

Club Elections To Be Held At October Meeting

At the September meeting the following members were nominated for office:

(* indicates an incumbent officer)

PRESIDENT -- John Bruce
Dave Knisely*

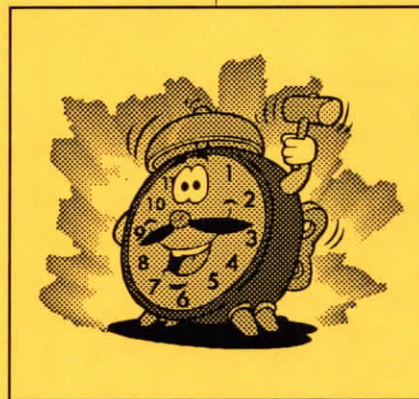
VICE PRESIDENT --
Michaela Brown*
Ron Debus

SECRETARY -- Ron Veys*
Jason Stahl

TREASURER -- Lee Thomas*

2ND VICE PRESIDENT --
(Program Chairman)
Dave Sherping

Nominations for all offices will remain open right up until voting begins. Please feel free to nominate yourself or any other member you think might do a good job of running our club. Remember that the officers make up the club's Board of Directors who, according to our bylaws, can make the important decisions on which our club depends. The elections will be held at the



*It's Time to
Vote!!!*

October meeting with the new officers taking their offices at the November meeting.

---Ron Veys

1994 Calendars Update...

At the last meeting, we passed around a brochure on a new calendar, "DISCOVER THE UNIVERSE 1994" by Richard Berry. If we order 12 or more, we can get them for \$5.50 each (no shipping charge). Several people expressed interest, but we did not have twelve put their money on the table (a requirement to keep the club from ending up with unsellable calendars which, curiously, have a short shelf life. Along about March, nobody seems to want to pay full price for a calendar anymore!)

Meanwhile, Hansen Planetarium has sent their brochure on the "WONDERS OF THE UNIVERSE" calendar, which we ordered last year. We can get those for \$5.48 plus shipping. (Because I can combine an order for calendars with an observatory order for posters, etc., there is no minimum, but the amount allocated to shipping must be determined after the order arrives.) I think some people last year were slightly disappointed with this calendar because the "Wonders" were not all astronomical. Some were earth-bound, like Alaska's Hubbard Glacier (March),

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and "Lave bubble exploding at ocean's edge" (April), Niah Caves in Borneo (June), etc. It's a very nicely printed calendar with lots of astro info, but if you're a pure skygazer, unimpressed with the sights of your local planet, "Wonders" isn't all that wonderful.

I have yet to receive a brochure for Guy Ottewell's ASTRONOMICAL CALENDAR. For those unfamiliar with it, this product of Furman University's Department of Physics Astronomical Workshop is not a wall-hanging calendar like the others. It is an oversized book crammed full of novel drawings illustrating the geometry of astronomical phenomena and explaining in detail the particular events that will occur during the year. There is nothing else remotely like it on an otherwise cluttered market of astrobobbles. Following Ottewell's calendar for one year is like taking a basic astronomy course from an extraordinarily talented professor. I hope that absence of the usual brochure doesn't mean we won't be seeing this publication for 1994. I'll keep you posted.

Following Ottewell's calendar for one year is like taking a basic astronomy course from an extraordinarily talented professor.

Meantime, ALL orders for RASC Handbooks must be received (along with the money) by the October 26 club meeting. And we'll decide at that meeting which (if any) of the other calendars to order. Attend or send your proxy if you're interested.

--LEE THOMAS

The President's Message



IT'S ELECTION TIME ONCE AGAIN!

Be sure to be at the October 26th club meeting if you are at all concerned about the way the club is run. Besides, our elections are a lot of fun, since the campaign speeches generally run from the mildly eccentric to the downright silly! Nominations are still open for all the club offices, so if you can think of anyone (even yourself) who would make a good one, please place their name in nomination.

The fall cleanup day at the Atlas site was nice and sunny, with about eight club members participating. Doug Bell "dug" a narrow trench for the electrical lines supplying power to the red entrance lights with his trusty pick axe, while several other members did some painting and a little mowing. Steve Bornemeier did his usual best in supervising (and getting paint on himself), while Jerry Williams kept poor hungry C.J. Brown well fed while he worked. There was some planning done, and concepts for the Astrophotography enclosure may be changing in the future to include more of a building, rather than a simple wind-screen. If you have any ideas or even a little experience in building things, please contact Steve Bornemeier or John Bruce. Remember, this is YOUR observing site. We want every member to get the most out of it, so we welcome your help and input.

