



REFLECTIONS AND

REFRACTIONS

OF THE UNIVERSITY LOWBROW ASTRONOMERS

July 2004

Upcoming Events

July 2004

- **Saturday, July 24, 2004.** *May be cancelled if it's cloudy.* (Starting at Sunset.) Open House at Peach Mountain.
- **Saturday, August 7, 2004.** *May be cancelled if it's cloudy.* (Starting at Sunset.) Open House at Peach Mountain.
- **Saturday, August 13, 2004.** *May be cancelled if it's cloudy.* (Starting at Sunset.) Open House at Peach Mountain.
- **Saturday, September 4, 2004.** *May be cancelled if it's cloudy.* (Starting at Sunset.) Open House at Peach Mountain.
- **Friday, September 17, 2004.** (7:30PM). Monthly Club Meeting.
- **Saturday, September 18, 2004.** *May be cancelled if it's cloudy.* (Starting at Sunset.) Open House at Peach Mountain.

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An Observing Report

by Mark S Deprest



Hello All,

It has been awhile since I sent out an observing report, mainly because it's been awhile since I've been out observing. Well, that changed Sunday night, when the skies cleared as the sun was setting. I decided that I'd better get out and at least take a look at few things. So, at 21:00 EDT I headed over to Leslie Park for a quick impromptu observing run. As I was setting up an older couple out for their evening walk, stopped for a few moments to chat and watch me set up my 12.5" scope. I remembered them from the Venus Transit and it was nice to find out, that we had made a wonderfully positive impression. They said they have been wanting to come to one of our open houses ever since that morning.

I have always found it interesting to see peo-

ples' reactions to my set-up process, especially the uninitiated to telescopes in general. There they are walking along through the park minding their own business and I will pull up and start to unload my equipment, which can look quite strange, if not a little suspicious. On their initial pass they might give a casual extra glance to see if they recognize something that will tip them off as to my purpose. But its on their way back that they give the ultra-fine scrutinizing, when I'm in the actual set-up process and my scope starts to look like some kind of home built weapon of mass destruction. Now they will be moving in for some closer inspection or they will walk very slowly past my position watching every move I make. If by chance they have some of those small recon troops (more commonly referred to as children) with them, they will be sent out to

reconnoiter the situation. These small but fearless troops will casually move right in close and after a couple of frustrating minutes of trying to figure me out on their own, will try the most direct approach and ask me "what are you doing? And as I start to explain to these inquisitive ones, I note out of the corner of my eye that the parents, either as a protection instinct or just figuring that there is no danger start to close in. Just about this time, while the parent is still a good shouting distance away the kid yells out, in a "way to loud" voice, "Its just a telescope! Mom, see I told you!" which instantly creates that perfectly wonderful, slightly embarrassed, chuckle of nervous laughter from the parent, as they move over to observe my final phase of set-up and collect there diminutive recon troops. The parent now tries to recover some of their dignity and stature by asking questions like, "What type of telescope is that?" Or, "How long have you been doing astronomy?" Sometimes the questions are well thought out and sometimes they're not, no matter, I answer them as best I can and try to help these parents save face with their off-spring. Sometimes they wait around for the skies to get dark, in hopes to get a look through this strange device, but most of the time they will thank me for the info and wander off, back to their homes. If they stick around for a glimpse into my universe, I usually try to show them something visually exciting like a planet or the moon to start. After I get the "Wows" that objects like that can elicit, I'll show them one of the faint fuzzies that I find so appealing. If they see it at all, their reactions are varied but predictable. They will ask, "How the heck did you find that?" or "What exactly is that?" or "I liked the (planet / moon) better, can I see that again?" Then after a little while they all thank me for sharing and go back to the comfort and artificial lights of their homes. Some might even give this experience a second thought just before sleep captures their night, but for most that was it ... just a brief encounter with an amateur astronomer at the park.

That was one observation; here is another one, this one is a little more astronomical.

