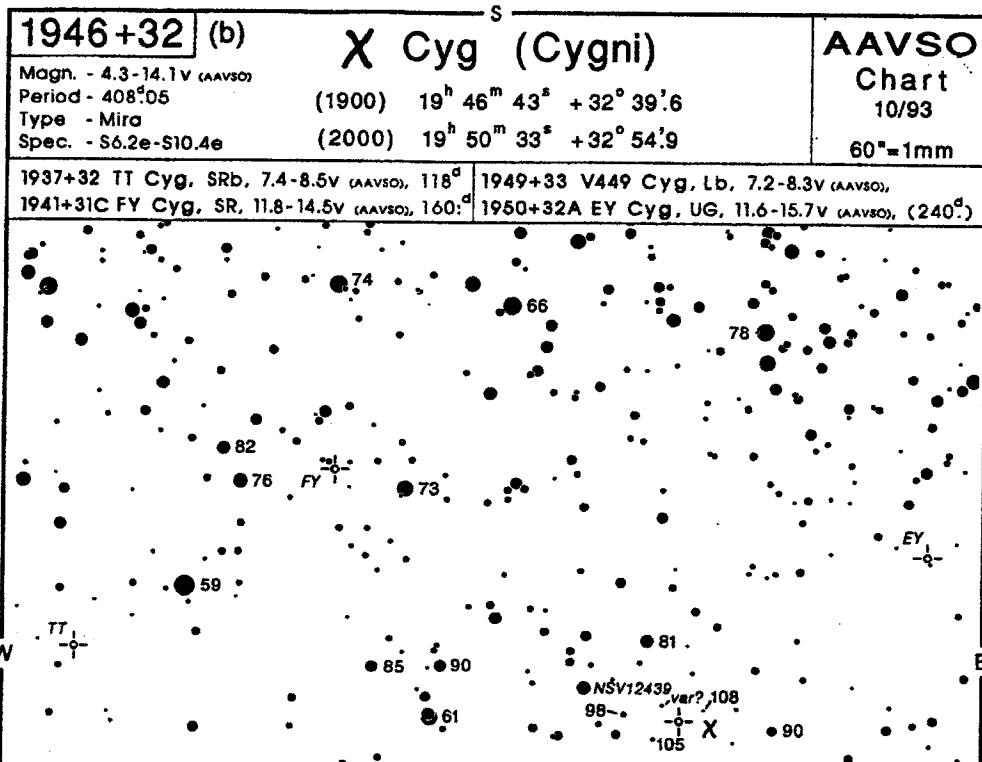


Saskatoon Skies

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

Volume 30, Number 04
April 1999



What do you do during those long, moon-filled nights between the *cloudy* New Moon periods? Observe variable stars, of course! You can make a contribution to science and get that observing fix, too! The American Association of Variable Star Observers (AAVSO) now has more than 1600 charts that can be downloaded from their site at WWW.AAVSO.ORG. The chart here is a portion of one of these, copyright AAVSO.

RASC Calendar Happenings

Date (1999)	Event	Contact	Telephone
Apr 16 or 17	Observers Group at Sleaford Obs.	Darrell Chatfield	374-9278
Apr 16	Junior Astronomers Meeting - 7:30 pm	Sandy Ferguson	931-3184
Apr 19	RASC General Meeting - 7:30 pm	Erich Keser	374-4262
April 22	Lyrid Meteor Shower Peak	Rick Huziak	665-3392
Apr 23	Youth Group Meeting - 7:30 pm	Sandy Ferguson	931-3184
May 7	Junior Astronomers Meeting - 7:30 pm	Sandy Ferguson	931-3184
May 8	Motion Picture & Sound Training at Sleaford Observatory - 9:00 pm	Rick Huziak	665-3392
May 14	Youth Group Meeting - 7:30 pm	Sandy Ferguson	931-3184
May 17	RASC General Meeting - 7:30 pm	Erich Keser	374-4262
May 22	International Astronomy Day	Sandy Ferguson	931-3184
Jun 21	RASC General Meeting - 7:30 pm	Erich Keser	374-4262
Aug 13 -15	Sask. Summer Star Party at Cypress	Erich Keser	374-4262

Sky Buys and Mirror Sells The Saskatoon Centre's Swap and Sale Page!

Wanted: Construction materials for the Sleaford Observatory - We'll take 2x4's, 4x4's, 2x6's, 2x8's, nails, screws, rebar, concrete, landscaping materials, plywood, siding and any other useful construction stuff. *Spring is here - it's time to build!* We will pick up - call Rick Huziak at 665-3392.

