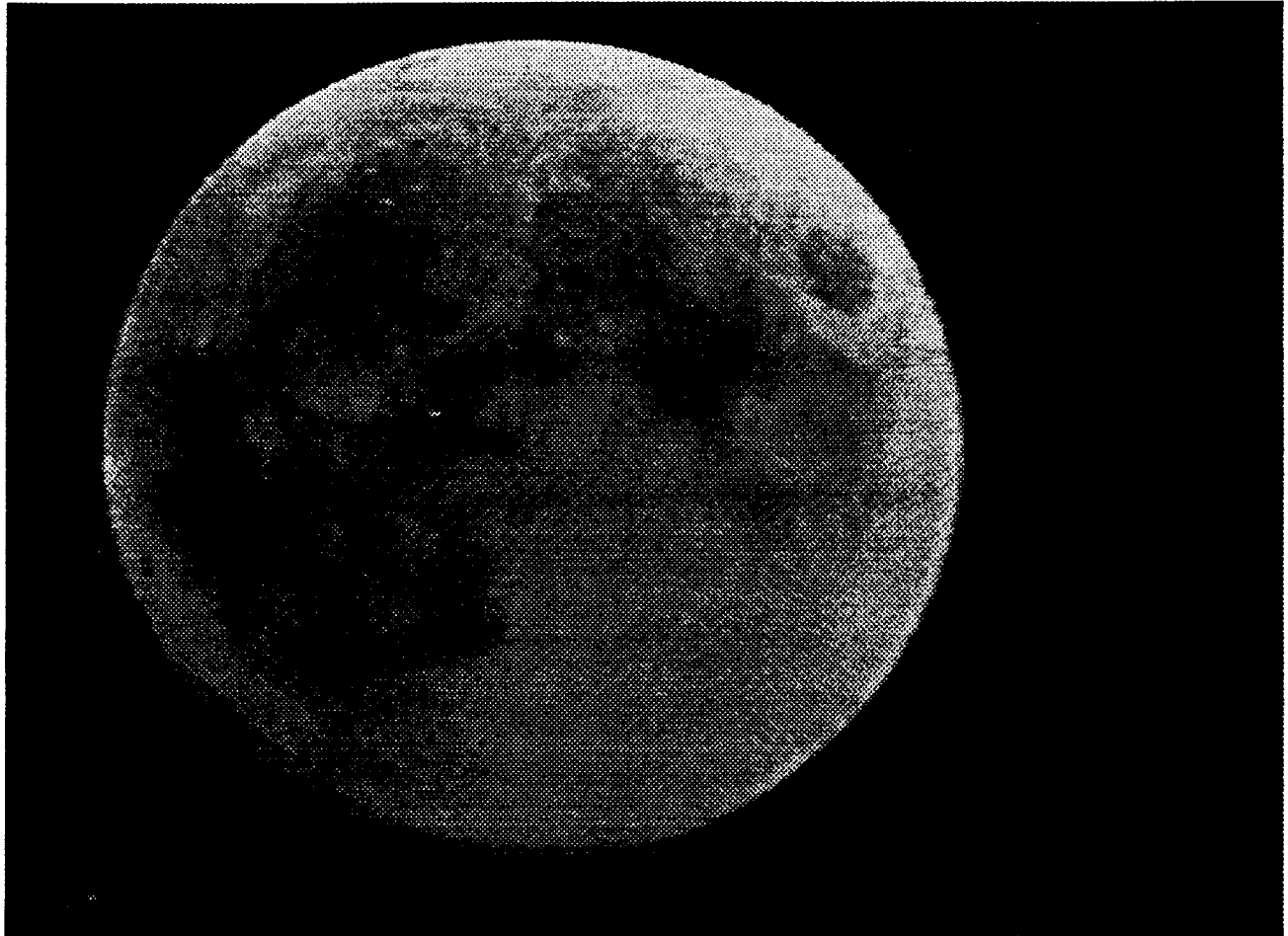


BASKATPOOL SKIES

Volume 24, Number 1

January 1994



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Minutes of the December Executive Meeting

December 13, 1993

Room B-10 Health Sciences Bldg, U of S Campus

Present: Richard Huziak, Mike Williams, Mike Wesolowski, Al Hartridge, Jim Young, Sandy Ferguson, Ed Kennedy, Gord Sarty