As mentioned in the last newsletter, the club bylaws are going to be updated. The proposed changes include taking out the defunct Junior

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Martian "Happy Face"

Computer rectified and enhanced view of the Martian Happy Face



Argyre basin and Crater Galle (210 km) on the west side of the basin.
NASA Viking image P-17022



Artist's interpretation



The Prairie Astronomer is published monthly by the Prairie Astronomy Club, Inc., and is free to all club members. Membership status and expiration date are listed on the mailing label. Membership dues are: Regular Members...\$10/yr; Family Memberships...\$12/yr; Address all new memberships, renewals, or questions to THE PRAIRIE ASTRONOMY CLUB, INC., P.O. BOX 80553, LINCOLN, NE 68501. For other club information contact one of the following: Dave Knisely (Beatrice) 223-3968, Ron Veys (Lincoln) 486-1449, Lee Thomas (Lincoln) 483-5639, John Lortz (Omaha) 496-1122. All newsletter comments and articles should be sent to Newsletter Editor JOHN LORTZ, 11684 MEREDITH AVE., OMAHA, NE 68164 no later than 10 days before monthly club meetings. Club meetings are held the last Tuesday of each month at Hyde Observatory in Lincoln, NE.

Observing Chairman's Report

THE NEXT SCHEDULED STAR PARTY WILL BE HELD ON FRIDAY NOVEMBER 12th (with cloudy night date on the 13th) AT THE ATLAS SITE. Late autumn skies offer a variety of interesting targets for the patient observer. Begin your viewing with the bright open cluster M52, located 5.5 degrees west and 2.5 north of Beta Cassiopeiae. Visible in a 2.4 inch refractor, this object is a moderate sized rather compact group of stars which can be difficult to resolve in small apertures. The brighter stars tend to be on the west side of the cluster, with a 10 inch showing a prominent yellow star near the west edge and a dark inclusion on the east side. On a good night, about 50 stars can be seen in an eight or ten inch telescope.



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membership and Sky and Telescope membership linkage, changing the program chairman's title to 2nd Vice President, and allowing proxy votes for family memberships when only one family member is present at a monthly meeting. One additional thing to consider is that our club is larger than it has ever been, creating the need for increased member representation on the executive board. Since the board effectively runs the club, it has been suggested that we add two board members at large, elected annually by the membership. If you have any feelings on this, please come to the meeting, or call one of the club officers.

See you at the next meeting **AND DON'T FORGET THE AFTER-MEETING COFFEE AT THE VILLAGE INN, 66th AND "O" STREET.**

—Dave Knisely

Another good group of stars is the bright cluster NGC 457, located half a degree northwest of Phi Cassiopeiae. It is a fairly large group of fairly bright stars, with a six or eight inch making it look like an eagle with scattered strings of stars reaching out from the middle and a pair of bright stars on the head. An eight or ten inch will reveal nearly 100 stars in this group. A somewhat more difficult target is the diffuse nebula NGC 281, located 1.5 degrees east of Alpha Cassiopeiae. It is visible in a four inch at very low power as a faint hazy area in a sparse group of stars. Nebular filters help the view of this object immensely, making it stand out well against a faint Milky Way background. In an eight or ten inch aperture, some dark detail is noticeable, making it look a bit like a brighter version of M16.

In Pisces is one of the more difficult Messier objects, M74. Located about 1.4 degrees east and a half north of Eta Piscium, this object appears as a small faint circular fuzzy patch in small telescopes, with larger ones adding little detail, other than a brighter center. A ten inch will sometimes make the outer haze a bit patchy looking, but it takes larger apertures to reveal much of the spiral structure.

Far south in Sculptor lies one of the best spiral galaxies in the entire sky, NGC 253. Located four degrees north and two west of Alpha, this object can be glimpsed in 7x35 binoculars as a tiny faint fuzzy streak on the south edge of a faint "Z" shaped asterism several degrees to the south of Beta Ceti. Small telescopes show the galaxy as an elongated hazy area with a brighter center, while an eight inch will sometimes reveal

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Another good group of stars is the bright cluster NGC 457



Sky and Telescope News



CTOBER 9, 1993

SETI DESCENDING

The big news this week comes from Congress, where a House-Senate conference committee has voted to end NASA's search for extraterrestrial intelligence, or SETI. The committee's decision could still be overturned by the full House and Senate, but that's unlikely. NASA's 10-year, \$100-million program began in earnest only last October, but it had been controversial throughout its years of development. Had the program continued, it would have scanned the entire sky over a wide range of radio frequencies and sensitivities, seeking to detect radio beacons from extraterrestrial civilizations.

