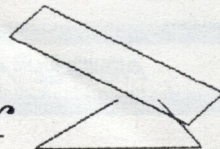


The Prairie Astronomer



Lincoln Ne.

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Nebraska's skies are often their best on the coldest of winter nights after a high pressure cell has settled upon us. In my 30 years of observing I have tried many ways of keeping warm while taking advantage of these below zero highs. At one time I even used an electrically heated U.S. Army Air Force flight suit. This worked great but carrying around that 28 pound transformer was a severe limitation. I've always wondered what that suit did to Earl's electric bill!

The best solution I have come up with can best be summarized in one word--layers. I don't wear heavy clothes but instead I wear several layers of light clothes. Air is the best insulator there is. Several light layers take advantage of this weightless insulation. Tight clothes are to be avoided as they cut down on circulation needed to keep you warm.

Here are the layers I find work best for me. First off I start with longjohns but avoiding the tight kind. If they feel tight on the legs and arms you are losing valuable circulation. Next I wear a wool shirt and wool pants. Over the shirt I wear a wool lumberjack's jacket. Wool is great for allowing perspiration to escape while keeping heat in. Thus, I use wool for the middle layers. I wear a second pair of pants over the wool ones. This pair should be of a tight weave so as to prevent wind from getting through. Over the lumberjack jacket and pants I wear a rather light hooded parka. Under the hood I wear a wool stocking cap and earmuffs. I don't like the hoods that are woolly and can completely enclose the face. These tend to trap moisture which condenses on the eyepiece as you put your eye up to it.

Hands and feet need separate treatment. For my feet I use "Moon Boots". With these you need nothing else though again I like wool socks. Not for warmth though, the boots tend to hold in moisture and the wool draws this away from your feet. These boots seem to be made for us. You can't walk far in them nor drive safely so when going to Earl's I don't put them on until I get there. If you insist on regular boots then wear two pairs of socks. The first being cotton the second wool. You want to draw the perspiration as far from your feet as possible so here the wool should be on the outside. For my hands I find a light loose fitting pair of gloves is fine if you can keep your hands in your pockets much of the time. If they are going to be exposed then I wear an even lighter pair of gloves with a pair of water tight mittens over them. The gloves will keep your hands warm for a short time when you need the added dexterity of your fingers.

Instead of the second pair of pants and wool jacket a pair of insulated coveralls would probably work as well.

When driving to Earl's be sure to keep the car heater as low as possible. You are heating the telescope optics which will take time to settle down again! Besides you can get overheated and perspire heavily making keeping warm nearly impossible. I keep the car heater off on the trip out. I find I can take the cold longer besides the telescope being ready to use. On the way back turn up the heat as far as you like!

***** PRESIDENTS MESSAGE *****

I finally had a long overdue date with my telescope this past week. It had only been about six weeks since I'd last seen the big white tube, and I'd almost forgotten where it was. But after throwing some boxes around and tripping over the lawn hose I found it in the corner of the garage feeling lost and totally rejected. For the first hour of our romp across the sky it didn't even speak to me, but once it got back into Orion and those familiar wisps of nebulosity, I could hardly shut it up. I guess I ended up getting in about 3 am, eye-sore but feeling great about the evening. We have another date planned this coming weekend. But on to more important matters.

Next meeting we will be passing around a sign-up sheet for those of you who wish to be included in our new call-up system. To explain, during the month if any unusual or unplanned events crop up in the sky or the club, everyone who signed up will be contacted by phone. Earl, Rick, and Lee will be the core of our system and will be dividing the list of names among themselves. If you wish to be included on the list but can't make the meeting, contact one of these gentlemen or a club officer and let them know.

We have lots to talk about Tuesday night, so I hope you all can make it out to Hyde. See you then...

John Lortz

***** This Month's Meeting *****

This month's program will be by Russ Genzmer. I had planned on this several months down the road and coupled with a death in the family it won't be the full program that will be presented this spring. But please attend as there are many facts to be discussed before you even think about a computer for your hobby.

The Prairie Astronomer is published monthly by the Prairie Astronomy Club.

Membership structure--

1. Newsletter subscriber only, \$6.00 per year. Over 21 years of age no club voting privileges (Newsletter only)
2. Junior Member, \$6.00 21 years of age and less. Receives newsletter, voting privileges. No magazine subscription discount through club.
3. Regular Member \$19.00, receives newsletter, voting privileges, Sky and Telescope subscription with dues through club. No age restriction.
4. Family members \$21.00, same as regular member, but receives 2 votes in elections etc.

Numbers 2,3,4 of above also can receive as an elective, Astronomy magazine through the club at \$12.00 per year. Address membership renewals to: Prairie Astronomy Club, Inc. PO box 80553, Lincoln Ne. 68501 Address all articles for inclusion in the Newsletter to Russ Genzmer 5301 So. 30th Lincoln Ne. 68516. All articles should be received 10 days before club meeting date.

