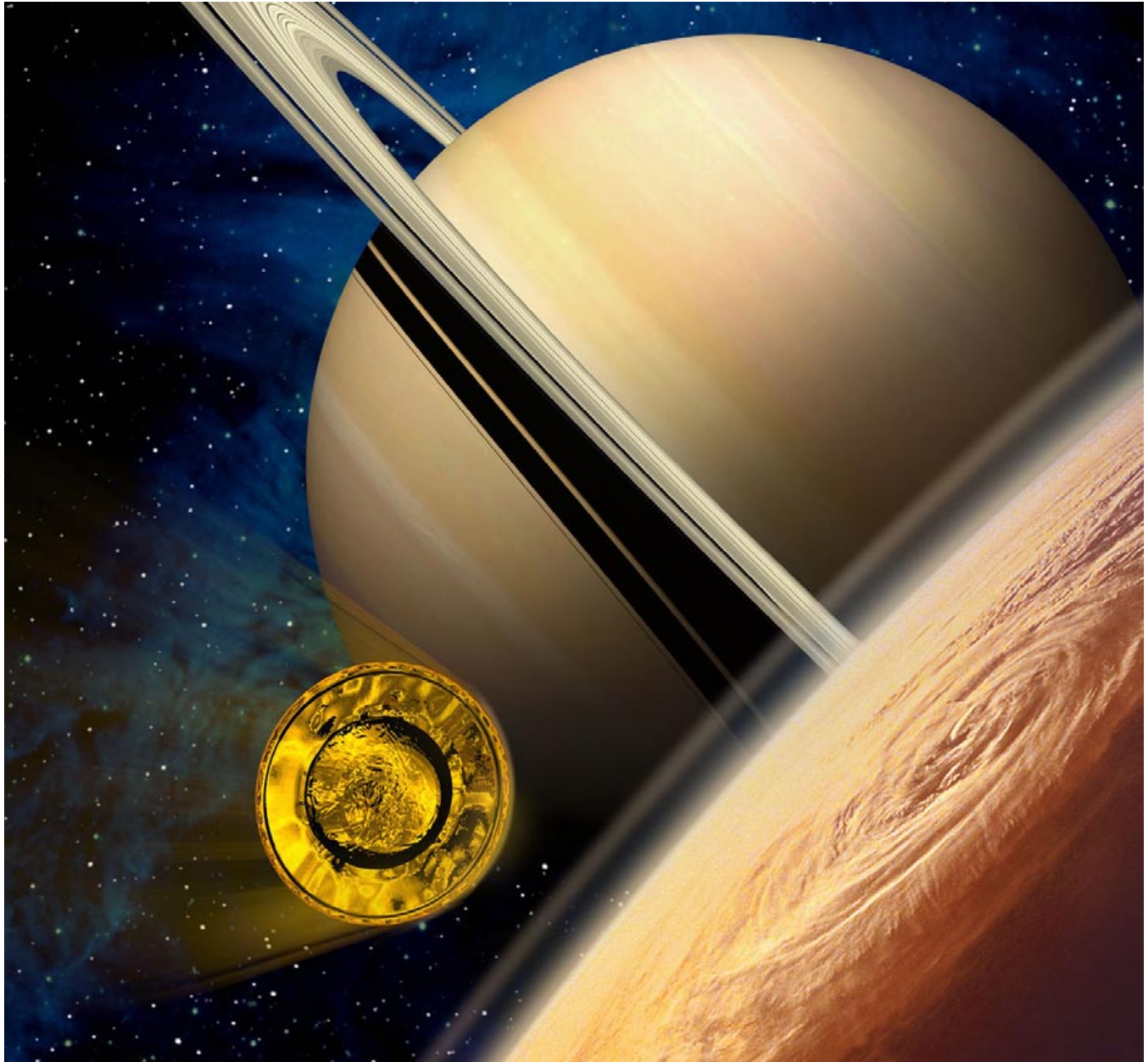




Current APRIL
Astronomy 2005

RIVER BEND ASTRONOMY CLUB NEWSLETTER



The Huygens space probe hurtles toward Titan, Saturn's largest moon. Club members tracked the perilous landing along with the rest of the world through news reports and web sites. ILLUSTRATION: ESA-D DUCROS

RIVER BEND ASTRONOMY CLUB

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

Officers and administrators

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Affiliated with the Astronomical League, dedicated to fostering astronomical education, providing incentives for astronomical observation and research, and assisting communication among amateur astronomical societies.
www.astroleague.org



Affiliated with the NASA Night Sky Network, a nationwide coalition of amateur astronomy clubs bringing the science, technology and inspiration of NASA's missions to the general public.
nightsky.jpl.nasa.gov

Current Astronomy CLUB NEWSLETTER

EDITOR Eric Young
younger@wustl.edu

Monthly Meeting

Saturday, April 9th, 2005 • 7:00 p.m.

