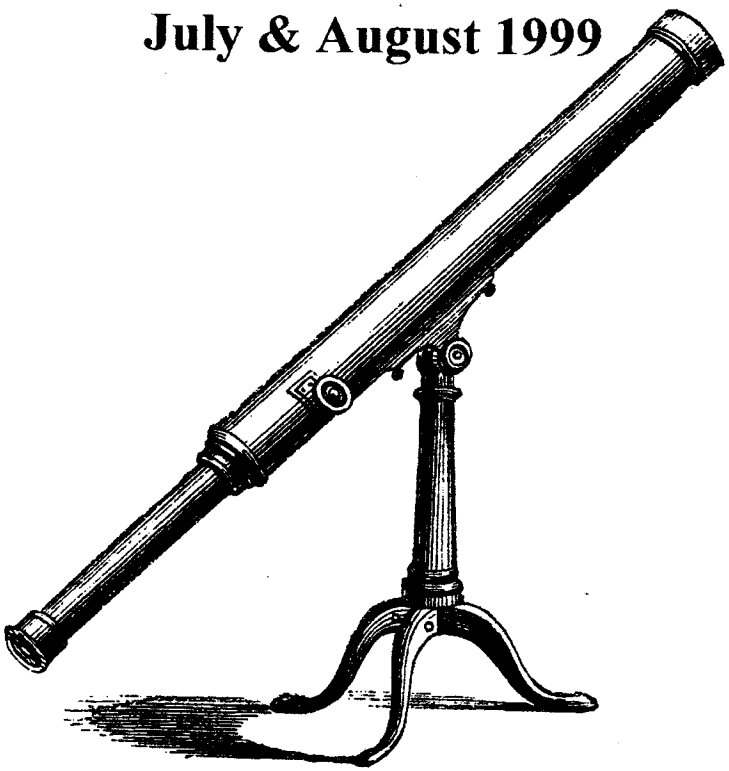
Saskatoon Skies

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

Volume 30, Numbers 07 & 08

July & August 1999



The History of Astronomy - the Lifetime Dedication of U of S Professor Emeritus of Astronomy and Saskatoon Centre Honorary President

John Edward (Ed) Kennedy

1916 - 1999

RASC Calendar Happenings

Date (1999)	Event	Contact	Telephone
Aug 7 - 15	**Mt. Kobau Star Party** - Oosoyos, BC	Erich Keser	374-4262
Aug 9 - 13	**Perseid Meteor Shower** - Two peaks this year - Aug. 11/12 & 12/13	Rick Huziak	665-3392
Aug 12 - 15	**Saskatchewan Summer Star Party** - Cypress Hills Interprovincial Park	Erich Keser	374-4262
Sep 8 - 12	**Alberta Star Party** - Caroline, AB.	Rick Huziak	665-3392
Sep. 10 - 11	**Public Star Night at Beaver Creek** - Tentative	Erich Keser	374-4262
Sep 20	First **General Meeting** of 1999 - 2000	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, beer and any other useful construction stuff. ***SUMMER is here - it's time to build!*** We also need a *'garage sale quality'* lawnmower. We will pick up - call Rick Huziak at 665-3392.

For Sale: Great astronomy books: ***Introduction to Practical Astronomy*** (Jones) $10.00, ***Burnham's Celestial Handbook*** (hardcover, 3 vol.) $50.00, ***Peterson's Field Guide to the Stars*** (softcover) $10.00. Call Darrell Chatfield, tel. 374-9278.

For Sale: 1-1/4" eyepiece & filters - Kellner 9mm eyepiece $40.00, 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.

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.

In Remembrance of
John Edward Kennedy
September 12th, 1916 — July 28th, 1999
by Jim Young

It is with great sadness that we report on the passing of J. E. (Ed) Kennedy on July 28 of 1999.

He was born on Sept. 12, 1912 in Ontario. His secondary education was at Queen's and McGill where he took both math and physics. After completing his education he first worked for the National Research Council and for the Defense Research Medical Laboratory in researching footwear for the army.

It was while he was at the University of New Brunswick as a professor of physics that Ed first got into the field of historical astronomy. This became not only his life's work but a passion, and the field in which he continued to research and publish articles the rest of his life.

When he came to the University of Saskatchewan it was as a professor of physics, where he later established the teaching of astronomy. He was also the Assistant Dean of the College of Arts and Science.

