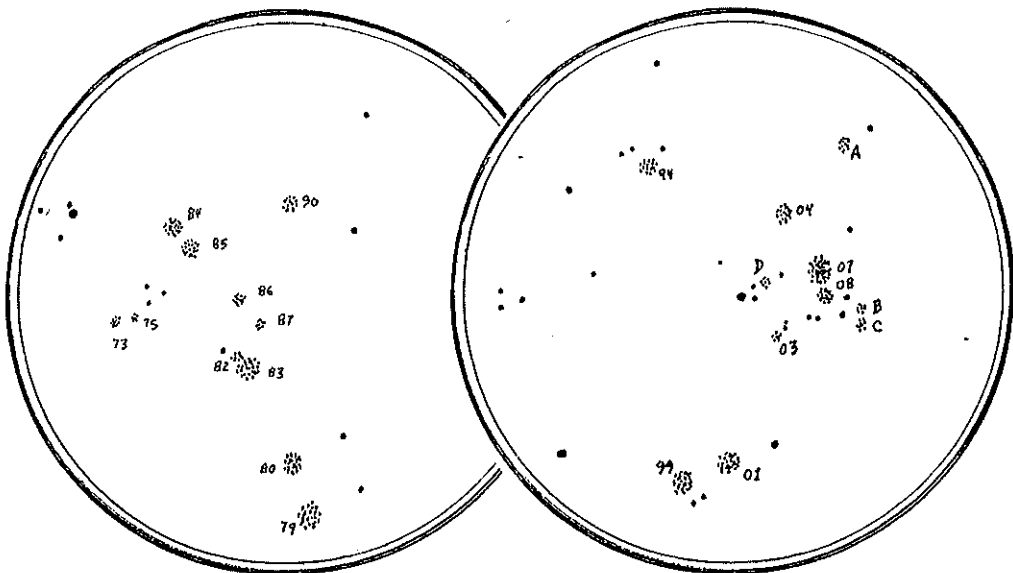


Saskatoon Skies

The Newsletter of the Saskatoon Centre
of the Royal Astronomical Society of Canada

Volume 28, Number 12
December 1997



The new Sleaford Observatory offers excellent, very dark skies for the discriminating observer! The sketches show two distant clusters of galaxies in the constellation Pisces, as seen through Eetook, the 12.5-inch Newtonian at the Observatory. These views were drawn by the editor early this December. The sketch on the left is a group of 11 galaxies - NGC 373 through NGC 390. The right sketch shows another superb galaxy cluster with 11 members visible - NGC 494 through NGC 508, including 4 "anonymous" galaxies marked A-D! The galaxies portrayed here range in magnitude from 12.5 to 16.0. North is down and east to the right.

Got Something to Tell Your Executive?

Your executive is here to serve you! Feel free to call them with you ideas, suggestions and guidance.

President	Erich Keser	374-4262	Activities Co-ordinator	Sandy Ferguson	931-3184
Vice-president/ Observers Chair	Darrell Chatfield	374-9278	Activities Co-ordinator	Brian Friesen	384-2963
Past President/ Newsletter Editor	Richard Huziak	665-3392	Membership Coordinator	Les Dickson	249-1091
Secretary	Al Hartridge	373-0034	Fundraising Coordinator	Terry Nelson	343-5928
Treasurer	Mike Williams	668-4365	Librarian	Ellen Dickson	249-1091
National Council Representative.	Gordon Sarty	665-6448			

The Event Horizon

Date	Event	Contact	Telephone
Dec. 12	Gastronomy at Delphi's - Rystrom Appreciation	Al Hartridge	373-0034
Dec. 12	Albebaran occulted by moon - about 10:35 p.m.	Erich Keser	374-4262
Dec. 9 - 13	Geminid Meteor Shower (Peak on 12th - 1/4 moon)	Rick Huziak	665-3392
Dec. 15	Saskatoon Centre General Meeting - Fr. Luke	Erich Keser	374-4262
Jan. 1-4	Quadrantid Meteors (Peak on 3rd - new moon)	Rick Huziak	665-3392
Jan. 16	Junior Astronomers' Group 7:30pm Sandy's Place	Sandy Ferguson	931-3184
Jan. 23	Youth Group 7:30 p.m. Sandy's Place	Sandy Ferguson	931-3184

Erratum: Oops - this editor isn't perfect either! On page 15 of the November issue, read "Fr. Luke" "for Fr. Like"

OUT-OF-TOWN OBSERVATIONS

by Brianna and Jayme Kantor
with Sandy Ferguson

From Martensville come a number of observations by Brianna Kantor (age 5-1/2) and her little sister Jayme (age 3).

