

Winnicentrics

The Journal of the Winnipeg Centre of the Royal Astronomical Society of Canada

2002 Montreal General Assembly – Winnipeg Centre Representative Report by Stan Runge

The 2002 Montreal General Assembly was a sharp contrast to last year's Space Odyssey theme of the London Centre. Holding their first G.A. in 42 years, this one was steeped in tradition and history. The event was held within the hallowed halls of McGill University, located deep in the heart of the city. So it was a fitting location for all the members of the RASC to have a chance to get together to discuss some of the most important issues in years. Those members who attended our Centre's June meeting, were able to see the pictorial display of all the GA activities. This report will focus on the events of the three main meetings.

First National Council Meeting

This meeting is one of a series of regular Council Meetings, held throughout the year, to discuss centre business. Although all members of the RASC may attend, only those on Council and the National Representatives may vote on the issues. It is usually the longest of the year, with six and one half-hours being scheduled to deal with all the matters at hand. It includes a review of reports from all the Executive members and the various Committees (Special and Standing). Here is a point-by-point summary of the more prominent items from this meeting:

- We have had inquiries from North Bay Astronomical Club and Lethbridge Astronomical Society with regards to the possibility of joining the RASC (we currently have 26 Centres).
- Evelyn Shoemaker – has become an Honorary Member of the RASC.
- There were two Messier and three NGC Certificates awarded (no Winnipeg Members though).
- The Executive Secretary reported the National Office receiving computer upgrades to maintain membership system, increased use of online ordering for products and memberships.
- The Treasurer reported that the RASC's rate of growth has slowed after a number of strong years; To achieve higher interest on our savings, he had arranged a 5 year term deposit for \$100,000;

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Deadline for the next issue is August 25



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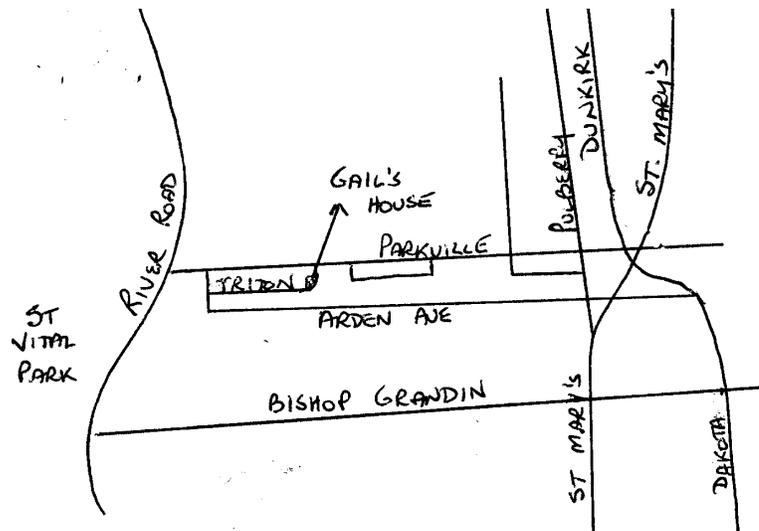
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July Our Annual Barbecue

Time: 6:30**Place: Gail's House, 81 Triton Bay**

**July
12
Friday**

Bring along some barbecue-ables, some drinks, and a lawn chair. Also bring along your spouse or significant other for a fun evening of eating, drinking and visiting. People usually arrive around 6:30 or so to start eating. The event continues as long as people want to stay and if it's clear we can take a look at the sun and the crescent moon.



August

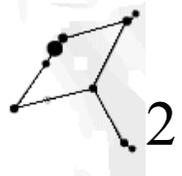
Note Date Change

Beginners Session 7:00
Regular Meeting 7:30

**August
16
Friday**

Because the SSSP falls on our regular meeting date, we will be having it on the third Friday.

On deck: "What's New" with Lloyel Hull, "Explore the Universe" Observing Certificate and Gail's "Constellation of the Month" looks at Aquila the Eagle.



Observing Sessions and Public Events

**July
20
Saturday**

Members Observing Night

9:00 p.m. to ???
Glenlea Observatory

Come out and work on your observing certificates, clear skies permitting. The moon is just past 1st quarter and we can identify the summer constellations. Bring your telescopes and binoculars and get advice from the more “seasoned” astronomers about telescope set-up, what to look at, etc.