He was a long (44 year) time member of the Royal Astronomical Society of Canada and held many offices with the National Office, including editor, secretary and national president. During this time, he reactivated the Saskatoon Centre of the RASC (1969) and remained a contributing member to the Centre the rest of his life. Ed was also a member of the International Astronomical Union and was on the Commission for the Teaching of Astronomy and the Commission for the History of Astronomy. Among the honours received by Ed were the Centennial Medal, Canadian Silver Jubilee Medal and the Service Award Medal of the RASC He was also elected as a Fellow of the Royal Astronomical Society. In 1998 Ed also received a special Lifetime Service Award from the Royal Astronomical Society of Canada which seemed to give him a lift at a time when one was needed. This award resulted in recognition from many other areas, including Queen's University, U of S Physics department, U of S faculty and a full page in the Star-Phoenix to name a few.

To those of us who were lucky enough to know Ed Kennedy, he will be greatly missed; but his compassion, integrity and his wry sense of humour will not be forgotten.

[Cover illustration appeared on the funeral program and was used there in tribute by Virginia Kennedy - Ed.]

KENNEDY — John Edward Kennedy passed away peacefully at Saskatoon City Hospital on Wednesday, July 28, 1999. Ed was predeceased by his loving wife, Caroline MacKay; and sisters, Grace and Anna. He will be deeply missed by second wife, Virginia Blake; daughters, Barbara (Tony) Anderson of Ottawa and Janet (Michael) MacLean of Vancouver; son, David (Colleen) of Vancouver; stepdaughters, Katherine and Lynn Blake of Saskatoon; sister, Winnie Kennedy of Ottawa; grandchildren, Robert, Andrew and Caroline Anderson Christopher, Lauren and Kelly MacLean and Michael and Meghean Kennedy. Ed used his education in math and physics at Queen's and McGill universities in many distinguished careers: as research physicist for the National Research Council and for Defense Research Medical Laboratory; as professor of physics at both the University of New Brunswick and the University of Saskatchewan; and as Assistant Dean for the Faculty of Arts and Science, University of Saskatchewan. He established the teaching of astronomy at the University of Saskatchewan on a firm basis, also reactivated the Saskatoon branch of the Royal Astronomical Society of Canada; Active nationally in the Royal Canadian Astronomical Society of Canada for 44 years, Ed contributed as editor, secretary and national president. In addition, he was a member of the International Astronomical Union, where he served on the Commission for the Teaching of Astronomy and the Commission for the History of Astronomy. Ed continued his interest in the history of astronomy through research, writing and publishing to the end. Among the honours he received were the Centennial Medal, Canadian Silver Jubilee Medal, election as Fellow of the Royal Astronomical Society, and a special Lifetime Service Award from the Royal Astronomical Society of Canada. In all his interests, Ed was a compassionate, trusted mentor noted for his integrity. To the many people who were privileged to know him, Ed leaves a legacy of love, support, friendship, appreciation of life - and a host of good stories. The Funeral Service will take place at St. John's Anglican Cathedral on Saturday, July 31, 1999 at 10:00 a.m. conducted by The Venerable Larry Mitchell and Canon Howard Green. A reception at the W.A. Edwards Family Centre (4th Ave. and 25th St.) will follow the service prior to a private family committal service at Hillcrest Memorial Gardens. Parking will be available south of the Saskatoon Funeral Home. For those so wishing, in lieu of flowers, Memorial donations may be made to the Saskatoon Cancer Centre, (20 Campus Dr., U.of S., Saskatoon, S7H 4H4), The University of Saskatchewan Archives (3 Campus Dr., Rm. 301, U.of S., Saskatoon, S7N 5A4), or a church or charity of your choice. Arrangements have been entrusted to SASKATOON FUNERAL HOME.

The StarPhoenix
Friday,
July 30, 1999

Cypress Hills is *Go for Launch!*

by Rick Huziak

With the organizing committee for the Saskatchewan Summer Star Party now meeting weekly, the final details of the star party are being pulled together. The organization is not going flawlessly despite the past few years of experience. There are still mix-ups with the Park and resort that need to be cleared up, and a lot of last minute details such as shuffling speakers around. We also experienced problems with the compatibility for future star party dates and their impact on the Park and the Mt. Kobau Starparty, with which we'd prefer not to compete with for obvious reasons.

