. S&T.

Next to see the 'star' move.



Dec 16/01 Last night I tried out my brand-new Meade 14mm UWA eyepiece. Cost $565 + GST = $604.55. Images appear very good. Not much distortion at edge in 8" f/6. Very little in fact Less than 30mm Ultima. It needs a more careful inspection under better sky conditions but I'm pleased. Good eye relief although it is difficult to see the whole field with glasses on, but easy without glasses.

Meade 14 UWA

Dec 20/01 Obs Vesta again - Really moving - & Saturn - Seeing O.K at times and Cassini's division visible

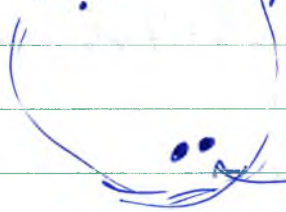
Io trans/sh on Jupiter. Could see shadow on SEB but not moon. A few hrs later Io moved off Jupiter and add'n belts could be observed. Something seems diff about Jupiter this year. SEB is not as wide as NEB?

Llee 20/01/74

Mars: Obs mars early in evening. Poor seeing. Mars above and to right of Moon. Mars was clearly not round but was 3/4 or so lit. Quite small + red. No canals.

Moon: Had a look at craters on term. line. Lots of shadow from rises or lines of puckering in Mare.

α Gem: For the first time I look at α Gem at 240x. Nice double. ~~NGC~~ NSOG says sep ~ 4.0" and the faint red dwarf ~73" distant is part of system



closer than shown rel. to faint companion.

29Jan02. Obs shadow transit of III on Jupiter in early evening ~9PM. John Malone was there also. Used 8". Seeing was so-so, but at times the shadow of Ganymede was very clear on ~SE13. (240x)

Also took a look at Saturn. JM quite liked that. Titan and the three inner moons were visible along with Cassini's division.

30Jan02 Obs. Jupiter from backyard with 8" on platform using 5 mm eyepiece. I was look for IV Sh, I've never seen one of Callisto, and I thought I saw it, but on rethinking No. Seeing was Poor although later in evening at times it became better.

Obs Europe just after it ~~cam~~ [r the disk. Very close to

Jupiter. I could not see the Tr of Io. The shadow of Io was on the SEB and was very obvious.

On the 10 Sh, I thought I saw it on the NEB, but it was too late by ~1 hr or so, as this was some kind of feature on the belt? I haven't seen it before. At time some detail would 'flicker' in the belts. e.g. the SEB has a white strip dividing it down the middle and the SEB is lighter in colour than the NEB.

I just checked the tables & I was correct in that it appeared that the shadow of Io was on the GRS in the scope and the times are roughly correct from S&T Tables.

---

16 Feb 2002 Sat. Evening. Coleraine.

Asteroid Metis: I found the asteroid Metis which was in the mid upper part of Gem. near γ Gem. It is at the end of its retrograde loop so it won't move much over the next few weeks.

8" f/6 Seeing was poor, very poor, but transparency was excellent in the Orion/Gem/Cancer area. Looked at Jupe Sat. (M42 - very nice), β Mon could just barely see the three stars.

Rosette Neb: Nice. Orion UHC block does a very good job of bringing out the nebulosity on low light side (NW Quad). Very good.

NGC 2420: An OC in Gem. Obs many times before, but this time with dark sky, about ~8-10 stars or more on a soft glowing background. Very nice

Esk. Neb: This tiny planetary did not take power well as seeing was very poor.

NGC 1435: Very nice + the more distant NGC (OC) was very apparent. I looked for the IC one further on, but I'm not sure what it's supposed to look like in an 8"

NGC 2419 GC. This GC is just north of Gem. in Lynx. Tonight I could see it ~~clear~~ clearly as a soft round haze. No hint of resolution. Description in NSOG. I could see it easily with direct vision [$(M_V = 10.3)$ @ 4.1']. I obs it once before under inferior sky at Coliston and I could only see it with averted vision.

Cancer: Had a look at M 1 s in Cancer - Very nice. Always a joy

Then the dreadful AURORA came in in a big way. I did ~8 or so star trail shots on Velvia mainly 28 mm, but also 50 mm at f/4. With Aurora ~10 shots on Fuji SG pushed 2 stops at f/2.8 and then 50 at f/1.8.

March 18/02 + March 19/02

Alone Monday evening. Cold for March Blackfoot. First trip to a dark site with the new 16" scope. Garage +16-18°C and say ~ -25°C at Blackfoot. After two hr. of running fan, the thermal problems went away. As it was cooling down, I looked at Saturn with and without the fan and there was quite the difference. Much more flair without the fan and better seeing with it.

Saturn + Vesta

Tonight and tomorrow is the evenings of the closest approach of Vesta and Saturn - I obs on Mar 18 from Blackfoot

• Vesta
Mars

Saturn

Titan

Vesta
Mar 19

with the 16" and from my backyard with the 8". Vesta appears a bit brighter than Titan. Maybe ~0.5 mag, but I don't know later to estimate properly.

Sky was a bit soft at Blackfoot because of crescent moon. I had a look at M42, Jupiter, Sat, M35 and the OC next to it which was an unresolved smudge. Didn't look any better than at Coliston on 16 Feb.

Aurora — As I was walking around waiting for the moon to go away and the scope to cool, I noticed a red shaft in the east. This became a red aurora. One of the most strongly coloured I've seen. Of course, I left my camera at home since I decided that handling the scope was enough

Finder: I must move the finder closer to the eyepiece so that it is easier to look through. Maybe a right angle amici prism is in order. All in all the scope worked well. The secondary revolved a bit + maybe I should lighten that up.

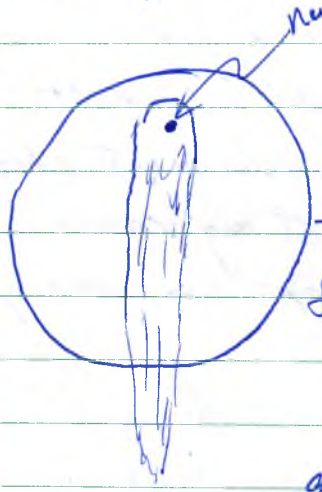
I left at ~ 10 or so as the aurora glow reached the zenith. I looked at M1 in Auriga + Rigel, but the scope requires better skys.

~~Friday~~ ~~Saturday~~ March 29/02 Coleiton Comet

Gina & I went to the 'road on the hill" to have a look at the planets and I wanted to see the comet. Full moon rose ~ 10 or 9:30 and there were lots of high clouded things. Seeing was rather good by the usual standards and trans. was phooey.

I eventually found the comet near Beta And. The nucleus was ~~@~~ mag 3 I'd say and about ½ deg South on the horizon line from B And.

The comet was the most spectacular I've seen since Hale-Bopp in '97. Distinct, bright nucleus with a tail ~ 1.3 degrees long. Very nice. Tail was visible in 8x50 finder I was impressed as was Gina. I examined the nucleus area at higher power to see if there were any structure like there was around H-B but I didn't see anything. I didn't get much of a chance to look as the clouds + moon were ending things.



Wonderful!!

Saturday March 30, Paula + Nicholas came over to look at the comet. Clear all day then it clouded over and snowed the next ...? days. Sigh >

Monday. Went with Glen 6. To view comet ~ 8K m W of Int. Airport Poor ~~sight~~ seeing blow from Devon. Soft sky + cloud. Could see comet COLD + windy

Also on Friday we had a look at Jupiter + Saturn. There was a shadow transit going on on Jupiter. Seeing was pretty good. For some reason when Gina is out with me observing, things work out well!

April 5-7 Fri-Sunday. George Moore Astronomy Workshop @ St. John School near Genesee Power Plant on N. Sask. River.

Overcast almost the entire time. Snowed both nights ~5cm each night. More than in city. No obs at night. Did not take 16" out of van. Sigh.

Had a look at sun in Paul Campbells 12" with Baader Solar Filter. Very nice. Lots of spots, some with considerable structure... Fried egg like. Nice neutral white/black colour. Good resolution and brightness.

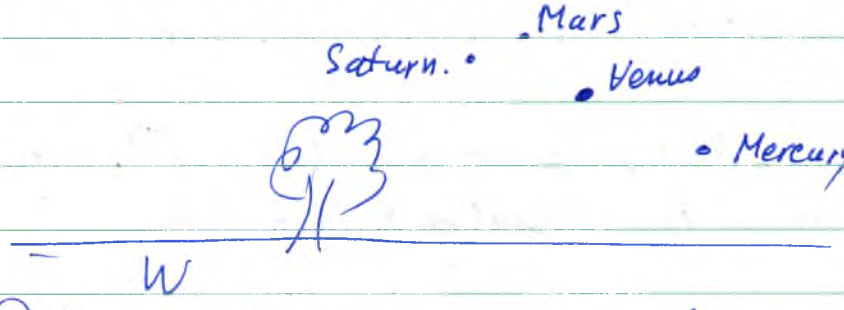
Also obs sun in someone elses 10" Meade obs with Baader film and only a 4-5" diameter filter. Did not appear as clear, I think?, but was fainter. I think full arperature filter would have done the trick.

Good Speakers. Ivan Semeniuk + Dave Robinson.

April 8 Monday. Glen Cullette and I started & go with the 16" & look at the comet, but poor sky in W stopped us and we drank coffee.

30 April 02 Tuesday 10:15 PM

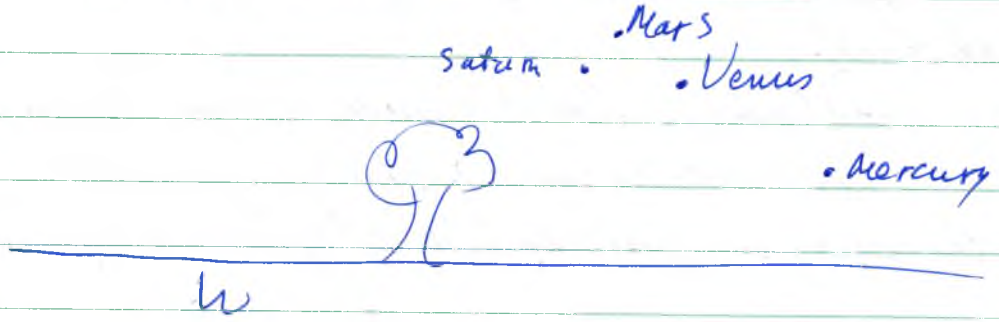
Observed the 'line-up' of the planets in the W to NW from 83 Ave behind the 'Next Act'



It was rather neat to see all 5 naked-eye planets at the same time. No photos yet. Must try for that. Tuesday night was a good opportunity, but I missed it.

May 3/02 Friday

Observed the planets again with my 8" scope. Gerri and Mrs. Snidle also had a look. Jupiter was the best since it was up the most. The others didn't look like much in the scope. Didn't look at mercury in the scope



The difference in the positions of the planets Mars & Venus relative to Saturn was apparent from 30 April. Also Mercury appeared fainter, but there was thin cloud in the area.

Took ~ 8-10 photos / 50 mm f/2, 1/2 - several sec. Velvia 50

June 3/4, 200~ **Venus - Jupiter Conjunction**

The closest approach of V + J was on June 3 (Mon) and Glen G. + I stepped out of the Next Act and had a look. Vaburn J. Quite far apart and not very impressive compared to other planetary conjunctions

On the ~~nd~~ next night, as I was going to bed, I looked out the bedroom window and the alignment was such that the two planets were visible between the roofs etc of buildings. V had moved further from J, but J is quite far down so the effect is not wonderful. Let's see what happens on June 13/14 ~~each~~ when the crescent moon gets into the picture.

June 10/02 **Partial Eclipse of Sun**

I took a number (~10) shots of the partially eclipsed sun. Max was at ~7PM and ~29% or so. A lot of cloud around with haze. Looked at eclipse thru sun screen glasses I had just purchased for my Telrad. Apparently it is going to be quite a while before the next partial eclipse around here.

August 7–11 Saskatchewan Summer Star Party.

Arrived @ Cypress Hill Prov Park ~ 6 pm and after the paper work ($69–) set up the tent. It rained / drizzled / Overcast and I went to sleep. According to Rick Huzjak the sky cleared at ~2:30AM. It was clear at 6:30AM and clouded over and rained most of the time until ~~Friday~~ Saturday in the morning when it cleared and was good.

Saturday at. Excellent trans. from 10 pm to ~2:30AM when clouds came in. ½ dog. bright things (M's) were visible in Scop. area as it was clear on S. horizon.

Set-up new 16.5" scope and had a great time. I'm in love with the Pentax 10.5 mm eyepiece. Great on M13.

Had a look at Mther and the colours are strange and I must look again

M17 (Omega Nebula) was wonderful. UHC even better. 30 mm

M8 Obvious dark lane 32 mm.

Next night with 14 mm, even more detail

M 20 Trifid .. 50-50 in 30 mm, but with 14 mm last night great detail could be seen in the three dividing dust lanes. Each different. Lots of kinks and sharp bends etc. Wonderful detail

M13 – what can I say

M92 – not as spectacular as M13, but very nice

M11 – Sat night in 14 mm was wow. An explosion of stars with the brightest in the centre.