My main purpose for going out on Sunday night was to get a look at Jupiter before it set and check out a couple of bright comets. So, after my company left and I actually got a chance look through the eyepiece of my own scope, I pointed the 12.5" toward the setting Jupiter and what I saw was this: Reading from left to right Europa, Jupiter, Io, Gany-mede, and Callisto on the surface this is not that unusual of an arrangement. However, there was something that struck me as particularly symmetrical and

quite pleasing to the eye about this layout; I quickly understood what it was These Galilean moons were spaced out all at their furthest points from Jupiter on a line that was perfectly perpendicular to my line of sight. Very nice! I also noticed the GRS about a quarter of the way in from the eastern limb, and it seems to be noticeably darker than that last time I saw it. Since it wasn't quite dark enough to start comet hunting, I examined Jove at higher power (just under 300x) and sure enough the GRS actually appeared REDDISH in color, now this could have been due to the low altitude (about 22 degrees) that I was observing Jupiter at and the extra layers of atmosphere I was looking through, but I didn't notice any change in the color of the rest of the disk. Whatever the case, it was a very pleasant sight.

It was now comet hunting time, and I had two targets to find tonight. The first was NEAT C/2001 Q4 with a listed magnitude of 6.5 and just 1.5 degrees north of Merak, (the southern star of the pointer stars in the bowl of the Big Dipper) this should have been an easy target. But the sky wasn't as dark as I thought and it proved to be a bit fainter than listed by almost a half a magnitude. Of course that did not prevent me from finding it, and even at 7th magnitude this is still a very impressive comet. After spending a little time noting Q4's position in relation to the field stars on my drawing form, I moved my scope over to the constellation Bootes and about 1/3 of the way from gamma to rho Bootes and just a little to the east of that line to find LINEAR C/2003 K4. The listed magnitude of 6.7 for this comet seemed to be off a little bit too, but in the other direction, it was at least a half a magnitude brighter at about 6.0 to 6.2, and sporting a very impressive tail stretching almost 2 degrees due east. This comet has a perihelion date of October 13th 2004 so its is currently in its dive toward the setting Sun and will move quickly through Bootes and a corner of Coma Berenices to the heart of Virgo by mid-September and into the Sun's glare. So, if you haven't seen this one yet, you might want to catch it in the next couple of weeks, as this comet continues to brighten at least another full magnitude or better. I made another quick positional sketch and started to pack up my equipment, it was now about 22:30 EDT and I needed to get up at 04:00 EDT the next morning, so my bed was calling me home.

All in all not too shabby for just an hour and a half observing session and it even inspired a newsletter article. Now, that's my gauntlet thrown down! Who will be the next to pick it up?

The University Lowbrow Astronomers Annual Report - 2003

(Prepared by President Charlie Nielsen)

It was an interesting and eventful year for the Lowbrows. Starting in the late part of the year 2002 and into early 2003, we formed a By-laws Committee to completely re-write our club's old constitution. Our main topic of the February 2003 monthly meeting was a reading and discussion of the committee's work. Several corrections and additions were noted from the membership. These items were then incorporated into the final document, which was presented for a vote of approval in the April meeting. We formed an Observatory Committee, chaired by Mike Radwick, which performed some maintenance and repairs on the observatory and telescope. There is much more work remaining to be done. We also eventually formed a Communications Committee, chaired by Jim Wadsworth. Jim has produced an open house etiquette document and Lowbrow information pamphlet to be handed out at open houses. We are working on getting this finished and printed.

Backing up to March 2003, our meeting speaker was Joe Bernstein, who did an interesting and fun talk called "Dark Energy: What Can It Do For You (and Do You Want It To)?". I also believe it was sometime late this month that we finally conducted an open house at Peach Mountain for the first time since the previous November. It was a very cruel winter for observers in Michigan.

The April meeting featured the vote on the By-laws, officer elections, and our annual swap meet. The new By-laws were overwhelmingly approved. Election results were: President-Charlie Nielsen; Vice President-Doug Warshow, Bernard Friberg, Jim Forrester; Treasurer-Mike Garrahan; Observatory Director-Mike Radwick; Newsletter Editor-John Ryan; Webmaster-Dave Snyder. A little celebration and picture taking session followed the vote count. We then enjoyed the swap meet.

At our May meeting we added Jim Wadsworth as our fourth Vice President. This was followed by a fine and enthusiastic comet presentation by Mark Deprest.

June's meeting featured Patrick Koehn. He

gave us the lowdown on the upcoming "Messenger" mission to Mercury. Patrick is an integral part of this mission and did a fine presentation.

In July we had our annual visit from John Kirchoff of Rider's Hobby Shop in Livonia. We always hope for a clear evening for this meeting so that we can hold the meeting at Peach Mountain and try the equipment John brings to show us. Indeed we got our wish! That evening turned out to be perhaps the best conditions that we had up on the hill the entire year. We all had an excellent time and John stayed a lot longer than planned so we could take full advantage. Thank you John and I know you were having fun too.

