

**REFLECTIONS / REFRACTIONS** 

University Lowbrow Astronomers

**KEFLECTIOUS / REFRACTIOUS** 

October 2007 Volume 31 Issue 10

# Adapting to the Big Picture

Lee Vincent

For me, the whole point of having a telescope is to see bigger and better views of the universe. So it's no surprise that I'm always looking for a wider angle 1.25" eyepiece for my ETX-125.

The 1.25" 26mm eyepiece that came with this scope provides a 0.82 degree field of view (FOV) at 73x. In order to get a bigger, better view, I purchased a 40mm Plossl that modestly broadened the FOV to 0.92, but reduced the magnification to 48x.

This was somewhat of an improvement, but I still wasn't completely satisfied, so an ad I saw recently in Astromart really caught my attention. It was placed by CNC Supply, Inc. and read as follows:

"This 2" ETX eyepiece adapter can really open up your view. The results are remarkable. Works well even with wide field 40mm eyepieces. Anodized aluminum construction with a brass compression ring to prevent marring eyepiece barrels. Threaded for 1.25" eyepiece filters.

"**Important Note:** This adapter requires a fair amount of back focus and is only recommended for catadioptric telescopes with a moving mirror focus system, will not work with most reflectors or refractor. Not for ETX60/70/80 due to lack of back focus."

This sounded intriguing. With this adaptor in my ETX, I could use my 2" ultra wide angle eyepieces in order to increase the field of view by as much as 50% or even more in some cases without reducing the magnification.

The \$49 price tag seemed a bit steep for this little item, so I thought I'd check out AgenaAstro.com. I've done business



in the past with Manish at Agena and found him to be nothing short of a class act. His prices always seem to be competitive, so I was not surprised to find what appeared to be a similar adapter for \$20 shipped to my door.

For 20 bucks, it might be worth a try, but before I placed my order, I checked out Mike Weasner's ETX website—www.Weasner.com/etx. Mike's site has an abundance of information related to the ETX, but didn't have any reviews on this adapter. Mike did tell me, though, that he would be concerned about vignetting and balance problems.

Vignetting was one of my concerns as well, but I had already tried hand-holding a couple 2" ultra wide angle eyepiece's--very nice, sharp, wide angle views right to the edge. In fact, my 26mm Orion Q70 has a slightly wider FOV than my 1.25" Meade 40mm eyepiece.

Though Mike's website did not have any reviews on an adapter of this sort, it did have an article by Chris Brown dated December 17, 2005. Chris attached a 1.25" barrel to an inexpensive 2" Erfle and was pleased with the results when used in his ETX-90. "Achieving focus was not a problem, nor was the weight of the eyepiece, due to its lightweight construction." My larger ETX-125 then should be able to handle a somewhat heavier eyepiece even with the added weight of the adapter.

I cautiously tested the eyepieces but was not terribly concerned about

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weight since my 1.25" 6.7mm Meade UWA eyepiece weighs about the same as my 2" 26mm Orion Q70. I've never had any problem with the weight of my 6.7mm UWA, however the heaviest 2" eyepiece I have is about 7 oz more.



So far, I've tried the following 2" eyepieces:

- 1. 30mm Wollensak -- weight: 19.2 oz; length: 114mm
- 2. 32mm Orion Q70 -- weight: 14.4 oz (+/-); length: 120 mm (+/-)
- 3. 26mm Orion Q70 weight: 11.9 oz (+/-); length: 103mm (+/-)
  - 4. 15mm Knight Owl -- weight: 9.2 oz; length: 80mm



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My results were as follows:

Vignetting: No vignetting with any of these eyepieces. Just a nice sharp edge.

Focusing: No problems at all.

**Balance:** This scope is nose heavy anyway, so even the heaviest of these eyepieces could only help to balance the scope.

It should be noted that I did not do any extensive testing with the scope in the Equatorial/Polar mode. I did briefly put the scope in Equatorial/Polar mode (about 42 degrees) with the heaviest eyepiece to see what would happen. I can't imagine that there would be much risk of even the heaviest eyepiece toppling things.

**Slewing:** I realize it's not very scientific, but I'm just basing my conclusions here on sight and sound. When I slewed the scope at various speeds, I did not notice any hesitation nor did the motors sound as if they were straining at all.

I think I may have to qualify this though. Let's be honest, these motors are not quiet to begin with. In fact they sound very much like dueling coffee grinders and didn't sound any better or worse with even the heaviest eyepiece.

If you're concerned about auto-slewing with a long, heavy eyepiece sticking out of the scope, you can always remove the eyepiece and then replace it when the slewing stops.

