

Saskatoon

Skies

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

**Volume 30, Number 03
March 1999**



**Friar Lucian Kemble OFM
(1922 - 1999)**

Father Luc "Lamplighter" Kemble passed away on February 21 from heart failure. His passing will not go unnoticed, judging by hundreds of emails of condolences that poured in within days from friends and acquaintances around the world. At the Regina service dedicated to him, over 300 were in attendance, and a second service in Calgary was much the same. Representatives of the Saskatoon and Regina Centres attended to express our deepest sorrows at his passing. Many of us look at the sky in a different way due to Fr. Luc's inspiration.

RASC Calendar Happenings

Date (1999)	Event	Contact	Telephone
Mar 12	Junior Astronomers Meeting - 7:30 pm	Sandy Ferguson	931-3184
Mar 15	RASC General Meeting - 7:30 pm	Erich Keser	374-4262
Mar 19 or 20	Observers Group at Sleaford Obs.	Darrell Chatfield	374-9278
Mar 19	Youth Group Meeting - 7:30 pm	Sandy Ferguson	931-3184
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 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. When spring comes, we 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.

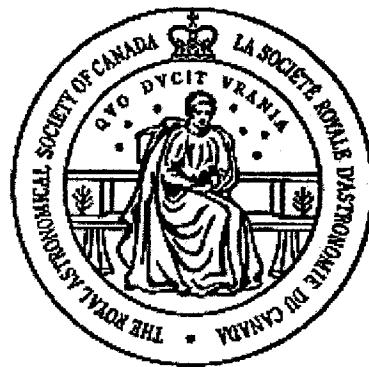
For Sale: 18 inch Super Planetary mirror set 18" f/4.33 [f/5 with Paracorr] Newtonian mirror, 2" thick + 3.16" diagonal, most of 18 point cell, and wooden crate. Brand new, with new coatings. Maker: Barry Arnold, Edmonton, AB [Dec/97 S&Tel.p81]. \$3,895.00 CDN. Tel: (905) 820-6410 for more information Or email Larry Manuel (Mississauga, ON) at <lmanuel@sprint.ca>.

For Sale: 10-inch f/5.6 Dobsonian with good optics. C/W finder scope, barlow and 5 eyepieces, including 35mm, 20 mm Plossl, 12 mm Kellner, 6.3 mm Plossl. \$700.00. Contact Normand Pourier, RR#3, North Battleford, SK, S9A 2X4, tel: (hm) (306) 445-0458, (bus) (306) 446-6632.

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 <heszak@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.

Remembrances of Father Lucian Kemble

by Peter & Jean Bergbusch <bergbush@phys.uregina.ca>

Department of Physics, University of Regina

Hello to you all.

I'm sending you the text of the part of the eulogy that my wife Jean and I will be giving at tonight's service in Regina. It would have been great to have you all come for this, or even to be able to read all your messages out to the people who will be there. Along with our personal remembrances, I have taken extracts of two of the messages I received because they are classic examples of how Luc affected us all. In fact, I think all of us (with some adjustments in gender) could just substitute our own names into these stories, and they would accurately reflect our own particular relationship with Luc.

As you probably knew, Luc was very excited about the latest Venus-Jupiter conjunction and he had started a series of photos following the same recipe he used for the one back in February 1975. He left his camera mounted on the tripod with the lens tilted up at just the right angle. Last night, Jean and I went out to the Retreat House in hopes of photographing the close approach last night at the same time (7:10 pm CST) that Luc had been using. We drove out in howling winds and driving snow - the highway was very slippery and hard to see. But as we got closer to Lumsden, the Sun started to break through. I found the slides that Luc had taken back in '75 and managed to identify the location that he had been shooting from. We took his camera out and got the shots. The conditions were far from perfect, but we kept taking pictures from around 7:10 CST to 7:50 CST in hopes of getting a good one out of the bunch. It was good therapy. Unfortunately, we'll be otherwise occupied tonight - but we'll keep working on the series until the film runs out. God bless you all!

The following eulogy were delivered by Dr. and Mrs. Bergbusch at St. Cecilia's Roman Catholic Church, Regina, Saskatchewan, February 24, 1999 [ed.]