In the evening of December 1st, Brianna Kantor was coming home at approximately 5:15 p.m. She had noticed the planet Venus in the evening twilight. Brianna said it looked like an airplane coming into the airport. She then noticed, just above her neighbour's trees, and to the right of Venus, a very faint crescent moon. This was the

first time she ever noticed the moon in the evening, while it was still almost daylight. (From Brianna's log-book).

After supper, Brianna's little sister, Jayme, was looking out of the dining room window. She noticed some bright "stars" and she went outside to check them out. From the deck she could see the planets Jupiter and Saturn. This was very special, because when they play games her sister is the "Princess of Saturn" and Jayme is the "Princess of Jupiter" (From Jayme's log book).

Both Brianna and Jayme watch the sky and make notes when they see something interesting. ☽

Saskatoon Centre

The Royal Astronomical Society of Canada
 P.O. Box 317, RPO University
 Saskatoon, SK, S7N 4J8
 URL: <http://maya.usask.ca/~rasc/rasc.html>
 E-mail: huziak@SEDSsystems.ca
 Telephone: (306) 665-3392



Newsletter Editor - Richard Huziak
 Collating and Stuffing - Sandy Ferguson

IN THIS ISSUE

	page
The Event Horizon	2
Out-of-Town Observations by Brianna and Jayme Kantor	2
Message from the President by Erich Keser	4
Meeting Notices - General Meeting and the Rystrom Gastronomy Dinner	5
A Different Kind of Fireball by Gord Sarty	6
Professor Kennedy Speaks at Queen's by Rick Huziak	7
Junior Astronomers and Youth Group by Sandy Ferguson	8
The Messier Club & The Hepburn StarFest by Dale Jeffrey	9
U of S Observatory Hours & Dues are Way Past Due	9
The 1997 Saskatoon Centre Financial Statement by Mike Williams, Treasurer	10
Minutes of the November Executive Meeting by Al Hartridge, Secretary	14
Minutes of the November General Meeting by Al Hartridge, Secretary	15

Saskatoon Skies is published monthly by the Saskatoon Centre of the RASC. Distribution is approximately 135 copies per issue. *Saskatoon Skies* welcomes unsolicited articles, sketches, photographs, cartoons, and other astronomy or space science articles. Articles can be sent by mail in any format to the Centre's mailbox. Submissions may also be sent by E-mail - preferred as **plain unformatted ASCII text files without line breaks**. Images sent by e-mail should be UUENCODED or as attached .GIFs. Send e-mail submissions to the editor at huziak@SEDSsystems.ca. Submitted materials can be returned upon request. A separate subscription to *Saskatoon Skies* is available for \$12.50 per year. Articles may be reprinted from *Saskatoon Skies* without expressed permission (except where otherwise stated), but source credit is requested. **DEADLINE** for submissions is the 1st of each month.

Message from the President!

by Erich Keser, President - keser@duke.usask.ca

We did it! At 4 a.m. Sunday, November 23rd, the lights (and HEATERS) of our Warm-up Shelter came on again. Thanks to the dedicated efforts of over a dozen Centre members and some very helpful friends over six weekends and additional days and evenings, our new Sleaford Site is up and running. With the help of an endless fall, some timely material aid from the University Physics department, Merlyn Melby and Darrell Chatfield, we've even managed to get it all done before winter.

Thus, the November 28th Observing Session at Sleaford had heat and power. This was a good thing because ten people participated; six of them were new observers. New member Franz Kuhlmann and his family, temporary members Kevin Ross, Rob Keir and Lianne Carpenter and two of Kathleen's university colleagues all took part. Thankfully, the long-suffering Scott Alexander (who'd driven in from Elrose and patiently waited for us!), and Ellen and Les Dickson were there to show people the skies, as I fought with my just re-greased (loose as a goose!) C-11 mount.