NGC 6210 PN with. Nice blue disk. I don't think it is as big as Neptune, but I must revisit

M57 – a show piece object.

Hooked at Uranus and Neptune later on Friday. The ring diff to obvious and Neptune clearly resolved to a bright blue disk. No problem. Barry makes wonderful optics. I'm impressed.

On Sat. I saw M7 in binoculars, very near horizon, but M6 was obscured by cloud.

① I'm not used to using the Telrad. I have to get used to this pointing device

② I used my 7×50 binos on both nights to spot things. This is the first time for me. Let them dangle around my neck. Very useful. Will try again next time I'm out

③ The 16×80 finder has a rather small field of view & I wasn't overly confident is using it. Practice. Tried 30mm eyepiece instead of 26mm focusing on tower. Wider field of view, but not by much.

In short I am very pleased with my new Telescope! Everything went very well. Collimation spot on.

Quite a few Perseid meteors were seen, I wasn't looking much, but many Oh's & Ah! from the crowd. A couple of really bright ones were seen

Coma: With the 30mm Ultima the Coma is obvious at the outer parts of the field of view. With the 14mm Meade UW A it is greatly reduced. I suppose it is due to the small field diameter – I think – of the 14mm eyepiece. I was going to try the Orion 31mm Wayler Panacea, but it clouded over on Sat. night before I had the chance.

Oct 4-5/02

84

Fri + Sat at Columbia. Had 16" scope, but it was cloudy both nights

Monday Oct 7/02 Blackfoot. Took scope to Blackfoot. I was alone except for 4 men - duck hunters - CN employees, swing shift. They had four ducks.

B Aurora. Not that bright but it ruined any DSO pic. I took a number of photo 28mm f/2.8, 22 seconds exp. Mainly looking NW at Big Dipper with a Spruce tree in foreground. We'll see what happens.

# of photos ~ 9 on dial.

Thursday Oct 31/02 Blackfoot

Not a very good night. Poor - actually, very poor, transparency. A few clouds. Scope didn't seem to cool down very well. Would not split the double-double for example.

2h sat. gal. of M31 were soft and hard to see - in 16.5".

Looked at Packman Neb. It was just there with Ultra block filter. Also NGC 7789

New NGC 404, a gal ext to β And. Easily seen despite poor skies

δ And (γ + β double) was very nice also

Comparison of 30mm Meteina and 14 mm UWA. There is more 'coma' or whatever at the edges of the 30mm ~~that~~ with the 14. Some 'coma' at the very edges of the 14, but not much.

I had the three finders, Telrad, 8x50, and 16x80 plus dew system and everything seemed to work very well, much to my surprise.

Thursday – Nov 28/02 Blackfoot.

Set up 16". Poor skys and worse seeing. After 1 hr the clouds started to come in. Went home. Phooey!

Friday – Ken Staskos. Hiker's Party. Cloudy, clear, cloudy, clear. Did not set up scope. At ~2AM Don, Ken + I (T-K had gone home) went out onto the back lawn. Very dark, clear and transparent sky. Exceptional. The Aurora was out, but as faint, ghost-like clouds that would flitter across the top of the sky. Very rapid, but faint. Unusual, I don't think I've seen an Aurora quite like this before - - - the very fast movement. Faint, no color.

Sat – Near Coleridge

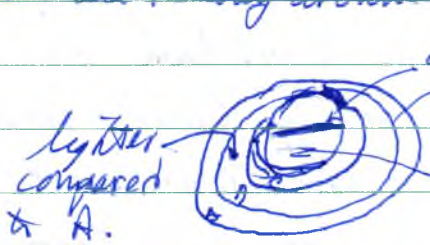
Set up 16" on Alta Rita field. Brian + Wayne + Jan Workman came out after 40 min or so. Sky was ~OK at start, but with steady Aurora Arch to N. By the time they arrived cloud/haze was coming in. Seeing very poor. Could barely split ζ Aries + δ And was tough to see the Y-B colors. Wayne (or is it Duane?) has very good eyes. He could easily see ~~H&C 404 and 406~~ which was another win for me. In addition, he could count many 7-8? stars in the Pleiades while, under the conditions of the night I could only see 3 or 4!

8 January 2003 86

Backyard

Wood Obs Saturn and Jupiter from backyard with old 8" and 5 mm radian. Used Tracking platform for some of the time. Temp -4 to -6 with Nwind becoming less as midnight approached.

(1) One of the best views I have ever had of Saturn. Cassini's division all the way around



Awful drawing. In truth, Saturn looked as clear as it does in many images in S+T

C ring against planet and also as grayish haze inside of B ring on sides. Really excellent. Good seeing lasted ~ 3/4 hr.

(2) Colours in Radian 5 mm. I noticed with Jupiter, and when I looked for it, with Saturn also, that there is some false colour near the field edge. Perhaps outer 1/4 say.

Jupiter, at the edge of field was 'yellowish' on outer edge and a bit 'blueish' on the inside of the ball. Sky was good and transparent (black) and seeing as Jupiter was not as good as Saturn, but almost as good.

In centre of the field - no false colour at all.

(3) Obs double shadow transit on Jupiter and then Reappearance of Europa from Oc. Some structure was visible in the dark belts on occasion and the shadows were quite clear. I could see one moon next to 'a' shadow as they both came off the ball. Shadow S of moon S moved less in contrast

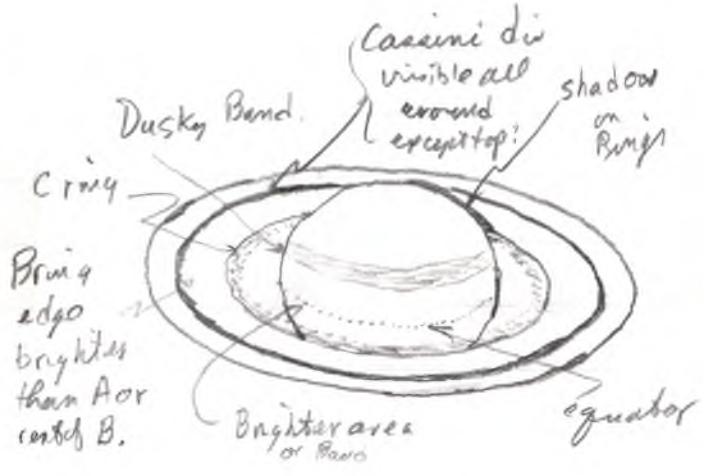
I don't really understand why, but Saturn (near meridian) had much better seeing than Jupiter.

9Jan03 At ~7AM I had a look at Venus at 240x and it was still a crescent, but not far from ½. Jupiter now had 3 moons as opposed to only one when I started obs. last night.

10PM Had a look at Jupiter (4 moons now) + Saturn again. Seeing fair to good (Good on saturn) but nowhere as nice at last evening.

Outline from S+T Jan 03

8 January 2003



Could not see belly of Saturn thru Cassini's division.

Jan 15/02 Another double shadow transit on Jupiter. First I both Ganymede. Seeing rather poor ~~and if~~ or perhaps typical is better. I could barely see the 1st transit, but the second one, when Jupiter was higher up ~~maybe~~ 11 pm to midnight was clearer.

Saturn was O.K. but nothing compared to the 8th.

Feb 22/02 Colinton

Sat 8"f6

Set up scope for ~1hr. Milky way visible, just. Some haze. Had a look at αGem, β Mon. Rosette cluster (could n't see nebula), M35, Eskimo neb. Jupiter, Saturn and obs. GC in Lynx? just N of Gem.

Feb 23/02 ~~Obs~~ From Backyard.

Sun.

Set up both Celestron 8"f/6+ my new scope with Barry's Optics. Obs Shadow trans on Jupiter ~24 Feb UT ~~&~~ 3-4 UT. I just missed the 102 (Occultation of Europa by Io) by the smallest amount. I thought I was looking at it, but then I saw two moons (barely) and I thought they were closing, but they were separating

Comparison of the two 8"f/6 telescopes

I compared the two scopes on Jupiter, Saturn & αGem and I didn't see much difference. Mainly at 240x. Seeing was not that good, but occasionally detail in Jup. belts would flicker in and out.

I was surprised at how little difference there was. Both scopes had been outside for 4-5 hours. There was no obs. diff. in brightness at 240x, but low power under dark skys would reveal more. Resolution appeared similar, but the seeing

was varying so much that it was really hard to tell.

Mechanics are much better (focuser) on my new scope, but the new one slides around on the ice/snow since it is lower weight.

I must repeat this comparison if the weather ever improves.

There was quite a bit of haze in the atmosphere. Jupiter was surrounded by a bright glow, the ~~redness~~ annular thickness was ~ the diameter of Jupiter.

Saturday, 9 March 2003, Caliston

2. set up my scope (16") to have a look at Saturn's moons. Iapetus was near Triton. Set up in Ernie's driveway In the morning it had been -40°C, but in the evening it was -25°C. Ran fan for 1-2 hours. Seeing quite poor. Saturns moons were fuzzy balls. Put scope back into van. Phooey!

Thursday 27 March 03, Blackfoot

I had Friday off work and went to Blackfoot. Two of them men were there with telescopes much to my surprise. Telescope secondary had come lose. Lots of fooling around. Had a look at M in Gem & OC next to it. and a few other things. Packed it in early as Aurora came in

Friday 28 March 03 Colinton

Big Aurora. I could see it in the twilight. ~~It~~ Took

90

Some photos, and some of them worked out.

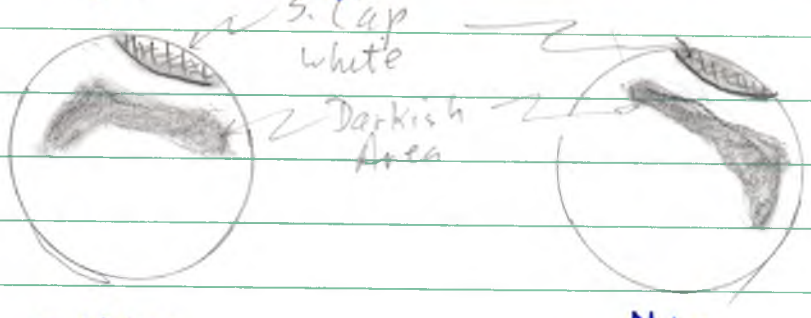
Aug 20/2003 — Saskatchewan Summer Star Party

Not a very good night. Much DEW. Smoke/Haze in the air. Milky Way visible, but not well. All Stars in L. Dipper visible. Bad Aurora - Almost photo quality

New: Obs NGC 6940 in Vul. Near 52 Cyg. OC. My notes say " m=6.3, 31', 60× " which is about right. It is actually rather nice in the Ultima 30 mm in the 16.5" but it 'overfills' the eyepiece. A wider field eyepiece would improve things. Rich cluster with lots of stars of ~ equal brightness.

Old I looked at some classics M57, M13, M11 but the stars of Scorp. were barely visible

Mars: Obs Mars at ~ 11-12 pm and again at ~ 4 AM when the moon was up. I tried various filters and a #21 seemed to be best mainly because of glair reduction



~ 11 pm — 4 AM

Aug 21+22 Poor Obs. 22 was overcast completely + 21 lasted ~ 1 hr.

23 Aug 03. Very Good night! I took a lot of photos with 28 mm f/2.8 on 1504 on Provia 400F using tripod and tracking platform. 10s, 20s, 30s, 60s, 120s and repeat. Also some with 50 mm f/1.8 and also f/2.8 @ 50 mm.

A number of tripod shots ~~28~~ mm f/5.6 + 1504 on - 30 min to 1 hr and a few 28 mm f/2.8 ISO 100. Also shorter on ASA 400 28 mm f/2.8 Taking images of my scope. The night before I tried some coloured flashes on scope

New Re-Obs IC 4665 and new was IC 4756 in Serpens Cauda. I could not find OC 6733 .. prob. looked right at it and failed to recognize it.

NGC 6572 PN This PN is puny ~ 3-4", but it is real as shown by O III. Also looked at PN 6210 in Her. 6210 is slightly blue to the eye ~~and~~ round and distinctly non-stellar ~~68~~" dia. Both are uniform + I could not see any central star at 190X.

Eyepiece comparison: I compared my 30 mm Ultima with 31 mm Nagler + 27 pan from club collection. 27 Pan has slightly larger FOV and 'good' edge correction. 31 Nag has much larger field of view but has a lot of coma at edges. Also ~~the~~ with 31 N I noted that I could 'focus' stars on one side/and then on the opposite but not both at the same time. I think focal plane of scope may not be ⊥ to focuser.

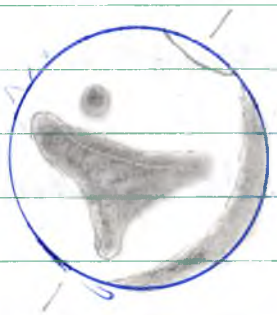
23 Sept 03 Obs. Mars from my backyard with the new 8" f/6 with the 5 mm and tracking. SPC is smaller + some darkish area were visible below the SPC. Mainly poor seeing.

