1946 November 23 Watched partial eclipse of Sun from front yard on Sydenham Ave.

1957

MAY

2 1 Identified Arcturus in Bootes, Leo, Jupiter? In Virgo almost bisecting northern angle in Leo triangle.

2 Calculated Jupiters opposition time: March 17 approx. Denis and I calculated Parsec.

3 3 Rechecked calculations: Opposition time March 17. Positive that object is Jupiter. Night: Found Regulus, Sirius, Procyon, Pollux, Spica, Corvus, tail of Draco.

4 4 Saw Bootes clearly, Corona, Canes Venatici, Libra?

5 5 Located Capella, Vega, Deneb, Altair.

6 6 Observed my first double: Alcor & Mizar with Binoculars. Also looked at Moon with binoculars but saw nothing. Located Cygnus.

7 12 Observed Mizar/Alcor with binoculars. Alcor to North-East of Mizar. Can now see two stars without binoculars. Took 3 shots on Tri-X f/3.5. 1. Moon. 2. Moonlit clouds. 3. Jupiter through clouds. Last exposure about 2-3 minutes. Unable to resolve disk of Jupiter with binoculars. Lunar eclipse tomorrow at 5:32-6:52. Hope to observe after school. Sent for Edmund catalog on May 1. Has not yet arrived.

8 13 Moon rose too late for eclipse observation. Times given above are E.S.T. 2nd time incorrect. Totality 1hr.20min. I forgot times before and after totality.

9 17 Identified two stars of Libra. Tried to find Antares in Scorpius. Thought I had it but was wrong colour and did not fit properly in constellation. Then with binoculars discovered Antares was dimmer star to west. Therefore I believe that the first star is a planet. Only possible choice is Saturn.

10 20 Observed Corona Borealis with binoculars. Can see much more than with naked eye. No sign of catalog.

31 Catalog arrived this morning. Have decided on 4¼" reflector at $74.50.

JUNE

3 Sent for scope today. Also ordered simple lens kit and 'Fun with Optics'. Total: $76. Denis says rings of Saturn visible to naked eye at Bruno.

10 Sent for Unitron catalog today. No word from Edmund on scope.

11 11 Split Epsilon Lyrae into its two major components with 6x30s.

12 15 Identified Hercules, Cepheus, Serpens, Cassiopaea. Located Ring Nebula in Lyra. No sign of T

19 No sign of telescope yet.

13 26 Found head of Draco.

JULY

14 4 Telescope arrived this morning. Tested it this evening. Observe moon with all magnifications; Saturn with 90X; Epsilon Lyrae a Mixar-Alcor before sky clouded over. Only difficulties are that locking knobs don't lock and finder won't stay aligned. 40X eyepiece is excellent, Barlow lens works well, but 90X seems to be scratched. Mirror, mirror mount, and eyepiece holde are excellent.

1957

JULY (cont.)

19 6 Weir: Observed moon and identified Copernicus. I think I saw Titan to the south of Saturn. Identified Jupiter with two moons to the west, one to the east. Seeing: Fair to good but cloudy.

16 7 Montreal: On further observation I am relatively sure that I can see Titan. 90X seems to be best for Saturn. Observed Tycho and identified Plato and Alps on moon. Tried to split Antares, Epsilon Bootis, Vega without success. Split Zeta Lyrae easily. Split Beta Lyrae into two unidentified components. 270X is useless on 4¼" mirror. Seeing: Fair to Good.

17 16 Montreal: Split Beta Cygni (Albireo) with 40X. Located Ophiuchus, Sagittarius. Serpens Cauda, Aquila. Seeing: Good.

18 17 Montreal: Titan now to North-East of Saturn. Tried to split 11 Aquilae without success. Located M22? in Sagittarius; it appears as a hazy patch of dim light. Seeing: Good.

AUGUST

19 2 Montreal: 2nd Edmund order arrived today.
Weir: Tested 6mm Eyepiece. It is excellent. Split Mizar. Seeing: Good.

20 3 Weir: Observed Venus in gibbous state near sun. Jupiter now too close to sun for observation of moons. Saw Caucasus Mts. very well on moon with 6mm. Split Alpha Cassiopaea with 6mm (necessary because B is only 9th mag.). Failed to split Eta Cassiopaea for unknown reason. Seeing: Fair.

4 Weir: Designed post mount, 32mm cradle and 42mm eyepiece holder.

5 Montreal: Mounted 32mm in cell and laid out optical plan.

21 6 Montreal: Got Reynolds Wrap for tube covering. Planned tube lengths. Observed bright meteor to south-west at 8:18 P.M. E.D.T. Extremely bright with trail about ~~about~~ 5° long lasting for about 5 secs. No sound. Probably a Perseid but no stars visible to get direction.

22 10 Montreal: Observed meteors from 10 to 10:15 P.M. Saw two: Latter was at about 10:10 and very bright.

23 12 Montreal: Observed meteors from 10 to 10:30 P.M. Saw two: 1st in Scorpius from Saturn to Antares. 2nd from Albireo (Beta Cygni) to northern wing tip of Aquila. Identified Delphinus.

24 16 Weir: Discovered comet directly ~~south of~~ below Ursa Major. Observed with binoculars, finder, telescope. Shown best with finder but head clear with 40X.

25 19 Montreal: Identified Sagitta, Pegasus, Andromeda, Auriga, Pleiades with binoculars.

20 Montreal: Comet is 1957-D according to tonights star. (See clipping.) Mrkos

SEPTEMBER

26 17 Montreal: Identified Fomalhaut, M31 with binoculars.

27 18 Montreal: At 6 A.M. E.D.T. Identified Sirius, Rigel, Betelgeuse, Belt of Orion, Procyon.

28 19 Montreal: At 6 A.M. identified Sword of Orion, Gemini, Cancer.

29 30 Montreal: Photographed sun with H-8/36mm: f/22 at 64 fps.

30 P Photographed Moon with H-8/36mm: F/2.8 at 8, 16, 24, 32, 64 fps. Tested 30mm telescope. Performs well with 28mm but image is only fair with 12.5mm. Observed M31 with 40X. Appears as bright hazy patch of elliptical shape.

All entries Montreal unless otherwise noted in red.

1957

OCTOBER

3 Redesigned Weir post mount. Designed mounting for setting circles.

4 Painted parts of 30 mm. Russians announced launching of Space satellite.

31 5 'Flat' black paint has high surface gloss. Tonight I joined the Royal Astronomical Society of Canada for $2.50 (half year). Very impressed with their 6½" refractor with drive clock etc. They also have several other telescopes which they use on clear nights on field. Looked at moon through 6½" and, although sky was very hazy, image was very good. I will get my Observer's Handbook when I go next time as librarian was not there and Mr. DeKinder could not find a copy. Borrowed copies of July 'Sky and Telescope' and January-June 'Strolling Astronomer'. Also got copy of 'Skywards'.

6 Am interested in lunar charting as described in 'Skywards'. Comet 1957d is called Mrkos after discoverer.

32 12 Another comet sighted at Palomar in early morning. Looked at Gamma Andromedae, Perseus cluster, M31, Epsilon Lyrae, Albireo through 6½" refractor. Must look at Perseus and Andromeda with 4¼". Others appear same except that Epsilon Lyrae shows 4 stars. Joined I. G. Y. Aurora Program.

33 13 Weir: Observed aurora from 20:15 to 21:45 E.D.T. with 6 reports.

34 14 Weir: Observed sunspots with 2" image projected by 30 mm. 'scope with 28 mm. eyepiece. Counted 14 at 14:00 E.D.T.

19 Today I paid $2.50 more to carry me through to next October. I got my 'Sky and Telescope' Lunar Map and my blank lunar chart. I met a Mr. Lunn who is also a new member and who purchased a new model of my 4¼" reflector a week ago. This has chains on the legs and telescope tube bolted to cradle.

35 20 Observed what may have been Sputnik at 7:05 p.m. E.D.T. moving South towards horizon but it was probably a meteor. On 'Close Up', Willy Ley predicted that Russia will probably crash a rocket on the moon on November 7.

24 Attended annual meeting and was voted a member. Dr. Morris agrees with Ley's prediction because of lunar eclipse on Nov. 7.

36 26 Started lunar map.and observed Earthshine.

30 Ordered 12.5 and 9 mm oculars and 1¼" adapter bushing from Harrison's. Also looked at Polarex telescopes which are identical to Unitrons and are made in Japan.

31 Designed objective cell and stops for 40 mm 'scope. Observed occultation of fairly dim star at 17:31½ E.S.T. Star must be less that 5.0 magnitude as it is not in Observer's Handbook table. Observed Venus in 'half moon' stage. Observed moon at all powers. Image extremely sharp at 191x. Pleiades are breathtaking at 41x.but really need lower power and wider field. Observed Orion nebula with all powers. Extremely beautiful at 41x. Higher powers only serve to reveal details of the 'Trapezium'. Seeing: Very good.

37

1957
NOVEMBER

1 Put screw in finder mount to stop play. Installed wire mesh light trap.

2 Designed mount for 50mm Huygens eyepiece made from Edmund simple lens kit. At R.A.S.C. joined Messier Club and got copy of 'Norton's Star Atlas' and Messier Catalogue. Miss Williamson says that 3 essentials for observing are 'Norton's Star Atlas', 'R.A.S.C. Observer's Handbook', and 'Field Book of the Skies'. Mr. Lunn has mounted slow motions and has taken some surprisingly good pictures of the moon.

3 Underlined all Messier objects in red in atlas except for nos. 43, 47, 102, 104-109, which are not plotted. Russians announced launching of Sputnik II carrying Eskimo dog.

38 6 Built 50mm Huygens eyepiece. Went to observatory for lunar and Messier work but found reporter and photographer from the Gazette, reporter from the Star, and three people from the CFCF news bureau complete with mobile unit and walkie-talkie. Stayed until 23:50 E.S.T. watching for Russian's moon rocket through impossible haze.

7 Russian's didn't come through but we got a photograph in the Gazette and a story in the Star.

9 Tonight Dr. Morris talked on Jupiter and showed drawings he made last spring with 6" reflector at 200x.

39 10 For the first time in almost a week and a half the skies cleared. Triangulum and Andromeda too close to zenith for observation. Tried to find M74 in Pisces but sky was too bright. Observed M42 but unable to see M43 for same reason. Seeing: Fair but rather chilly (22°)

40 12 Observed M31 and tentatively identified M32.

14 Attended Dr. Millman's lecture at McGill.

16 Mr. DeKinder says that he was not impressed with Questar. Mr. Lunn has taken more pictures of the moon. These are sharper than previous ones. I payed $1 for 4 elementary lectures. After meeting Mr. Lunn showed me his telescope. Has chains at bottoms of tripod legs, felt in finder mount, name plate, bolts to hold 'scope to cradle, otherwise identical right down to extra holes in tube. His slow motions are beautifully installed. Lent him Unitron Catalogue.

41 18 Got 9mm Huygens Polarex eyepiece from Harrison. Tested it on Gamma Arietis. Appears to be quite good.

42 20 Went to observatory for Messier Club. Used 4" Zeiss refractor to try to find M57, 27, 15, 38 but clouds prevented this. Pleides very good with low power. Looked at M42 through 6". Forgot Atlas and Messier Catalog at observatory.

23 Received Lunar Crescent Sets today.

43 24 Observed Venus having slight crescent appearance. Dropped lunar map and flashlight from porch with no ill effects. Am almost sure of M32.