.. a House-Senate conference committee has voted to end NASA's search for extraterrestrial intelligence, or SETI.

CATCHING MACHO's

Two independent teams of astronomers, one from the United States and Australia and the other from France, believe they have discovered Massive Compact Halo Objects (MACHOs). These very-low-mass stars or giant planetlike bodies, thought to lurk at the galaxy's outskirts, have been proposed as the objects responsible for the universe's missing mass. An otherwise invisible MACHO reveals itself by passing between a distant star and Earth, briefly focusing the star's light like a magnifying glass and causing it to brighten. For more than a year both groups have observed millions of stars in the nearby Large Magellanic Cloud, watching for the telltale signature of a microlensing event. On September 20th the American-Australian team announced the detection of one possible MACHO detection, while the French researchers found two.

IN CHARON'S SHADOW

Last week there was mention here of a possible occultation on October 3rd of a faint star by Pluto's satellite Charon. But the predicted path was somewhere near Tasmania. The only professional observatory predicted to lie in the path was Mt. John in New Zealand. Although hampered by cirrus clouds, the astronomers there report seeing no hint that Charon actually occulted the star.

No word yet on results from NASA's Kuiper Airborne Observatory.

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some mottling in the outer haze, especially at higher power. Larger apertures show much detail in this object, including hints of the spiral structure.

In Cetus is another bright galaxy, M77, located one degree east and a half south of Delta Ceti. Small apertures will show it as a very faint oval fuzzy patch with a brighter center, while a six inch will reveal its star-like nucleus at high power. While an eight or ten inch will sometimes reveal hints of structure in this object, the details are quite vague and require very good conditions to be easily seen. Large apertures will show several other galaxies in the area. Also in Cetus is the large planetary nebula NGC 246, located 1.25 degrees south and 3/4 east of Psi-1 Ceti. Small telescopes show it as a moderate sized very faint diffuse fuzzy patch, with larger instruments giving it a circular shape and revealing a few stars inside. Use of nebular filters define the nebula more clearly and give the inside edge a scalloped look.

Of course, the best spiral galaxy in the entire sky is M31, the Great Andromeda galaxy, located 1.5 degrees west of Nu. A good pair of binoculars or a rich field telescope provide the best views of this large object, with most small telescopes showing only the hazy nuclear region. A six inch RFT will begin to show hints of the two outer spiral arms, while an eight inch will reveal the first dark lane northeast of the nuclear region, as well as the faint star cloud in the southern arm. Larger apertures will reveal much other detail, but it takes low power and very good conditions. The two companion galaxies, M32 and M110 are also in range of the small telescope, but neither shows much detail. M32 is the brighter of the two, lying off the southeast side of the galaxy. An eight or ten inch will show a star-like core in this elliptical galaxy, but not much else. M110 is further away to the northeast of M31, and is larger and more elongated than M32.

CLUB BYLAW CHANGES

Our club's Bylaws have not been changed since April 1984. We need to make some revisions to reflect the changes that have occurred in the way the club operates, specifically:

1. The Program Chairman is now called the 2nd Vice President.
2. Sky & Telescope is no longer a benefit of membership. Dues were lowered to reflect this and discount subscriptions to S&T were offered to members instead.
3. The Junior Membership category was eliminated. This category was established so younger members could belong without the requirement to take Sky & Tel. Membership is no longer tied to S&T so this category is the same as a regular membership now.

Suggested revised Bylaws are printed here. Current wording that should be changed is lined out and new wording is in italics. We will discuss these changes, and any other suggested changes the members wish to propose, at the October meeting. A revised set of Bylaws will be printed in the next newsletter and a vote to accept the changes will be taken at the November meeting.

---Ron Veys

PRAIRIE ASTRONOMY CLUB BYLAWS

Suggested Revisions as of October 1993

NAME

The name of the Club is Prairie Astronomy Club of Lincoln, Nebraska.

PURPOSE

The purpose of the Club is to encourage and to participate in the study of astronomy and related subjects for the benefit of its members and of the general public, including but not limited to owning an observatory, telescopes, or other instruments or property useful in such studies. No part of its income or net earnings are to inure to the benefit of or be distributable to its members, directors, or officers or any private individual.

PROCEDURES

A quorum of one-third of the memberships on the current membership list must be present for a vote to be binding. A family membership shall count as one membership for this purpose. A simple majority vote of the members present is required except where a two-thirds majority vote has been required by these Bylaws. Where a two-thirds majority vote is required, notification of the upcoming vote shall be published in the Club newsletter issued immediately prior to the meeting at which the vote is to be taken.