The August monthly meeting was very memorable for not being memorable. The meeting was cancelled due to the great power outage of 2003. A large portion of the northeastern part of the country and parts of Canada went black the day before. That evening was most memorable for seeing the difference light pollution makes. Though it was very hot and humid, the sky was amazingly dark and clear until the Moon came up. It was something for all astronomers to behold.

Our September meeting was held at Angell Hall to listen to Rocky Kolb, a famous astronomer who did a talk titled "The Quantum and the Cosmos". This was the first in a series of lectures done by the university and the room was jammed beyond overflow. Rocky was excellent and I think all the Lowbrows in attendance agreed that he was one of the funniest lecturers we had ever seen.

The October meeting was also held at the lecture series and featured another famous astronomer named Alyssa Goodman, who entertained us with "A Recipe for Making Stars and Planets".

For November we had several club members do a presentation on their observations and experiences at the 2003 Black Forest Star Party.

In the December meeting Mike Radwick did a comprehensive demonstration of Astroplanner, an observing aid and planning software package that is very powerful and low priced. In fact the basic version is freeware. The meeting attendees asked lots of ques-

tions and Mike handled them all easily.

For January 2004, we moved our meeting to the lecture hall in the Dennison building to host one of the most famous speakers the club has ever had. This was internationally recognized, and author of two popular books, Dr. Fred Adams. An estimated crowd of about 150 watched Fred explain the future destiny of the universe. We also had the opportunity to purchase signed copies of Fred's books. All of the audio-visual equipment worked and Dr. Adams was excellent. It was a fine showing for the club.

February's meeting was a demonstration of astronomy software by Mike Garrahan and Steve Moore. Thanks Mike and Steve for a fine program.

For March we had a return of Joe Bernstein, who again did an excellent talk, titled "Superconductivity in Neutron Stars".

On the club Website front, as of March 7, 2004, we used 57 megabytes of space with 1971 files in 71 directories. For the month of February 2004, we had 85,741 hits, for an average of 2,956 per day. As a rough educated guess, this represents about 4500 people, each of whom made an average of 18 hits each. This does not equal the grand total of hits because a few thousand hits will be from web crawler software. The total data transferred for February was 1.13 gigabytes. This was a slight decrease from January, however the data transferred went over one gigabyte last August and has remained over that number ever since. While most of the access to our website probably originates in Michigan, we get activity from across the United States. Also, there are typically a few thousand hits from Canada, The United Kingdom, and Australia. There are always lesser numbers of hits from other countries. It is not possible to identify all hits outside the US, however an incomplete list from last February includes The Netherlands, Italy, Sweden, Japan, France, Singapore, Germany, Mexico, Switzerland, Belgium, New Zealand, Finland, Brazil, The Czech Republic, Austria, Romania, Poland, Israel, Hungary, Spain, The Philippines, Taiwan, Argentina, Thailand,

Greece, South Africa, Norway, India, Venezuela, Croatia, Denmark, Ireland, Portugal, Hong Kong, Turkey, Slovakia, Paraguay, Russia, Peru, Iceland, Lithuania, Trinidad and Tobago, Chile, Estonia, Indonesia, Georgia, Bulgaria, and Malta. (Test in the morning). Some of these hits are from web crawlers, but most are from people.

I think most of us will not soon forget the 2003 Mars opposition and our multi-club event "Astronomy On The Beach", at Kensington Metropark. We had good skies for both nights' viewing. All the media attention on Mars really brought out the crowds. And I mean crowds! Park officials told us their estimate for the total number of visitors between both nights was 10,000. (Yes, I mean ten thousand) The August September, and October open houses at Peach Mountain also drew huge crowds of hundreds per night. At least one of those nights was agreed by all to be the largest turnout in memory. We had to park cars all the way down the road coming up the hill. The top of the hill was completely covered with cars for hours. Even Mars cooperated by not going into any planet obscuring dust storms during the whole apparition period.