25 Received customs declarations from Jaegers. They wanted to know whether I wanted tubing sent by Railway Express collect. I wrote them telling them to do so. Stapled lunar map to board.

44 26 After a long spell of bad weather I really made up for lost time tonight. Observed 19 lunar craters. Located M34 and double cluster in Perseus. Recorded my second auroral display with 11 reports from 21:00 to 22:20 E.S.T. Also observed M42 but was unsure about M43, tried unsuccessfully to split Gamma Andromeda. Seeing: Good. Temperature: 10°.

1957

NOVEMBER, (cont.)

27 Inquired about appearance of M42-43. Miss Williamson says that there is a rift between the two which is only visible under good seeing conditions.

29 Received customs notice for Moon Sets. At noon, Jaegers order arrived duty free. All items are apparently in good condition. Tube will have to be cut to 44" length when it arrives.

30 Got Unitron Catalog back from Mr. Lunn. Everyone is interested in Star Map in the December, 1957, issue of the 'National Geographic'. David Sands says that he joined National Geographic Society just by writing for information. Mr. Lunn says that customs ~~tried~~ valued Moon Sets at $14 and tried to put 30% duty on them.

Nov. (cont)

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DECEMBER

45 4. Got ~~an~~ customs notice for Jaegers tubing. Went in afternoon to get it and Moon Sets. Tubing is in good condition. Tested 'scope on Venus but could not bring any of the eyepieces into focus because of extra tube length. Observed Venus with 4 1/4". Definite crescent shape. Used 6 1/2" refractor at Observatory to locate 7 craters on moon. Discovered that I am supposed to draw whole crater on map rather than just plotting ~~a~~ its centre. Therefore I got another blank map and will have to start again. Also got another pad of Aurora report forms.

5. 2" tube may have to be shorted ~~and~~ to even less than 44". Focal length of objective appears to be ~~a~~ 43 1/2". Started new lunar map. Finished Messier Visual Magnitude list.

6. Cut tube to 44". From terrestrial tests ~~a~~ I think 2" more should be cut off but I want to ~~make~~ try all eyepieces on ~~a~~ star to see focus travel needed

7. Learned from Mr. MacLennan that refractors over 10" are no longer superior to reflectors of same aperture due to ~~additional~~ thickness of glass.

46 8 ~~Tube~~ Tested 2" on Venus. Although sky was very hazy image was much clearer than with 4 1/4" Cut additional 2" from tube. This seems to be perfect.

47 11. Tested ~~2m~~ 2" on Venus. Seems best with 100x. At R.A.S.C. Miss Williamson ~~and Constantine~~ told me that the following Messiers were quite good: 35, 36, 37, 38, 41, 44, 67.

14. Mr. Sunn ~~says~~ is trying to get me a ~~pr~~ worm and spur gear (180:1) for my right ascension slow motion. Mr. Venor suggest plugging both ends of ~~tube~~ 2" tube and either sloshing flat black paint around in it, or sloshing shellac around in it and then blowing black flock into tube.

48 17 Spent about two hours in Auriga looking for M36, 37, 38 without much luck. Beautiful little cluster there is probably M36 but I am not sure. Tried unsuccessfully for M41, 43, 78. Only success was with M35 in Gemini. By following stars on atlas in finder I landed the telescope right on it. (Got white enamel, 1/4-20 bolts, 4-40 R.H. machine screws at Lasco's for $1.93).

18 Constantine Papacosmas ~~is~~ wants centre to build ~~a~~ large reflector (16 or 20") ~~on~~ an ~~English~~ mount made from a ~~car~~ car axle. Miss Williamson says that it would have to be outside of the city.

plastic wood

21 Mr. Lunn has built a very professional clock drive from an old Victrola.

Counted 28 sunspots with 30mm.

49 50 22 Painted inside of 2" tube. Observed Venus and 1 day old moon. Found M15, 36, 37, 38, 41 which puts me on the chart. Tried unsuccessfully for M43. Observed M44 with ~~binoculars~~. 6x30.

23. Inside of 2" tube is not flat enough. I've decided to use cardboard tubing inside of aluminum because of its dull black finish and ease of mounting stops.

24. Jaegers catalogue arrived this morning. Made stops for 2". Cut cardboard tubing to required lengths. Tried for M43 again unsuccessfully. Got M44 and 67 in Cancer. Identified Sirius and rims of Orion with naked eye, and Columba with 6x30

51

52 25. Showed Malcolm Venus but intermittent clouds interfered. Gave him and Bonnie a demonstration of my planetarium. Gave Malcolm my spare copy of "Stars" by Lim-Baker. Donnie sent Malcolm "Exploring the Moon".

28. Miss Williamson asked me to observe meteors at her house next Thursday and Friday (Jan. 2, 3) Mr. Lunn's drive kept his telescope on a crater on the moon for 1½ hrs.

1958
JAN

1. Ordered 7x50 finder, 16 mm Erfle, and 'Making Your Own Telescope'.

53 2. Got money orders and sent for above. Observed Quadrantids at Miss Williamson's for 20 mins before clouds became too thick.

54 3. Observed Quadrantids for 2 hrs. Only meteor seen was by Constantine. However I did see a shower meteor after we finished official observing. David and I decided to collaborate on writing S.F. stories.

I found great pleasure in seeing Leo again. 55

4. ~~Attended Observation~~ Looked at ~~Orion~~ M42 through the 6½" but moonlight spoiled the view.

5. Saw Dr. L. Searle of David Dunlap interviewed on "Explorations". Learned nothing new.

7. Went to first elementary lecture. Very elementary.

8. Went to combination Messier and Lunar meeting but did no observing.

Observed Venus as an extremely narrow crescent

9. Went to McGill meeting. Took several pictures on Tri-X: f/3.5, 1/10 sec.

11. Photographed it setting behind tree on Tri-X: f/3.5, 50 mins (17:59-18:49 E.S.T.). Clock drive for 6½" is badly damaged so 'scope had to be used manually. Observed Delta Cancris and Pleiades with 56 Dr. Douglas demonstrated spectroscope showing spectra of tungsten (light bulb), neon, sodium chloride. Also a brown gas whose name I forget. Mr. Lunn is going to

get me my 1 1/4" Erfle when he is in Camden. He and I were shown ~~the~~ some reflectors made by members and donated to the society.

57 12. ~~Managed to bag~~ Got M1, 78.

14 Received 'Making Your Own Telescope' from Jaegers. Went to elementary lecture on 'The Planets' at Y.M.C.A. ~~Mr. Odell asked me~~

15. I was the only one to turn up at Observatory tonight. Waited from 8:10 to 9:00, then left in disgust!

16. Reassembled 2" without stop cage to test it further at first opportunity.

17. Got customs notice for Jaegers eyepiece. Trecker & finder arrived just before lunch with $4.91 duty on it. Coast billed me for $1.09 packing and postage which they prepaid. In afternoon I removed ~~light~~ screen light trap and mounted finder. Finder seems to have same field as 6X30 monocular which is about 50% ~~larger~~ wider than 6X20 finder.

18. Sent Unitron catalogue to Mr. Odell. Gave Mr. Lanoy a $25 check and $10 cash to buy me ~~a~~ 1 1/4" Erfle + adapter, ~~to~~ star diagonal, and lens for Denis' level. Mr. De Kinder spoke about solar observations which seem very interesting.

58 19. Observed meteors at Miss Williamson's tonight, from 21:15-22:15 and 22:50-23:50. I saw the first meteor which was about 1st mag. In second period I saw a 3rd mag. one and a 1.5 ~~which~~ out of the corner of my eye. My position was East. North reported about 3/4 of the 20 seen; South, none at all. Temp: just below 0°. Sky: Clear and gradually darkening, after midnight was black with the stars like jewels. At home I ~~also~~ located Jupiter again quite close to Spica.

Miss Williamson wants me to do lunar meteor work starting next week end

20. Sent money order to Coast for finder postage.

21. Picked up 16 mm eyepiece at Customs. It seems to be very good but skys are overcast so I cannot test it. Went to third elementary astronomy lecture.

22 Went to observatory for Messier club. Miss Williamson and Mr. Good were only other ones there. Miss Williamson gave me forms for Lunar Meteor Program.

59 23. Observed for lunar meteors from 6:25 to 6:40 and from 6:45 to 7:00. Moon was in tree but I had no difficulty. Sky was very transparent. By time of occultation of 7.1 mag. star, moon was too far into tree. I spent about an hour trying to spot M79. Got M46, 50, 93. Tested 16 mm eyepiece on Pleides, Orion. It is wonderful. Finder also is very good.

60 24 Observed for lunar meteors.

~~31 Americans launched their first satellite (1958 Alpha)~~

February

1. Americans announced launching ~~of their yesterday of their first~~ satellite (1958 Alpha)

January (cont.)

25. Gave Mr. Lunn check for $25 and $10 cash to buy 1¼" Erfle, Star diagonal, lens for Denis' level from Ground. Mrs Yone gave me two Nova Search areas (#84 in Gemini, #55 in Auriga)
26. On studying Norton's Atlas I think that #55 is better.

February

1. Americans announced launching last night of their first satellite (1958 Alpha). Mr. Lunn brought me Erfle and diagonal but forgot level lens. 68° field of Erfle is cut down to 54° in order to fit 1¼ O.D. eyepiece holder. This is the ~~maximum~~ maximum field possible since adapter is made of very thin wall brass tubing.

4. Drilled and tapped all holes in 2" aluminum tube, ~~and~~ eyepiece holder and ~~all~~ odl.

5 Received Coast instrument catalogue at last. I think I will get Tracker-Pathfinder mount for 4¼" since it can later be adapted for 6" and can take all Tracker accessories. I will get 5 ft legs for Palomar, Jr. ~~the~~ mount and use it ~~will~~ for refractor. Went to observatory for Messier hunting. Got M103 and found out that ~~they was~~ is rift between M42 and 43 was just the dark bay that I have been seeing for months. Miss Williamson ~~was~~ says that I am now to mark my Lunar Meteor reports as Station #5. She wants me to make survey of members telescopes.

Using 4" Zeiss refractor

61

6. ~~Tested 1" on~~ Made up sample cards and form for R.A.S.C. instrument survey. Tested 2" on ~~Orion, Pleiades~~ M42, 45, Sirius. M42 seems much fainter than with 4¼", ~~o~~ Image is very sharp and clear at 45x w. diagonal. Tested 1¼" Erfle on ~~Orion~~ M42, 45. ~~M42 was best~~ Both were beautiful. Field is sharp and clear to ~~very~~ very edge. Consider it one of the best investments I ever

62

made.

8 Gave Miss Williamson telescope survey samples. Mr. Vickerson says that Railway Express will deliver items after they have cleared customs.

10 Started list of Messier Objects by right ascension.

12 ~~to~~ I missed an aurora display on the 10th. Kuiper says that it was the most spectacular he has ever seen, but he is ~~too far~~ not in ~~the~~ an area of great activity. I finished Messier chart, Miss Williamson could not find my survey samples, so we did not go over them. I wrote a complicated formula on comet orbits from a book on the blackboard in case Dr. Whipple comes to observatory.

13 Attended Downand lecture. Attendance was quite good and included Dr. Millman and members of Ottawa and Quebec centres as well as the two Montreal Centres.

15. ~~The first~~ The first thing Dr. Whipple noticed ~~the~~ at the observatory ~~after~~ his lecture was my formula. Mr. Lunn brought his finder which is a very nice job except that I do not like a diagonal in a finder. Gave Miss Williamson Messier right ascension list.