Peter's Remembrance of Luc

I first met Luc in the fall of 1974 at Lumsden shortly after taking a position in the Physics department at the University of Regina. I was 24 and Luc was 52, a few years older than I am now. He was already well into astronomy - in fact his interest in the sky dated back to his childhood at Pincher Creek. Luc had done his basic training with binoculars and a delightful book simply called *The Stars*, by H. A. Rey of *Curious George* fame, from which he learned new ways to see the constellations and gained a clear understanding of the celestial clockwork. He had a small telescope - a Celestron 5 - that he would set up in the parking lot, and I would bring along another one from the University. We shared many long hours under the dark skies of Lumsden (as they were then) enjoying views of the planets, double stars, star clusters, interstellar nebulae, and galaxies while refining our observing techniques and skills.

Jean, my wife-to-be, joined us in the spring of 1975, and we continued as a threesome of observers. Our notoriety was established late in the summer of that year with the appearance of Nova Cygni, which we noticed within 20 hours of its first discovery by observers in Japan. We had been studying objects down in Aquarius - some globular clusters and the Saturn Nebula - but we decided to switch our attention to the

Milky Way in the region of the constellation Cygnus. When we looked there, the sky was unrecognizable because of one bright "new" star. After consulting Luc's charts, we sent a brave message off to the Central Bureau for Astronomical Telegrams at the Smithsonian Astrophysical Observatory suggesting a "possible nova" near the familiar bright star Deneb. Here's how it came out in IAU Circular 2826, (Sept. 2 1975):

"among the many hundred independent discoveries that must have been made of the nova during the 24 hours following its rise to naked-eye brightness are the following: Aug. 30.33 UT, L. Kemble and P. Bergbusch, Lumsden ...".

Jean never let us forget that she was the one to notice it first, so it should have been J. Hatcher, L. Kemble, and P. Bergbusch.

Jean and I were married out in Victoria late in December, 1975 on *The Feast of Holy Innocents and Martyrs*. Luc had sent us on our way after a night of astronomy with a blessing delivered under the stars in the parking lot of the Retreat House. We received a cosmic wedding gift in the form of the most spectacular comet to appear in the skies since Comet Halley back in 1910, Comet West. It was early in March 1976, the weather was bitterly cold, and we had to be up and observing by 5:00 am to see it. After a number of frustrating false starts, we made an overnight stay at the Retreat House in the room at the end of the north-east wing. Luc made sure we got up in time. The apparition of the ghostly tail of the comet rising mysteriously off the eastern horizon was an enthralling sight. Finally the head of the comet rose over the horizon. We carefully wound the film through our cameras to avoid static discharge as we took picture after picture. Two hours later, with the brightening dawn we went in exhilarated but practically hypothermic. The pictures we took that morning have been shown to thousands of people over the years, and they always remind me of the thrill and the awe we felt then.

Over the following years we shared many intense astronomical experiences with Luc including the total solar eclipse of 1979 which we observed from Estevan, and more recently, the spectacular comets Hyakutake in 1996 and Hale-Bopp in 1997. When the skies were not filled with such exotic objects, we enjoyed watching meteor showers, spectacular auroral displays, and lunar eclipses. We delighted in the knife-edged cutoff of light from a star as it was occulted by the moon or by an intervening asteroid while we listened to the beat from our favourite radio station - the time signal from WWV from Boulder, Colorado. We even derived excitement from the predicted appearance of satellites as they emerged from the Earth's shadow into sunlight high above us. And when there was no *special event* to observe, we shared the sky to the accompaniment of Bach or Vivaldi, or coyotes and owls, or even the drumming of male sage grouse.

In 1980, the magazine *Sky and Telescope* published an innocent drawing of an observation made from Luc's observatory in Cochrane, Alberta in the *Deep-Sky Wonders* column written by Walter Scott Houston. Luc described what he saw as "*a beautiful cascade of faint stars tumbling from the northeast down to the open cluster NGC 1502*". Such delicate star patterns, with subtle differences in brightness and colour among the stars were a source of constant pleasure to Luc, and he delighted in showing them to anyone who was interested. The one he described in *Sky and Telescope* is now known as *Kemble's Cascade*.

Through his love of astronomy, Luc became friends with many people across North America and around the world. The e-mail messages that flowed in over the past few days are full of the love that he shared with those who knew him. I would like to quote from two which reveal the Luc we knew and which capture some of the light that drew us to him.

Cetin Uzel from Turkey, writes:

... I am greatly saddened with the news about Mr. Kemble. In these days I was planning to write something to him. I am feeling the sorrryness of losing a dear friend. Although we have never met each other and our friendship was only through mails (by post in the beginning and by e-mail recently) he was really a friend of mine. I was writing him about my personal problems, about my sad love stories and general problems about life. He was understanding me much better than my friends here. Some days I desired very much to talk with him face to face. We also interchange ideas about more general subjects on such things as peace in the world.

