

 **Current** NOVEMBER
2003
Astronomy
RIVER BEND ASTRONOMY CLUB NEWSLETTER



Meyer-Womble Observatory, atop Mt. Evans in Denver, is the highest operating observatory in the west at 14,148 feet elevation. Club members participated in a program sponsored by the University of Denver which provides for amateur use of the facility. PHOTO BY GARY KRONK

Climbing Mt. Evans

Using a professional telescope leaves members breathless

BY GARY W. KRONK

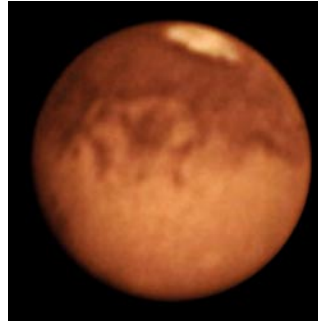
Using professional equipment at a mountain-top observatory is an amateur astronomer's dream—one that can vanish when waking up to the realities of time, money, and opportunity. I'm happy to report that this summer, along with a good friend, our amateur dreams came true when we got the chance to use a unique telescope at the highest observatory in the west.

Fellow River Bend Astronomy Club member and astrophotographer Mark Brown suggested that we apply for a week-long observing run at Meyer-Womble Observatory as part of a summer program offered by the University of Denver. Mark had been accepted once before but suffered a week of lousy weather, and program director Robert Stencel had promised Mark another chance if he wanted. Now Mark wanted to team with me so together we submitted a proposal to observe comets. A few weeks later we were both offered a slot in August. And the dates were great—only a few days before the exceptional Mars opposition of 2003!

Although our first night at the observatory was going to be August 18, our trip began on the evening of August 15. Stencel had warned us about the effects of high altitude, so we wanted to get higher than our normal 500 to 600 foot elevation as soon as possible to give our bodies time to readjust. We were in Colorado Springs (over 6000 feet) early the next evening.

On a Saturday night we met several of Mark's friends from the Colorado Springs Astronomical Society. We observed for several hours at a member's home, located above 9000 feet, and began to acclimate ourselves to high-altitude astronomy. The next day we visited Garden of the Gods early and then tried to sleep in the afternoon—abruptly altering our sleep schedule.

We headed for Mt. Evans lodge on the morning of August 18 and made it just in time for an early afternoon appointment with Stencel. After meeting two students that would be joining us for the week, we ate



Mars, five days before its closest approach to Earth on August 27, 2003. The “bullseye” is Solis Lacus and the pale, circular feature near the lower right is the huge volcano Olympus Mons.

and then went to the lodge where we stayed, a University of Denver research facility only a couple hundred feet away. Stencel suggested we rest before heading up to the observatory that evening.

The drive up the mountain was beautiful although a little nerve wracking. We traveled 15 miles of curves and switchbacks to gain an additional 3500 feet—all without guardrails. Most of the drive was above the tree line, so that rocks and arctic tundra were all we saw along one side of the road. The other side of the road was always a discomfiting drop-off. Fortunately, good weather made for safe driving every night except the last, when it rained. Of course, the trip back down the mountain in darkness was completely different—we were dismayed to find that our headlights were almost useless going around hairpin turns!

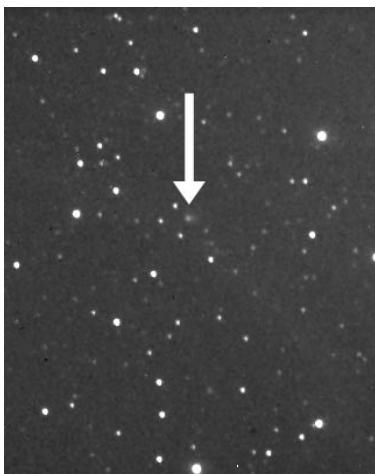
The summit of Mt. Evans rises west of the Meyer-Womble Observatory, while the lights of Denver illuminate the east. The observatory includes about 2100 square feet of space spread across three levels, with the control room on the second level and the telescope on the third level. The telescope is called the Meyer Bioncular telescope and is a dual aperture 28.5-inch Ritchey-Chretien system. What makes this telescope so unique is the fact that you have two identical telescopes pointing at the same spot in the sky. You can look through one, while capturing images with the other, or you can use two cameras simultaneously. It was incredible using such a large aperture instrument in such clear, transparent skies.