21. Was unable to observe for lunar meteors due to clouds.

63 22. ~~Observed lunar meteors~~ Tested 2" on sun using projection. It showed very good details with 12.5 mm ocular. Observed for lunar meteors but had ~~great~~ difficulty with Erfle. It reflects ~~the~~ an image of the mirror and

64 diagonal back into my eye which causes flashes similar to meteors. Observed Orion and Pleiades. At observatory, looked at M42, 35 with 6½". Sky had

65 become slightly hazy so ~~as~~ 42 was not as good as with my 4¼".

23. Did not observe for lunar meteors as I had a migraine and there were intermittent clouds passing over the moon.

66 25. Took pictures of ~~the~~ ~~the~~ my two telescopes.* While observing the moon, two jets came over and I trained the telescopes on them by putting crosshairs on their trails and then following their trails ~~with~~ to the plane with the 16 mm eyepiece. Tried 2" on the moon with 45 and 80 x. Image seems much

67 sharper than with 4¼". Went to Miss Williamson's for ~~lunar m~~ meteors. Mr. Bridgen wants a report on the fireball I saw last August 6.

*~~[illegible]~~ I discovered that I have had a wonderful astrocamera staring me in the face for years. Father's old camera has a 75 mm, f/4.5, Zeiss Tessar lens which is ideal for photographing extensive constellations. (Negatives cover about 31 x 44°)

26 Mr. Williams has written to Carson's, and their telescopes are also Polarex.

27 Received new Jaeger's catalogue. (#851). They now have cell for 5" objective.

MARCH

1 At the observatory I met a man who owns a Unitron 3" Equatorial. He says that it is quite good and that the mount is very steady. Dr. Morris seems to be interested in comet seeking

2 Wrote to Stellar, Stell, Carson, Garth, and Precision inquiring about mounts and eyepiece trivets.

5 Mr. Good has decided on September 18 as a tentative date for Star Night. He, Miss Williamson and myself went over the survey form. We decided it would be simplest if we run off a set of index cards with the addressograph. These would be put in a file and removed as the forms come in. Thus I would know who had not sent theirs in. Miss Williamson thinks that they should be sent to Mr. Sekinder to stop confusion.

6. Received replies from Garth and Carson

68 9. Made my first nova search (Area 55 in Auriga). Located Uranus first with binoculars, then with 4¼". Tried with 36 and 72 power. Then I used barlow at maximum position with Erfles. I was not able to discern a disk. Tried Erfles on Praesepe with success. Tested 2" further. Split Eta to Orionis easily although magnitudes are 2 and 6.8. Only thing wrong with unblackened tube is the large ring (radius about 10°) around Sirius. Image of Sirius shows sharp diffraction rings. M42 does not show well but sky is hazy. [using B.A.A. chart in Feb. S+T]

8 Mr. Lynn brought some excellent colour slides of Venus taken through his telescope.

12 Received reply from Stell. I think I prefer the Tracker mount to his as he does not sell drives etc. Miss Williamson put me in charge of the Lunar Meteor section. Apparently a Ph.D. in Mathematics or Physics is required to be a professional astronomer.

14. Wrote Garth about refractors

13 Attended Physics Building meeting and met Dr. Hoffleit

15. Checked my nova search area in Shalnate Eliso

16 Made adapter to use 2" on 4¼" mount. Wrote to A.L.P.O., Edmund, Sky.

69 18 Wrote to Mr. Greenspon and mailed letters to A.L.P.O. etc. Made my second nova search. Finally located M79. Plotted M77 in Norton but failed to locate it on M48 even though I am positive that I was in the right place. There was a small aurora. I missed most of it by observing instead Jupiter. 2" definitely gives image with better contrast. North Equatorial Belt? clearly visible. Attempted a drawing.

70 19 Image of Jupiter is still good with 9 mm (141 x). Made another drawing.

21 Sent money order for refiggering to Garth. Wrote to Astronomy Charted. Mercury occultation ~~clouded out~~ and I. G. Y. Meteors

~~22. Lunar Meteors clouded out~~ clouded out.

22. Lunar Meteors clouded out. At meeting Mr. Lunn had pictures of his telescope

23 Lunar Meteors clouded out.

71 24. Tried observing Lunar Meteors for first ten minutes but heavy cloud and tree prevented worthwhile work. Dismantled 4 1/4" and left mirror and cell soaking overnight.

25. Packed mirror and sent it by insured mail. Shouldn't be back before May 5. Unable to observe lunar occultation due to tree

72 26. Went to observatory for lunar and Messier work. Found that men working on Molson Stadium had disconnected power. Looked at moon through 4". Mr. Gogg got lunar occultation by running down to Douglas Hall where radio was plugged in. Tried out spectroscope on Procyon, Arcturus, Betelgeuse and Moon. The latter looked like an out-of-order colour television set!

27. Edmund order arrived complete except for tubing. Eyeguard fits perfectly over 28 mm. Hellner. Lens for eyel apparently was sold out and substitute was too small. Eyepiece for 30 mm. is satisfactory

73 'Amateur Telescope Making, Book I' convinces me that I should buy my mirror! Tested 35 mm on moon, Sirius. Many craters visible.

28 OTTAWA: Mentioned casually to Aunt Margaret that I would like to see the Dominion Observatory. She got hold of Mrs. Swasin, Dr. Beals' secretary. She told me that since they had been observing the night before nobody could

74 show me around. MONTREAL: Tested 30 mm on Jupiter. It shows a small disk. The moons are faintly visible.

75 29. Blackout still at observatory. Observed moon and Jupiter with 6 1/2". Jupiter did not seem as clear as with 2" but this may be due to many factors.

APRIL

76 1 Got Edmund tubing and S S&T binder at customs. Observed moon and Jupiter with 2". Identified Tycho, Messier & Pickering on almost full moon. Detected 3 belts on Jupiter with suspicion of Red Spot.

2. Sent for Vol. XVI of S&T and Tracker Pathfinder Mount. Sent Nova Scorpii reports to Mrs. Yane.

77 4. NEW YORK: After 'Oh! Captain' observed conjunction of moon and Jupiter (Only objects visible in N. Y. sky!)

Went to 'Astro-Murals' and bought 2x3' mural of moon for $5.95. Dragged Mother to Hayden Planetarium. Black light murals are amazing.

1958–59

Day	April		May		June		July		August		September		October		November		December		January		February		March		Day
1									MLN	129			AN	157	AN	166					AN	185			1
2			N	92	AN	109	N	124	MN	130	AN	148	N	158	N	167	AN	174					MAN	194	2
3					N	110					AN	149	N	159	AN	168					AN	186			3
4	Conj	77	N	93	MN	111	N	122	MN	131													AN	195	4
5			N	94					N	132	N	150							A						5
6					ANPH	112															AN	187			6
7					MAN	113			N	133			AN	160	AN	169	AN	175					AN	196	7
8											AN	151													8
9			N	95	N	114	N	123									A	176							9
10	P	78	N	96					AN	134							ANP	177							10
11							N	124	A	135											LmN	188			11
12			MNPH	97	N	115							N	161	A	170									12
13	ANP	79							AN	136	AN	152	N	162	ALm	171	Lm	178	MAN		N	189			13
14	AN	80	MN	98	AN	116			PH	137							Lm	179							14
15	AN	81							AN	138			Lm	163			Lm	180			N	190			15
16			N	99					AN	139															16
17	N	82	AN	100																					17
18	AN	83	N	101	AN	117																			18
19	N	84	AN	102	MAN	118			LmN	140	ALN	153	L	164											19
20			N	103									LNPH	165							N	191			20
21			MALmN	104													LNP	181							21
22	Lm	85	AN	105	LmN	119			MLN	141	LN	154			N	172									22
23	N	86	ALmN	106	N	120	N	125	AN	142	ALN	155													23
24	N	87															P	182			N	192			24
25			AN	107					L	143									AN		AN	193			25
26	NPH	88	AN	108					LN	144									N						26
27	MPH	89					L	126	N	145					N	173			AN						27
28																									28
29	N	90					MN	127	N	146	N	156					N	183	N		—				29
30	LNP	91					AN	128	LN	147							ANPH	184			—				30
31	—				—						—				—				AN		—				31

Conj

1959-60

	November	December	January	February	March	April	May
1			S 258		S 277		
2					N 278		
3							
4		L M 250					
5			N 259				LP 295
6			N 260			N 288	
7							
8	245				N 279		
9	N 246				L N/S 280/1		
10	N 247				S 282		
11							
12					Lunar Eclipse 283		
13							
14							
15	A 248			N 272			
16					S 284	N 289	
17			N/S 261/2				
18		N 251	S 263				
19		N 252				N 290	
20							
21				N/S 273/4	N/S 285/6		
22							
23		N 253					
24		A N/S 254/5	N/S 264/5				
25		S 256	S 266		N 287	N 291	
26	N 249	S 257	N/S 267/8			N 292	
27			N 269	N 275			
28				S 276			
29						N 293	
30			S 270	—		N 294	
31	—		S 271	—		—	

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HU. 4-2402

GENERAL OBSERVATIONS

MARCH 8, 1959.

197 E.S.T. Transparency: VG Seeing: Fair. MARCH 8/9, 1959

Uranus showed tiny disc at 180x, image poor at 240x. Failed to see satellites III & IV although I checked position angles with N.A.
Observed γ Leonis, well separated, bright, & easy pair.
Observed M42-3 with fabulous results. At 45x wings were clearly defined, at 360x nebula appears like mottled clouds. I am unable to make out more than 4 stars in θ.
Attempted to observe Horsehead. Some possible faint nebulosity seen.
Back to M42: at 45x appears 1/2° long (i.e. wing end to wing end)
Observed M78. Tiny & faint even in 3". 45x shows tiny smudge w. some stars. 90x shows even less — smudge fainter and 2 or 3 stars.
33 Leonis: Nice pair. Primary greyish, comes reddish.
Tried unsuccessfully for M95 (I couldn't even relocate 96 + 105, the former an eyeatcher a few nights ago.)

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198 Transparency: E Seeing: VP MARCH 22/23, 1959

Alphonsus: Located by dark markings on floor. Moon too bright to study peak.
Plato: 2 spots seen. Drawing at 19:40.
Gassendi: Too bright for drawing.
Identification: 6 craters: 55, 75, 123, 160, 264, 274.

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199 Transparency: G Seeing: G MARCH 24/25, 1959

Alphonsus: Located, but moon too bright to study peak.
Plato: Drawing at 22:00

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200 Transparency: G Seeing: G MARCH 25/26, 1959 (Observatory)

15 minutes migratory birds on 6 1/2".

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201 Transparency: G Seeing: G MARCH 27/28, 1959

Messier hunting: Located 95, 94, 106, 64, 51, 63, comments in catalogue. Failed to locate 109 due to proximity of γ U Ma. Moon & haze prevented starting on Virgo cloud.

202 E.S.T. Transparency: 6 Seeing: 6. MARCH 28/29, 1959 (Observatory)

Large bright aurora. Mars, M44 through 6½"

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203 Transparency: E Seeing: F Passing clouds APRIL 11/12, 1959 (S.O.)

Lunar Meteors: 20:04-20:10, 20:19-20:36, 20:38-21:00. No flashes
Planetary: Venus appeared slightly gibbous

204 (O.M.C.)

Messier: M13 for first time this year in 6½". Haze in sky prevented resolution into stars

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205 Transparency: E Seeing: P-F APRIL 12/13, 1959 (S.O.)