For Sale: 1-1/4" filters - Lumicon OIII and Light Pollution (Deep Sky). Call Darrell Chatfield for pricing and trials. tel. 374-9278.

For Sale: Tasco Model 11TR 4-1/2" aperture, 900 mm f.l. Newtonian telescope. Comes with 20 mm and 4 mm eyepieces, 2X barlow, moon filter, equatorial mount and tripod. Call Gerald at 244-9918.

Wanted: Old bed sheets and pillow cases (white, coloured, print, flat or fitted) to be used for Kid's Kostumes at the Cypress Hills Star Party. All contributions gratefully appreciated, no matter what condition the sheets are in! Call Sandy Ferguson at 931-3184 or bring to the next General Meeting.

Saskatoon Centre

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Saskatoon Skies is published monthly by the Saskatoon Centre of the RASC. Distribution is approximately 140 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, attached .GIFs, .JPGs or similar. Send e-mail submissions to the editor at <huziak@SEDSystems.ca>. Submitted materials can be returned upon request. Please send articles in "generic" formats, with standard grammatical formatting appreciated - 5 spaces at the beginning of paragraphs, two spaces after periods, one space after commas. 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 26th of each month.** ***Saskatoon Skies*** accepts commercial advertising. Please call the editor for rates. Members can advertise non-commercial items free of charge.

President's Report

by Erich Keser, President

It is only when someone like Father Lucian Kemble dies that we realize what a huge contribution he made to our lives. The number and range of the friends who sent their condolences, wished him farewell, and shared tales of their delightful experiences with *Father Luc* by electronic means is almost beyond belief. How did a modest priest, who spent the last decades of life serving in remote religious ever find so much: *quality time* for so many friends?

How was he able to do this alongside his priestly duties, and the over 5000 meticulously detailed, beautifully sketched observations he recorded? And when did he find time to also take the beautiful photographs of flowers, of sunsets, of other things all things natural that were on display at the Regina Memorial Mass? Somehow, Father Luc found time for all of us, for all those thousands of starry nights, and *to see* so much beauty in his 76 years, 3 1/2 months of life.

So, this summer, at the Saskatchewan Summer Star Party, we will be taking time to remember **Father Luc** who so loved this event and to *celebrate* the wonderful example of how to live and how to observe that he gave us all. (There is a web site full of images and memories of Father Lucian at <http://www.jps.net/davestea/lucian/lucianhome.htm>).

And so it is also time, as the nights start to warm, for each and every one of us to go out and look up and drink in the starlight and the wonder of the night skies, for dear Father Lucian *Bert* Kemble, beloved *Lamplighter* for so many, whom we can remember in no better way.

Two of Lucian's favourite quotes:

"We limp along at a quixotic pace, Aching to fill our chill void with celestial fire." - Richard Luft

"If you don't know whether to laugh or cry - LAUGH" - L. Malach

Sky News Ownership Changes Hands

from J. Randy Attwood, RASC National President, <attwood@istar.ca>

Hello fellow RASCers. I received news from Terry Dickinson that he has *purchased SkyNews/Ciel Info* from the National Museum of Science and Technology. The museum did not want to publish the magazine any more.

SkyNews will continue but *Ciel Info* will not. There will not be another issue of *Ciel Info* published. For the next issue of the *Journal* (April) we will send all members *SkyNews*.

We had been informed of an increase in the per copy price (\$1.10 to \$1.18) by the publisher before the sale. This will take effect with the Sept./Oct. 1999 issue.

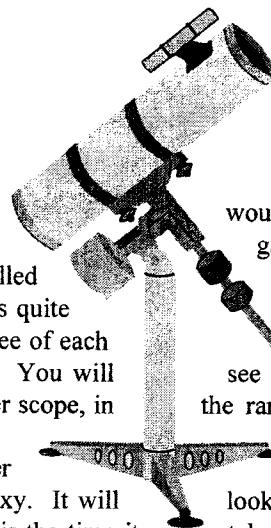
I hope you will all wish Terry success on his new venture.

the deep sky observer

by Scott Alexander

Hi fellow astronomers. This month I thought that we constellations of Gemini and Lynx to look for some very nice globular cluster. First, on to the galaxies. The first one is called known as the *Bear Paw* galaxy. This galaxy is in Lynx and is quite galaxy, NGC 2537A. Both of these galaxies are with 1/2 degree of each magnitudes of 11.7 and 15.3 respectively, are quite different. You will 8- to 10-inch scope but NGC 2537A will require a much bigger scope, in inches or bigger.