But despite these concerns, we will be ready for the party and we are all looking forward to a great weekend of observing and presentations. This year, the presentations will be held in the ***air-conditioned*** Four Seasons banquet room, so complaints about the heat have been resolved. The Park has also agreed to allow us to close the Meadows entrance gate and to limit the Meadows to ***only*** starparty attendees. This should resolve the problem of cars driving in and out and ruining photographs and night vision.

Volunteers Are Needed at the star party! The organizing committee can only put things together and do so much, so **we are expecting all Saskatoon and Regina Centre attendees to volunteer** at least a 2 hour shift to help out with something that has to be done during the party. The main tasks that require constant vigilance are the registration desk, book, calendar and drink sales, the information tent and gate security. Volunteers are needed between the hours of 10 a.m. and 8 p.m. for these tasks. *Please chip in to make this star party a success.*

Please Camp at Meadows Entrance. If Saskatoon and Regina members camp as near to the Meadows entrance as possible, then we will have no trouble running security. During our 1997 star party, we could easily run from the information tent or from our telescopes to fend off any rogue car with blazing lights. Unfortunately, during the 1998, some unsympathetic non-star party campers occupied this location making at-gate security a problem.

The Deep Sky Observer - Great Objects for Small Scopes

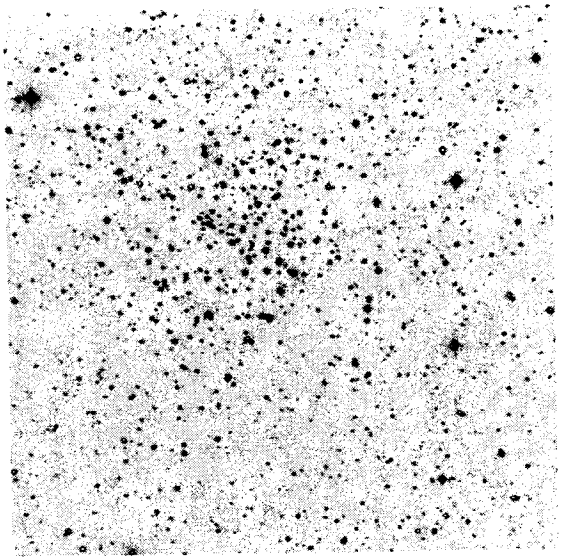
By Scott Alexander

This month's article will be on 2 planetaries, a galaxy and two open clusters. The first ones are called NGC6572 and NGC6781. Both of these planetary nebulae are within the power of a 4-inch telescope when observed from a dark sky sight. What you will see are small blue (at least *blue* to my eyes) round balls of light that will look just like small planets (hence the name *planetary* nebulae). These planetaries are in the constellations of Aquila (6781) and Ophuchius (6572) and are not to difficult to find.

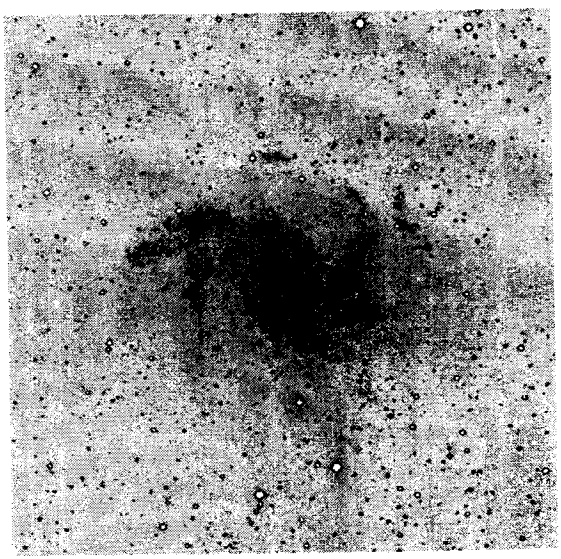
The bright planetary nebula NGC6572, with an easy magnitude of 9.0, was a light blue colour and fairly small in my 24mm and 15mm eyepieces. You might be able to see some detail in this nebula but you will likely have to get a bigger scope than I used. Try an 8", 10" or larger scope.

The next object is the planetary nebula NGC6781 in the constellation Aquila. This nebula was also a very nice object to look at. It is a little bit harder to see because of it's fainter magnitude of 11.8 but it is still within the power of a 4 inch scope. To my eyes this nebula reminds me of the planetary nebula M97 in Ursa Major, after I saw it. I read this description of NGC6781 in the *Observer's Handbook 1999* and I agreed with it. This planetary will take a little more time to find but it will be worth it.