This, our first full-scale Observing Session at Sleaford, indicates of just how attractive our new, much darker site is, despite its distance. In fact, Eetook had already seen "first light at Sleaford" three days before, as Rick Huziak used it to show his visiting friend, Paul, the skies (and I wrestled with the calcified "California-grease" in my mount). And four days later, on December 1st, Darrell Chatfield (atoning for his absence from the Friday session), Bob Christie, Bill Hydomako, Rick and I (with--finally!--a working mount) had another long session; this one benefiting from a coffee maker provided by Les and Ellen.

Be sure to try our new site; the skies and the setting are worth the drive. **BUT PLEASE REMEMBER:** the remoteness could cause anxiety for your loved ones. In winter, please take safety precautions by taking along warm clothing and blankets and informing another person of what route you will be taking and when you expect to get back. It is further suggested that people car-pool and/or drive in a convoy whenever possible. **REMEMBER THAT THERE IS A LENGTHY DRIVE BACK AHEAD OF YOU: PLEASE LEAVE WHILE YOU ARE STILL AWAKE AND ALERT FOR IT!**

WE HAVE COMMITTEES: With membership growing and more Youth and Temporary Members than ever before, and big plans for our Sleaford Site and for the 1998 edition of the Saskatchewan Summer Star Party (the first registrations are already coming!), it is important that we develop our Centre infrastructure.

The SITE DEVELOPMENT COMMITTEE recently chose Bill Hydomako as its overall Chair, with Darrell Chatfield continuing to coordinate construction projects, and Rick Huziak and I to liaise with the University. This Committee is also drafting policies and procedures for use of the Sleaford site. It is also developing phased construction plans to help in formulating project-related fundraising goals. Ideas and help are welcome in all these areas.

The SSSP COMMITTEE is well underway, too. Dale Jeffrey has taken on the huge task of Promotion, both in print and through the Net. The Dicksons are working on registration, Rick on recruiting and coordinating volunteers, Darrell on security, Sandy on Junior programs, Kim Mysyk on the geology-related programs and David Cornish has volunteered to be the official photographer. Again, your input is welcome.:

In addition, the Saskatoon Centre is humming with activities ranging from Ellen Dickson's heroic library reorganization through Rick, Sandy Ferguson, Dale, Al's (and now Kirt Headley's) schedules of presentations, Sandy's burgeoning Youth programs, Gord Sarty's slick web site, to Darrell's bottle. Terry Nelson is starting to assemble fundraising proposals...and Walter Essar has assembled mirror-grinding-grit for something to do on cloudy nights!

And there's lots of observing to do from a site at which one can see the Milky Way from horizon to horizon. Please get involved.

PLEASE NOTE: Dale URGENTLY needs good photos or slides of SSSP'97 (or even '96!) for potential articles for *Sky&Telescope*, *Astronomy* and *SkyNews*. Please call him at (306) 223-4447 or e-mail him at dale.jeffrey@sk.sympatico.ca if you can help, or bring ANY possible images to the Dec. 12th Dinner or the Dec. 15th General Meeting. ☺

Notice of the General Meeting of the Saskatoon Centre of the Royal Astronomical Society of Canada

**Conference Room, the National Hydrology Research Institute
Innovation Place**

Monday, December 15, 1997 8:00 p.m.

The program will feature Fr. Lucian Kemble from Lumsden, SK. Fr. Kemble will give a presentation entitled "Observing Projects and Experiences - Effective Observations and Limitations".

The program will also feature presentations on beginning astronomy and using your 1998 Handbook. Members and friends are welcome. There is no admission.

The Nelson and Gloria Rystrom Gastronomy Dinner (with Special Guests Bob and Mrs. Geall)

FRIDAY, DECEMBER 12th, 6:00 p.m.

DINNER AT THE DELPHI

(on Eighth Street just East of Circle Drive)

Time to celebrate and give thanks! Come, bring your spouse, bring the kids for a wonderful evening of brief presentations (including some unique images!), humour, and good food. Gastronomy coordinator Al Hartridge has once again found an excellent venue for our dinner to thank Nelson and Gloria Rystrom for years of hosting our old site, and Bob for the huge boost his trenching gave the whole effort. The food at the Delphi is excellent, prices are manageable, and there is a good children's menu.

