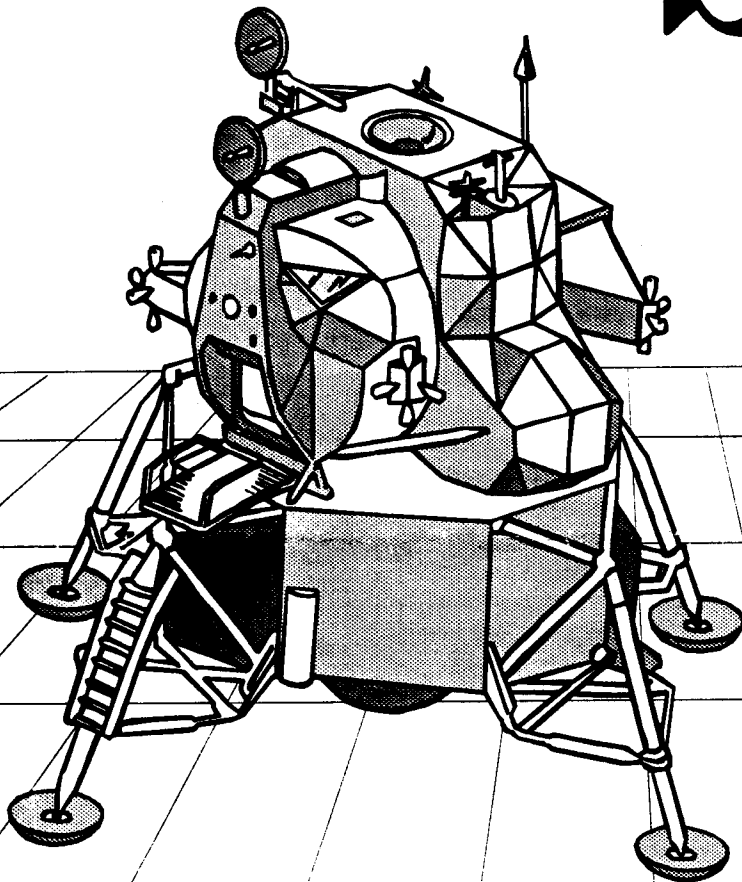


# Saskatoon Skies



Volume 27,  
Issue 09  
September 1996

## SPECIAL ANNOUNCEMENTS

COME TO THE MEETING AFTER THE  
SUMMER BREAK, SEPTEMBER 16TH  
IN THE USUAL PLACE.  
ROOM A-226  
HEALTH SCIENCES BLDG.  
U OF S CAMPUS  
8:00 PM

Saskatoon Skies is published monthly by the Saskatoon  
Centre of The Royal Astronomical Society of Canada

**IMPRESSIONS OF THE 1996  
CYPRESS HILLS STAR PARTY  
BY RICK HUZIAK**

The First (hopefully) Annual Saskatchewan Star Party was held July 12 - 14 at the beautiful Cypress Hills Provincial Park. Organization of this event was mostly done by Erich Keser, who, earlier in the year met with the Regina Centre, who had been going to the park annually for several years. Erich's hope was to turn this into a truly Saskatchewan Star Party.

For those who have never been to Cypress Hills, it's one of Saskatchewan's best kept secrets! The park is divided into two separate sections, a smaller park just south of Maple Creek, and a second, larger wilderness park 25 km to the west, which straddles the Alberta border. Our star party was held in the 'just south of Maple Creek' park. The drive from Maple Creek southward takes you higher and higher into the hills, until, surprisingly, you find yourself in a nest of Lodgepole Pines, and a very scenic park. All the main camp grounds are in these pines, and you'd swear you were in the Rockies, if you didn't know better. The park has serviced and non-serviced sites, a small lake for fishing, boating or paddling, a heated pool, modern services, a restaurant, and cool interpretive walks. For wildlife lovers, there are tonnes of birds, deer, squirrels and moose. (I enjoyed the park so much, I took my daughter camping there two weeks after the star party). Cypress Hills is the highest point in Canada east of the Rockies. The park is 456 kilometers from Saskatoon. I made it in 4 hours and 5 minutes, though very few attendees expressed interest in catching a ride with me next year!