I took 1 aurora photo 24 mm f/2.5 on 800 fuji for ~20 sec. The aurora had some colour briefly, but that did not last long. Also the usual glow in the sky.

Oct 18/03 Columbia. Alt+Rita Field

10Am-Midnight

Mars:



Mars. Oct 18/03 ~Midnight MDT

I made a drawing of Mars on the box of my 30mm Ultima eyepiece. I think it was the best seeing I have ever obs on Mars The phase was very clear. S PC was much smaller than at SSCP in Aug. The 'spot' about the 'blue' ring was rather weaker than drawn, but was there. Also I think the Y was turned toward the sun more.

Pentax 30mm XW.: I spent quite a bit of time comparing the Pentax & the Ultima. Pen. is v. good eyepiece. With my glasses off very little distortion at the edges. Colours are vivid. With my glasses on edges are very soft. Why?

Split & Aries easily at 40x with Pentax 30 XW. Had a look ~~at~~ at the double cluster and it was very good in this eyepiece with colours of stars evident. Note: very good seeing. Lots of cloud & Aurora

I took 3-4 aurora shots 24mm f2.5 or 2.8 for

about 15 seconds.

Oct 26/03 Edmonton · Backyard

Had a very brief look at Mars in the early evening. Again, rather humid & cloudy & v. good seeing. Unfortunately it clouded over and by 10 pm I put the 8" scope away.

Oct 27/03 Backyard
Monday I set up the 8" for a look at Mars. Poor Seeing, but the air was clear so I looked at some OC in Cygnus as outlined in Sue French's article in S+T Oct 03 p. 96

Obs NGC 6811, 6866 + 6910. They were much as described in the article. I must re-visit from a dark site.

Sat Nov 8/03 Near Turner Valley Lunar Eclipse

Early evening ~ 5:30 on

I exposed a role of 36 of 400 ASA Fuji 400F silk film on the moon using 50, 100, & 200 mm focal length lenses mainly at f/4 with the canon F-1. Most (all) were on a tripod on the tracking platform except for the 1st ½ doz. taken before Totality when things were still quite bright.

Exposures varied from a fraction of a second at the start to ~ 5 to 45 sec during totality and after skyi darkened. We'll see what happens.

Dec 26/03 **Backyard. Ceres + Double Stars**

Obs. asteroid Ceres for the second time. It is in Gem. Used charts generated by Guide 8. This is the 2nd time I have obs Ceres this opp. Lots of cloud etc. The seeing was above average.

I observed 6-8 double stars in Gem + a few more in Auriga, Orion, + Canis Minor. I have marked these doubles on the charts copied from NSOG + have marked the ones they deem interesting.

I used the 10.<mm Pentax eyepiece + the EQ platform. The combination of decent seeing, tracking, good charts + correct magnification (120x) makes "picking-off" these doubles a piece-of-cake. The colours aren't very good however. More aperature would certainly help. Also the lights from the house + city don't help any.

Saturn was fairly good. Cassini's division was obvious, but C ring was not really there. Brighter outer edge of B ring was apparent and dark rim, there was a darkish, thin band near the equator on the globe.

Jan 19/04 **Ceres:** Spotted Ceres from my backyard. Must be ~6 times this opp. I marked its position on charts from Guide

Hebe: Spotted Hebe for the first time tonight. It's a few degrees "up" from Procyon. It's mag 8.8 according to Obs Handbook 2004 + I'd say that's right. Poor seeing tonight. Could not see Cassini's division

Feb 1/04 Backyard. 2 9 Am

Asteroids

Obs: Ceres & Hebe. Ceres 3 times & Hebe the 2nd.

Moon: Had a look at the moon as I continue to identify & become familiar with more features of the Moon. I can see that this will take a while, but it is interesting. Obs mainly at 240x

Saturn: Seeing was better than it has been for quite a few nights. I could see Cassini div on the sides (very clear) and to the front (on occasion). Slight shadow of planet on rings, more near opp. Cassini div is behind or just touching top of ball. Hard to tell. There is a darkening on the polar area, nothing distinct. Also a band - darkish roughly, but may be a bit above, the equator. Bright outer edge of B ring was quite apparent. C ring was in front of globe and on 'left' side, but I've certainly seen it cleared before.

Venus: Obs venus at 240x early, before dark from 85 Ave in the south. Venus is, I think, ~~three quarters~~ the ball of Saturn by ~~2-3 ratio~~ and is 2/3 lit.

Venus.

Feb2/04 96

Backyard. Evening

Asteroids: Ceres + Hebe. Need to obs 2 nights in a row so that the small movement can be easily seen.
Saturn: Quite nice. Seeing good, as it was yesterday
Moon: Had a look at 240x at Aristarchus area. The shadows really showed up the big cliffs which is in that area. Very nice.

Feb4/04 Backyard: Evening. ~ Full Moon
Asteroids: Obs Hebe again. Did not look for Ceres.
Jupiter: Had 1st look this season @ Jupiter
Saturn: Cassini is Div visible
Seeing was not very good (few arcsec) and poor compared to 1 Feb04
Looked at a number of doubles in Cancer + Orion + Mono, but seeing limited things
Mars: Obs mars. It was more 'full' than Venus the other night + much smaller. I think I could see dark area, quite prominent despite the poor seeing + small angular size of Mars

---

Feb10/04 Backyard:
Asteroids: Obs Ceres again, but not Hebe as it had moved off the edge of my charts
Double Stars: Looked at some double stars in Cancer and Leo.
Seeing was quite good
Jupiter: At 11:45 obs reappearance of Europa from behind Jupiter
Io + Ganymede were close by. At ~ 12:15 a Shadow Tr of Io started. Fairly good seeing & at times detail could be seen in the belts of Jupiter.

Feb 16/04 — Near Calmar.

Chris Astle + I went to near Tom + Patricia's place and set-up on a side road. Chris had his new Celestron 8-i 8" SCT - Nice rig Chris was having problems 'aligning' the GO-TO system, but things are much better when wide apart stars are used - We were there for ~2½ hrs. Sky's good but time but terrible at others — Cloud.

8" f/6 — Comet Lenear T7. Obs comet near δ Peg. About mag 7 according to charts. Quite easy to find. Unfortunately it was in an area of poor transparency all throughout the observing period. It seemed to have some asymetry and a brighter centre, but with the poor sky it was diff. to say.

M42 was rather nice as the sky in that direction cleared nicely. In addition I was able to see some structure in the Eskimo nebula with the 10.5 mm eyepiece.

We looked at many other objects but the sky was only good in certain places.

Feb 21/04 Saturday — Coleraine Cemetery

Gena was present + we set up the 16". Fan would not run. Later it seems that the battery output was 5V on the VOM.

Comet Lenear C/2002 T7

Very nice in the pentax 30 mm XW. Comet had distinct core - stellar like, surrounded by a circular coma

say 6'-8' in diameter. A faint, but distinct tail was present. About 12'-15' long... hard to tell and 'finish' Tapering toward the end. There was a star next to the comet. Gina was happy. Sky was soft near δ-Per. since the glow from the sun was still present.

M42 — Seeing was ~OK (5 stars in trap.), but transparency to the South was excellent. Great views with the 14mm UW A. Gina was happy.

Others
OC 2430 Gem — Looked at OC 2430 in Gem. Stars were resolved at perimeter and across the central haze of the OC. Reminded me of a Glob.

2371/72 PN. — I'm look for this one before with the 8", but I could never see it. It was clear in the 16" in the 30mm & with the 14mm. Double lobe planetary. Confirm with OIII filter.
NGC Finest Test says 7.55" and m_v = 11.3
The Left hand lobe is distinctly brighter than the Right hand lobe as seen in the 16".

2392 PN Eskimo — Had a look at this. I could see structure, but I didn't use high power since I don't have a tracking platform & Gina was there.

Gina & I looked at a whole bunch of "showpiece" M's in Gem, Aur, etc M1, Double cluster, M31 (built soft in that area of the sky), Saturn, Venus, Mars etc. Very good night.

March 23/24/25 Backyard Edmonton

Obs: Mercury - near horizon in W at ~7:30-8 pm on 23 March
In Telescope Venus was ◑ nice half. Moon was a thin crescent near Venus on 24 and Mars on 25
On 25 March, I had a Look at the double stars (list from NSOG) in Leo. Seeing ~ OK for doubles, but rather soft on planets

---

March 29 Backyard

Gena and I obs' the double transit of I + II on Jupiter. Seeing was just awful. No sign of either moon in Tr., but fairly good suggestion of one shadow on N belt. The other maybe. It was neat to obs moons appearing ~15 min apart off the disk of Jupiter so that Jup had 2 moons, then three + then the fourth appeared v. close to the third.
Gena was happy. Also looked at Venus, (¾ phase), Mars + Saturn.

May 2/04 Backyard - Edmonton

Venus is becoming a well defined crescent as it moves toward June 8th Transit of the sun.

Jupiter: Obs Transit of III on Jupiter just N of N eq. belt. Very clear nice black dot. Seeing fairly good at times, but a lot of wind. Warm

Saturn: Cassini div + several (Titan + 2-3) moons. Always nice

Aug 11/2004
100

Big Stone Campsite ~ 30km S. of Youngstown AB

I was lazy + didn't go to Dinosaur (SP) campsite after driving from Edmonton. Set up 16". 3 children, Britt (8), Jaranay (almost 10) and older sister were around all evening. Showed them various 'show piece' objects. No fear in climbing ladder.

Sky was O.K. overhead, but there was cloud/haze all around the horizon. Also some 'street' lights on a highway I shed in the distance was most distracting.

Quite a few meteors as this was the height of Perseid meteor shower. Went to bed 'early' at ~1:30AM since sky was not good

Aug 12/2004

SSSP at Cypress Hills Prov. Park.

Outstanding sky! One of the best in a while. Dobs steady from ~10 pm to ~2AM when I layed down + got up but was just 'observed out' and went to bed.

Richard V.d. Berg + Don were behind me with their scopes Lots of GEM this year.

Used new 'white' star atlas 2000 charts + I like them. I need a dimmer red light.

M13 + NGC 6207: Obs M13 with the 14mm. Wonderful with dark sky. Also the Gal NGC 6207. No core, just smudge elongated

PN 6210: I can't see any 'blue' colour, round no central star some hint of structure with 14mm.

M57, M56 + $\zeta_1\zeta_2$ Lyra. Obs these 'show piece' objects again later in night. Obs star R. of M57 + faint stars (2) & comet + strong stars

M27 - Dumbbell: Very nice. Tried OIII + ultrablock. OIII enhances details somewhat, but dims things a lot.

M11 - Wild Duck - looks great

M71 - Aquarii

Uranus & Neptune. Look + ll + N with 14mm + 6.7mm in an effort to spot a moon, but was not successful. I think it is very difficult

M51: Using 14mm. Two glows of unequal size with obs. cores. There was some hint, but only hint, of spiral structure in large M51, but I'm certain I saw spiral structure in Dennis Bouchard's 16" from Blackfoot. Some stars superimposed on G.

NGC 5660, 5676, 5689 + 5677 + I 1029. The first 3 G are very obv in 14mm. 5677 & there + I 1029 is more of a suggesting, but I feel it was there

Jobs a lot more, mainly PN. They are tough since I don't have a tracking platform + they are small & dim.

GCin Ophiuchus: M12, M10, M14. Each diff. M14 is mainly a glow with only a few stars resolved.
NGC 6366: Not much. Sort of hazy & a few stars near the

glaciers of bright star. Not a typical globular

Aug 13/04 SSSP — Cypress Hills Prov. Park

Another good night! Not as good as last night as some Aurora made an appearance ~2AM, but still satisfying.

Globs: I observed quite a few GCs last night + they have distinct personalities in the 16" with the 14 mm eyepiece.

Delphinus: NGC 6934 resolves into a ball with quite a number of resolved stars around it + over the face of the G.C.

NGC 7006 is just a ball. No real resolution, but some twinkles now and then.

M15, M2 + M72 each has its own personality and looks very nice in the 16" vs the 8"

. . .

In the 8", the differences between the G is not as obvious. In photographs, they "all look the same" as the photo overexposes all the stars. By eye the difference in brightness of the stars and patterns, strings etc, of the stars are quite apparent.

M73 + NGC 7006 the Saturn Nebula — nice PN, egg shaped, but with the 14 mm I didn't see any rings or saturn like shape. No central star.

Draco: NGC 6411 a faint galaxy. Some brightening a center but small, faint + a bit elongated

NGC 6543 The Cats Eye

Very nice in the 16" with the 14 mm. Central star visible with direct vision, egg shaped, bright PN surrounding star. Hints of 'structure' in the 'fuzz' around star. Tried OIII but it didn't seem to help.

NGC 6503 G in Draco. On NGC finder. Made drawing elongated blip. Much brighter + larger than 6411 (also in Draco) No Core

Near Cepheus NGC 6939 OC. Supposed to be compressed in middle, but I didn't see that.