I am happy to announce that the observatory and McMath Telescope are still there. Sadly though, our Observatory Director, Mike Radwick has discovered that the new mirror coating that was done in the summer of 2002 is deteriorating. Although there is plenty of reflectivity at this time and probably the visual images have not noticeably gotten worse, we are likely facing another re-coating this year or next. On the positive side, the Observatory Committee provided significant help. Thanks to Dennis Jozwik, Kurt Hillig, D.C. Moons, and Bernard Friberg for participating on the committee. This year the roof support structure was successfully repaired. The telescope clutch mechanism was also repaired and cleaned. Mike also upgraded the operation of the NGC Max (computer linked to telescope) to sim-

About the University Lowbrow Astronomers

The University Lowbrow Astronomers is a club of Astronomy enthusiasts which meets on the third Friday of each month in the University of Michigan's Physics and Astronomy building (Dennison Hall, Room 130 or 807). Meetings begin at 7:30 PM and are open to the public. Public star parties are held twice a month at the University's Peach Mountain Observatory on North Territorial Road (1.1 miles west of Dexter-Pinckney Road; further directions at the end of the newsletter) on Saturdays before and after the new Moon. The party may be canceled if it's cloudy or very cold at sunset. For further information call (734) 480-4514.

plify the alignment process, and restored the hand controller to normal operation. A start has been made on preparing a complete inventory of all equipment stored in the observatory. Work remains to be done, such as cement repair, painting, and restoring the Coulter 17.5 inch to working condition. Help is always welcome and needed, please contact Mike if you would like to lend a hand. We have also modified and are testing our traditional open house schedule. Some of the upcoming public open houses will be conducted on Saturday nights when the Moon is visible. We have noticed the public really enjoys the Moon, so we are going to sometimes give it to them. On some of the "dark" Saturday nights that we would normally host the public, we will have club member

and invited guest's nights.

Officer elections were held in April 2003, with some changes in personnel. Kathy Hillig has bravely stepped forward and become our new Treasurer. Paul Walkowski has returned as Vice President. Bobby Gruszczynski, who will serve the club for the first time as Vice President, joins him. Welcome to the new officers, and thanks for your services to the outgoing ones. Also, thanks to all of the officer's submissions that helped make this report possible.

It was a busy and eventful 2003 and early 2004. It should be interesting and fun to see what this next year brings.

MY MARVELOUS 2004 VENUS TRANSIT EXPERIENCE

by Lorna Simmons

I was determined to see the June 8 Transit of Venus, come Hell or high water (as the lame-brained saying goes). However, my work schedule did not permit my taking off that day because of an expected emergency which would make "obligatory" my presence at work. This problem would prevent my attending the Angell Hall offering of a completely clear view of the Venus Transit and would force me to miss the wonderful Lowbrows and U of M Astronomers who were gathering there. As the only alternative, I tried to find a site with a clear eastern horizon, near my home, but all of the places I visited had long stretches of obscuring trees, making a clear viewing of the Venus Transit absolutely impossible. Just my usual stupid luck.

I knew that the Venus Transit would be appearing elsewhere in the World and decided to find a computer site which would make such viewing possible. I went to Spaceweather.com and, lo and behold, they presented a large number of NASA-collected computer sites from various countries around the world. Wonderful! The big problem: The worldwide viewing would begin around Midnight on June 7 and continue well into the early morning. The solution: I could get some sleep and wake up now and then to view the transit in passing. Piece of cake! Finally, because the time for the beginning of the transit was several hours away, I fell asleep, expecting to wake up periodically throughout the night.

It was not to be. I forgot to reset my alarm clock to wake myself up in time. I snoozed on. And on. And on. Somehow, the computer's bright white screen woke me up about 4:30, a.m., on June 8. My computer would not respond to any of my feeble resuscitating attempts -- frozen solid. I turned the computer completely off and went through the usual slow corrective process (slower this time, because there must have been a gargantuan failure). After about an hour of playing with my "System Tools," I finally was able to access AOL online. This time I decided I would stay up to monitor the computer for what was left of the Venus Transit.