You definitely need to be a bit more careful when aiming at or near the zenith, but there still seems to be plenty of clearance.

Fit: I was surprised to see that the adapter seems very stable even with the longest, heaviest eyepiece—nice snug fit without any wobble.

**Leverage:** I would be careful at star parties. Sometimes people want to hang onto the eyepiece as if it were a handlebar. With the additional length/leverage of a 2" eyepiece plus adapter, there could be a problem here.

**Conclusion:** Overall, I'm very please—thrilled in fact. For 20 bucks, I'm able to significantly broaden the view through my ETX 125. Without this adapter, I would never even dream of turning my scope to the double cluster (NGC 869 and NGC 884) and expect to see both in the same field—one or the other, but not both. With this nifty little adapter and an ultra-wide-angle eyepiece, the pair just fit neatly within the field of view. I'm now enjoying a much bigger picture of the universe.

# The 11th Annual Astronomy at the Beach

## by Dave Snyder

September 21st and 22nd was the 11th annual Astronomy at the Beach. This is a star party held each year on Kent Lake within Kensington Metropark. It's aimed at the general public and families; while it's not the darkest location to view from, we typically get a lot of visitors, and it's a great way to introduce the public to astronomy.

Astronomy at the Beach is an event hosted by GLAAC, an organization made up of The Astronomy Club at Eastern Michigan University The Ford Amateur Astronomy Club, The Seven Ponds Astronomy Club, The University Lowbrow Astronomers and The Warren Astronomical Society.

## So what happened in 2007?

On the 21st (Friday) there were some persistent clouds that covered perhaps 10% of the sky, somewhat annoying, but it was still possible to view objects. (One visitor had asked "is that the Milky Way?" It wasn't dark enough to see the Milky Way, she was looking at one of these persistent clouds). On the 22nd (Saturday) it was a beautiful evening, not a cloud to be seen. On both nights there was a very bright moon, not quite full, but still bright.

At 6:00 or so, on both evenings, there were telescopes near the parking lot, and other telescopes near the beach, all set up for solar viewing. (These scopes are marked with yellow balloons). The sun was rather quiet, so there wasn't a lot to see.

Rider's Hobby Shop, the Cranbrook Institute of Science, the Detroit Science Center and Webster Telescopes/Great Red Spot Astronomy Products each had set up tables. There also was a display from the Grosse Pointe North High School RATz Radio Astronomy Team. The Ford Club, the Warren Club and the Seven Ponds Club also had tables. As is typical,

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the Lowbrows and the EMU Club did not set up tables. The Detroit Science Center had brought a portable planetarium which was set up nearby.





Bobby G

Mike Radwick & Guests

Over the course of both evenings, there were several of astronomy talks (the same talks on Friday and Saturday).

- "Basic Astronomy Equipment."
- A Comet Making Demonstration.
- "Our Vanishing Night"—This is the light pollution talk, Norb Vance showed the difference between good lights, bad lights and stupid lights (if you don't know what a stupid light is, you'll just have to listen to Norb's talk next time).
- "How Cold Is Outer Space?"— Kevin Dehne used liquid nitrogen, roses, hot dogs and cheese balls to entertain the audience.
- "Astronomy 101."
- "The Orion Manned Program and the Mission to Return to the Moon"—A presentation by Strategic Operations Leader Robert Landis, National Aeronautics and Space Administration. Orion will be used to reach the International Space Station, but its primary mission will be to return to the Moon, and then as the re-entry vehicle into Earth's atmosphere.

Once it got dark, we started looking at the sky. There were a number of Lowbrows in attendance, many of whom had brought telescopes.

Charlie had brought the club Questar. Lorna had donated the Questar to the club some time ago, and Charlie has possession of it.

Jim Forrester had brought his TMB. There was a special reason Jim brought the TMB as he explained in an e-mail he sent out on Saturday....

"I have just learned of Thomas Back's death on Sept. 13. He was an optical designer of several of the finest refracting telescopes in the world, as well as numerous eyepieces. He was as well a fine and gentle man. I feel fortunate to have met and had some long discussions with him.

All the early TMB telescopes bearing his TMB logo were personally assembled and tested by him. I am fortunate to

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have one of those telescopes—a TMB 105, F 6.2 SN 082.

No announcement has been made about tributes to his memory. The best I can do for the moment is to use his telescope. I'll be out at Kensington tonight with his refractor. I hope you'll all come and take a look."

Clayton did not bring a scope. He said the following (in an e-mail)....