NGC 6946 G. Big. Made drawing. Suggestion of spiral or peanut shape to me. Strange

Cygnus PK 64+5.1 - I can't find.

Aquila PN 6781 - I can't find it

Aug 14/04 SSSP - Third Night

Nice Banquet this evening. Joshua Roth of Sky & Telescope gave the Fr. Lucian Lecture on Cosmology. Very good.

It clouded over as the sun went down & I went into the tent in the 10 pm+ area and roped until 1 AM. Sky was good but definitely the inferior of the 3 nights at Cypress Hills

Photos: I took a few pics - camera on tripod 20-60 min f/5.6 on Provia 100 + a couple on Velvia same settings. 28 mm lens.

NGC Project: I aligned the finders on the lower top and centered the main objs with the 10 mm eyepiece (200x), no finders used.

Obs NGC 6572, 6677, 6712, 6781, 7027 + 6802
I made notes in the NGC finder table.

Cygnus PK64+5.1 Campbell's Hydrogen Star

I looked for this last night but couldn't find it. I got it tonight because of finder alignment. Orange tone to star. It is not dimmed too much with OIII filter. Using the 14 mm I looked carefully with/without OIII and I could not see any haze. Just a star
NSOG says you can see a haze.

NGC 6834 OC - 4 stars evenly spaced over haze.
- Oblong streaky haze which is not quite in the same line as 4 stars. As described in NSOG

Lyra — Steph I - Irreg. clust. around main star in Lyra. Not much.

M31 — Obs. M31 & 2 dust lanes were obvious. I looks for 'glows' in the general body of the gal. looking for HII regions, but I couldn't spot anything.

M76 — The little dumbell. I hadn't obs this one with this 16" and it is like a rectangle with slight pinch in middle - Cute.

Summary: A very good star party. Lots of people with equipment. It seemed that there were more than in previous years. Quite a bit of expensive gear around.

My scope works well, but it is heavy. I concerned about the tracking platform I'm making ... if it will have enough 'strength' to withstand the push-pull of this heavy a unit. I must re-visit bearings (both) on the scope to see if I can reduce friction.

- Talked a lot with Paul + Sherry Campbell - they just got married
- Don + Hube + Joan ... I must view some in HC
- Donna-Lee .. She's a beener.

Richard V.d. Berg + Don ... were set up behind me and can hear guys talk. I don't know if they observed much, but they seemed to be having fun.

Daniel + Leridon Prud'homme + Sonya Hynes.

Harris + Karen Christen

Greg + Lindsey .... from Scenic Shop.

Tim H.

Late Summer - Fall 2004

I have been doing some observing of the moon, and I have some new charts + books. Wood's book is very good. Trying to get the 'big' picture of the moon + its geology.

Have now constructed the 2 fan system for the 8" and it seems to be working fine.

Oct 27/04 Total Eclipse of the Moon

I took a number of photos with the F-1 on a tripod on the tracking platform. ~ 1/60 or less with full moon to 1 - 16 sec at Totality. They came out well.

The photos ~ 20-30 min from 555P were on the same roll and they didn't turn out very well due to tracking errors with the platform.

Nov 9/04 ~~I took the~~ Bright aurora in city + I took ~ 10-12 shots 20 sec, f/2.8 22mm on Fuji 800 ASA w/ low negative film

Nov 14/04 I went to Blackfoot with the 16". Did not set up due to aurora - like a haze - that went from horizon to horizon. Talked to Shelly Sodergren + had a look at her beautiful 12" split tube on Dennis Borchard platform. Very smooth motions and wonderful workmanship. Must see in the daylight. DB was there also + Paul Campbell.

~ 12 cars.

Nov 11/04 On the way back on hwy 16 an aurora flare-up and I stopped at the parking lot at the entrance to Elk Island Park. Took ~ 12 or 14 shots of aurora.

This ~~was~~ was the brightest aurora - red and blue edges that I can recall seeing. WOW!

Nov 16/04 Tuesday — Blackfoot

I took the 16½" to Blackfoot for ~ 2.5 hours, arriving home at ~ 12:30 for bed + work the next day.

Doug ~ 10" Ha & SCT + Mewcon it until near the end when Bob Drew showed up. Nice discussion.

I didn't have an organized plan, so I just grabbed a chart + started to look around.

Kemble's Cascade + NGC 1501 + 1502

After some stumbling around I found Kemble's cascade. + after a very brief glance at it I went on to the PN, 1501. I used the 14 mm. It is quite big, and bright. Framed by a triangle of stars. Fairly uniform, but 2 times I though I could see a central star + perhaps a faint star on the edge of the PN.

M 33: Does this ever look different in the 16" vs 8". Examining with the 14 mm I could see a number 6-8? suppin imposed stars on the central core. Suggesting spiral arms. A number 3-4 of spots or glowing areas could be seen. I must revisit + compare to recent drawing in Sky + Tele

Galaxies in Triangulum

I was practicing my star hopping + I was able to find the faint gal. 750, 777, 890 + 925 in Triangulum.

β And + NGC 404

Looked again at 404. Very easy.

NGC 7331.

Had a look at this old fav. I was thinking about Stephan's Quartet but I didn't have charts.

There is a fuzzy spot - direct vision - near 7331 + Guide says it is 12.8 mv

PK 158+17.1 This PN is on chart 5 just outside of the boundry of Auriga W/Oh and without the OIII +14 mm I couldn't see a thing. Must look up in NSOG.

M 77 + faint G I had a look at M 77 (bright core with glow surrounding it) + the faint G in the area 1055, 1040, 1087. I was going to look for some more but time was running out

Aurora: Just as I was taking down the scope the aurora came up in the NE + I took 3-4 frames 24 mm f/2.5 ~20 sec on Fuji 800 colour negative film.

Classic Objects

Bob Drew let me use his 35 pan to look at the Orion nebula. Also the 27 pan + OIII for the Veil + NGC 6888 the crescent nebula. I didn't realize how big the crescent is - I almost fills the 27 pan. Ear shaped. Brighter on the convex curved part + towards the 'bottom' of eyepiece.

Must purchase 2" OIII filter.

Backyard Edmonton. Dec 6/04 Iapetus

Observed Iapetus + the other 4 moons of Saturn from backyard at ~11:30 pm. Temp ~ -25°C.

Used 5 mm (240x) and tracking platform.

Unfortunately Dec 7/04 is overcast and the next few days are predicted to be overcast

Dec 9/04 Iapetus Backyard.

It was sort of clear this evening (Thursday) and I set-up for a look at Saturn. Had charts from Dec 8. The seeing was awful. Cassini's division was barely visible. Titan was a fuzzy ball and Iapetus was sort of seen with averted vision. Not very satisfying.

Sunday 9 Jan 05

Backyard Edmonton 8" f/6

I took the 16" to Coleridge for the weekend, but conditions were poor. Counselor Paula Evans came over for dinner. I was thinking about going to Blackfoot, but work on Monday, plus it was quite cold −22°C... ? Excuses.

Comet Machholz C/2004 Q2

I observed this comet from the backyard. Round, large, fuzzy ball-bright. I could see it in the finder!! Unfortunately, city conditions being what they are precluded any obsy structure. Over a period of 1.5 hours I noted it move with respect to a star!

Diagram S&T January 2005 pp. 54-5.

Multiple Stars

Obs: ζ Orion - nice

see S&T Jan 05 p. 10

ζ 31 Orion Or with faint blue companion flickering in & out with seeing over my house-hot air

σ ≡ 48 Orion - very nice multiple of four stars incl Struve 761 in the same field with 10.5 mm.

Monday Jan 10/05 Obs the comet from backyard with 7x50 Binoculars before going to RASC meeting. Same as before, but it had moved.
~6:30-7pm

Wed, Jan 12/05 T = -25°C. Set up scope and had a look at the comet. Sky softer than on Sunday and the comet appeared smaller and more condensed.
Also looked at various multiple stars and Saturn.
Seeing varied greatly depending on the position in the sky + with time. View of Saturn was quite good at times.

Thursday Jan 13/05 Blackfoot Comet Machholz

Chris Astle + I went to Backfoot and set-up the 16". The comet filled at least ½ of the 30mm eyepiece which has a 1° FOV. So the comet was at least ½°.
Round, with bright nucleus feeding into gray skies
Sky was not good as Milky way was poorly visible
No Tails, but I'm sure this was due to the poor sky.
Comet visible about ¾ of distance between Alderbaran + Algol as a "fuzzy" star to the naked eye.

We were out about 1.5 hrs. Very cold. We looked at a few M's but the sky was not good. Also we had a look thru Chris's 20mm (~90) eyepiece. Not bad. Shows field curvature quite strongly in the f/5 scope.
The wind came up and we left for home.

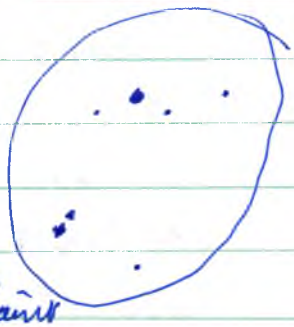
Feb 13/05
112

Backyard – Sunday Evening

Moon First 'clear' night in ages. Moon was ~1/3 lit and I got out my chart (4) and had a look at many features some new, some familiar. Spent about 1 hr or more over 2 sessions. Some trans/cloud problems.

Saturn Had a look at saturn with the 5 mm. Fairly good seeing. Looked great, as always. Just past opp. + shadow of planet was on the rings. Seeing varied as diff. air events moved through.

Double in Orion 48-σ + the star next to it – very neat



31 ~~28-η~~ 4.7, 9.9; 12.7" σ + blue. The faint one was faint, but definitely blue compared σ Orionis

28-η 3.6, 5.0; 1.5" – I could split this one. They 9.4, 11 5½" looked more = in mag. than the data suggests. At times, very split, then flicker & elongated blow – I was surprised that I could split such a close double.

Feb 16+17 Backyard Edmonton 8" f/6 10.5+5 mm.

Spent much time both mornings obs. the moon. From the charts I identified a gillion craters. I think I'm starting to become familiar with the moon. At least it is not the struggle it was some time ago.

Tonight the shadow was coming up on the Caporicius + it was interesting to note it advance over a couple of hours.

Obs. straight wall + Rima Bird. I could see the 'fan' crater at the end but not the other small one near Bird. Interesting debree or craters next to Cap.

Seeing at times was good + I could convince myself that I could just detect 2 craters in Plato. The Mare above Plato was quite spectacular as the shadow accentuated many layers of Lava flow on the Mare.

Clavius .. lots of detail.

Saturn was very good. Too many moons --- background stars.

I obs again all the doubles in Gemini from NGC + some more in Mons.

March 2/05
114

I have been observing the moon most nights lately since it has been sort of clear. From Edmonton + Colinton

Mare Orientale

On the moon, I've been able to obs Lacus Veris, Lacus Autumni Byrgius A etc + the bright spot at the end of Lacus Veris but No Mare Orientale. I guess I'll need a more favourable libration

I have also looked at various doubles in Gem, Cancer + Leo from backyard as well as Saturn.

I really like the 10.5 mm Pentax eyepiece. At x120 somehow it just 'seems right'.

March 11/05 I was over at Chris + Laurie Astle's place for supper with Rob Bidlett and we went out in the street and had a very nice view of Mercury near the thin crescent moon in the west. I had obs Mercury on Two occasion before this month, but this one had the best skies + the moon was a nice added touch.

April 17/05 Sunday evening. Backyard Edmonton 8" f/6. I had put flocking paper opposite focuser and centre spotted primary mirror + adjusted focuser so it was approx parfocal to tube

Jupiter: I looked at Jupiter at ~~9:10~~ 10 AM and noted dark spot on NEB. After 3/4 hrs, obs Jupiter again and spot had moved. It was the shadow of Io. I looked for quite a while but I could not see Io itself.

Moon: I looked at the moon tonight + last night. Very bad seeing last night, but tonight on occasion it was fairly

good, but after 15 min deteriorated again

Rima Hadley + Rima Bradley : Rima Bradley was obv. at most times and Rima Hadley which winds around as much could be seen in times of good seeing

The 'splutterchain' next to Copernicus was quite clear as was Eratosthenes + Stadius

Dirt + Rima Dirt : Both were quite clear as well as the straight wall

---

April 20/05 Edmonton ~10 pm. 8" f/c 240 x

With much staring and only on occasion I could see 4 white spots in the crater Plato.

Plato

On occasion, considerable detail was visible in Cassendi Aristarcus was spectacular at the angle of the sun.

Seeing was 3/5 most of the time + not as good as it was on 17 April.

Saturn was so-so. Cassini is div was visible + several moons. Jupiter had bands and suggestions of detail but it was lower down than the moon + Saturn was just past the zenith.

May 1/05
116

Edmonton Backyard 8" f/6 Tracking Platform

Jupiter: Obs Shadow transit of II on Jupiter. Nice Blackspot. Could not see II until it was ~ 1 moon diameter from the edge of Jupiter.

See OK. GRS obs and also some detail after the spot. Also some dark areas S of NEB below detail following GRS.

