

The *Prairie* Astronomer

The Official Newsletter Of The Prairie Astronomy Club, Inc.

January 1999

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MEETINGS & EVENTS

PAC MEETING

TUESDAY, JANUARY 26, 1999, 7:30 PM
at Hyde Memorial Observatory

NSP PLANNING COMMITTEE MEETING
THURSDAY, FEBRUARY 11, 1999, 7:30 PM
At Mahoney State Park Lodge

CLUB STAR PARTY
FRIDAY, FEBRUARY 12, 1999, Sunset 'till 4
Olive Creek SRA (see Page 12 for directions)

UNL STUDENT OBSERVATORY
FRIDAY, FEBRUARY 19, 1999, 7:00 PM till 10:00 PM
Open to the public

PAC MEETING
TUESDAY, FEBRUARY 23, 1999, 7:30 PM
at Hyde Memorial Observatory

UNL BEHLEN OBSERVATORY SPRING OPEN HOUSE
FRIDAY, MARCH 26, 1999, 7-10 PM
(Directions in February newsletter)

JANUARY'S PROGRAM:

The January speaker will be Jack Dunn, director of the Ralph Mueller Planetarium at the University of Nebraska in Lincoln. He will give a video/computer slide presentation about his visit to many astronomical sites in Los Angeles with the Quadruple Conjunction Planetarium meeting. Sites include JPL, Mount Wilson Observatory and Griffith Observatory.

His talk will also include photos from his trip to Amsterdam for the International Laser Display Association (ILDA) conference in Amsterdam last November, where he visited the Artis Planetarium, some related European Planetaria in Belgium and Spain.

And last, but not least, he will present some photos from the Southeastern Planetarium Association Conference last summer which visited the National Radio Astronomy Observatory at Greenbank, WV.

CLUB LIBRARY: The Prairie Astronomy Club has a library with scores of astronomy related books, which are available for loan at no cost to its members. These books are now located in a cabinet at Hyde Observatory, and may be checked out by PAC members at any monthly meeting of the Prairie Astronomy Club. Larry Hancock is our librarian.

PAC CHANGE OF ADDRESS: The Prairie Astronomy Club has a new mailing address. Liz reports the new address is: **P.O. Box 5585, Lincoln, NE 68505-5585**. Please send all new memberships and renewals to this address.

PAC-LIST: Mark Dahmke maintains an e-mail list server for PAC. If you have an e-mail address and are not on the PAC List, you may subscribe by submitting an e-mail to list@4w.com. Write "Subscribe PAC-List" in the body of the e-mail.

WEBSITES OF THE MONTH:

Ralph Mueller Planetarium

<http://www.spacelaser.com/>

Kansas Cosmosphere and Space Center

<http://www.cosmo.org/>

Star Station One

<http://www.bishopmuseum.org/starstation/>

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The Prairie Astronomer is published monthly by the Prairie Astronomy Club, Inc. Membership expiration date is listed on the mailing label. Membership dues are: **Regular \$20/yr, Family \$22/yr**. Address all new memberships and renewals to: **The Prairie Astronomy Club, Inc., PO Box 5585, Lincoln, NE 68505-5585**. For other club information, please contact one of the club officers listed on the last page of this newsletter. Newsletter comments and articles should be submitted to: **Jeff King, 4018 South 83rd Street, Lincoln, NE 68506 or jeffrey892@aol.com**, no less than

SECRETARY'S REPORT

By: Willa Penney

Dave Knisely called the meeting to order and asked guests to introduce themselves: Lorien Chittendon (recently moved to Lincoln); Mark Crawford (friend of Cedric Gibb) and Brent Kasl and son Tim (who have visited Hyde and recently bought a scope).

Dave reported seeing 60-70 meteors per hour in the Geminid shower. Eric Hubl said his sister reported a meteor at 5:00 p.m. on the 14th, moving North to South, that was as bright as a full moon. Dave mentioned that Jupiter and Saturn are still both good viewing. Solar activity is fairly high.

The next shower will be the Quadrantid shower the morning of the 4th. There will probably be a very narrow peak (90/hour?) just before dawn; however, there will be a full moon that night. The next showers will be Lyrid on April 22 and Eta Aquarid on May 5.

The next club star party will be January 15. UNL observatory will be open on January 22 and possibly February 3rd?

The Cosmosphere trip was discussed: proposed dates are March 20 or April 17, to be decided at the January PAC meeting. Dave will notify the Omaha Astronomical Society in case any of their members wish to join us. (The Cosmosphere is a space museum/IMAX theatre in Hutchinson, Kansas.) This would be an overnight trip and also include a trip to Wichita.

National Astronomy Day is scheduled for May 21. Because May 20 is designated as a snow day by the Lincoln Public Schools, it was moved and seconded (motion passed) that we remain flexible on our date for Astronomy Day for either the 15th or 21st, depending on whether or not LPS is in session. The Friday of the two-day event would be primarily for the schools, and Saturday for the public. Jack Dunn reported that the Air Force Association is hoping to bring in 1-2 astronauts for a Friday night talk and would pay their expenses.

Our club will have a display; some at Morrill Hall, some possibly at the Air Base. It is estimated that turnout may be around 2,000. Jack is planning a free space film festival (Apollo 13, From the Earth to the Moon, Right Stuff, etc.) that would run continuously so that people could come and go. The International Space Station Model would be set up to view. Eric Hubl will co-chair the event with Jack.

Jeff King is now putting out our newsletter; please send any articles you may have to him.

Larry Hancock reported that he still has a few extra shirts left.

Liz Bergstrom reported that there is \$375.87 in the treasury; 15 members are delinquent in their dues. Sky and Telescope will be \$27.00 and Astronomy, \$29.00.

The next meeting for the Nebraska Star Party will be January 14th at the Mahoney State Park Lodge. Dave Hamilton handed out brochures for NSP. T-shirt designs are being accepted. Cabins will only be held until February 1; if you are interested in renting one, please contact Tom Miller before then.