NOTE: THE MOON WILL BE OCCULTING ALDEBARAN AFTER 10 PM THAT NIGHT, SO YOU MAY WANT TO BRING WARM CLOTHES AND BINOCULARS TO USE IN A BRIEF OBSERVING SESSION AT A NEARBY SITE (tba).

A Different Kind of Fireball

by Gord Sarty

For me, one of the most enjoyable aspects of a life-long interest in astronomy is living to see mysteries solved. One such mystery was quasars which, when they were first discovered, were a complete mystery. Now astronomers think that they understand quasars reasonably well; although there is still a little disagreement about them. Another mystery is gamma ray bursts.

Gamma ray bursts were discovered in the early 1960's by military satellites designed to detect nuclear explosions. Knowledge of the bursts was kept secret until 1973 when Klebesadel, Strong and Olson finally published their observations. At the time, gamma ray bursts were a complete and total mystery. No one even knew how far away they were! Models were formulated that assumed they were near our solar system, in the halo of our galaxy or at the edge of the universe! In 1991, the Compton Gamma Ray Observatory was launched to provide astronomers with more data about these mysterious bursts. They occur anywhere in the sky, several times a day and can last anywhere from a few dozen microseconds to 30 seconds.

My favorite model for gamma ray bursters has been the coalescing binary neutron stars model. Neutron stars are the collapsed cores of stars that have gone supernova. They are so dense that they are essentially huge atomic nuclei. Rotating neutron stars can be detected by radio telescopes as pulsars. These pulsars are often found within supernova remnant nebula. For example, the Crab nebula (M1) contains a pulsar which also is visible optically in telescopes of the 100 inch or so variety.

The Theory of General Relativity predicts that two neutron stars orbiting each other will emit gravitational radiation. This emission takes kinetic energy away from system causing the two stars to spiral towards each other. Eventually they will collide. Such a collision is a major physical event and will produce a cosmic fireball that emits gamma rays identical to what is observed with the gamma ray bursters. It will also produce gravitational radiation of a magnitude that should be detectable by gravity wave detectors, such as LIGO, now under construction.

The September 23rd issue of *Science* reports that several presentations made at the "Fourth Huntsville Gamma-Ray Burst Symposium" confirm, for the first time, that gamma ray bursts are definitely at "cosmological distances". This conclusion considerably reduces the number of models possible. One of those models is my favorite colliding neutron star model. Another possible model involves the collapse of a star into a black hole. However, many Saskatoon members will know that I am skeptical about black holes because I don't think enough is known about the equation of state of matter under extreme pressure to know for sure that a star can be pressed into its event horizon.

So how did the Huntsville people come to the conclusion that the gamma ray bursts are far away? The answer comes from observations of the gamma ray burst's afterglow which is visible at x-ray, optical and radio wavelengths and lasts for many months. The x-ray afterglow of two bursts, one on February 28th and another on May 8th (1997) were observed with the BeppoSAX satellite which can observe both gamma rays and x-rays. Optical spectra of material in front of the x-ray source showed a "Lyman-alpha forest" of absorption lines, caused by intergalactic dust, indicating that the burst was billions of light years away. The February 28th burst's afterglow was observed optically by the Hubble Space Telescope, as lately as September 4th. The Hubble observations confirmed that the object had no detectable proper motion which also indicates that the burst is very far away.

The cosmic fireball theory (however produced) predicts that the afterglow should twinkle, at first, as the Earth revolves around the Sun because the intervening dust and gas in our galaxy will affect the light in the same way that the Earth's atmosphere causes stars to twinkle. Later, as the afterglow expands in size, the twinkling should cease for the same

reason that planets normally don't twinkle in the night sky. These twinkling effects were observed by radio astronomers who followed the radio afterglow of the February 28th burst as the Earth went around the Sun this year.