Saturn: Had a look at Saturn. Cassini div clear and some bands visible on glob of Saturn.

May 7/05 Caledon Cemetery 16" Saturday

Set up the 16". First time out since I modified the sliding pads, i.e. added more pads. Works much better. Smoother action.

Aurora + Bear

There was an Aurora in the NW as always and eventually the west horizon - zenith - horizon. Quite bright. I could barely see the Leo triplet of Galaxies.

After about 2 hr or so some animal noises and breaking of branches etc were heard. Quite loud and persistant. Mooing - bellowing - type call. I thought it was a cow or moose. The next day Mrs Smiley told Gina that a black bear had been sighted recently in that area.

Went home after 3 hrs.

May 14/05(?) 8" f/6 Edmonton.

Jupiter: watched ☲ Ec behind Jupiter

Moon: Obs Lunar 100 # ~~Eb~~ 60+65

60 is Kies π which is a volcanic dome looks like one only
65: Hortensius domes - several

The angle of the sun was not the best for obs either of these features but they could be seen. The team was a couple days past best + I was surprised that I could obs. them at all. No pits on top.
Must re-obs under better conditions

SSSP 2005 Preliminary

Big Stone Campsite Aug 3, 2005 Wednesday

South of Youngstown

Set up the 16" at the same place as last year. Not so many people this year at the campground. A number of Pelicans were on the 'lake' in the evening along with large gray cranes and a bunch of what appeared to be Canada Geese

There are two very bright lights on some guy's North bunting in the sight ... 700 m away. These things would cast a shadow at that distance. Also very distracting bright to the South. Other than that, skys were quite good, particularly by >30° up.

Aurora came in later and I took a bunch (~10) frames on Fuji SuperHG Colour neg. film with 24 mm lens at f/2.8 20-40 sec. exposure - All across lake. Aurora an arch.

Obs : Jupiter : Jupiter had 4 moons ~~two right east~~ as shown above Eato changed 6

: ⊖ : Jup. good down with sun

Venus was seen poorly as sun was setting. Seeing on Jupiter was usually poor : 30mm eyepiece, 14mm did no good.

Mars : I looked at Mars with the 14mm at ~ 2AM and it was ~ 3/4 lit. Suggestions of surface detail, but the glare is so great in the 16" that it blinds you. Must try filter.

NGC Finest : I spent the evening obs a bunch NGC finest as noted in the 'book'. Planetaries + 1 glob + several OC.

6888 Around 1-2AM I spent time looking at the SN remnants in Cyg. The OIII in the 24 Pan works best for the Veil + 6888. With No filter 6888 is ok. The Orion UltraBlock doesn't do much but with OIII, 6888 is a faint, peanut shaped glow, brighter on exterior curve of peanut side and is ~ 1/4 the field of view with the 24 Pan.

Veil The veil is quite spectacular with the OIII + 24 Pan. Traced all three segments. Very nice. Better in Bob Drews 20" however.

SSSP Aug 4/05

GC in Oph M107, M14, M10, M12 - All nice, but different

Also 6426 + 6366 - faint smudges - very faint mv ≤ 10.5 or < 11

~~6539~~ 6539 - larger of the two - no resolution

6517 smaller than 6539 No resolution

PN 6 309 · ~~Faintish irregular~~ fan shaped smudge - Seemed to respond to OIII but faint and irregular.

NGC 7129 □ in Cepheus · Faint Haze around 'dipper'-like pattern of star around star

NGC 40 PN. Very nice · Central star obvious · Haze responds to OIII, 14 mm. Haze is somewhat irregular.

M52 Nice

Faint 7635 ref. - very faint haze around star - Very faint

Obs Neptune and Uranus. Nice to see again. Distinct disk to Uranus & also with Neptune

555P Thursday Aug 5/05

Looks like a great night! Again!

Bought 2" OIII by Televue from Science Shop (Lindsey) Today.

An aurora came up and this dominated things for a while but it declined by ~ 1 AM. A strange Aurora 'line' or 'band' ... like a big jet trail, straight, horizon to horizon passing near zenith ~ E-W. Strange thing. Quite steady for 10-15 min and then some 'curtain' phenomena appeared in eastern half & it faded over ~ 90 min or so.

PEGASUS

I spent most of the morning in pegasus following the 'Small Wonders' ideas of Tom Trusock. Very nice. I spent 1.5 hrs on Stephan's Quintet in Two sessions

NGC 7479: Similar to that described by T.T. but I could see the arms at all, just the bar.

NGC 7814 + NGC 14: 7814 is an elongated fluff and 14 is just a soft haze

Pegasus I Galaxy Cluster NGC 7619 + 7620.

~ 250 million l-yr distant. NGC 7619+7620 are easy.

Referring to the photo in TT's article I could find 5 or 6 of the 6 in the image + a soft one - largish off the r.h.s. of the inverted picture.

Stephan's Quintet

I followed the chart in TT article. I was confused about the image scale + the correct star hop. Over 1 hr was spent on this. Using the 10mm, and looking for at least 20 min I could see 3 smudge lepper on at 45° with respect to the second lower one + 45° with ie the line between them. Haze seemed to pop in and out in various places. Some 'stars' were involved, but they may be G Lovers. Very challenging object + I must revisit. I made a drawing.

M15: Very nice

M51: Had a look at the whirlpool, but conditions in the NW were not good. Suggestion of spiral + some stars on main spiral but I've seen it much better in Dennis Boucher's scope at Blackforst.

On the NGC forest, I looked at #7027 PN + PN 6826 - Blinking planetary in Cyg. Could not see the N. Am. nebula. Could not find PN 7026 in Cyg - diff star hop.

SSSP Friday Aug 6/05

Obs e-Gal of And 147 + 185 | Soft smudges only | I've seen three better
Also 891 - barely visible | poor sky. | at Blackfoot
7009 Saturnb. suggestion of elliptical shape. | | when the 80
- Showed visitors a variety of M 27, 13, 22 etc.

The dreaded aurora came up again as it did the night before. Again there was this horizon to horizon thing and that went near the zenith. This time however the whole sky became soft. Too bad.

Obs ~~or~~ re-obs a number of the NGC Finest PN + GC etc that were low to the southern horizon.

Had a look at the viel with my new 2" OIII filter on the 30 mm Pentax. Nice.

Mars — I looked again, as I always do, at Mars before going to bed. Seeing not good due to low altitude. Phase is there ~ 3/4 Cit. South polar cap is nice + white + below the SPC some vague dark areas. Also looked at x 320 using Tak 4" on G-11 Mount.

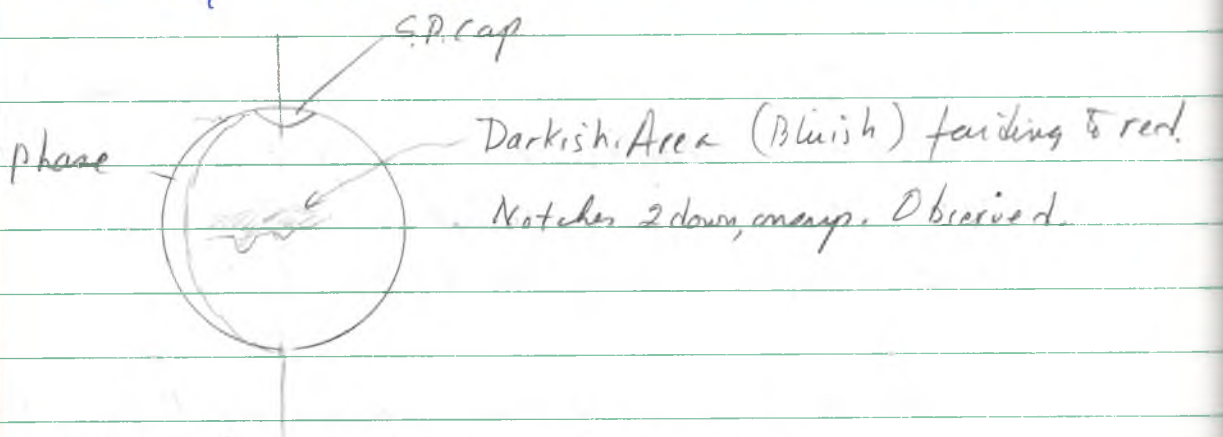
Tim H. + Roz — Had a look at double cluster using 35 Panard 22 Naglor with Tim's GE Mounted Televue 85. Nice set up but $$$.

Good staff party. Hot during the day, but long underware + tee was enough at night. Must take something with hood next time. Too bad about Aurora. Usually don't have much at the SSSP.

Mars

122

~~Sunday~~ Monday 19 Sept 0200 hrs - 0230 hrs



① Mars had less 'phase' than at 1550
② " was larger in diameter "
③ S.P. Cap smaller

I set up 8" scope in backyard and got up at ~0200 hrs and obs Mars for a 20 min with 5 mm. eyepiece. Seeing was lousy, but some obs were made. Seeing ~ 2/5

Sept 20 Again obs Mars + Moon, but I didn't stay up very late. Too tired. Seeing 2/5 at best.

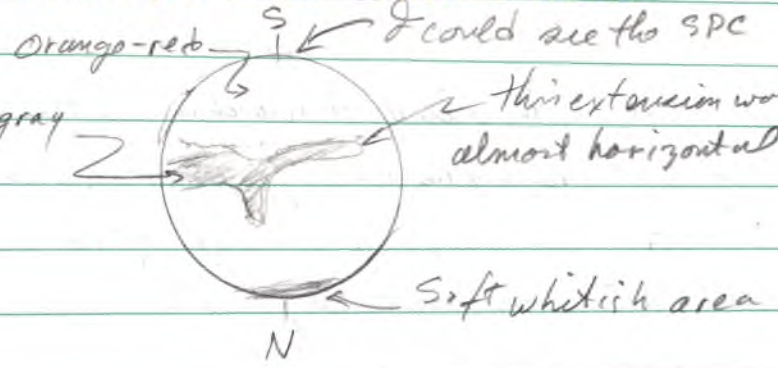
Oct 22/05 Collection. I have been obs. Mars quite a bit lately, but the seeing has been terrible + I haven't made any notes. On Sat Oct 22 I set up in Gina's yard 8" f/6 platform and the seeing was so bad that the double/triple star in Gemini (Pollux?) was an elongated line - like structure using the 5 mm. On occasion however, some detail could be seen on Mars. Close to opp. now

24/05 Edmonton - Monday, after next act ~ midnight. Seeing was so bad that Mars was a featureless smear. Looked at waxing moon

and the seeing was awful. Wind from South and quite warm (+~8°C) for this time of the year.

Sunday Oct 30/05 Edmonton 8" f/6 MARS

Set up the scope again. Seeing the best it has been in ages and it was still terrible ~ 4÷5° wiggle at least. Nevertheless in moments at 240 x some detail could be seen



Nov 2/05 Mars @ 240x ~11PM MST.
Edmonton

Near opp.

seeing slightly better than above. Note time change on Sat.

Nov 13/05

124

Sunday Edmonton 8" f/6 - Tracking platform.

Moon: I had one of my most satisfying evening viewing the moon since I started. The seeing, at times, was better than say the last 10 Times I have setup my 'scope. Moon was approaching full, but much detail was visible at the termnidor line

Plato: I could 'just' see 4 white spots on the surface of Plato.

Aristarchus: I think the view of Aristarchus was the best I have ever had. The 'square' shape of the underlying material was clear. And the Vallis Schroter was very well outlined by the angle of illumination. The crater Aris. was bright compared to Herodotus. Many minor craters and other ditches were visible

Isabel Williamson Lunar Observing Program

I started this new Obs. Pro.

#130 Obs Mons Rümker. I had trouble finding it because it was so large! The diamond-shaped depression was easily seen. It is slightly 'darker' than the rest of the mountain mass.

*129 Obs: Wargentin, Nasmyth, Phocylides + Schickard

Wargentin is a filled crater and the ill. was such that the wrinkle whichgoes the length of the crater was very obvious. Major contrast with N + P

127 Schickard is quite interesting. Dark + light areas with

more craters on the big dark area at one end.

#131 Obs Reiner Gamma – strange whitish complex area.
" Galilaei crater

#126 Marius + the hills: WOW! The ill. was such that there was a shadow for each mound or hill. Lots of them ... 40? I didn't count

---

Nov 24+28/05 8" f/6 Edmonton.

Juno I obs the asteroid Juno on 24+28 Nov. It is near the belt of Orion. Quite easy to find. I used charts from Guide 8.
Vesta is in Gemini, but I would have to stay up past midnight for it to swing in to a good position for viewing.

Pentax 7mmXW: Very nice eyepiece. I really like it.

Mars: Obs mars every opportunity, but the seeing it never very good ... sigh! At 10 PM or so it crosses the meridian and is as high as it gets.

Dec 11/05 8" f/6 Edmonton Sunday evening

I took the 8" to Colinton for the weekend, but it was cloudy both nights. Temp climbed to +11 at ~ 4 pm on Saturday. We were visiting Paula Evans. Amazing temps. Melted ~ all the snow.