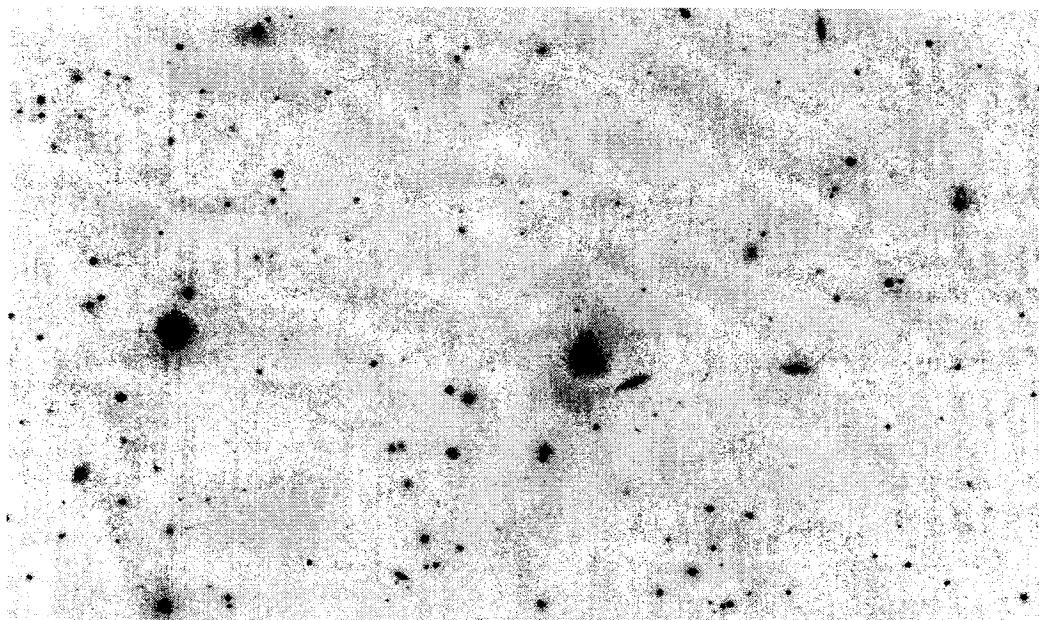
This galaxy will resemble a planetary nebula in smaller larger scopes it is even stranger. Look at the disk of the galaxy. It will sharp edge to it. At a distance of 22 million light years (that is the time it



would go into the galaxies and a NGC 2537, also close to another other, but their see NGC 2537 in an the range of 12- to 14-

scopes but in look like it has a very takes light traveling at

Figure 1. The central portion of galaxy cluster Abell 779 in a 15' x 25' field from the Digital Sky Survey. NGC 2832 is the largest galaxy near center. North is up.



186,000 miles per second to come from there to here) it is one of the nearer galaxies to us. It is a rare class of object called a blue compact dwarf galaxy. These galaxies have low luminosities and a lot of O and B type (extremely hot and bright) stars in them.

All right, on to the next object. This one is called NGC 2832. This galaxy is very nice. Also luckily it is right in the middle of a very nice cluster of galaxies called Abell 779. This is the brightest galaxy in Abell 779 and forms a double system with NGC 2831 at the SW edge of a halo 22' between centers. Also nearby is NGC 2830, 1.3' SW. A double star h2493 (mags. 10.1/11.7) is 2.5' SSE and a wide mag 11/12.5 pair is 3.0' ESE.

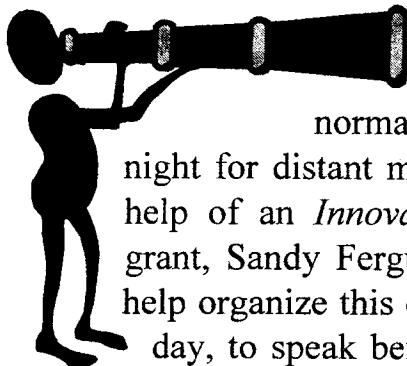
All right on to the next object which is called NGC 2419 or *the Intergalactic Wanderer*. This is a globular cluster in Lynx and is on chart # 101 of Uranometria 2000, Vol. 1. This is one of the most distant non-galactic objects visible. It is 26,000 light years away, which is nearly *twice* as far as the Magellanic Clouds, the satellite galaxies of our own Milky Way! If this cluster were the same distance as M 13, it would shine at a magnitude of 6 instead of 10.3! Also, there are two stars right next to the cluster. Don't mistake them for the cluster. The cluster's stars are not easily resolved in any thing less than a 20-inch scope, but the cluster is visible in an 8-inch scope from a dark sky sight. It will look like a faint haze 2 minutes of arc across. Give this one a try