Lunar Meteors: 20:00-20:15, 20:20-20:35, 20:40-21:00. No flashes.
Messier: 81 — bright
82 — bright, spindle shaped
109 — faint & hard because close to γ UMa
101 — large & faint

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206 Transparency: E Seeing: G APRIL 13/14, 1959 (S.O.)

Lunar Meteors: 20:00-20:20, 20:25-20:40, 20:45-21:00. No flashes.
Photographic: 8" RFL, 32 mm ERFLE, Aluminum extension, Asahi-Pentax. Moon at 21:10 1/50, 1/25, 1/10 sec on Panatomic-X.
Messier: 104 — small, bright, & easy.
Could not locate 68, 49, 60.
44 — resolved in 8" beautiful, large, with many interesting doubles & triples with beautiful colour contrasts.
Instrument: Observed diffraction patterns inside & outside of focus with 360x. Although air was unsteady, images very good
Planetary: Observed distinct disk of Uranus with 240x. Greenish grey in colour.

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207 E.S.T. Transparency: G Seeing: G APRIL 16/17, 1959 (S.O.)

Lunar: Alphonsus: 20:05 - 20:15 Nothing unusual, no dark spot
Dome at entrance of Alpine Valley into M. Imbrium: Drawing at 20:40.
Plato: Floor charted at 20:55, two spots.

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208 Transparency: G Seeing: G. APRIL 22/23, 1959 (O.M.C.)

Migratory Birds: 15 minutes, 1 bird. Also, first view of Jupiter with 4" Zeiss

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209 Transparency: G. Seeing G. APRIL 23/24, 1959 (O.M.C.)

Migratory Birds: 45 minutes, about half a dozen birds.

E.D.T.

210 Transparency: F Seeing: P MAY 1/2, 1959 (S.O.)

Double stars: Split ε Böotis, γ Leonis, Mizar
Messier: Reobserved M3: Not resolved with 8" at 40, 90, 180 (after stars)
M13: Resolved ~~at~~ with averted vision at 180. Best at 90.
Planetary: Jupiter: Drawing at 23:55 E.D.T. (Followed Peek's suggestions, i.e. observed planet for 1/2 hr before making drawing. I could see nothing but N.E.B. at first, ~~until~~ after 1/4 hr. could see much more. Remarkable!)

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211 Transparency: G Seeing: F MAY 2/3, 1959 (O.M.C.)

M67, M65-66, M105, γ Leonis in 6 1/2"

212 (S.O.)

Double stars: ε Lyrae, others in Lyra, Albireo.
Messier: M68 observed by trees.
Reobserved: M5: very nice with 90x, streams of stars
M13: unresolved at 50x, pretty at 90x, but at 180x resolved into thousands of minute points shimmering on dark background. Appears irregular with streams on one side but not on other.
M57: Annular shape at 90x, marvelous at 180, irregular smoke ring,

E.D.T. no sign of star in centre.

Planetary: Jupiter: Much detail visible between N.E.B. and S.E.B., particularly two twin bulges in both belts at same longitude, almost mirror images except that N.E.B. much wider than S.E.B. Several other distinct belts visible. Unable to make drawing because of lack of flashlight. 180x better than 240x.

Saturn: Observed for 1st time this year. Altitude less than 10° caused poor image with much colour. 50x + 90x.

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213 T: VG S: F MAY 3/4, 1959 (S.O.)

Messier: 68: plotted wrong in Sk. Pl., right in No. Quite bright. (Small cluster of ~6 stars [in Sk. Pl. position)
83: Bright + small
60: easy
59: close to 60 but fainter
58: near star in Sk. Pl. fairly bright
49: small but bright
61: faint but not difficult. All with 8" + 50x
Unsuccessful: 85, 98, 99, 100.

Double stars: Antares: Altitude too low to give sure resolution at 180x.

Planetary: Disk drawing at 00:40 E.D.T. of Jupiter. Suspected doubling of N.E.B.

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214 T: G (Bad smoke) S: ? MAY 4/5, 1959 (O.M.C.)

2 hrs. I.G.C. Meteors

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215 T: VG S: ? MAY 5/6, 1959 (Belmore)

2 1/2 hrs. I.G.C. Meteors (no recorder)

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216 T: G (Clouds) S: ? MAY 6/7, 1959 (S.O.)

Photographic: 8" RFL, Erico adapter, Pentax Planatomic-X, 1/5 sec.
1. Mizar - Alcor 00:25 E.D.T.
2. Jupiter 00:30 E.D.T.

217 E.D.T. T:G S:G MAY 9/10, 1959 (O.M.C.)

Messier: M81-82 in 4" Zeiss Rr.
M13 in 2" Rr.
Planetary: Jupiter: Many belts in 6½" Rr.

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218 T:G (Clouds) S:P MAY 11/12, 1959 (S.O.)

Lunar Meteors: David Lands managed 7 mins between clouds and saw one flash near Aristarchus. Rest of hour was clouded out.

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219 T:P (Clouds) S:P MAY 12/13, 1959 (S.O.)

Lunar Meteors: I did 5 min and David Lands did 7 min between clouds, no flashes, rest of hour clouded out.

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220 T:VG S:VG MAY 16/17, 1959 (O.M.C.)

Photographic: 6½" RR. (F=100"), prime focus, Asahi Pentax with Panatomic-X:
Moon: 1/100, 1/50, 1/25, 1/10 (23:25-23:30 E.D.T.)
Jupiter: ~~1/50~~, 1/25, 1/10, 1/5, 1/2, 1 (23:35-23:49 E.D.T.)

~~May not have been~~

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221 T:VG S:VG MAY 17/18, 1959 (S.O.)

Photographic: 8" RFL. Cinco adapter, Pentax, Tri-X
Southern pt. of moon: 1/200, 1/100, 1/50, 1/25 (21:25-21:30 E.D.T.)
Northern " " " : 1/200, 1/100, 1/50, 1/25 (21:30-21:35 E.D.T.)

Lunar: Identification: 98, 180, 156, 196, 52, 54, 244, 3, 144, 138, 161, 148, 202, 194
Photo: floor drawing at 22:20 E.D.T.
Domes: Dome at mouth of Alpine Valley visible at 240X on 8" (22:25 E.D.T.)
Domes near Hortensius and Milichius drawn at 23:05 E.D.T.
Dome near Ptolemy seen at 240X (22:40 E.D.T.)

222 E.D.T. T: G (Occasional haze) S: VG — MAY 18/19, 1959 (S.O.)

Photographic: 8" RFL., CRICO adapter, Rentax, Tri-X
Venus: 1/50, 1/25, 1/10, 1/5 (20:40 E.D.T.) (Slightly gibbous)

Lunar: Gassendi: drawn at 21:30 E.D.T. (Western quadrant only)
Identification: 66, 92, 168, 288
Domes: Milichius dome visible at 240X (20:45 E.D.T.)
All others in vicinity of Milichius, Hortensius and Ptolemaeus not visible
Plato: Floor drawn at 22:25 E.D.T.
Clavius: About 2 dozen craterlets visible inside on floor (i.e., not count two large ones which break wall on North and South) (22:35 E.D.T.)
Alphonsus: Dusky spot seen to North-West of central peak. Drawing at 22:50 E.D.T.

Photographic: 8" RFL., CRICO adapter, Rentax, Tri-X
Moon: South: 1/200, 1/100, 1/50, 1/25
North: 1/200, 1/100, 1/50, 1/25 } (23:10-23:15 E.D.T)
Jupiter: 1/25 (23:15 E.D.T.)

Planetary: Jupiter: Faint object (moon or merely passing star?) to SE of planet. Drawing of this configuration at 23:25 E.D.T. SA0159452
Disk drawing at 23:55 E.D.T.

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223 T: G S: P — MAY 22/23, 1959 (O.M.C.)

Migratory Birds: 45 mins, about half a dozen birds.

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224 T: VG S: G — MAY 24/25, 1959 (S.O.)

Messier: Observed M13. Best at 90X, too small at 50X, too little light at 180X
" M57. Good at 90X (true annular shape visible), better at 180X (like smoke ring.

Planetary: Jupiter: Drawing at 23:15
Lunar: Identification: 49, 47, 30, 191, 211, 20, 289, 189, 152, 177, 253, 228.
Plato: Floor drawing at 00:15
Alphonsus: Atmospheric spectrum seen at peak. Report without drawing at 00:20
Planetary: Saturn: too low to see well, Titan and another couple of satellites seen (00:30)
Jupiter: Drawing at 00:50

225 E.D.T. T: G S: GF (Moderate breeze) MAY 25/26, 1959 (S.O.)

Messier: Identified M85: small and of medium brightness with 50X
M99: faint, gave impression that larger 'scope would show as very large loose spiral, 50X

Unsuccessful: 100, 98, 88

Planetary: Could not locate Neptune.
Jupiter: Drawing at 00:25
Saturn: Suspected about ½ dozen satellites, but there are many stars in this region.

Lunar: Low altitude and subsequent poor seeing and terrestrial obstruction prevented any work.

Double Stars: Albireo, ε Lyrae, former resolved at 50X, latter resolved at 180X (i.e. individual components resolved), better at 240X
Antares: Low altitude and T.V. antenna prevented resolution.

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226 T: G S: VP MAY 28/29, 1959 (S.O.)

Messier: 98: Very faint, invisible at 50X, needed 90X to show
100: Do.
88: Do
84: Much easier, bright at 90X
86: Fairly easy, but fainter than 84 with 90X
87: Fairly easy, about equal to 84; 90X
89: Not too difficult at 90X
90: Faint and difficult with 90X
Coma - Virgo group finished!
Observed M8, M20, M21 and N.G.C. 6530 in Sagittarius.

Planetary: Jupiter: Drawing at 00:35, had to be terminated due to poor seeing.
Earlier in evening, saw shadow of satellite on disk of planet.

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227 T: G S: VP MAY 30/31, 1959 (O.M.C.)

Planetary: Jupiter: Plotted satellites with 6½". Seeing too poor to attempt photographs.

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228 T: XG S: F JUNE 3/4, 1959 (O.M.C.)

Photographic: Jupiter: 6½" RFR., Erico Barlow, 8mm extension, K2 filter, Pentax body, Plus-X

E.D.T. 00:13-00:14: 1/10, 1/5, 1/2, 1 sec

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229 S: P T: G JUNE 4/5, 1959 (S.O.)

Planetary: Venus: 180X necessary to cut glare. No detail seen, although centre of crescent looked slightly shaded, too indefinite to draw. Near dichotomy.
Jupiter: Drawing at 22:35.
Transits at 22:08, 22:39, 22:47 E.S.T.
Saturn: Drawing at 00:35
Messier: Re-observed, M8, 11*57, 29, tried unsuccessfully for spot of Cygnus Loop or North America Nebula. Observed 4. VIII. 72 again: fills low power field with tiny stars. Located M 70 - ~~Sun~~ not too difficult ~~at Altitude~~ when 1h 20m from meridian but practically impossible further than this, at least in city. This puts me at the top of the Messier Ladder.
Planetary: Jupiter: observed shadow of satellite in transit.

* M11 was superb at 90X, many fine chains of stars sweeped about.

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230 S: G T: P-G (Passing clouds) JUNE 5/6, 1959 (Belmore)

Meteors: 2½ hr. as recorder (alternating with Miss Williamson)
Planetary: Drawing of Jupiter with 80 mm Zeiss Refractor, 173X, at 23:55.

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231 S: Fair T: Fair JUNE 9/10, 1959. (S.O.)