The observatory has two power sources: solar and diesel. Big solar panels charge a large insulated box of lead-acid batteries during the day—that is, when the sun shines. The day's sunlight determines whether the batteries last the entire night or only a few hours. On one of our nights, following a cloudy day, one of the students had to go out and start the diesel generator.

The first night gave us the worst altitude problems. I guess I did not realize how thin the air was until we got to the observatory. Walking up the first flight of stairs was tough and had me really panting when we reached the control room. I felt even more winded when we walked up the third level to the telescope. During the next few nights, we climbed up and down these stairs many times. I guess I got used to it because the out-of-breath feeling did seem to subside a bit by the end of the week.

As it turned out, our first night was our warmest night, with the temperature in the control room dipping to the mid-40s. Later in the week, the temperature dropped to 35 degrees in the control room and into the 20s inside the dome. The wind typically picked up after midnight each night, with speeds of up to 25 miles per hour, dropping wind chills into the single digits inside the dome. Brrrr! People always tell you to wear layers of clothing in cold weather, but here's a little secret: After a few hours the cold eventually makes it through.

Our observing schedule was the same each night. One of the students observed variable stars for their project, then I observed some comets, and finally we all got chances to obtain observations of Mars.



The team imaged Comet C/2003 K4 (LINEAR) on August 21, when the comet was magnitude 14. Expecting to be unimpressed, the author was instead rewarded with evidence of a tail: faint, short, and fan-shaped.

The comets I studied were C/2003 K4 (LINEAR) and 29P/Schwassmann-Wachmann 1. Both comets were faint—I was not expecting much from either, but both surprised me. Comet LINEAR was a 14th-magnitude fuzzy that was fairly easily seen in the observatory telescope. We obtained several images of it on two nights and I was surprised to detect a tail both nights. Periodic comet Schwassmann-Wachmann 1 really threw me. The comet is normally quite faint and would have been near the limit of this telescope, but the comet had flared in brightness in June and again in July, so I was hoping we'd be lucky enough to catch it flaring again. And we did. The comet was spotted with ease at about magnitude 14 or a little fainter. It was not visually noticeable through the telescope, because of its diffuseness, but we imaged it with the CCD camera. Schwassmann-Wachmann 1 presented not only a coma but also a tail, which is extremely rare for this comet—perhaps only the second or third time since its discovery in 1927. When we returned, I found that other observatories had also detected this tail. We were fortunate to have seen something so unusual.

Mars was certainly the week's "star of the show." Viewed through the telescope, Mars was incredible, as impressive as Jupiter in my 13-inch reflector at home. I vividly remember the night of August 20 when—for our first time ever—we spotted the Martian moons Phobos and Deimos to the left and right of the planet. We obtained several detailed images of Mars using Mark's digital "webcam." Everyone was impressed at how well the inexpensive camera captured the planet's subtle features—even more so when we saw we were detecting the giant volcano, Olympus Mons, as well as its possible shadow.

I rate our trip to Mt. Evans as one of the most exciting weeks of my life. The appearance of the two comets was a welcome surprise and the chance to view this very rare close opposition of Mars with a large telescope 2.5 miles above sea level was absolutely incredible. But maybe it wasn't the chance of a lifetime after all...because we've been invited to return. [↻](#)

Gary Kronk, president of River Bend Astronomy Club and an authority on the history of comets and meteor showers, is author of the multi-volume series Cometography.

The River's Edge

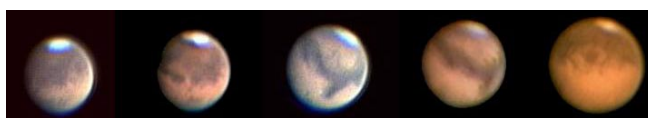
BY TYCHO BROUHAHA

SATURDAY, OCTOBER 18, 2003

was a clear and steady night. On a night like this, the stuff of which starry dreams are made, telescopes pop up in the backyard of club president Gary Kronk like mushrooms after a thunderstorm. The sheer spectacle of stars overhead tempted us and we found ourselves distracted from our eyepieces, necks craning for wide-eyed views of the Milky Way, constellations and darting meteors. Several members stayed late enough to watch fall turning into winter—it even felt a little colder as mighty Orion began to rise and aged Saturn began its ascent in the east.

ATTENDEES Dennis Rippelmeyer, Wolfgang Frierdich, Jamie Goggin, Mike Veith, Bruce Kryfka, Tom Foster, Tom Schalk and son, J.R. Schalk and son, Mark Brown, Gary Kronk, Deb Wagner, Lois Butler, Eric Young, Mark Young, and straggler Jace Perham—who was better late than ever...I mean, never.