That is it for now. See you all next month. **CLEAR SKIES AND GOOD LUCK.**

Object	NGC 2537	NGC 2832	ABELL 779	NGC 2419
Right Ascension (2000)	08h 13m 2s	09h 19m 46.8s	09h 16m 48s to 09h 19m 51s	7 h 38.1m
Declination (2000)	+46° 0m 00s	+33d 44m 59s	+33d 59.0m to +33d 46.3m	+38d 53m
Constellation	Lynx	Lynx	Lynx	Lynx
Object Type	galaxy	galaxy	galaxy cluster	globular
Object	Sd	E2	I-II: [BM]	
Classification				
Photo Magnitude	11.7			
Visual Magnitude	11.7	11.9	13.8	10.3
Surface Brightness (mag. per arc-sec ²)		13.7		
Object Size (arc-min.)	1.7 x 1.5	3.0 x 2.1	90	2
Catalog Notes	The Bear Paw Galaxy.			The Intergalactic Wanderer
Also Cataloged As	UGC 4274, MCG+08-15-050, Arp 6, Mrk 86, H IV-55, h 491, GC 1629, CGCG 236.035	U04942ne or M+06- 21-015 or Z181-024 or Arp 315		

A Yorkton Star Party

by Jim Huziak (past member) <j.huziak@sk.sympatico.ca>



This past February 25th saw the Saskatoon Centre extended a bit further away than it normally does. On that date, the RASC held a star night for distant member Helen Dean's Yorkton school. With the help of an *Innovator's in the Schools* (Emily Cherneski) travel grant, Sandy Ferguson was able to travel cost-free to Yorkton to help organize this event, help with the telescopes and then the next day, to speak before Helen's class. Being a past member of the Centre, I jumped at the chance to participate when Sandy called me a few weeks before.

The star night was quite interesting. It was pretty much a planetary night as the (60-odd) people spent the night reforming in a line at my telescope. Despite an active astronomy layoff of a few years, there were no questions I couldn't bluff my way through. The highlight (for me) was this pre-kindergarten kid who boldly marched up and demanded to see Jupiter before it set, and was the only one who commented on the moon's overwhelming brightness (without being unprompted!). Scary.

And, I'm sorry to confess, I let them look at the moon; it was kind of hard to miss, after all. I did manage to put it off until the end, however, so as to blind as few people as possible.

A few of the die-hards (teens, believe it or not) got a short tour of the Orion Nebula and a few doubles and clusters once most of the crowd had hit the garage for hot chocolate or to watch the curling playdowns on TV.

This was enough fun that I'll have to do this again with some of the people around here that I know that are closet astronomers! Maybe I'll even form a *branch* Saskatoon Centre here!

SASKATCHEWAN SUMMER STAR PARTY 1999

TO HONOUR FATHER LUCIAN KEMBLE

by Erich Keser, President

The August 13th-15th Saskatchewan Summer Star Party 1999 at Cypress Hills Interprovincial Park will do its best to remember and celebrate the great and good man who did much to give the event its unique character. It will feature a special **FATHER LUCIAN KEMBLE - AN APPRECIATION** session at 3:00 p.m. Saturday, August 14th. This (and other presentations) will take place in the Four Seasons Resort's spacious, air-conditioned convention hall.

Father Lucian Kemble, the keynote speaker for SSSP'97 and Master of Ceremonies for SSSP'98 was an enthusiastic champion of the Saskatchewan Summer Star Party. At SSSP'98 he was presented with the *Millennium Star Atlas*, a surprise gift by his many friends in Canada and the US, which included the editors of the *Atlas*.

Father Kemble was looking forward to playing a major role in SSSP'99 and had already registered and booked a room before he died on February 21st. To further remember Father Luc, the Saskatchewan Summer Star Party's keynote presentation will henceforth be titled ***The Lucian Kemble Memorial Lecture***. The first such presentation will be given by Father Lucian's long-time friend and observing companion, professional astronomer and astronomy educator (at University of Regina), Dr. Peter Bergbusch:

HOW BIG AND OLD IS THE UNIVERSE?

A slide presentation from Dr. Bergbusch's personal collection will be used to focus attention on how astronomers estimate distances across the universe and the ages of the stars and galaxies within it. He will briefly discuss the fundamental observational evidence which leads astronomers to believe the universe is expanding and show how this evidence allows us to predict its age. From the perspective of his own studies in observational stellar astrophysics, he will illustrate how we derive the ages of the oldest stars. We arrive at an interesting paradox: the universe appears to contain objects that are older than the universe itself.

Dr. Bergbusch, whose work on globular clusters recently won him time at world renowned observing facilities in Chile, will do his best to give "a wide-ranging talk that will appeal to the novice, but will also provide some meat for the more experienced amateurs and professionals in attendance."

