REFLECTIONS / REFRACTIONS

University Lowbrow Astronomers

June2010

Volume 34 Issue 6

ALMOST HEAVEN

by Brian Ottum

This is a report of my spring break observing excursion to Calhoun County Park, West Virginia. I spent five great nights camping, observing, imaging, biking and visiting during April 2-7, 2010. This report also includes a review of the new Explore Scientific 30mm mega-eyepiece.

WHY WVa?

Calhoun County Park is known as one of the darkest places east of the Mississippi. It is the dark sky observing site for the Wilderness Center Astronomy Club, which is based SW of Canton OH. The Columbus Club also uses Calhoun.

http://cleardarksky.com/c/TWCACBrnWBkey.html?1

With my family out of town, I had the choice of going up to northern MI or Calhoun. The darkness is the same, so I chose to drive the extra 3 hours to gain 15 degrees Fahrenheit (and avoid frost). I got lucky, as they had near-record temperatures during my visit. It was in the 80's during the day, and 50's at night. Four of the five nights were clear, though I dodged some high clouds.

THE JOURNEY

I drove my little Winnebago to Calhoun on Good Friday. The GPS wanted to take me the shortest route, which contained boulevards with stop lights. The Winnebago does not like a lot of stop lights. So I was always fighting the GPS, and she kept on saying "recalculating" in her irritated tone. The fastest route turned out to be the Ohio Turnpike to Cleveland, I77 south to Parkersburg WV, then 50 miles of a twisty ribbon of

asphalt to the park. The total from my house in Saline was 375 miles, 7 hours exactly with stops. That last hour is some beautiful WVa mountain scenery, as the road follows the Little Kanawa River. Unfortunately, many locals were held up by some camper with an odd "NEBULA" license plate. I had checked out the park and nearby town of Grantsville using Google's "street view." It was a surreal déjà vu feeling when I was actually driving down those roads for the first time.

THE SITE

Calhoun County Park was originally a golf course, but being in the poorest county in the state, it has been converted to a park. The rounded tops of all the hills are grass-covered. The steep valleys ("hollers") are deeply forested, and teeming with wildlife. I had many deer and wild turkey visitors. There are many great observing spots, with near-perfect horizons, in the park. Another astronomer from Kentucky had chosen a high spot above the fishing pond, so I joined him. There's another spot nearer the entrance that features electricity, water, a picnic shelter and concrete pads (pit toilets close by – or the barn can be rented for $20/night to have a warm place to sleep inside).

The hiking and biking in and around the park are fantastic. The local Boy Scouts have created seven miles of trails through the woods, and I survived several of them. The mountain biking is quite "technical" with steep drops, climbs and a few logs to ride over. The road riding outside the park is an aerobic challenge, with frequent 300' climbs. The most adventurous ride I took was on a dirt road at the bottom of a holler. It had three river crossings, where I had to get off the bike, remove my shoes and socks, and carry the bike across. I was almost swept downstream during the final crossing, and thought that anyone watching would bust a gut. There's a History Village within the park, where buildings from the 1800's have been placed. It's a fun time to peek through the windows of the general store, post office and one-room schoolhouse.

SKIES and OBSERVING

Being on the top of a hill, it was easy to spot Venus and Mercury once the sun set. Then Mars with its tiny white polar cap. Of course, Saturn was a big hit. Despite the frequent high clouds that first night, we were able to see the good spring clusters (Auriga's M36, M37, M38, Gemini's M35+NGC2158, Beehive). The Pleiades were great in the binoculars. The Orion Nebula was distinctly green in the 14.5" reflector. For the first time, I was able to see the structure of the "Flame Nebula" NGC2024 in Orion. As the winter Milky Way set, it was time for galaxies: M81/82, M51 and M101. Then the clouds thickened at 12:30am and the long day started to weigh heavily. I peeked out of the camper to see the moon rising in the trees.