These Bylaws may be changed by a two-thirds majority vote by a quorum of members at a regularly scheduled meeting. The proposed changes must be presented at a regularly scheduled meeting previous to the meeting at which the vote is taken and must be published in the Club newsletter prior to the meeting at which the vote is taken.

When conducting the business of the Club, procedural disputes shall be decided by consulting Roberts Rules of Order. All amendments to a motion must be voted upon before the vote on the main motion may be called for.

All regular Club meetings shall be open to the general public.

DEBTS AND OBLIGATIONS

A two-thirds majority vote by a quorum at a regular meeting shall be required to obligate the Club for any debt or to increase any outstanding debt. The property of members, directors, and officers shall not be liable for payment of the debts and obligations of the Club.

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BOARD OF DIRECTORS

The business of the Club shall be managed by a Board of Directors. The Board shall have the power to spend funds from the treasury for any valid purpose. The Board shall create additional non-elective offices as required and initiate impeachment proceedings against officers who have been negligent in performing their duties.

The Board shall consist of the elected officers of the Club. Each decision of the Board shall require an affirmative vote of three Board members.

ELECTION OF OFFICERS

Five officers shall be elected from the membership: President, Vice-President, Secretary, Treasurer, and ~~Program Chairman~~ *2nd Vice-President*.

Nominations for the elected officers shall be held during the September meeting and elections held during the October meeting. The term of office for elected and appointed officers shall be from November 1 until October 31 or until a successor is elected. In the event of a vacated elective office, a special election will be held to fill that office for the remainder of the term.

Any single individual is precluded from holding more than one elected office at any one time.

Impeachment of any officer shall require a two-thirds majority vote by a quorum of members at a regular meeting. Notice that an impeachment vote is to be held and the name of the officer involved shall be printed in the Prairie Astronomer prior to the meeting.

Non-elected offices shall be held by qualified Club members appointed by the newly-elected President.

DUTIES OF THE ELECTED OFFICERS**President:**

The President shall organize and direct the regular monthly meetings and all other Club activities, officially represent the Club at meetings of regional and national importance where he is in attendance or to delegate this authority.

The President shall have the authority to call meetings of the Board of Directors and to appoint non-elected officers.

Vice-President:

The Vice-President shall be responsible for meetings when the President is absent. He is to be the mediator in cases of procedural dispute, to temporarily assume any duties of any officer at the direction of the President, and to be in charge of Club publicity.

Secretary:

The Secretary shall handle all Club correspondence and be responsible for the distribution of information received through official Club correspondence.

Treasurer:

The Treasurer is responsible for all Club funds and for keeping accurate records of all monetary transactions. He shall submit a written report of the Club's monetary status at the request of the President, or give a verbal report at the request of any member during regular meetings. He shall also maintain a current inventory of all Club property.

~~Program Chairman~~ 2nd Vice-President:

The ~~Program Chairman~~ *2nd Vice-President* shall be responsible for the formation and presentation of monthly Club programs.

DUTIES OF NON-ELECTED OFFICERS**Publications Chairman:**

The Publications Chairman is responsible for the editing, publishing, and mailing of the Prairie As

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ronomer in advance of each monthly meeting.

Recording Secretary:

The Recording Secretary is responsible for keeping the minutes of Club meetings and filing a copy with the Club Secretary.

Librarian:

The Librarian shall keep the Club library and promote its circulation among the Club members. Dated records of persons to whom books are circulated are to be kept by the Librarian. He shall keep a current bibliographic listing of all Club library materials and file updated copies as necessary with the Club Treasurer.

Observing Chairman:

The Observing Chairman shall present a monthly report at Club meetings and/or in the Prairie Astronomer. He shall attempt to keep members informed of upcoming celestial events, sky objects of special interest, and star parties.

MEMBERSHIP

There shall be three *two* classes of membership: Individual, Junior, and Family.

An Individual Membership shall be granted to any individual who has a valid interest in astronomy and the Club's activities, upon payment of the proscribed dues. ~~A Junior Membership shall be granted to any individual twenty-one years of age or younger who has a valid interest in astronomy and the Club's activities, upon payment of the proscribed dues.~~ Family Membership shall be granted to any family, the members of which have a valid interest in astronomy and the Club's activities, upon payment of the proscribed dues.