*Our friendship began some 8 or so years ago after I had written him as an answer to a mail of him which is published in **Sky and Telescope** magazine. The subject was "Daytime observations". He replied immediately. Our friendship began thereafter and I learned many, many things from him about many subjects. For example I learned from him "what is Franciscanship". I can never forget him and his unusual kindness. He always said that "how good" for my English.*

In Turkey after a Christian passed away it is said: "Let his soil be much".

Let his soil be much.

From Barry Thorson, Calgary, AB:

Growing up as a Catholic just down the road from Mt. St. Francis Retreat Centre in Cochrane, I was able to spend more than a few nights out at the telescope with Fr. Lucian. I was a teenager; I was interested in cool movies and rock'n' roll and meeting girls. Yet something about this man held my teenage mind in a gentle grasp. We would look out at the stars - looking upon a world I could not even begin to understand - listen to Mozart on a tiny cassette player, and drink hot apple cider. I was spell-bound by the combination of such genius, love, and knowledge. Those were formative years for me (as they are for us all); I am so grateful for the invisible hands that led me to Lucian's observatory during that time; something of who he is became embedded in the smithy of my soul.

He was a poet first and foremost. Not so much in the written word, but in his outlook of life. He became his telescope, and through him we were all able to see some far off light. He became his favourite books, and one could spend hours with him and be ushered into strange and magical worlds. He became his sermons, and one could hear in him the call to adventure. He became the simpleness of a flower, and all one needed to do was observe. Observe and learn."

Luc was still looking ahead when I talked to him over the phone last Friday morning. He was planning to shoot the latest Jupiter-Venus conjunction following the same recipe he had followed for a similar conjunction back in February 1975 - the same two planets in the same constellation, Pisces. He loved to see the completion of cycles in the sky - part of the great cosmic clockwork. And I was looking forward to sharing it with him.

Many seasoned astronomers would claim that Luc couldn't possibly have seen the faint galaxies that he claimed to see through his telescope. But Luc could always see more than the rest of us, even in the few stray photons that had traveled tens of millions of light years from a distant galaxy.

Jean's Remembrance of Luc

"Hi Kid! Guess what? - The bluebirds are back! One sat on the roof of my shed last night while I was setting up."

"Hi Kid! You should see the crocuses! The hills are just covered!"

"Hi Kid! I went for a walk in the valley. The ticks are AWFUL!"

"Hi Kid! You should see the chokecherries this year. They're just laden and SO juicy!"

This is how phone conversations with Luc began. He was always so excited about the cyclical events of the seasons that he had to phone a fellow enthusiast. I reciprocated.

"Hi Luc, you'll never guess what's in the back garden!"

No, what?

Rufus-sided towhees.

You're kidding!!!

He was always thrilled to hear about the birds I had seen and he was delighted to show us the birds around the Retreat House. Once, in early spring when we were walking in the woods, Luc started to whistle. After a minute or two, some chickadees appeared, curious to know who the interloper was. Walking with Luc was always interesting and regularly punctuated with stops to look! look! LOOK!

Last summer, while walking through my backyard, he came upon some yarrow. He pulled some through his hand and exclaimed "Turkey Grass! I used to hate this as a kid, but I like it now!"

We shared a deep attachment for our cats. He loved Bernie, the Retreat House cat, and was always amazed that I could pick her up and cuddle her. "She doesn't let anyone else do that!" He was proud of her skills as a mouser and would chuckle when "the little pig" would gobble up a mouse and then march into the Retreat House demanding her dinner. He was equally pleased when our cats decided to grace his lap with their presence.

Love of Nature was only one thing we had in common. Music was very important to him. One piece that he introduced me to was Prokofiev's Concerto for Organ and Tympani - a thrilling piece. Language for him was music of another sort. During one of our last observing sessions I told him that I would have to study French and German to fulfill my degree requirements. That led to an impromptu lesson, and he was really pleased with me when I pronounced things correctly. The genuine delight that he conveyed when I understood encouraged me to learn more and to try harder. Many people have called him "mentor" and he truly was.

In spiritual matters he was really ahead of his time. He was ecumenical long before it became fashionable. He was fond of giving impromptu blessings. I really think that the blessing we received under a starry sky set the tone for our marriage - simple, straightforward, but complex too. He bent the rules a bit - he was godfather to our son. The fact that we are Lutheran didn't bother him in the least. And he provided us with strength and insight as we encountered life's difficulties.

