

# REFLECTIONS / REFRACTIONS

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University Lowbrow Astronomers Monthly Newsletter

April, 2025, Vol 49, Issue 4

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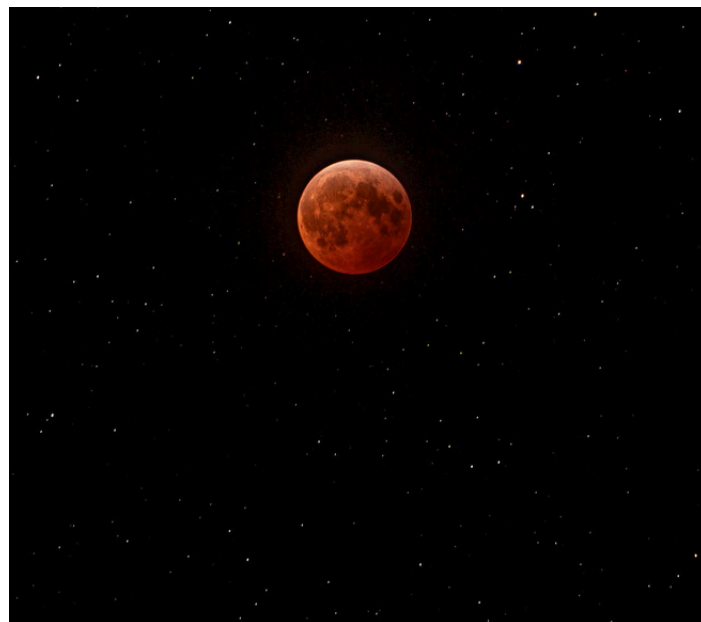


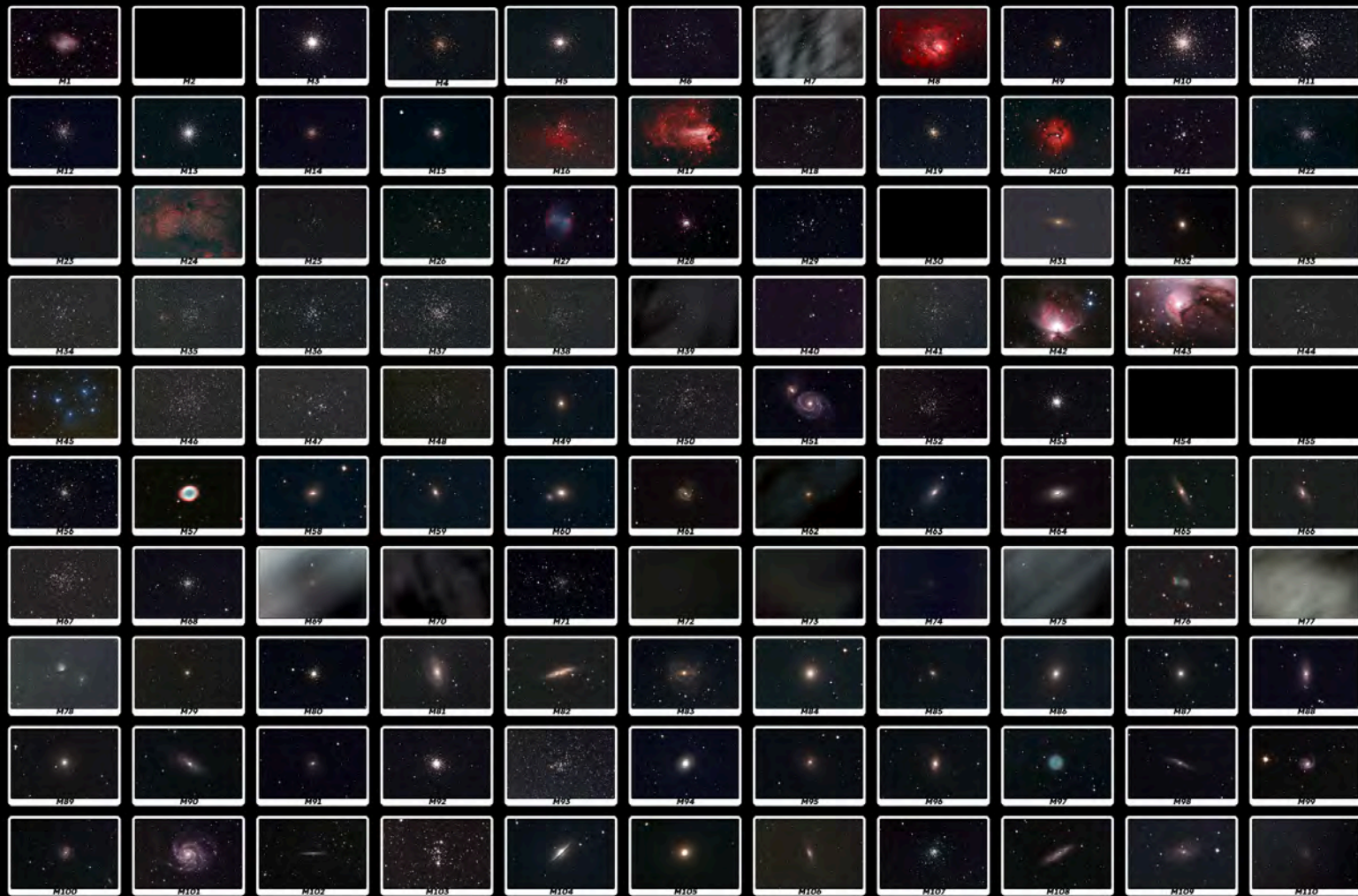
### **MARCH 14 LUNAR ECLIPSE**

Above:  
**PRITHVI DASGUPTA**  
Taken on Main St,  
Ann Arbor, MI

Right:  
**ADRIAN BRADLEY**  
With stars!