1. Meeting called to order 7:00 p.m.
2. There is no further news about Peter Broughton's visit and Regina Centre participation. (J. Young)
3. The hand truck fund has increased to \$80, but the hand truck has not yet been purchased. (R. Huziak)
4. The Light Pollution Committee reports that there has been no activity or news to report.
5. The U of S Observatory has been painted and the new RASC display can go in anytime. Sandy Ferguson reports that she has a large number of photos which will be used in the new display. Gord Sarty stated that the blackboard will be moved out soon.
6. The last Observer's Group Meeting was clouded out. This is counterproductive for our new members. It was decided that "raindates" should be established in the future.
7. Mike Williams reports that the Centre has to pay for the 1994 Calendars on December 15. No motion is required to release the funds for this. (M. Williams)
8. Membership status: 39 paid, 13 yet to renew. (M. Williams) Mike Wesolowski will phone those who are unpaid and try to solicit renewals.
9. The Centre has received a request for the Annual reports to be submitted by Jan 21 to the National office. (R. Huziak)
10. A splinter group has formed from dissenting Hamilton members, called "Hamilton Amateur Astronomers". They publish the *Event Horizon*. (R. Huziak)
11. Gord Sarty will produce 1994 asteroid finder charts. He will advertise these for sale in the next newsletter. (G. Sarty)
12. Item 23 from the Minutes of last months Executive meeting should be corrected to read that the Time Life books were donated by Percy Crosthwaite, not Al Hartridge as stated.
13. The Centre's financial statement for the year ending September 30, 1993 was presented. (M. Williams)
14. The Centre has received a donation of several years worth of Astronomy magazine as well as some astronomy books from Dennis Duncan. (M. Wesolowski)
15. Sky and Telescope magazine advertises that members of an astronomy club can get reduced subscription rates on the magazine. As several members already subscribe, we might be able to take advantage of this. M. Wesolowski will investigate. (M. Wesolowski)
16. With the upcoming partial solar eclipse in May, do we want to attempt to sell Solar Skreen filters for viewing the eclipse at Astronomy Day? After considerable discussion, it was decided that the Centre does not want to risk lawsuits. M. Wesolowski will contact Tuthill about the company's approach to liability. (M. Wesolowski)
17. E. Kennedy has received some of the more recent reprints of H. S. Hogg's books, which he is donating to the University archives.
18. Ideas for the Centre's direction discussed. (R. Huziak)
 - (a) we need to address the needs of beginning members
 - (b) the Observer's Group meeting should be THE vehicle for training new members
19. Meeting Adorned 7:56 p.m.

Cover Photo - Last November's Lunar Eclipse

This months cover photo was submitted to the internet by Dennis Ward, Observatory Director, Birmingham Astronomical Society. He writes:

This is a photo that I took Sunday night (November 28/93) from Birmingham, AL, using a Meade LX-200 8" f6.3 SCT. The film was Kodak Gold 1600, exposure time 3 seconds. This photo was scanned at 300 dpi, 24 bits; then reduced to an indexed 256-color image using PhotoStyler.

Clear Skies!

Saskatoon Skies Information

Commercial vendors wishing to advertise in the "Saskatoon Skies" may do so at the following rates: \$50.00 per page, \$25.00 per half page and \$12.50 for business card ads. Individual RASC members and other parties (at our discretion) may advertise items and events for free.

Next months deadline is Friday, February 4, 1994. Please have any submissions in to me by then in order to be included in the next issue. Submissions may be in typewritten form or on a floppy diskette (3.5 or 5 inch size and formatted for MSDOS) preferably as ASCII files. Electronic submissions are preferred as it saves me some typing. Mail or bring your submissions to:

Gordon Sarty
422 Edmund Park,
Saskatoon, Sask.
S7N 0Z4
phone: 374-8803

OR

Saskatoon Centre RASC
Box 317, RPO University
Saskatoon, Sask.
S7N 0J8

E-mail submissions to sarty@math.usask will also be accepted. Saskatoon Skies is a monthly publication of the Saskatoon Centre of the Royal Astronomical Society of Canada.