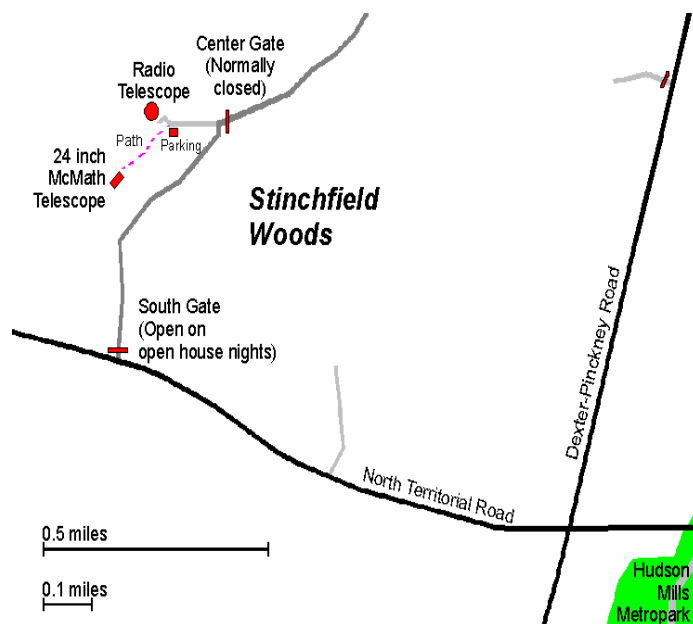
Spaceweather.com located the available NASA viewing sites around the World and I was able to view Venus as it crossed the face of the Sun. Well, I suppose that Venus was crossing the face of the Sun, because Venus really seemed to be remaining perfectly still. Because I had a variety of available sites, I went from one site to the other, each site putting Venus in a distinctly different position on the face of the Sun, and each time Venus remained seemingly motionless. Dead tired and bleary-eyed, I eventually gave up watching and turned off my computer. At my age, people tend to give up when sleep overpowers all other urges. The next thing I heard was my alarm clock blasting away. All of my preparations to wake up from time to time went unfulfilled. Gone! The transit was over in most parts of the World and I had slept right through it all! Dumb!

I hear that the truly intelligent members of Lowbrows went over to Angell Hall (or to other great viewing locations) and were able to see the local transit live (in addition to the computerized NASA site versions). I was left to look at the wonderful Lowbrow e-mailed pictures. FANTASTIC!

Grrr! (Gnashing of teeth). You lucky so-and-so's!

Places and Times

Dennison Hall, also known as The University of Michigan's Physics and Astronomy building, is the site of the monthly meeting of the University Lowbrow Astronomers. It is found in Ann Arbor on Church Street about one block north of South University Avenue. The meeting is held in room 130. Monthly meetings of the Lowbrows are held on the 3rd Friday of each month at 7:30 PM. During the summer months, and when weather permits, a club observing session at Peach Mountain 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 inch telescope which is maintained by the Lowbrows. The observatory is located northwest of Dexter. The entrance is on North Territorial Road, 1.1 miles west of Dexter-Pinckney Road. A small maize-and-blue sign marks the gate. Follow the gravel road one mile to a parking area near the radio telescopes. Walk along the path between the two fenced in areas (about 300 feet) to reach the McMath telescope building.

Public Star Parties

Public Open House/Star Parties are held on the Saturday before and after each new Moon at the Peach Mountain Observatory. Star Parties are canceled if the sky is cloudy at sunset or the temperature is below 10 degrees F. Call 4332-9132 for a recorded message on the afternoon of a scheduled Star Party to check on the status. Many members bring their telescopes and visitors are welcome to do likewise. Peach Mountain is home to millions of hungry mosquitoes - bring insect repellent, and it does get cold at night so dress warmly!

Amateur Telescope Making Group meets monthly, with the location rotating among member's houses. See the calendar on the front cover page for the time and location of next meeting.

Membership

Membership dues in the University Lowbrow Astronomers are \$20 per year for individuals or families, and \$12 per year for students and seniors (age 55/+). This entitles you to the monthly REFLECTIONS newsletter and the use of the 24" McMath telescope (after some training).

Dues can be paid at the monthly meeting or by mail to this address:

Mike Garrahan
7676 Grand Street
Dexter, MI 48130

Magazines

Members of the University Lowbrow Astronomers can get a discount on these magazine subscriptions:

Sky and Telescope: \$32.95 / year
Astronomy: \$29.00 / year

For more information contact the club Treasurer. Members renewing subscriptions are reminded to send your renewal notice along with your check when applying through the club Treasurer. Make the check payable to "University Lowbrow Astronomers".

Newsletter Contributions

Members and (non-members) are encouraged to write about any astronomy related topic of interest. Call or Email to Newsletter Editor at: John Ryan (734) 662-4188 allegheny@mac.com to discuss length and format. Announcements and articles are due by the first Friday of each month.

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



Visitors to Peach Mountain investigate Mark eprest's telescope.



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Check your membership expiration date on the mailing label.