Hyde observatory still needs volunteers: duties could include running the telescopes, the slide show and/or answering questions from visitors.

Dave said there was nothing new to report on site news.

Mark Fairfield asked if anyone was interested in helping to organize a Junior Astronomy Club for kids. Please see Mark if you would be available to help.

Mark introduced our program: Larry Stepp, Optics Manager for the Gemini Project. Larry showed pictures of transporting, setting up and maintenance of the lens for the Mauna Kea telescope. Current information about the project is available on their website: www.gemini.edu. There will also be an article about the project in the April issue of Scientific American.

DEEP-SKY OBSERVATIONS

by David Knisely
DS120998

DATE: 12/9/98, 0045 to 0300 hrs UTC.

LOCATION: Rockford Lake, Nebr. 40.227N, 96.581W, 1400 ft elevation.

INSTRUMENT: 10 inch f/5.6 Newtonian, 49x, 59x, 94x, 141x, 220x

CONDITIONS: Clear, Temp. 35 deg. F. Wind SW at 5 to 7 mph.

UNAIDED EYE LIMITING MAGNITUDE: +6.6

SEEING: 0.75 to 1 arc second (variable).

OBSERVATIONS: I picked up quite a number of objects from the Herschel II list on this rather cool evening. Most of these I located with just the Telrad and a wide-field eyepiece. After a little sight-seeing, my first target was the faint galaxy NGC 718 in Pisces. Unlike some of the Herschel II objects I had previously observed, this one was visible even at low power as a small faint fuzzy spot with a brighter middle. 141x revealed a faint star-like nucleus and made the galaxy look a bit more oval, with hints of vague irregularities in the outer haze. After that came a slightly more difficult target, NGC 741. This is the core galaxy in a small group of three or four small objects in southeastern Pisces, and appears as a small oval fuzzy spot with a brighter middle. In the eastern portion of the galaxy's outer haze was a very small fuzzy spot, NGC 742, along with several faint stars. To the southwest is another tiny fainter galaxy which is not noted on Megastar, and one or two more tiny ones were seen just to the northwest of NGC 741. Moving up into Aires, I spotted another Herschel II object, NGC 821. It isn't much to write home about, as it again appeared as a small faint hazy patch with a brighter middle. 141x showed a star-like nucleus and made the western half seem slightly brighter than the eastern half. Much farther north was NGC 890, another small oval faint galaxy which showed a star-like nucleus at higher power, but not much other detail.

I took a break from galaxies to look at the diffuse nebula IC 1795/ NGC 896 in Cassiopeia. This object(s) consists of a larger dim puff east of a smaller one, and is barely visible without a filter. With the Lumicon UHC, IC 1795 ballooned in size to a large roughly circular hazy patch, with the somewhat smaller patch (NGC 896) sitting just to its west. Both nebulae had involved stars, with NGC 896 showing a slight flaring to the southeast. Nearby to the east is the huge complex of nebulae and star fields, IC 1805, and its imbedded cluster Mel 15. It has some interesting looping filamentary detail which really needs a wide field eyepiece to be appreciated. East of this area is another nebulous cluster, IC 1848, which although dim, shows a rich starfield and several diffuse wisps of nebulosity in a long east-west arc (LBN 667). This nebula also has some dark inclusions in the eastern end. All these objects benefit greatly from the UHC filter, although the OIII does help to a degree as well.

Going back to the Herschel II galaxies, I finally hit a winner! NGC 925 in eastern Triangulum is a moderate to large spiral galaxy which has a low surface brightness but some interesting detail. At 94x, it showed a slightly brighter and rather elongated core with some dim mottling over much of the rest of the galaxy's outer haze. 141x revealed hints of a broad diffuse spiral fan curving to the southeast, and another hazy curving area towards the northwest, although none of these details was very bright. A large number of faint field stars were also noted on the face of the object. Still, its nice to see something big with at least SOME detail in it for a change! Another somewhat interesting galaxy was NGC 1003. This object was again somewhat small, appearing as an elongated fuzzy patch with a brighter center. 141x showed a pip of brightness near the center, and some patchy outer haze, with the northwestern side showing a vague arm-like patch. I also located NGC 1012, a small oval very faint patch of light with little other detail.

Farther south in eastern Cetus, I managed to locate NGC 991, another small faint oval fuzzy spot with a brighter middle and a faint star off-center. North of Delta Ceti was a much more interesting object: NGC 1032, a nearly edge-on spiral. Low power showed only a small faint but rather elongated fuzzy patch with a small brighter middle, but 141x made it into a nice narrow dim needle of light with an oval nuclear bulge and a very narrow dark lane which could be glimpsed with averted vision right down the middle of the galaxy. Again, after picking up featureless faint fuzzies, seeing this one was a bit of a treat.

My final target was the strange galaxy NGC 1045 near the Cetus-Eridanus border. It appears as a small slightly oval fuzzy patch with a slightly brighter middle, but high power shows an unusually bright star-like point near the dead center of this galaxy. Whether it is a superimposed star or a star-like nucleus is not clear, but if its in the galaxy itself, this galaxy may be a Seyfert galaxy. The galaxy is classed as peculiar in Megastar. At least it casts one more mystery in the heavens, and made for a good ending to a cold but productive observing session.

Double Blue Moons

by Deborah Byrd *From Sky and Telescope's Website*
January, 1999

We don't know for sure what the New Year will bring, but we do know that 1999 will be a banner year for Blue Moons! For the first time since 1961, there will be two Blue Moons this year, one in January and one in March. Meanwhile, the month of February won't have a full moon.

We're not talking here about a blue-colored moon. Some observers have reported seeing blue-colored moons, such as that seen from Hawaii in August, 1991, not long after the eruption of Mt. Pinatubo in the Philippines. Volcanic dust in the air -- or smoke from a forest fire -- can make a moon appear blue in color. But these blue-colored moons are rare. They might have inspired the expression "once in a blue moon."