Getting together at the park was a bit of a problem as we all had individual camp sites scattered around a bit, but at least most of us were in the same general campground, making group lunches and discussions about the observing-to-come reasonably easy to do. The first evening, we set up at a remote corner of the park called Lookout Point; Regina's traditional observing site. The site proved to be

pretty good. It WAS remote, so we had little interference from others, but it was open to the wind and presented a bit of travel time when we shuffled kids and family members around to and from the site throughout the night. This was, however, very dark, and the great rifts and dark clouds in Cygnus were very obvious to the naked eye.

The first night was spent shuffling from scope to scope to enjoy each other's views for Comet Hale-Bopp, the globular, Pal 8, Jupiter, Saturn, a great number of Messier objects and the wonders of the Sagittarius Milky Way. (The views of this area through Jenica Dyck's binoculars were phenomenal)! Although hampered by cirrus clouds from nearby thunderstorms, some of us braved the entire night from sun down to sun-up, for which were rewarded at the end by being able to see 7 of the planets in the sky at the same time! Jupiter was setting, along with Uranus and Neptune, Saturn was high in the south, and Mars and Venus were just rising in the east. Look down, and there was the good old earth! Only Mercury and Pluto were absent. The second day greeted us with a steady rain, and the Doubting Thomas's of the group had already written the weekend off by 10:00 a.m! I kept repeating the Saskatchewan chant..."This is Saskatchewan.

If you want a change in the weather, just be patient and wait 5 minutes!". Sure enough, by early afternoon the skies cleared. Many of us had decided to move to a group campground so we could all be together, and we also decide to move the observing to the group campsite so we could set up equipment early and leave it set up. As the sun set, a ground fog appeared in the campground, and two playful adolescent moose pounced around in the field, not 50 meters from us!

The second night was much better, in that the sky remained clear, but lingering moisture from the morning rain caused severe dewing problems for the Schmidt-Cassegrain people. Those of us with Newtonians were far less affected, though it did require constant wiping of my (cheap) eyepieces, and my books and charts were soaking wet. Despite the moisture, the sky was great, and I spent the night looking for elusive planetary

nebulae, diffuse nebulae and Barnard's dark nebulae, several of which I was able to find because of the excellent transparency. Most people who showed up the first night also returned the second night, including the park's conservation offices, who spent far more time at the scopes than at 'conserving'.

By Monday, most of us had to leave, but Erich Keser and John Leppert stayed behind to enjoy an even better Monday night, which was clear, dark and far less moist than the night before. Below are the Cypress Hills attendees. All in all, we had 19 people (Centre members and family) attend the First Annual Saskatchewan Star Party. The turnout is very encouraging, as this was simply a fact-finding star party. We didn't advertise beyond Regina and Saskatoon.

Regina Centre: Ross Parker, Darcy Kozoriz, Steve Szuta, Les Walker (non-member).

Saskatoon Centre: Stan Noble and sister, Nancy, David Cornish and family, Kim Mysyk and family, Erich Keser and family, John Leppert, Jenica Dyck and "DW", Rick Huziak.

The award for the farthest trip goes to John Leppert, who drove all the way from Sarles, North Dakota to be there, stopping "on the way" in Saskatoon, to check out the new Centre he had just joined! A close second is Jenica Dyck, who's trip from Christopher Lake, SK also rates as a fine achievement of long distance road-manship!

I'm looking forward to next year's expanded star party. Hopefully it will include participants from all over western Canada and the northwestern US.

**How to Reach  
The Editor**

*If you have an article or an ad or picture that you want to submit to the Saskatoon Skies please mail them to the address below. If you have any questions please call. Check the last issue of the newsletter to find out when the deadline is to make sure you don't miss getting your submission put in the issue you want it in.*

**The Editor**  
522 Devonshire Crescent  
Saskatoon, Sask  
S7L 5W1  
(306) 384-1807

clude participants from all over western Canada and the northwestern US.