Your hosts this month: *Robin and Gail*



**August
17
Saturday**

Members Observing Night

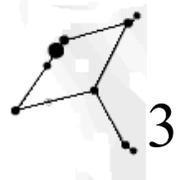
8:00 p.m. to ???
Glenlea Observatory

With the nights getting dark earlier now we can get out and find some of the autumn constellations on their way, and do some observing for your certificates. We may even catch a few stragglers from the Perseids meteor shower which peaked last weekend.

Your host this month: *Scott*



Coming up: September 14 at the Forks



Humans in Space

by Ray Philippe

This series takes us on a journey through time to explore the human race's quest for space flight.

Part 9

Continued from last issue

Soviet premier Nikita Khrushchev was smiling. All the recent firsts achieved by Sputnik and by the Vostok missions were a tremendous source of pride for the Russian people, and for Khrushchev they were a lusty political symbol of Soviet domination in space; they were proof that the Soviet system worked. These milestones included: first artificial satellite; first human in space; first human in orbit; and first woman in orbit.

By 1964, Soviet chief designer Sergei Korolev and his rocket team had begun working on Soyuz, a family of ships designed to dock in Earth orbit and then circle the moon with a crew of three. In this project an empty tanker craft would be launched into Earth orbit. Three successive launches would follow with spacecraft rendezvousing with this tanker and filling its tanks with kerosene and liquid oxygen. When the tanker was full a manned Soyuz with two cosmonauts would rendezvous with the tanker, dock with it and then use the tanker to boost them into an orbit around the Moon.

While Korolev wanted to start developing Soyuz immediately,

Khrushchev had other plans. The Soviets had access to western newspapers, so they knew that the objectives of NASA's Project Gemini included a number of would-be firsts such as sending a two-man crew into orbit, and performing docking and space walks in orbit. Not wanting his American rivals to take any kind of lead in the space race, not wanting to lose his political momentum, Khrushchev forced the chief designer into the Voskhod missions, thereby delaying Soyuz development.

But Voskhod did not represent much of a technological or logistical advancement over Vostok. The

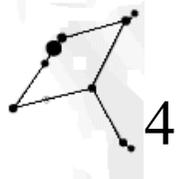


*The Voskhod
Spacecraft*

Voskhod ("Sunrise") spacecraft was simply a modified version of the Vostok. By pulling almost all non-critical equipment out of the Vostok spacecraft, the Soviets were able to squeeze three cosmonauts -- without spacesuits -- into the tiny crew compartment to achieve the space first of a multi-person crew.

There was no room for ejection seats, so the crew would have to return to the Earth's surface inside the Voskhod capsule, instead of bailing out and parachuting down as the Vostok pilots had done.

The first Voskhod crew consisted of Vladimir Komarov, a pilot from the



Vostok Program; Konstantin Feoktistov, a spacecraft engineer; and Borig Yegorov, a physician. Voskhod 1 was launched on a new rocket, the SL-4 Soyuz space launcher on October 12, 1964. Outfitted in track suits aboard the cramped spacecraft, the three cosmonauts reportedly had to diet so all could fit comfortably. In the Voskhod the cosmonauts performed medical experiments and took pictures. The Voskhod 1 made 16 orbits in 24 hours, then re-entered the atmosphere and parachuted to a landing 305 km northwest of the town of Kustani, Kazakhstan, with the crew aboard.

The second Voskhod was launched on March 18, 1965. The vehicle contained further modifications including an expandable airlock attached to the reentry module. Once again the SL-4 was used as the launch vehicle. Aboard the spacecraft cosmonauts Pavel Belyayev and Alexi Leonov prepared for the first human spacewalk. Unlike Voskhod 1, both cosmonauts were dressed in space suits for launch.

During Voskhod 2's second orbit, Leonov crawled into the airlock where he opened the hatch and floated out into space until he reached the end of his 5-meter umbilical cord. After ten minutes of extravehicular activity, Leonov returned safely to the spacecraft, but not without some difficulty and some panic. In fact, the EVA almost ended in disaster when Leonov was unable to reenter the airlock due to stiffness of the inflated spacesuit. He had to bleed air from the suit in order to get into the airlock. After Leonov finally managed to

get back into the spacecraft cabin, the primary hatch would not seal completely. The environmental control system compensated by flooding the cabin with oxygen, creating a serious fire hazard.

