



Current
Astronomy

MAY
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RIVER BEND ASTRONOMY CLUB NEWSLETTER



His hand imprinted for Astronomy Day attendance, a child stretches bubble wrap over a cardboard telescope: a fun way to mimic how Earth's turbulent ocean of air roils seeing — and stretch a young mind toward science. PHOTO BY ERIC YOUNG

Indoor astronomy

Astronomy Day weathers well – four years and counting

PHOTOS AND TEXT BY ERIC YOUNG

River Bend Astronomy Club hosted its fourth annual Astronomy Day celebration at the Children's Museum on Saturday, April 24, 2004. A dozen member volunteers and their families greeted attendees representing three states — Missouri, Illinois and Iowa — participating in games, demonstrations, lectures and interactive displays. RBAC awarded dozens of prizes and distributed hundreds of informative giveaways and promotions from our sponsors.

Confirming the phrase “April showers...”, all activities were held indoors due to intermittent rain throughout the day. Even so, a cooperative spirit brought new meaning to the term “camaraderie” as our slightly soggy members served up infectious enthusiasm for science, fulfilling the festival’s intent: *Bringing Astronomy to the People*.



Courtney Curtis of Edwardsville, Ill., winner of the grand prize — a telescope donated by Hardin Optical Company — pictured with Mark Brown, Astronomy Day coordinator (left), and Gary Kronk, president of RBAC.

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With special thanks to Mark Brown, Astronomy Day coordinator; the Children's Museum staff; and the Goggin family who graciously hosted the afternoon barbecue.



The NASA Night Sky Network, which recently chose RBAC as a St. Louis regional coordinator, provided this simple yet effective teaching tool.



Al Kaminski tours the telescopes with Keith Filges and Georgia Bracey.



Jeannette Schodroski of the Planetary Society cheerfully fielded far-out questions.



Coloring planets: Cassidy Cunningham.



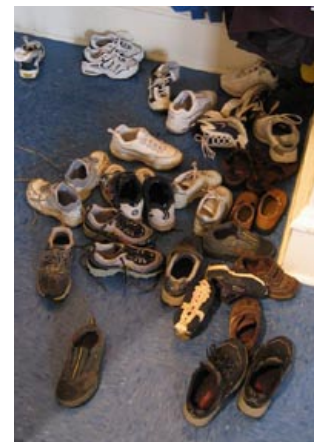
Don't try this at home, kids: Gary Kronk (far left) and chef Mark Brown cooked up a comet (above).



How's the weather? Mike Veith (left) and Nathan Goff talk with Bill Bojarzin, the man behind the Edwardsville Clear Sky Clock.



Angela Bramstedt (right) enters the attendance prize drawing while Janet Rippelmeyer looks on.



Keeping a clean house: Kids doffed their shoes as they squished out of the rain and into the museum.



Lynn Taake and Larry Taake have been known to engage in stargazing and laughter with neighbor Deb Wagner.



Star of the show: Dennis "Rip" Rippelmeyer discusses his big telescope — which got lots of attention — with George Wolfford.



Nancy Kelley and Jackson Kelley of St. Louis try out their planisphere as family friend and RBAC member Mark Young watches.



Cheyenne Wallace of Alton, Ill., won the Bushnell telescope donated by Pass Systems Group, Inc., employer of member George Roethemeyer.



Lindsay Wolfford carefully selects her prize — a planisphere — as Bruce Kryfka looks on.



A visitor chats with Janet Rippelmeyer, Noah Perham and Lisa Perham. In the background, Lois Butler staffs the "Ask an Astronomer" booth.



Attendance prizes: educational toys, books, and observing aids.



Melanie Meyer won the Lego Mars Rover kit for her son, Drew Pikey. At least, we think it was for Drew.



Nancy Bracey and Cole Filges take the interactive quiz.



June Tharp and Bailey Zimmer select from the information table.



The Planetary Society's poster showing a Martian landscape in 3-D, viewed by Michael Davis.



Jamie's back: Chef Goggin grills burgers for the party afterwards.

Atsa lotsa aperture in the tour of telescopes and binoculars.