**PERSEIDS AT BEAVER CREEK  
BY RICHARD HUZIAK**

While many Centre members were viewing the Perseids from Douglas Provincial Park, I was busy giving Perseid presentations and interpretive sessions at the Beaver Creek Conservation Area. Beaver Creek extended their operating hours until 11:30 p.m. to allow Saskatonians the pleasure of observing the meteors from a dark sky. I was delighted at the turnout. On Saturday night, about 75 people attended my talk, then viewed the Perseids for the next 1-1/2 hours. On Sunday, the night of the peak, 100 people attended (standing room only for Beaver Creek!) my talk, but afterward, increasing cloudiness spoiled the best views of the shower. Undaunted, though, the vast majority of the crowd remained to the bitter end, and "ooh'd and ah'h'd" when the bright ones broke through the holes in the clouds. BCCA interpreter Keri was kept busy chasing those out of the bushes who had decided to do more on their backs than watch cloud-ridden meteors, and interpreter Kim ran around all night making artificial meteors with wintergreen Lifesavers. Me, I just told stories of the "big ones" - the showers of the early '80's which were far more impressive than the

Perseids of the last few years. In spite of it all, the general crowd was impressed with the shower and were rewarded both nights by excellent passages of the MIR space station as the consolation prize. I was also impressed with a couple who came all the way from Hudson Bay, SK, just to hear me speak. (No, Erich, it wasn't my parents!).

For those of you who counted meteors, this shower can only be rated as an average or below average shower. In actual properly determined single-observer counts, I got a rate of 22 meteors per hour on Saturday night, which implies a rate of approximately 50-60 meteors per hour at the peak on Sunday, which was too cloudy to do useable counts. On Monday night, the night after the peak, I counted a rate of 28 meteors per hour. The shower can be rated as "OK", but not spectacular by any means. The shower also seemed to produce almost no significant fireballs, at least on a consistent basis, as it did two years ago.

Doing the presentations at BCCA was very rewarding. The large turnout was greatly appreciated, as was the warm hospitality and helpfulness the staff interpreters.

Richard Huziak, Manufacturing Engineering  
huziak@sedsystems.ca

**STAR PARTIES BOTH  
NEW AND OLD  
BY ERICH KESER**

Dear fellow Naturalists of the Night,

It's official. Last night, a well-attended special executive meeting of the Saskatoon Centre of the RASC confirmed the date and general form of the Saskatchewan Star Party at Cyprus Hill next July 4th -6th, and this morning the deposit to rent the Parks 200 seat Recreation Hall for the whole of Saturday July 5th was mailed off.

Within minutes of my confirming the booking by phone, Brad Mason the Park Administrator called back to ask what

they can do to help us make the event a success. He was very understanding of the need to block off a large area (probably the Meadows overflow area) and to prevent unnecessary lights, and was also excited about the possibility of our putting on a separate Star party for the general public up at Lookout Point.

Even at this point, ace observer Fr. Lucien Kemble has indicated a willingness to speak, and Murray Paulson of the Edmonton Centre has offered to conduct his popular Binocular Starwalk. Kim Mysyk, a Geologist and lifetime member proposes to discuss the MORP Fireball recovery project and to conduct a hunt for fireball remnants, and several other speakers have expressed strong interest.

For those of you who don't know this wonderful Park, it is a uniquely attractive venue. It's 1200 metre height saved it from the ravages of the last Glacier, and left it as a beautiful, elevated island of lodgepole Pines at the southwest corner of Saskatchewan.