Kronk Observatory

132 Jessica Drive, St. Jacob, IL 62281

Looked up lately?

Join River Bend Astronomy Club

Want to learn more about astronomy? The members of River Bend Astronomy Club invite you to join. You won't need expensive tools or special skills — just a passion for observing the natural world.

- Meetings offer learning, peeks through great telescopes and fun under the stars.
- You will receive the club newsletter, *Current Astronomy*, packed with news and photos.
- Get connected with our member-only web site and discussion group.
- Borrow from the club's multimedia library.
- And that's not all! Through club membership you also join the Astronomical League, with its special programs and a colorful quarterly newsletter to 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?

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) _____ Youth membership(s)
@ \$20.00/year @ \$15.00/year
(18 years or older) (under 18)

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

Signature _____

Date _____



River Bend Astronomy Club

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

web: riverbendastro.org e-mail: riverbendastro@att.net

SEPTEMBER 04

Saturn fun facts

Get to know this dazzling gas giant planet

BY DEB WAGNER

THE PLANET SATURN

- Saturn is the 6th planet from the Sun.
- Saturn is a gas giant. Its atmosphere contains hydrogen, helium, methane, and other compounds surrounding a small solid core.
- Saturn weighs less than water. If Saturn could fit in your bathtub it would float.
- At its equator, the radius of Saturn is 9.5 times wider than Earth.
- Saturn completes one orbit around the sun every 29.5 earth-years.
- The wind on Saturn can reach speeds of 1,100 mph.
- Saturn was named for the Roman god of the harvest.
- Ring-edge to ring-edge, Saturn is more than 170,000 miles across — over two-thirds the distance from the Earth to the Moon.

MOONS

- A 6" telescope will reveal 4 or more moons.
- Saturn is orbited by at least 31 satellites (moons).
- Saturn's largest moon, Titan, is more than 3,000 miles across and a little bigger than the planet Mercury.
- The Huygens probe, which descended to the surface of Titan on January 14, 2005, was named after Christiaan Huygens who discovered Titan in 1655.

In 1675, Giovanni Domenico Cassini discovered the large gap in Saturn's rings (though probably not while taking a bath!) Saturn, a gas planet lighter than water, in theory could float like a rubber ducky.

RINGS

- In a backyard telescope, Saturn's rings appear solid. Actually, they consist of trillions of pieces of ice and rock that orbit the planet.
- The Cassini Division, a noticeable gap in the rings, is about as wide as the North American continent.
- Giovanni Domenico Cassini discovered the Cassini Division in 1675.
- Saturn is not the only ringed planet in our solar system. Jupiter, Neptune, and Uranus also have rings, but Saturn's rings are the only ones visible in backyard telescopes.

CASSINI MISSION

- On June 30, 2004, the Cassini-Huygens spacecraft entered orbit around Saturn to begin several years of scientific exploration. To learn more about this mission and to view the latest photos and information, visit the Cassini-Huygens Mission to Saturn and Titan website at: saturn.jpl.nasa.gov



Star light, star bright

Fifth annual Astronomy Day planned for April 16th

BY ERIC YOUNG

Explore our big universe with River Bend Astronomy Club at its fifth annual Astronomy Day & Night celebrations on Saturday, April 16.

The club held its first Astronomy Day event in 2001 when a few people gathered in St. Jacob Park for some quiet stargazing. Since then the club and the event have grown and we now host both daytime and nighttime activities.

The daytime event will be held from 10:00 a.m. to 2:00 p.m. at the Children's Museum, 722 Holyoake Road in Edwardsville, (618) 692-2094. The Museum will be converted to an astronomy learning center.



Courtney Curtis of Edwardsville, Ill., won the grand prize in 2004 — a telescope donated by Hardin Optical Company. She's pictured with Mark Brown, Astronomy Day coordinator (left), and Gary Kronk, president of RBAC.

“Star gazing teaches patience and humility. It is a fun hobby, because unlike some hobbies, all you need to do is look up!”

— Tom Foster —

Attendees will learn about space through interactive displays and activities. Taste a comet, safely watch the sun's life-giving energy, tell time with a mega-sun dial, color the planets, and see a range of family-size telescopes for capturing the cosmos. Visit the Museum for a chance to win one of three telescopes or other educational prizes. Admission is \$3, for ages 1 and over.