Calhoun County Park is quite remote, with dark skies. I was able to see stars to 6.1 magnitude at the zenith (meaning that I was there during a time of mediocre transparency due to the warm fronts). There are two significant light domes – Grantsville to the NE and Arnoldsburg + the local high school to the SSW. I get the sense that the SSW dome (rising up to 20 degrees) is rather new. It's sad that irresponsible lighting is encroaching everywhere.

There are no lights whatsoever in the park – the barn's bright light can be turned off from the outside switch. Some neighbors half a mile away have high pressure sodium lawn lights. Depending on your camping location, you may see no direct lights at all.

The best night of observing was my last. See the Explore Scientific Eyepiece Review for more details. After packing up the telescope at 2am, I could not go to bed without lying on the grass and taking in the sky. Very nice.

EXPLORE SCIENTIFIC EYEPIECE REVIEW

This is a truly huge eyepiece. Over 3lbs, 3.6" in diameter at the top. 30mm focal length, 82 degree apparent field of view. The actual field of view in my 14.5" f/4.3 Starmaster was over 1.6 degrees. I know this because when looking at the Ring Nebula, I was just barely able to fit in BOTH Sheliak (β Lyrae) and Sulafat (γ Lyrae). This is a breathtaking field of view.

The eyepiece has generous eye relief. My 49 year old eyes had no problem handling the 7mm exit pupil, once fully dark-adapted. This is the ideal eyepiece for either large objects or groups of normal-sized objects. M42 is simply amazing, allowing me to see the Running Man dark nebula for the very first time (in the same field of view as M42 and M43). I was able to resolve tiny and yellow NGC2158 next to M35. I was able to see the Flame Nebula and the faint nebula line that holds the Horsehead (but no Horsehead was seen and I did not have a H-β filter). The view of the Beehive makes you think you are *inside* the cluster. Nebulosity in M45 was apparent. I loved the Leo triplet, especially the edge-on NGC3628. M81 and 82 are perfect objects for this eyepiece.

My favorite and most memorable observing was "galaxy hopping" through the Virgo Cluster. Usually I associate this activity with cold weather, so it was a delight to observe in shorts. Too early in the season for mosquitoes! The ES 30mm was well-suited to tracking down Markarian's Chain. In fact, as I spotted dozens of galaxies and identified them with a chart, I saw no fewer than three galaxies in any random field of view. The maximum was 12 galaxies counted in a single field of view!

Now the drawbacks. First and foremost, my nose got in the way. Now I don't think I have an overly big nose, but I just did not know what to do with it when using the ES 30mm. The huge top diameter of 3.6" makes it IMPOSSIBLE for me to peer directly into the lens. I must turn my head and look 10-20° outward from dead-on in order to fit my nose alongside the rim. This is not a huge problem, but is annoying to me. If someone had a larger head, or smaller nose, this would be less of a problem.

Secondly, the eyepiece has significant coma in my scope. Not surprising, since I'm a fast f/4.3. But I sold my Paracorr after buying the Denkmeier binoviewer. This eyepiece requires a coma corrector. Only the central half of the FoV is in sharp focus. The next quarter has distortion, but not objectionable. The final quarter is objectionable (to me at least). BUT, this coma problem is primarily due to my telescope, and not this good eyepiece.

Summary of Positives: Fantastic wide field "you are there" views, allows you to fit in the huge objects or groups of objects, sharp (in center), no pincushion, good eye relief, excellent value for the money.

Summary of Negatives: Top diameter too wide for your nose, requires a Paracorr for focal ratios less than about f/5, magnification is too low in a <70" focal length scope to be the #1 main eyepiece.

SOUTHERN HOSPITALITY

I was treated with supreme southern hospitality throughout my trip. Shirley, a park board member, met me when I arrived. Nub and Jimmy, Confederate Civil War Re-enactors, were my in-park hosts. They enjoyed looking through the telescope, telling me stories and letting me shoot their authentic black powder guns.