As a place to vacation, it has everything, from lots of wildlife and birds (but no bears or cougars) and space to hike to every conceivable recreational facility (a beach, small lake, swimming pool, sauna, hot tub, riding stables, golf and mini-golf, snack bar and restaurant, grocery store, rental rooms at the park lodge, rental cabins, trailer hookups and showers, as well as more laid-back campsites between the pines). It also (unusually for Saskatchewan parks) has very few lights, and all these facilities are well and tastefully distributed. It's a great place to bring the whole family; they'll have lots to do while the more fanatical of us are glued to our scopes and discussions..

Already this past summer, the barely advertised pilot run of this event drew a total of 23 people from as far away as North Dakota. On Friday night, we set up at Lookout Point, as Regina Centre, the real source of this idea, has done for some years now. On Saturday and Sunday we got together from our scattered campsites for two nights of magnificent seeing in the Meadows area, where we (and especially the kids) could interact.

It was a wonderful weekend, and all those who came this year are eager to come back.

**Advertising Info**

Commercial advertisers are encouraged to advertise in the *Saskatoon Skies*. Your ad will give you access to all Canadian members of the Royal Astronomical Society.

Commercial advertising is accepted in the *Saskatoon Skies* with three sizes of ads available. Artwork must be camera ready and supplied by the advertiser.

One quarter page.....\$25.00  
One half page.....\$39.00  
One full page.....\$50.00

For further information please contact me or mail your questions to the address below.

The Editor  
522 Devonshire Crescent

Next year we will have a sizable hall, complete with kitchen stage and wash-rooms for talks, slide shows, photo displays and contests, swap meets, or whatever anyone wants to suggest (pot-luck meals and a pancake breakfast have already been proposed).

However, we will very much need your help -as well as ideas- to make this event a success. Our Centre has a lot on its plate already, from finding, acquiring and developing a new observatory site to the many regular activities we carry on throughout the year.

The Saskatchewan Star Party at Cypress Hills is an idea whose time has come. Please stay in touch, talk it up, and do what you can so we can all make it happen!

**1997 SKYWATCHER'S  
TRIVIA CALENDAR  
BY STAN SHADICK**

Stan Shadick  
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Physics  
116 Science Place  
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Saskatoon, Saskatchewan  
Canada  
S7N 5E2  
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email: shadick@sask.usask.ca

**1997 Skywatcher's Trivia Calendar**

Stan Shadick's Skywatcher's Trivia Calendar is now available. The calendar contains monthly starmaps with a Canadian horizon scene. The maps show those constellations visible in the evening above a particular compass direction. Each date in the calendar grid has an approximate 40 word commentary about some celestial feature that is depicted on the map. Extra spaces in the calendar grids is filled with maps of planetary conjunctions and astrophotos taken by Al Hartridge. There are monthly trivia questions and a year-end trivia challenge. Six extra pages at the front and back of the calendar include

an astronomical glossary, lists of RASC clubs, internet sites and answers to frequently asked astronomical questions. A special feature discusses viewing of Comet Hale-Bopp from January to April, 1997. The graphics were designed by another Saskatonian Brian Smith. The calendar was published by Fifth House in Saskatoon.

Stan Shadick will bring copies of the calendar to the September RASC meeting. If you want to reserve a copy, phone him at 652-5975 or email: shadick@sask.usask.ca. Cost is \$16 including tax. Go for it!!!!

**A LOT OF GOOD STUFF  
BY RICHARD HUZIAK**

**NOTICE OF GENERAL MEETING**

Everyone is invited to attend the next General Meeting of the Saskatoon Centre of the Royal Astronomical Society of Canada. The presentation will consist of several members relaying their experiences of summer activities, such as The Cypress Hills Star Party, The Douglas Prov. Park Star Party, the Sarles Star Party and others. members are encouraged to bring their slides and pictures and give short presentations on their summer astronomy experiences.

Please contact Rick Huziak if you intend to speak so we can assure you have proper AV equipment on hand.

**Monday, September 16, 1996  
Room A-226  
Health Sciences Building  
U of S Campus  
8:00 p.m.**

Executive members are reminded that the Executive Meeting begins at 7:00 p.m. in Room B-10. The October 21 meeting is the Annual Elections of the Centre executive. Details will appear in the October Newsletter.