From backyard I obs Mars and the Moon. By ~ 11 pm

Mars + Moon — mars was < 1 moon diameter below the moon. I could see some of the usual features on mars. Used Tm Penbar eyepiece and this is becoming my favourite. (like Nov 2 drawing but with some 'phase')

Moon — I spent 1½ hrs on the Moon. I used the Moon Quadrant maps and also noted a number of features mentioned in the RASC Lunar Observing booklet. Good booklet. Seeing at times was fairly good and in fact much detail was visible as the Terminator was favourably positioned.

Juno + Vesta — Spotted both asteroids + marked positions on the Guide 8 charts.

January 4/2006. 8" f/6 Edmonton.

I've had the scope out the last 3 nights obs asteroids + double stars. Tonight some doubles in Auriga, last night doubles in Taurus.

Asteroid	Dates of observation		
Vesta (in Gemini)	Dec 6, Dec 11, 4 Jan		
Juno (Orion)	24 Nov	Dec 6	Jan 2
	28 Nov	Dec 11	" 3
		Dec 16	" 4

Vesta is difficult to find in town because of the difficulty in finding 'naked-eye' stars. Time I'll be doing by finding π^6 + π^5 in Orion but there doesn't seem to be an easy way to get started near δ Gem.

The sky has been overcast most nights for some time now. Very mild winter makes for humid condition + lots of haze.

Saturn: Had a look at saturn tonight (poor seeing) and last night (much better seeing). Always great.

Mars: Haven't looked much at mars lately unless seeing is good.

Venus: Set up the Stellavue in Colniston before Xmas Dec 21 or 22 in Gina's backyard. Nice crescent. Mrs Smillie had a look also.

Lots of blue fringe on venus with 7 mm. & 480 focal length
On Mars, still some colour but much feister than on Venus

Jan 7/06 Moon. 8" 8/6 Edmonton.

The clutch cable jammed on my van & I could not go to Colniston. Fixed-replaced-cable Saturday with the assistance of J.M. Spent the evening obs. Moon from backyard. Used the 7 mm XW eyepiece - great eyepiece - and only looked at the Moon (1½ hrs) & briefly at Mars (close to moon in n Taurus — very well positioned.

Mars is now starting to show some 'phase' but surface markings were visible, but not well. Oddly, when cloud was somewhat obscuring Mars I think I had the best view...? The glare is reduced and this seems to make things better.

Moon Great night obs. Moon! One of the best. Moon was half lit and the Ter. line was near the straight wall

Birt E The 'rima Birt' was visible but not that clear, but the 'E' obj at the N end - looks like a 'volcanic' mound with a crack through it - was very clear. I think the light was just right.

Straight Wall Looked great! Like a great tunnel.

Archimedes, Aristotle, Autolycus + Cassini. Wonderful! Great contrast in the various features of these craters. The long valley Alpes and surrounding mts's - wonderful contrast. The smoothness the floor of Arch contrasts with Cassini and the 'splatter' around Aristotle and its '4' bumps central peak.

Apollo 15 Landing Site: I could follow Rima Hadley through much of its length as shown in Rukl 22. Crater 'C' easily visible + N-S section visible + E-W to the W of 'C' visible, but joining section I think was near the Ter. line.

Wonderful mountains with shadows etc. Great to look at!

Lots of cloud during the evening + that ended the obs. Session. Fairly good seeing + Moon very well positioned. Great Night!

I've been using the 'Williamson' book observing programme from the RASC in recent months & I think it's a very instructive guide to Lunar features. Good purchase!

Jan 9+10/06 Backyard 8"/f/6 Edm.

Obs moon both nights. Little else. Seeing was poor, but nevertheless I went thru a number of features pointed out in the RASC lunar program. I'm slowly becoming more familiar with the moon, and I suspect the soon it will become less an adventure or struggle of discovery and more where I'll just relax and look at it but in old favourites.

Did a bit more double star obs one of those nights. It is diff. to find things from the city due to lacky stars from light pollution. Quite the contrast to the SSSP, where, this summer I 'got lost' trying to star-hop in an area of the Milky Way looking for a PN.

Feb 6/06 Backyard 8"f/6 Moon Edmonton
Mon pm.

Jobs for ~45 min took a break and then obs for 45 m. Very satisfying evening of observing the moon. Lately I've been going thru the I.W. RASC List of notable features on the moon. I did a little bit of this at the end, but I spent most of the time just looking at the moon. Seeing was good at times. But I've had when obs the moon. Used 7 mm for a while then switched to 5 mm. One of the most enjoyable sessions I have

ever had obs. the moon.

Rima Hadley: The terminator was quite far away as it was 1/4 moon, but Rima Hadley and that small crater could be clearly and easily seen. Very nice.

Much detail could be seen in many craters

Dionysius: #93 in Charles Wood's Lunar 100. Dark rays. I don't know. There is a light halo surrounding the crater. Off centre. Big ~ the size of the crater Crater edges are very bright - typical of "recent" impacts. There are 'dark' rays going away radially from the crater, but to me it could have been bright material on a dark surface. I don't know. p. 58 of S&T Feb 2006 shows a spacecraft image which indicated dark rays but at the eyepiece this was not clear to me.

Rima Hyginus: Very nice. A series (~ 6 - 8 ?) of 'sink-holes' or pits could be seen on L. r.H. side of the ditch going away from the central small crater. Clearer than #34 Rükl

Clavius: Glorious! The sun was rising & over ~2-3 hours exposed the crater floor. Just wonderful! Very Black & White. Like a drawing by Harold Hill. The best I have ever seen Clavius. Wonderful shadows & bright areas. Very contrasty

Rima Ritt: Dark area surrounding pit at end of ditch very clear Labeled 'E'

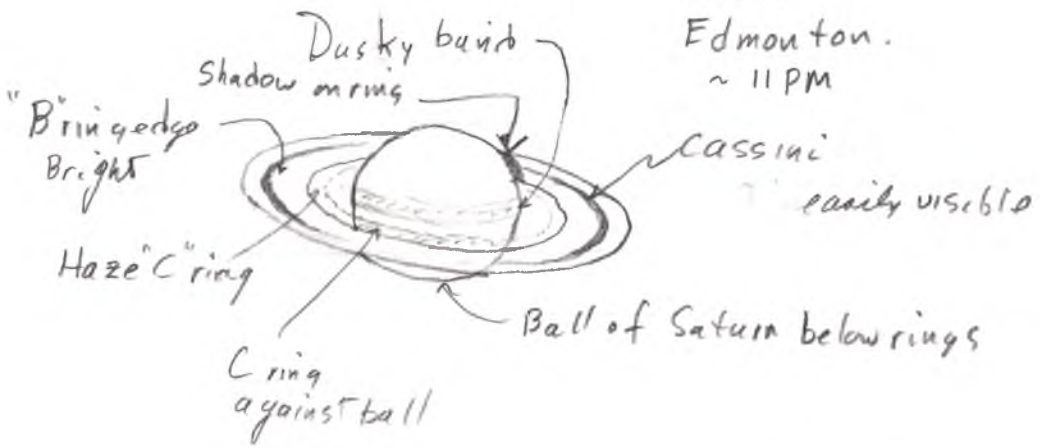
Arzachel: A bright line. L. LH side on floor of crater was very clear

Eratosthenes + Stadius: The 'spray' around 'E' was very clear and the small craters in & around 'S' were also clear. Copernicus was in darkness.

~8 Feb/06 — Nature of the date, but π Kies was visible and the 'darkpit' on the top of this mound was clear. The angle of the sun was just right. Seeing ~~xxxx~~ 3/5 say.

π Kies

Feb 16/06. Saturn Backyard 8" f/6 5mm



Spent an hour or so obs. Saturn. Temp ~ -25°C range Gina was in bed. Quite a bit of detail was visible at times. The

Cassini division was easily seen as was all of the features labeled in the figure. Quite a few 'moons' were visible, but since the planet was near M44 who knows what was what...

Very nice image at the eyepiece. I wore my mars outfit as was quite comfortable.

Feb 25/06
Saturday

Coleiton Cemetery 16"

The evening started out fairly clear with 50-50 seeing. 4+ stars in Trapezium with 30mm, and Cassini's Div was partially visible with 17mm.

After an hour some rather flaky Aurora appeared in the N.W. and then suddenly, this cloud appeared obscuring everything, then 'clear' for ½ hr + then it clouded over for good. I wacked around for an hour + then went home

T = -24C at bina, Time 17:45

New

NGC 1971 (Jewel list) See notes in Tables

" 1907 OC — " —

NGC 2261 (Hubble's variable nebula) — " —

" 2264 Cone Nebula Near 2261. Interesting very diff from photos, but you can sort of get the idea.

NGC 2371/2 PN in Gem. Obs again. As before but sky not as good this time.

A good night in many ways. Too bad about cloud. Sigh! Nice to set up the 16" under dark skies ... actually just nice to be under dark skies.

Wed Mar 8/06 8" from Backyard in Edmonton

Obs morn + Saturn for a while but cloud was bad. Cur in fairly good seeing, then cloud, then poor seeing ... → fairly good (3/5) seeing, then cloud + repeat. Nothing new really just by the time I fumbled with Rikk the cloud would come back.

Wednesday
23 August
2006

Cypress Hills Provincial Park
SSSP

Well, I turned 60 a few days ago. I guess that is a milestone. I don't feel old, but turning 60 somehow makes me feel old in the mental sense. Physically I'm OK, but I must say that I am concerned about health issues given my age.

Warm day, ~30°C at ~6:30 pm. Partially cloudy. Swift Current radio (770 AM) suggests showers overnight + tomorrow AM, with a high tomorrow of +19°C.

Paul + Sheryl Campbell
Donna-lee May
Dan Hube + Joan are here so far.

I set up the 16", but I'm not very optimistic about this evenings viewing .... but then time will tell.

I went for a short walk this evening and saw several deer. 2 adults + young. Light brown in colour. Later an add'n deer - gray and a bit bigger. The highlight however was the moose with full rack. Must talk the moose tomorrow!

Thursday Evening

The full crowd is now at the field. Met lots of people from Edmonton Roy ..., Tein ... Harris + Karen Christen, Paul + Sheny Campbell. Greg + Linsey set up their shop next door to me last night.

Hot dog roast at "Auditorium" at 5 pm. Put 2 pics of Aurora up at Wapiti Rm.

Observing Thursday night was quite good ... actually very good Only at ~ 1:30 - 2 AM did cloud appear around much of the horizon. I went to bed and set alarm, but in AM it appears that alarm battery died. I got up near dawn and things looked good, but I went back to bed. Friday AM (now) looks very good, sunny, not too warm yet.

Photography: I carried the Elan II with the 70-200 zoom lens for most of the day hoping to see the moose again. I did but it was late in the day + a diff. male moose!

I took 10-20 frames (colour-neg) of various woodland scenes attempting to get an artsie-type picture. I don't think I did, but we'll see later. Used monopod (new)

After the weenie-roast I took the tripod and the F-1 with 50 mm lens. Something is wrong with the F-1. It must have moisture / salts inside from when I dropped it into the hot springs at Mist Mtn. The light meter.

bowmen all over the place. I plan to take the camera support and clean all the circuits etc. Should be fun. I took quite a number of frames (Provia 100F), typically 1/8, 1/4, 1/2 sec at ~f/11 or f/16 of dead cow bush or whatever it is called. Will see what we have later.

~~Obser~~. Astrophotos:

I took ~15 frames on Provia 400F with the 24 mm lens at f/2.5 with the assembley on the tripod on the tracking platform. I forgot to even crudely align the platform! Stupid! Exposures from 10 sec to 2 min.

Observing: Wednesday I had a look at Jupiter and also tonight. Moons are moving. Obs M92, M13 and the G near M13 with the 14 mm eyepiece. Also $\delta^{(2)}$-Del - cute double. Clouds then came in and ended observing.

Thursday I spent some time with the Viel neb. and the 2" on the 30 mm XW. Very nice. Also the OC, NGC 6940. Very large and I think it had a bright - reddish - star at the centre.

NGC 6940

I spent most of the evening in Oph. looking mainly at GC.

Obs M107 than 6517 | smudges
M10 6539
M12 I 1276 smudge
6366 - smudge
M14

The 'smudge' GC were mainly threshold objects in the 14 mm.

PN 6309 This object is near the bottom of Oph. and is rather unusual. I don't know what to make of it. It responds to the OIII filter in the 14 mm, but instead of being round it is elongated with a star at one end

I don't know if the faint star is part of this object or not.

PN6572 PN 6572 is in upper Oph. ~15" across and blue-green according to Sue French. About right. Nice and round and I could see the colour using the 14mm + I'd say more blue than green.

G1 G1 is a GC associated with M31. Tom Trusock describes it in one of his "small wonders" articles. I was able to star-hop to the object - fairly easily - despite the charts provided by TT. For some reason .. he says "... to aid star hopping at the eyepiece ..." he flipped the last chart - the detailed one - left to right. This makes the star-hop more difficult that it should be. I have no idea what Mr. T. was thinking - Anyway I eventually got to the 'triangle' of stars and the G1 'star' appears somewhat out of focus compared to the other two. One of the other stars appears to have something else (another star?) near it. Must check better charts as I think Tom T. has described this object.