Park president Henry stopped by with a gift of honey from his own hives. Shirley, the editor of the local paper, came twice to interview me and show her grandchildren the telescopes. The local online news site wrote an article about my visit http://www.newspapersites.net/magazine/the-hur-herald.asp (see 4/5/2010). Bob watched in horror as a gust of wind blew over my Lunt solar scope (it's now in for repairs). Larry brought the Boy Scout troop for a star party, and we made smores afterward. Everyone asked me when I was coming back, and hoped I'd bring many folks with me. Upon departure, I was presented with venison, chicken, pork, and beef.

RECOMMENDATION

I highly recommend Calhoun County Park as an observing adventure. The key advantages over Michigan are warmer temperatures, better scenery and more challenging hiking & mtn biking. The best times to visit are March/April and October/November. Feel free to contact me for more information.

Brian D. Ottum, Ph.D.

ottum@comcast.net or (734) 429-3559

For more information see the park's website

http://www.calhouncountypark.com/

An Observing Report – By Mark S Deprest

☐	Date:	May 15, 2010 – May 16, 2010
☐	Time:	21:30 – 04:00
☐	Location:	Tomahawk Lake SFC, Onaway, MI N45 13' 50" W84 10' 00"
☐	Conditions:	Sky 10/10; Transparency 9/10; Seeing 9/10
☐	LVM:	6.8 – 7.0
☐	Objects:	4 comets, 25 Arp Galaxies, 2 Quasars, Mars, Venus, Saturn & Moon.

The conditions were absolutely the best I've ever experienced with my 18" f/4.5 (a.k.a. Blondie), My eyepiece collection includes University Optics 32mm MK-80, Explore Scientific 20mm 100degree, ES 14mm 100degree, ES 9mm 100degree, TeleVue Nagler 7mm, TV Nagler 4.8mm.

After observing the planets and the moon (waiting for astronomical darkeness), I quickly move on to Comets: C/2009 K5 McNaught at 10.1ml; C/2007 Q3 Siding Springs at 12.2ml, 81P Wild at 10.4ml, and P/2010 H2 Vales at 12.0ml.

Quasars: Makarian 205 and QSO 3C275

Arp Galaxies: 84, 90, 136, 85, 26, 178, 269, 23, 266, 281, 242, 159, 163, 313, 294, 305, 189, 76, 116, 152, 120, 87, 288, 277 & 240

As the night progressed I went after some of my favorite big, bright and chunky objects M51 was incredible the amount of detail seen was near long-exposure image quality, M57 the central star and IC1296 a 15.1 magnitude Barred Spiral just 4' to the northwest (this was a first for me visually), M13 and NGC6207 were breath-taking in the ES 20mm 100degree and another first for me visually was IC4617 at 15.6magnitude which sits 14.5' north-northeast of the center of M13 (just about half-way between M13 and NGC6207.

The temperature dropped quickly and by 04:00 it was 38 degrees and the dawn was approaching, my cot and sleeping bag we calling, so I packed up and went to bed.

LOWBROW ASTRONOMERS TAKE OVER ANN ARBOR SCHOOLS

Charlie Nielsen -May 18, 2010

Admittedly, the title of this article is a slight exaggeration. However, the University Lowbrow Astronomers have recently been on a tour of Ann Arbor elementary schools. The seed for this program was a result of our club's Saturday Morning Physics presentation in March of 2009. An Enrichment Facilitator for Ann Arbor Public Schools was in attendance and favorably impressed with our program. Last fall I was contacted by Lisa Bankey, who informed me that several Ann Arbor elementary schools were doing an astronomy class and they thought it would be really cool if our club could do something to enhance their efforts. In my discussion with Lisa we defined, at least roughly, what we might actually do for them. Obviously, the Saturday Morning Physics program would be too advanced for the target age group, but the general idea of what we do and how we do it still seemed like the foundation for a presentation that the kids could learn from and enjoy while doing it.I then went on the recruitment trail to find some fellow Lowbrow Astronomers that could dedicate some time for this, and to make matters more difficult we had to do the program during regular business / working hours. Somehow, it seems like our club always comes through on these endeavors, and this was no exception. The team members for this project changed as we went along, which is understandable given the hours. The initial team consisted of this author, Dave Snyder, Yumi Inugi, Yasu Inugi, Srini Sundararajan, and Bobby Gruszcyinski. I provided an explanation of the general idea and the team took off. Yasu wrote up a proposed program that accomplished our objective and was targeted well for the age group we thought we would be dealing with. It was so on target and well designed that we all endorsed it with little modification.