**Calendar of Upcoming Centre Events**

- Sept. 14** Northern Lake Starparty - call Dave Cornish
- Sept. 16** General Meeting - call Rick Huziak
- Sept. 26** Total Eclipse of moon - be at meeting or see for details
- Handbook** General Meeting/Elections - call Rick Huziak
- Oct. 21** Orionid Meteor Shower Peak

**1996 Calendar Boo-boo**

Erich Keser pointed out a abit of a problem with the 1996 RASC Calendar. Has anyone else noticed that the 1995 and 1997 calendars on the back page are totally incorrect? It seems that a production error accidentally copied calendars from another year. Oops! Don't use the back page for anything important, like your wife's birthday!!

By the way, the new 1997 (hopefully corrected) RASC calendars should be available for purchase by the October General Meeting.

**Membership Update**

As always, we have address changes and new members throughout the year. For those of you who are keeping track here goes:

**New Members:**

John Leppert, RR#1, Box 25, Sarles, ND 58372-9618, ph. (701) 697-5225

**Membership Info**

*Membership in the Royal Astronomical Society of Canada and the Saskatoon Centre is open to anyone and has many benefits.*

*Below are the prices for memberships. Should you require additional information please contact Rick Huziak at 665-3392.*

- Regular membership (21 & up).....\$40.00*
- Youth Membership (21 & under)....\$22.50*
- Club Newsletter (12 issues).....\$10.00*
- Observer's Handbook.....\$18.95*

*Note: Lifetime memberships are available o.*

John Leppert, RR#1, Box 25, Sarles, ND  
58372-9618, ph. (701) 697-5225

Ron Schnor, 2510 Wiggins Avenue,  
Saskatoon, SK, ph.(306) 343-1256

**Address Corrections/New Addresses:**

Kevin Greggain, 1130 Avenue H North,  
Saskatoon, SK, S7L 2C9 Mark Moore,  
address unknown, Calgary, AB

Ed Kennedy, 1902 - 315 - 5th Avenue  
N., Saskatoon, SK, S7K 5Z8

Nelson Rystrom, Box #10, RR#5,  
Saskatoon, SK, S7K 3J8 Welcome new  
members!

**Centre Program Updates  
by Rick Huziak**

Everyone is reminded that they should contact Rick Huziak to register their hours for the New Observatory Site Search Program. If you have worked on any aspect of finding or developing the new site, make sure you get in contact to register the 25 hours you need to get a future key! See the July-Aug. issue for details.

Fireballs must have fallen over the summer, but I've received only one report of an AUDIBLE fireball from Dale Jeffrey. If you see a fireball, I am still taking reports. Call me at 665-3392.

Sky and Telescope gives a discount for members of the Saskatoon Centre for the magazine and Sky Publishing products. Please remember to renew through the Centre by mailing in your renewal card to the Centre PO box. We'll handle it from there!

**Important Info**

**The Rystrom Observatory**

*Members are welcome to use the observatory at any time but please phone ahead. Call Nelson or Gloria Rystrom at 955-2370 before 9:00 p.m. if you intend on going out. This lets them know that someone will be roaming around their yard. If they do not answer go anyway. Drive through the yard slowly, and dim your lights as a courtesy to others*

New discoveries are announced with Saskatoon Centre's "Quicknews" email service. Exciting new comets, novae, variable stars and other observing oriented details appear. Quicknews is emailed at irregular intervals as the new events warrant new alerts. If you'd like to subscribe to this service (free), email "huziak@SEDSsystems.call and in the message write "subscribe Quicknews". Internet browsers might also want to visit the Saskatoon Centre's home page at "<http://maya.usask.ca/~sarty/rasc/rasc.hti'a111>