The next object to try to find is a real beauty (as Bob and Doug would say!!!!....so who remembers Bob and Doug, anybody????) It is called NGC6946, a galaxy in the constellation Cepheus. It is a faint object in a 4-inch scope but with dark skies it is quite nice. This galaxy is a easy sight in an 8 inch scope but a larger scope will show the distorted shape of this object. I saw it as a very open-armed spiral with a bright center and very long arms on either side of the nucleus.

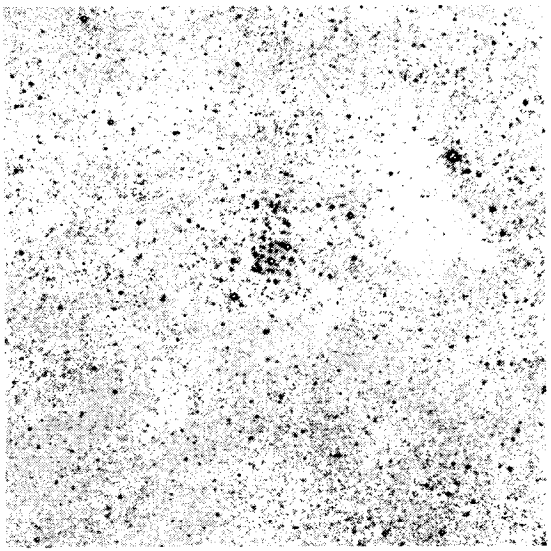


NGC 6946 below and NGC6939 above. All illustrations are from the Digital Sky Survey/



See what you think it looks like. The lucky thing with this object is there is a very bright and very nice open cluster right next to it, in the same eyepiece field. This cluster is called NGC6939 and with a magnitude of 7.8, it is visible to a person with binoculars from a dark sky sight (at least 9- or 10-power, I mean). This cluster has about 80 stars in it so it looks very nice in a scope of any size. Both of these objects are shown in *Uranometria 2000* and on chart # 8 of *The Peterson Field Guide to the Stars and Planets.*

The next object is called NGC6520. It is a easy binocular object in the constellation of Sagittarius. This one is visible in 10x50 binoculars from a fairly dark sky sight. (I myself saw it from behind a few bins on my dad's farm with a pair of very bright lights right behind me). It was a very nice nebula with a pair of stars right next to it and one star right in the center of it. With a very easy magnitude of 8.1 this object is shown in *Uranometria 2000* and also on chart # 42 in *The Peterson Field Guide to the Stars and Planets.* This object should be visible from just about anywhere you want to look from.



In this negative view, the diffuse nebula is the 'white' smear at right centre.

Well this is all for now. See you next month. Good luck with all of these objects in this article. Also don't be afraid to try some of the brighter objects with a smaller scope or binoculars. You can see many them with smaller instruments.

Clear skies, and Good Day, eh?

Locations of objects in Scott's article

Object	RA & Decl. (2000)	Mag.	Type	Constellation	Uranometria Chart No.
NGC6572	1821.1 +0651	9.0	Planetary	Aquila	204
NGC6781	1918.4 +0633	11.8	Planetary	Aquila	206
NGC6946	2034.8 +6009	8.9	Galaxy	Cepheus	32
NGC6939	2031.4 +6038	7.8	Open Cluster	Cepheus	32
NGC6520	1803.4 -2754	8.1	Diffuse Nebula	Sagittarius	377

Observing Geostationary Satellites

by Rick Huziak

About 22,400 miles (35,800 km) about the earth's equator, sit 791 geosynchronous satellites (as of June 12, 1999). Almost every day, a new launch puts yet another satellite into the tiny remaining gaps between the other satellites already there. Quick math shows that there are 791 satellites / 360 degrees = 2.20 satellites per degree. Geosynchronous space is indeed a crowded place!

In geosynchronous orbit, a satellite revolves around the earth exactly one time every 24 hours, so despite traveling at over 4,600 kilometer per hour (1.3 km/sec), the satellite appears to be locked directly above one point on the earth's surface. Geosynchronous satellites thus become very valuable to their owners, since the satellite can broadcast and receive 24 hours a day, unlike low orbit satellites that can generally be seen above the horizon for 16 minutes or less for each 96 minute pass. Geosynch satellites are used daily for overseas and long distance telephone calls and data transmission, television broadcasting, weather monitoring, earth resources imaging, and for *spook stuff* - spying! (The US, Russia, NATO and others use geosync satellites to look for ICBM contrails, listen to telephone conversations, etc.)