After 18 orbits and 26 hours, it was time to return to Earth. The cosmonauts found that the automatic reentry features of the Voskhod did not work and



Leonov: the first human to walk in space

Belyayev had to perform a manual reentry procedure. The procedure worked, but Belyayev had executed the burn 46 seconds too late! When the cosmonauts landed, they found themselves in the snow-

covered mountains amid many birch trees rather than on the treeless plains of Kazakhstan. The faulty retro burn had landed them about 2000 miles off course in the Ural Mountains in Siberia! The craft was wedged between two trees and rescue teams only detected it four hours later from the air. The cosmonauts got out of the spacecraft and built a fire and soon they heard some wolves so they hastily retreated back into the Voskhod where they spent a cold night fending off hungry wolves (luckily, the crew's survival kit included a hunting knife). The rescue team only



arrived on skis the next morning, and everyone had to spend another night in the woods before they were brought to safety.

The Tass news agency's official explanation was that Voskhod 2 did indeed land at the prescribed location, but that the two cosmonauts had decided to rest for two days after their tiring mission.

This was the final Voskhod mission. Voskhod's achievements included the first multi-person crew, the first crew in a shirtsleeve environment, and the first EVA (space walk). Although a Voskhod 3 had been planned, it was promptly cancelled at the end of 1965 and all Soviet efforts concentrated on the new Soyuz program to get cosmonauts to the Moon.

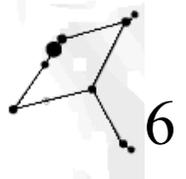
Continued in next issue



2002 Montreal General Assembly *continued from page 1*

We have been advised of changes to the Post Office fee structure resulting in significant upcoming increases of postal charges - for the Handbook of \$2.10 (~\$7000) and Annual Report (~\$2400). Council discussed ways to try to get these changed, but the short term results are increases in our costs of nearly \$10,000; A Teacher's guide was shown in the budget with an expense of \$14,500, but expected sales would mean this guide to be revenue neutral (see details in the 2nd Council meeting below); As it stands, there was a possible shortfall of \$12,000 but it is early in the revenue year, and too early to be concerned.

- Publications Committee- requested \$800 USD for Internet Banner advertising (motion - PASSED); Observer's Calendars sales in 2002 were up 10% to 5600; Observer's Handbook sales down 2.3% to 6384; the Beginner's Observing Guide sold 900; .the RASC eStore had \$14,000 in business;
- There is a new Journal Publications Manager - Dave Garner, replacing Dave Lane (Thanks Dave!).
- The Historical Committee is trying to arrange to have Our National President to meet with the Queen or her Representatives on the occasion of the 100th Anniversary of our obtaining the "Royal" designation (in 2003). Possible arrangements would be to meet her on this October's Royal visit.
- They also are making formal submission to Historical Sites and Monuments Board of Canada to erect two plaques marking the major sites where Venus Transits were observed - 1761 in St John's NF (to be erected in 2004) and 1769 in Churchill (to be erected in 2012). These plaques would coincide with the upcoming Venus Transits in 2004 and 2012.
- Constitution Committee identified the proposed (and mailed out) Bylaw amendments. These items were passed at the previous National Council Meeting and were to be voted on at the Annual Meeting. There was discussion, especially on the de-coupling. Despite their best efforts to resolve this item, there are still some unresolved issues with Unattached and Life member. The Toronto Reps. discussed their concerns over these outstanding items and how difficult it was to decide within their own Centre's Council meeting, as they have removed their previous support to the issue.
- There was also discussion of use of Proxies (used at the Annual Meeting), which caused controversy and will lead to future changes in format. For the meanwhile, National council suggestion for the Reps to vote exactly as indicated on ballot.
- The Observing certificate Committee reported success with promoting the new "Observe the Universe Certificate". Toronto Centre has awarded it to one of their members (the first awarded).