More eclipse photos at:  
<https://lowbrows.club/member-photos>





## Brian's Messier Marathon 3/22-23/2025

**FROM BRIAN OTTUM:** On Saturday, March 22-23, 2025 I hosted a Lowbrow Messier Marathon event. It was attended by Jim Forrester, Don Fohey, Alex Swartzinski, and Adrian Bradley. The skies started out promisingly clear, and the 32F wind was blowing cold. Luckily, the winds dropped off, but the windchill stayed at about 14F all night. Unfortunately, the transparency slowly degraded and made galaxies hard to find after midnight. The group enjoyed lots of snacks and a warm room inside. Lots of great storytelling. But one by one, folks left, leaving me alone after about 3 pm.

I wasn't the best host, with my face glued to my laptop. But my rig was working great, and Murphy had not visited. The ZWO 2600 color camera easily cooled to -32C, and the 6" f/2.8 kept focus pretty well. My AM5 mount did not point or track perfectly because the tripod's feet were slightly "squishy," riding on grass instead of firm dirt (mistakes were made). But the GOTO seemed to put the targets near the

center of the 2x3 degree field of view. The SharpCap program is super powerful, and I had invested dozens of hours to get comfortable with it. The program live stacked the 30-second images, 3-5 per object. I downloaded and printed one of the many websites that give you the recommended order of bagging objects depending on your location.

Things started to get difficult once Jim left me. Couldn't stay warm, high clouds started to form, and the -4day old moon came up at 4:30 am. Grr. But I was hopped up on caffeine, so I pressed on. Nearly froze my fingers while installing the NBZ filter so the camera could cut through the light and moon pollution. When pix started to look really bad, I couldn't figure out what was wrong. The clock was ticking - the sun was coming. A quick peek down the tube showed frost on the primary. Ug. So I ran inside and borrowed my wife's hair dryer.

**MESSIER MARATHON** continues, p.3

**MESSIER MARATHON** continues ...

The trees prevented good shots of several objects, but at least I could see evidence of something in the center.

Then I tried M54 and M55 just before dawn. Both showed super bright reddish images with no stars. What? I sighted across the tube to see that the scope was pointing really close to the Moon for both. No dice for those two. M2 was claimed by the trees on the SE horizon. And M30 is just plain impossible from Michigan on this night. So I got 106 out of 110. The Messier Marathon is truly a physical event. I was exhausted – hitting the bed as my wife was getting up.

It took 10 hours to capture all the images. It took another 10 hours for me to create this poster using Photoshop. I think I gave myself carpal tunnel.

### **JIM FORRESTER ALSO REPORTS FROM BRIAN'S HOME, SAME NIGHT:**

In March 2016, the Lowbrows staged a very successful Messier Marathon at Lake Hudson. Little did we know how hard it would be to organize another. The combination of member enthusiasm, weather, and a favorable moon proved difficult to repeat. Drop in the Pandemic and we found ourselves with a 9-year drought.

This year, as the spring equinox approached, only March 22 looked possible, as the long-range forecast for March 29 was very gloomy. March 22 looked to be cold with poor transparency; would it be worth the effort? 9 years on, this observer (and much of the rest of the club) was reluctant to endure a long night of 20-degree temperatures without shelter.

Coming to the rescue, Brian Ottum opened his home on the eastern edge of Saline. Don Fohey, Alex Schwartinsky, Adrian Bradley, and I took him up on his offer and had a great time. Brian was able to photograph most of the catalog, but we visual observers struggled with the poor transparency. Star clusters were easy, but galaxies often impossible. Nonetheless, we were able to bag scores of objects, I pulled in 45 before calling it quits at 03:30.

Again, many thanks to Brian for providing shelter and snacks. □

**APRIL 15, 7 PM**

**You're invited to  
Dean Regas' next class  
TOPIC: MESSIER  
MARATHON**



Astronomer and former co-host of PBS' Star Gazers is inviting you to his next monthly class for free.

### **Messier Marathon**

Tuesday, April 15, at 7 pm Eastern

Star clusters, nebulas, galaxies, and more. In the 18th century, astronomer Charles Messier catalogued more than 100 deep sky objects. Dean Regas shows you how you can find them all (well at least a lot of them).

To join that night, use this link and pass

Link: [https://us06web.zoom.us/j/89352147138?](https://us06web.zoom.us/j/89352147138?pwd=d6GaFznUIHIEINdpc5JZ7ptFV8kZ5.1)

pwd=d6GaFznUIHIEINdpc5JZ7ptFV8kZ5.1

Pass: 991422

If you can't attend but want a link to watch the recording at your convenience, please email Dean at [dean@deanregas.com](mailto:dean@deanregas.com)

Dean Regas, Your Astronomer  
Host of the Looking Up podcast  
<https://www.astrodean.com>

## **UPCOMING SPEAKER SCHEDULE**

### **April 18: Professor Gregory Tarle**

Topic: Cosmologically Coupled Black Holes

### **May 16: Jim Shedlowski**

Topic: The Many Dimensions of Russell Porter

### **June 20: Adam Kall (Kall-Morris, Inc.)**

Topic: (Retrieval and effects of space debris)

### **July 18: Kristina Collins**

Topic: Citizen Science Project to Monitor the Ionosphere

### **August 15, CLUB PICNIC**

### **September 19: Sebastián Garcia**

Topic: Telescopius Website and App



# MAKE VS BUY

BY TOM RYAN

When I was a kid, I had no money, so I was stuck with trying to make everything that I wanted. Everything that cost actual money, that is. This led to a lot of learning experiences, and I eventually decided that if I could buy something instead of making it, I would.