Except for voting rights and dues, the rights of the three *two* classes of memberships are identical. ~~with the exception that Junior Members do not receive Sky & Telescope magazine as a benefit of membership.~~

VOTING

A paid-up Individual member ~~or a paid-up Junior member~~ shall have one vote. A paid-up Family membership shall have two votes when two or more family members are present at the time of voting. When only one member of the family is present, he may cast one vote.

A Family, ~~or Individual, or Junior~~ member must be present in order to cast a vote.

RIGHTS OF MEMBERS

Each paid-up membership has the right to:

- ~~1.~~ Receive a years subscription to Sky & Telescope magazine, with the exception of Junior ~~members, who do not receive this publication as a benefit of membership.~~
- ~~2~~ 1. Receive notification of all Club meetings, activities, and other events occurring in the name of the Club.
- ~~3~~ 2. Initiate and second motions. The President does not have this right.
- ~~4~~ 3. Speak out and be heard during Club discussions.
- ~~5~~ 4. Submit for publication articles for the Prairie Astronomer.
- ~~6~~ 5. Submit, without charge, advertisements of relevance for publication in the Prairie Astronomer.
- ~~7~~ 6. Require a reading of the minutes of the last meeting, a Treasurer's Report, or request a secret ballot.
- ~~8~~ 7. Equal opportunity to use all Club-owned equipment and resources.

DUES

Dues shall be determined by the Club membership and adjusted as required to meet expected expenditures. ~~and the cost to the Club of Sky & Telescope magazine.~~

DISSOLUTION

The Club shall not be dissolved so long as five members vote against dissolution. If the Club is dissolved, its assets at the time of dissolution, after payment of liabilities, shall be distributed to Hyde Memorial Observatory, so long as this observatory is used for purposes of dissemination of astronomical knowledge to the general public.

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SUNSPOT ACTIVITY

Sunspot activity has inched upward in recent weeks; Caspar Hossfield reports a mean index of 71 for the week ending October 6th. Rick Krezewski reports that a second naked-eye sunspot group is currently making its way across the Sun's face.

OCTOBER 16, 1993

AXAF CLEAVED

The budgetary axe has once again fallen and another NASA space-science satellite has become the victim. Originally, the Advanced X-ray Astrophysics Facility, or AXAF, was one of NASA's four "Great Observatories," augmenting the Hubble Space Telescope and the Compton Gamma Ray Observatory now in orbit. AXA was intended as a huge spacecraft containing instruments to take images and spectra at X-ray wavelengths. After one round of cutbacks in 1992, the project was split into two smaller, cheaper spacecraft -- one with the imager the other with spectrometers. However, further belt-tightening has now eliminated the spectroscopic satellite altogether. There are alternate plans for at least one of the spectrometers -- it has been granted a place on an upcoming Japanese high-energy satellite.

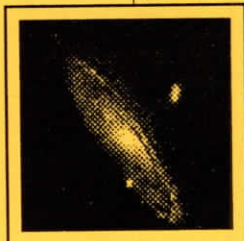
GAMMA RAYS AND SUPERNOVAE

And speaking of Great Observatories, astronomers announced two important discoveries from the Compton

Gamma Ray Observatory that will aid supernova researchers. In the first, the Imaging Compton Telescope detected the gamma-ray spectral line of Titanium-44 in the supernova remnant Cassiopeia A. The element has a 54-year half-life, which will let astronomers home in on recent supernovae, even those hidden by interstellar dust. A second spectral line, that of Aluminum-26, in the Vela supernova remnant is the first apparent association of this element with a supernova. Aluminum-26's million-year half-life will offer a guide to much older supernovae.

LIGHT-POLLUTION SETBACK

San Diego will take a step backward in trying to keep light pollution at bay. Under the pretense of fighting crime, late last month the city council voted to rescind their 1984 decision to use only low-pressure-sodium streetlights in the city. The council announced plans to reinstall high-pressure-sodium lamps in high-crime areas -- much to the displeasure of those concerned with the sky quality for the observatories atop Palomar Mountain and Mount Laguna. Nevertheless, the city council has created a study group, which, according to David Crawford of the International Dark-Sky Association, will offer a mechanism for getting advice from the business community, engineers, and astronomers.



The Prairie Astronomer
 c/o The Prairie Astronomy Club, Inc.
 P.O. Box 80553
 Lincoln, NE 68501



Next Meeting
October 26, 1993

93007 04/94 RS
 John Johnson
 15606 Woolworth Ave.
 Omaha NE 68130-2517

Please Notice: If there is an asterisk on your mailing label it is time for you to renew your PAC membership!

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