TUBULAR A table top tomato-red Tasco telescope belonging to the son of J.R. Schalk made an appearance. Beginner telescopes like this are instrumental for spying on siblings and neighbors.



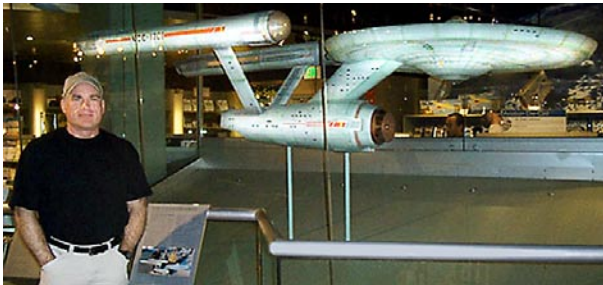
The Mars Approach in 2003: Prolific astrophotographer Mark Brown imaged this “golden” approach of the Red Planet, its nearest visit not only in Mark’s lifetime but for generations to come. Mark took these images using a ToU-Cam connected to his C-8, and processed the video using Registax. The far left image, taken July 24, shows the planet at 21 arcseconds in diameter; the far right image shows Mars at 25 arcseconds diameter on August 26.

LOCAL SKY LAB The club is welcome to visit the William C. Shaw Sky Lab, a viewing site north of the Southern Illinois University Edwardsville campus. Tom Foster, Assistant Professor of Physics at the university, attended our meeting and extended the invitation. The Sky Lab hosts public viewing sessions as a community service and to supplement an astronomy course. Tuesday evenings, weather permitting, visitors receive a tour of the night sky. Inquire about a particular session by calling (618) 650-3049. Maybe the club can meet at the Sky Lab sometime next year...

By the way, Foster’s research inquires how students learn physics and astronomy, how students solve physics and astronomy problems, and what classroom factors can hinder or help learning. Visit his web page at www.siu.edu/~tfoster/.

LUNAR ECLIPSE Earth’s shadow serves up a colorful spectacle on Saturday, November 8, when a full lunar eclipse will dazzle the U.S. We (*US*, that is) plan to be out in force in St. Jacob Park to show the event to the public, get folks excited about astronomy and maybe drum up interest in the club, too. And Mother Nature has so conveniently timed it for just after supper for most folks. Hope you can make it—mark your calendar.

FEARLESS LEADER No doubt he’s sobered up since he said “Yes,” but everyone present distinctly heard Jamie Goggin say he would be the club’s new ALCor, so we’re gonna hold him to it. The ALCor, or Astronomical League Correspondent, is our direct link to the largest amateur astronomy organization in the world. Jamie will represent our interests to the League, as well as keeping us abreast of League programs and events. He’ll report new members to the League and see that we get our *Reflector* newsletters regularly. Thanks, Jamie!



Rarely-seen club treasurer Ed Cunnius took a break from his training regimen at StarFleet Academy to pose for this recent photo.

ASTROFEST Hosted by the Chicago Astronomical Society, the star party AstroFest was attended by Jamie Goggin and Dennis Rippelmeyer, along with nearly 1,000 other heartland night owls. Memorable displays included prized antique Alvan Clark refractors. Newer equipment included an H-Alpha filter that delivered incredible views of solar plumes. According to Jamie, after a first night “dew-up,” the next morning vendors sold out of their anti-dew devices. Jamie remembers the event as a worthwhile experience with a lot of good observing, despite skyglow from the windy city. By the way, AstroFest will celebrate its 25th anniversary from September 16–18, 2004.

HE'S HYPER Making its first appearance in Gary's backyard was a Meade LXD55, along with its owner Bruce Kryfka. This big, impressive reflector has a powerful slew motor that lets you know it means business. Bruce couldn't pass up Meade's anniversary deal, and feels the scope was a good value, especially Meade's \$99 eyepiece bonanza. Bruce's equatorial mount bears a metal plaque showing that it's been “HyperTune Serviced,” a modification process that he purchased from an independent telescope tuner-upper. When not looking up, Bruce has looked out for America's interests in the Middle East.

WOODCHUCK WONDER Visiting with tales of stargazing from Monroe County, Wolfgang Frierdich revealed his special technique for hunting groundhogs, which involves wearing a cucumber-patterned camouflage shirt. No word on what salad dressing the whistle pigs prefer.