Planetary: Venus: Drawing at 20:35, a few dusky markings and hint of north cusp band. Filters did not help.
Lunar: Identification: 85, 132, 272, 273.
Rotavies: Drawing at 21:10
Planetary: Jupiter: Drawing at 22:15.
Transits: 7 between 21:30 and 22:30 E.S.T.
Satellites: ER of I observed at 22:03 E.S.T., one minute before predicted in Observers Handbook.

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232 E.D.T. S:G T:VG JUNE 10/11, 1959 (O.M.C.)

Planetary: Jupiter: Drawing at 23:20 with 6½".

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233 S:F T:F-P (clouds) JUNE 11/12, 1959 (S.O.)

Lunar: Identification: 41
Posidonius: Drawing at 21:30
Occultation: Clock stopped: 22:05 (WWV) (E.D.T.)
" reading: 00:00:42.2
∴ Time of occ: 22:04:17.8 (E.D.T.)
Lunar Meteors: David Sands did 15 min., I did 5 min. before Moon clouded over.

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234 S:VP T:F JUNE 19/20, 1959 (S.O.)

Venus: Terminator seen as either straight or perhaps slightly concave. Boiling prevented drawing (22:30)
Clouds and poor seeing prevented further work.

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235 S:F T:F JUNE 24/25, 1959 (O.M.C.)

Planetary: Jupiter: satellite plot.

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236 S:P T:VG JUNE 29/30, 1959 (S.O.)

Planetary: Jupiter: poor seeing prevented serious work. Two satellites east of plot were in a vertical line (N-S), E Z seen as lemon yellow as described by Rose.
Saturn: poor seeing prevented drawing. NPR clearly visible against ring, quite dark.
Meteors: observed two sporadics in almost same position, 15-20 mins apart. 1st was poorly seen, no report; second was reported (23:25)
Messier etc.: Renewed old acquaintance: M13, 5, 11, 31, Sagittarius group.
To Located: M72: slowly defined irregular faint hazy area with 90x
M76: very hard with 90x, faint region, ill defined hazy patch.
Failed to locate M73 after about an hour search, I think it is visible.
H. IV. 1: "Saturn" nebula: remarkably bright (~7 mag), small, definitely blue, elliptical

237 E.D.T. S: ~~1~~2-3 T: 4 JUNE 30/JULY 1, 1959 (S.O.)

Planetary: Venus: Too much boiling to make drawing, terminator definitely convex.
Jupiter: 14 transits in 2 hr. EZ had an orange tinge but mainly lemon yellow.

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238 S: 2-3 T: 2-3 JULY 3/4, 1959 (S.O.)

Planetary: Venus: drawing at 20:10. Notch seen on S cusp, plus a few faint shadings.
Jupiter: drawing at 21:15.
17 transits in 1 3/4 hr, much detail in NEB.

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239 S: 0-1 T: 4 JULY 7/8, 1959 (S.O)

Planetary: Venus: seeing too poor for drawing. Regulus about 1/2° away from Venus.
Jupiter: seeing too poor for useful work.

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240 S: ~~1~~3 T: ~~1-2~~ 3 JULY 8/9, 1959 (O.M.C.)

Planetary: Saturn: seen in 6 1/2" and 12", no drawing. Rings seen in finder of 6 1/2"

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241 S: ? T: 1-2 JULY 9/10, 1959 (S.O.)

Photographic: Venus + Moon 1. 1/10 sec f/3.5 Retina Kodachrome } 21:30
2. ~~1~~ 1 sec f/3.5 " " }
(from playroom window)

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242 S: good T: 4 JULY 11/12, 1959 (O.M.C.)

Planetary: Saturn: seen in 6 1/2"
Messier: M 13 located with 12 1/4"

(S.O.)

Moon set too early for lunar meteors.

243 E.D.T. S: ? T: 1 (very hazy) JULY 12/13, 1959 (S.O.)

David Sands and I observed lunar meteors for 24 minutes

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244 S: 3 T: 4 JULY 13/14, 1959 (S.O.)

Planetary: Venus drawn at with C5 filter
Lunar: Alphonsus examined negatively at 20:35 and 23:00.
Lunar Meteors: David Sands and I observed for 1 hr. Malcolm & Ronnie Louck visited.

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245 S: F T: F JULY 14/15, 1959 (S.O.)

Planetary: Venus ~~at~~ drawn without filter at 20:05 and with C5 at 20:15.
Lunar: Identified 89, 91, 201, 266, 297
Plato: Floor drawing at 20:50
Alphonsus: Central peak drawn at 21:00
Longomontanus: Apparently very high peak on western rim seen casting shadow on floor at 21:10
Planetary: Jupiter: 3 transits in 50 minutes.
Saturn: drawing at 23:15

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246 S: F T: F JULY 16/17, 1959 (S.O.)

Planetary: Venus without filter 20:20
with C5 filter at 20:25
Lunar: ~~Nothing unusual~~ a
Alphonsus: nothing unusual at 20:35-20:40
Swan Band: negative: 20:40-20:45; 23:05-23:10
Plato: floor drawn at 21:00
Gassendi: Northern quadrant drawn between 21:10 and 21:45
Planetary: ~~Sat~~ Jupiter: 10 transits in 50 minutes
Lunar: Identification: 220

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247 E.D.T. S:? T:P JULY 17/18, 1959 (S.O.)

Showed Moon, Jupiter, and Saturn to a number of guests at ~~my~~ party after my sisters wedding, including Mr. Heywood, Mr Orlando, Dr Purdy, Miss Proctor, Mr Stavert, Malcolm Loucks, Jr, Arthur Budden.

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248 S:3-7 T:3 JULY 19/20, 1959 (S.O.)

Planetary: Venus: Seeing too poor for drawing.
Jupiter: 12 transits in 2 hrs. Seeing for most of time = 6-7
Lunar: Identification: 252
Green band: 23:20: negative
Aphonsus: 23:25: nothing unusual
Plato: floor drawn at 23:30

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249 S: 5 T: 3 (Moonlight) JULY 21/22, 1959 (S.O.)

Planetary: Jupiter: 22 transits in 2 hr 8 min
Saturn: Drawing at 23:40
Lunar: Identified 71

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250 S:? T: 4 JULY 25/26, 1959 (O.M.C.)

Aurora: 1 positive report.

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251 S:3 T:3 JULY 27/28, 1958 (S.O.)

Planetary: Venus: Drawing at 20:10
Jupiter: 11 transits in 2 h 10 m. T I II: 1C 01:56; 2C 02:07
Saturn: no prominent markings on disk, no drawing made.

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252 S:3 T:3 JULY 28/29, 1959 (S.O.)

Planetary: Venus: seeing too poor for drawing.

Planetary: Jupiter: 12 transits in 2 h 15 m. ER III 00:49:30 U.T.
Saturn: No detail on disk, no drawing made.
"Messier": observed N.G.C. 6633 (H. VIII 72) again. Very large, bright (easy in 7X50s), contains many interesting chains.
observed I.C. 4665: Why had ~~both~~ Messier & both Herschels miss this object? Easily seen with 7X50s, containing half a dozen stars brighter than 7.75m and many fainter. Its only drawback is its large size (~ 1°) which would make an RFT the ideal instrument to view it.

~~S: F T: VG JULY 29/30, 1959 (O.M.C.)~~
~~"Messier": observed the above two objects with 40x on 11 cm Zeiss~~

253 S: ? T: P JULY 30/31, 1959 (O.M.C.)

1½ hr I.G.C. Meteors as recorder.

254 S: F T: VG ~~JULY~~ AUGUST 1/2, 1959 (O.M.C.)

"Messier" observed the above two objects (JULY 29/30) with 40x on 11 cm Zeiss refractor.

254 S: F T: E AUGUST 2/3, 1959 (S.O.)

Klaus Krasch & Constantine Papacosmas over for observing.
Planetary: Klaus made Jupiter & Saturn drawings with 8". He also observed 0.5 mag meteor.
"Messier": We observed numerous objects: M 20, 11, 13, 15, 57, 22 etc.
The Milky Way was clearly visible. Star clouds as follows: 1. Cygnus from centre of cross to Albireo. 2. Cloud near arrow in Sagitta. 3. Scutum cloud.

S: P T: F AUGUST 3/4, 1959 (S.O.)

Planetary: 6 transits in 1 hr. on Jupiter. Nothing unusual on Saturn.
Messier: Located M73: 3 or 4 faint stars. (3 more Messiers to go!)

256 E.D.T. S: F T: F (passing clouds) AUGUST 7/8, 1959 (S.O.)

Planetary: Jupiter: 15 transits in 1 h 10 m. Drawing at 21:30.
Meteors: 1 h 40 m I.G.C. meteors as observer and recorder.

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257 S: VP T: G AUGUST 11/12, 1959 (S.O.)

Lunar: Posidonius drawn at 20:25
Planetary: Jupiter 2 transits in 25 min. Occultation disappearance of III: 1st contact 01:05 U.T., 2nd contact 01:13 U.T. (Seeing (rated at 0) made determination of contacts extremely difficult.
Lunar: Alphonsus, no drawing, nothing unusual.
Manilius, surface dome not seen.
"Plateau", nothing unusual seen, but I am not sure of position } 21:15
Lunar Meteor: David Sands and I observed for 57 minutes. No flashes.

(Belmore)

I.G.C. Meteors: 30 min observing, 2 meteors
1 h. 40 m as recorder (in 3½ hours team saw 113 meteors)

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258 S: F T: G-VP AUGUST 12/13, 1959 (O.M.C.)

Lunar: looked at Alphonsus & Hörbiger with 6½" at 333x. Moon is superb with my 80x Erfle on this telescope.
I.G.C. Meteors: 2 h. as recorder (27 meteors seen)

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259 S: F T: G AUGUST 13/14, 1959 (S.O.)

Planetary: Jupiter: 6 transits in 1 h 10 m. Detail drawing of dk spot in STrZ.
Lunar: Swan: Negative at 21:50.
Alphonsus: Tiny white speck suspected at foot of peak, SW of and very close to peak (22:00)
Plato: Floor drawn at 22:15.
Copernicus: Four domes seen on floor. Drawing ("pen and ink") at 22:45.
Hias: dome to E seen clearly
Hortensius: quintet of domes seen clearly

230 E.D.T. S: F T: P (haze) AUGUST 14/15, 1959 (S.O.)

Lunar: Cabaeus: largest dome still visible
~~[illegible]~~ Milichius: dome to E visible
Gassendi: Central peak, Gassendi A, and detail between ("doughnut") drawn at 21:40
Lowa: Moon checked at 21:50 with negative result.

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231 S: G T: F (passing clouds) AUGUST 17/18, 1959 (O.M.C.)

Migratory birds, none seen.
Lunar Identification 25

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232 S: ? T: G (sky light) AUGUST 21/22, 1959. (S.O.)

Planetary: Mercury: located with 7X50s at 5:20 from bedroom window.

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233 S: ? T: G AUGUST 22/23, 1959 (O.M.C.)

Located M31 with 6 1/2".

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234 S: ? T: F (light aurora) SEPTEMBER 5/6, 1959 (O.M.C.)

Telescope duty: Andromeda: γ And, M31, Perseus cluster, located with 6 1/2"

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235 S: F T: F SEPTEMBER 6/7, 1959 (S.O.)