While the mystery of gamma ray bursts may have to wait for the completion of gravitational wave detectors now under construction for a final understanding, astronomers have come a long way. From, "we don't know what the heck they are" to "they're definitely cosmic fireballs billions of light years away probably caused by coalescing neutron stars". ☺

Professor Kennedy Speaks at Queen's

by Rick Huziak

Dr. Alice Vibert Douglas:

Her Contributions to Astronomy at Queen's



A talk given by
Ed Kennedy,
Queen's Alumnus
and Professor
Emeritus from the
University of
Saskatchewan

Saskatoon Centre's Honorary President, Prof. Emeritus J. E. (Ed) Kennedy spoke at Queen's University on October 18th in conjunction with that university's Alumni Weekend and Observatory Open House. His lecture and slide presentation was entitled *Dr. Alice Vibert Douglas: Her Contributions to Astronomy at Queen's*. Professor Kennedy, a Queen's alumnus himself, was hosted by Dr. Judith Irwin, a prominent member of the Queen's Astronomy department faculty.

An abstract of Professor Kennedy's talk can be found in *Saskatoon Skies*, Aug. - Sep. 1997, p. 12. ☺

WHEN: Saturday, Oct. 18 (from 9 to 9:20pm)

WHERE: Ellis Hall, Room 324

Held in conjunction with the Alumni Weekend Open House at the Queen's Observatory (7:30 to 10:30pm, Ellis Hall).

Free admission. For more info, call 545-2711.

JUNIOR ASTRONOMERS and YOUTH GROUP

by Sandy Ferguson

The above groups are now sliding into the winter season, with good attendance and interest by all members. We have 13 registered Juniors in the 7-10 age group and 15 in the Youth Group, ages 11-14. Each meeting we attract another one or two, so the membership in each group is growing.

At the October meetings, which were held on Oct. 7th for the Juniors and October 10th for the Seniors, the younger ones talked about the earth and our place in the scheme of things. We demonstrated day/night and the seasons with our ball of yellow wool and flashlight (the Sun) and our large navel orange, with felt-penned continents and cooking skewer, representing the earth and its axis. Saskatoon was clearly marked by a nail with wool "wig" representing our young astronomer, surveying the night sky! Outside, the night was clear and we viewed the Summer Triangle, Hercules, the Big Dipper and Jupiter, through the Astroscan.

The Youth Group wasn't as lucky on its meeting night. The sky was pretty much socked in. However, for a brief period around 8:00 p.m. we observed a very strange aurora overhead through a break in the cloud. It cleared later that night and became quite a display. Inside we had a slide presentation on objects we could view naked eye and a bit of discussion on Jupiter. Monthly star charts, compliments of Bob Christie (to whom we give our hearty thanks), were handed out to both groups, as well as other relevant material, and everyone was encouraged to keep their handouts and observations in a

folder, so they can easily refer to the information, if needed.

The meetings for November were held on November 7th for the Juniors and November 21, for the Seniors. Again the Juniors had a good night for observing. We took my 10" Dobsonian outside to view Jupiter and Saturn, Alcor/Mizar and Pegasus/Andromeda. As a few new members were in attendance, we reviewed last month's topics, with the same (aging and slightly shriveled) orange, and talked about autumn constellations, Jupiter and Saturn.

The Youth Group, again, met on a poor night, but we had a good time indoors discussing the concepts of magnitude, right ascension and declination and universal time. Some members were keen to understand *The Observer's Handbook* and this seemed one of the best places to start. We had planned on going over Messier and his catalogue, but ran out of time! Who would have thought RA and dec could be so absorbing!!

The meetings for this month come together in the form of a tour of the U of S Observatory on Friday, December 5th. We are keeping our fingers crossed for good skies that night as this is the first time many of our young members will be visiting the Observatory and looking through the telescope there. Most of us will remember our first look at Saturn through a good telescope on a fine night. Is there anything more BEAUTIFUL?! ☺

The Messier Club

Rick Huziak	110
Gord Sarty	110
Scott Alexander	110
Dale Jeffrey	109
Darrell Chatfield	106
Erich Keser	30
Bob Christie	some
Brian Friesen	some
Les and Ellen Dickson	some
Terry Nelson	4

Join the Messier Club!

Observe all 110 Messier objects and earn your

CERTIFICATE!