IN THE DARK Some fishermen would go to their graves with the secret location of a favorite fishin' hole. So don't tell anyone I told you this—but Deb Wagner has a lead on a good dark sky site. Be-inz as Deb is such a nice person who cares deeply about others and looks out for their well-being, we're most certain that she will agree to take us there sometime. If not, we have a vial of truth serum and plenty of dirty needles just in case the rubber hose proves ineffective.

DON'T MENTION IT Whatever you do, don't mention the “Gateway Connector” to Deb Wagner and Lois Butler—that is, unless you want to see smoke come out of their ears. The Illinois Department of Transportation wants to pave a highway all the way from Troy in Madison County to Columbia in Monroe County, mostly to piss off Deb and Lois by running part of it through their yard. The proposed road—a developer's dream, an urban sprawl instigator—would link large tracts of farmland with major arteries. Hey, if you can't beat 'em, join 'em: why not stock up on old-time pottery, walnut bowls and adult videos and become roadside entrepreneurs?

HEAVY ARTILLERY Yeah, it's an Obsession, alright: the need for more light answered by huge truss-tube Dobsonians like those owned by Jace Perham and—new to the club, Dennis “Rip” Rippelmeyer. Rip's 18” telescope makes Jace's look like the runt of the litter by comparison (but we still love ya, Jace). Better put on sunglasses before viewing the Andromeda galaxy through Rip's Obsession—it's big and it's bright! Rip uses an Orion correct image right angle finderscope, a Telrad finder and a phone call to NORAD to get his Obsession pointed in the right direction. Performing just as well as Jace's scope's mount, Rip's is so buttery smooth that it takes but a feathery touch to track an object in the eyepiece. It's a joy to use instruments of this caliber, and once again I'd like to say what talented, fascinating and handsome individuals are Jace and Rip. (Did I mention they have good taste?)



River Bend Astronomy Club serves amateur astronomers of the American Bottom region, the Mississippi River bluffs and beyond, encouraging observation, education and a spirit of camaraderie.

Officers

PRESIDENT Gary Kronk
VICE-PRESIDENT Kurt Sleeter
TREASURER Ed Cunnius
LEAGUE CORRESPONDENT Jamie Goggin
SECRETARY Eric Young

Membership

ADULT \$10.00/year
(18 years or older)
YOUTH \$8.00/year (under 18)

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Astronomical League

Members of the world's largest amateur astronomical organization.

WEB www.astroleague.org

Current Astronomy Club Newsletter

EDITOR Eric Young
E-MAIL younger@wustl.edu
Submissions to the newsletter are encouraged. Contact the editor for more information.

SPECIAL EVENT
SATURDAY, NOVEMBER 8, 2003 •
5:00 P.M. • ST. JACOB TOWNSHIP PARK

TOTAL Lunar Eclipse

NEXT MEETING
SATURDAY, NOVEMBER 15, 2003
7:00 P.M. • KRONK OBSERVATORY


STEALTH COMET Jamie Goggin and Gary Kronk expended some effort sighting Comet 2002 T7. They gave me a peek—I thought I saw something there, maybe, using averted vision. The *Comets & Meteor Showers* web site predicts this snowball will round the sun next April and perhaps become as bright as second or third magnitude.

TAKE A SHOWER, PLEASE The crowd responded with “oohs” and “ahs” to meteors dancing in the north. The quantity and location was unexpected. Later, while gazing eastward I saw an early Orionid meteor make a quick, bright plunge in the murky night. Gary remarked that I was fortunate to have seen a piece of Halley’s Comet—that’s the parent comet of the Orionid meteor stream. Thanks, Papa Halley.

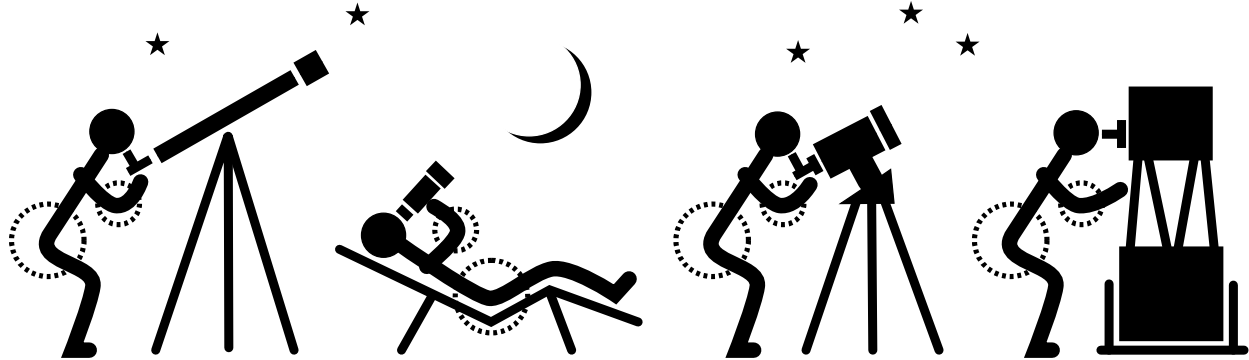
TRAPEZIUM ARTIST Shimmering just above roof top level, the “trapezium,” four close-knit stars within the stellar cradle known as the Orion Nebula, sparkled in Mike Veith’s ETX.