Minutes of the December General Meeting
December 13, 1993
Room A-226 Health Sciences Bldg, U of S Campus

1. Meeting called to order 8:08 p.m. (R. Huziak)
2. Everyone was welcomed and the RASC described. (R. Huziak)
3. It was moved that the November minutes be adopted as published, after noting the correction to item 23 of the Executive Meeting minutes. Moved: J. Young ; Seconded: S. Alexander ; Carried
4. Memberships are past due. Please renew, or newsletter will lapse. Those who have renewed can pick up their 1994 Observer's Handbooks from Mike Williams.
5. Announcements:
 - (a) Geminid Meteors peak tonight. Some members will be going to the Rystrom Obs. after the meeting.
 - (b) Nova Cassiopeia 1993 has been discovered this weekend. Finder charts are available.
 - (c) Next Observer's Group Meeting set at January 15, 1994, with the "rain date" to be the following weekend.
 - (d) 1994 Calendars are still available for \$6.50 each.
 - (e) New members CAN use the Rystrom Observatory after they have been checked out.
6. Presentations:
 - (a) Les MacPherson's article on the eclipse and R. Huziak's editorial was reviewed (R. Huziak)
 - (b) The Victoria Centre is organizing a coordinated western Canadian Occultation observation effort for 230 Athamantis/PPM121051 on Jan 8, 1994.
 - (c) *The Winter Constellations* (S. Ferguson)
 - (d) Al Hartridge presented some of the photos he took during the total lunar eclipse of November 28/29, 1993 (A. Hartridge)
 - (e) *The Geological Importance of Meteorites* (Dr. Les Coleman)
7. Adjourned to the Rystrom Observatory at 10:15 p.m.

Observers' Group Meeting

The next Observers' Group observing session will be held on January 15 at Rystrom Observatory, with a "rain date" of January 22. Time: After 8:00 p.m. To find the observatory, drive south on hiway #11 to the Grasswood Esso station and drive-in, turn left past the KOA campground and head down the road approximately 1.5 miles to the last mailbox on the right before the railway tracks. The mailbox is the Rystrom's. Go down the driveway past two homes and around the large equipment building to the right. Be sure to dim your lights.

In addition to the Observers' Group meeting, members are welcome to visit the Rystrom site at any time provided you phone ahead. The number to call is 955-2370, ask for Nelson or Gloria. If you do not have a key, find a member who does and talk them into a trip to the dome. After you have been checked out on the equipment there you are entitled to a key of your own.

University Observatory Hours

The U of S Observatory will be open to the public on Saturday evenings from 7:30 to 9:30 p.m. in January and February. Visitors will be able to view Saturn, the Andromeda galaxy, the Double Cluster and other celestial objects. Observatory assistants will be present to answer questions about astronomy and to assist the public in viewing through the telescope. The observatory is located on campus, one block north of the corner of Wiggins Ave. and College Drive. For more information, call Stan Shadick at 966-6434.

RASC Items for Sale

The Saskatoon Centre of the RASC has some items for sale. One is the **1994 RASC CALENDAR**. They are available for \$6.50 each (G.S.T. included). The 1994 versions of the **BEGINNER'S OBSERVING GUIDE** are available but must be ordered as the demand arises. For **asteroid hunters**, finder charts for 1994 are also available. See the Editor's Notes (page 8) for more info.

Contact Rick Huziak at 665-3392 or at the monthly General Meeting if you would like to purchase any of these items.

Come One, Come All to the Telescope Extravaganza Night

Notice of the January 17, 1994 General Meeting (but don't forget your scope)

I'm really excited about the January General Meeting. Besides the usual business, we are going to have two great presentations.

First, Bill Hydomako will be showing his slides from the November Lunar Eclipse (and they ARE good; I've already seen them!). If anyone else has eclipse slides, please bring them, too. (Those of you who attended the December GM will remember Al Hartridge's great slides!)

Then....we are going to try something a little different. The January General Meeting will be the official "Telescope Extravaganza Night". Everyone is encouraged to bring their telescope and to set it up for the regular meeting. This will allow all Centre members to get a first-hand look at what everyone uses and what is available on the market. Everyone is encouraged to participate, whether you have a 2-inch Sears 'special' or a 17" hernia machine. If you don't have a scope, bring your binoculars or other observing aids. For example, Bill Hydomako said he'd bring his 'collimation alignment tools' for everyone to see, Mike Wesolowski will show his 6 inch Walker scope, Sandy will have her 10 inch Dobsonian, my 6" solar scope will be there, maybe a few 8's, I know of a C-11, a few 14's, a Schmidt camera? and on and on an on..... If everyone could also be prepared to make a short presentation on their scope (2 - 5 minutes), this will help others understand the features, advantages, drawbacks, performance, cost, etc. of the scope or equipment. What weird and wonderful astronomy toys will be brought out into the daylight for the first time at this meeting?? I know they exist; and you can't hide them forever!