Well, I wanted an adapter that would let me fit my Canon RP camera into a 2" eyepiece focuser, without vignetting, so I could do prime focus astrophotography.

I could find adapters for 1.25" focuses and adapters for the older Canon cameras but not the RP; and I could even find adapters for 2" focusers and the RP camera, but they vignetted heavily. So, I resolved to make an adapter myself.

Fortunately, I already had a \$15,000 Colchester lathe, and some \$50 aluminum stock, but I had to buy a special boring bar (\$100) and some carbide threading inserts (\$90) and a paint gun and an air compressor (\$200) and some special Musou black paint (\$25), but then I was all ready to go.



Musou paint drinks light.



Make vs. Buy. Mine is the shiny one with a black interior.



Two camera adapters

Three days later (that's about thirty hours, for those of you keeping track of expenses), I finally had the adapter that I wanted. And, of course, I found one on Amazon just like it, that very day, for \$129.00.

I bought the Amazon one just for spite. But I like the one that I made better. □

# HENRY FITZ, AMERICAN TELESCOPE MAKER

BY PETER ABRAHAMS

Note from Lowbrow member Kurt Hillig

30-odd years ago in the pre-web days -- when I was the editor of Reflections -- I got into a conversation via Usenet (remember that?) with Peter Abrahams about the Fitz telescope at U of M. He'd written an article for the Journal of the Antique Telescope Society on Fitz and his telescopes; after some negotiation, he gave me permission to reprint a revised version in the Lowbrow newsletter, with the caveat that we don't distribute it any farther.

For various reasons, I never got around to putting this in the newsletter, and I only recently stumbled across it in my old files.

*Reprinted, with permission, from the Journal of the Antique Telescope Society, Volume 6, Summer 1994 (revised 1995).*

Henry Fitz was preceded by the earliest American telescope makers, notably Amasa Holcomb, and followed by Alvan Clark, the most important maker from the United States. Fitz was the first important American telescope maker because his pioneering techniques of local correction of poor quality glass allowed him to construct the largest American-made refractor on five different occasions. From 1840 to 1855, Fitz made forty percent of all telescopes sold in the U.S., and manufactured eighty percent of all astronomical telescopes made in the U.S. American made telescopes were much less expensive than those from Europe, and local manufacture was an important factor in the proliferation of observatories in Nineteenth Century America (from zero in 1820, to two hundred to three hundred by 1900.)(1) Fitz played an important role in the development of astronomical photography, and the creation of the first telescope specifically designed for photography was interrupted by his early death. His use of innovative optical designs is epitomized by his largest instrument, a sixteen-inch dialytic telescope, with a singlet objective and a doublet corrector in the middle of the tube. Fitz' self-confidence is further shown by the extreme thinness of his flint elements, to one twentieth of an inch, in an attempt to minimize imperfections in the glass. This combination of mechanical ability and fearless inventiveness in a self-taught optician promised a spectacular career that was cut short by accidental death in 1863.

Henry Fitz was born in 1808 in Newburyport, Massachusetts, and from his youth was interested in science and mechanics. When fifteen years old,



Henry Fitz, circa 1840-42, daguerreotype

he made a telescope using a lens from a pair of eyeglasses.(2) By the 1830s, he was a locksmith and well-known as an amateur astronomer. Among his acquaintances was Alexander Wolcott, who was working on a speculum mirror for a Cassegrain reflector. Fitz acquired the half-finished blank and, after a great deal of work, completed it in 1837. More specula followed, and many nights were spent in observation of the stars and critique of the instruments. From August to November of 1839, Fitz was in Europe, educating himself on astronomical and photographic optics. He established the contacts for his future supplies of glass, learning that the French were the makers of the best quality glass (due to the glass tax in England that required a duty be paid with each melt of the multi-stage purification process for optical glass.) Opticians in England and Germany taught Fitz the techniques of sawing and grinding glass from shapeless lumps to finished lenses. In France, he learned the new Daguerrotype photographic process. The degree to which Fitz overcame the natural reticence of old-world craftsmen to divulge their techniques is unknown, but he returned from the brief journey with increased skills and initiative.(3) Back in America, and in partnership with Wolcott, Fitz developed a patented Daguerrotype camera with shorter exposure needs than earlier models, and in 1841 opened a successful photographic studio in Baltimore. This success allowed him to continue his experiments in optics and chemistry and to marry Julia Ann Wells in June of 1844.