On the other hand, in recent years, Blue Moons have come to be associated with the calendar. The idea here is that there is a full moon every month, because the moon takes a month to complete one orbit around the Earth. That's where the word "month" or "moonth" came from. Each of the full moons have names, which correspond to the months of the year. The January full moon, for example, is called the Old Moon or Moon after Yule. But, once every two or three years, there are two full moons in a single month. That was the case in August of 1993, and again in June of 1996. And it will be the case in both January and March of 1999.

The first full moon for this month comes on January 2 at 2:49 Universal Time. That's January 1 at 9:49 p.m. Eastern Standard Time in the United States. The second full moon comes on January 31 at 11:06 a.m. Eastern Standard Time. By rights, the January 1 full moon will be called the Old Moon or Moon After Yule. And the January 31 full moon will be the Blue Moon.

Likewise, the March full moon is typically called the Sap Moon, Crow Moon or Lenten Moon. Those will be the names for the full

moon that'll come during the night of March 1. The second full moon of that month -- the so-called Blue Moon -- will come on March 31.

The time between full moons is 29.5 days. Thus the month of February is shorter than the lunar cycle. If the first full moon of a year falls on January 1st or 2nd, there will always be two full moons in January, and two in March -- but none in February. That's the case this year.

The last time we had two blue moons in one year was in 1961. The last time before that was in 1885. The next times that we will have two blue moons in a year will be 2018 -- and again in 2037.

The recent use of the word Blue Moon to describe the second full moon of a month can be traced to J. Hugh Pruett's April, 1946, article in *Sky and Telescope* magazine entitled "Once in A Blue Moon."

In his article, Hugh mentioned an old Maine Farmers' Almanac for the year 1937. He wrote, "In effect . . . at one time the various full moons of the year were given names according to the order in which they occurred -- provided there was only one per month. These names were as follows: Moon after Yule, Wolf Moon, Lenten Moon, Egg Moon, Milk Moon, Flower Moon, Hay Moon, Grain Moon, Fruit Moon, Harvest Moon, Hunters' Moon and Moon Before Yule. But seven times in 19 years there were -- and still are -- 13 full moons in a year. This gives 11 months with one full moon each and one with two. This second in a month, so I interpret it, was called Blue Moon, and was considered unlucky and a real nuisance as it occurred at various times of the year and upset scheduling of church festivals."

Lincoln Parks and Recreation Constellation Programs

A crisp winter night is a great time to star gaze. Pioneers Park Nature Center is offering Constellation Programs where staff will point out winter constellations and share stories about the stars. Please bring a blanket or something to lay on and binoculars, if you have them. No flashlights, please! If the sky is cloudy the program will be cancelled. Dress for the weather. Pre-registration is required and may be done by calling 441-7895 between 8:00 a.m. and 4:30 p.m. The sessions are held at the Prairie Building.

Date	Time	Cost
Feb 19 Fri	7:30 pm	\$4.00/adult-\$2.00/child
Mar 19 Fri	8:30 pm	\$4.00/adult-\$2.00/child
Apr 16 Fri	8:30 pm	\$4.00/adult-\$2.00/child

Breaking news

On December 21, just two months after the Solar and Heliospheric Observatory (SOHO) was brought back from the dead, the last of the spacecraft's three gyroscopes failed.

Models have predicted that Neptune's largest moon, Triton, would experience a change of season around the year 2000. At least three groups of astronomers have seen evidence that such a change is taking place.

Voyager 1 revealed Titan to be a haze-enshrouded world devoid of clouds; recent ground-based observations paint a different picture.

Astronomers have announced four new extrasolar planets, raising the grand total to 18 (including two planets orbiting a pulsar). In other words, astronomers have now found twice as many planets outside the solar system as there are within.

Astronomy in Lincoln Before Hyde

Some Personal Remembrances - By Rick Johnson

I was in second grade and had devoured all astronomy books for kids my age and had gone on to books beyond those in the children's section of the Library. I found one I especially liked that fired my interest for two reasons. First, it said the upcoming Mars opposition in 1954 would be the best since the 200" scope was built so that the canal question could be finally answered. Secondly the last chapter was entitled "Build your own \$200 scope for \$30! I had recently started a weekly paper route and had just saved the \$30 needed to build the scope and see the Mars canals for my self! Only problem was the instructions covered making the mount, grinding and silvering the mirror yourself and making the eyepiece! All this great information was packed into 3 pages of text and two of pictures! Not knowing any better I ordered the kit with grand visions of Mars Canals before my eyes.

The instructions for the mirror contained no math whatsoever. Nor did the mirror tester make any measurements. My dad didn't know much about telescopes but he was an engineer by training and knew I was in deep trouble. He was a Shriner and at the Shrine circus that fall got to talking with a clown playing the steam Calliope. This was our first introduction to Jess Williams who along with Carroll Moore and Dick Hartley were to be the true founders of PAC.

Jess was the last surviving Scott Joplin (think ragtime) musician, ran a spring shop on O street about where Old Country Buffet is today, and avid amateur astronomer. He had ground many mirrors and was my guardian angel through the processes of building mine. He had me bring over the mirror. It was a horrid, unusable, mess but he never said anything but how good it was but then said he'd show me how I could make it better.

His solution involved me doing all the work, Jess would just advise. He had mirrors he could have lent me. He could have done some of the grinding and got me back on track. He did neither. I had to do it all. He demonstrated, using his blanks, how to reverse the mirror and tool and grind the mirror back to f/10 where parabolizing wasn't necessary, nor was any math as the null test in the tester was enough. Besides, the math was well beyond a second grader. He also showed me how to measure a rough ground mirror's focal length. Note he never did these things, I had to actually do them, he just showed me what to do and when I screwed up (all the time of course) he'd show me how to get back on track. One month before the opposition the mirror was done but was at f/12 instead of f/8. That meant the mount didn't carry it as well but it worked. I did see Mars at opposition but didn't see any canals. The scope was a rotten performer but I didn't know this as he never let me look through one of his good scopes. That way I wasn't disappointed in what I saw and thought it just great.