**Richard Huziak, Manufacturing Engineering huziak@sedsystems.ca**

**NAMEKUS LAKE STAR PARTY  
SEPTEMBER 13TH & 14TH  
BY DAVID CORNISH &  
BOB CHRISTIE**

Yes, it is true some of us never get enough of Star Parties. So . . . Namekus Lake in Prince Albert National Park, 10 km south of Waskesiu on the old park highway #263, Sept. 13th & 14th we will be favored by a new moon, very dark skies, no street lights and an excellent southern horizon over the lake. Namekus is a small lake, great for swimming, snorkeling, canoeing (boats with motors are not allowed) and fishing. An outstanding golf course is only 8 km away with interesting shopping and activities in Waskesiu. There are 21 camp sites (\$10/night) with 6 sites for tents right next to the lake. Motor homes can be accommodated with no hook-ups. Excellent hotel and cabin facilities are available in Waskesiu. Bring your own drinking water. For those of you who will travel through Emma Lake and up the old (scenic and more fun) highway, Namekus Lake turnoff is approximately 33 km from the park entrance past Sandy Lake and Trappers Lake campgrounds.

With a little luck we may have a 17 1/2" Dobsonian, an assortment of other telescopes, dark skies and hot days, so come on out for the season's last Star Party.

For more details call David Cornish 242-7125, Bob Christie 931-2115. We hope to see all R.A.S.C. members there in force.

**SASKATOON RASC STAR PARTY  
SAT. BY DARRELL CHATFIELD  
SUN. BY BOB CHRISTIE**

Saturday, August 10, 1996

Our Center had its own star party in Douglas Park (close to Elbow), this year in conjunction with the famous Perseid Meteor Shower. Even though some members were there by Thursday, Eric Keser and I got down there by 6:00 P.M. on Saturday, Bar-B-Que and all. All members, except myself, stayed in the overflow area of the park.

After unloading and getting set up, we had a pot luck Bar-B-Que, which is a good way to get to know fellow members. Those present were: Erich Keser and family, (with good friend Susan and her son); David Cornish and family; Paul Ferguson and family; Kim Mysyk and daughter; Bob Christie and his wife; Gord Sarty and his wife; and myself.

Erich had previously arranged with the park Officials to have a public star party on the Saturday evening. So around 8:00 P.M. the park wardens brought 4 picnic benches to the middle of the overflow area for our use. However, the sky was clouded over (as usual), and we were worried about the outcome. Then around 10:00 P.M., the clouds parted in patches, so we took some smaller scopes to the designated area. To our surprise, about 100 people came out to view with us. We had Bob's C5 and large binocs, David's 4" and Paul's 3" finder.

Even though the sky was partly cloudy and not very clear, the visitors were very enthusiastic. We saw a few meteors, and some of the usual deep sky objects until 12:00 P.M. We all fielded questions on many aspects of astronomy from the public.

If that wasn't enough, club

members set up the big scopes by our campsite, including Erich and Davids C11's and my Meade 10". The sky afforded us pockets of viewing until about 3:00 A.M. Then it was time to pack up.

**Sunday, August 11, 1996**

After breakfast, some of us visited and others went to the beach area. It was a beautiful, clear day. Paul said that he could see Venus in the daytime! Of course, we wouldn't believe him until he showed us where it was. That was our first adventure into daytime astronomy. Later, Bob and Paul were wanting to see some Sunspots, so Bob set up his C5, with David's solar filter. After careful aiming, we were graced with seeing 2 groups of Sunspots against a blue Sun (as seen through the filter). Even the wives got in on this event!

Fr. Lucian Kemble came down from Lumsden on Sunday, August 11. He was able to show Erich and David how to polar align in the daytime. They even saw Polaris, Polaris B, and Antares in the middle of the afternoon. Later on in the evening, club members set up their scopes with hopes of a clear sky. However, it was again cloudy, and not very clear. The club did entertain a couple from Oregon who were making their way back home.

I guess the whole outcome of this event was deeper friendships with fellow astro-nuts (and families), another chance to share our common hobby with the public, and an idea of what the Douglas Park facility had to offer.

(P.S.: we are already planning our star party for next year, so stay tuned).