Stellarvue 80 mm I set up the Stellarvue 80 mm achromat last night. I'm beginning to like this scope. Used 24 mm Pan and 10.5 mm Pentax. Slight colour on Jupiter with the 10.5 mm. Also it is very nice and it works very well on large objects ... which is what it is designed for.

Friday Night
Aug 25, 26, 2006. WOW! What a night. Sky was as good as I have ever seen it. Many others thought the same. I went to bed at 4:10 AM. Spent ~1hr observing naked-eye. So many stars it was difficult at times to find the constellations.

Winnipeg
John
Margaret
Allison

Early in the evening, some native people chanted and this really set the atmosphere for the entire evening.

I put a chart (white) face down on the table and held my hand above it and you could see the shadow of my hand due to the Milky Way. Hand 2" to 8" above chart.

North American Nebula. Late in the evening (~ 3 AM) I decided to try for the NA nebula. I have never seen it by eye before. Got all the charts etc. In the 16" with 30mm nothing really, but in the 11x80 finder the outline of the "Gulf of Mexico" was clear. 'Florida' could also be seen. Huge object - It goes on faintly for ... who knows. In the Stellarvue at x20 as above, but the lower magnification was better. In the 8x50 it was unclear, but this finder is not the best.

Stephans Quintet When the great square was well placed ~ 1 or 2 AM I decided to have another go at Stephan's Quintet. Tried last year. Used the charts from Tom Trusock's articles + the Guide-8 charts with DSS images that I generated. Could not have done it without the DSS images. 14 MM eyepiece. [Much back and forth between charts and eyepiece]

7317 had a faint glow around it.

7320 and the double 6 had a glow around them. The double 6 could be seen with direct vision most of the time, but the glow was best with averted vision. The fifth glow + core could also be

'easily' seen.

Much trickier was IC 1706. Going back and forth between the photo images & the eyepiece I convinced myself that I could see the core ~ half the time using averted vision.

Pleiades — I looked at M45 using the Stellarvue at x20 and I convinced myself that I could see a 'glow' around these stars.

M33 — Late, just before bed, I looked in Tri with 7x50 binos and found M33. I could not see it naked-eye although I'm sure that it was close to being visible.

NGC Finest — Did a whole bunch of objects on the NGC Finest list including some 'large' objects, which were rather easy given the sky. I made notes in the NGC finest catalogue and I'll not repeat them here.

M31 — Best view ever of M31! Late at night when M31 was high in the sky. Used 30mm x w.

NGC 604 was easily visible. I had not seen it before.

The main bar went on 'forever'. Several widths of the eyepiece.

Two dust lanes were easily visible and structure - irregularities, etc - were visible in both dust lanes. Previously I had only observed the dust lanes and the second one was always less than clear. What a difference very good skys can make!

To-ground stars were sharp points of light easily distinguished from M31.

Saturday August 26-27, 2006 SSSP

Pegasus Pegasus Last night I looked for the second time at this G cluster.
Galaxy Cluster T^2 describes it and has a photo. A number of G's are visible but as one moves to the fainter/smaller objects, it is not clear from the photo or at the eyepiece what distinguishes a faint star from a G.

Saturday Aug 26-27, 2006 SSSP

The evening started rather poorly with cloud with thodd star shining thru + a clear band in the west. I laid down in the tent for a couple of hours - to digest the banquet - and when I got up things had cleared. The sky was a bit soft, but still fairly good. I attempted some thing in Sag. but too much cloud.

NGC Finest: I decided to look at some members of NGC Finest that would be OK given the sky, so I looked at OC in Cas.

IC 289: The description in the NGC Finest list is not very good. The size must be photographic. NSOG says it is ~ the size of Jupiter $m_v = 13.3$; ~34"

NGC 246: The description in 'Finest' has ~~the~~ an error. 246 + the bal 25 are reversed. NSOG has it correct

March 15/07 Backyard Edmonton 8" f/6

Venus: I had a look at Venus in the W thru many clouds Venus was 2/3 - 3/4 lit in the Gibbous phase. I don't think I had seen it this way before.

The ball was ~ the size of Saturn or perhaps somewhat larger.

Venus

A terrible winter for observing. Very overcast. I had a couple of night obs. moon from Edmonton, but I haven't set up the 16" since August 555D

March 25 & 26/07 Backyard, Edmonton, 8" f/6.

Obs. Moon for ~ 1.5 hrs each night. Very well placed, just after half-lit in early evening near meridian in ~ Gemini or so.

Noted a number of features which I indicated in the Williamson Lunar book of the RASC. Wonderful view of the straight wall on 03/26/07 !

Also had a look at Saturn (best seeing on 03/25/07) & Venus (Blue-red chroma)

It has been very rare to have any clear nights this season and for two in succession a miracle.

Aug 9, 10, 11 SSSP.

① I got my 10 year certificate for attendance at the SSSP
② Gina came and had a good time since there were lots of astronomy "geeks" and Gina likes to socialize with "geeks".
③ The weather was the worse that it has ever been at an SSSP.

Highlights: ISS went over on the evening of 9 and ~ 25° behind it was another ~equally bright object which was the space shuttle.

Two of the evenings it clouded over soon after dark and the third it was OK to ~ midnight then cloud and blasts of wind.

The wind was so bad that we went to Medicine Hat on Sunday whereas the plan had been to stay a 4th night and observe the Perseid meteor shower. Sigh!

Aug 27/07 Kananaskis ... Total Eclipse of the Moon.

We (Ken, Don + me) were camped at Etherington creek. Monday pm. In drizzle and overcast conditions. I got up at 3 a.m. AM to have a pee and by a miracle, it had cleared and totality was only ~15 minutes away.

I woke up the boys and we all observed the total eclipse. Nice orange-red colour to the moon.

Wonderful!

Nov 8/07

Comet 17P/Holmes

6:30pm mon The above comet had a major outburst on 24 Oct 07. It went from $m_v \sim 15$ to $m_v \sim 2.5$ in <1 day. Discovered by E. Holmes on 6 Nov 1892.

I observed it this evening from backyard in Edmonton. First clear night since I was aware of the announcement.

Naked eye: Soft, not sharp star in Perseus

7x50 binoculars: Immediately observed. Round, brighter toward the centre, obvious. No tail

8" f/6 with 24mm panoptic. Brighter diffuse inner circular area surrounded by fainter, but obvious outer ~ circular area. After it rose up higher ~ 8 PM, I could see unresolved vision a nucleus. A faint star was just right of the sharply-defined right edge of coma.

Left (comet side of object was seemingly less well defined and more extended. Seeing ~ 20'-30' or so.

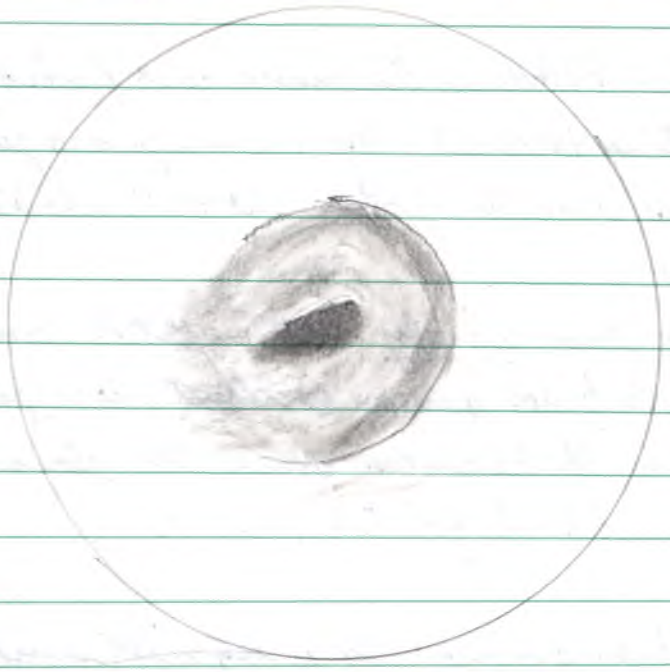
Sky is still not good.

10 PM ~ completely overcast.

I took the 8" to Calmbon hoping to see the comet under dark skies, but both Fri + Sat - evening were overcast!

Nov 13/07 8" f/6 Backyard, Edmonton 24mm Pan.

~ 9:30pm



① Comet filled ~ 1/3 of the width of the 24mm Pan eyepiece
② Leading edge (right in eyepiece) was sharp while trailing edge was v. soft.
③ Leading edge was followed a semi-circle of bright material and then a darker annular area inside that.
④ There was in the centre the brightest area, which appeared to be elongated to the 'back'

— I was only able to obs for ~ <1 min and clouds came in. Sigh! Several stars were visible through the comet structure.

— Also the position of the comet appears to have changed since last Thursday and the object is closer to ζ Perseus.

— There was an image 300 mm f/4 canon lens DSLR 1 min exp presented at the RASC meeting on Monday and what I saw was very close.

Nov 19/07
8:30pm

8" f/6 . Backyard . Edmonton

Comet 17P/Holmes has moved and faded — quite a bit. It was diff. to see the comet. Moon was up and just past ½ lit. Comet is now close to α-Per., but that is about all that can be said.

Before I was easily able to spot the comet in the finder. Indeed 7×50 binos gave an excellent view, perhaps more pleasing than the 25 mm Pan since the glowing ball of the C. contrasted with the points of the stars.

It has been overcast for many night since Nov 13 and most nights this month.

I also looked at the moon with the 5 mm radian. I didn't identify much as I was really into the Comet.

Mars is not far enough about the horizon for good viewing yet.

Nov 29/07

Comet 17P/Holmes Backyard, Edmonton

9 pm

Obs. comet with 7×50 Binos. It appears fainter / larger than before and has moved a fair bit. Perhaps ½ a bino field from α Per. to the right (South) whereas before (or latest obs.) it was V. close but Left of α Per.

Did not set up scope. Moon not up. Transparency — not good but the best in many days.

April 8/08 8" f/6 · Backyard · Edmonton.

Moon The thin crescent moon was going thru the Pleadies. In the finder the P. pattern around the moon could easily be seen. Apparent this was best observed from Eastern Canada.

Mare Crisium Obs a number of features in and about Mare Crisium which was favourably illiminated

Petavius Quite the crater. Big central peak and very prom. rille Lots of detail was easily seen. Quite good seeing for a change

Mars Had a look at Mars. It is quite small now and about two thirds lit

Saturn Saturn looked great. The rings are ~~edgy~~ approaching edge on. Cassini's division could still be seen, but only at the ~~outer edge~~ extreme extension of the ring. The shadow of the rings on the globe was prominent.

March 5/09 8" f/6 Backyard · Edmonton

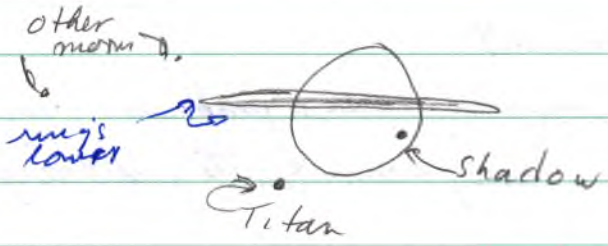
Had a look at the moon for 20 min or so -16°C. Didn't obs. anything new, just used 7mm Pentax & observe some old favourites. Seeing not bad!. Try again in a couple of nights

Photos of Conjunction of crescent moon + Venus taken from Feb 27/09 front of house · Good shots

April 28/09 Titan Shawdow on Saturn

April 29/09 0:22 ShI Titan on Saturn

8" f/6, back yard in Edmonton



Best observation was at ~ 1:15 AM 29 April '09. By this Time the shawdow of Titan had moved clearly on to the disk of saturn. At ~ 12:40 it was sort of there, but not clearly. Later it was clearly observed - 5 mm radian eyepiece x240.

The rings were very slightly Tilted -- almost edge on. Seeing was so-so, but the shadow was held with direct vision.

It will occur again in ~15 years. I wonder if I'll be around & make the observation again

NB: Much like similar transits on Jupiter does unique since it was on Saturn. I tried a couple weeks before, but it was overcast. Little detail visible on ball of Saturn.

18 Jan 2010 Backyard . 8" f/6.

~10pm - 11pm MARS : First 'clear' night in ~30 days or so. Mars is coming into opposition on 29 Jan.

Obs: at 240x, I 'think' I could see the N polar cap with a darkish ring around. Also a smaller bright area at the S polo ? Also some vague additional dark 'streaks' and areas on Mars. Seeing was mediocre...

Next Day: Overcast - as usual. I have N and S reversed in the above note. After consulting with Sky+Tel, the N pole is Tilted towards + the side of Mars that faced Earth is consistant with what I observed.

26 Jan 2010 MARS: Obs Mars at 240x, but the seeing was not as good as it was on the 18th. And the 18th was only average. I went out every hr. or so 9, 10, 11 .. pm, but things didn't improve..