Planetary: Jupiter: 2 transits in 50 min.
Conspicuous (20:10): NEB, SEB (broader?), STB, NPR, SPR.
Saturn: No transitable markings.
Titan was equal in brightness to star in same field (NW of Tc)
Comets: Searched ~~[illegible]~~ for 1959 e unsuccessfully.
7662 "Messier" located Perseus cluster, M11, H IV 18 (small and very bright, annular at 200X, blue in colour), H. VII 32 (very large loose group of rather faint stars) M33 (extremely difficult due to low contrast, found by sweeping at 50X and detected
752

E.D.T. by slight increase in field brightness in the same R.A. on several sweeps), M 74 (quite small and very faint, a difficult object, 90X)

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236 S: ? T: G SEPTEMBER 8/9, 1959 (S.O.)

Lunar Meteors: 40 minutes. No flashes.

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237 S: ? T: G SEPTEMBER 9/10, 1959 (S.O.)

Lunar Meteors: 41 minutes with David Sands. No flashes.

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238 S: F T: VG SEPTEMBER 11/12, 1959 (S.O.)

Planetary: Jupiter: 4 transits in 28 min.
Lunar: Swan: Negative at 20:15 & 21:45
Alphonsus: Grey patch equal in area to peak seen SW of, and tangent to, peak. (20:25)
Plato: floor drawn at 20:55
Eratosthenes: drawing of NE segment to show dome cut by cleft (21:40)

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239 S: F T: G SEPTEMBER 12/13, 1959 (O.M.C.)

Lunar: Dome east of Milichius seen with 6½".

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240 S: G T: VG SEPTEMBER 13/14, 1959 (S.O.)

Planetary: Jupiter: 3 transits in 26 minutes
Lunar: Swan: Negative at 20:10 & 20:40
Alphonsus: Nothing unusual seen at 20:20.
Plato: floor drawn at 20:25.

244 ~~NOV. 5/6~~

S: ? T: G to F

NOV. 5/6, 1959
(S.O.)

Lunar Meteors: 10 min. No flashes.

241 E.D.T. S: ? T: VG. OCT. 21/22, 1959 (O.M.C.)

Messier: Observed M77 with 6½" RFR. at 80X, small but bright, close to small star. This is the final object ~~located~~ in Messier's Catalogue located. Now come the Herschels!

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242 E.S.T. S: ? T: VG OCT. 28/29, 1959 (O.M.C.)

Herschel: ~~VIII~~ 77: Small and faint with 4¼ rfl. Some confusion with star clouds in Milky Way.

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243 S: ? T: G OCT. 29/30, 1959 (S.O.)

7380 Herschel: VIII 77: Rather faint and undistinguished with 50X on 8"
7243 VIII 75: Fairly large, about a dozen brighter stars against background of faint stars.
7209 VII 53: Medium size (D = ¼ 50X field), no bright stars.
7789 VI 30: Very faint and small
129 VIII 79: Lovely scattered group of 10 ~~sta~~ fairly bright stars.
457 VII 42: Beautiful. Small cross shape with long irregular chains from both ends of short arm of cross
253 V 1: Rather faint because of large size and low altitude. Central condensation seems rather elliptical and ill-defined.

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245 S: P T: G NOV. 8/9, 1959 (S.O.)

Lunar: Lava emission: negative at 17:05
Alphonsus nothing unusual at 17:20.
Hörbiger: floor is a mass of detail under low illumination. It would be extremely difficult to detect domes in this terrain. (17:20)
"Plateau": Angle of illumination fairly high. No plateau detected. I think that detection would be extremely difficult due to the exceedingly rough terrain in this region. (17:15)
Plato + Birt ~~[illegible]~~ dome Both objects drowned in shadow although faint streak on floor of Plato from first rays of rising sun.

296 EDT. S: P / (boiling) T: G (passing clouds) MAY 19/20, 1960

See also 4 CM. book.

Saturn: Checked at 03:15 for transitable spots. None seen. Crape ring not seen

Messier: M8, 20, 21 within 3° of Jupiter

297 > CMT JUNE 3/4
298 > CMT JUNE 6/7
299 S: F T: VG JUNE 7/8, 1960

Lunar Identification: ~~25~~ (Already identified Aug 17/18, 1959), 93, 162, 222
George Wedge made two lunar drawings & one of 4
Planetary: THE RED SPOT IS BACK!!!

300 S: VG T: G JUNE 9/10, 1960

Lunar Identification: 115, 127, 149, 190, 212, 234. TWO MORE TO GO!
Jupiter: Red spot really looks pink tonight! See 4 book.

301 > CMT JUNE 12/13 303 > CMT JUNE 21/22
302 > CMT JUNE 16/17
304 S: - T: F JUNE 27/28, 1960 (NER)

Observed sunset ~~on~~ on ~~very~~ fairly (~2°-3°) low horizon with > x50 binoculars. 4 or 5 spots seen, no green flash. Discontinuities in atmosphere very clearly seen.

305 > CMT JULY 3/4

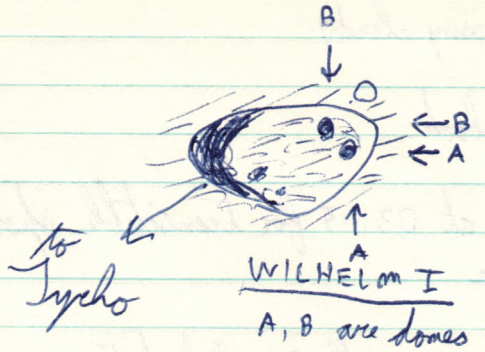
306 S: F T: F JULY 10/11, 1960

Lunar: Identified last two craters on S&T map: 241 & 249

307 S: F-P T: VG JULY 14/15, 1960

Saturn: At 360x most remarkable feature is colour contrast between yellow-brown (with a tinge of olive?) of ball and white of ring B.

SEE CMT BOOK


B
B
A
A
to Tycho
WILHELM I
A, B are domes

E.D.T.

32² 1961
JUNE 22/23
S-0+1 T-3
8" 240X
20:45 - 21:15

Lunar: Dome Survey: Dome near Kies well seen. There are what appears to be two domes ~~near~~ near the E wall of Wilhelm I (inside crater). Good seeing shows much fine detail for an instant, but the image is boiling to much generally to permit drawing. See ~~sk~~ rough sketch

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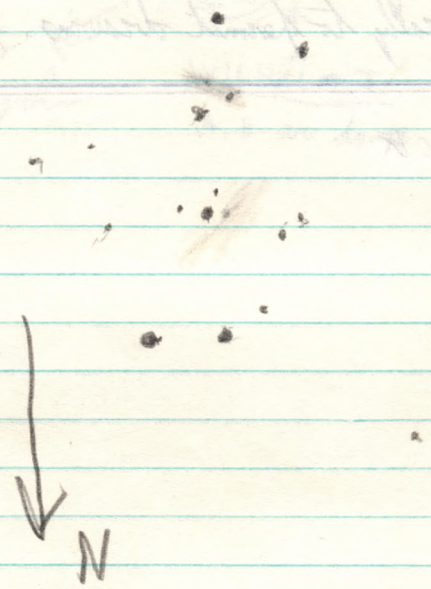
> SEE CMT BOOK

MARCH 6/7, 1962
NGC. 2244
T = 4
20:15
H. VII 2



CLEAN START: 25/2/62

Due to sheer laziness I have let my note-taking slip. Be it resolved that in future this not be allowed to happen! All observations will henceforth be recorded herein.

1962

MARCH 1/2 358 — Comets: Area W of 41 Eridani searched from 19:20 - 19:40 E.S.T. for Comet 1962c Seki-Lines. Limiting magnitude ≐ 6^m. ~~Comet not seen~~ with 7x50's. Comet not seen.

MARCH 2/3 359 — Comets: Area again searched for 1962c without success. Transparency slightly better than last night; limiting magnitude ≐ 6.5^m (stars).

MARCH 6/7 360 — Comets: Area between τ⁴ Eridani and α Fornacis searched unsuccessfully for 1962c. 7x50's gave limiting mag ≐ 6.5^m.

Herschels: 8" REFL.

NGC 1647: Very large cluster of fairly faint stars, rather undistinguished. There is a wide double star just south of centre. 50x (H. VIII 8)

NGC 1535: Small diffuse planetary. Fairly bright. ~~No fine~~ At 180x appears bright in centre, fading out toward edges; annular structure suspected. (H. IV. 26)

~~NGC 1637: Not located~~

1758? NGC 1746: A very widely scattered group with a few fairly bright stars and almost no faint ones. 50x (H. VII 21)

NGC 1817: with NGC 1807 this forms a "double cluster" within about 30' of each other. 1807 is the richer of the two, especially in faint stars. 50x (H. VII. 4)

NGC 2129: Quite small cluster with two bright stars ~~and a number~~ of almost the same R.A. and a number of fainter stars. ~45' f. 1 Gemini. 40x (H. VIII 26)

NGC 2244: This fine cluster is set in the heart of the Rosette nebula (not visible in 8-inch). Drawing made at 20:15 EST. at 50x. Trans. = 4 (H. VII 2)

March 9/10 361 — Lunar Meteors: 44 minutes

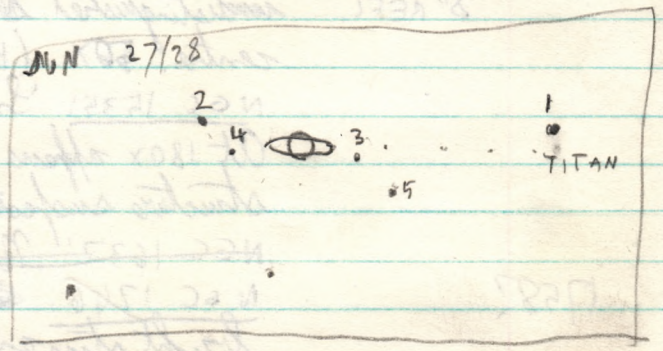
Moon's Phase: 20:25 E.S.T. $k_0 = 0.20$

DOME 2

21:50 $x = .47$

DIA = 0.70 ARAGO
.75 ROSS
.90 MACLEAR

DOME 1 in shadow
S-2 T-3



	Δ	Δ^2
18.5	−0.7	0.49
20.0	+0.8	0.64
19.0	−0.2	0.04
3 $\overline{57.5}$		3 $\overline{1.17}$
19.2		$0.39 = \sigma^2$
		$\therefore \sigma = 0.62$
		p.e. $= 0.42$

1 TITAN
2 ~~RHEA~~
3 TETHYS DIONE
4 DIONE
5 IAPETUS ?

March 10/11 — Comet: Area is in trees at 19:15 E.S.T. Must try earlier
362 — Moon's Phase: 19:40 EST. $k_0 = .32$

March 11/12 — ~~Lunar~~ Moon's Phase: 18:30 E.S.T. $k_0 = 0.46$
363 — Nova Search: 21:45 E.S.T.

Occultations: Watch stopped 21:40:00.0 EST
90x S-1 T-3 Watch reading 01:51.6
Time of occ 21:38:08.4

Watch stopped 22:15:00.0 EST
Watch reading 14:52.0
Time of occ 22:00:08.0

~~Lunar~~: 21:50 E.S.T. Observation of Dome ARAGO 2
240x $x = 0.47$
S-2/T-3 Diameter = 0.70 x (ARAGO)
= 0.75 x (ROSS)
= 0.90 x (MACLEAR)

April 18/19 — Comets: 19:45 - 19:55 E.S.T. Searched unsuccessfully for comet.
364 — Lim. mag ~ 5^m due to twilight, haze, & rising moon.

