



THE NEKAAL OBSERVER

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The official newsletter of Farpoint Observatory and
the Northeast Kansas Amateur Astronomers' League

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Your articles and other contributions to this newsletter are welcome and encouraged. Please get them to the editor at least 6 days prior to the next scheduled meeting.

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FROM THE PREZ:

By Jerry Majers

Even though a Lunar Eclipse and several Meteor showers were scheduled, thick clouds unfortunately eclipsed Topeka's observations. Gary Hug (on his Birthday Oct. 29) reported that he viewed an Aurora display from his home. Unfortunately, by the time I arrived home, the display had mostly faded.

On the other hand, it is not too late to be on the look out for other planned attractions. In late November and December we will see Comet Encke, the last views of Mars and those with telescopes will be able to view Uranus (in Aquarius) and Neptune (in Capricorn). It is still an excellent time to bundle up for the winter observing of Saturn, Jupiter, Venus, and Mercury.

Remember, too, that the Gemini meteor shower will reach its peak on December 13-14 th. Finally, a last reminder that the Annual NEKAAL Holiday party and business meeting will be at Gary and Cindy Hug's house: 964 w 149th, Scranton, Ks. (directions are in this newsletter). I am sure we will enjoy getting to visit Sandlot Observatory and their new home on 40 acres of land near Scranton, Kansas.

Clear dark skies,

Jerry R. Majers

NOTES FROM THE EDITOR :

By Graham Bell

As mentioned in Jerry's comments above, this year's Christmas Party will be at Gary and Cindy Hug's house near Scranton. Directions are on page 3. The party will be at 1:00 pm on December 14th.

I apologize for being late with the *Observer*. As I was putting it together, I encountered an unexpected reaction to some new medication. It took a couple of days to recover (somewhat) after ceasing the meds

As far as we can determine, only one NEKAAL member was able to see the recent Lunar eclipse. Edwin Woerner had clear skies in the United Arab Emirates (UAE). He was able to get some good pictures of the eclipse. Several of those appear in this issue of the *Observer*.

VOTE: The 2004 ballot is inserted in this *Observer*. Please read the instructions on page 5 and mail your ballot to the Secretary. The ballot is on page 9 of this month's *Observer*.

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SKY HIGHLIGHTS FOR DECEMBER:

by Janelle Burgardt

December 8	Full Moon December's full moon is called the Cold Moon, Long Night Moon, or Moon before Yule
	Mercury at greatest elongation
December 13-14	Geminid meteor shower
December 16	Last quarter moon
December 23	New Moon
December 30	First quarter moon
December 31	Saturn at opposition

Planet viewing for evening skywatchers is heading into an interesting phase, peaking early next year. Here's what our planetary neighbors will be up to this month:

Mercury—At magnitude -0.5, the little guy will be 7 degrees to the lower right of brilliant Venus during the first week in December. From this position of greatest elongation, It fades to +0.8 by the 18th.

Venus—At magnitude -4.0, Venus at 12" across is nearly full. It rises higher in the western sky throughout the month.

Mars—Distance from Earth increases from 79 to 103 million miles over the month, and magnitude fades from -0.4 to +0.2. The planet's disc is about 11", half of what it was in August.

Jupiter—A bright presence in the morning sky, Jupiter shines at -2.0 in Leo.

Saturn—Smack dab in the middle of Gemini, the ringed planet is the most prominent planet in the night sky this month. Rising 2 hours after sunset on December 1, Saturn rises earlier each night throughout the month, until rising around sunset on the 31st, when it reaches opposition. Saturn is at its highest point above the ecliptic since May 1975, placing it in excellent viewing position. With a diameter of 20", magnitude of -0.2, and its rings inclined at a near-maximum 26 degrees, **Saturn-viewing doesn't get much better than this.**

Uranus—Uranus remains in western Aquarius.

Neptune—In Capricorn this month, Neptune will be about 2 degrees south of Venus on the nights of December 29 and 30.

Pluto—Just past its conjunction with the sun, Pluto isn't visible this month.

SOME INTERESTING ALIGNMENTS THIS MONTH

by Janelle Burgardt

Sometimes, sky events happen that aren't of particular astronomical note, other than the fact that they are just kinda neat. If you're into planetary alignments (*not* of the astrological type), or just like pretty sights, this month is for you.