Later, look through telescopes to see stars, the moon and planets from Shaw Sky Lab, Southern Illinois University Edwardsville, (618) 650-3049, from 7:00 p.m. to 10:00 p.m. See astronomical wonders, like the rings of Saturn and the moons of Jupiter. The club plans an evening of stargazing, perfect for family fun or romance under the stars. Admission is free.

Visitors of all ages are encouraged to ask questions. “The heart of science is questioning and then learning the answers,” says Tom Foster, club member and assistant professor of physics at Southern Illinois University Edwardsville. “Parents need to be comfortable saying ‘I do not know, but let's try and figure it out together.’”

“The first time you see Saturn with your own eyes, your life will change,” says Foster. “I had flipped through numerous books as a kid, but when I finally put my own telescope on the ringed planet, I understood majesty. We live on an amazing world and it should be experienced.”

For more information visit riverbendastro.org. 

Help make a difference

Let's bring astronomy to the people

BY MARK BROWN

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planetary.org

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www.imaginova.com

Anacortes Telescopes & Wild Bird
www.buytelescopes.com

FireFly Books Ltd.
www.fireflybooks.com

Edmund Scientifics
www.scientificsonline.com

The Children's Museum
www.childrens-museum.net

We've come full circle again as Astronomy Day 2005 is fast approaching. Our 5th annual program will be held at the Children's Museum on Saturday, April 16, 2005. In the evening we will stargaze with the public at Shaw Sky Lab, Southern Illinois University Edwardsville.


Astronomy Day, our club's biggest and most popular yearly event, offers the opportunity to make a difference — a chance for our astronomical community to give something back to the people. The main theme is, "Bringing Astronomy to the People."

For a relatively small club, our members have huge hearts when it comes to sharing the joy of this wonderful hobby with others — both young and old. There is no doubt we are the premier Astronomy Day organization for residents of the metro east area and southwest Illinois. By doing what we do, we inspire youngsters to become interested in science and to consider extending their academic endeavors.

Once again, I make a plea for your enthusiasm to help put our event in motion. Weather permitting, we will set up the bulk of our equipment outside the Museum. Inside we can set up computers, promotional information and other displays. Volunteers should arrive between 8:00 a.m. and 8:30 a.m. to help set up. The Museum opens to the public at 10:00 a.m.

In the evening, we will join club member Tom Foster at Shaw Sky Lab for (hopefully) clear skies and nighttime viewing of the stars, Moon and planets.

I encourage you to promote this event as much as possible. Print copies of the Astronomy Day flyer and send them to schools. Give them to science teachers and place them in libraries and other public places.

A lot of people (including you) and various organizations help support Astronomy Day through sponsorship and prize donations. It is through these charitable contributions and unselfish generosity that we are able to do the things necessary to reach the public. I look forward to seeing you all on Astronomy Day. 

SCHEDULE

Saturday, April 16, 2005

8:00 a.m. Set up at the Children's Museum

10:00 a.m. Astronomy Day 2005 opens

11:30 a.m. Door prize drawings

1:30 p.m. Door prize drawings

2:00 p.m. Daytime activities at the Museum end. Clean up and pack up.

6:30 p.m. Set up for night sky observing at Shaw Sky Lab

10:00 p.m. Evening observing ends



Special thanks to Jace Perham for donating a pair of Apogee 25 x 100 mm binoculars.

Thanks to all club members who give so generously of their time and talents in bringing astronomy to the people.

Star light, star bright

Explore our big universe

Astronomy Day
April 16, 2005



Win a telescope!

FREE attendance prizes
— passports to family fun!



*Hardin
Optical*



*Edmund
Scientifics*



Meade Instruments

MUST BE PRESENT TO WIN.
ONE ENTRY PER FAMILY.
PRIZE DRAWINGS WILL BE HELD
AT 11:30 A.M. AND 1:30 P.M.



SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE



Astronomy Day & Night!

Educational activities and great prizes
April 16, 2005 • 10:00 a.m. to 2:00 p.m.

The Children's Museum

722 Holyoake Road, Edwardsville, IL (618) 692-2094
www.childrens-museum.net Admission: \$3

Stargazing with telescopes
7:00 p.m. to 10:00 p.m.

Shaw Sky Lab

Southern Illinois University Edwardsville
www.siu.edu/PHYSICS/viewing.html
Free admission.

Visit riverbendastro.org for more information.

BY TONY PHILLIPS

Utterly alien

There's a planet in our solar system so cold that in winter its nitrogen atmosphere freezes and falls to the ground. The empty sky becomes perfectly clear and jet-black even at noontime. You can see thousands of stars. Not one twinkles.