### **NASA FINALIZES X-34 CONTRACT WITH ORBITAL SCIENCES CORP.**

NASA has finalized its contract negotiations with Orbital Sciences Corp. (OSC), Dulles, VA, to design, build and test-fly the X-34, a small, reusable technology demonstrator vehicle. The 30-month contract is valued at approximately \$50 million. An additional \$10 million will be spent by NASA in direct support of X-34 by NASA

Centers and other government agencies.

NASA selected Orbital Sciences for the X-34 contract in June. The contract with OSC includes two powered flight tests scheduled to begin in the fall of 1998 at White Sands Missile Range, NM, that will occur within a period of four months.

The X-34 is a single-engine rocket with short wings and a small tail surface. The vehicle is 58.3 feet long, 27.7 feet wide at wing tip and 11-1/2 feet tall from the bottom of the fuselage to the top of the tail.

The X-34 will be carried aloft and launched from an Orbital Sciences L-1011 aircraft at the White Sands Missile Range, NM. It will complete the initial flights within the White Sands range air space and land at the facility's runway.

The fast-track X-34 program calls for demonstrating a vehicle that will be capable of flying at eight times the speed of sound and reaching an altitude of 250,000 feet. The vehicle will demonstrate low-cost reusability, autonomous landing, subsonic flights through rain, safe abort conditions, and landing in 20-knot cross winds.

NASA may exercise a contract option for up to 25 additional test flights, if required, during a 12-month period beginning immediately after the initial contract is complete. Flights would originate from either White Sands or the Kennedy Space Center, FL. The Florida location would be used to test the X-34's subsonic flight capabilities in weather conditions such as rain, high cross winds and fog.

The X-34 program is one of three within the Reusable Launch Vehicle (RLV) technology program managed by the Marshall Space Flight Center, Huntsville, AL. The others are the subsonic Clipper Graham test vehicle and the Mach 15 X-33 advanced technology demonstrator, scheduled to begin flight demonstrations in early 1999. The overall RLV program aims to reduce the cost of access to space by a factor of 10, and promote the creation and delivery of new space services and other activities that will improve U.S. economic competitiveness.

NASA centers and government instal-

lations involved in the X-34 program include the Marshall Space Flight Center, Huntsville, AL, which is providing design and development of the vehicle's main propulsion system; Langley Research Center, Hampton, VA, which is conducting key aerodynamics testing in its wind tunnels; Ames Research Center, Mountain View, CA, which is providing the thermal protection system for the X-34's leading edges and nose cap; White Sands Test Facility, NM, operated by the Johnson Space Center, Houston, TX; the Army's White Sands Missile Range, NM; Holloman Air Force Base, NM; and NASA's Dryden Flight Research Center, Edwards, CA, which is assisting with the flight test portion of the contract.

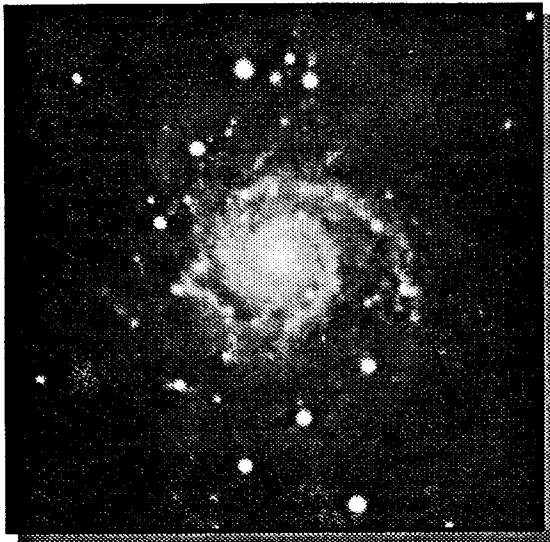
### **LETTER FROM THE EDITOR**

I hope that everyone had a summer full of clear nights and bugless days. I want to thank everyone who sent in some things for the newsletter. It sure was appreciated. I need lots of articles for the next newsletter so please don't be shy.....sit down and write about your astronomy experiences over the summer.