Each month I'll be posting updates. If your name is not on this list or you've observed more this month, let me know! ☺

Hepburn StarFest

by Dale Jeffrey

You may never have even heard of Hepburn, Saskatchewan, but now, thanks to some excellent volunteer effort, Hepburn, Saskatchewan has heard of the RASC. On November 13th, Sandy Ferguson and I put on a seminar at Hepburn School for approximately 150 students from kindergarten through grade eight. I spoke about the history of astronomy, and Sandy gave a slide presentation on the glories of the night sky. After a question and answer session, the school had an opportunity to view the sun using Rick Huziak's solar telescope.

Rick then joined up with Sandy and I for a public star night in Hepburn, where the students, their teachers, parents and grandparents came out

to peer through our telescopes. Despite a near full moon, the skies were pristine and we enjoyed excellent views of Jupiter, Saturn, the moon, M45, some binary stars and even that famous stellar celebrity, Huziak's Variable Star.

Observers were given handouts, including membership applications for the RASC and Young Astronomers program, as well as a summary of what they had seen through the eyepiece. In appreciation, Hepburn School presented the RASC with a donation towards our observatory fund. ☺

Dues are Way Past Due

Dues for membership in the Saskatoon Centre of the RASC have not changed. Membership runs from Oct. 1 to Sept. 30. Please pay at the General meeting or send payment to the Centre mailbox as soon as possible so you don't lose out on your publications.

Regular - \$40.00

Youth - \$22.50

Life - \$720.00

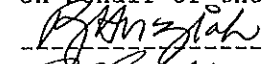
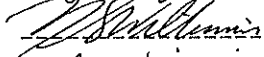

University of Saskatchewan Observatory Hours

During the months of December through February, the U of S Observatory will be open to the public on Saturday evenings from 7:30 p.m. to 9:30 p.m. On clear evenings, visitors may view the moons of Jupiter, the rings of Saturn and the Hercules globular star cluster through the telescope. Admission is free of charge. Group tours of the observatory can be booked for Friday evenings. For further information, phone the recorded Astronomy Information Line at 966-6429.

The Royal Astronomical Society of Canada
Saskatoon Centre Incorporated
Balance Sheets
September 30, 1997 and 1996

	<u>1997</u>	<u>1996</u>
Assets :		
Current Assets;		
Cash (note 1)	\$ 1,792	294
Savings (Telescope Fund)(note 2)	2,997	2,746
Accounts Receivable	25	-
Deposit (Cypress Hills)	-	60
Prepaid Expenses (Library)	<u>50</u>	<u>-</u>
Total Current Assets	4,864	3,100
Fixed Assets @ cost;		
Rystrom Observatory	5,859	5,859
Warmup Shelter	4,773	4,773
Underground Wiring	3,015	3,015
Storage Shed	<u>653</u>	<u>653</u>
	14,300	14,300
less accumulated amortization	<u>10,918</u>	<u>10,285</u>
	3,382	4,015
Library	1	1
Equipment	<u>7,114</u>	<u>6,861</u>
Total Fixed Assets & Equipment	<u>10,497</u>	<u>10,877</u>
	\$ 15,361	13,977
	=====	=====
Liabilities and Equity :		
Current Liabilities;		
Prepaid Membership	\$ 662	95
Member Calendar Deposits	<u>-</u>	<u>55</u>
Total Current Liabilities	662	150
Equity;		
(per accompanying statement)	<u>14,699</u>	<u>13,827</u>
	\$ 15,361	13,977
	=====	=====

On behalf of the Executive :

----- President
----- Treasurer
----- Auditor

See accompanying notes to financial statements.

The Royal Astronomical Society of Canada
 Saskatoon Centre Incorporated
 Income Statement
Years Ended, September 30, 1997 and 1996

	1997	1996
Income :		
Membership Fees	\$ 1,751	1,737
Life Member Grants	58	58
Donations	871	285
Cypress Hills Star Party	3,954	-
Member Surcharge (newsletter sub)	264	231
Member Special Surcharge (Key)	25	30
Observers Handbook	-	-
Observing Guide	-	27
National Calendars	258	200
Advertising	25	-
Astrophotography Handbooks	330	-
Telescope Rentals	145	-
Interest	4	9
Miscellaneous -	3	3
	\$ 7,688	2,580
Expenses :		
Educational Activities (Cypress)	\$ 3,218	42
Fees to National Office	1,072	1,064
Astrophotography books	110	-
Library	-	-
Office Administration	311	73
National Calendars	214	150
Newsletter & Postage	868	749
Observing Guide	-	34
Observatory Utilities	50	-
Donation (Belfour Memorial)	-	25
Insurance	288	274
Subscriptions	52	47
	<u>6,183</u>	<u>2,458</u>
Surplus before amortization	1,505	122
Amortization - Buildings 20 years	(633)	(633)
Net Income (loss) for year	\$ 872	(511)
Equity beginning of year	13,827	14,338
Equity end of year	\$ 13,699	13,827
	=====	=====

See accompanying notes to financial statements.