The exact orbits of these satellites fall into two main categories: ***geosynchronous*** and ***geostationary***. Most people who think about these satellites imagine them in a true circular orbit around the earth. In this mode, the satellite is *geostationary*. However, this is not a very easy orbit to maintain since it requires very precise speed matching during launch, and then a lot of fuel consumption to keep the satellite there due to constant tugging by the moon and the sun. Expending the limited fuel to tweak the orbit to keep it *perfect* takes a log of '*housekeeping*' on the controller's part and limits the useful life of the satellite, since the amount of fuel is limited. To avoid this scenario, most satellites are *geosynchronous*, and appear to do a small figure-8 dance about a point in space. This figure-8 is actually a slight oscillation or wobble that keeps that satellite *almost* above the same point and saves fuel, but the tradeoff is that the ground station has to. have a tracking antenna to receive signals. (Some satellites oscillate as much as 4 degrees above and below the equator. A typical antenna beam width is about 1/2 degree). With so many satellites that close together, electronic interference becomes a concern, but this is generally overcome by having side-by-side satellites transmit in different frequency bands (generally Ku- or X-band) and at different polarizations.

Note that low-earth orbit satellites we see with our naked eyes are generally not satellites at all. They are mostly expended rocket bodies. Except

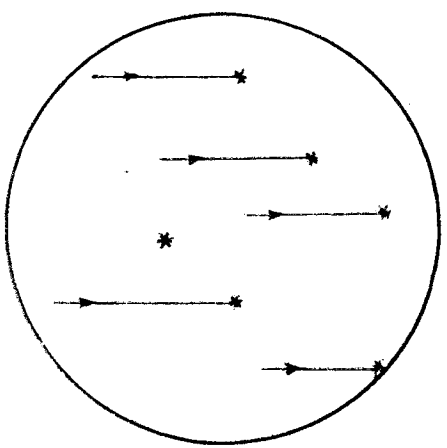


Figure 1 - In an untracked telescope, geosynchronous satellites stay fixed in the eyepiece, even at high power, as the stars float by!

for very low orbit satellites (generally spy satellites!), the satellites are too small and thus too dim. However, using a telescope changes the situation with it's superior light gathering ability. It's rare that a night goes by where I don't see several satellites cross the fields of the variable stars or galaxies I observe. One hundred times further out into space are the geosyncs, but despite their extreme distances, they *might* be seen with a reasonable sized telescope. This is due to some fortunate circumstances: they are generally very large - often the size of a train boxcar, sunlight illuminates the bodies, antennae and solar panels virtually head on, and they are stationary in an untracked telescope eyepiece.

I had seen photographs of these satellites taken with untracked tripod mounted telephotos lens in hours-long exposures, but how faint were they really? Could they be spotted visually? Well, yes! My first view a geosync satellite was on the evening of July 6/7. Doing some basic math (see figure 2) will show where in the sky to find geosyncs, and as it turns out, looking directly on the south meridian, the satellite will be located at 7 degrees 25 minutes *below* the celestial equator as seen from 52 degrees north latitude. I took out my Uranometria, found a locatable asterism at -07 deg 25' and pointed Eetook (our 12.5 inch reflector) to that part of the sky. There shone a 13th magnitude satellite, dead steady in the field as the other stars moved by! Scanning the telescope left and right, between earth longitudes of about 102 degrees and 107 degrees West, I found 3 other satellites between 13th and 13.5 magnitude, each a degree or two from the last! Chances are that one of these satellites is Canada's Anik C1, though I could not identify them for certain.

In the next few days, I showed these little gems to Al Hartridge, Darrell Chatfield and Andrew Krochko. We were all amazed at how the satellites stayed fixed in a high power telescope field while the distant stars whizzed by! Anyone with an 8-inch or larger telescope can find these satellites with a bit of luck! Over the next few months, I hope to map, photograph and identify all the geosync satellites visible from Saskatoon!