It went like this: Since we would be dealing with as many as 75+ students, it would be easier for us and them if we start out by splitting them into two different groups doing two different parts of the program. This required two rooms; a classroom, and the school's multi-purpose room which is usually the largest room in the building. In the classroom one of us used our laptop computer to run the freeware astronomy program Stellarium, projected on the room's screen. The students were all given Uncle Al's Star Wheels, which is a free planisphere. But, we made them actually make the star wheels first. We wanted the whole program to be very "hands on", and you will see that idea carry over to the other part of the program. At this point I wish to thank Jim Forrester, whose printing company printed the star wheels for a very low cost. It consists of two sheets of heavy "card stock" paper with an image on each one. Both sheets need to have cuts made, and one has a portion that must be folded over and stapled or taped. Jim even scored the fold over portion, and drilled scissors starter holes in the other sheet where one part is an interior cutout. I sent Jim a little text insert which said compliments of University Lowbrow Astronomers, and listed our website. After the kids assembled the star wheels we showed them how to hold and use them. Then Stellarium was used to dial in some various dates and times and we had the kids match the screen with the star wheels. We also had them do it the other way around. Sometimes a student would select some date many centuries into the future, which was a great opportunity to explain stellar motion. Of course the students kept the star wheels to take home, and hopefully show their parents and siblings.

Meanwhile in the big room, we started out by showing the kids a short slide show that dealt with how to handle a telescope, how they work, and why they should respect them and handle them with care. After the slide show we had the kids break into smaller groups of about 5 each and go up to some tables where we had several small telescopes set up. Four of these scopes were Celestron Firstscopes (3" table top DOB) that were purchased and owned by the club, plus a fifth one purchased by Srini for the club. We also used Yasu and Yumi's Firstscopes, and at some locations Orion Starblast scopes owned by Bobby and Dave. On a far wall we attached several images of planets, clusters, the Moon, etc. One image was a full moon shot that Yasu modified by inserting some small pictures into some select craters. The pictures were President Obama, Einstein, Bobby, me, and some cartoon characters. I thought this was a pretty cute idea, and so did the kids. Thanks Yasu! The idea was to teach the kids how to move, aim (with red dot finders) and focus the scopes. We usually got a second round in where we had them change to a higher power eyepiece. All the while we asked them what they saw and experienced. Did the image dim at higher power, was it inverted, etc. This was the most challenging portion of the program because only one child was able to use the scope at a time, and the others were behind that one chomping on the bit to get their turn. Trying to keep them from shaking the table was a pretty constant effort. But no riots or mayhem broke out.

Each half of the program was about forty minutes long, at the end of which we reversed the two groups and started over. By having two rather short segments we thought we could keep their attention better, and generally this was the out-

come. We started our tour in February at Lawton Elementary. The images with this article are from that site. In March we visited Martin Luther King, and two weeks later Thurston. Our April appearance was at Pattengill, and we concluded in May at Haisley. Five schools in four months; I think that is a demonstration of this club's dedication to an objective. At all events except Haisley we did this for third graders. At Haisley it was fifth grade, which we think was the better age group for our program. Classes were as large as 77 to as small as 41. The Enrichment Facilitators that we worked with were Lisa Bankey, Pat Zawacki, Linda Matton and Nancy Beltaire. They were all very pleasant to work with. All of them, and everyone one else that we heard comments from, loved our program. The majority of the kids really enjoyed the program, and I think they must have learned something along the way. I have been told that we should expect to be asked to do another program next school year. This was a fun program to do, and hopefully we have started the process of turning some of the kids into amateur (or even pro) astronomers some day. How many will become Lowbrows? I can think of at least a couple of them that I was ready to sign up right now. Many of the questions were very funny. One example was when I was asked if we all had telescopes. I said yes, in fact some of us had more than one. The next question was how many I had. In my response I said "I have at least one in every room in my house". Immediately another hand went up and I was asked if that included the bathroom. That kid is definitely ready to be a Lowbrow! They loved my answer. I scratched my chin and replied "Wow, I guess I have room for a couple more". At the next school I was asked if I had any scopes in my bathroom. Wow, the word travels well, even across schools.