Under the "pretty sight" category comes an astronomical Christmas gift. On the evening of December 25th, there will be a close encounter between the crescent moon and the beautiful planet Venus. Show this one to those visiting relatives; it's always an attention-grabber. Astrophotographers really like this one.

There are three different tri-planetary alignments this month. This is the kind of astronomical trivia that appeals to "regular people" as well

Group #1 Mercury-Venus-Mars

All 3 planets are visible in the western sky until midmonth.

Group #2: Venus-Mars-Saturn

After December 8, these planets are all visible in the early evening. Venus and Saturn are at opposite horizons, with Venus in the west and Saturn in the east. By December 31, both planets will be equidistant above their respective horizons. At about 13 degrees above the horizon 1.5 hours after sunset, they'll be bright "bookends" of the night sky.

Group #3: Mars-Saturn-Jupiter

Around midnight all month long, all three of these outer planets will be visible at the same time. Jupiter rises in the east just before Mars sets in the west. On December 31, Mars and Jupiter will both be 10 degrees above opposite horizons shortly after 11PM local time, making a distinctly uneven pair of sky "bookends".

BOARD MEETING SUMMARY, NOVEMBER 9, 2003 : Janelle Burgardt

Present: Graham Bell, Jan Burgardt, Walt Cole, Gary Hug, Russell Valentine

Absent: Mike Ford, Marvin Kessler, Bill Leifer, Jerry Majers, Marshal Miller, Ken Peterson, David Ryan

1. Treasurer's Report

Account balances presented.

Water repair—The break in the water line outside the observatory has been repaired, at a cost of \$286. Board members have made special donations to cover the cost.

2. FPO Director Report

No report.

Tasks remaining: exterminator visit

3. Old Business

Internet access—Graham hasn't been able to find the type of relay required to complete the original design. . He and Russ Valentine are working on a different plan to get service restored.

27" Telescope Project—Some discussion of available equipment. Response from NASA expected in March of 2004.

4. New Business

Presentations – Janelle is going to Theodore Roosevelt Elementary in Manhattan to present to two first-grade classes. Heartland Park Star Party went well, despite lack of publicity by TSCPL.

FPO Maintenance – May be a short in red lights in observatory proper. Due to water problems, debris maybe be plugging up some lines; may need new ballcock assembly. Problems have been reported to FPO Director.

January meeting—telescope demo session will be conducted again. Fliers will be provided to Wolfe's and other interested vendors.

December meeting—Date was set for December 14. Time and location to be announced.

Website—Requested input on what should be included in a new FAQ section.

THIS YEAR'S CHRISTMAS PARTY!!

The party this year will be earlier in the day, 1:00 pm at Gary and Cindy Hug's place on December 14. They now live south of Carbondale.

Directions:

Take US 75 South to the Carbondale exit. Take the exit and turn right from the top of the ramp (you'll then be heading west). Go just past Skip's Grocery (only about a block west of the ramp) and turn left onto Topeka Ave. (actually its old US 75). Travel south for about a mile and a half until you get to 149th St. Turn right (heading west) on 149th (rock road). The next intersection is Jordan. Continue west past Jordan on 149th until you get to Merrill road. At this corner Merrill road only goes north and their house is the one just north west of the intersection. it is a gray u-shaped house with a 30 x 40 ft Morton bldg to the northeast.

Election results and awards will be announced at this party!

STARDUST by Patrick L. Barry and Dr. Tony Phillips

Philosophers have long sought to "see a world in a grain of sand," as William Blake famously put it. Now scientists are attempting to see the solar system in a grain of dust-comet dust, that is.

If successful, NASA's Stardust probe will be the first ever to carry matter from a comet back to Earth for examination by scientists. It would also be the first time that any material has been deliberately returned to Earth from beyond the orbit of the Moon.

And one wouldn't merely wax poetic to say that in those tiny grains of comet dust, one could find clues to the origin of our world and perhaps to the beginning of life itself.

Comets are like frozen time capsules from the time when our solar system formed. Drifting in the cold outer solar system for billions of years, these asteroid-sized "dirty snowballs" have undergone little change relative to the more dynamic

planets. Looking at comets is a bit like studying the bowl of leftover batter to understand how a wedding cake came to be.