Kyle Robertson of Glen Carbon, Ill., poses with a telescope or two.

Psssst! Wanna P.S.T.?

RBAC says “yes!” to a Personal Solar Telescope

BY ERIC YOUNG

Individually, River Bend Astronomy Club members own many telescopes, varied in shape and size, all capable of grasping distant starlight.

Collectively, RBAC will soon own one little golden telescope offering enhanced views of the nearest star.

“Despite the vast array of equipment in the hands of members,” says club president Gary Kronk, whose family owns several telescopes, “RBAC can’t examine the sun in the light of Hydrogen-alpha.”

Telescopes with this capability show prominences dancing along the solar limb, revealed as arcs, loops or fingers extending into space.

Kronk explains why RBAC can’t see in H-alpha: price. H-alpha filters costing thousands of dollars have kept the sun’s dazzling ramparts out of low-budget reach — until now.

“A couple of months ago Coronado Instruments released a device called the Personal Solar Telescope (P.S.T.), which has taken the world of amateur astronomy by storm,” says Kronk. The 40mm telescope with H-alpha filter costs \$499.

Visually stunning ads and favorable reviews of the breakthrough P.S.T. — as well as an impending transit of Venus — have avid sun-gazers as feverish as a bad sunburn in their eagerness for memorable, dynamic solar images. All reasons, Kronk says, that “numerous astronomy clubs and universities are rushing to buy the Coronado P.S.T.”

Consequently, within RBAC, weeks of excited discussions led to the April meeting when members proposed to buy a P.S.T. for the club.

Stargazers in favor said “Aye!” Or was it, “Eye?” In any case, members green-lighted the idea and offered a bit of green for a golden telescope.

RBAC’S P.S.T. Seizing a golden opportunity, Kronk and project coordinator Jamie Goggin penned a fund raising appeal and e-mailed the membership. The next day, Goggin tallied pledges enough to buy the P.S.T. and accessories — and placed an order.



Good things come in small packages and good things come to those who wait: The club’s P.S.T. should arrive later this year.


Money materialized so quickly, “It was overwhelming,” says Goggin. “I believe the fast and generous response was a reflection of the club’s shared excitement for this project. I had no idea we could raise this much money in just 24 hours.”

Gratified, Goggin adds that “I want to thank you all for making this happen so quickly and with such enthusiasm.” Among members anxious to see the sun in H-alpha, Deb Wagner adds, “It is gratifying to see what a group of like-minded individuals can accomplish in such a short amount of time and I’m appreciative of everyone who helped make this happen.”

Happen it did. The frenzied project P.S.T. marks a turning point for an informal group of friendly enthusiasts come of age as an active organization. “This is a fantastic acquisition,” Kronk exclaims.

The P.S.T. will star in RBAC’s future outreach efforts, appearing center stage at public viewing parties and school presentations.

Wagner calls the P.S.T. “a wonderful resource for our club. It is a great educational tool for members who enjoy taking astronomy to the classroom and it will enhance the solar observing experiences of those who like to spend time at the eyepiece.”

“I get excited when I think of the prospect of giving a daytime talk at a school and actually having kids look at something *really cool!*” says Goggin. “This is the kind of thing that will leave a real impression on a kid, perhaps giving that spark which will take him/her a different direction in life. Sounds corny, but I believe it.” 

The Space Place

BY PATRICK BARRY AND TONY PHILLIPS

Sciencecraft

Probes that can distinguish between “interesting” things and “boring” things are vital for deep space exploration, say JPL scientists.

Along with his colleagues in NASA’s Space Technology 6 Project (ST6), JPL’s Steven Chien is working to develop an artificial intelligence technology that does just that. They call it the Autonomous Sciencecraft Experiment, and it’s one of many next-generation satellite technologies emerging from NASA’s New Millennium Program.