"I spent most of the evening behind the Riders counter helping John pass out "Scavenger Hunt" forms and passing out prizes to the kids that returned them. There were a LOT of kids there on Saturday—we almost ran out of stuff to give out! Lots of fun!"

We've done the Scavenger Hunt before. A form is passed out to kids who come to Astronomy at the Beach. The form typically has a list of things to look for ("planets", "star clusters" and so on). The kids are supposed to view each one through a telescope, and they get a prize when they find them all.

In addition to this form, we saw a few high school students with a longer form. These forms didn't come from us. Apparently a high school teacher had given the forms to his students, some of whom came to Kensington Metropark.

Belinda Lee & Robert Ebling had just joined the club. I first met them at the open house one week earlier. Belinda had a Questar that had belonged to her father. Both Belinda and Robert brought scopes (between Belinda and Charlie, we had two Questars for visitors to look through).

John Causland brought his 24inch, Paul brought his wood scope, Bobby G brought his PortaBall. Mike Radwick, David Tucker and Yasu also brought scopes.

Eric Webster had one of his scopes (Eric isn't a club member, but he is on our ACNO list and is a frequent visitor at our club events).

Norb and Sharon Vance were using EMU's Celestron. Also in attendance were Jack Brisbin, Bob Klose and me (hopefully I didn't forget anyone).

Usually we attempt to set up a "Camp Lowbrow" so all the Lowbrows are in the same general area, but this doesn't always happen. This year there were two "Camp Lowbrows," one near the parking lot and one closer to the beach.

There are always people with questions, many come from people who want to purchase a telescope for their children. I got a few of these questions, as I assume others did as well. The easiest way to answer this type of question is to point out different kinds of telescopes, but it is difficult to do after it's dark.

There were long lines on Friday, and even longer lines on Saturday. Since the beginning, Astronomy at the Beach has been a two day event, and over the years, we seem to get a bigger turnout on Saturdays than we do on Fridays. The Metropark makes estimates on the number of visitors. What about 2007? I asked Bob Hotaling (who works for the Metropark); he estimated there were 1000 visitors on Friday and 3000 on Saturday. Not as big a turnout as we had for 2003 (that was the year of the big Mars opposition), but not bad.

One new thing this year: The GLAAC planners had decided to hold a raffle. Only club members who volunteered at least one night could enter. On Friday Bob McFarland asked me to photograph each of the winners and their prizes after the drawing (which would happen at 11:00 on Saturday). However on Saturday, I noticed the batteries in my camera had discharged. John Causland let me borrow some batteries which solved the problem.

Among the winners were the following Lowbrows:

- Bob Klose—Orion Telescope Knit Cap
- Jack Brisbin—Red Shake Flashlight from Great Red Spot Astronomy Products
- John Causland—\$50 Certificate for Astrozap Telescopes & Accessories
- Robert Eblige—2008 Calendar from Astronomy Magazine
- Yasu Inugi—Planisphere from Orion Telescope & Binoculars
- Norb Vance—7 x 35mm Up Close Binoculars from Rider's Hobby Shops of Livonia
- Sharon Vance—Decorative Patriotic Fiberoptic House

That was according to an e-mail, but I happen to know that a few winners got a little something extra, such as an astron-

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omy card game or a star pen. I was able to photograph most of the winners, but a few people escaped and a few were not present. While it might seem like a lot of Lowbrow winners, there were 7 winners from the Ford club, 6 from EMU (that's counting Norb and Sharon twice, as members of both EMU and the Lowbrows), 4 from the Warren club and one each from Cranbrook, Longway and Seven Ponds. None of us came to Astronomy on the Beach for the raffle, but it was fun way to recognize everyone that helped out.



### John Causland and Yasu Ingui, Raffle Winners



On Saturday afternoon there was a talk given by Robert Landis (the guest speaker from NASA) and a special dinner. I did not attend either one, though I have attended similar events in previous years. These talks typically are aimed at astronomy club members and go into more technical detail than the public talks.

If you are interested go the web site <u>http://www-personal.umich.edu/~dgs/kensington/</u>. There is information about previous Astronomy at the Beach events and lots of photographs.