RINGLEADERS We’re eagerly awaiting the evening return of Saturn—rings conveniently tilted for gorgeous views. Once it began its ascent Saturday night, Deb and Lois had a look-see, and their refractor easily revealed the dark Cassini division in the rings, as well as a subtle color band on the gaseous sphere.

GREAT GLOWING GASBALLS Lurking near summer’s glaring rocky interloper, Mars, were two of the gas giant planets, Uranus and Neptune. The proximity of dim Uranus to the Martian beacon cried out for a star hop. Uranus revealed itself in binoculars, an easy find just west of Mars. Eight-inch telescopes owned by Messrs. Brown and Kryfka magnified Uranus into a tiny bluish disc. Neptune was dangling farther down in Capricornus, dimmer, smaller, and more reserved in its appearance. In his part-time job as astronomical commentator, Jace was barely able to contain his enthusiasm for these far denizens of the solar system: he described the planet duo as one faint blue dot and another smaller, fainter blue dot. Yowza!

YOU KNOW YOU’RE IN ST. JACOB WHEN... Freight trains thundering through St. Jacob’s whistle stop echoed through the cooling night air. Meanwhile, local farmyard cows were mooing themselves to sleep. And a pack of howling coyotes out for a Saturday night brawl further disturbed the peace. When a distant dog barked on and on, a neighbor threw open his front door and screamed “Shut up!” So much for the serenity of the cosmos...(though it sure sounds like home). 

We recommend light bending nightly.



Exercise your sense of wonder — join the River Bend Astronomy Club.

Meteoroids explode high above the Earth. Comets exhale dusty, million-mile-long tails while hurtling towards the Sun. Galactic collisions rip stellar systems to shreds of stardust. Oh, and don't forget the Big Bang...

These aren't scenes from Hollywood's latest action flick. The drama of the universe plays nightly over your backyard. All it takes to enjoy the show is a little know-how and maybe some modest optical equipment. Popcorn is optional.

While often exciting, astronomy is also a peaceful, deeply meaningful, and some might say spiritual pursuit, a search for a "cosmic connection"—reaching out from our tiny blue world to try and grasp our place in the universe.

The thrilling WOW! of a child's first glimpse of Saturn through a telescope as well as quiet, personal moments are among the many rewards of amateur astronomy. The River Bend Astronomy Club aims high to make your pursuit as rewarding as possible.

Anyone interested in learning more about astronomy may join. Expensive tools or special skills are unnecessary. But space is a big place—it helps to know someone with a road map. Members have maps, and they'll gladly show you around the sky—plus you'll enjoy sharing great sky views using quality astronomical telescopes. Besides, it's more fun to share the night together (and having a friend close by helps ward off night-feeding hungry bears, surprise alien attacks, etc.).

Through club membership, you join the Astronomical League, a national federation of over 240 local astronomy societies. The League's many special programs and quarterly newsletter will enrich your hobby.

We meet monthly, observe regularly, e-mail news and quips constantly, and generally have a good time. Won't you join us?



River Bend Astronomy Club Membership Application

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone (Day) _____ (Evening) _____

Email address (to receive club news and information): _____

Where did you hear of our club? _____

How long have you been interested in astronomy? _____

Do you have optical equipment? Telescope Binoculars

Are you afraid of the dark? Yes No (just kidding)

I am submitting my application for:

_____ Adult membership(s) @ \$10.00/year (18 years or older) _____ Youth membership(s) @ \$8.00/year (under 18)

I enclose a check for a total of \$ _____ made out to "Ed Cunniss, Treasurer RBAC."

Signature _____

Date _____

River Bend Astronomy Club

c/o Gary Kronk, 132 Jessica Drive, St. Jacob, IL 62281

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