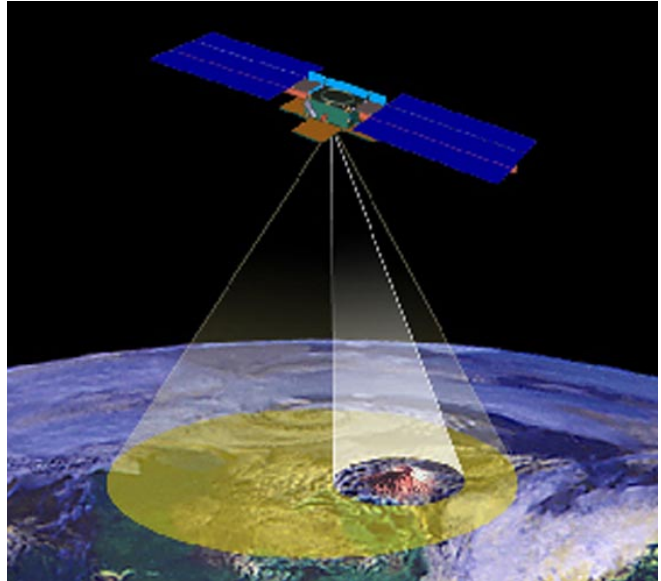
As humanity expands its exploration of the outer solar system—or even neighboring solar systems! — the probes we send suffer from two unavoidable handicaps. First, commands radioed by mission scientists on Earth take a long time to reach the probe: six hours for the planned New Horizons mission to Pluto, for example.

Second, the great distance also means that data beamed back by the probe trickles to Earth at a lower bandwidth — often much less than an old 28.8 kbps modem. Waiting for hundreds or thousands of multi-megabyte scientific images to download could take weeks. And often many of those images will be “boring,” that is, they won’t contain anything new or important for scientists to puzzle over. That’s certainly not the most efficient way of using a multi-million dollar probe.

Even worse, what if one of those images showed something extremely “interesting” — a rare event like a volcanic eruption or an unexpected feature like glaciers of methane ice? By the time scientists see the images, hours or days would have passed, and it may be too late to tell the probe to take a closer look.


But how can a probe’s computer brain possibly decide what’s “interesting” to scientists and what’s not?

“What you really want is a probe that can identify changes or unique features and focus on those things on its own, rather than just taking images indiscriminately,” says Arthur Chmielewski, one of Chien’s colleagues at JPL.



The Autonomous Sciencecraft technology that will be tested as part of NASA’s Space Technology 6 mission will use artificial intelligence to select and transmit only scientifically significant images.

Indeed, that’s what Chien’s software does. It looks for things that change. A mission to Jupiter’s icy moon Europa, for instance, might zero in on newly-formed cracks in the ice. Using artificial intelligence to set priorities, the probe could capture a complete movie of growing fractures rather than a single haphazard snapshot.

Until scientists can actually travel to deep space and explore distant worlds in person, they’ll need spacecraft “out there” that can do some of the thinking for them. Sciencecraft is leading the way. 

Learn more about Sciencecraft at nmp.nasa.gov/st6. Kids can make a “Star Finder” for this month and learn about another of the ST6 technologies at spaceplace.nasa.gov/st6starfinder/st6starfinder.htm.

This article was provided to Current Astronomy by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

BY ERIC YOUNG

Hope springs eternal around Kronk's kitchen table

APRIL 10, 2004 Attendance: Rita Breeden, Bill Breeden, Mark Brown, Sandy Burgess, Lois Butler, Jamie Goggin, Al Kaminski, Gary Kronk, Bruce Kryfka, Deb Wagner, Eric Young. Clouds and drizzle kept us inside all evening...

WELCOME We saw four friendly faces for the first time: Here's a brief intro. to...**Al Kaminski** belonged to a big club in Naperville, IL, where two meetings were held monthly, one for the regulars, one for the newbies. (We're thinking of having a special meeting just for Al.) Apparently he's into software, has begun uploading freeware/shareware to the RBAC Yahoo! site, and hopes to create a CD of applications we can share.... Al's daughter, **Sandy Burgess**, studied astronomy in college and finds herself sparked once again by interest in her dad's hobby. We'll see how much of that course she remembers when Sandy computes Mars' retrograde motion using Kepler's formulae at the next meeting. Sandy said one of her passions is reading about cosmology. Maybe she will expand our horizons.... **Bill Breeden's** enthusiasm for astronomy is contagious. He's studying web sites and daydreaming regularly in anticipation of buying his first telescope. Bill's first bright night-sky target will probably be the gas station sign visible from the backyard of he and his wife, Rita.... **Rita Breeden** seems as excited about the universe as Bill. As Bill put it, "You should have seen my wife when she saw Saturn. She was speechless! 'It's just like you see on television,' she said." The Breedens hope to eventually have his-and-hers scopes. They've already started an observing logbook for objects they've seen. Way to go!