HENRY FITZ continues, p.6

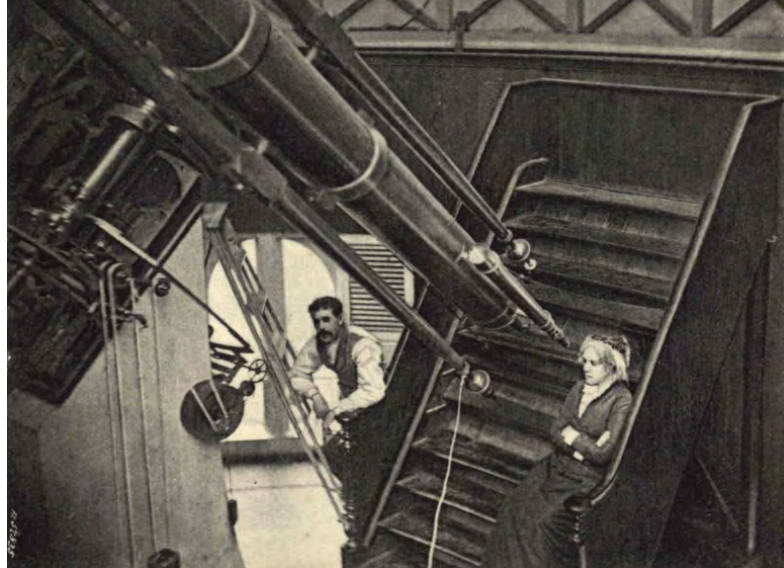


Her memories, quoted by Lewis Rutherford,(4) include the making of doublet lenses, with the flint element ground from the bottom of a tumbler and the crown element made from plate glass. Working after the studio closed, often until two or three AM, Fitz finally succeeded in January of 1845 in finishing an achromatic lens of high quality. With this achievement, Fitz began making telescopes full time. He invented and built foot power machines for the grinding of lenses and trained employees to do all but the final polishing. Elisa Robinson was a female employee of Fitz in 1846, who was paid \$3.50 a week, and the man running the rough grinding machine earned \$1.00 a day. Robinson was memorialized in mannequin form in the exhibit displaying the original Fitz workshop (now in storage) at the U.S. National Museum of American History.(5) Fitz was secretive and did not train any employee in all the steps of telescope making, reserving the final figuring for himself. John Byrne was a Fitz apprentice who manufactured telescopes under his own name in the 1870s and 1880s,(6) and who probably taught himself how to finish a lens. Unfortunately, Fitz did not commit his methods to paper, for his achievements would be better understood if he had left a clear record.

Fitz completed a six-inch refractor for the American Institute Fair in October of 1845 and received a gold medal and notices in the press. He invited the public to view the stars and attracted a crowd so large that he had to suspend viewing until they dispersed. The problem was solved by charging 25 cents per spectator, gaining Fitz \$33 in a week of operations.(7)

In November of 1848, Fitz received an order for a six-inch refractor to be used in an astronomical expedition to Chile by Lt. James Gillis, (who from 1837 to 1841 was in charge of the Depot that was to become the U.S. Naval Observatory.) Fitz made three six-inch objectives in five months, two of which proved to be of inferior glass. The third was tested against a Fraunhofer lens and judged equal to that high-quality German import. In the patriotic fervor of antebellum America, this was an important achievement in the drive to be equal to and independent of Europe.

During 1849, Fitz delivered a 5.6-inch telescope to Erskine College in Due West, South Carolina. This is



**Maria Mitchell, Vassar College Observatory, using a Fitz telescope, June, 1878**

thought to be Fitz's first observatory instrument, for which he received \$1,050. The wooden tube has miraculously survived vandalism to the observatory, including bullet holes found in the dome. This telescope was restored by Robert Ariail and is now in working order.(8)

Robert Van Arsdale owned a private observatory in Newark, New Jersey, and in 1849 or 1850 bought a Fitz comet seeker with an aperture of four to five inches. Within a year, he purchased a 6 3/8 inch Fitz mounted on an equatorial stand by Jacob Phelps of Troy, New York. Phelps provided the mounts for many Fitz telescopes. Van Arsdale was an avid comet hunter, a popular branch of amateur astronomy for which an altitude-azimuth mount was more appropriate.(9)

In 1851, South Carolina College at Columbia, S.C., bought a 6 3/8 inch Fitz for \$1,200. The telescope was in use for the next decade, but after the Civil War was stolen and broken up for scrap brass.(10) Haverford College in Pennsylvania purchased an eight-inch refractor in 1852,(11) which was refigured by Alvan Clark and Sons in 1880.

Fitz made a 9 3/4 inch refractor for West Point Academy in 1856. Costing \$5,000, this telescope was 14 feet long and came with 13 eyepieces. In 1875, Alvan Clark and Sons refigured the objective. West Point transferred its astronomical instruments to the University of Texas sometime near 1910, and the Fitz was acquired by St. Mary's College in San Antonio in 1952.(12) The history of the West Point Fitz is being assembled by James Gort, who is also restoring the original tube.