At the beginning of this article I Iisted the names of our initial team members. There were several others that participated at one school or more. They are Belinda Lee, Paul Juska, Jack Brisbin, Don Fohey, Ken Ruble, Betsy Dugan and Sandy Dugan. Thank you, and congratulations to all of you for a job well done! You have represented the University Lowbrow Astronomers very well, and maybe helped influence some young minds in a very positive way.

ULA Meeting Minutes from May 21, 2010

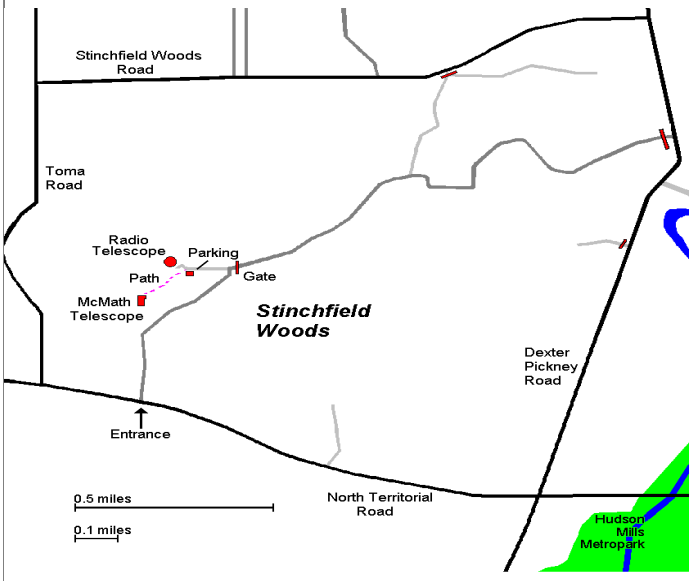
1. Charlie Nielsen called to order and introduced the club and guest speaker Myron Campbell.
2. Charlie reported on AA schools presentations.
3. June 26-Leslie Park event.
4. Charlie met with AOSS and they are taking over operation of the Peach Mountain Radio Telescope after the Astronomy Department discontinues.
5. New AC receptacles on south side of observatory and cement work is proceeding.
6. Mark Deprest (Newsletter Editor) reports that he needs articles. He has none for June, July, or none thru 2012. Camp Hazelwood; showed stars to 10 year olds (sky cleared just in time). Expect 2 events there next year. New comets are naked eye in June. Has new Night Sky Network poster.
7. Liz Calhoun (Treasurer) reports a bank balance of $8995, and 117 members. Liz made a motion to spend $657 for a T-shirt run. The motion was seconded and passed with one nay-sayer (who certainly did this simply to be rebellious). $142 of the expenditure is for 24 T-shirts reserved for guest speakers. Special Lowbrow prices are set at $10 for T-shirts and $20 for Sweatshirts.
8. Dave Snyder (Webmaster) reports that he met with Jeff Masters and he has been booked for our January 2011 guest speaker. Jeff is co-founder and Director of Meteorology at The Weather Underground.
9. Paul Walkowski (VP) reported the null set.
10. Jim Forrester (VP) reports that we better have better luck on our June Open Houses!
11. Mark Deprest went to Tomahawk Lake last weekend (5/15) and he had excellent observing conditions. He is planning on going again on June 4-6, or June 11-13, and is inviting observing partners.
12. Meeting adjourned.

Produced by Charlie Nielsen based on minutes taken by Jim Forrester. Some minor modifications and additions have been made.