I would like to draw your attention to the quilt draping Luc's coffin. His niece, Sue, made it for him to celebrate his 75th birthday. During the celebrations that year, family and friends wrote messages on the squares of cloth. He was delighted with this testament of love, but couldn't resist telling us about Sue's husband, Vern. Vern had been heard to grumble about women who bought expensive cloth, cut it up into bits, and *then sewed the bits back together!* If a quilt like this one is the result, I think it's OK to cut expensive cloth into bits.

"Hi kid, the sky is great! Come on out."

"See you soon, Luc."

"OKAY! Ciao Ciao!"



KEMBLE, Fr. Lucian (Bert) Joseph, OFM —Father Lucian Kemble passed away at Regina General Hospital on Sunday, February 21, 1999 at the age of 76 years. His brothers Victor, Charles, Sidney, Roy and sister Ruth predeceased Fr. Lucian. His sister Blanche (Charles) Dwyer of Victoria, B.C., as well as numerous nieces and nephews in Western Canada, survives Fr. Lucian.

Father Lucian was born in Pincher Creek, Alberta, on the 5th of November, 1922. He received his high school education in Pincher Creek before joining the Royal Canadian Air Force where he served as radio operator during WWII. After the war he attended St. Anthony's College in Edmonton, AB., from where he entered the Franciscan Order of the Roman Catholic Church and took his seminary studies in Quebec City and Montreal. He was ordained on the 7th of June, 1953. His ministry involved teaching at Regina Cleri Seminary, Regina, and Notre Dame College, Wilcox, SK., as well as St. Francis College, Biddeford, Maine. He served in the Port Alberni, B.C., Parish for 5 years. Fr. Lucian touched the hearts of many people through his service in retreat ministry at Mount St. Francis, Cochrane, AB., and St. Michael's Retreat, Lumsden, SK.

A man of many talents and interests, Fr. Lucian was an avid amateur astronomer and is a member of the Royal Astronomical Society of Canada and well known in many centres. He has published several articles in astronomy magazines and newspapers. A star cluster named after him is called "Kemble's Cascade." Many friends appreciated his enjoyment of fine music, art, literature and scientific pursuits.

Two funeral services will be held in his memory. The first will be in St. Cecilia's Roman Catholic Church, 5020-7th Avenue, Regina, SK., 7:30 P.M., Wednesday the 24th of February, 1999, presided by Fr. Kevin Lynch. The second will be held at St. Mary's Cathedral, 219-18th Avenue S.W., Calgary, AB., at 7:30 P.M., Friday the 26th of February, 1999. Cremation with burial of cremains at Mount St. Francis Retreat, Cochrane, AB.

May Lamplighter Luke rest in peace, his eyes always on the stars.

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Novice's Corner - Leo

by Sandy Ferguson

Anyone who seriously wants to learn about astronomy and the night sky realizes sooner or later that he or she must give up the cozy armchair astronomer lifestyle, in order to learn his or her way around the heavens. Unfortunately, the wonderful wealth of printed material available to help you learn ABOUT astronomy is of limited use, unless you get out there in the dark and look up. It's a sad tale, but true. This article is aimed at the beginning amateur astronomer - those of you who have long dreamed of becoming one with the universe, but hesitated to take the plunge!

So, what is necessary to get started on some serious observing? The answer is "not much". You already have the most important items and they are your eyes. There is a lot of naked-eye observing to be done. If you have some common, garden-variety bird-watching binoculars, so much the better, but they are not necessary. A chaise lounge garden chair, with adjusting back, enables you to lay back comfortably without craning your neck. The importance of winter clothing cannot be emphasized too much at this time of year, as observing is a lazy pastime and you can become chilled very, very quickly. Other than that, you need only a spot in your backyard or local park, where you won't be bothered by house or streetlights, and your horizon is not blocked by trees or buildings. It is wise to have a small red flashlight (any household flashlight, which has been covered by red cloth or cellophane, so as not to shine as white light) to refer to any printed material you have with you. Red light has the least affect on your night vision. Once you have waited for 20 minutes for your eyes to become dilated and your night vision acute, being blitzed by white light will set you back to square one! You may also wish to have a log book with you to record any observations.

Getting your Bearings

Well, you've made it into the backyard. If this is one of your first times looking around the sky, you may be content sitting in your chair (perhaps up to your neck in your sleeping bag) just taking in anything that goes through your line of vision. Besides the moon, planets and stars that are available on any particular night, these may include some bright satellites, sporadic meteors ("shooting stars") and aurora ("northern lights"), not to mention those bright flashing lights you will see preparing to land and taking off from Saskatoon International! All these objects you will see, no matter what direction you are facing.