But a 6" f/12 was far too big for a now 9 year old to use and Dad knew it wasn't good. Jess had dad get me a 3" moonscope, a 30x reflector of cheap origins. It gave better and steadier images. But more important, it was one I could set up and use by myself whenever I wanted. No help needed! When I was about 11 Jess had my dad get a good 60mm refractor he knew was available for sale in town. I still have it and it is of far higher quality than any 60mm made today. I really had a ball with this scope. It was still my main scope when PAC was formed.

When Carroll Moore joined Wesleyan in the late 50's Jess went to see him, as apparently did Dick Hartley. They wanted to form an astronomy club. Carroll kept a sign-up sheet in his office. He had anyone interested sign the sheet. Carroll later told me he had some 30 names on the sheet but most were college students who were

only in town for school and would be gone again. Getting a group that would stick around was a big problem. By this time I was getting my viewing tips from Jess but had also met Carroll and signed his sheet several times. In the fall of 1960 I got a call from him that he'd have the 6" refractor in the Wesleyan observatory operational for the transit of Mercury in November and I was asked to help.

This was the other thing that was to dominate the way the early PAC worked. Put the beginners to work right away. I barely knew what a transit was but there I was helping explain what the public was seeing when I didn't even know myself. Carroll taught me and I tried to teach them. Carroll had his sign-up sheet at the transit. Hundreds went through the observatory that day with a couple dozen signing the sheet. A couple weeks later we all met at Wesleyan. It was decided there was enough interest for a club but without kids (I was the only one at this pre meeting as I recall) it wouldn't do what was wanted.

Jess then started hitting the science clubs at the schools. He came to mine at Southeast. There was another kid in the club, far more advanced than I was in science though since Astronomy hadn't been a topic I didn't know of his astronomy interest. He was Pete Schultz and he was one year ahead of me. He jumped at the idea of the club and recruited another South East Student, Jim Hoskins who had an 8" f/8 Cave scope but wasn't in Science club. This was the largest scope in the club we saw. Dick Hartley had one too that was better but intentionally didn't use it at club functions. With that and a couple from Lincoln High Jess found it was decided the club would be formed. The first meeting was in March or April I think. I couldn't drive yet so dad took me to the first few meetings. The Lincoln High kids weren't at the first meeting and I don't recall if they ever showed up.

Tom Pansing, a prominent attorney in town was elected President. He had an avid interest in amateur astronomy and gave the club a legitimacy that got us noted. He, Carroll, Jess and Dick were the main promoters of the club that I recall as each had a wide contact base with little overlap. The adults offered as much help as possible to the kids. I think it was Harlan Franey that may have loaned the Brandon eyepieces to Pete. Unfortunately Pete left them on the open tailgate of his car and drove off. That was the last anyone saw the eyepiece set.

Being a small club everyone had a job to do whether we wanted it or not. Programs were everyone's responsibility. Each month a different member had to give the program and within 18 months it was your turn all over again. Often there were two per meeting so it kept you hopping.

Our star parties were very different from today's. They were held in town, often in Dick Hartley's back yard as it was big with no trees, sometimes a school yard was used. Lincoln had far less light pollution which helped. Then too, we stuck with major objects "Big and Bright" became our motto. Beginners without scopes used the experienced members scopes. And they only brought their smaller scopes, something in the size a beginner could start with. Their fancy scopes with all the good stuff were never brought out. 6" was the max aperture except for Jim and his 8". But he used it for solar work so had removed the coating! Without coatings it had no more light grasp than my 60mm refractor.

By this time I'd outgrown the 60mm and went back to work on the 6" f/12 that had performed so poorly. At 9 it was so much bigger than I was even if it had worked well it would have been

Continued on Page 6

Continued from Page 5

worthless to me due to its size. Jess thought it was the eyepiece I made that was the problem and loaned me an 8mm ortho of his. Sure enough the images were beautiful. All these years my crappy scope was a good one with a crappy home made eyepiece. The mirror was fine.

Someone, probably Pete Schultz, got the idea of holding "moon parties" at Gateway as a way to attract more members. I figured Dick Hartley or Tom Pansing would be the one to approach Gateway management about this. Nope, this isn't how they operated. Pete and I got the job! Pete didn't have money for a car (it all was going to a 10" scope he was building) so I drove. Pete seemed calm and confident. I could hardly keep the car on the road I was so scared. In suit and tie we made our presentation to all these big name store owners. Thank goodness Pete did all the talking. He came away, not only with an agreement that we could do this but that they'd even pay us \$100 to do so! With dues of only \$5 per member this doubled our annual budget.

We also grew rapidly after this as the gateway shows did indeed attract many new members, many with young kids. Our most valuable catch (I'll resist saying biggest catch) at Gateway was Earl Moser. His enthusiasm and wisdom quickly made him president. Knowing a good thing we didn't let him out of that office for many years, no matter how much he objected.

Pete and I continued Jess's tradition of visiting the local science clubs. Larry Stepp was recruited out of Lincoln High's science club as well as quite a few members who went on to science careers.

Jess and Carroll remained the main members who always had time for the kids. No matter how wrong the kid was or how deep a hole he'd worked himself into they'd always say what good work they were doing "but here's how to make it better". They always had time for the kids who were working, they had no time for those that weren't. The kids came to them, never the other way around. I always brought my mirror to Jess, he never came to me. He would call constantly to see how I was doing and offer encouragement. But when the time came and I needed hands on help I had to go to him. Even if that meant packing everything on my bike and biking several miles to 40th and B where he lived at the time.