With the help of all participants, the Saskatchewan Summer Star Party will strive to retain Fr. Lucian's spirit by being an event that offer presentations, skies and observing arrangements fine enough for the most discerning expert and at the same provide events, guidance and enthusiastic help to make young astronomers, the spouses, partners, friends and families of astronomers and beginners of every kind feel really welcome.

PLEASE NOTE: SOME RESORT ACCOMMODATION STILL AVAILABLE:

Our Centre did its best for those who would rather not camp by reserving 34 assorted hotel rooms, cabins and condos. They are reasonable priced, clean and comfortable and in such demand that they are the only non-camping accommodation still available in the park for that weekend. A few units remain, and we have invested a deposit to keep these available for you. They are going fast, and the sooner you book, the sooner we will be "off the hook". The remaining units are mostly hotel rooms (\$65/night). To book, call the **Cypress Four Seasons Resort** at (306) 662-4477, identify yourself as part of the Star Party, and charge the first night's rental against a major credit card, or send your money order or cheque to the CYPRESS FOUR SEASONS RESORT, P. O. BOX 1480, Maple Creek, SK, S0N 1N0. Cancellation provisions are very reasonable. Should you become unable to go, all but a \$10 administration fee will be refunded as long as you give the resort two week's notice. For more information on accommodation, please contact SSSP Registrars Ellen and Les Dickson at (306) 249-1091. SO PLEASE BOOK ASAP. To help with the organizing, please contact Rick Huziak (e-mail huziak@SEDSystems.ca, phone 665-3392).

AUTOBIOGRAPHY OF FEATURED SPEAKER, PETER BERGBUSCH:

I'm a native Flatlander, born in Saskatoon back in 1950. We moved to Victoria, BC in 1955, where I attended school and grew up. My interest in astronomy began at an early age: I first looked through a telescope at the age of six to see the planet Mars. I bought my own telescope (a 3.5 inch refractor, equatorially mounted) at age 13. The first photographic project I undertook was to record the (partial, in Victoria) solar eclipse in 1963. Fortunately, it was a cloudy day, so I didn't suffer any eye damage for my ignorance, but the clouds worked like a wonderful neutral density filter and I got some pictures with a little box camera.

I started university at UVIC, but moved to Regina before finishing my undergraduate degree. (I needed the big sky!) I have a B.Sc. in Physics (U of S, Regina Campus), an M.Sc. in Physics (U of R, I cheated and did some binary star astronomy), and a Ph.D. in Astronomy from UVIC (Luminosity Functions for Old Stellar Systems).

I have run observing projects at the Dominion Astrophysical Observatory (Victoria, B.C.), the Kitt Peak National Observatory (Tucson, Arizona), the European Southern Observatory (Chile), and the Cerro Tololo Interamerican Observatory (Chile).

My research focuses on the oldest stellar systems we know of in the universe - the globular clusters. the Milky Way galaxy (ours) has about 200 such clusters associated with it. Since each cluster contains up to a few million stars, all of which share a common history and are made from the same chemical mixture, they provide excellent laboratories in which to study the effects of stellar evolution. Moreover, my work sets constraints on the epoch of globular cluster formation and provides a lower limit to the age of the universe, both of which are important in cosmological models.

The Saskatoon and Regina Centres of the Royal Astronomical Society welcome everyone to our third annual SASKATCHEWAN SUMMER STAR PARTY 1999. Please come and find out why this star party has grown so fast!

OBSERVER'S REPORT FOR MARCH 19-20, 1999**by Darrell Chatfield**

We finally made it out to the dark site for some observing on March 19. It proved to be a dark night, as well as being not very cold. A few eager members, two, to be exact, came out as well. They were Brian Barnhill, and Larry Grenkow. We met at the Fas Gas Station, then went on to the site. After arriving around 10 p.m., we decided to set up on the clubhouse deck to observe. Larry suggested that we take Eetook out for a spin, so the three of us struggled with it. (Rick, I don't know how you do it yourself! You get the *HERNIA AWARD*, along with the Messier, NGC, etc.)

The deck held Eetook, my 10" Meade telescope and table, and all three of us! This kept us out of the bit of wind that wanted to keep us cold. Anyways, I was able to share some of the sky with my 2 friends. Orion always has something to offer, especially M 42. We toured around Leo, seeing some of the brighter galaxies. There are also a few planetaries worth noting.

Both Brian and Larry have binoculars, which they used to their abilities. Brian also brought out his home-made binocular holder, made for use while sitting in a lawn chair! It works very well, and is lightweight.