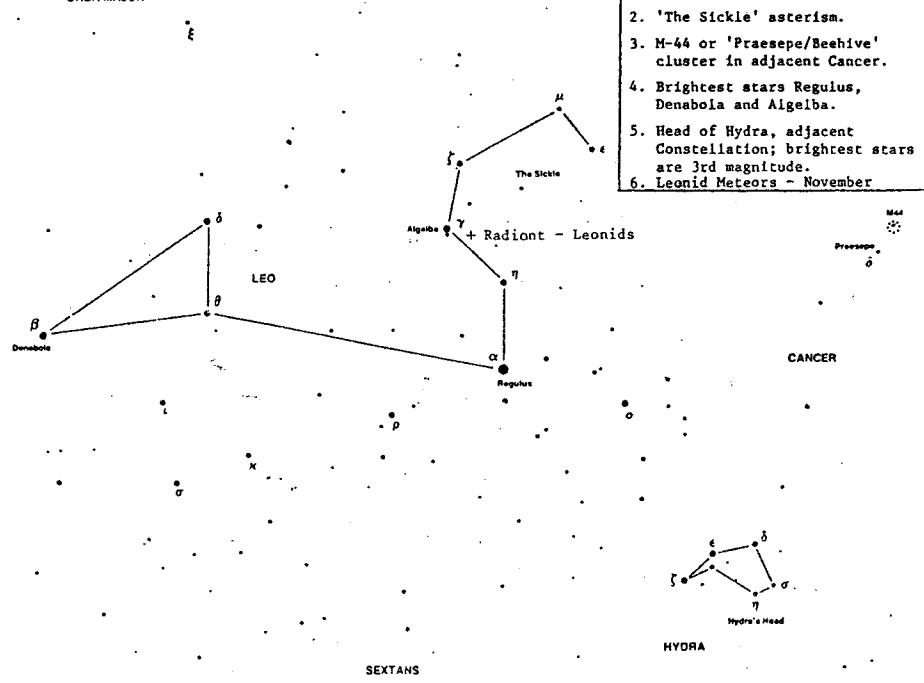
However, if you wish to become familiar with the constellations, it is necessary to know what direction you are facing and the direction in which the constellation you wish to find can be found. We all know the four points on a compass or map - North, South, East and West. It is particularly handy to recognize North as a reference point. If you are familiar with the Big Dipper, a pattern of stars (called an *asterism*) in the constellation Ursa Major (the Big Bear), you can use it at any time of year to find true North. It's two pointer stars, named *Dubhe* and *Merak*, point to the North Star (called *Polaris*), which is directly over our North Pole.

If you are not familiar with the Big Dipper, you can still locate North and South easily. As the avenues in Saskatoon run North and South, you could orient yourself facing North on any avenue or parallel roadway, by consulting a city map and placing your back to any landmark, nearby street, or part of town

CHART ADAPTED FROM:
"Nightwatch: An Equinox Guide to Viewing the Universe" by Terence Dickinson (Camden House)

FIGURE 2

URSA MAJOR



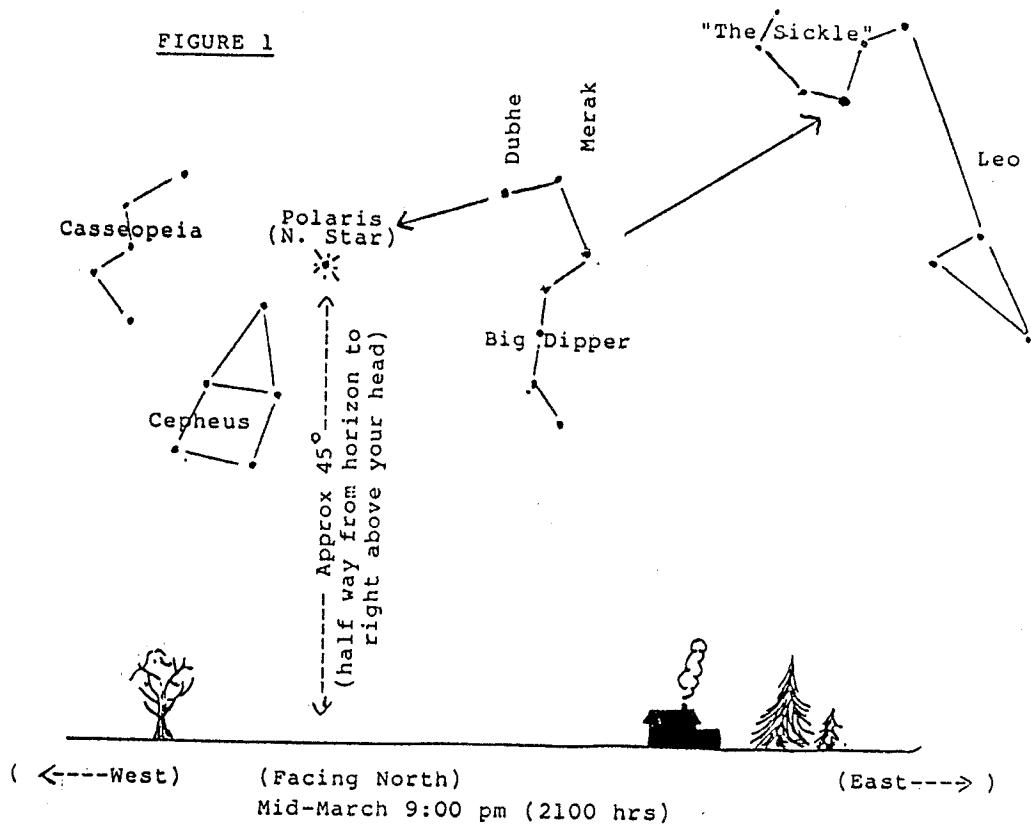
you know to be south of you on the map. This would put you in a position to identify the Big Dipper and use it to locate true North.