LAST-MINUTE PLANS Astronomy Day maven Mark Brown ran through a list of items leading up to the big event. It will all be old news by the time you read this so no need to mention it here. (Come to think of it, all astronomy is old news. Everything in the deep-sky gazette is ancient history.)

V.P. RESIGNS The board of RBAC regrets to inform the membership that vice-president Kurt Sleeter resigned his position this spring. Kurt, a founding member of the organization, has evangelized astronomy to the St. Louis area for over a decade, even when the letters "RBAC" were just alphabet soup. Kurt says his current schedule does not allow him to take an active role in club affairs. We're grateful, Kurt, for all you've done as V.P. for the club, for your dedication and for your sense of humor through the years.

BUSH VS. KERRY Hah! Got your attention. Those guys will duke it out in the national election this fall. This summer, RBAC must hold an election, too. At least the vice-presidency must be filled. More to come.

SPACE SUITCASE That's one way to think of the information box we received from NASA as part of our membership in the Night Sky Network. This public outreach program has a bounty of good ideas and helpful information, including visual aids for presentations. The box contains a training CD — helpful, according to Jamie Goggin. Every six months a new box of goodies will arrive. There are forms to fill out after each presentation to keep the good stuff coming. Contact Jamie for more information.

KRYFKA INN Arizona looks good to Bruce Kryfka as a state to call home when he retires. Bruce promises at least one large guest bedroom (a large bedroom, that is to say, for guests of any size) with a sign on the door that reads "Welcome, RBAC members." We'll take you up on that offer, Bruce. Pass the rattlesnake repellent.

FEEL FOR ASTRONOMY Gary Kronk displayed *Touch the Universe: A NASA Braille Book of Astronomy* by Noreen Grice. This neat, large-print book not only has Braille characters but the photos are embossed — readers can "feel" a galaxy or "touch" the

Events

MAY MEETING

Saturday, May 15, 2004 • 7:00 p.m. •

Kronk Observatory

rings of Saturn. (It's worth mentioning, though, that a great deal of modern astronomy is imaged outside the range of visible light that most humans can see.)

HEED YOUR CALLING Deb Wagner, telemarketer at heart, urged new members to join the Astronomical Early Warning System, or AEWS as we like to call it. This card entitles the bearer to a phone call at any time of day or night alerting them that a Chicxulub-size meteoroid is incoming, a heretofore unknown second satellite of Earth has just emerged from behind the Moon, or that sort of thing.


TENTATIVELY TENTATIVE We studied a calendar and came up with this list of suggested dates for meetings in 2004: May 15, June 19, July 17, August 14, September 11, October 9, November 13, December 11. (Yes, we discussed the September date. As someone said, mano a mano with the cosmos seems fitting for that evening.)

ON THE RIGHT FOOT The rather reclusive creature Bigfoot put in a surprise appearance at the April meeting. Although he was polite and well-mannered (at least, I believe it was a "he"), he smelled as if he just got up off the forest floor. Or maybe like he'd taken a dip in the water treatment lagoon just north of the Kronk's place. Well, maybe not, because then he

would be more of a creature from the black lagoon rather than a backwoods legend. At any rate, he sampled the sour cream and onion chips, motioned for a cup of Ski soda, and went on his way.

ABC'S OF P.S.T. Originally, I'd figured to print an appeal in this issue begging money to buy the club a P.S.T. (See page 6). Well, quicker than you could say "SPF 15," we had more than enough dough and the scope was on order from Astronomics. Guess we really wanted one of those, huh?