**HENRY FITZ** continues, p.7

For the University of Michigan in Ann Arbor, Fitz made a 12 1/4 inch telescope with a 17 foot focal length. Completed in December, 1857, this was the largest American-made telescope and the third largest refractor in the world, behind the 15-inch instruments at Harvard and Pulkowa Observatories. Delivered with seven negative (Huygens) and six positive (Ramsden) eyepieces, clockwork, and eyepiece micrometer, this telescope cost \$6,000.(13) The original tube was of pine, with a mahogany veneer, but was replaced in 1907 by a steel tube. The clockwork was not powerful enough to provide an even motion and was replaced at the same time, along with the manual slow motion controls and eyepiece holder. However, this instrument is probably the most important surviving Fitz telescope because it is the largest objective to escape refiguring by late nineteenth-century custodians. Several other 12-inch Fitz telescopes survive, but their objectives were re-ground and polished by Alvan Clark and Sons to correct them to the higher standards of a later era. The University of Michigan Fitz has remained on its limestone pedestal for 138 years and is in working condition to this day.(14)

In 1858, Fitz displayed a 6 3/8 inch telescope at the American Institute Fair, and with it showed fairgoers the impressive Donati's Comet, until October, when the entire Fair was destroyed by fire.(15) The year 1861 saw the delivery of a 13-inch Fitz to Allegheny Observatory in Pittsburgh. This instrument cost \$7,000 and was ornamented with strips of red and yellow brass. In 1872, the lens was stolen, held for ransom, and somewhat damaged before its rescue, when it was repaired and refigured by the Clarks.(16) The instrument was later rebuilt and remounted by John Brashear.

The largest and most innovative Fitz telescope was completed in 1861 for William Vanduzee of Buffalo, New York. This was the largest telescope in America and had a single element 16-inch objective, with a smaller, two-element corrector lens midway down the tube. This system was known as a dialitic telescope, easily confused with the dialytic optics that used liquid lens elements between glass, made in England in the 1830s.(17) The dialitic lens had been described in print since 1828 and was, in part, an attempt to overcome the ever-present difficulties with inferior glass. This refractor was purchased by



1850 shop advertisement

Vanduzee for the education of his two daughters. The telescope was moved to Lancaster, N.Y. in the 1870s, where the observatory was known to exist until before World War I. Nothing is known of the 16-inch Fitz after that time, nor of the quality of image formed by this interesting instrument.(18)

Dudley Observatory in Albany, N.Y. bought a 13-inch Fitz on an equatorial mount in 1863. The fifteen-foot tube was made of one-inch strips of mahogany, beveled and glued to make a cylinder. When the Clarks were called to correct its optics in about 1877, they found that the extreme thinness of the flint element permitted only minor corrections.(19) The 12 1/2 inch telescope made for Vassar College in the 1860s was more thoroughly reground by the Clarks in 1868, who later repaired the telescope drive.(20) This instrument is now at the Smithsonian Institution. Another 12-inch Fitz, owned by New York banker Jacob Campbell, was also reworked by A. Clark and Sons and now has a Clark nameplate on a wooden tube that is likely a Fitz product. Wellesley College is the current owner of this Fitz.(21)

The foregoing itemization of Fitz telescopes is based on the writings listed here as footnotes, which contain much contradictory material, anecdotal narratives, and tentative speculation. This is not a reflection of a lack of scholarship but an inevitable outcome of the lack of reference material on the subject and the infancy of the field. There also may be errors in this research project. More productive than a dry relation of dates and instruments is an examination of Fitz's personal relationships and of his artful techniques of telescope making.



Elijah Burrit, famous for his star atlas, *The Geography of the Heavens*, declared in later editions of the companion volume to the atlas that he had been well acquainted with Fitz and used a "perfectly achromatic" six-inch Fitz for most observations.(22) Maria Mitchell used a comet seeker of short focus by Fitz that still survives, with its original wooden tube, at the Maria Mitchell Observatory in Massachusetts.(23) Most important of Fitz's acquaintances was Lewis Rutherfurd, a wealthy amateur astronomer, lawyer, and trustee of Columbia University.

Immediately after Fitz's first exhibit, at the 1845 Fair, Rutherfurd ordered a four-inch telescope. In 1847, he bought a six-inch, sold in 1856 to Earlham College in Indiana, where all the optics were stolen in 1870.(24) An article by Rutherfurd in the *American Journal of Science* was highly complimentary of Fitz's work and led to the purchase of the six inch used in the Gillis expedition to Chile in 1849.(25) A 9-inch with a 9 1/2 foot focal length was bought for \$2,200 and placed in the Rutherfurd observatory on Eleventh Street at Second Avenue in New York City. This f12 telescope was short focus for its day, a design requirement imposed by the size of the observatory dome, and necessitated more color correction than a longer refractor.(26) Rutherfurd also bought a 5 3/4 inch Fitz, and an 11 inch Fitz collaboration. The two men together explored astronomical photography, where the lens must be corrected for the blue colors to which photographic plates are most sensitive. Each refinement in the correction of a photographic objective must be tested by taking a picture, and the lens was not completed until December of 1864, over one year after Fitz's death.(27) Henry Fitz's 16-year-old son, Harry, assisted in the completion of this telescope and continued the business in a limited fashion for twenty years.

The technical innovations achieved by Henry Fitz were in response to the low quality of the glass available in his lifetime. The denser flint glass was very difficult to manufacture without streaks, irregularities, and bubbles, and the crown glass was only slightly less prone to imperfections. Fitz used American and European glass and tried making his own, but was forced to use fragile thin lens elements to minimize the imperfections. The dialytic design allowed the flint element to be a much smaller diameter and similarly minimized the effect of irregularities. Lenses ground from inhomogenous



Fitz's workshop, reconstructed at the Museum of American history.

glass have pockets of denser glass that refract and disperse the light to a different degree than the rest of the lens, scattering the light and blurring the image. Fitz would grind and polish the lens to its designed profile and test it on a star or an artificial star. His testing procedures could reputedly detect the thermal expansion produced by the touch of a finger on a cold lens.(28) When an imperfection was found in the assembled doublet, fine polishing was performed on a limited area of the outer element of crown glass. Alvan Clark's innovations allowed him to correct all four lens surfaces. Both opticians would polish with rouge, using their fingertips as pads. Fitz was using the technique by 1845 or 1846, Clark dated his process from 1848, and Leon Foucault published an account of local polishing in 1858.(29) In 1861, *Scientific American* printed an article on the Fitz business that discussed his practices but not his polishing secrets. By then, he had machines for cutting lens blanks, grinding tools of iron, and special polishing machines. It was noted that a 16-inch lens blank cost Fitz \$325.(30) An earlier practice of grinding the lens before sawing the circular blank, original to Fitz and designed to eliminate a turned-down edge, was replaced by the precise action of the machinery.