Each club meeting, one of the young members was expected to give a short part of the program. Carroll and others helped them find the information they needed but never did any of the work or even tell them anything other than where to get the information or loan them the needed books. Things changed a bit later on.

All this time our meetings were held in the old science building at Wesleyan. It was in falling down condition when we started meeting there but it was about 3 years later that it was replaced with the present building and planetarium.

This changed the way the club worked with kids somewhat. Now the kids, and often their parents went to the planetarium where Carroll gave them a short show. They also got to give their required program to the other kids a month before giving it to the full club. This gave them a chance to try it before a less intimidating audience, most of whom were sweating their own presentation and not paying attention anyway. Carroll would then offer suggestions in his gentle way. The result was the final program was often better than what the adults were doing!

In the meantime the club, with Earl presiding as president, was holding its business meeting. It would always end when Carroll brought the kids back in, whether done or not. Though in those days the board held their own meeting mid month to conduct most of the necessary business so the club business meeting was mostly a report than anything else.

When Hyde was built Jess Williams died and the club moved its meeting site to Hyde. We hadn't been meeting at Wesleyan for a year as Carroll was on leave from the University to spend his time getting Hyde up and running. Jack Dunn provided our meeting space at his planetarium. It was thought Hyde would bring in the kids we had been bringing in through our Gateway shows (which ran until Hyde opened). It did but we did so little for them most quickly left again. All this started our slide away from kids which has continued to today.

Obviously not everything we did in the past is possible today nor would it necessarily even work if it was. Still it is what worked in the past and resulted in both Pete and Larry going on to nationally prominent positions in science. They may have anyway but I like to think the club helped in some way.

Je Voudrais Acheter Un Telescope

From Mark Dahmke

Since the PAC website went online, we've received many requests for information about astronomy. This is the first one I've received that wasn't in English. I can read French (a little) but there's no way I could respond in French. So I went to the Alta Vista language translation service (<http://babelfish.altavista.com/cgi-bin/translate?>) and pasted this message into the fill-in form. The translation is shown below.

On Wed, 6 Jan 1999 GRETDANIEL@aol.com wrote: "i am french i no speak english je voudrais acheter un telescope 200 ou 300 mm aux usa par correspondance QUELQU'UN PARLE FRANCAIS.? pouvez me answer in french thank you very much GRETDANIEL@AOL.com"

Translated:

"I am french i no speak english I want to buy a telescope 200 or 300mm in the USA by correspondence ANYONE

SPEAK FRENCH? Please answer in french thank you very much."

I then wrote a response (which says that I don't speak French but am using Alta Vista to translate, and I suggested contacting Astronomics). I ran it through Alta Vista and pasted it into my email message:

"Bonjour. Je ne parle pas francais, mais utiliserai le service de traduction de langage de Alta Vista (www.altavista.com). Je voudrais proposer que vous entriez en contact avec www.astronomics.com. Ils sont une bonne compagnie et peuvent vous aider pour trouver le meilleur telescope pour apparier vos conditions."

The results of machine translation are often amusing (sometimes hilarious) but if you're careful with your choice of words, the meaning should come through ok.

AAVSO News Flash

(Provided by PAC member Dave Hamilton)

0124+57 KU CASSIOPEIAE

The dwarf nova type (SS CYG subclass) cataclysmic variable KU CAS is in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
JAN 07.872	<15.3	PYG	JAN 10.71	13.4	KTO
JAN 08.1	<13.8	CGF	JAN 10.819	13.5	OJR
JAN 09.833	13.4	MUY	JAN 10.926	13.4	PYG
JAN 09.851	13.9	PYG	JAN 11.072	13.6	CGF

0206+57A TZ PERSEI

The dwarf nova type (Z CAM subclass) cataclysmic variable TZ PER is in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
JAN 07.78	14.3	KTO	JAN 09.840	12.8	MUY
JAN 07.954	14.7	PYG	JAN 09.859	13.6	PYG
JAN 08.0181	14.0	BRJ	JAN 10.854	12.3	OJR
JAN 08.1	14.5:	CGF	JAN 10.940	13.0	PYG
JAN 09.71	13.0	KTO	JAN 11.076	12.5	CGF

0744-23 BV PUPPII

The dwarf nova type (SS CYG subclass) cataclysmic variable BV PUP appears to be in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
JAN 05.4882	<14.8	SRX	JAN 09.4826	13.2	SRX

0804+28 YZ CANCRI

The dwarf nova type (SU UMA subclass) cataclysmic variable YZ CNC appears to be in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
JAN 08.2740	15.12	CCDV ZRE	JAN 09.894	14.6	PYG
JAN 09.878	<13.6	MUY	JAN 11.007	13.7	PYG

0814+73 Z CAMELOPARDALIS

The dwarf nova type (Z CAM subclass prototype) cataclysmic variable Z CAM is undergoing an outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
JAN 05.858	12.9	MUY	JAN 09.880	10.8	MUY
JAN 05.872	12.9	DPA	JAN 09.883	10.7	PYG
JAN 06.762	13.0	MUY	JAN 10.2618	10.8	BMM
JAN 07.993	12.8	PYG	JAN 10.71	10.7	KTO
JAN 08.0354	12.5	BRJ	JAN 10.875	10.6	OJR
JAN 08.1	12.8	CGF	JAN 10.956	10.6	PYG
JAN 09.77	10.6	KTO	JAN 11.084	11.5	CGF
JAN 09.82	10.2	GUN			

0855+18 SY CANCRI

The dwarf nova type (Z CAM subclass) cataclysmic variable SY CNC is in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
JAN 07.89	13.9	KTO	JAN 09.936	12.9	MUY
JAN 08.024	13.6	PYG	JAN 09.947	12.7	PYG
JAN 09.89	13.2	KTO	JAN 11.011	12.3	PYG

1454+41 TT BOOTIS

The dwarf nova type (SU UMA subclass) cataclysmic variable TT BOO is in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
DEC 30.17	<13.7	KTO	JAN 10.247	12.6	MUY
JAN 10.18	12.8	KTO			