27 Jan 2010 MARS. Again! T = -16°C. Trans. - So - So.

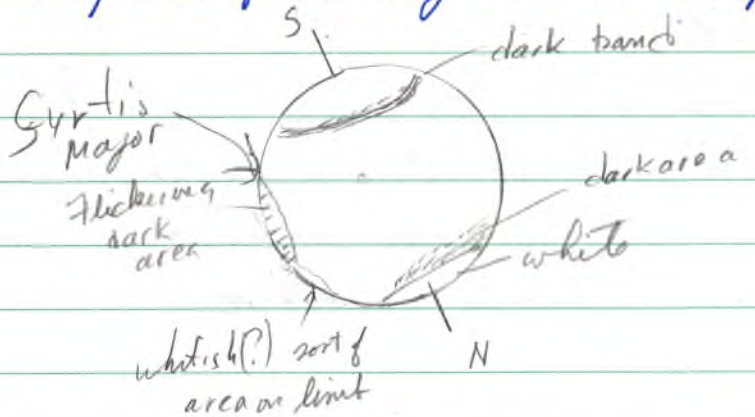
Bum scope fans for Thorn + 8" f/6.

Obs Mars at 9, 10 and 11pm @ 240x. Seeing was awful, terrible + v poor in that ordered time. Near full moon.

I could just barely obs the S polar cap - tilted towards earth, but little else. ... Disappointing.

10Feb 2010 Edmonton Backyard 8" f/6 Mars 240x

Seeing the best of the 4 nights I have set up the scope



Saturday March 6, 2010 Coliseum Cemetary. 16"

Very first time to set up the "new" 16". Set-up was easy, as expected. Aligning the finders was again. The optics were not aligned so at X70, bright objects had variable flairs at and at X140 ... wow.

I think the central inserts that support the primary mirror are acting up. I loosened the truss assembly and gave it a good shake and nothing changed ... which is good ...

Looked at a number of classic objects - M42, M? in Canis and OC (faint) next to it. Classic G in the tail end of Leo.

Saturn has the rings close to edge on, but when I tried X140 on Saturn & Mars all kinds of problems.

An Aurora slowly crept up from the E NNE as an arc initially and then briefly as a shimmering curtain. Sky was soft foam haze and A. Packed it in after ~ 1-5 to 2 hrs. Main thing was that the

1st Field Set-up of new 16" scope

new scope was convenient to set-up. and put back into the van.

Now the collimation in

March 15/2010 Blackfoot 16"

I took the new 16" to Blackfoot and set it up. Set-up OK. Sky was v. poor. Thin cloud and haze

Clear Dark Skies predicted better conditions

I left after 30-40 minutes as there was no sign of improvement. No better when I got home.

March 31/2010 Street near home in Edmonton

8:50pm Venus and Mercury

Venus + Mercury were 3-4° apart almost due West at sunset. Cloud was a problem

First I could see only Venus. Then below and to the right only Mercury.

Finally I could see both planets for a couple minutes, but then cloud came in again.

Must try for a photo tomorrow night.

30 Sept 2010 — Jupiter + Uranus

8" f/6 backyard Edmonton.

Obs. Jupiter for the first time in ages. The S eq. belt (dark) is ~gone as has been reported.

Also the planet Uranus was close ~1.5° from Jupiter in the sky so it was v. easy to find. Resolved to blue-green disk at x240 in the city

---

Nov 3/10 — Jupiter + Uranus — Backyard.

Had a look at Jupiter + Uranus in the 8" with the 5 mm. Seeing so-so, and then clouds moved in.

Uranus & Jupiter are considerably further apart than on 30 Sept. ... perhaps ~5° or so.

U. greenish fuzzy disk. Jupiter has only the one EB these days. Other surface detail not very clear. Moons in curious position.

Beaver Lake: Obs. J+U from Wally Peter's backyard at Mono Club Meeting. Bad light pollution etc., but similar to 30 Sept.

---

mid April 2011 — Saturn + δ-Virgo — 8" f/6 - backyard Edmonton

Set up in the backyard & have a look at the above two objects. The seeing was excellent - for the backyard.

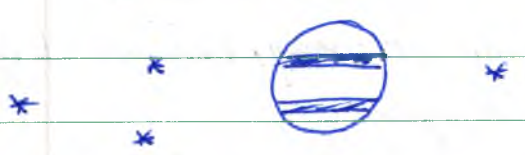
γ-Virgo was easily split. According to S+T April 2011 p. 56f the separation was 1.7". Easily split. Nothing like good seeing (x240)

Saturn: I had a look at Saturn which was near by, but the moon - near full - was also near by and only Titan +/- one other moon were visible.

Spot on Saturn: There was a bright, elongated area on the N (?) hemisphere of Saturn. I didn't know what to make of it. Recently noted on the S+T web site that there has been some sort of 'storm' on Saturn. Unusual, as surface markings on Saturn are usually much fainter and of lower contrast than those on Jupiter.

May 22, 2011

Nov 8/2011 Jupiter + Moon Edmonton 8" f/6.



Jupiter had two bands as usual as compared to my observations on the page opposite for Nov 3/2010. Strange planet.

I had a look at the moon. Almost full. It had been quite a while so it was nice to obs some old fav. features.

All obs at 240x Seeing not good.

January 31, 2012 — 8" f/6 Backyard. Edmonton

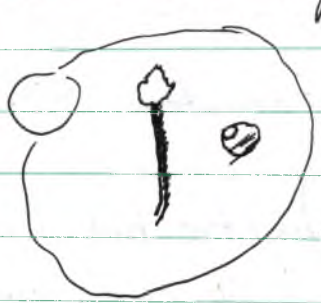
~7pm

The first clear evening in what seems like forever. I had a look at the Moon & Jupiter which were close to each other and near the top of the ecliptic.

Jan 31
Feb 2

Seeing was not good on Jupiter, I don't know if it was some trees or exhaust from the neighbours house.

The Moon was much better. Fairly good seeing at times. Moon about ½ lit. A feature called the straight wall (?) or "sword" was superbly illuminated



← crude drawing, but wonderful at the eyepiece

The sword feature really looks like that when the angle of the sun is just so, and this evening it was just so. I think this was the best view I have ever had of this feature. Lots of other nice stuff also.

Blind luck! What else? ...

Feb 6 I received the charts and determined that the object I obs. on 31 Jan. was the "Straight Wall".

It was quite spectacular on 31 Jan and was by far the highlight of the evening.

See Rükl: Chart #54

Feb 7/2012 8" f/6 Backyard Edmonton

~7 pm Venus: I had a look at Venus with the 8" just after sunset - Had to go out to 85 Ave. Obs at x120. Venus was a bit more than ½ lit.

Jupiter: Also at x120. The usual.

~10 pm Moon: Later when scope had cooled. Obs at x120 and x240. Almost full moon. Interesting at x120. The "big" rays and splatters from craters were fairly obvious and better because of the seals at x120 (10.5 mm Pentax)

Mars: Had a look at Mars (just rising) at x120 and x240 Red with yellow-white fringes due to atmospheric effects. The phase was more lit than Venus and of a similar angular size. Poor seeing. No surface features.

---

2 April 2012. 8" f/6 Edmonton

Moon & Mars. I used the Pentax 7mm eyepiece.

Nice eyepiece. Seeing was poor, so only suggestions of the polar cap & other features could be seen. Mars is just past opposition so it is more-or-less fully lit.

Moon was just past first-quarter and close to Mars in the sky. Venus & Jupiter in the west & later Saturn in the east. I spent some time obs. features on the Moon. I quite enjoy this. Packed it in early due to poor seeing.

Feb 9, 2014 Sunday evening. 8" f6, Edmonton. 5 mm Radian
X 240
+ 7 mm pentax

Obs shadow transit on Jupiter & straight wall on Moon

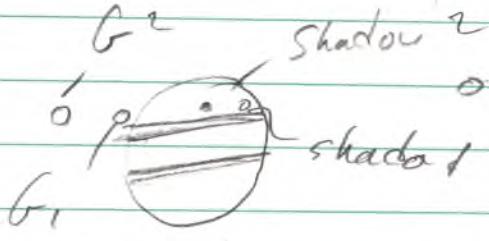
Jupiter looked different from Nov 3/2010. Then only 1 major Equatorial belt. This time two (as usual)

Good seeing – certainly for around here. Shadow on J was clear and steady at times. Jet black. I was impressed Shadow about 1.5 shadow diameters above EB and about ½ to ¾ in diameter of the width of the belt.

Temp = -23°C. High pressure system.

N.B: I'll bet the seeing was < 1", judging from seeing #2. Very good seeing

Moon: Straight wall was the first thing I saw in the eyepiece. Look just like a sword. Lots of detail on moon. I spent most of the time looking at detail on moon, little waves on the lava flows, strings of small craters from the splash from larger craters on the lava flows.



* star

I went out for a 2nd observing session but unfortunately the seeing condition had changed considerablely and for the worse. Shadow was still visible ② and have quite a bit as had the moon ①.

I tried to see the GRS but the seeing was to poor and I did not spot it during my first session.

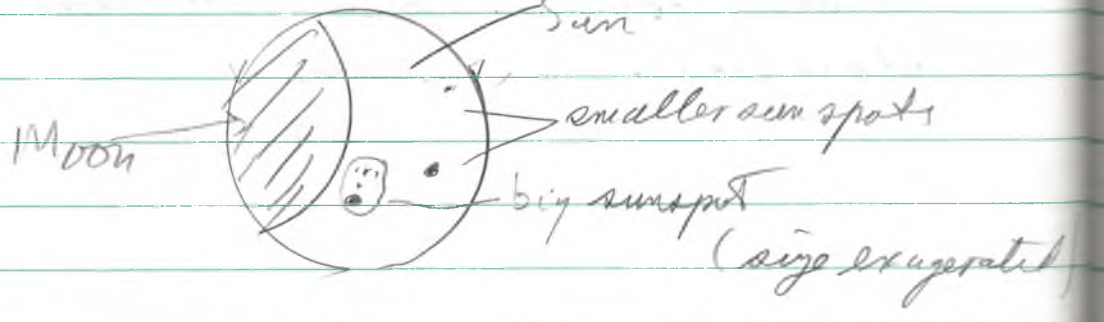
---

23 October 2014 — Partial Solar Eclipse.

Max. coverage was supposed to be at 4:02 pm Local time. I obs sun using 80mm. refrator - Stellaview - and special mylar solar filter that I made years to years ago. First time usage. Worked great.

I employed 24mm panoptic + 10mm pentax eyepieces I think the scope is f/6 so X20 with the panoptic.

Max coverage of sun was supposed to be 70% which seems right.



Like big sunspot was quite the sight. I don't think I've ever seen one near this size. Multiple dark spots which appeared to me to look like a bear's footprint

Three dark spots with one a bit larger underneath and then a great big black blob on the bottom. The whole was surrounded by the 'fried-egg' yoke which appeared to have a fairly well defined outer edge.

---

20 Dec 2014 Sunspots thru 8" telescope

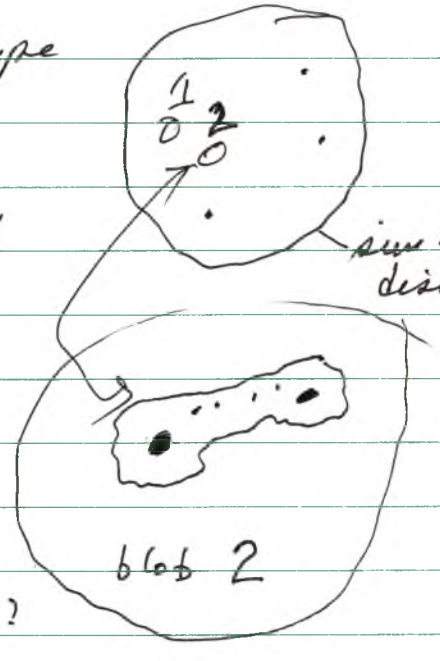
With the assistance of Marc Beauchemin, I fabricated a X1 aiming device for pointing the 'scope at the Sun. Today was its first test run and it worked very nicely!

I observed Safety 97th covering the aperature with the special solar filter that I had been planning to fabricate for several years.

I used the 25 mm penoptic + 10 mm pentax. The Starter f.l. eyepiece gives too much magnification and detail of the sunspots is less clear.

The seeing is v good in the 25 mm. eyepiece. At times, much turbulence on the edge of the sun. I suppose this is daytime heating of our atmosphere by the sun.

There were 3 or 4 small-type sunspots and two great big ones.



Blob #2 had much detail with at least 2 major dark spots in a 'fried egg' envelope plus several small spots in a row. Interesting.

Reminded of the big spot of 2305.

Perhaps this is the same spot having gone around the sun once or twice?

Who knows.

I must do more sunspot observing.

March 9/2016 Jupiter from backyard Edmonton

Obs Jupiter 8" f/6 10.2 mm. Moons in rather unusual pattern. Eq. Belts clearly visible. No GRS.
Seeing so-so and sky was soft with thin cloud.