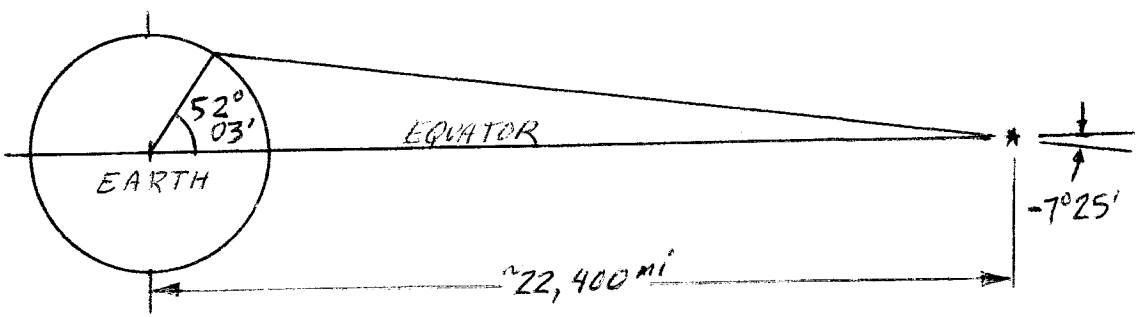


Figure 2. Geometry of geosynchronous satellites as visible from Saskatoon.. Not to scale.

Good Observing (Finally) at the Sleaford Observatory (July 13)

by Darrell Chatfield

Do you remember the song kids used to sing "R*ain, rain, go away, come again some other day"*? Well, someone must have been singing that tune a lot, because it finally got nice on this particular evening. If you can believe it, there was NO rain, NO clouds, and eventually NO aurora.

I had arranged to meet Rick out at Sleaford to go observing, which we did around 10 p.m.. Rick had brought out Andrew Krochko for the evening, so we started observing. Rick used Eetook, and Andrew used Rick's homemade 10" Dobsonian, while I used my 10" Meade. This proved to be an excellent evening, because it was also quite warm , and also quite dark. We could see the division in the Milky Way very easily.

Rick was observing his usual "18" magnitude galaxies (actually 14-15 mag.), and could see them easily. He had Andrew and I over to look at the same things, just to test our observing skills. Later on, we all were looking at objects called 'geostationary satellites'. These things were very interesting, because as you observed the background stars move, the satellite was stationary. It almost made us dizzy, because your eyes wanted to correct this situation to make everything move.

Andrew was busy trying to use the 10" scope and find objects on his own. He laid on our deck to observe overhead with his binoculars, which afforded him the thrill of finding Uranus, and then being able to see it naked eye! M33 was quite a sight, with the outer arms visible, and some other obscure NGCs imbedded around the area.

Meanwhile, I used my 10" scope to pick out some NGCs and Herschels. I was hunting objects in Ursa Major, and Cepheus. NGC 3079 was a very nice edge on galaxy, easy to spot and silvery-gray in color. NGC 4026 was a peculiar galaxy in Ursa Major, because it looked like a contact lens. Even though it was small, it was worth looking at.

Anyway, 3:00 a.m. rolled by pretty quick, so it was time to leave. I left Rick and Andrew at the site, feeling we all had an excellent observing session. See you all soon.

It's never the wrong time to join the Saskatoon Centre

Note: membership renewals or new memberships received from now on will be carried forward to the 1999-2000 year.

Membership runs from Oct. 1 to Sep. 30.

Please send payment to the Centre mailbox.

Regular - $40.00

Youth - $22.50

Life - $720.00

The Messier, FNGC & H-400 Club

MESSIER CLUB

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

Bob Christie	(applied!!)	110
Wade Selvig		64
Erich Keser		51
Tyler Cottenie		33
Stan Noble		28
Brent Gratias		26
Terry Nelson		21
Les & Ellen Dickson		20
Brian Friesen		15
Ellen Kaye-Cheveldayoff		11
Andrew Krochko		4

FINEST NGC CLUB

Certified at 110 Objects: Rick Huziak

Dale Jeffrey -COMPLETE! (& applying)	110
Gordon Sarty	97
Darrell Chatfield	95
Scott Alexander	83
Sandy Ferguson	...23

HERSCHEL 400 CLUB

Certified at 400 Objects: not yet!

Rick Huziak	329
Darrell Chatfield	180
Gord Sarty	130
Scott Alexander	70
Sandy Ferguson	...18

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!

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!