One advantage of coming out to the Observer's Group night is that a person can see and try out different equipment for viewing the sky. Another is that we can all learn from each other some aspect of the sky, or astronomy in general that we didn't know before.

With Larry leaving around midnight, and Brian and myself leaving around 1:30 a.m., we all concluded it was worth the effort.

I went out myself on that Saturday night, and was afforded another clear and calm night. I was able to add more objects to my NGC and Herschel lists.

I hope to see more of you out at the next OG night.

This NEWSLETTER, with the exception of the cover page, is copied on a Risograph Model TR1510 copier at 3 pages per second!

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You are invited to the
General Meeting of the Saskatoon Centre
Monday, April 19, 1999 at 7:30 p.m.
Conference Room, National Hydrology Research Institute building
Innovation Boulevard

Presenting:

The Great 1999 Mars Conjunction
Murray Paulson, Edmonton Centre, RASC
Great slides, great talk!

May Meeting - Bill Brooks, Western Space Education Network

This event is open to the general public. There is no admission charge.

**MESSIER CLUB**

Certified at 110 Objects: Rick Huziak, Gord Sarty,
Scott Alexander, Sandy Ferguson, Dale Jeffrey,
Darrell Chatfield

Bob Christie (there!!....done & applied!)	110
Wade Selvig	64
Erich Keser	51
Tyler Cottenie	33
Stan Noble	28
Terry Nelson	21
Les & Ellen Dickson	18
Brian Friesen	15
Brent Gratias	11

FINEST NGC CLUB

Certified at 110 Objects: Richard Huziak

Dale Jeffrey	83
Darrell Chatsfield	72
Scott Alexander	63
Gordon Sarty	50
Sandy Ferguson	23

The Messier, FNGC and H400 lists are meant to promote observing! Please send in your observations of these objects, and I'll publish them in the newsletter!

HERSCHEL 400 CLUB

Rick Huziak	315
Darrell Chatfield	138
Gord Sarty	77
Scott Alexander	59
Sandy Ferguson	...18

Join the Messier, Finest NGC and H-400 Club!