- The Nominations Committee identified their slate of candidates being:
 - President - Dr. Rajiv Gupta (Vancouver)
 - First Vice President - Peter Jedicke (London)
 - Second Vice President - Scott Young (Winnipeg)
 - Treasurer - Michael Watson (unattached)
 - National Secretary - Kim Hay (Kingston)
 - Executive Secretary - Bonnie Bird
 - Recorder - Heide DeBond (Toronto)
- The Light Pollution Abatement Committee reports that this area has become very active. We recently joined as a club member of the International Dark Skies Association. More Centres are trying to introduce the concept to their City Councils.
- Public Education – A discussion on the new proposed publication called “Skyways” was deferred till second Nat. Council meeting.
- Upcoming General Assemblies
 - 2003 is in Vancouver
 - 2004 awarded to St John’s, Newfoundland
 - 2005 suggested in Saskatchewan or Alberta, with idea of Regina or Saskatoon being promoted.

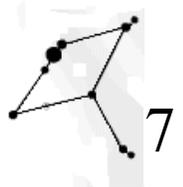
The Annual Meeting

This meeting is the focus of having the General Assembly, as it is the meeting for all members to express their views and vote on major issues such as Bylaw changes. The meeting began with abbreviated reports of all the Officers, Standing Committees and Special Committees from the First National Council meeting. Then came the major item, the Bylaw Amendments (remember, these were mailed out to all members with an opportunity to fill in a proxy vote – I received only one proxy):

- Item one - “Remote Participation in National Council Meetings” – allowing members to vote although they are not physically present at the meeting, but connected on a conference bridge. **Approved**
- Item two - Change to “Terms of Office for Society’s Officers” – This allows more flexibility for members to be voted onto National Council. The previous guidelines were quite rigid. **Approved**
- Item three - “Decoupling of Society and Centre Membership Fees” - There were 14 people to speak on this issue representing the two opposing sides.

One side suggested that decoupling would eventually destroy the RASC (citing examples of another 5000 member club which is now defunct, the weak US National Astronomy Associations and the British Astronomical Association). It was said that this solution was not sufficiently thought out (outstanding issues to still be dealt with), showed short-range vision, and that the perception of dual fee structure allows easier Centre disassociation. The cliché “if it is not broken - don’t fix it” was used. In fact it even brought up existing disagreements with current opting out of the National Fee collection system by the Calgary and Toronto Centre (we opt in for National Collection).

The other side argued that too much was being read into this change, that it involved the simplification of fee splitting process, making it easier to raise National Fees as required without changing the amount the Centres got. They suggested that the examples cited earlier do not apply and that National was strong, and this would not apply, as we are unique. This item was merely to change some fundamentals in the fee collection system.



Keeping in mind that this item was passed by a two-thirds majority vote at the May National Council Meeting, with the Winnipeg Centre in favour. However, as a bylaw change it would require a two-thirds

majority at the annual meeting as well, with all the proxy votes to be included.

Final Vote FOR - 174 AGAINST - 203 - **Motion Denied**

The interesting thing about this vote was that the final vote was not a regional vote (i.e. Ontario vs. West) that had bothered the RASC in the past, but rather a widespread vote. Best of all, at the conclusion of the issue, it was put to rest and there seemed to be no hard feelings towards the outcome. In fact, it showed us that regardless of this outcome, the RASC is strong vibrant organization, able to resolve difficult and controversial matters in an even and fair manner. It made me feel very proud to be apart of such an organization.

Second National Council Meeting Highlights

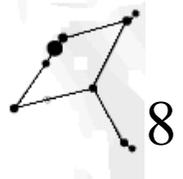
This meeting generally deals with the Election of individuals to the Standing and Special Committees. It also deals with any outstanding issues not addressed at the first meeting. The Committee Selections are too numerous to mention. What I can tell you is that I am pleased to see our Scott Young, now sitting on the National Executive as Second Vice President (applause).



- The significant item carried over was the SKYWAYS Publication. This was to be a new RASC Publication, written by Mary Lou Whitehorn, and was intended to be a Teacher's guide to the new Astronomy Curriculum. The Proposal of the Publications Committee had requested monies, for better illustrations for the guide, and then funds to print 1000 copies at a cost of about \$12,000. It was expect to sell these at cost to Teachers (specifically at the upcoming Ontario Teacher Association meetings) to recover monies. Future productions would generate new revenues, and address other Canadian locations. Although the concept of this guideline was strongly endorsed, the debate yielded that it might not be ready for publication, and still needed some changes. There was a debate over "Publish Early, Publish Often" (get them to the Teachers quickly) verses "Publish Perfect" (this represents the RASC).