1848+26 CY LYRAE

The dwarf nova type cataclysmic variable CY LYR appears to be in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
DEC 18.9610	16.99	CCDV ZRE	DEC 30.66	<13.6	KTO
DEC 19.63	<14.0	KTO	JAN 09.64	12.8	KTO

1930+31 V795 CYGNI

The dwarf nova type (SS CYG subclass) cataclysmic variable V795 CYG appears to be in outburst, as indicated by the following observations:

AAVSO Observer			AAVSO Observer		
UT	Mag.	Initials	UT	Mag.	Initials
DEC 23.70	<14.5	KTO	JAN 09.64	13.0	KTO
JAN 07.64	<14.0	KTO			

Celestial Events for February, 1999

Day Time (CST)	
1	7 p.m. The moon passes 0.3 degrees north of Regulus
	8 p.m. Uranus is in conjunction with the sun
3	11 p.m. Mercury is in superior conjunction
4	2 a.m. Vesta is at opposition
6	10 p.m. The moon passes 3 degrees north of Mars
14	6 a.m. The moon passes 1.5 degrees north of Neptune
16	1 a.m. Annular solar eclipse (visible in Australia and the Indian Ocean)
18	Midnight The moon passes 1.8 degrees south of Venus
	10 a.m. The moon passes 2 degrees south of Jupiter
20	9 a.m. The moon passes 3 degrees south of Saturn
23	7 a.m. The moon passes 0.4 degree north of Aldebaran
	3 p.m. Venus passes 0.1 degree north of Jupiter (evening)

February Planetary Views



February marks an important milestone in the visibility of surface features on Mars. From this point on, the view can only get better. The arbitrary size of 10" is often used as a guide to determine when useful surface observations can begin. Mars reaches this apparent size by the end of February and will continue increasing until opposition when it spans 16". Mars spends the first half of February moving gently eastward from night to night among the stars of Virgo the Maiden. It then passes into Libra the Balance.

The best conjunction of the year, perhaps the best for more than a decade, occurs this month. Two brilliant planets, Venus and Jupiter, dress up the evening sky and pass within 0.1° of each other in the final week of February. The addition of a thin crescent moon a few days before the conjunction makes this a highly photogenic evening sky. Not since 1990 have these two planets paired up so closely, and that was an early morning event.

Venus plays its role as the evening star admirably. The bright magnitude -4.0 planet continues its climb away from the sun. On February 1, it lies 22° to the east of the sun and sets two hours later. Jupiter, at magnitude -2.1, lies roughly 22° farther east along the ecliptic in Pisces. As each day passes, Venus edges one degree closer to Jupiter. By the new moon on February 16, the two planets lie only 7° apart. At about the same time, tiny Mercury joins the evening activity. Mercury sets 45 minutes after the sun and attempts to shine through the bright twilight on February 16. Mercury's visibility improves as it approaches greatest eastern elongation early in March.

The slender crescent moon lies 5° southwest of Venus on February 17. One night later the thickening crescent lies 4° east of Jupiter. These are the final days before the conjunction. On the evening of February 22, Venus lies a mere 0.8° west of Jupiter. Both planets are visible through a telescope in the same low-power field of view. Though Jupiter is farther away, the 89-percent-illuminated disk of Venus appears one-third the size of Jupiter's 33" diameter. Venus lies 133 million miles from Earth and Jupiter is a staggering 540 million miles away. The two planets are separated by 400 million miles.

The two planets get as close as 0.1° on February 23. European observers will have a fine view in twilight on that evening. For American observers, this event occurs during daylight hours, and those with telescopes may be able to catch the moment. By nightfall, the two planets will have moved apart slightly, though will still be less than 1/4° apart. Below and to the west of the pair, Mercury is gaining ground. It sets more than an hour after the sun.

To round out the early evening's planetary action, Saturn can be found some 27° above Jupiter and Venus. Shining at magnitude 0.3, Saturn lies opposite the Jupiter/Venus pair in Pisces the Fish. The growing crescent moon passes 3° south of Saturn on February 20. The four evening planets -- Mercury, Venus, Jupiter, and Saturn -- offer some of the best opportunities all year for planetary observation and photography.



Keeping Warm at the Telescope

By Alan MacRobert

Reprinted from Sky and Telescope

THE DEEP BLUE sky of a frigid late afternoon in winter sets an astronomer's pulse to running -- or so it always has mine. Night comes early. The arctic air shows no sign of haze or humidity, promising the darkest skies of the year. Studding the icy blackness will be such bright riches as Orion, Canis Major, Gemini, Auriga, Perseus, and Cassiopeia. And yet I hear amateurs say their scopes are "in storage;" that this is the season one reads about astronomy rather than practices it. Do these people shiver too hard to keep a steady eye? Do they think Orion can be viewed only through the pain of frozen fingers and toes? In fact you can enjoy winter nights comfortably for hours on end if you dress properly and heed a few cold-weather tips that everyone should know.

Clothing

The first principle of cold-weather dressing is to trap layers of warm air near your body. Studies by the U.S. Army have found that "dead air space," air held in place by tiny fibers, is the only effective body insulator. It doesn't really matter what the fibers are, whether thrift-shop cotton, finest goose down, or exotic synthetics -- only how many inches you put on.

Of course some insulators are lighter than others, per inch of dead air space provided, and have other desirable properties. Vigorous hikers and skiers need light, flexible materials that wick perspiration away from the skin so it can evaporate without leaving a clammy, cold feeling. Special winter outfits are designed for these needs. Skywatching, on the other hand, is hardly athletic. So you can do fine by piling on layers of ordinary clothes that are already around the house.

What matters is how you wear them. Many thin layers are often better than a single thick one. Remember, you want to trap air. The outermost layer should be windproof to keep cold air out. It should also have elastics or ties to close off the waist, sleeves, and the face of a parka hood.