Accompanying this article is a chart on how to use the Big Dipper to locate Leo, our constellation of the month. As spring is fast approaching, Leo is an excellent spring constellation to get the new observer started on a learning program for the year. The best way to get to know the sky is to take it bit by bit - learning a few constellations per season is just about right. Anything more will be overwhelming! Just remember, there's a lot of time to learn - the sky won't change during our lifetimes, so what you miss this year will be back in the same spot, same time, next year.

CONSTELLATION OF THE MONTH - LEO THE LION

Leo is the most prominent spring constellation in the eastern part of the sky this month. It is easy to see from the city and easily recognized, as it has bright stars in a distinctive pattern.

If you watch Leo over the spring and summer, you will note its orientation with respect to the horizon. When it is rising in the East, the asterism, *the Sickle* (the “backwards question mark” - the “head and mane” of the lion) first becomes evident over the horizon. As it clears the horizon and night progresses, it straightens out and rights itself, then as it sets in the west, *the Sickle* is the first to disappear. This is a phenomenon that happens to most constellations we see here in Canada, except for the circumpolar

FIGURE 1

constellations that remain above the horizon all year round, rotating around the North Star. (These include Ursa Major (the Big Bear), Ursa Minor (the Little Bear), Cassiopeia, Cepheus, Draco, etc.)

Other objects to observe in the constellation are the brightest stars, which are labeled. Also, in the month of November the annual Leonid meteor shower can be observed (named for Leo as the point of origin of the meteors (radiant) appears to be there. In 1999 we anticipate a meteor **storm**; it remains to be seen if the shower will fulfill its predictions.

In the adjacent constellation of Cancer, to the right of Leo, is a large open cluster known as the **Beehive** (or *Praesepe*). It also has a designation of M44 (which means it is listed in the Messier Catalogue of deep sky objects). It is easily seen naked-eye, but binoculars will show that the cluster is made up of dozens of closely associated stars. Also take note of the **Head of Hydra**, another nearby constellation, which is quite distinctive under dark skies.

I hope the above will enable you to start on an observing program. If you require any further information, please give me a call at 931-3184. Good Observing!