Despite the perpetual twilight, there has been a lot of observing this month, with *Dale Jeffrey completing his Finest NGC list. - Congratulations!!* Darrell Chatfield, Scott Alexander and Gord Sarty continue the race in the FNGC & H400 Club. I'd also like to welcome two additions to the Messier Club - new members Andrew Krochko and Ellen Kaye-Cheveldayoff. Andrew is a U. of Calgary student, spending this term in Saskatoon. He is a keen observer. Ellen is also a student, living this summer and fall with her grandparents in Blaine Lake. Originally from Oak Ridges (Richmond Hill), Ontario, Ellen can't get over the size and the darkness of the prairie sky and loves the naked eye sight of easy-to-see (verses Ontario views) M31 & M42. She has binoculars and a 4" SCT.

Send observing numbers to <huziak@SEDSystems.ca>

University Observatory Hours for Public Viewing

The U of S Observatory is open to the general public every Saturday evening. Admission if free. The observatory is located on campus, one block north of the Wiggins Avenue and College Drive entrance.

Hours: August 9:30 p.m. - 11:30 p.m.

On clear evenings visitors may look through the 6-inch refractor to view Venus, Mars, the moon, star clusters and other exciting astronomical objects. For further information, phone the recorded Astronomy Information Line at 966-6429.

You are invited to the

General Meeting of the Saskatoon Centre

Monday, September 20, 1999 at 7:30 p.m.

Conference Room, National Hydrology Research Institute building
Innovation Boulevard

Presenting:

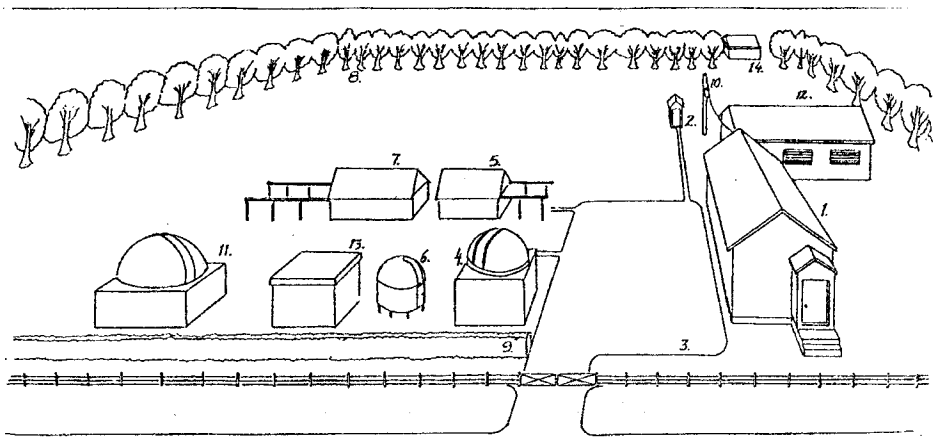
How Cypress Hills Went

by Erich Keser, Rick Huziak, Sandy Ferguson and other Saskatoon Centre Members

Note: The September meeting date MAY be changed to accommodate a Dr. Peter Bergbush who will be in Saskatoon. The meeting date will be announced formally in the September newsletter. Stay tuned!

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

ASTRONOMY



The Sleaford Observatory

***Longitude:* 105 deg 55' 13" +/- 13" W *Latitude:* 52 deg 05' 04" +/- 08" N**

by Rick Huziak

Fundraising

If no news is good news, things are going great. We have not heard back from either funding submission to date, but this is not unusual. Funding schedules rarely coincide with application dates. So it's hurry up and wait for now. In the mean time, we are planning more submissions for more funding - after all, our ambitious plan requires $75,000 more than we have! We can use ideas for corporations to approach. We also need ideas for sustainable funding in order to cover yearly operating expenses at the observatory, which will be several hundred dollars per year.

Construction

Our construction has stalled, due to poor weather, but mostly due to a pause in the action to plan SSSP'99, since many of the construction workers are also the SSSP planners. We plan to begin construction at Sleaford as soon as Cypress is completed. Because new funding has not come through yet, we will most likely have only enough money this year to complete the work in the warm-up shelter, toilet facility and warm-up shelter. The construction of the 16-inch telescope dome will begin in the spring of 2000 if funding comes through. Due to bright skies, usage of the site was down in June to 0 users (first time we had a blank month!), but bounced back to 9 visits in July.

However, don't be shy about volunteering for small jobs at the site before Cypress occurs. There are a number so jobs that can be done by one or two people in a few hours (see the list in the May newsletter). Call Bill or Darrell to ask what you can do!