To aid in unloading and hauling of the scopes up to the meeting room, I will arrange to have someone to help out at the Wiggins door of the Health Sciences Building from 7:15 to 8:00PM. Parking will be a problem, as it always is, so just pull into the crescent by the door, double park and unload. The helper will watch over your stuff until you've had a chance to park, then will help you carry it up to the room.

This meeting will be what you make it. Please participate! Let's rival Kitt Peak for the largest collection of telescopes in the world! I hope to have enough scopes that we have to spill out into the hallway! If you wish, you can give me (Rick Huziak) a call at 933-1676 (days - work) or 665-3392 (evenings - preferred) to let me know in advance that you are bringing your scope, though don't let this stop you from just showing up with your scope and surprising the heck out of me. The meeting is open to members and the general public. Everyone is welcome. Don't miss the greatest event of January 17th!!!

And.....don't forget the January 15th Observer's Group Meeting at the Rystrom Observatory (with a January 22nd 'rain' (or snow?) date. Someone will be out at the observatory by 7:30PM or so. If it's clear, we'll be there! If it's cold, we'll be bold. If it's snowing, no way I'm showing.

**Monday, January 17, 1994
Room A-226, Health Sciences Building
U of S Campus
8:00P.M.**

Why Hasn't Anyone Mentioned the Sept. 17/18, 1993 Star Night?

I've just realized that no one has written even a word about how the September Public Star Night at Diefenbaker Park went. Well, in a word, it went GREAT. This star night was one of the best we've had in years. We had good attendance by members, with several scopes out each night. Don Friesen even got the 'Welcome to the Universe' banner up. The weather cooperated, giving us two quite clear nights, that got better as the nights wore on. (We also got reasonably clear nights for the July PSN as well; what a year!). One downside was that the crowds were quite light, despite the wonderfully warm weather we had for the starnight. This was most probably due to ineffective advertising for the event. We'll fix that for future events. But the people that did show up were treated to an excellent view of Saturn and wondrous views of the Sagittarius/Scutum region. This event was quite the success, and proved that we can easily hold at least two successful starnights a year. I'm sure the September starnight will become an annual adventure.

Rick Huziak

1993 Lunar Eclipse (11/28 - 11/29)



11:06pm EST



12:06am EST



12:31am EST



1:00am EST



1:29am EST (Longer
Integration Time)



1:40am EST (Longer
Integration Time)

Images taken by Tim Fickett & Jerry Armstrong Using a prototype Lynx Plus CCD camera near Atlanta, GA. Distributed by the Atlanta Astronomy Club (BBS 404-455-3089)



Here are some more lunar eclipse pictures found on the internet. The picture at the left is another one taken by Dennis Ward (see cover photo). One of the stars in the photo (the one to the far right) was actually occulted by the totally eclipsed Moon as seen from Saskatoon. That star was the double star β 87 (Burnham 87) which consists of 6 and 9 magnitude components separated by 3 seconds of arc. Saskatoon RASC member Stephen Light says he saw the star wink out in two steps as each component of the double was blocked by the Moon. Be sure to drop in to the January General Meeting to see the eclipse pictures taken by our Saskatoon members.

Usage of the Rystrom Observatory

A lot of members ask me how often the Rystrom Observatory is actually used, and what the probability is that there will be someone else out there if they just show up. Well, I took a few minutes one night to count the entries in the Observatory Log. The results are encouraging. In the future, I plan to actually analyze the log in a little more detail, but preliminary results are:

Year	No. of Prime User Visits (mostly key members)
1990	105
1991	88
1992	74
1993	96 (to Dec 7)

The figures show that we get reasonable use out of the facility. Since we get in excess of 200 clear nights per year (and half of those have the moon up), usage is pretty good, averaging about 1 observer in every 4 or 5 nights (on a yearly average) or 1 observer in every 2 or 3 clear nights. That's pretty good usage! Note that the 96 "prime use" visits in 1993 actually involved 135 people, because they brought along friends or other guests. Please remember that you should sign the Observatory Log every time you go out to the Rystrom Observatory, regardless of whether you opened or closed it up. Get your guests to sign, too. It is important that we know how many users we have, so we can plan expansion to the existing site or the addition of a totally new site.

