

# Winnicentrics

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

## A Neophyte's National Council

*F. Lindsay Price*

Save the Society money! That's the plan. Instead of going on the Friday night for this Saturday meeting, if one catches the flight from Winnipeg at 06:00 in the morning, it lands in Toronto at 09:15. There remains 45 minutes for a quick taxi ride to Commerce Court West for the 10:00 start of National Council. The small sacrifice of getting out of the marriage bed at 03:30 is a small price to pay for such a noble goal. One has to allow some time for a slow morning person to get shaved, showered and fed Shreddies, and then transport to the airport to arrive an hour prior to departure. Enter the Gremlins. This is Winnipeg. This is winter. The airplane has to be de-iced. This is Winnipeg. This is winter. The de-icer vehicle is frozen and has to be repaired before it can de-ice the airplane. The flight leaves 45 minutes late. However, the pilot, being a considerate fellow, poured on the gas and we arrived only a half hour late, having made up 15 minutes along the way. The taxi seemed to make pretty good time to downtown and we arrived on the sidewalk in front of Commerce Court only 15 minutes past start time. The Gremlins aren't done yet. This is Toronto. Nobody lives in the business section and it is Saturday morning. We entered a mall the size of Polo Park, and there is not a single person anywhere. No one to ask where the elevators might be. Now I understand the feeling of the lonely character on Twilight's show, "The Last Man On Earth". After what feels like an eternity of searching, the well concealed elevators are discovered and they are cordoned off. But that was OK because there was no directory to indicate on what floor the offices were located anyway. Then, in the midst of standing there in that "What-the-heck-am-I-going -to-do-now" feeling, it came. A voice; a human voice at last, and directed to me. "Sir, you can't go there. Please report to security over on your left." Sure enough, behind a stout stone counter just above the edge was a head. The first sign of a living being that I had seen in half an hour. After I explained my mission, she told me that my meeting was on the 49th floor and called a security guard to escort me thereto. This is a tall building in a big city and it now takes a magnetic smart card to make the elevators work. So a guard escorted me into the elevator and swiped his card and pressed 49.

### IN THIS ISSUE . . .

National Council Meeting.....	page 1
Meetings.....	page 2
Observing Sessions.....	page 3
Humans in Space.....	page 4
Sean's Sketches.....	page 7
Cosmology for Dummies.....	page 8
Members Observing.....	page 11
Hardcore Astronomy.....	page 12

Deadline for the next issue is April 21



*Continued on page 9*

**Executive Council**

President  
Scott Young  
[sdyoung@mb.sympatico.ca](mailto:sdyoung@mb.sympatico.ca)

*Past-President*  
Kevin Black 224-0182  
[cblack@home.net](mailto:cblack@home.net)

*1<sup>st</sup> Vice-President*  
Gail Wise 253-8297  
[wgail@mts.net](mailto:wgail@mts.net)

*2<sup>nd</sup> Vice-President*  
Gil Raineault 253-4989  
[raineaul@minet.gov.mb.ca](mailto:raineaul@minet.gov.mb.ca)

*Secretary*  
Jay Anderson 474-1485  
[jander@cc.umanitoba.ca](mailto:jander@cc.umanitoba.ca)

*Treasurer*  
Stan Runge 261-9984  
[stan.runge@mts.mb.ca](mailto:stan.runge@mts.mb.ca)

**Councilors**  
Ray Andrejowich 667-6896  
[randrejo@hotmail.com](mailto:randrejo@hotmail.com)  
Mike Karakas 253-5379  
[mkarakas@mb.sympatico.ca](mailto:mkarakas@mb.sympatico.ca)  
Paul Paradis 257-4093  
[pparadis@mb.sympatico.ca](mailto:pparadis@mb.sympatico.ca)  
Lindsay Price 831-0150  
[flprice@mts.net](mailto:flprice@mts.net)  
Fred Wood 774-3238  
[henrya22@henryarmstrong.com](mailto:henrya22@henryarmstrong.com)  
Robin Woods 586-4173  
[robin.woods@uwinnipeg.ca](mailto:robin.woods@uwinnipeg.ca)

**Appointed Positions**

Librarian  
Fred Wood 774-3238  
[henrya22@henryarmstrong.com](mailto:henrya22@henryarmstrong.com)  
Observatory Director  
Ray Andrejowich 667-6896  
[randrejo@hotmail.com](mailto:randrejo@hotmail.com)  
Observatory Bookings  
Gil Raineault 253-4989  
[raineaul@minet.gov.mb.ca](mailto:raineaul@minet.gov.mb.ca)  
Winnicentrics Editor  
Gail Wise 253-8297  
[wgail@mts.net](mailto:wgail@mts.net)