Next month is election time and if someone out there is crazy enough I will give up my position as editor and hand it over to someone else. It is not that I do not want to continue on, for I will, but I thought that I should at least see if anyone else wants to loose some of their hair for a change as mine is getting a little thin.

As long as I keep getting the cooperation that I have gotten on the last couple of newsletters I can keep on doing the newsletter, but I can still always hope for a volunteer who has no idea what they are in for. (oops, I mean all of the fun they will have)

So if someone out there is reading this and saying "Hey yeah....sure.....why not.....I could do that.....I think.....Yeah, sure I could!" then please come forward.....please!...Ed.



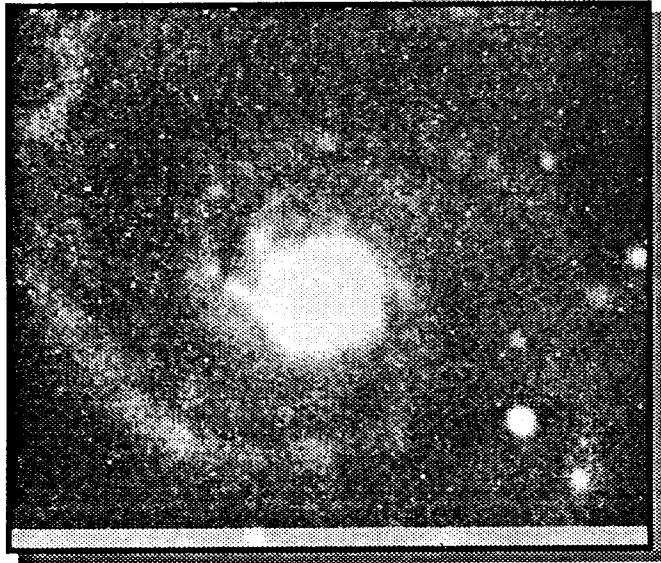
M-74

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**FOR SALE OR TRADE**  
One 10" F/5.4 Richfield Newtonian telescope on a Dobsonian mount. Scope also comes with a split ring equatorial mount. Telescope is made from Birch with Oak and Polished Brass trim. Scope has a 50mm finderscope with a fibre optic quick sighter. Scope gives pinpoint images and has been given the Rick H. seal of approval. Will sell for \$850.00 or will swap for a Cassegrain. Call Garry at 222-3120 for details.

**FOR SALE**  
For sale: One C-8" telescope with the wedge, a tripod and accessories. This scope is in excellent shape. For details call Darrell at 374-9278  
For sale: Astronomy magazines. Have the issues from July, 1986 to December, 1991. For information call Darrell at 374-9278

# ASTROPHOTO CORNER

September 1996

RASC SASKATOON CENTER  
**PHOTO OF THE MONTH**  
**M27 THE DUMB-BELL NEBULA**



M27 is considered to be the most conspicuous planetary nebula in the sky. It was discovered by Messier in 1764. This object is estimated to be about 900 light years distant and about 21/2 light years in diameter. It is easily seen in large binoculars and small telescopes. M27 lives in the constellation of Vulpecula and is easily found by moving due north of (straight up in declination ) from what I call the pointer star of the arrow Gamma Sagittae.

**TECHNIQUE:** Please excuse the quality of this photograph. This is the first photograph taken with my Celestron 14. The guiding is far from perfect and the focusing is very soft. This was taken at f7.5 on hypered Kodak 2415. The length of the exposure was 45 minutes. This photograph does not digitize well and I could not improve it much using the computer.

Notice the lateral lobes of the planetary which are easily seen on photographs but harder to see visually. These give the planetary an elliptical appearance obscuring the dumb-bell shape to some degree. On my first trip to Mt. Kobau these lateral lobes were very impressive visually through the C14 at this high altitude.

**Clear skies and gooding ----- Al Hartridge**