Rick Huziak

Reporting Fireballs

Gordon Sarty and I have been very busy working on fireball reporting and an associated article for the *Journal of the RASC* since the October 30/93 fireball. Since that time, several others have been sighted as follows:

Date(1993)	Time(CST)	Mag	Observers	From Where
Nov 23	07:46	- 10?	M. Hagen/R. Braun	Prince Albert/Saskatoon
Nov 24/5	00:00	- 6?	M. Hagen	Prince Albert
Dec 6	23:10	-13	G. Sarty/R. Huziak	Rystrom Observatory

If anyone else saw these or other fireballs, Gordon or I would like to hear about them. We are gathering information for the nation-wide MIAC fireball network. Please report new fireballs as soon as you can. In particular, we need the following points: date, time, location of observer, magnitude, fragmentation, colors, sound, position angle and height of beginning and end points, angle of decent, duration, a track against the background stars and a full description of the event. It is actually rare that any one person can give a full description of the event, so it is important that we get as many reports as possible. If you can give me a telephone call, I would prefer that so I can personally interview you. If you can't, please write in to our Centre's mailbox. Please see past articles in *Saskatoon Skies* and the *Journal of the RASC* for full details. You can call me at any time with a new fireball report at 665-3392.

Richard Huziak

Financial Statement for 1993

The financial statement for the Saskatoon Centre RASC for the year 1993 is given on page 7. The following notes apply to the statements:

The Royal Astronomical Society of Canada
Saskatoon Centre Incorporated
Notes to Financial Statements
September 30, 1993

Significant Accounting Policies

1. Observatory and buildings are recorded at cost and are amortized using the straight-line method over 20 years.
2. Equipment is recorded at cost and is not amortized.
3. Library items are carried in the accounts at a nominal value of \$1; new additions are expensed during the current period.
4. Interest on short term investments is recorded on the accrual basis.

The Royal Astronomical Society of Canada
Saskatoon Centre Incorporated
Balance Sheets
September 30, 1993 and 1992

The Royal Astronomical Society of Canada
Saskatoon Centre Incorporated
Income Statement
Years Ended, September 30, 1993 and 1992

	1993	1992
Income :		
Membership Fees	\$ 1,121	948
Life Member Grants	51	51
Donations	533	385
Member Surchage	122	101
Member Special Surchage (Key)	40	35
Observers Handbook	-	-
Observing Guide (net)	-	-
National Calendars (net)	12	292
Interest	154	117
Miscellaneous -	<u>2,033</u>	<u>1,929</u>
Expenses :		
Educational Activities	\$ 57	32
Fees to National Office	684	588
Library	91	36
Office Administration	116	77
Newsletter & Postage	495	323
Insurance	273	262
Miscellaneous	<u>1</u>	<u>117</u>
	1,717	1,435
Surplus before amortization	316	494
Amortization - Buildings 20 years	(528)	(528)
Net Income for year	(212)	(104)
Equity beginning of year	\$ 15,590	15,694
Equity end of year	<u>15,308</u>	<u>15,590</u>
Assets :		
Current Assets:		
Cash	\$ 600	688
Savings (Telescope Fund)	4,361	140
Short Term Investments	-	4,000
Accrued Interest Receivable	-	152
Prepaid Expenses (Obs guide)	-	<u>97</u>
Total Current Assets	<u>4,961</u>	<u>5,077</u>
Fixed Assets @ cost:		
Rystrom Observatory	5,335	4,642
Warmup Shelter	4,773	4,773
Underground Wiring	3,015	3,015
Storage Shed	<u>653</u>	<u>653</u>
	13,776	13,083
less accumulated amortization	(8,386)	(7,788)
	5,390	5,295
Library	1	1
Equipment	<u>5,351</u>	<u>5,265</u>
Total Fixed Assets & Equipment	10,742	10,561
	<u>15,703</u>	<u>15,638</u>
Liabilities and Equity :		
Current Liabilities:		
Prepaid Membership	\$ 325	48
Total Current Liabilities	395	48
Equity:		
(per accompanying statement)	\$ 15,308	15,590
	<u>15,703</u>	<u>15,638</u>

See accompanying notes to financial statements.