*Winnicentrics* is published six times each year by the Winnipeg Centre, RASC. *Winnicentrics* is produced by and for the members of the Winnipeg Centre, and any opinions expressed are those of the author. If you have comments, questions or concerns about *Winnicentrics*, you can contact any of the councilors above, or write to RASC, Winnipeg Centre, Box 2694  
Winnipeg MB R3C 4B3

# March

**Beginners Session 7:00**  
**Regular Meeting 7:30**

**March**  
**8**  
**Friday**

## "Kevin and Ray's Excellent Adventure"

Kevin Black and Ray Andrejowich have returned from Arizona, safe and sound. They'll bring us some great stories and slides from their trip and Kevin will have some of his astrophotography from the past year. We'll be auctioning off some of the old library materials and we'll also have the regular features of the "Explore the Universe" certificate and Gail's "Constellation of the Month" takes us on a tour of Ursa Major.

# April

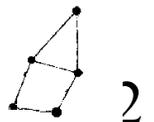
**Beginners Session 7:00**  
**Regular Meeting 7:30**

**April**  
**12**  
**Friday**

This month Paul Paradis will show off his beautiful handmade Dobsonian telescope.

We'll (hopefully) have some reports on members' Messier Marathons.

Also: Lloyel Hull will update us on "What's New"; the "Explore the Universe" certificate; and Gail's "Constellation of the Month" looks at that granddaddy of all cats, Leo the Lion.



# Observing Sessions and Public Events

**March**  
**16**  
**Saturday**

## Members Observing Night

7:00 p.m. to ???  
Glenlea Observatory

Come out and work on your observing certificates, clear skies permitting. Be sure to dress warm and bring plenty of hot chocolate.

Remember, this is the night to do the Messier Marathon.

What's up in March – Jupiter, Saturn and all the spring galaxies are on their way!

Your hosts this month: *Ray A. and Gil*

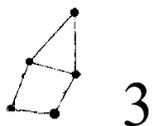
**April**  
**20**  
**Saturday**

## International Astronomy Day

At the Forks

Come out and celebrate International Astronomy Day at the Forks. We'll have our display table set up inside during the day (always lots of fun) and if the sky is clear we'll have solar telescopes showing sunspot activity.

At night, the sky has a special treat in store for us: a beautiful grouping of the brightest planets in the evening sky! The five planets which are easily visible to the unaided eye - Mercury, Venus, Mars, Jupiter, and Saturn - will be lined up in the western sky after sunset. It's a great opportunity to show the public some of the most spectacular sights in the sky. Astronomy Day occurs near a First Quarter Moon, so there's always one spectacular target for our telescopes; this year, Jupiter and Saturn are in prime view, and people have a chance to see the red colour of Mars, brilliant Venus, and elusive Mercury (if they have good eyesight!) at the same time.



# 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 7

*Continued from last issue*

"What ever happened to Robert Goddard?" someone asked me, after having read parts 1 through 6 of *Humans in Space*. That was a very good question. Part 1 of this series described Goddard's historical achievements in rocketry. His correspondence with Hermann Oberth was mentioned briefly in Part 2, but subsequent chapters made no mention of Goddard's ongoing work in rocketry or what became of him. Hence the need for a short digression.

After moving to New Mexico with his wife Esther in 1930, Robert Goddard continued designing and building bigger and bigger rockets, and launching them to higher and higher altitudes. The New Mexico desert was the perfect environment for the very private scientist to thrive. He had noticed that Germany was showing more interest in rocketry than any other country at that time. From time to time during the 1930's, he would receive a letter from German engineers asking a couple of technical rocketry questions, and he would casually respond. But in 1939 the Germans suddenly fell silent. Goddard feared that Germany might be working on some kind of rocket-based weapon. He brought his concerns to the attention of some Army

officials in Washington, but they dismissed his theories and sent him on his way.

During World War II, Goddard took a break from rocketry and spent his time designing experimental airplane engines for the U.S. Navy. After the war ended in 1945, he quickly returned to rocketry and hoped to get his hands on a German V-2. According to some sources, when some of the captured V-2s finally made their way to U.S. soil and Goddard had a chance to dissect one, he instantly recognized his own handiwork. While poking around the rocket's innards, when asked by an assistant "isn't this your rocket?", he reportedly replied "It seems to be." Before the year was out, Robert Goddard died of throat cancer.