Indeed, evidence suggests that comets may have played a role in the emergence of life on our planet. The steady bombardment of the young Earth by icy comets over millions of years could have brought the water that made our brown planet blue. And comets contain complex carbon compounds that might be the building blocks for life.

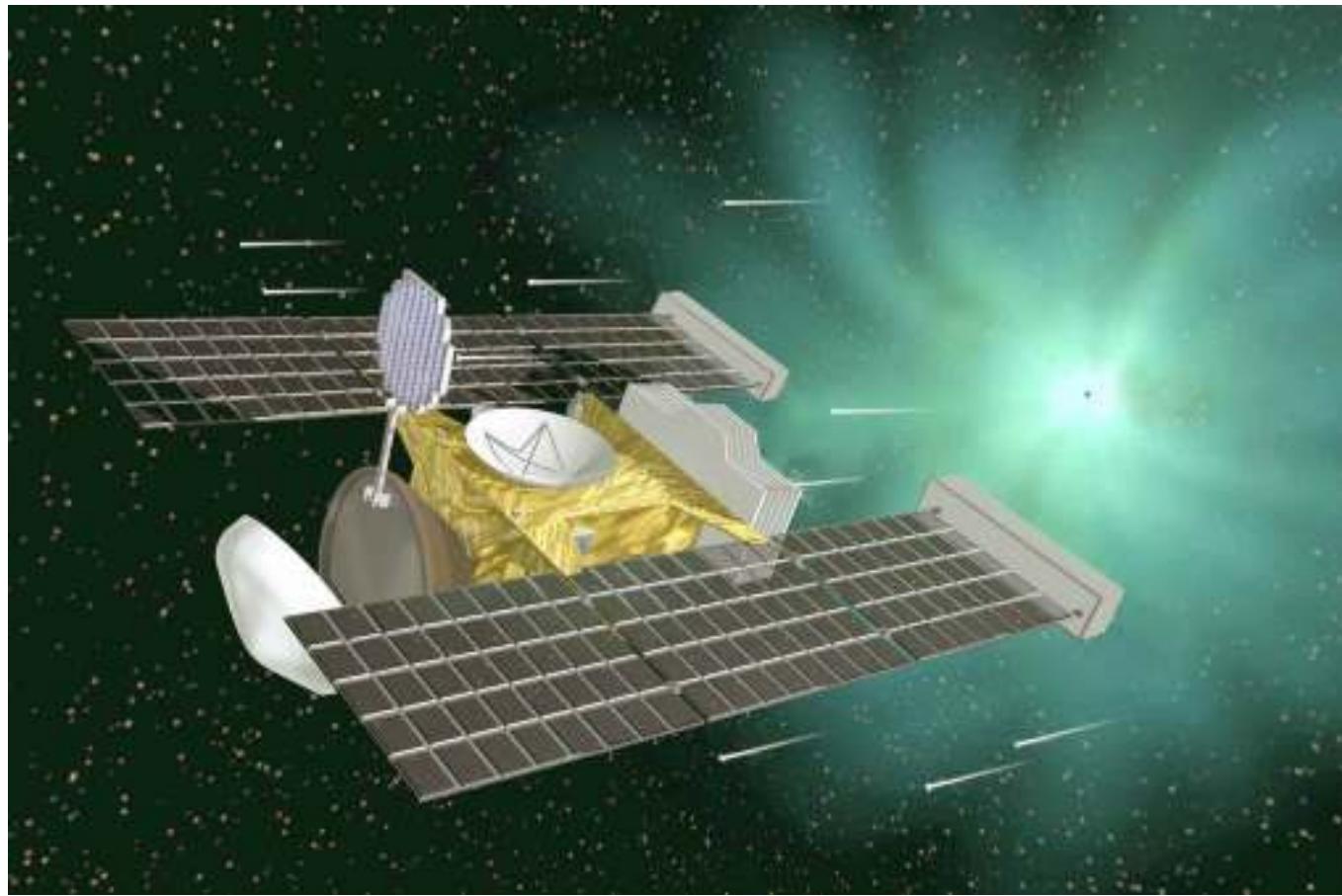
Launched in 1999, Stardust will rendezvous with comet Wild 2 (pronounced "Vilt" after its Swiss discoverer) on January 2, 2004. As it passes through the cloud of gas and dust escaping from the comet, Stardust will use a material called aerogel to capture grains from the comet as they zip by at 13,000 mph. Aerogel is a foam-like solid so tenuous that it's hardly even there: 99 percent of its volume is just air. The ethereal lightness of aerogel mini-

mizes damage to the grains as they're caught.