On behalf of the Executive :

Richard J. Bergquist ----- President

Bill Harris ----- Treasurer

D. Wilczak ----- Auditor

See accompanying notes to financial statements.

Editor's Notes

Happy New Year All!

Although we don't have the financial resources to radically change the format of *Saskatoon Skies*, I'm trying out a slightly new style this month. Basically, I want to put a picture on the cover of every newsletter. So send in your pictures! I can scan in photographs (with a little loss in resolution) and drawings. Also, pictures are not limited to the cover, so send in all you can. I will return the photos to you when I'm finished with them.

How 'bout the Christmas nova of 1993! This nova was (is) an easy binocular object visible directly overhead for us in Saskatoon. I haven't done much observing over the holidays but I did manage to peek a few looks at the nova between glasses of Christmas Cheer. Check out the last two pages of this newsletter for more nova info.

I will again be making asteroid finder charts for the coming year and will be offering them for sale to the RASC Centres across Canada. If you want a copy, let me know. They will be sold for \$5.00 to cover the cost of photocopying and will be spiral bound for easy use at the telescope.

Lunar Occultations in 1994

For the convenience of observers in Saskatoon, the information presented in the occultations section of the *Observer's Handbook 1994* has been reduced to circumstances specific to Saskatoon. This information is presented in the following table. From left to right, the columns give the date of the occultation, the name of the occulted star, its magnitude (note that only listings for stars brighter than magnitude 5.0 are given), the circumstances (RD means a reappearance at the dark limb of the moon, DD means a disappearance at the dark limb), the elongation of the moon relative to the sun in degrees (where 90 is first quarter, 180 is full moon, etc.), the Central Standard Time of the event to the nearest minute, and the approximate position angle of the event, measured from the northernmost point on the moon, eastward around the limb.

There are no really spectacular occultations visible from Saskatoon this year. The brevity of the list is due to the relatively bright limiting magnitude being used. As it stands, binoculars or small telescopes are sufficient to observe any of the events in the table.

For additional information about observing occultations, refer to the *Observer's Handbook 1994*, pp. 113-126, and references therein.

Date	Name	Mv	Circumstance	Elong.	Time	P
Jan 7	ι Lib	4.7	RD	303	07h44m	290
Feb 20	ZC 894	4.6	DD	116	18 47	120
Feb 21	ZC 915	4.7	DD	118	00 23	88
May 27	21 Sgr	5.0	RD	210	02 11	301
Sep 21	δ Psc	4.6	RD	196	00 33	270
Nov 9	ν Aqr	4.5	DD	89	22 42	56
Dec 11	δ Psc	4.6	DD	114	18 36	30

Mike Wesolowski

Sending Letters in to the Centre Mailbox

Members, especially ones who cannot get into our monthly meetings on a regular basis, may wish to keep in touch with the Centre via our mailbox. You are encouraged to write in for a number of reasons: we would like to hear from you; there are a lot of distant members in other cities that we've never had the fortune of meeting! ; you may need questions answered on astronomy or telescopes; you may have observed some interesting events you'd like to tell us about; you may want to submit an article or photograph to the newsletter; you'd like to comment on articles in the newsletter; you need some resource material for a project or; you observed a fireball or variable stars and would like to tell us about them.

I try to answer all letters on a timely basis, or route them to a member with similar interests. For some, I will submit the letters or excerpts from them to the newsletter if they are potentially interesting to other members. (If you don't want parts of your letter published, just let me know).

Our Centre is here to serve the membership in any way we can. Just let us know.