The final outcome was that the manuscript was considered incomplete, and suggested that some changes be made for publishing at a later date with strong encouragement. Unfortunately, the frustrated author may withdraw her offer of giving the RASC the rights to the publication. More will come out of this issue I'm sure.

Next year's GA is in Vancouver. You might consider taking in some of these meetings to see your RASC at work.



BOOK REVIEW by Lindsay Price

Shoemaker by Levy, the Man Who Made an Impact

by David H. Levy,

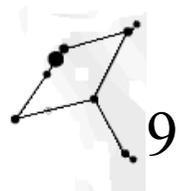
302 pages, 14 X 23 cm's

Princeton University Press, US \$27.95 soft cover

This book by Nova Scotian, and long time RASC al David Levy, describes the life and work of Eugene Merle Shoemaker. Most people, who have even a passing interest in astronomy, are familiar with the name Shoemaker. His name on every radio and TV set from the events of the famous comet that went into Jupiter, and from the news casts of his tragic death in a motor vehicle accident in Australia. What is revealed in this book is the long and fascinating career that Shoemaker had with the US Geological Service and NASA where his formidable knowledge of geology and how he used it to study all the way from the bottom of Meteor Crater Arizona to the furthest reaches of the solar system. His expertise, imagination and leadership had significant influence on the US space programme and NASA's science missions. As the book unfolds it becomes more and more apparent how true the subtitle is, "The Man Who Made an Impact".

More than just a chronicle of events and achievements, the book is written by one man about another who held each other in high esteem as friends and in professional respect. As a good biography should, this book avoids painting its subject in a beatifying glow. Shoemaker is shown as a mortal like the rest of us with faults and foibles, but it is done gently, the way we would think about our own close friends. Descriptions of the childhood and early life, education and background of Gene and the events that shaped him and lead to his passion are well researched. His passion was to learn, teach, and expand mankind's knowledge of the ties that linked the rocks far beneath his feet and the space far above his head. Levy traces the steps of Shoemaker's fascinating and eclectic career which ranged from uranium prospector to comet hunter with stops along the way to be university professor and government space scientist. He also shares with us the side of Gene as husband of Carolyn, not only his partner for life, but who became his partner in science. Many of the comets named Shoemaker after their discoverer are, in fact, named for Carolyn Shoemaker. By the nature of Gene's work the book is replete with the names of American presidents, famous missions, and moon walking astronauts, but sprinkled throughout are references to other events and people much closer to home and familiar to RASC members.

David Levy and the Shoemakers worked many long nights, cloistered together in the quiet, dark, and very confined space of observatories, and it is very obvious that David took to heart the old adage to authors, to write about that which you know very well, and like very much. It is well written and I found it hard to put down such a fascinating book about such an interesting person. It did not teach as much astronomy or geology as I had hoped it would, but in fairness, it proclaims itself a biography and not a science text, and as a biography it is very, very good.



Cosmology for Dummies

By Ron Berard

Epilogue

Looking back towards the beginning

In the past two articles, I have tried to present an overview of the study of cosmology. I have focused on the current dominant cosmological theory, that is the Big Bang Theory, and tried in the last article to explain a few principles that are central to an understanding of the BBM. In this, the final article, I'd like to look at some of the current data that support the BBM, and ponder what this all means to me.

The Primeval Fireball

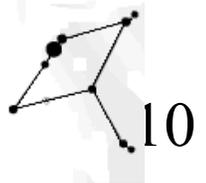
Theoretically, in the moments that followed the creation event, the Universe expanded extremely fast. An offshoot of the BBM is called inflationary theory, which postulates that in the earliest moments after the Big Bang, the Universe inflated faster than the speed of light. According to Einstein's Theory of Relativity, matter cannot achieve a velocity faster than the speed of light, however, such a occurrence was necessary, in order for the BBM to work. Theoretical physicists suggested that the Universe was much different in those early moments, and as such, behaved in manners not explained by relativity, yet entirely plausible using quantum mechanics.

Another problem with the BBM that contradicts Einstein's GR is that there is no explanation for how all that matter could have been expanded outward from a singularity. After all, the BB was like gravitational collapse in reverse. The BBM conjures up images of a great big explosion that propelled matter outwards, however this is not actually the case. In the case of a massive star that collapses into a black hole, no amount of energy inherent to the mass of the star is able to overcome gravity. Yet, the BBM suggests that all the mass in the Universe was concentrated in one singularity, and somehow all that cumulative gravity was overcome.