The brightest star in the sky is the Sun, so distant and tiny you could eclipse it with the head of a pin. There's a moon, too, so big you couldn't blot it out with your entire hand. Together, moonlight and sunshine cast a twilight glow across the icy landscape revealing ...what? Twisted spires, craggy mountains, frozen volcanoes?

No one knows, because no one has ever been to Pluto.

"Pluto is an alien world," says Alan Stern of the Southwest Research Institute in Colorado. "It's the only planet never visited or photographed by NASA space probes."

That's about to change. A robot-ship called New Horizons is scheduled to blast off for Pluto in January 2006. It's a long journey: More than 6 billion kilometers (about 3.7 billion miles). New Horizons won't arrive until 2015.

"I hope we get there before the atmosphere collapses," says Stern, the mission's principal investigator. Winter is coming, and while it's warm enough now for Pluto's air to float, it won't be for long. Imagine seeing a planet's atmosphere collapse. New Horizons might!

"This is a flyby mission," notes Stern. "Slowing the spacecraft down to orbit Pluto would burn more fuel than we can carry." New Horizons will glide past the planet furiously snapping pictures. "Our best images will resolve features the size of a house," Stern says.

The cameras will also target Pluto's moon, Charon. Charon is more than half the size of Pluto, and the two circle one another only 19,200 kilometers (12,000 miles) apart. (For comparison, the Moon is 382,400 kilometers [239,000 miles] from Earth.) No wonder some astronomers call the pair a "double planet."



SOUTHWEST RESEARCH INSTITUTE (DAN DURDA)
JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY (KEN MOSCATTI)

New Horizons spacecraft will get a gravity assist from Jupiter on its long journey to Pluto-Charon.

Researchers believe that Pluto and Charon were created billions of years ago by some terrific impact, which split a bigger planet into two smaller ones. This idea is supported by the fact that Pluto and Charon spin on their sides like sibling worlds knocked askew.

Yet there are some curious differences: Pluto is bright; Charon is darker. Pluto is covered with frozen nitrogen; Charon by frozen water. Pluto has an atmosphere; Charon might not. "These are things we plan to investigate," says Stern.

Two worlds. So alike, yet so different. So utterly alien. Stay tuned for New Horizons. [↗](#)

Find out more about the New Horizons mission at pluto.jhuapl.edu/. Kids can learn amazing facts about Pluto at spaceplace.nasa.gov/en/kids/pluto.

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

BY ERIC YOUNG

Never stare a vulture in the eye

MARCH 12, 2005 A brilliant sunset sky appeared promising with a slender crescent Moon and Mercury arrayed in the west. Clouds overtook us, though. We convened in the Kronk garage for officer's reports and Astronomy Day planning plus the usual assortment of tall observer's tales and other nonsense.

FARSIGHTED We learned how Bill Breeden can focus his eyes on infinity: his wife, Rita, just whacks him on the back of the head and suddenly he can see Coma Berenices.

SHOOTING STARS Deb Wagner proudly displayed her Meteor Club certificate from the Astronomical League. She laid outside for several hours to earn the certificate — no word on whether or not her eyes were open at the time.

HAIRY When the front plate of Jeff Menz's Schmidt-Cassegrain telescope frosted up, Terri Menz strung extension cords outside to blast it with a hairdryer. Jeff later had his nails done, too.

CARRION Earlier in the day a vulture was feeding on a raccoon carcass out in a wheat field so your newsletter editor (me) pulled out the 80mm telescope and aimed it toward the big black bird. It struck me how the vulture would pull at something and then step back and hop over to a completely different portion of the 'coon for the next nibble. It's hard to say whether this was a defense strategy or what. In telling this tale I explained how a vulture, when alarmed, may regurgitate the contents of its gut, aiming the horrific mess right at its opponent. Next, we passed around a bucket of KFC provided by Jace Perham. Yum!

E-MAIL Don't forget — the club e-mail address is now riverbendastro@charter.net. Keep those notes coming from the Nigerian consulate!

SEASON OF CHANGE

Observing report from Dennis "Rip" Rippelmeyer, Friday, March 4, 2005

"...just wait a while." I've heard this for years about our midwest climate.

Last night was a good reminder. The early evening sky looked very clear and steady. Saturn was fairly well-behaved in my little 4.5" reflector; however, I'm convinced the mirror isn't figured well enough for me to pull out the Cassini Division. I took a look at the Beehive Cluster which filled the field of view using a 32mm Plössl lens. Imperfect mirror or not, I was still able to see the four major stars in the Trapezium in the Orion Nebula and the nebula itself appeared especially contrasty.