The imperfections of Fitz's techniques seemed obvious to those who decided to refigure almost all of his larger objectives. Testing procedures improved dramatically with time, and it is likely that the lenses needed the corrections they received. However, optical glass has always been very expensive, and it is possible that much of the reworking of large objectives was done because it was cheaper and easier to work on an old lens than acquire a new



blank. Research techniques including interferometry and autocollimation could reveal the extent of Fitz' ability to correct for the glass of his era. His inventiveness and productivity are already clear.

In 1863, Fitzs' business was achieving some success. His son Harry was learning the craft, and plans were underway for a 240inch refractor. He had a house built for his family nearby to Rutherford's property and intended a trip to Europe at the end of the year. The Fitz family had just moved into the new home when a large chandelier fell from the ceiling onto Henry Fitz, who died several days later, on October 31, 1863. □

1. Sperling, Norman; Fair Play for Fitz: Henry Fitz Introduces the All-American Telescope. Rittenhouse, Vol. 3, #2, Feb. 1989.

also: Bell, Trudy; In the Shadow of Giants: Forgotten Nineteenth Century American Telescope Makers and Their Crucial Role in Popular Astronomy. Griffith Observer, Sept. 1986

2. Lankford, John; In Search of Henry Fitz. Sky and Telescope, 9/84

3. Howell, Julia Fitz; Henry Fitz, 1808-1863. Holcomb, Fitz, and Peate: Three 19th Century American Telescope Makers. U.S. National Museum Bulletin 228, 1962

also: Sperling, 2/89, op. cit.; Lankford, op. cit.

4. Lankford, op. cit.

5. Warner, Deborah Jean; Elisa Robinson and Henry Fitz. Rittenhouse, vol. 1, #1, 11/86

6. Bell, op. cit.

7. Sperling 2/89, op. cit.

8. Briggs, John Wright; In Search of Neglected Telescopes. Sky and Telescope, 8/83

9. Sperling, Norman; When Comets Were Discovered From Newark. Sky and Telescope, 8/79

10. Sperling, Norman; Having Fitz: Searching For Old Refractors. Popular Astronomy, 12/75

11. Lankford, op. cit.

12. Gort, James; personal correspondance, 4/7/94

also: Loomis, Elias; An Introduction to Practical Astronomy. Harper, N.Y., 1855. pp.496-497

also: Sperling, 2/89, op. cit.

13. Loomis, op. cit., p496

14. Publications of the Astronomical Observatory of the University of Michigan, vol. 1, 1912. Ann Arbor, Michigan, 1912

15. Sperling, 2/89, op.cit.

16. Warner, Deborah Jean; Alvan Clark & Sons, Artists in Optics. Smithsonian Institution Press, Washington, D.C., 1968. p40.

also: Lankford, op. cit.

17. King, Henry; The History of the Telescope. Charles Griffin & Co., London, 1955. pp189-191

18. Lankford, op. cit.

also: Sperling, 12/75, op. cit.

19. Lankford, op. cit.

also: Warner, op. cit., p58

20. Warner, op. cit., p104

21. Warner, op. cit., pp. 45 & 107

22. Burritt, Elijah; The Geography of the Heavens. Sheldon & Co., N.Y., 1874. pp317-318

23. Sperling 12/75, op. cit.

24. Sperling 12/75, op. cit.

25. Lankford, op. cit.

26. Loomis, op. cit., pp496-497

27. King, op. cit., pp290-291

also: Learner, Richard; Astronomy Through The Telescope. Van Nostrand Reinhold Co., N.Y., 1981, pp88-89

28. Genzmer, George H.; Henry Fitz. Dictionary of American Biography, vol. 3, p433. Scribner's, N.Y., 1959. Refers to the New York Tribune of Nov. 7, 1863.

29. Sperling, Norman; presentation at Riverside Telescope Maker's Conference 1975, reviewed in Sky and Telescope, 10/75, pp256-259.

also: Sperling 2/89, op. cit.

also: Lankford, op. cit.

also: Sperling 12/75, op. cit.

30. Lankford, op. cit.

# TREASURER'S ANNUAL REPORT

BY DOUG SCOBEL

## Treasurer's Report for Fiscal Year April 1, 2024, to March 31, 2025

*Doug Scobel, Treasurer*

### Overview:

We have \$13,787.87 in the treasury, an increase of \$759.31 above last year.