Some theoretical physicists had suggested that it may have been a rebound explosion from a "big crunch" and that the Universe is perpetually recycling itself, expanding until gravity overcomes the outward velocity, then collapsing in a big crunch again and so on. However, new evidence that the Universe is actually accelerating negates this theory. It has recently been postulated that there is a repulsive force that exists in space-time, which counters gravity. This "dark energy", also referred to as vacuum energy, when applied to the BBM suggests that matter was not thrust outward by the force of an explosion, as in the gravitational rebound explosion of a supernova, but rather that space itself expanded outward violently, thereby enabling matter to

reach velocities greater than the speed of light without violating Einstein's GR because it was actually traveling along with space as opposed to moving through it.

In the early Universe, matter was not as we see it now. For the first 400,000 years or so, the Universe was an opaque hot plasma. Particles within this plasma were far too energetic to combine



and form atoms. As this plasma expanded, it cooled, much like Freon cools as it expands in an air conditioner. As the plasma cooled, protons, neutrons and electrons began to combine to form hydrogen, helium, deuterium and trace amounts of lithium. From these basic building blocks, stars and galaxies were formed.

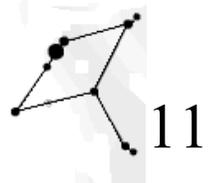
So where is the evidence to support all this theory? The theory was initially proposed to explain the expansion of the Universe discovered by Edwin Hubble, but it has since also explained many observations that had predated the theory, as well as observations we are only now capable of making. For example, the BBM also postulated theories for nucleosynthesis of the light elements mentioned above. The theorized ratio of elements is remarkably consistent with that observed in the Universe today. What is more remarkable though is the predictions regarding the Cosmic Background Radiation (CBR).

The Cosmic Background Radiation

The CBR was first predicted in 1948 by George Gamow and represented what could be considered the afterglow of the Big Bang. It was later discovered by accident in 1965 by Arno Penzias and Robert Wilson as a unexplained background noise in the huge microwave receiver they were working on for Bell labs. It is a remarkably uniform radiation that exists in all directions in space in the microwave region of the electromagnetic range. If we could see this radiation, the entire sky would glow in a uniform light. Scientists cannot explain the uniformity of this radiation by any other means than as the residual heat of the Big Bang. And it's a cool ember being only 2.72 degrees above absolute zero.

The uniformity of this radiation is somewhat problematic. If the early Universe had been completely uniform and homogenous, then stars and galaxies could never have formed. In order for the BBM to work in light of this uniformity, tiny fluctuations would have to exist. These fluctuations were so small, that it would require extremely sophisticated technology to measure it. Only recently, with the Cosmic Background Explorer (COBE) Satellite, these fluctuations were confirmed and were almost exactly as predicted.

From these fluctuations, areas of higher density congregated such that the cumulative gravity was no longer overwhelmed by the dark energy, which apparently dissipates as space expands, and the first stars and galaxies sparked to life. It is these young galaxies that astronomers are trying to visualize with ever-larger telescopes. The Microwave Anisotropy Probe (MAP) is now on its way out to explore the CBR at even greater resolution giving us insight into the state of the Universe before galaxies formation, only 400,000 years after the Big Bang. Beyond this "wall", referred to as the Point of Last Scattering, the early Universe was too opaque and will not reveal its secrets to us with our current technology; but what of tomorrow?



In The End

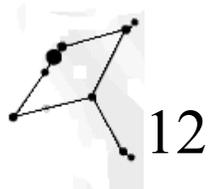
Reflecting on all that I've written, both fact and artistic license, I ask myself if I've accomplished what I'd set out to do. That is give fruit for thought. Thought that might somehow enrich our experience of observation.

Whatever the "truth" might be, however divergent our beliefs might be about such matters, the universe is without doubt unimaginably vast. It fulfils a deep-rooted instinct in all of us to explore it by

any means we have at our disposal. Be it a 3" Tasco or a 5" Astrophysics, a well-written book or a particle detector, our naked eyes or a space telescope, they're all tools for discovery.