Wild 2 orbited the sun beyond Jupiter until 1974, when it was nudged by Jupiter's gravity into a Sun-approaching orbit-within reach of probes from Earth. Since then the comet has passed by the Sun only five times, so its ice and dust ought to be relatively unaltered by solar radiation. Some of this pristine "stuff" will be onboard Stardust when it returns to Earth in 2006, little dusty clues to life's big mysteries.

To learn more about Stardust, see the mission website at stardust.jpl.nasa.gov. Kids can play a fun trivia game about comets at spaceplace.nasa.gov/stardust.

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



NASA's Stardust mission will capture dust from comet Wild 2 and bring them back to Earth for study.

ECLIPSE OF THE MOON FROM UAE ON NOV. 9

Last month we published a report from the Woerners regarding their planned observation of the Lunar eclipse. It seems they may have been the only NEKAAL members who were able to observe this event. The rest of us were clouded out. So, compliments of the Woerners, here are a few of their eclipse pictures. These images were taken on Kodak Gold 400 speed film. Exposures ranged from 1/60 to 1 sec.



SPECIAL THANKS



To the Heartland Park Stargazing Party staffers

*Graham Bell, Janelle Burgardt, Walt and Nancy Cole,
Julee Fisher, Gary Hug, Bill Leifer, Russ Valentine*

The crowd wasn't huge, but everyone had a great time. The comments received were absolutely stellar! Thanks for sharing your time, your equipment and your expertise.



VOTE

The ballot for the 2004 officers and directors is included with this copy of the Observer. Please take a few minutes to complete the ballot and mail it to our Secretary:

**Janelle Burgardt
4407 SE Pennsylvania
Topeka, KS 66507**

**or email:
sky_liebe@yahoo.com**

Please mail your ballots no later than December 10.

FACILITIES REPORT by Bill Leifer

The observatory is in good shape. There are no major problems at this time.

- The toilet is now fixed. There was debris in the water supply line, which has been cleared. A new filler valve has been placed. Refill is now rapid. The porcelain lid to the tank was shattered during the repair along with the ego and confidence of the repairman. A replacement is being sought.....for the lid, not the repairman so far. The tank is model number 141-1153. Neenan Co. has been contacted (267-0444).
- The dimmer switch for the red ceiling lights has been replaced following a report that there was intermittent bad connection.
- PVC sections and debris have been cleared away from the east side of the building following replacement and repair of the underground hydrant leak. A new PVC vent tube and cap of full height are now in place just south of the original. The wetlands created by the leak have receded and no longer fall under the National Wetlands Protection Act. This could help reduce the breeding of deadly West Nile Virus-bearing mosquitoes but has the potential of reducing income from our rice crop next season.
- There are huge dirt clods around the repair site left by the digging machinery. In the spring, we will need someone who has a tiller to break up the clods and till the area smooth, after which it can be re-seeded.
- The shear pin for the roof was INTACT, with the roof working normally. Thank you to Russell Valentine for installing the motor cutoff switch. It is working as planned.

Supplies and preventive maintenance have been performed and are up to date.

BROCHURE FOR JANUARY MEETING by Janelle Burgardt

Here is the text for the brochure which is being placed at Wolfe's and elsewhere:

SO YOU GOT A NEW TELESCOPE FOR CHRISTMAS... NOW

WHAT?!

Learn how to use your telescope from experienced telescope users.