Observe all 110 Messier, 100 FNGC or 400 H-400 objects and earn your

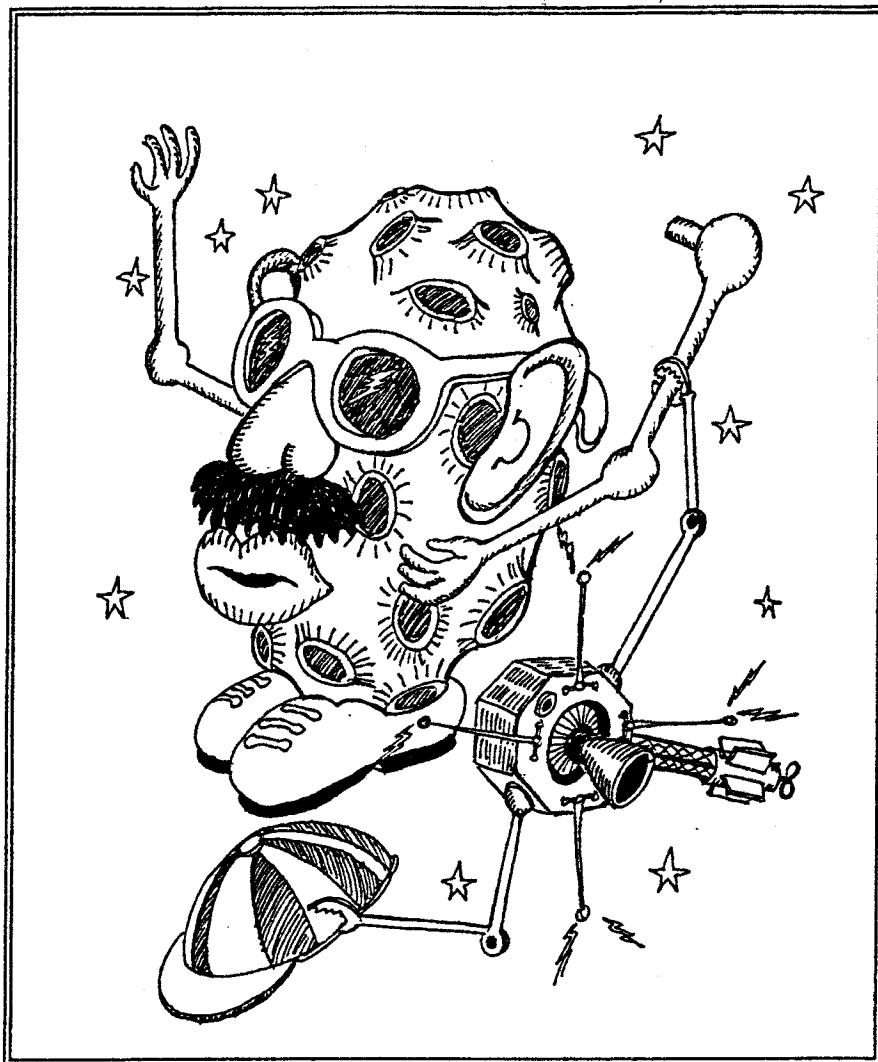
CERTIFICATE

There are a few troubles in Herschelland, since Fr. Luc was the Canadian verifier for the Herschel list. Until a new Canadian verifier volunteers, the Herschel list can be verified by the **Herschel 400 group in Florida**. The first 2 lists can be found in the Observer's Handbook. The Herschel 400 list will be available at each general meeting for 50 cents (covers photocopying) or can be mailed out on request to distant members. Each month I'll be posting updates. E-mail or phone in you new numbers!

The race is back on! With better weather, I've noticed that several members are out observing again and have sent in their updates. Congratulations to **Bob Christie with a Messier Certificate completion this month**, and to **Darrell Chatfield** for the most new objects! Please get your new number to me as soon as you can!

Send to <huziak@SEDSystems.ca>

SPACE FUNNIES G.Urcuhart/R.Huziak



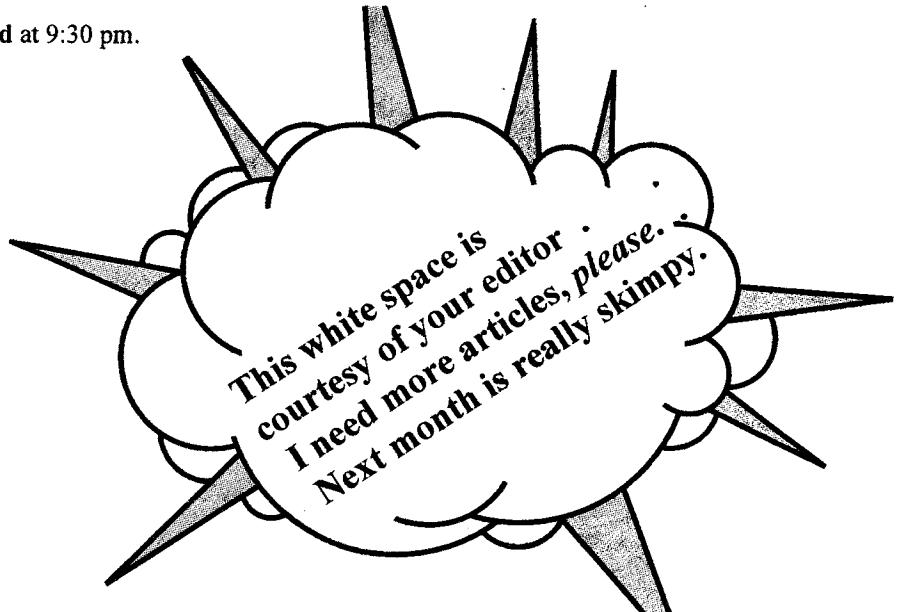
**The Near Earth Asteroid Rendezvous (NEAR) spacecraft
completes it's mission to Eros.**

Minutes of the Executive Meeting

Monday, March 11, 1999

held at the Open Door Society Board Room, Saskatoon, 7:30 p.m.

1. **Report on the death of Fr. Lucian Kemble** by Erich Keser. There is his observing equipment and extensive observing notes to be dealt with.
2. **Newsletter report** - copying, collating and mailing usually takes about 1-1/2 hours . Costs about \$55.00 per month for postage. Cost about \$11.00 per month to mail to other Centres. These could possibly be e-mailed instead.
3. **Financial report** - Barb and Jim Young. Since October until present the revenues from memberships fees, donations, etc. were \$3,773.65 and expenses were \$5,222.89.
4. **Membership report** - Les Dickson. Memberships are holding at around 77 members. The Burlingham membership will be reinstated for the rest of this year. Anyone joining after June 1st should automatically have their membership applied to the next year.
5. **Fundraising** - Kalium mine will meet with their GM when he gets back. Jean Dudley will look into distributing Sky Publishing books.
6. **SSSP report** -Erich - There will be an extension of unit reservations deadline to the end of March. There will be changes to the brochure to accommodate the *Fr. Lucian Kemble Appreciation* and the **Kemble Memorial Lecture**. A meeting will be held in Regina at the Science Centre at 7:00 p.m. with the Regina Centre. Rick and Erich will attend.
7. **Dr. Herzberg** - Ed Kennedy and Jim Young commented on the death of this great astrophysicist.
8. **Journal** - Ed Kennedy commented on the state of and quality of the *Journal of the RASC*.
9. **Legal Infringement** - Rick pointed out that a legal infringement on a Centre asset has been identified and that Don MacKinnon is willing to pursue this. The Executive agrees it is worth pursuing.
10. **Lucian Kemble account** - There is \$90.00 in the account that will be used for the Junior Astronomy program.
11. **Meeting adjourned at 9:30 pm.**



Minutes of the General Meeting

Monday, March 15, 1999

held at the National Hydrology Conference Room, Saskatoon, 7:30 p.m.