The Deepest Sky

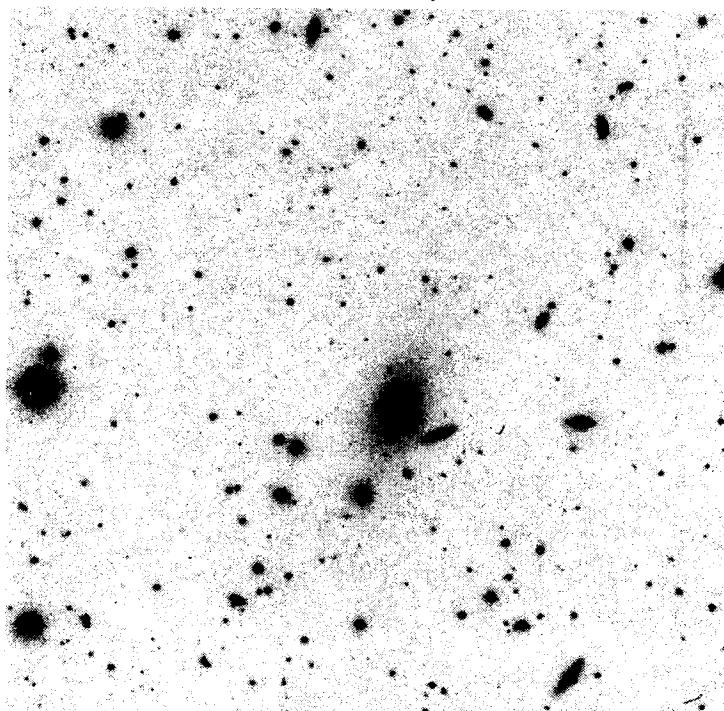
Abell 1367 - A Deep Galaxy Cluster

by Scott Alexander

Hi. Welcome to the newsletter article that plans to go into the deepest part of the sky for you astronomers that have the big scopes. This means the people with scopes 12 inches and bigger will be able to look for the objects that I will write about. The information for some of the objects will come from the *Observer's Handbook 1999* edition; the deep sky challenge objects listed on page 262, and also the *NED Database* (*Near Earth Extragalactic Database*) which is on the NASA web sight.

The objects that we will go after will be "galaxy clusters, quasars, galaxies, anonymous galaxies and any other object that we can find that is in the deep sky. Most of these objects will be in the magnitude range of 12 or 13. This is where all (for me anyway) of the most interesting objects are to be found.

OK, so here we go off into our Adventure in Wonderland. The first object, or should I say objects, will be a galaxy cluster called Abell 1367. This cluster is in Leo just below the star 93 Leonis. The cluster is very close to the star, within a 2 degree circle of it, centered at a right ascension of 11 hours 44 minutes 29.4 seconds and a declination of +19 degrees 50 minutes 21 seconds. The center of this cluster is within a 1 degree field and all of the rest is within a 2 degree field. The galaxies are mostly NGC objects but there are some MCG and a lot of CGCG objects (and yes I do know what MCG is! It is the *Morphological Catalog of Galaxies* by Vorontsov-Velyaminov, a pair of Russian astronomers, and the CGCG is the *Catalog of Galaxies and Clusters of Galaxies* by Fritz Zwicky, an American astronomer, made back in the 1950's and 1960's.



These galaxies in this cluster are fainter than 13 or 14th magnitude and some are in the 15th and 16th magnitude range. This is also a small cluster of galaxies so you will have to use high power to very high power to see it. Use low power to find the area, then switch to high power. You will find some face-on galaxies, also some edge-on ones, as well also some irregulars and maybe some distorted galaxies. See what you can find!

This cluster is one of a list of clusters that Professor George Abell made. There are 60 or more galaxies here but not more than half of that many will be visible in a telescope of 14 to 16 inches in size. You will see more in a large telescope of 18 inches or bigger, and because this cluster is faint you will need dark skies out in a rural area away from any light source (a.k.a. light pollution). It will take some time to be able to track down all of the members of this cluster (but that is the challenge of looking at faint clusters like this, right?)

If you have access to the *Webb Society's Deep Sky Handbook (Volume 5)*, this is where a lot of information is to be found on this cluster (or for those of you with a computer, go look at the NASA web site at <www.NASA.gov> and click on the *NED database* icon). This is where a amazing amount of information can be found on this cluster, other galaxies and more clusters. From the pictures that I have seen, this cluster is not very compact but more spread out. This cluster will be visually beautiful and a good observing challenge for you . Next month we will go find some more interesting objects

Clear skies and good luck.

You are invited to the
General Meeting of the Saskatoon Centre
Monday, Mar 15, 1999 at 7:30 p.m.
Conference Room, National Hydrology Research Institute building
Innovation Boulevard

Presenting:
Stanley Shadick

The Dark Sky (Olber's) Paradox

If the universe was indeed infinite, and contains an infinite number of stars, then looking in any direction, you should see only the overlapping surfaces of distant stars, and thus the sky should be as bright as the sun! Since the sky is found to be not bright at all, Olber's Paradox presents interesting challenges to Cosmology.

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	102
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

Richard Huziak (now certified)	110
Dale Jeffrey	83
Darrell Chatfield	62
Scott Alexander	51
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!

I haven't had any recent up dates to these lists. I suppose this is due mostly to recent bad weather around the new moon weeks. However, if you have been observing, please get your new number to me as soon as you can!

Send to <huziak@SEDSystems.ca>

HERSCHEL 400 CLUB

Rick Huziak	325
Darrell Chatfield	85
Gord Sarty	77
Scott Alexander	54
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!