I took a break to put up some coffee and check the sky maps. About 30 minutes elapsed and when I returned to the scope and looked up I was startled — no stars — completely clouded over. I packed everything back into the house and joined the wife for a little TV channel surfing only to notice the sound of rain striking the front storm door. An hour or so later I took the dog out and noticed the stars had returned in full glory.

"Just wait a while...it'll change", I thought.


YOU CAN BANK ON IT We have about 500 bucks in the bank according to a report from treasurer Mike Veith. Mike's still ironing out the details of our official account with the Swiss branch of the Edwardsville banking system. Mike promises that he'll maintain full access to our hard-earned money at all times. In other spending news, we voted to go with the company called godaddy.com to secure our club domain name for another five years. This new contract will save us some bucks in the long run.

ON THE WEB The Astronomical League spiffed up their web site with new graphics. The site is now easier to navigate, more consistent, and highlights items that were once buried deep in the old site. Check it out at www.astroleague.org

FLYBOY Where in the world is Jeff Sjoquist? He sent word from a-broad (I mean, from overseas) that he'll be far away on Astronomy Day. Maybe the sky's clear over his corner of the planet.

HALF-TRUTHS Where does Deb Wagner get the latest news? From the supermarket tabloids, which she calls "scientific journals." And where does John Schwartz hear what's up? From listening to the Coast-to-Coast A.M. radio program. Given the nature of their sources, I've decided not to mention their claim of seeing Bigfoot lunching with Elvis at the Troy truck plaza.

PLAY BALL So last fall the St. Louis Cardinals' World Series hopes were dashed during a lunar eclipse. They face another eclipse, this time solar, on opening day, April 8th. What are the chances? View an animation at: www.spaceweather.com/swpod2005/08mar05/koehn1.gif

OUTREACH See the coverage in this issue for Astronomy Day information. This year, tell someone how much you enjoy astronomy, and why! 



NASA recognizes RBAC's public outreach

OUTREACH RECOGNITION FROM THE NASA SPACE PLACE

The NASA Space Place team sent a certificate and this letter of recognition:
 "We are pleased to award you and your club the enclosed certificate of appreciation. As an active NASA Space Place astronomy club partner and by carrying our NASA column in your club newsletter or on your web page (or both), you facilitate science and technology education among club members and throughout your community. Through your public events, you not only educate, but you also inspire your audiences, both young and old. Through your use of hands-on activities and experiences for children, you play a key part in developing tomorrow's scientists. Please accept this certificate of appreciation with our gratitude."



The Astronomical League is proud to announce the 2005 annual convention to be held in Kansas City, August 12-13, 2005.

The League's **Council meeting** will be held August 11 at the National Office, our first council meeting at the facility. There will



also be an astronomical trade show and vendor exposition, a **Star-B-Q at Powell Observatory**, and a private exhibition at the **Linda Hall Library** where you can hold a Galileo first edition and read Herschel's journal. Our goal will be



to increase participation by astronomers and companies and to make this the best trade show we've ever hosted.

annual awards speakers will all be Kansas, **Sheraton**



The meetings, banquet, trade show, and held at the Overland Park, **Hotel and Convention Center.**

For information call 913-234-2100,



or toll free 866-837-4214. Be sure to mention the Astronomical



League for a discount rate. For additional information, contact Mr. Carroll Iorg, 7241 Jarboe Street, Kansas City, MO 64114. Phone 816-444-4878 or e-mail Carroll at: Carroll-Iorg@kc.rr.com.



April 2005



March 2005

S	M	T	W	T	F	S
27	28	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	31	1	2

May 2005

S	M	T	W	T	F	S
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	31	1	2	3	4

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

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27 ● Easter	28	29	30 ● Mercury close to Venus	31 ● Jovian moons cluster @ 9:30 p.m.	1 ● Last quarter 6:50 p.m.	2
3 ● Daylight "Savings" Time begins ● Jupiter at opposition	4	5	6	7	8 ● New Moon 3:32 p.m. ● Partial solar eclipse	9 ● RBAC meeting 8 p.m.
10	11 ● 2 Pallas close to M98	12	13 ● Mars close to Neptune	14	15	16 ● Astronomy Day ● First quarter 9:37 a.m.
17	18	19	20	21 ● Lyrids peak @ midnight (5h UT on the 22nd)	22 ● Earth Day	23 ● Passover begins at sunset
24 ● Penumbral lunar eclipse ● Full Moon 5:06 a.m.	25	26	27	28 ● Jan Oort b. 1900	29	30