We have 213 memberships, an increase of 12 compared to last year. Our membership categories break down as follows:

- 53 Family/Individual (24.9%)
- 108 Senior (age 55+) (50.7%)
- 4 Student (1.9%)
- 32 Reside outside of Michigan's lower peninsula (15.0%)
- 16 Lifetime/Honorary/Hardship (7.5%)

### Balance Sheet:

#### Income

Dues collected	\$3,870.00
Astronomical League	\$409.50
Donations	\$20.00
Shirt/Cap sales	\$119.00
Shipping/mailing	\$35.30
RASC publications	\$1,098.00
Miscellaneous	\$139.81

**Total Income** **\$5,691.61**

**Balance 01 April 2024** **\$13,028.56**

**Income** **\$5,691.61**

**Expenses** **\$4,932.30**

**Balance 31 March 2025** **\$13,787.87**

**Net Increase (Decrease)** **\$759.31**

#### Expenses

Open house "hotline"	\$190.20
Newsletter print/mail	\$37.63
Astronomical League	\$392.50
Donations	\$1,010.00
Shipping/mailing	\$42.92
Miscellaneous	\$569.13
Observatory/equipment	\$1,289.92
Guest speakers	\$250.00
RASC publications	\$1,150.00

**Total Expenses** **\$4,932.30**

**Shirt Inventory** **91**

**Cap Inventory** **32**



### **Income and Expense Details:**

This year, 43 Lowbrows are also Astronomical League members, an increase of 6 compared to last year. The income side represents the dues our members paid for their membership in the A.L. through the Lowbrows. The expense side represents what we paid for our membership as an A.L. member society. The difference between the two amounts is the \$10.00 annual fee that the A.L. charges its member societies, plus a few members paid ahead for multiple years' worth of A.L. membership.

Donations are the amount we received from several members that included them with their membership dues payments. All these donations (however small) from members are greatly appreciated!

We had four donations going out. \$200.00 (annually now beginning last year) to the Vatican Observatory Foundation (think Brother Guy), \$250.00 to Dark Sky International (previously known as the International Dark Sky Association), \$500.00 to the Great Lakes Association of Astronomy Clubs (GLAAC) in support of the annual Astronomy at the Beach star party, and \$60.00 to sponsor the Peach Mountain Clear Sky Chart.

Shipping/Mailing income was payment from members for shipping Lowbrow apparel items that they purchased. Similarly, shipping and mailing expenses were for mailing those items, and for mailing shirts and caps to a couple of our guest speakers.

The RASC publications expense line item is the cost of the 2025 issues (25 each) of the Royal Astronomical Society of Canada (RASC) observer's calendars and handbooks. We purchased them from the Astronomical League, instead of directly from RASC. The RASC publications line item is the total amount that our members paid for them. The difference is because the club purchases a handbook for the observatory and a handbook for our club president as our way of saying "Thank you!"

Our main miscellaneous expenses were \$200.00 for our annual rental of our USPS post office box, and \$294.41 for food and refreshments provided at the July meeting at EMU. The rest was for costs associated with web hosting our WordPress website, a check order, and other smallish banking and PayPal fees.

The Miscellaneous income is mainly from member Ken Ruble's purchase of the club's Cave Astrola 6-inch f/8 telescope. The rest is from a personal check of mine that I mistakenly deposited to the Lowbrows' bank account instead of my own. I paid myself back, and that amount (\$14.81) is included as part of the Miscellaneous expense line.

Observatory and equipment expenses consisted of \$42.39 for a new eyepiece focuser for the club's Cave Astrola 8-inch f/7 Dobsonian, \$45.40 to replace the battery charger for that same telescope, \$420.16 to replace the McMath's Argo-Navis controller, \$518.29 for the club's new loaner Seestar S50 telescope and leveler, \$245.96 for an additional heater for the observatory, and \$18.08 for replacement anti-dew heat lamps in the observatory.

Our speaker expenses were for a \$50.00 gift certificate for April speaker Jeff Kopmanis, a \$50.00 gift certificate for January guest speaker David Gerdes, and a \$150.00 monetary gift to March guest speaker Richard Goodrich.

Note: Because of space limitations in the newsletter this report is necessarily brief. If you have questions or would like further details about anything outlined here, then please do not hesitate to contact me.

Our meeting at the Detroit Observatory was called to order by Charlie Nielsen at 7:32 PM.

Richard J. Goodrich gave an interesting talk entitled "Fear and Loathing in the Heavens" on the 1910 return of Haley's comet, drawing from his book "Comet Madness". The yellow journalism at the time hyped up the uncertainty around the comet, questioning if humanity would survive earth passing through the tail of Haley's comet. Austin Edminster mentioned that the second director of the Detroit Observatory wrote a book debunking many myths regarding comets and Haley's comet in particular. Also there is an image in the Detroit observatory of the 1910 Haley's comet appearance taken through the Fitz telescope.

Our business meeting began at 8:35 PM

Charlie brought up the Messier marathon on Saturday March 22nd and possibly March 29th. Peach Mountain or Lake Hudson are both possible locations. Weather will be very brisk, so dress accordingly.

Club officer elections will happen at our next meeting on Friday April 18th at the Detroit Observatory. Nominations will be accepted into the next meeting, please contact Charlie if you are interested in running.

The Westland Library event has been rescheduled to Friday June 6th.

Night Sky Network (NSN) has sent handouts/small posters on The Marvelous Moon. Which we can probably use for Moon and Mars night at the Ann Arbor District Library (AADL) on April 5th and May 3rd.

VP Brian Ottum offered to host a Messier Marathon observing party on Saturday 22nd in his backyard. He can provide a warm place with snacks and a bathroom to help with the expected cold temperatures. He plans to build a large Messier map with picture of all the objects club members observe. Please contact him via email if you plan to attend.