1. Meeting called to order at 7:40 p.m.
2. **Fr. Lucian Kemble** - Erich talked about his funeral and showed some slides of the event.
3. **Dr. Herzberg** - Ed Kennedy spoke about his life and accomplishments.
4. Minute of Silence for both of the above men.
5. **Feature Presentation:** Stan Shadick spoke about the *Dark Sky Paradox* and a very interesting discussion followed.
6. **Finances:** the balance in the current account is just over \$3,600.00. For Sleaford there is about \$1,500.00 available and for the SSSP budget about \$330.00.
7. **SSSP Report:** some important changes to the program in the afternoon. There will be an appreciation for Fr. Luc at 3:00 p.m. The evening lecture will be called the *Fr. Lucian Kemble Memorial Lecture*. The Regina club will give to public star nights this year.
8. **Site and Site Fundraising report** - because of the poor weather the number of visits to the site is away down. The Kalium mine is still interested in talking about some support for the site. A presentation to National will be drawn up to ask for a matching grant.
9. **Motion by Erich Keser:** to allocate \$300.00 out of general funds to the star party was made and carried.
10. Meeting adjourned at 10:00 pm.

SSSP'99

T-Shirt



*design by Darcy Kozoriz (Regina Centre)
poor illustration by Rick Huziak*





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extra bases - \$15 dew shields \$20

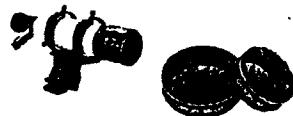
Cross-Polarizing filter - \$45, LPB Nebula filters 1.25" \$90 2" \$145

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1.25" format - \$142.50 2" available

SOLAR FILTERS - see the sun safely



EYEPieces

TELEVUE - PLOSSL - simply the BEST quality - 50 degree AFV High index, edge-blackened,
multi-coated glass - 8, 11, 15, 20, 32, 40 mm

PANOPTIC - sharpest edge-to-edge images - 68 degree AFV

6 element low dispersion glass - "Nagler-like" quality at a moderate price

"NEW" - RADIANT - 60 degree AFV with tall (20mm) eye relief -

3mm to 14mm 1.25" format ALL at \$360 each.

NAGLER - the ULTIMATE eyepiece - 82 degree AFV - very sharp images

PowerMate - 4 element image amplifier - 2.5x & 5x - \$265 each

OMCON - PLOSSL - good quality - affordable prices - 4 element, 50 degree AFV

7.5, 10, 12.5, 17, 20, 25 mm @ \$65 each 32mm & 40mm @ \$85 each

SUPER PLOSSL - as above with rubber eyeshield and grip

7.5, 10, 12.5, 17, 26 mm @ \$70 each 32mm @ \$92 each

BARLOW Lens - 2x magnification \$50 each

ANTARES - PLOSSL - higher quality - Japanese-made 5 element, 52 degree AFV

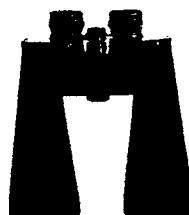
7.5, 10, 15, 20 mm @ \$110 each

BARLOW Lens - 2x magnification multi-coated \$80 each

Tele Vue

"TOPS IN
THE FIELD"

Tele Vue specialist:
here to help you.



BINOCULAR SPECIALS (in stock supply only)

BAUSCH & LOMB Legacy - 7x35 or 8x40 \$129 7x50 \$140

FUJINON - 7x50 water proof XL-series \$250 (w/o case)

- FMTSX series - 7x50 \$650 or 10x70 & 16x70 \$900 each

ANTARES - bak 4 prisms, multi-coated lenses, centre focus

10x70 \$415 11x80 \$510 15x80 \$500 16x80 \$535

Sky Vue Telescopes carries Binocular tripod "L" brackets - Small \$25 Large \$30

MAKING YOUR OWN "NEWTONIAN" TELESCOPE ?

Sky Vue Telescopes has 6, 8, & 10" mirrors, secondary mirrors, spiders, focusers

Prices listed do not include GST