When I take out my scope I like to imagine our galaxy, its structure and expanse. A planet transforms from a bright disc writhing with elusive detail, to a massive body falling around its star. A nebula becomes a nursery of hundreds, maybe thousands of suns. A globular becomes an impossibly distant and ancestral glimpse into the first spark of light in the Milky Way. A planetary nebula, a sobering reminder that our own world cannot not be timeless. When I lose my bearings in a cluster of faint galaxies and find a glowing object so dim, it approaches a point just this side of illusion, I wonder how far back in time I'm looking. And when I look at the moon I cuss under my breath and run out to get a video (I felt levity was overdue and might help keep my parting comment in perspective).

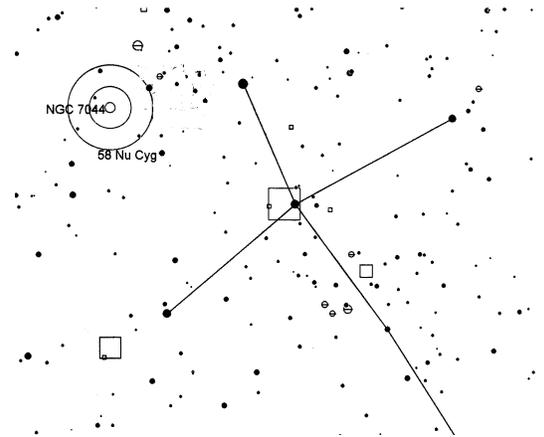
It seems with every generation, going as far back as history and myth can take us, our imagination takes us farther out into the vast realm. Ironically, the farther out our technology allows us to peer towards the edge, the farther back in time we penetrate towards the beginning. I often wonder if there's some sort of barrier, protecting us from something we're not supposed to touch. Or, as portrayed in Mica Angelo's greatest fresco, I often wonder if we reach far enough we'll find something or some One reaching back.



THE QUEST FOR NGC7044, AN OPEN CLUSTER IN CYGNUS by Gail Wise

June 16, 2002: would NGC7044 elude us once again or would we finally spot it? Both Cartes du Ciel and Earth Centered Universe list it as 6 arc minutes, magnitude 12. The Herschel 400 list says it is 3.5 arc minutes, magnitude 11.3. How difficult can it be? Ask me almost a year later.

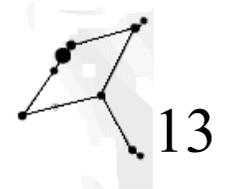
Even Moose Mountain Park in Saskatchewan last August wasn't dark enough to see it. Sean Ceaser and I had tried last summer with charts from Cartes du Ciel, and we knew we had the right star field but several nights of hunting failed to show the open cluster. We decided that it either wasn't there, or it wasn't where Cartes du Ciel says it is. So we turned to ECU, which showed the exact same location for it. We started at Nu Cygni, a 4th magnitude naked-eye star and planned to star-hop through the star patterns.



After a couple of false starts ("Is this that star?" "No, it's this one." "No, it's this one." "No, it's *this* one!") ("Is this the star pattern?" "No, it's this one." "No, it's this one." "Listen, you, turn your star chart *this* way!") we did get our star field in view but we couldn't see any open cluster. It took averted vision and moving the telescope just slightly to bring out a teensy patch of nebulosity, really just like a blank spot in the sky. A triangle of stars inside the cluster made it difficult to see the fuzzy patch. There is an elongated "keystone" pattern just to the south of it, which was on the charts from both programs, and Cartes du Ciel also shows a little "big dipper" pattern to the east, both of which we had found numerous times before.

It gets dark just after midnight, and we finally logged it at 2:15. Considering how much I like open clusters, this one is really a disappointment. Of all my eyepieces, the 20mm at 62 times magnification brought it out the best. It is indeed about 6 arc minutes in diameter, magnitude 12. This cluster really doesn't look like anything at all. I think Herschel 399 has a very nice sound to it . . .

an elongated "keystone" pattern to the south of it, 2 stars at the west side make a triangle with a brighter star on the east.