Be a "Partner in Astronomy" at the 1999 General Assembly

by John R. Percy (University of Toronto)

We are delighted to invite you all to attend the 1999 General Assembly, in Toronto. But there is more! This will be a first-ever joint meeting with the Astronomical Society of the Pacific, and the American Association of Variable Star Observers. The meeting theme is "Partners in Astronomy" to signify the three partner organizations, the two neighbour countries Canada and the US, the partnerships between amateurs and professionals, and between scientists and educators, and the many facets of astronomy which are on the program.

We have carefully arranged the schedule so that, in addition to the RASC National Council Meeting, Business Meeting and Papers Session, you can enjoy an outstanding assortment of other astronomical, educational, and social events: tours of the David Dunlap Observatory, the University of Toronto Campus Observatory, and the famous Ontario Science Centre; *Universe '99* -two days of exhibits and non-technical **History of Astronomy** lectures on *Frontiers of Astronomy*; two days of invited and contributed papers on; a day of AAVSO meetings and papers; a three-day workshop for teachers - something that the ASP is especially experienced in organizing; a *Family Fair* for the kids; a *Project ASTRO* workshop on creating partnerships between astronomers and teachers; the *Ruth Northcott Memorial Lecture*, to be given by Professor Geoff Marcy (San Francisco State University), an outstanding public speaker whose research group has discovered most of the score of new planets around other sun-like stars; and a gala *AAVSO+ASP+RASC Awards Banquet*.

For those of you who are deeply engaged in astronomy research or education, there is a special three-day symposium on "*Amateur Professional Partnership in Astronomical Research and Education*". The RASC, of course, is known for the wide assortment of important activities which it carries out in education, research, history and heritage. This symposium, and its proceedings, will play a major role in the future evolution of amateur-professional partnership.

Our host, for the meeting, is the University of Toronto, which has been a leader in astronomy research and education for almost a century. The meeting will be held on the main campus of the University, in the heart of the city, close to restaurants, shops, museums, galleries. Accommodation ranges from about \$45 a night (including breakfast) in air-conditioned university residences, to \$85 a night at the Quality Inn, or more if you want a really upscale hotel. Toronto is arguably the most multi-cultural city in the world. You can get around easily and safely on foot, or on the excellent public transit system. You can relax in Toronto's island parks, or watch the July 1 weekend fireworks. Niagara Falls is just over an hour away.

So don't miss Toronto in 1999, for the most varied, interesting, and affordable meeting of the decade! You will be able to meet old friends, and new ones, too. The bulk of the meeting events are on the holiday weekend of Thursday, July 1 to Monday, July 5. The symposium is July 5-7. Stay an extra week, and enjoy one of the great cities of the world! For advance information, contact John R. Percy, Erindale Campus, University of Toronto, Mississauga ON, Canada L5L 1C6; e-mail: jpercy@erin.utoronto.ca.

Information on registration, accommodation, and submission of papers will be provided later, at the March meeting of National Council, and in a mailing to the Centres. As the arrangements for the meeting become finalized, you can find them on the ASP web site (www.aspsky.org), as well as on the AAVSO

(www.aavso.org) and RASC (www.rasc.ca) sites. Those interested in participating in the symposium should contact John Percy directly.

John R. Percy

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Minutes of the General Meeting

Monday, February 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. Presentation:
 - Sandy Ferguson - The constellation of Leo Major, interesting naked eye, binocular and telescopic objects.
 - Erich Keser - Future Space Vehicles.
3. Books and Calendars: available at a discount of 10%, Centre makes a profit of about 30%.
4. SSSP unit reservations: 34 units in total were available, all the 2 bedroom units are one, there still 4 one bedroom units available, the condos will also be taken up.
5. SSSP report: Preparations are well in hand. Dr. Peter Bergbusch will be the speaker for the event and Fr. Lucian Kemble will be the MC.
 - A motion: that we give 2 nights accommodation, registration and banquet to Mr. Peter Bergbusch.
 - A motion: that we reserve up to \$528.00 worth of unit first nights.
 - Volunteers are needed please sign the list.
6. Observing Report: The next Observers Group out at the dark site will be this coming weekend. Contact Darrell or Brent.
7. Library Report: A meeting with the University archivist Cheryl Avery has been held. She requests any missing issues that they do not have. The rest could be given away or destroyed. This includes books, magazines, and slides.
8. Youth Group Report: Mr. Kim Mysyk spoke on meteorites to both the junior and the youth group. This was very well received.
9. Fundraising: Kalium Mine: Darrell has been talking to them and some result is expected in the next several weeks.
10. Meeting was adjourned at 9:30 p.m.