*Local amateur astronomers will be on hand to answer
your questions about telescopes and astronomy.
Bring your own telescope, or look at one of ours!*

**NEKAAL MEMBERS: Lets support this event.... Bring your telescopes and
be prepared to assist the public. Lets see if we can recruit some new blood
into the organization!!!**

December 2003

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8 Full Moon ○	9	10	11	12	13 Geminid Meteors
14 Geminid Meteors	15 Geminid Meteors	16 Last Qtr ●	17	18	19	20
21	22 Winter solstice 1:04 am CST	23 New ●	24	25 Merry Christmas	26	27
28	29	30 First Qtr. ●	31			

2004 NEKAAL MEMBERSHIP FORM

Please check appropriate membership type:

- Individual \$30 Family \$35
 Student \$10 for first year, \$15 each succeeding year

Name:

Address:

City

State:

Zip:

Phone Numbers:

E-mail:

Mail form and check to NEKAAL
PO BOX 951, TOPEKA, KS 66601

FARPOINT CONTRIBUTORS

- Help us improve and maintain Farpoint Observatory. A \$50 donation (membership dues not included) gets your name on a plaque on Farpoint's *Wall of Fame*.
 I am including an extra \$10 for a one year subscription to the Observer

Contributer Name:

Address:

City:

State:

Zip:

Name on Plaque:

Donation is for

- Farpoint operating fund
 Telescope fund

Mail form and check to NEKAAL
PO BOX 951, TOPEKA, KS 66601

Meeting Schedule

NEKAAL meets monthly on the fourth Thursday, January through October, at Washburn's Stoffer Hall. The meetings are at 7:30 pm.

Guests are always welcome to join us for the General Meetings and/or observing at Farpoint.

October General Meeting

Thursday, October 23, 2003, 7:30 pm
Stoffer Science Hall, Room 103

Graham Bell: New Insights from Globular Clusters

Whom do you contact:

<u>Meetings, Speakers:</u>	Jerry Majers
<u>Farpoint Functions:</u>	Janelle Burgardt
<u>Farpoint Maintenance:</u>	Bill Leifer
<u>Special Presentations, Groups:</u>	Janelle Burgardt
<u>Dues, Donations, Merchandise:</u>	Walter Cole
<u>FAST:</u>	Gary Hug
<u>Web Content</u>	Janelle Burgardt
<u>Observer Articles</u>	Graham Bell
<u>Other Web Issues:</u>	Russell Valentine
<u>General Questions:</u>	Any board member
.....
Graham Bell	256-6281 gebell@mindspring.com
Janelle Burgardt	266-5624 sky_liebe@yahoo.com
Walter Cole	266-4911 w.i.cole@worldnet.att.net
Mike Ford	364-2641 mford@holtonks.net
Gary Hug	836-7828 frogstar@intergate.com
Marvin Kessler	233-7649 mhkess@networksplus.net
Bill Leifer	478-4249 williamleifer@usa.net
Jerry Majers	862-8869 jmajers@cox.net
Marshall Miller	862-6059 marshallmiller@cox.net
David Ryan	272-0177 dlryan@cox.net
Russell Valentine	862-5046 russ@coldstonelabs.org

"The REAL MEETING" Gathering



Please join us for post-meeting eats at Perkins Restaurant, 1720 SW Wanamaker. Some members refer to this as "the real meeting" which follows our general meeting each month.

Open House Dates for 2003

Feb 7-8	7:00	July 11-12	9:30
Mar 7-8	7:30	Aug 1-2, 8-9	9:30
Apr 11-12	9:00	Sept 5-6	9:00
May 9-10	9:00	Oct 3-4	8:00
Jun 6-7	10:00	Nov 28-29	7:00

Club Observing Dates for 2003

January 3-4	June 27-28
Jan 31-Feb 1	July 25-26
Feb 28-Mar 1	Aug 29-30
March 28-29	Sept 26-27
April 4-5	Oct 24-25
May 2-3	Nov 21-22
May 30-31	Dec 19-20

Farpoint Observatory

W. Long. 96°00'08.6" Elevation = 406 m
N. Lat. 38°53'24.9" = 1320 Ft.



The NEKAAL OBSERVER

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PO BOX 951
TOPEKA, KS 66601

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NEKAAL 2004 BALLOT

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Board

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Jim Koch

Vice-president

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Janelle Burgardt

Jerry Majers

Secretary

Bill Leifer

Julee Fisher

Dan Tibbets

Russell Valentine

Gary Hug

Russell Valentine

Marvin Kessler

Please vote for our three club officers, and up to nine board members. You may cast your vote for the same individual as an officer and as a board member. Family memberships get two votes!

See page 5 for additional information

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