The Royal Astronomical Society of Canada
Saskatoon Centre Incorporated
Statements of Changes in Financial Position
Years Ended September 30, 1997 and 1996

	<u>1997</u>	<u>1996</u>
Operating Activities:		
Net earnings	\$ 872	(511)
Item not requiring cash outlay:		
Amortization	<u>633</u>	<u>633</u>
	1,505	122
Cash provided by (applied to)		
operating working capital;		
Accounts Receivable	(25)	35
Deposit Cypress Hills	60	(60)
Prepaid Membership	567	(135)
Prepaid Expenses	(50)	34
Calendar Deposits	<u>(55)</u>	<u>55</u>
	<u>497</u>	<u>(71)</u>
Cash provided by (applied to) operations	<u>2,002</u>	<u>51</u>
Investing Activities:		
Additions to equipment	(253)	(1,510)
Cash provided by (applied to)		
investing activities	(253)	(1,510)
Increase (decrease) in cash position	1,749	(1,459)
Cash position beginning of year	<u>3,040</u>	<u>4,499</u>
Cash position at end of year	\$ <u>4,789</u>	<u>3,040</u>
	=====	=====
Cash position at end of year is comprised of:		
Cash	1,792	294
Savings	<u>2,997</u>	<u>2,746</u>
Net cash at end of year	\$ <u>4,789</u>	<u>3,040</u>
	=====	=====

See accompanying notes to financial statements.

The Royal Astronomical Society of Canada
 Saskatoon Centre Incorporated
 Notes to Financial Statements
September 30, 1997

Significant Accounting Policies

- (a) Observatory and buildings are recorded at cost and are amortized using the straight-line method over 20 years.
- (b) Equipment is recorded at cost and is not amortized.
- (c) Library items are carried in the accounts at a nominal value of \$1, new additions are expensed during the current period.

1. Cash Summary:		
Cypress Hills		\$ 736
Prepaid Membership		346
Calendars & Insurance		502
Current Operating		<u>208</u>
		\$ 1,792
		=====
2. Savings (Telescope Fund)		
Opening balance		\$ 2,746
additions:		
deposits	445	
interest	<u>4</u>	<u>449</u>
		3,195
withdrawals:		
telescope additions	<u>198</u>	<u>198</u>
Closing balance		\$ 2,997
		=====
Summary:	Telescope Fund	\$ 2,552
	Sleaford Site	<u>445</u>
		\$ 2,997
		=====