But perhaps a bit of reporting is in order for those who could not make the meeting when the matter was discussed. President Gary made an eloquent appeal for the acquisition which went along the lines of — RBAC is an observing club, this scope is an observer's dream, *let's do it*. Jamie, who agreed to chair the project, strongly urged voluntary donations and access for everyone when the P.S.T. arrived. Mark called the initiative "a crossroads" for RBAC and said that the P.S.T. would become a real perk of membership. Deb had some great fund raising ideas, but she, like me, probably assumed that it would take awhile to come up with that much cash. My recommendation that we set up a Hammurabi-type code whereby anyone who lost or damaged the scope would have their right hand (if they're right-handed and focus with that hand) removed with a food processor was hooted down, and I was politely asked to go remove ticks from Bigfoot's back. Regardless, everyone wholeheartedly agreed that getting a club P.S.T. was a worthwhile endeavor.

Any way you look at it — turning point, crossroads, big step for mankind, etc. — RBAC is no longer just a group of individuals who merely allow others to peer through our telescopes in the dark. We've gone and done something that promises to bring a little light into other's lives: We've put our money where our good intentions reside. And that, for sure, is pride-worthy. 



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

Officers

PRESIDENT Gary Kronk
VICE-PRESIDENT Kurt Sleeter
TREASURER Ed Cunniss
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.

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Current Astronomy

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

May 2004



April 2004

S	M	T	W	T	F	S
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1

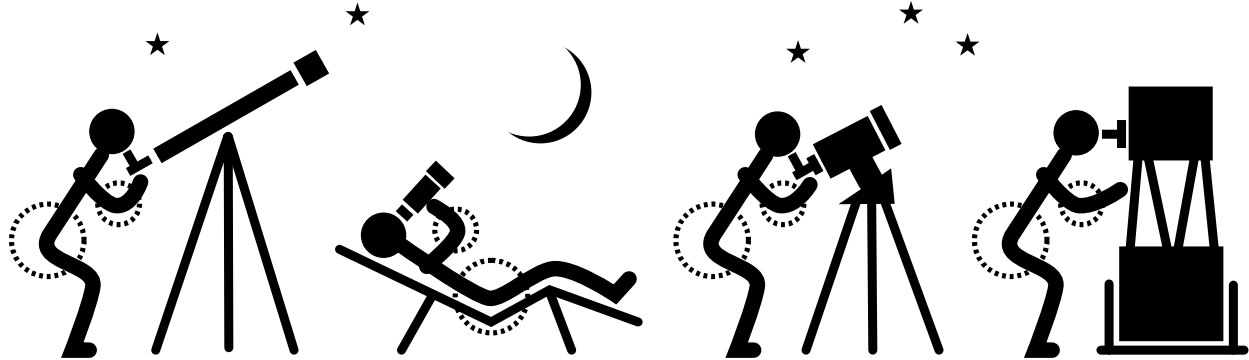
June 2004

S	M	T	W	T	F	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3

■ Holidays
 ■ Moon Phases
 ■ RBAC
 ■ Space Mission
 ■ Observing
 ■ Trivia

Sun	Mon	Tue	Wed	Thu	Fri	Sat
25 ■ Lyrids end ■ Astronomy week ends	26	27 ■ First-quarter 12:32 p.m. CDT	28	29	30	1 ■ Venus at greatest illuminated extent
2	3	4 ■ Full Moon 3:34 p.m. CDT	5 ■ Eta Aquirids near peak before dawn	6	7 ■ C/2001 Q4 (NEAT) closest to Earth	8
9 ■ Mother's Day	10	11 ■ Last-quarter 6:04 a.m. CDT	12	13	14	15 ■ RBAC Meeting 7 p.m.
16	17 ■ Mercury at greatest illuminated extent	18 ■ 1969 Apollo 10 launch ■ New Moon 11:52 p.m.	19 ■ C/2002 T7 (LINEAR) closest to Earth	20	21 ■ North Dakota Star Party begins	22
23 ■ North Dakota Star Party ends	24	25 ■ Mars passes 1.6 degrees from Saturn	26	27 ■ First-quarter 2:57 a.m. CDT	28	29
30 ■ Memorial Day	31	1	2	3	4	5

We recommend light bending nightly.



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

Meteors 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

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