STAR PARTIES

Saskatchewan Summer Star Party Cypress Hills Interprovincial Park August 9 – 11, 2002

Once again, the Saskatoon and Regina Centres of the RASC are hosting the Saskatchewan Summer Star Party at the Cypress Hills Inter-provincial Park, 32 km S of Maple Creek. The party takes place August 9-11. This year's Father Lucian Kemble Memorial Lecture speaker is comet discoverer Vance Petriew, who promises an exciting multi-media presentation on his comet discovery during last year's SSSP.

Registration rates for those booking before July 1, 2002 are as follows (all rates are in Canadian dollars): Single: \$17; Couple: \$28; Family: \$34. After July 1, all prices increase \$10. Banquet tickets are: Adults, \$17; Youths 4-11 yr, \$10; Children 3 yr and under, free. T-shirts (\$17) and golf shirts (\$30) will be available; these have to be pre-ordered and pre-paid. A limited number of pins and crests will also be available for purchase at the party, prices to be announced.

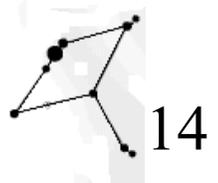
Campsites are freely available, and reasonably priced hotel, cabin and condo units are available by pre-booking with the park. (Make sure you tell them you are with the Star Party when booking accommodations!) For accommodation information, call the Resort at (306) 662-4477 or the Park at (306) 662-5484.

Brochures with registration forms will be available at the meeting, or for more information visit their website at <http://prana.usask.ca/~rasc/sssp02.html>.

You can also call Les or Ellen Dickson at (306) 249-1091.

September Spruce Woods AstroWeekend Spruce Woods Provincial Park Tentative Date: September 6 – 8, 2002

We are tentatively going to be in the same area as last year, the Winter Use Area. Plans are to find somewhere higher so we won't have the same problems with fog that we had last year. Gail will keep you posted as to date and/or location changes.



HIGHLIGHTS FROM THE COUNCIL MEETING HELD JUNE 23

- ★ Scott announced he will be meeting with Dr Bochonko with reference to renewing our lease at Glenlea. It will likely not be until September. Some items from our wish list, like newly paved road, septic field washroom, and the like are not going to happen.
- ★ Stan Runge the treasurer gave his report; the club has a current balance of approximately \$3,800, only a little over \$300 of which has not been already earmarked in our budget.
- ★ National Council Report by Stan Runge. We are currently having the best ever sense of co-operation among the centres and the personalities that have to work together.
- ★ Scott Young talked about the National Council being the only body that can apply for federal grants, as when centres do so the applications are fragmented and get rejected.
- ★ A discussion took place as to providing a budget of \$200 per year that would allow Fred to buy Library books as opportunities arise.
- ★ A discussion on building a toilet between the dome and the warm room ensued. A committee was struck to study this and report back to the Council by September. The committee is Stan Runge (chair), Robin Woods and Lindsay Price.
- ★ A discussion on fees took place. There are fees for adult (\$50) and youth (\$33). "By regulation anyone, student or otherwise over 18 years is to be assessed adult rates. It was the decision of the council referring back to earlier discussion, that anyone attending full time education at a recognized secondary or post secondary educational institution would be allowed to join the Wpg Centre for youth rates. The mechanism is to be that the joining or renewing member pays the full \$50 and the Wpg Centre rebates \$17 to them.

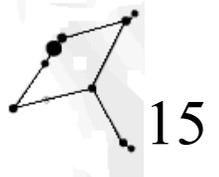
What does membership include?

Subscriptions to:

Winnicentrics
Sky News
the Journal
the Observer's Handbook

Access to:

The club's loaner telescopes
The club's observatory at Glenlea with the 12" and 14.5" telescopes, pad and warm room
The club's library of books and magazines
The chance to hobnob with some very interesting people who are willing to share their expertise on telescope building, observing, etc.



|



Messier Certificates:

The following members are working toward their

Fin	Eugene d'Auteuil	40
Sta	Ray Philippe	12
Se	Mike Karakas	99
Ga	Sean Ceaser	110
	<i>Way to go, Sean!</i>	
	Robin Woods	56
	Lindsay Price	10



Herschel 400's:

Stan Runge	31
Sean Ceaser	104
Kevin Black	400
	<i>Congratulations, Kev!</i>
Gail Wise	242

Are you working on your
 Messier list?
 Explore the Universe?
 Finest NGC's?
 Herschel 400's?
 Let me know how many
 you have and I will publish
 it here so we can encourage
 each other!