At the time of his death, Goddard had 214 patents to his name. Many of his innovations were incorporated into the V-2 to create the Redstone rocket, which was used in the Mercury program and which led to the Saturn rockets and many other launch vehicles flown by the U.S.

Fast forward to May 25th, 1961. Twenty days after Alan Shepard became the first American in space, U.S. president John F. Kennedy delivered his now historic speech before a joint session of Congress, a speech which announced the recommendations made by NASA and the Department of Defense for beating the Soviets in the space race; a speech which amounted to a declaration



of war: "I believe that this nation should commit itself to achieving the goal, before the decade is out, of landing a man on the moon and returning him safely to the Earth. No single space project of this period would be more impressive or more important to the long-range exploration of space; and none will be so difficult or expensive to accomplish."



### ***Kennedy throws down the gauntlet***

NASA now became a huge money pit, with its budget swelling from \$1 billion to \$6 billion per year. The lunar program was born.

Meanwhile, Project Mercury continued with Virgil "Gus" Grissom becoming the second American in space on July 2nd, 1961 (see Part 6 for more details) in the Liberty Bell 7 capsule aboard Mercury 4. Like Alan Shepard's Mercury 3 flight, Mercury 4 was also sub-orbital, powered by the Redstone launch vehicle, and lasting only 15 minutes.

A month later, on August 6, 1961, Soviet cosmonaut Gherman Titov blasted into

space aboard the Vostok 2 spacecraft,

some four months after Yuri Gagarin made the first piloted journey into space and three months after Alan Shepard became the first American in space.

Unlike Gagarin, who completed a single orbit of Earth, Titov circled the planet for an entire day. The fact that Titov's orbital track in a near-polar plane carried him over the United States three times was alarming to some Americans. During his 17-orbit mission, Titov, the second Soviet in space, attempted many activities that were soon to become routine in human space exploration, such as exercising, sleeping, eating and using an onboard toilet. He also suffered from the syndrome analogous to seasickness that would plague space travelers for decades to come.

Later in that same month, NASA terminated the sub-orbital phase of Project Mercury ahead of plan, canceling all further Mercury-Redstone launches. The sub-orbital phase of Project Mercury had been highly successful with the Shepard and Grissom flights, and it was felt that the *orbital* phase of the project, featuring the Atlas rocket, should be expedited. By now, the Soviets had already orbited two cosmonauts, while NASA had only two sub-orbital flights under its belt.

The Atlas rocket was originally developed by the U.S. Air Force to be the first American Intercontinental Ballistic Missile (ICBM) capable of boosting a







*The Atlas Rocket*

nuclear warhead to any target on earth. The program began in the early 1950's with the first successful launch in December 1957. The liquid-fueled Atlas served as one of the primary ballistic missiles until it was phased out of strategic missile service in 1965.

Several unmanned Mercury-Atlas tests had already been conducted by mid-1961. The final unmanned orbital test, Mercury 5, was launched November 29, 1961, carrying Enos the chimpanzee into orbit. Enos the orbiting chimp faired well, withstanding 7.6g of force and making two complete orbits of Earth. The mission was a success.



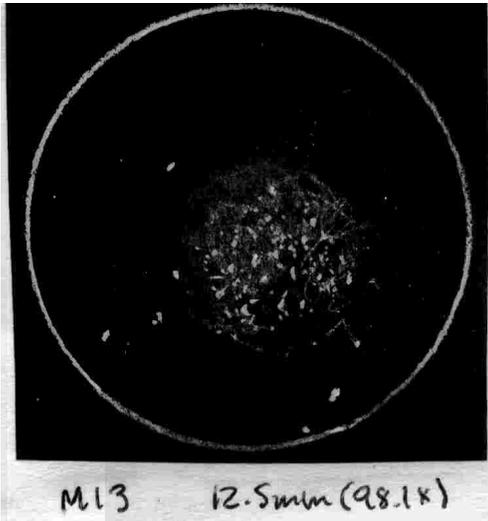
John Glenn, the first American to orbit Earth

The first manned Mercury-Atlas mission, Mercury 6, came on February 20th, 1962. Mercury 6 shot John Glenn Jr. into orbit in his Friendship 7 capsule. Glenn became the first American to orbit Earth, making three orbits of Earth in just under five hours. The flight was certainly not without problems; Glenn had to fly the last two orbits manually after the autopilot failed. There were also problems with the heat shield, but the (still) attached retro-pack saved his life during reentry.