April 21/22 — Comets: Comet 1962c finally seen at 20:00 E.S.T. Location: $4^h 20^m$; $+28°.6$ (1950.0)
365 — Mag. = 5 Tail ~ 1° at P.A. 10° Trans 3. 7x50 binoculars.

April 24/25 — Comets: Unable to pick 1962c up. Searched ~~for~~ from 19:55 - 20:20
366 — E.S.T. There seems to be some sort of haze in this part of the sky. Lim. mag (w. 7x50s) ≐ 5^m

April 26/27 — Comets: Searched unsuccessfully for 1962c from 20:00 - 20:20 EST.
367

June 27/28 — Saturn: Positions of satellites (?) plotted 180x - 360x — 01:00
368 ✓ — - 01:15. 1 (Titan) was easy, 2 relatively so, 3-5 more difficult. S-2 T-4 Drawing

Jupiter: Clear of haze at 01:50 EDT. RS very prominent ~~of~~ on f part of disk. EZ extremely dusky & rusty in colour. SEB n has obviously revived, now darkest belt on planet. NTB still apparently missing. STB fairly broad, RS appears imbedded in it.

~~Ao~~ ~~Dese~~ 240x S-2 T-4 U.T. λ_1 λ_2

1 Df sect NEBn 06:08 — 355

SAT PHEN I Sh.E. 1 cont 06:11.0

2 Dp RS STrZ 06:13 — 358

SAT PHEN I Sh.E. 2 cont 06:14.4 S-1 T-4 240x

$\omega_1 = 245°$ CONSPIC: BELTS: SEBn, NEB, STB, SSTB, NNTB, SSSTB

$\omega_2 = 2°$ @ 06:20 ZONES: STRZ, NTeZ-TrZ, STeZ, EZ, NNTeZ, SSTeZ

Echo transit meridian ~ 02:27 E.D.T. – no flickering.

3 Wc oval Sedge NEB 06:32 252 —

4 Dc RS STrZ 06:32 — 9

5 Dp sect NNTB 06:34 — 10

STB oval coming onto f limb (DE?)

6 Dp lg proj Sedge NEB 06:43 259 —

7 Df RS STrZ 06:51 — 21

8 Dc lg proj Sedge NEB 06:56 267 —

~~Obs~~ disc. 06:57 — —

Obs. comm. 07:03 — —

EZ is a brownish orange near SEBn, shading off to ochre near the NEB. Detail here is quite difficult due to lack of contrast and general duskiness.

SAT PHEN I TrE. 1 cont. 07:22.4

2 cont. 07:26.6 S-1 T-4 240x

9 Wp oval Sedge STB 07:37 — 48

07:47 I have the distinct impression that the S edge of the SEBn and the N edge of the NEB are not parallel — being farther apart at the f limb.

10 Wc oval Sedge STB 07:55 — 59

11 Dp elong cond SEBs 08:01 — 63

12 Dc elong cond SEBs 08:06 — 66

13 Wf oval Sedge STB 08:08 — 67

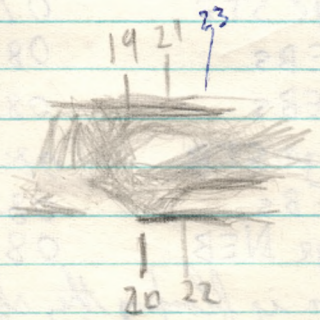
14 Df elong cond SEBs 08:12 — 70

15 Wp oval Sedge NEB 08:13 314 —

08:14 Obs. disc. Dawn is flooding the sky, I am ~~too~~ rather tired but immensely satisfied to be "at it again"!

July 15/16, 1962 Swan band negative 90x 22:15 E.D.T.

369


19
21
23
20
22

1962

July 22/23 370

Saturn occultation: 8" ℄ at 360x
05:20.5 U.T. slight dimmer suspected
Diss. behind Ring A:

Watch stopped		05:50:00.0
"	reading	00:01:53.0
"	started	05:48:07.0

S_R - 1 T - 3½ mag

Jupiter:

#	Des.	Loc.	Trans	I	II
—	Obs. comm.	—	06:04	—	—

I've never seen Jupiter look so bland — one has the feeling of the calm before the storm. SEBs strongly suspected. NTe-TrZ quite heavily shaded. EZ shows a mottled effect, but not so impossible to make out anything definite.

In transits: NPR = SPR = 4.0 06:20 – 06:30

	SEBn = 2.5	EZ = 3.2	S - 2 T - 3½ mag
	STB = 3.0	STrZ = 8.0	
ω_1 = 238°	NEBn = 3.0	NTe-TrZ = 5.8	
ω_2 = 164°	SEBs = 4.2	SEBZ = 7.8	
	SSTB = 3.8	STeZ = 6.7	

NNTB only detectable as a boundary between NPR & NTeZ. NEBs not distinct at this longitude

16	Dp sect	NNTB	06:36	—	170
17	Dc column	STeZ	06:42	—	174
18	Df sect	NEBn	06:52	—	180
—	Obs. disc. due to cirrus cloud.		06:52	—	—

Aug 3/4 371

Jupiter 8" Refl x 240 S - 2 T - 3

			U.T.	I	II
—	Obs comm		05:05	—	—
19	Wp oval	S edge NEBs	05:10	288	—
20	Dp sect	NEBn	05:14	—	125
21	Wc oval	S edge NEBs	05:27	298	—
22	Wp rift	NEB	05:32	301	136
23	Wf oval	S edge NEBs	05:45	309	—
—	Obs. disc due to wind causing tube vibrations & poor seeing.				

05:31.5 -2 mag

White

d/2 oc

Pole

5°

✓ AUG 11/12, 1962 Jupiter 8" 240 S-5 T-3
372

				U.T.	I	II
—	Obs comm			04:33	—	—
24	Dp rod	STB		04:34	—	224
25	Wp ~~elong~~ oval	S edge NEB		04:39	93	—
26	Dc rod	NNTB		04:44	—	230
27	Wf ift	NEB	(Est)	04:53	102	236
28	Wf ~~elong~~ oval	S edge NEB		05:02	107	—
29	Wp bay	S edge STB		05:05	—	243
30	Df rod	NNTB		05:08	—	245
31	Dc proj	S edge NEB		05:09	112	—
32	Df rod	STB		05:11	—	247
	sat phen 05:21.4 1 cont II ER					
✓ 33	Wc nodule	S edge NEB		05:24	121	—
34	Wc bay	S edge STB		05:26	—	256
	sat phen 05:28.4 2 cont II ER S-5 T-3					
35	Wf bay	S edge STB		05:39	—	264
	sat phen 05:54.8 1 cont II 0					
✓ 36	Wc oval	S edge NEB		05:53	138	—
37	Dp seet	NNTB		05:58	—	275
	06:02.7 2 cont S-4 T-3					
38	Wp gap	NEBn		06:04	—	279
39	Dc proj	S edge NEB		06:07	147	—
	Obs disc.			06:03	—	—

✓ Aug 17/18 Jupiter 8" x 240 S-1-0 T-2-0
373

			U.T.	I	II
—	Obs comm		05:05	—	—
40	Dc ~~d~~ proj?	N edge STB	05:10	—	69
	STB oval appears remarkably bright, ~~and not~~ shorter & more circular in outline.				
41	Dc proj	S edge STB	05:28	—	79
	Obs. disc due to clouds & poor seeing		05:30	—	—

✓ Aug 22/23 Jupiter 8" x 240 S-4-6 T-4
374

			U.T	I	II
—	Obs. comm		04:50	—	—
42	Wc nodule	N edge NEBn	04:56	—	92
43	Dc sm. cond	Bl. edge SSTB	04:59	—	94
44	Wf oval	S edge STB	05:00	—	95

1962

			U.T.	I	II
45	Dp lg proj	Sedge NEBs	05:11	51	—
46	Wp rift	NEBZ	05:15	—	104
47	Wc rift	NEBZ	05:26	—	110
48	Dc lg proj	Sedge NEBs	05:29	62	—
49	Wc patch	STeZ	05:30	—	113
50	Wp v. br. oval	NTrZ	05:36	—	116
51	Dp veil*	STeZ	05:37	—	117
52	Wf rift	NEBZ	05:39	—	118
53	Df proj	Sedge NEBs	05:41	70	—
	NTB begins to be visible about here.				
54	Wc v. br. oval	NTrZ	05:47	—	123
55	Wf v. br. oval	NTrZ	06:00	—	131
56	Wp rift	NEBZ	06:02	—	132
57	Wc rift	NEBZ	06:14	—	139
58	Df veil*	STeZ	06:16	—	140
	*This feature really only covers the S half of the zone but seems too wide to be classed as a red. I suspect a test. joining its p. end to the STB.				
59	Wc nodule	Sedge SSTB	06:21	—	144
60	Dp elong cond	Sedge SSTB	06:25	—	146
61	Wp dusky oval	Sedge NEBs	06:28	98	—
62	Dc elong. cond.	Sedge SSTB	06:35	—	152
63	Wc dusky oval	Sedge NEBs	06:37	104	—
—	Obs. disc.		06:40	—	—

Aug 23/24
375

Jupiter 8" x 240 S-Z-T-3-2

			U.T.	I	II
—	Obs. comm.		04:04	—	—
64	Dp red	NNTB	04:09	—	214
65	Wp oval	Sedge NEBs	04:21	179	—
66	Dc red	NNTB	04:33	—	229
67	Wc oval	Sedge NEBs	04:35	187	—
68	Wp bay	Sedge STB	04:43	—	235
69	Wf oval	Sedge NEBs	04:52	198	—
70	Df red	NNTB	04:57	—	243
71	Wc bay	Sedge STB	04:59	—	244
—	Obs. disc. due to poor seeing + decreasing transparency.		05:03	—	—

1962
Sept 8/9
376

✓ Lunar: Dome study – Kies dome. 8" refl x 360
S-3 T-3

Slope meas.

U.T.	k
00:26	.35
00:36	.40
00:51	.35

Dia. est.:

Crater	fraction	
Kies	.25	00:30
Kies A	.80	
Kies B	1.4	
König	.55	
Bullialdus B	.70	
~~Nicollet~~ Max Wolf	.55 (EW dia)	

Dome f Wagner B

Slope	
00:44	.35
00:50	.35

Dia		
Wagner	1.0	00:45
Wagner B	1.7	
Hortensius	.95	
Hortensius A	1.0	

Photography with Moon Minox at 50, 180, & 360x (20 ASA) 1/2, 1/10, 1/50 sec

Saturn at 240x 1/2, 1/10, 1/50 sec } sky hazy

3 ✓ Jupiter 240x S-2 T-3

			U.T.	I	II
—	Obs. comm.		03:24	—	—
72	Wc oval	S edge STB	03:27	—	75
73	Wp notch?	N edge NEBn	03:32	—	78
74	Wf oval	S edge STB	03:40	—	83
75	Wc notch?	N edge NEBn	03:43	—	85
76	Wf notch?	N edge NEBn	03:53	—	91
—	Obs. disc. due to poor seeing & wind.		04:02	—	—

1962
✓ Sept 12/13 ✓ Jupiter 8" x 240 S -3-2 T -3-0
377

			U.T.	I	II
—	Obs comm		04:31	—	—
77	Wp. bay	S edge STB	04:35	—	358°
78	Dp Rs	STrZ	04:43	—	3°
—	Clouded out		04:43	—	—

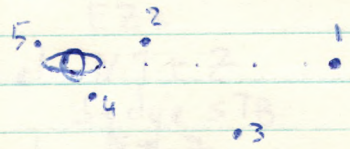
✓ Sept 15/16 ✓ Saturn: Intensity estimates: 00:45 – 01:00 UT.
378 8" refl x 240 S-4-2 T-3

Outer part ring B	9.0 st.
NEBs	~~5.0~~ 4.5
Ring C on ball	2.0
NEBn	5.0
Ring A	6.0
Inner part ring B	7.0
EZ	7.5
NTrZ	6.5
NPR	5.5

No belts seen between NEBn & NPR. Crape ring not seen in ansa ← field star?