VP Don Fohey mentioned observing from Independence Park two weeks ago. A report on the event will be in the newsletter.

VP Ken Cook had no response yet from a potential speaker at the U of M.

Treasurer Doug Scobel emailed his report: As of March 21st, 2025 we have: The Club has 213 memberships. Since our previous meeting on February 21: Doug made our usual monthly payment to AT&T for our Open House "hotline". He sent a t-shirt to February guest speaker Jeff Macleod.



He reimbursed Jeff Kopmanis \$34.12 for our annual web hosting costs. On April 1, Doug will provide the detailed end-of-fiscal-year report covering April 1, 2024, through March 31, 2025. Doug is willing to serve as treasurer for next year.

Observatory Director Jack Brisbin reported that U of M is investigating bringing U-M network service onto Peach Mountain. Project manager Katherine Seeburger contacted the club asking if there was any interest and what our usage would be. We will provide more information as U-M reviews and decides if the cost is justified.

April 5th is the Ford Astronomy Club conference and swap meet. Jack has a table and will sell a few long unused, extra items from the observatory. Please contact Jack via email if you would be interested in selling items at the Ford Club's 2026 event; he is planning on reserving a table.

The observatory heaters are performing well. The observatory building is in good condition.

Jim Forrester mentioned that registration is now open for the Oakie-Tex star party beginning September 15th. While it is a 1300 mile drive, the location has the darkest skies many lowbrow attendees have ever seen. Past attendees recommend making the trip at least once to this impressive event.

Adrian Bradley is planning on attending Astrocon in Bryce Canyon this year, where Brian Ottum will be presenting. This is also a very dark site with excellent events and viewing. Adrian has an article in the June 25th issue of Astronomy magazine: [Chasing Nightscapes](#), on viewing auroras.

Austin Edminister had several sketches made by a U-M alumnus working at Case-Western of comet Donati from 1858. Interestingly, the comet had a curved tail.

At 9:08 PM, Adrian Bradley made a motion to adjourn with support from Ken Cook.

Minutes respectfully submitted,  
Ken Cook, VP

## PLACES & TIMES

Monthly meetings of the University Lowbrow Astronomers are held on the third Friday of each month at 7:30 p.m. The location is usually the Judy & Stanley Frankel Detroit Observatory. The Observatory is located at 1398 E. Ann St., Ann Arbor. The Ann Street Parking Structure (M86), the Catherine Street Structure (M5), the Glen Street Structure (M61), and the School of Public Health II Lot are usually open after 6:00 p.m. Mon-Fri. The M86 structure is closest to the Detroit Observatory.

Peach Mountain Observatory is the home of the University of Michigan's 25-meter radio telescope and McMath 24" telescope, which is maintained and operated by the Lowbrows. The entrance is addressed at 10280 North Territorial Road, Dexter MI, which is 1.1 miles west of Dexter-Pinckney Rd. A maize and blue sign marks the gate. Follow the gravel road to the top of the hill to a parking area south of the radiotelescope, then walk about 100 yards along the path west of the fence to reach the McMath Observatory.



## PUBLIC OPEN HOUSE / STAR PARTIES

Public Open Houses / Star Parties are generally held on the Saturdays before and after the New Moon at the Peach Mt. Observatory but are usually canceled if the forecast is for clouds or temperatures below 10 degrees F. For the most up-to-date info on the Open House / Star Party status call: (734) 975-3248 after 4 pm. Many members bring their telescope to share with the public and visitors are welcome to do the same. Mosquitoes can be numerous, so be prepared with bug repellent. Evenings can be cold so dress accordingly.

Lowbrow's Home Page  
<http://www.umich.edu/~lowbrows/>

## MEMBERSHIP

Annual dues are \$30 for individuals and families, or \$20 for full time students and seniors age 55+. If you live outside of Michigan's Lower Peninsula then dues are just \$5.00. Membership lets you access our monthly newsletter online and use the 24" McMath telescope (after some training). Dues can be paid by PayPal or by mailing a check. For details about joining the Lowbrows, contact the club treasurer at: [lowbrowdoug@gmail.com](mailto:lowbrowdoug@gmail.com)

### Newsletter Contributions:

Members and non-members are encouraged to write about any astronomy-related topic. Contact the Newsletter Editor: Amy Cantu [cantu.amy@gmail.com](mailto:cantu.amy@gmail.com) to discuss format. Announcements, article, and images are due by the 1st day of the month as publication is the 7th.

### Telephone Numbers:

President:	Charlie Nielsen (734) 747-6585
Vice President:	Don Fohey Brian Ottum Ken Cooke Dmitri Tsahelnik
Treasurer:	Doug Scobel (734) 277-7908
Observatory Director:	Jack Brisbin
Newsletter Editor:	Amy Cantu
Key-holders:	Jim Forrester Jack Brisbin Charlie Nielsen
Webmaster:	Krishna Rao
Online Coordinator	Jeff Kopmanis

**A NOTE ON KEYS:** The Club currently has three keys to the Observatory and the North Territorial Road gate to Peach Mountain. University policy limits possession of keys to those whom they are issued. If you desire access to the property at an unscheduled time, contact one of the key-holders. Lowbrow policy is to provide as much member access as possible.

Email to all members  
[Lowbrow-members@umich.edu](mailto:Lowbrow-members@umich.edu)