Schoolhouse Clean-up & the Friends of Sleaford

At the end of July, Bill Hydomako and I cleaned out all of the (useful) junk in the schoolhouse, and threw out the useless stuff. Part of the useless stuff was a *dead skunk* that somehow wandered into the

school and died! Things were just fine until I discovered it and moved it - then it began to stink! All of the junk was moved back into the warm-up shelter, cold storage, observatory and extension for now, because the Friends of Sleaford will be soon doing major renovations inside the school, including varnishing of the floor and mouse-proofing the main floor, in a restoration and preservation effort.

University News

The roll-off observatory continues progress. At the end of July, Bill Hydomako, Darrell Chatfield and I installed and rough-aligned the University's C-14 telescope. This is the first of the 4 telescopes that will be available by the end of August. The other 3 scopes include a brand new Meade LX12, a Meade 8, and a smaller Zeiss refractor. Bill and I have volunteered to align these scopes along with the C-8 in our Patterson dome, hopefully in time for the first U of S Astronomy Lab which is scheduled to go on August 20 or 21. Stan Shadick has convinced me to become a lab assistant to help the new students operate the equipment and observatory and to get them through the complexities of photometry and spectroscopy. This will be a challenge for me as well, since I have never done photometry or spectroscopy, but the rest of the job should be old hat! This will also enable me to learn the use and maintenance of the scopes and equipment in the roll-off and pass this training onto members that would like to use the equipment in off hours.

Stan Shadick has also asked if we might be willing to lock the main gate at the observatory in order to limit access to the site by passersby and provide a bit more security. After much discussion we decided that the best solution would be a combination lock on the gate, and to the provide the combination to *all* RASC members and UofS lab demonstrators. This would have the effect of limiting access to site by non-users, though it is unclear if it is desirable from a community access point of view. No final decisions have been made in this regard. Opinions on this problem are welcome from members. (Call Rick or Erich).

Telephone

Calls from the Sleaford Observatory into Saskatoon are no longer long distance, but calls from Saskatoon to Sleaford still are! No one is quite sure of why this is at the moment, but I will be checking with SaskTel to find out. If the situation remains this way, it will be more convenient for site users when they can make emergency calls quickly, or also call back to inform other observers how good the site is that night!

Outside Pier for a C-8

To accommodate a 5th telescope for U of S labs, we have agreed to install the old Patterson/Williams C-8 pier outside, just to the east of the warm-up shelter. A telescope must be installed and removed nightly, and the pier will provide reasonable alignment for general observing. It will be sunk into the ground in a sand-packed post hole, so that it can be easily removed if a new building is erected there. Power will be run by a temporary extension cord.

Minutes of the General Meeting

Monday, June 21, 1999

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

recorded by Al Hartridge, Secretary

1. Meeting called to order at 7:30 p.m.
2. Astronomy Day Report: Brian Friesen stated that there was a good turn out and that there was a good group of volunteers.
3. SSSP update:

- new dates for future SSSPs has not yet been settled.
- every second Tuesday there will be a meeting at the CAA building. The next meeting will be on June 27th.
- registration stands at 89 people, the block of rooms has been sold out.
- publicity brochures are readily available.

4. Books and Calendars for SSSP:

- A motion was made, seconded and carried that we allocate $500.00 of funds toward books and calendars for sale at the SSSP. The funds are to come from general accounts if necessary, but must be paid back by SSSP.

5. Presentations at Star Party: There will not be as many this year.
6. Sleaford Report: The fund-raising brochure for the new observatory is now ready. It can now be sent to possible donors including National.
7. Youth Activities: have concluded for the year. The barbeque was canceled this year. Sandy is looking for someone to take over the older group.
8. Summer Activities:

- star night for Colonsay, possibly in September on a Friday with the following Saturday as a rain date.

9. New Business:

- general assembly, no one is attending this year, largely because of the tremendous costs involved. A letter will be sent indicating that the price is too high for this GA.
- Ed Kennedy has received a call from a member of the Ottawa Centre who is concerned about a conflict of interest with National. It seems that the legal advisor is also chairman of the Constitutional Committee and also the Treasurer.
- Presentation: Rick Huziak spoke about School Presentations - this was interrupted by a power failure at the very end.

10. Meeting adjourned at 8:30 pm.