Satellites:

01:05



1 Titan
2 Rhea
3 Iapetus
4 Dione
5 Tethys

✓ Jupiter: 8" x 240 S-3-4 T-~~3~~4

			U.T.	I	II
—	Obs comm.		02:03	—	—
79	Wp bay	S edge STB	02:04	—	358
			Io 02:11	—	—
80	Dp Rs		Cin 02:13 ←	—	3
			ni 02:16	—	—
81	Wf rift	NEBm	02:18	—	6
82	Wc bay	S edge STB	02:20	—	7
83	Dc elongcond	S edge NNTB	02:28	—	12
84	WF bay	S edge STB	02:34	—	16

900

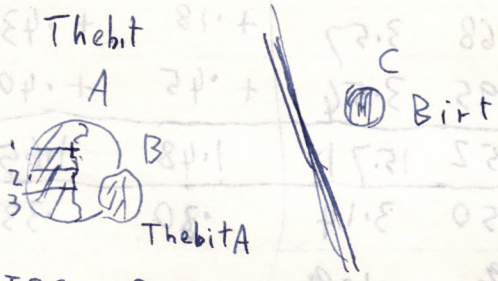
				UT.	I	II
			lo	02:31	—	—
84	Dc RS	STrZ	cen	02:32 ←	—	15
			hi	02:33	—	—
86	Dp sect	NNTB		02:40	—	19
			lo	02:43		—
87	Df RS	STrZ	cen	02:48 ←	—	24
			hi	02:51		—
88	Wp bay	Nedge NEBn		03:06	—	35
89	Wc bay	Nedge NEBn		03:13	—	39
90	Wf bay	Nedge NEBn		03:21	—	44
91	Wp rift	Sedge NEBs		03:26	180	—
92	Wc rift	Sedge NEBs		03:43	190	—
93	Dc fest	STeZ		03:44	—	58
94	Wp oval	Sedge STB		03:51	—	62
95	Wp rift	EZs		03:54	197	—
96	Df sect	NNTB		03:55	—	65
97	Wf rift	Sedge NEBs		04:01	201	—
98	Wc rift	EZs		04:03	202	—
99	Wc oval	Sedge STB		04:05	—	71
100	Dc proj	Sedge NEBs		04:07	205	—
101	Wp v.b. oval	NTrZ		04:08	—	73
102	Wf rift	EZs		04:09	206	—
103	Wc v.b. oval	NTrZ		04:18	—	79
104	Wf oval	Sedge STB		04:20	—	80
105	Wf v.b. oval	NTrZ		04:33	—	88
106	Wc nodule	STeZ		04:39	—	91
107	Wp rift	NEBZ		04:51?	—	99
108	Wc rift	NEBZ		04:57	—	102
109	Wp v.b. oval	Nedge NEBn		05:04	—	106
110	Wf rift	NEBZ		05:07	—	108
111	Wc v.b. oval	Nedge NEBn		05:15	—	113
—	Obs. close.			05:16	—	—

1963
March 10 Green flash observed at sunset. Temp = 24°.
379

Apr. 5 Green flash observed at sunset. Temp = 30°
380

MAY 1/2, 1963
6" REFR X220
S-3 T-3

STRAIGHT WALL AREA



ESTIMATES OF INTERNAL SHADOWS

OBJ.	EST TIME	f	Comp
A 1	9:41	.48	A
		1.0	B
	42	1.4	C
A2		.50	A
	43	1.1	B
		1.3	C
A3	44	.38	A
		1.0	B
		1.2	C
B	45	.28	A
	46	.75	B
		1.0	C
C		.22	A
	47	.65	B
		.78	C

1963

May 1/2
381

Lunar: Shadow estimates in Thebit, Thebit A, & Birt (see opposite page.

May 15/16
382

Variables:

Star	U.T.	Sky	Instrument	Observations	Class	Notes
V Boo	02:20	2	6RX60	8.0(1)V(4)9.0	3	Poor comparison
				V(1)9.0(1)9.2	3	star (2° away)
						'Scope chart

May 25/26
383

Lunar Photography 21:15 - 21:25 EDT 8" refl.
N wall: 1/50, 1/25, 1/10, 1/5, 1/2, 1 sec
S wall: 1/50, 1/10, 1/2 sec, long exposure with hand shutter, short exposure with do., 1 sec, 1/5 sec
Erico barlow, pentax, plus ~~x~~ improved. Moon in trees
S - 2 T - 4 (twilight)

Variables:

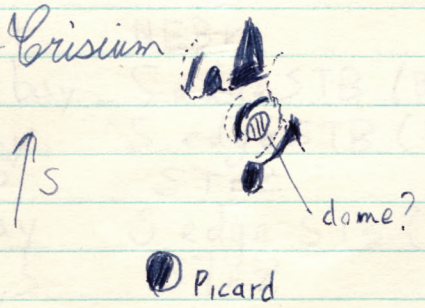
Star	U.T.	Sky	Inst.	Observations	Class	Remarks
V Boo	02:20	2	8LX50	V = 9.2	1	
R Drac	02:50	2	8LX50	~~8.3; V ~~ 9.4; 9.2~~ i.e. V = 8.1	2	
R Serp	03:15	2	8LX50	V = 9.6	2	

May 26/27
384

Lunar: Dome Survey: 8LX360 S-3 T-4

Mare Crisium

01:55 UT



Variables:

Star	U.T.	Sky	Inst	Observations	Class	Remarks
V Boo	03:23	3	8LX50	9.3	2	
R Dra	03:30	3	8LX50	8.3	2	
R Ser	03:35	3	8LX50	9.5	2	

Calong = 23°2

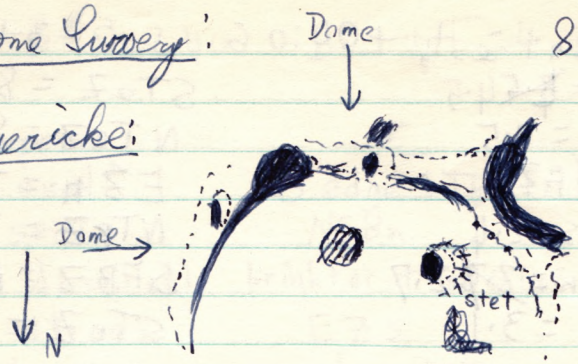
1963
~~June 30, 1963~~
June 30/July 1
385

Lunar: Dome Survey:

Guericke:

8" r.l. X 240 S-1-2 T-2

01:15 – 01:30 U.T.



Dome appeared perfectly spherical. About equal in size to crater in floor of it (Guericke A). No craterlet noted. Observation very difficult due to wind.

Aug. 18/19, 1963 Jupiter 8" X 240 S-3 T-4
386

				U.T.	I	II
—	Obs comm			04:26	—	—
1	Wp	oval	S edge NEB	04:30	107°	—
2	Wc	oval	S edge NEB	04:44	115°	—
3	Dc	cond	NEBn	04:48	—	293°
4	Df	sect	SEBn	05:00	125	—
5	Wf	oval	S edge NEB	05:01	126	—
—	Obs. disc.			05:14	—	—
—	Obs. comm			05:30	—	—
6	Wp	oval	EZs	05:37	147	—
7	Dp	sect	SEBn	05:41	150	—
8	Df	proj	S edge NEB	05:45	152	—
9	Wc	oval	EZS	05:48	154	—
10	Wf	oval	EZs	06:02	163	—
11	Df	sect	NEBn	06:12	—	344
12	Wp	~~ova~~ bay	S edge STB (BC)	06:25	—	352
13	Wc	bay	S edge STB (BC)	06:39	—	0
14	Dp	RS	STrZ	06:42	—	2
15	Wf	bay	S edge STB (BC)	06:52	—	8
16	Dc	RS	STrZ	07:01	—	14
—	Obs. disc.			07:01	—	—

2:35

03:52 Int est, -04:06 S-3-4 T-4

SPR = ~~4.5~~ 4.5
NPR = 3.5
STB = 2.0
NEBS = 2.4
SEBn = ~~2.6~~ 2.7
EB = 3.1

STeZ = 8.0
NTeZ = 8.0
EZn = 7.5
NTrZ = 7.5
SEBZ = ~~4~~ 5.5
STrZ = 5.5
EZs = 5.0
~~NTrZ = 8.0~~

03:59
$\lambda_1 = 210°$
$\lambda_2 = 241°$

04:10
$\lambda_1 = 216°$
$\lambda_2 = 247°$

04:08 Conspicuousness 04:13

BELTS: NEBs, STB, SEBn, EB

ZONES: NTe-TrZ, STrZ, EZn, STeZ, EZs

04:21 With improved seeing I can detect the SEBs and what may be the NTB, although it seems too far south.

04:48 There appears to be a white streak within the NEBs just N of the large projection, but I cannot resolve it well enough to time its transit.

04:58:53 ± 2 sec

05:34 Sn Tr CM

KLAUS 622-1407

1963
SEPT 6/7
387

Jupiter 8L X240 S 1-4 T -4

			U.T.	I	II
—	Obs. comm		03:22	—	—
17	Wf oval*	S edge STB (FA)	03:24	—	220
18	Df sect	NEBn	03:29	—	223
	*oval decidedly brighter than STeZ.				
19	Wp streak	EZs	04:15	220	—
20	Dp lg proj	S edge NEBs	04:34	231	—
21	Wf white area	EZn	04:40	235	—
22	Dc lg proj	S edge NEBs	04:48	240	—
23	Wf streak	EZs	04:52	242	—
24	Df lg proj	S edge NEBs	05:01	248	—
—	Obs. disc.		05:02 1140	—	—

Sept. 15/16
388

Jupiter 8L X240 S -1-0 T -3-4

			U.T.	I	II
—	Obs. com		02:42	—	—
25	Wc oval	S edge STB (DE)	02:43	—	108
26	Wf oval	S edge STB	03:00	—	119
27	Wf lt sect	EZn	E 03:11	163	—
28	Wp elong oval	EZs	03:19	168	—
29	Dc ~~bro~~ lg proj	S edge NEB	03:24	171	—
30	Wc elong oval	EZs	03:29	174	—
31	Wp lt sect	EZn	E 03:33	176	—
—	Obs. disc. due to ~~to~~ atrocious seeing.		03:35	—	—
32	Wf elong oval	EZS	03:43	182	—

Sept 16/17
389

Jupiter 8L X240 S -0-1 T -3

			U.T.	I	II
—	Obs. com		02:58	—	—
—	Obs disc. poor seeing		03:06	—	—
—	Obs com		03:50	—	—
33	Wp oval	S edge STB (BC)	E 04:47	—	334
34	Wc oval	S edge STB	04:59	—	341
35	Dc cond	NEBs	05:03	29	—
36	Wf oval	S edge STB	05:13	—	350
37	Dp rod	S edge SEBn (SEBZ)	05:24	42	356
38	Dp dist?	NTrZ or NEBn	05:28	44	358
39	Dp RS	STrZ	05:38	—	5
—	Obs. disc.		05:38	—	—