Places & Times

Dennison Hall, also known as The University of Michigan's Physics & Astronomy building, is the site of the monthly meeting of the University Lowbrow Astronomers. Dennison Hall can be found on Church Street about one block north of South University Avenue in Ann Arbor, MI. The meetings are usually held in room 130, and on the 3rd Friday of each month at 7:30 pm. During the summer months and when weather permits, a club observing session at the Peach Mountain Observatory will follow the meeting.

Peach Mountain Observatory is the home of the University of Michigan's 25 meter radio telescope as well as the University's McMath 24" telescope which is maintained and operated by the Lowbrows. The observatory is located northwest of Dexter, MI; the entrance is on North Territorial Rd. 1.1 miles west of Dexter-Pinckney Rd. A small maize & blue sign on the north side of the road marks the gate. Follow the gravel road to the top of the hill and a parking area near the radio telescopes, then walk along the path between the two fenced in areas (about 300 feet) to reach the McMath telescope building.



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 Mountain observatory, but are usually cancelled if the sky is cloudy at sunset or the temperature is below 10 degrees F. For the most up to date info on the Open House / Star Party status call: (734)332-9132. Many members bring their telescope to share with the public and visitors are welcome to do the same. Peach Mountain is home to millions of hungry mosquitoes, so apply bug repellent, and it can get rather cold at night, please dress accordingly.

Membership

Membership dues in the University Lowbrow Astronomers are $20 per year for individuals or families, $12 per year for students and seniors (age 55+) and $5 if you live outside of the Lower Peninsula of Michigan.

This entitles you to the access to our monthly Newsletters on-line at our website and use of the 24" McMath telescope (after some training).

A hard copy of the Newsletter can be obtained with an additional $12 annual fee to cover printing and postage. Dues can be paid at the monthly meetings or by check made out to University Lowbrow Astronomers and mailed to:

The University Lowbrow Astronomers

c/o Liz Calhoun

P.O. 4465

Ann Arbor, MI 48106

Membership in the Lowbrows can also get you a discount on these magazine subscriptions:

Sky & Telescope - $32.95 / year

Astronomy - $34.00 / year or $60.00 for 2 years

For more information contact the club Treasurer. Members renewing their subscriptions are reminded to provide the renewal notice along with your check to the club Treasurer. Please make your check out to: "University Lowbrow Astronomers"

Newsletter Contributions

Members and (non-members) are encouraged to write about any astronomy related topic of interest.

Call or Email the Newsletter Editor: **Mark S Deprest (734)223-0262 or msdeprest@comcast.net** to discuss length and format. Announcements, articles 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 Presidents:	Jim Forrester	(734) 663-1638
	Jason Maguran	
	Paul Walkowski	
	Belinda Lee	(313)600-9210
Treasurer:	Liz Calhoun	
Observatory Director:	Mike Radwick	
Newsletter Editor:	Mark S Deprest	(734) 223-0262
Key-holders:	Jim Forrester	(734) 663-1638
	Fred Schebor	(734) 426-2363
	Charlie Nielsen	(734) 747-6585
Webmaster	Dave Snyder	(734) 747-6537

Lowbrow's Home Page

http://www.umich.edu/~lowbrows/

Email at:

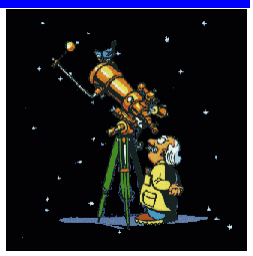
Lowbrow-members@umich.edu

University Lowbrow Astronomers

University Lowbrow Astronomers
c/o Liz Calhoun
P.O. Box 4465
Ann Arbor, MI 48106

lizcal@umich.edu

Reflections & Refractions



Website
www.umich.edu/~lowbrows/

M65 / M66

12x120sec + 13x60sec Canon 30D ISO1250
StarMaster 14.5" F4.3, Peach Mtn, MI

Michael Radwick
May 29, 2010

University Lowbrow Astronomers
P.O. Box 4465
Ann Arbor, MI 48106

Check your membership expiration date on the mailing label