The Computer Corner by Russ Genzmer

Johnny where are you?" There was a short pause before a muffled voice came from upstairs. "I'm upstairs in the attic". Sonya was nearly out of breath by the time she climbed both the flight of stairs to the second level and then the even steeper flight of stairs to the attic. With each step she became more angry. Her 15 year old son knew the attic contained only antiques, and old mementos of her late husband. Even though it had been 7 years since his untimely death the room was still too painful for her to frequent so she ruled it off limits to her son also.

As she opened the door she saw her son over in the corner of the attic. This was the one place she didn't want him to be. He had just removed the tarp covering a small mountain of electronic equipment. After the dust had settled he turned a smudged face to his mother. "What is all of this stuff?". His mother at first thought about not telling him the truth it might be better but then ruled it out.

"Sit down son there is something about your father I must tell you." You remember reading in your history books how, many decades ago these devices were used by nearly everyone?"

"People were using them to do their banking, write letters". "You mean they didn't use a pencil and paper like we do now?" John broke in. "No, and they even used them to read with. No longer would they need to buy books or go to library's like we have now. They would simply command the machine to produce a book on this thing here called a monitor." John was spellbound as he listened. "They even had these things solve their problems for them. less and less time was spent thinking and using their minds. People grew complacent, listless, everything was done for them." She continued.

"The only people who used and exercised their minds were the ones they called programmers, like your father". She drew a breath before continuing. "Then it happen society started to fragment. Social unrest became common place. The thing that seperated the have's from the have not's was no longer money but whether you were one of the ones who controlled the computer or were controlled by the computer". "finally after a decade of intense upheaveal society overthrew these devices and the people who supported them. They went back to the basics. People started finding out the true joy of using their minds".

After a pause John looked at his mother and asked "Mom, what did dad die from?". "Boredom son". "Boy am I glad we live in the future mom"

The author is Support Manager for a software development company in Lincoln and a computer systems dealer for 5 years before that.

**** Newsworthy Notes ****

I still need to collect from all those members who haven't paid the Telescope Making number 20. I'll be at the meeting and we can take care of it then.

Please find the revised bylaws of the Prairie Astronomy Club. These need to be voted on and approved by 2/3 of the members attending. Any additions need to brought up, discussed, published in the next newsletter and voted on at the following meeting. Ah, politics....

How large is your field of view? This is an important question to ask when selecting eyepieces or when trying to find a deep sky object using the right angle sweep method. Eyepieces have a field called apparent field of view which is constant for each eyepiece.

The fields for common eyepieces are as follows: Ramsden eyepieces have about 30 to 40 degree fields, Kellner's have 35 to 50 degree, Plossls have about the same as Kellners, Symmetricals have 25 to 40 degrees Orthoscopics have about the same field as Kellners, and Erfle's have 50 to 70 degree fields. To find the true field, divide the apparent field (if known) by the magnification of the telescope/eyepiece combination. My 8 inch F/7 Newtonian has a 27mm Kellner eyepiece that yields 53X and my Kellner also has an apparent field of about 50 degrees, so my true field is one degree, 3.6 minutes of arc wide.

Another method of finding the field of view is to use objects of known angular size such as the moon. The moon's exact angular size is listed in Sky and Telescope magazine for a couple of dates a month, but on the average it is 30 minutes of arc wide (1/2 degree).

The number of full moons you can fit diagonally across your eyepiece field will give your true field of view in half degrees. Also, the Pleiades star cluster is a bit over one degree in diameter with the stars Atlas (one of the two dipper handle stars in the Pleiades) and Electra (the star in the bottom front of the bowl of the Pleiades) being almost exactly one degree apart.

Those of you who have a watch with a sweep second hand or a stop watch can determine your field of view by timing the passage of a star that is near the celestial equator through the eyepiece. Place the star so that it passes directly through the center of the field and then time how long it takes to go from the center to the edge. Multiply the number of minutes and seconds it takes by 30 and you will get the true field in minutes and seconds of arc.

Two stars that are quite close to the celestial equator are Delta Orionis and Zeta Virginis, but any star on the equator will do.

David Knisely

The Prairie Astronomer
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FIRST CLASS

*** Printed herewith is a copy of our club's proposed Bylaws incorporating all the changes recommended at the November meeting.

Please read them carefully. They will be voted on at the January meeting.

PRAIRIE ASTRONOMY CLUB BYLAWS

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.

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.

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:

The Program Chairman 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 Astronomer 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 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 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 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 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. Receive notification of all club meetings, activities, and other events occurring in the name of the Club.
3. Initiate and second motions. The President does not have this right.
4. Speak out and be heard during club discussions.
5. Submit for publication articles for the Prairie Astronomer.
6. Submit, without charge, advertisements of relevance for publication in the Prairie Astronomer.
7. Require a reading of the minutes of the last meeting, a Treasurer's Report, or request a secret ballot.
8. 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.