Richard Huziak

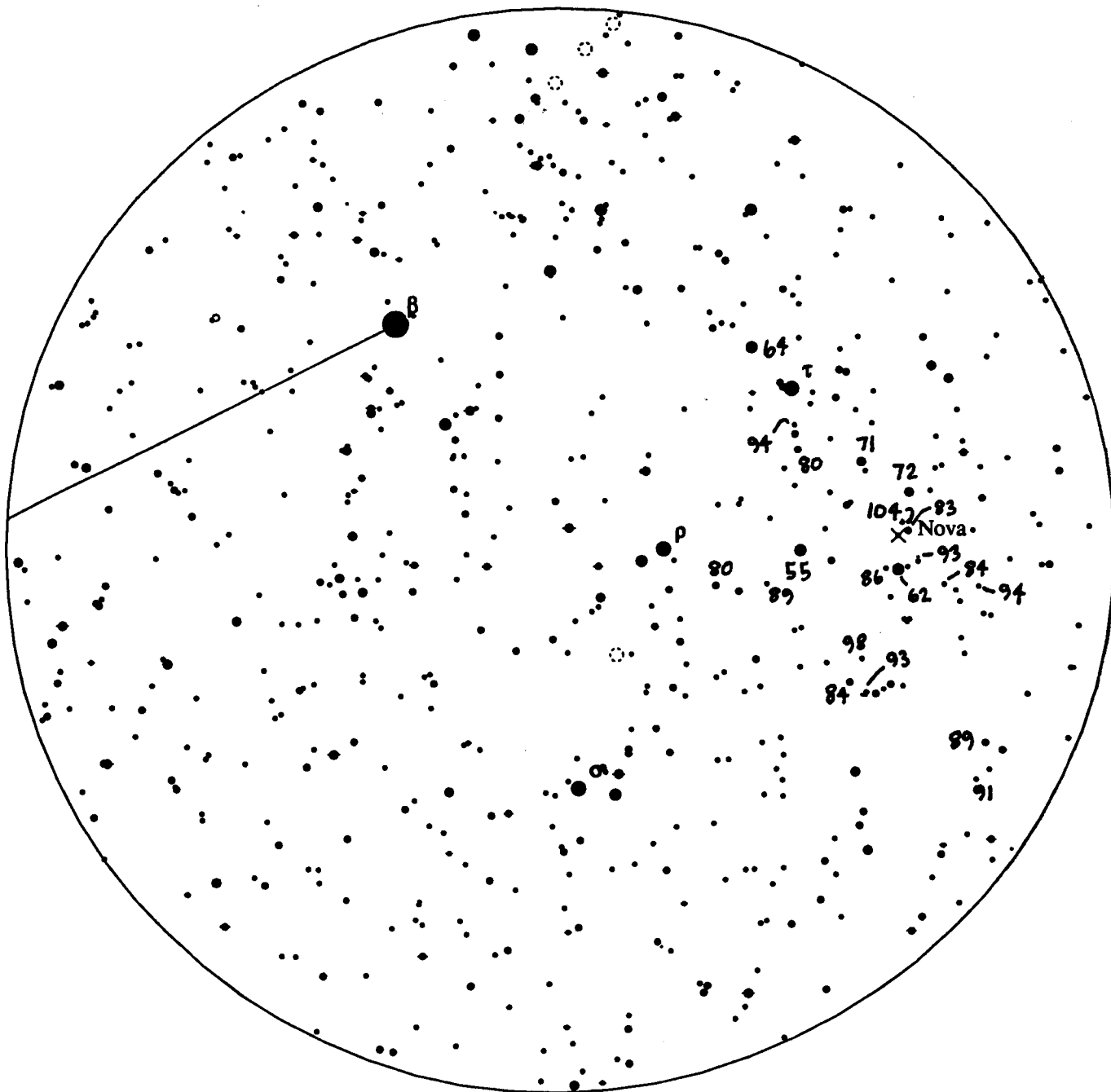
Nova Cassiopeiae 1993

In case you weren't at the December General Meeting, a new nova was discovered on December 7. It was discovered photographically by a Japanese amateur, Kazuyoshi Kanatsu, who used an ordinary camera with a 55-mm f/2.8 lens.

A nova is theorized to be the result of an explosion that happens in a special kind of binary star system. The system consists of a white dwarf, which is a very dense burnt-out star, and of another relatively normal star orbiting around it. The two stars orbit very closely with the white dwarf sucking gas off the other star. When enough gas is piled onto the white dwarf, the weight of that gas sets off a thermonuclear explosion on the surface of the white dwarf. This explosion causes the brightening that we see as the nova.

Below is a finder chart with AAVSO comparison magnitudes penned in. It has been visible in binoculars for the last few weeks but may be fading by the time you read this. On the back page is a preliminary light curve that was e-mailed to me by Mike Boschat in Halifax. It is based on hundreds of observations made by amateur astronomers around the world.

The coordinates of the nova are (equinox 1950.0): RA = 23h 39m 22.26s, Decl. = +57d 14' 23.7". The corresponding 2000.0 position is RA = 23h 41.79m, Decl. = +57d 31.0'.



NOVA CASSIOPEIA LIGHT CURVE; DEC.4.40 UT to