The second principle is to cover your whole body evenly. Three sweaters and a down parka won't keep you warm if there's nothing on your legs but blue jeans. Long underwear and an extra pair of pants -- perhaps heavy wool hunter's pants or insulated snow overalls -- are just as important as a coat. Pajama pants make good "long underwear." Two pairs of pajama pants are better. Your neck and head are major areas of heat loss, so a thick, warm hat and scarf or a thick parka hood are essential.

Where different items of clothing meet at ankles and wrists, prevent bare spots by interleaving the layers. Pull your inner socks up over the legs of long underwear, your pants down over the socks, and your outer socks up over the pants. Whenever it's mildly chilly it helps just to tuck

your pant cuffs into the tops of your socks to keep cold air from blowing up your legs.

The third principle is to protect your extremities. Fingers, ears, toes, and nose freeze first. Good footgear is crucial. Your boots should be heavily insulated, but since you won't be scrambling up rockslides they needn't be rugged. Many observers swear by the large, puffy snow boots ("Moon boots") used by snowmobilers. Much warmth is lost from the feet to the ground by conduction through the soles of ordinary boots, so an insulated bottom liner or insole will help. Boots should be large enough to allow you to wear heavy wool socks over your regular socks without any feeling of tightness. Circulation to hands and feet must be kept completely free; anything that feels tight will soon feel frozen.

Protecting fingers is a problem because you have to manipulate eyepieces, charts, pencils (pens freeze up), and so on. One strategy is to wear thin skier's gloves inside loose, more heavily insulated mittens. The mittens can come off briefly as needed. My little finger is always the first to turn painful unless I keep it in the same finger of a glove as my ring finger; then it's no problem. Better alternatives are shooter's mittens with flap-covered slots that allow you to stick your fingers out. You might make cuts in the fingertips of an old pair of gloves.

A ski mask with holes for your eyes and mouth protects the face, if you don't mind looking like a terrorist. Don't use the kind with no mouth hole; your humid breath will come out the eyeholes and fog the eyepiece.

Since you'll be standing still, dress for 20° to 30° Fahrenheit colder than the actual temperature. Studies for Canada's National Research Council indicate that this is the clothing-requirement difference between walking briskly (what most people normally do outdoors in winter) and standing still for long periods.

Eat, Drink, and Act Merry

You can prolong your time in the cold by eating a good meal beforehand and by nibbling carbohydrates, which raise blood sugar and provide heat energy. Hard candy is convenient, but too many sweets can cause a sudden jump in blood sugar followed by an equally abrupt crash. A sandwich gives a steadier lift.

A thermos of hot coffee may feel comforting, but caffeine restricts circulation in the extremities. So does tobacco. A thermos of hot cider or other sweet drink will be better for you. Avoid alcohol; it not only reduces night vision but makes you lose heat by dilating capillaries in the skin.

Once any part of you gets cold, warming it is very hard without an external heat source. So as soon as something begins to feel chilled, run in place for a while or do some

jumping jacks. You produce several times more heat during mild exercise than at rest, and good circulation will carry this heat all the way to your toes and fingertips.

Elderly and very thin people have lower metabolism (production of body heat) and are especially vulnerable to cold. Women produce less heat on average than men. People with good muscle tone generate more, even at rest. Vigorous exercise raises anyone's metabolism for up to six hours afterward, so late afternoon or early evening would be a good time for a workout. Beware of exhaustion, however, which leaves you prone to rapid chilling.

A little-known cause of chills, headaches, and ill feeling in winter is dehydration. You lose a lot of water breathing dry winter air, while cold depresses the thirst mechanism so you don't drink enough. When the body runs low on water it conserves fluid by reducing circulation to the extremities, which means your hands and feet freeze quicker. Guzzle water before going out under the stars.

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Safety

Cold can kill. If you observe from a remote, lonely site in winter, think through the entire chain of events that will happen if your car won't start. Have you told someone where to come looking for you if you don't show up by breakfast? How will you keep warm until then?

Car batteries lose power in the cold. Even if you normally run your equipment off the car battery and have enough juice left to start the engine, don't assume you can do this in unusually low temperatures. If in doubt, run the engine for five or 10 minutes per hour while observing. This is a good reason to power your equipment from a separate 12-volt battery -- which in an emergency might recharge the car battery enough to get you started.

Any car that is driven in cold rural areas should carry certain emergency items under the seat: extra old sweaters

or blankets, an extra hat or two, hard candy, matches, and candles. A candle in a car will provide much warmth if you huddle over it, but open the window a crack. If the engine will start but the car won't move, check the gas gauge. Conserve gasoline by running the engine and heater only 10 minutes or so out of each half hour or hour. If the area is snowy, check that the tailpipe is clear so exhaust won't be trapped under the car. Police report that exhaust poisoning is a

major cause of death for motorists whose cars get stranded in deep snow.

No matter how thirsty you get, never eat snow when in danger from cold. Snow requires so much body heat to melt that rapid hypothermia can result. Instead, melt it in a hubcap over your candle. Times like these make a cellular phone or mobile ham radio look mighty good.

Another piece of advice from cold-weather state police: don't leave your car. It provides by far the driest, most windproof, most comfortable shelter you could possibly devise in the wilds. It's also highly visible. Poor judgment leading to gross stupidity is a classic effect of oncoming hypothermia. When things look bad it would be very easy to walk a half mile down the road from your car at 3 a.m. in hopes of finding the house that you think maybe you passed, become disoriented, and forget to turn around. If you stay in your car, sooner or later -- whether in hours or days -- someone will always come.

Such emergencies, of course, are unlikely. With a little planning and common sense, winter nights under the stars will be as pleasant as any -- as well as darker and more exciting.