# **Upcoming Astronomy Events**

- Friday, October 5, 2007. (7:30PM). Lecture Series, Scales of the Universe (hosted by the following units of the University of Michigan: the Department of Astronomy, the Exhibit Museum of Natural History, the Student Astronomical Society, and the Michigan Center for Theoretical Physics). Carl Heiles (University of California, Berkeley): "Our Local Microcosmos."
- Saturday, October 6, 2007. (10:30AM). <u>Saturday Morning Physics</u> (hosted by the University of Michigan Physics Department). Bradford Orr. "How to Keep Your Focus; the Physics of Camera Lenses."
- Saturday, October 6, 2007. *May be cancelled if it's cloudy*. (Starting at Sunset). <u>Open House at Peach</u> <u>Mountain.</u>
- Saturday, October 13, 2007. (10:30AM). <u>Saturday Morning Physics</u> (hosted by the University of Michigan Physics Department). Bradford Orr. "We All Need Just the Right Amount of Exposure."
- Saturday, October 13, 2007. *May be cancelled if it's cloudy*. (Starting at Sunset). <u>Open House at Peach</u> <u>Mountain.</u>
- Friday, October 19, 2007. (7:30PM). Monthly Club Meeting.
- Friday, October 19, 2007. (7:30PM). Lecture Series, Scales of the Universe (hosted by the following units of the University of Michigan: the Department of Astronomy, the Exhibit Museum of Natural History, the Student Astronomical Society, and the Michigan Center for Theoretical Physics). Mario Mateo (University of Michigan): "Galaxies: Where Space Becomes Time."

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- Saturday, October 20, 2007. (10:30AM). <u>Saturday Morning Physics</u> (hosted by the University of Michigan Physics Department). Bradford Orr. "It's All About Light!"
- Saturday, October 27, 2007. (10:30AM). <u>Saturday Morning Physics</u> (hosted by the University of Michigan Physics Department). James Woodward. "Fresnel: Before and After."
- Friday, November 2, 2007. (7:30PM). Lecture Series, Scales of the Universe (hosted by the following units of the University of Michigan: the Department of Astronomy, the Exhibit Museum of Natural History, the Student Astronomical Society, and the Michigan Center for Theoretical Physics). Niel Brandt (Pennsylvania State University): "A Rich and Evolving Tapestry of Cosmic Structure."
- Saturday, November 3, 2007. (10:30AM). <u>Saturday Morning Physics</u> (hosted by the University of Michigan Physics Department). James Woodward. "Lightning Lights: the Mercury Float Lighthouse Lens or How you float a 4,000lb lens in 600 lbs of liquid."
- Saturday, November 3, 2007. (12:20PM). <u>Saturday Morning Physics</u> (hosted by the University of Michigan Physics Department). Owen Gingerich. "Four Myths of the Copernican Revolution."



- Saturday, November 10, 2007. *May be cancelled if it's cloudy or too cold*. (Starting at Sunset). <u>Open House at Peach Mountain.</u>
- Friday, November 16, 2007. (7:30PM). Monthly Club Meeting.
- Friday, November 16, 2007. (7:30PM). Lecture Series, Scales of the Universe (hosted by the following units of the University of Michigan: the Department of Astronomy, the Exhibit Museum of Natural History, the Student Astronomical Society, and the Michigan Center for Theoretical Physics). Michael Turner (University of Chicago): Mohler Prize Lecture "Quarks to the Cosmos: Connecting the Smallest and Largest Scales."
- Saturday, November 17, 2007. *May be cancelled if it's cloudy or too cold*. (Starting at Sunset). <u>Open House at Peach Mountain.</u>
- Saturday, December 8, 2007. (10:00AM to 4:00PM). Space Day (hosted by the University of Michigan Exhibit Museum of Natural History). Details to be announced.
- Saturday, December 8, 2007. *May be cancelled if it's cloudy or too cold*. (Starting at Sunset). <u>Open House at Peach Mountain</u>.
- Saturday, December 15, 2007. *May be cancelled if it's cloudy or too cold*. (Starting at Sunset). <u>Open House at Peach Mountain.</u>

Friday, December 21, 2007. (7:30PM). Monthly Club Meeting.

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Astronomy at the Beach and solar observing!

Images by John Causland

Stars in the daylight via The Detroit Science Center's Starlab Planetarium!





Colorful talks and even more colorful speakers!

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### 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 3<sup>rd</sup> 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 Astronomer c/o Yasuharu Inugi

#### 1515 Natalie Lane #205

Ann Arbor, MI 48105

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 <u>msdeprest@comcast.net</u> to discuss length and format. Announcements, articles and images are due by the 1<sup>st</sup> day of the month as publication is the 7<sup>th</sup>.** 

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#### Lowbrow's Home Page

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#### **Reflections & Refractions**



Website www.umich.edu/~lowbrows/



Astronomy at the Beach 2007 Clear Skies, Great Weather, Fun <u>Time</u> <u>A Rousing Success!</u>



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