Minutes of the November Executive Meeting

Monday, November 17, 1997

at the Conference Room, National Hydrology Research Institute, Saskatoon

1. Meeting called to order at 7:00 p.m.
2. Positions appointed by Executive and accepted: Honorary President - Ed Kennedy; Centre Representative - Gord Sarty.
3. Membership:
 - youth membership: Sandy Ferguson stated that we have 28 youth members - 15 have joined the RASC.
 - family membership: this is being discussed at National but has not been settled. The outcome affects several members in the club and others wishing to join.
4. Sleaford Observatory Site Report:
 - partnership agreement with the University is still pending.
 - a log-in procedure by all users is encouraged. This will be a continuation of the Rystrom log. University users also should log in. Signing in by all users is important due to insurance considerations.
 - relations with the Colonsay community - there is a move afoot to declare the school a heritage building.
 - Wildlife Federation - continued use of the school to be clarified.
 - construction: the warm-up shelter move is 90% completed.
 - financial situation: We are over budget and have done more than planned. The moving cost was \$600.00 as opposed to \$300.00 estimated.
 - an appreciation dinner for the Rystroms and for Bob, the electrician who did all the trenching at the site, will be held on December 12th. Al Hartridge to find a good restaurant.
 - meeting next for Sleaford planning: Monday, Nov. 24th at 7:30 p.m. at the Hydrology building.
5. Long-term planning, budgeting and fundraising - We must start a variety of fundraising projects including larger scale ideas. There does appear to be some potential with Cameco, the Saskatoon Foundation, and SED and this in turn would help with matching grants.
6. Saskatchewan Summer Star Party 1998 - A meeting was held on Nov. 4th. A tentative schedule was set up; some speakers were confirmed; the evening meal will be catered; the budget was discussed; some funds are available from last year; the dates have been extended to July 23 - 26, 1998. Dale Jeffrey suggests that a schedule of dates for future years would help in pre-booking the facilities.
7. Lockable cabinet for the Hydrology meeting room - Darrell has got a unit which he will do some work on.
8. Proposal by E. Keser that we give a token of appreciation to major outside speakers.
9. Presentations for Dec. and future meetings: Calgary has offered to give a presentation sometime soon.
10. The 1998 General Assembly at Victoria - Ed Kennedy suggests that the Saskatoon Centre participate in some way possibly by sending a display.
11. Meeting adjourned at 8:00 p.m.

Minutes of the November General Meeting

Monday, November 17, 1997

at the Conference Room, National Hydrology Research Institute, Saskatoon

1. Meeting called to order at 8:00 p.m.
2. Executive appointed positions announced to the membership- see the executive minutes.
3. Membership: for joining one receives the Handbook, SkyNews, the Journal and Saskatoon Skies. Those members who have not yet renewed, please renew now. Youth and family memberships discussed - see executive minutes.
4. Sleaford Site financial report: See details in the executive minutes.
5. Report on star nights: Rick Huziak and Sandy Ferguson.
 - Sandy reported on the Nov. 13th Hepburn starnight which was very successful with over 100 attending.
 - Space Club: on Nov. 1st Sandy gave a presentation on 'Telescopes'. Other members (G. Sarty, R. Huziak, A. Hartridge, D. Kulak) were present with their telescopes for demonstration.
6. Observing Session Report: the next observers group will be on Nov. 28th or 29th at Sleaford, depending on skies.
7. Junior Astronomers and Youth Group Report - Sandy Ferguson - please see details in the executive minutes.
8. Sleaford Site Development presentation: Darrell Chatfield, coordinator- the warm-up shelter move is 90% done a final work session is needed. Sleaford partnership agreement still pending. A variety of ex-Rystrom stuff is now in storage at Sleaford. A log-in procedure for all users will be a continuation of the Rystrom log with the addition of the University users.
9. Lockable cabinet and library - Darrell has a unit that will do. He will do some restoration on it.
10. Scott Alexander was awarded his Messier Certificate by Richard Huziak - a bloody marvelous achievement!
11. Programs:
 - Dr. Mel Stauffer spoke about various types of meteorites and their recovery. We also had a chance to view, handle and discuss the University's meteorite collection.
 - Al Hartridge showed slides on astrophotography that he will present to a group on Nov. 29th.
 - Darrell Chatfield - slides and photos on the construction and activities at the new dark site.
 - Rick Huziak - slides of Cypress Hills and a request for more volunteers.
12. Library Report- Ellen Dickson has made a list of books in the library in the basement of the University Observatory and has sorted things out with Yannis. There are a lot of odds and ends there including some good coffee mugs that we could use at our monthly meetings.
13. Meeting adjourned at 10:30 p.m.



ROSET by REID

Sky News May/June 1997 says:

**"Today's Binoculars are better than ever.
Certainly much better than almost anything produced
one or two generations ago."**

**Most optical experts would agree that ZEISS, LEITZ
SWAROVSKI and BAUSCH&LOMB make the finest binoculars
available. Come to the only store in Saskatchewan that
stocks them all and compare for yourself!**



LEICA

BUSHNELL

**BAUSCH
& LOMB.**



#108 BAYSIDE, 255 - 2nd AVE. N.
SASKATOON, SK S7K 2B6
e-mail: b.rose1@sk.sympatico.ca
<http://www.saskstar.sk.ca/rose1>

TEL: (306) 665-8665
FAX: (306) 244-0017

Fine Jewellery