Daytime Sightings *From Martin Gaskell*

Those of you who read Sky & Tel might be familiar with articles from time to time about visibility written by my friend Brad Schaefer of Yale. He's been interested in a number of daytime naked eye sightings I've made of stars and planets. This is a fun game to play. So far, as well as Venus (trivial), I've seen Sirius and Jupiter from Lincoln with the sun a couple of degrees above the horizon and Vega and Altair in broad daylight from the top of Mt. Lemmon (10,000 ft.) by squinting along the tube of a 60-inch reflector which was observing it. Here are parts of some recent e-mail correspondence with Brad. If you make any interesting naked eye daytime sightings, send him an e-mail (brad@grb2.physics.yale.edu). If you make an observation note the TIME accurately since the altitude of the sun above the horizon is a critical parameter.

The game is to see how long before sunset or how long after sunrise you can still see things with your naked eye.

Martin

Hi;

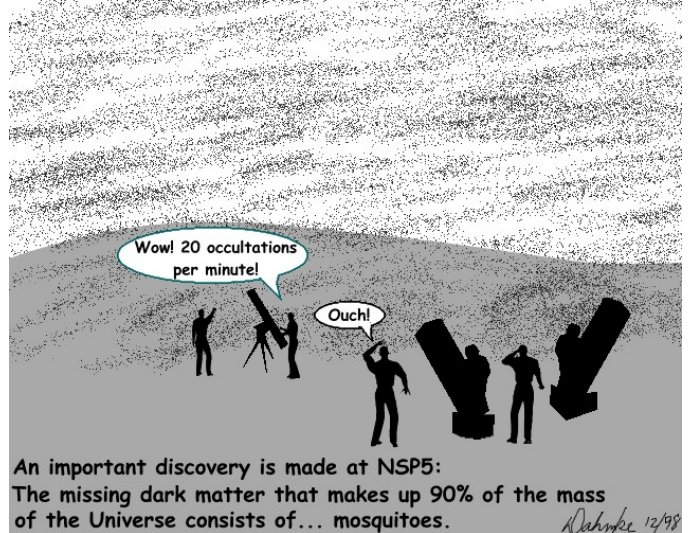
Great. Do keep telling me about your daytime sightings. These are pushing the envelope of what I considered possible.

Cheers,
Brad

Brad,

here's a better one:

This afternoon (Jan 17, 1999), we had a family walk. On this walk I spotted Jupiter (mag. 2.2) at 17:13 CST. I found it by casually sweeping the sky. I pointed it out to my wife, Barbara, who saw it at 17:14 and to my 6-year old son, Daniel, at 17:15. I then pointed it out to my 3-year old daughter, Laura, at 17:19. The reason for the delay with Laura's sighting was that I needed to get a suitable tree top lined up to get her to look in the right place. My 8-year old son, Timothy, never did see Jupiter before sunset. He has the worst eyesight, but also tends not to notice things for psychological reasons. He didn't have his glasses with him. The sun set around 17:25 or 17:26 (based on when the shadows stopped hitting the tops of building; I didn't check this with the USNO prediction).



Sun

Mon




Tue

Wed

Thu

Fri

Sat

1999 MAHONEY STAR PARTY DATES: FRIDAY, MAY 21 FRIDAY, JUNE 18 FRIDAY, JULY 16 FRIDAY, SEPT 10 FRIDAY, OCT 8	1	2	3	4	5 Aurigids Meteor Shower Peak Begins OAS Meeting	6 Hyde Observatory open to the public 7-10 PM Aurigids Meteor Shower Peak
7 Aurigids Meteor Shower Peak	8 1ST QUARTER  Aurigids Meteor Shower Peak Alpha and Beta Centaurids Peak	9 Aurigids Meteor Shower Peak	10 Aurigids Meteor Shower Peak Ends	11 NSP Planning Meeting 7:30 PM @ Mahoney State Park Lodge	12 Observing at Olive Creek SRA	13 Hyde Observatory open to the public 7-10 PM
14	15	16 NEW MOON 	17	18	19 UNL Student Observatory Open House 7-10 p.m. Constellation Program @ Pioneers Park	20 Hyde Observatory open to the public 7-10 PM
21	22 1ST QUARTER 	23 PAC Meeting 7:30 PM Hyde Observatory	24	25	26	27 Hyde Observatory open to the public 7-10 PM
28	<p style="text-align: center;">Minor Meteor Showers for February</p> <p style="text-align: center;">Aurigids</p> <p>This meteor shower is generally visible between January 31 and February 23, with a maximum of about 2 meteors per hour occurring during February 5-10. The radiant is normally located at RA=74 deg, DECL=+42 deg. The meteors are slow. Although the average magnitude is between 3 and 5, the shower is known for bright fireballs. The radiant seems to possess a daily motion of +0.7 deg in RA and +0.3 deg in DECL.</p> <p style="text-align: center;">Alpha and Beta Centaurids</p> <p>The duration of these meteor showers extends from February 2 to February 25. Maximum occurs around February 8. The Alpha Centaurids emanate from RA=216 deg, DECL=-60 deg, while the Beta Centaurids have a radiant of RA=208 deg, DECL=-58 deg. Despite the closeness of the radiants, they do have differences. The Alpha Centaurids possess maximum hourly rates of 3, while the Beta Centaurids can reach hourly rates as high as 14. The Alpha Centaurids have an average magnitude of 2.45.</p>					

DIRECTIONS TO OLIVE CREEK SRA

From Lincoln, take Hwy 77 south to Hwy 33. Take Hwy 33 west (toward Crete) for 9 miles to SW 114th St. Take SW 114th Street south 4 miles (almost to Kramer). Go east 1 mile on W. Panama Rd, then south 1.5 miles on SW 100th. We set up in area 1 on the west side of the lake.



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First Class Mail

Next PAC Meeting
January 26, 1999
7:30 PM
Hyde Observatory

Less than 210 days until
NSP 6!
August 7-14, 1999
Merritt Reservoir

Next Month:
Viewing With Binoculars
Alan MacRobert discusses the
use of binoculars as astronomical
instruments