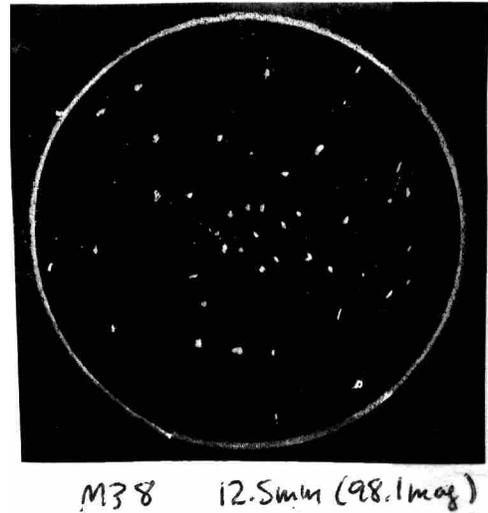
*Continued in next issue*

The planet Saturn, its rings tipped about as wide open as they ever get, glows prominently in the evening sky this season. Be sure to get a look at "The Lord of the Rings".

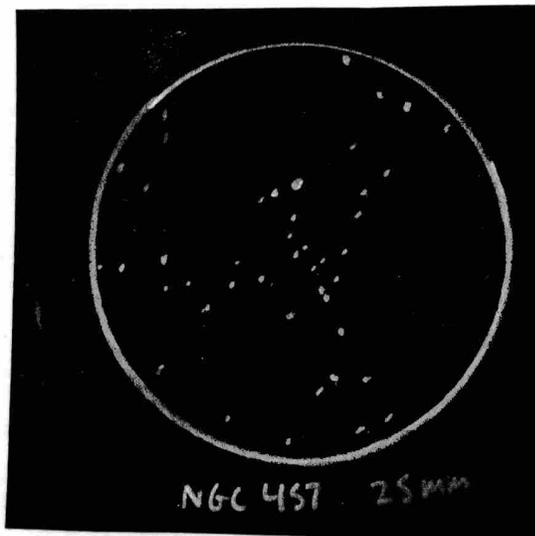
# SKETCHES by Sean Ceaser



M13 The Hercules Cluster looks quite magnificent with some individual stars seen – many of the same magnitude.



M38 Open Cluster in Auriga  
Took “the kids”, the triangle below Capella and it points down to M38.  
Can see it naked eye. I saw 44 stars in it with 3 bright ones in the centre.



NGC457 The “E.T. Cluster” in Cassiopeia  
Has a very interesting shape to it with its 2 prominent eyes pointing heavenward. The two stars that make up the eyes: the eastern star is a yellow star and the western star is slightly dimmer and has a green-blue tinge to it. I counted 28 stars in the cluster.



# Cosmology for Dummies

By *Ron Berard*

## Introduction

When I was about 15 years old, a confusing time when hormones start to muck about with body and mind, I spent a lot of time at a friend's farm. In summer months we often slept outside under the stars staring up at the sky, talking about cars and girls and other typical teenage obsessions. I have vivid memories of drifting off in those hypnotic moments between wake and sleep, where the mind can transport your thoughts to a netherworld where you remain conscious of your senses, yet your imagination opens up and transports you out of your self into that vast cosmic sea. Of course the drugs helped a little!

Seriously now, it was those magical moments of taking in the overwhelming beauty of the night sky and contemplating the infinite that sparked my interest in astronomy. Today, memories of those nights enhance my current experience of reaching even farther out into space through the power of a telescope. Without this foundation of wonder and fascination, my observations would be limited to staring at pretty points of light and faint fuzzy whatever's, interesting, but hardly the satisfying pleasure that this hobby can maintain perhaps for a lifetime.

What does all this banter have to do with cosmology? Quite simply stated, I believe that a basic understanding of cosmology can help put our observations into perspective – into the “big picture” as it were. That is, take a pretty view, whether naked eye, binocular or highly magnified, and transport our

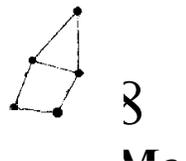
appreciation of what we're looking at from a two dimensional optical image to a multidimensional experience of time and space. In other words, kickin up the wow factor!

It is not my intent to purport some sort of expertise in the field of cosmology. The title is not intended to be a derogatory quip at the reader but rather a confession of my own rudimentary grasp of the subject. I have no doubt that a good number of club members know a great deal more than I do about cosmology, therefore I'd like to preface my attempt at sharing my knowledge with the proviso that my understanding of cosmology is based on a limited amount of reading of a few good books and a number of web pages. In other words, I intend on simplifying my, no doubt, simplistic view of a particularly mind-boggling subject (no math)! I don't mind being corrected on the odd erroneous factoid but hope not to have to embark on any apologetic diatribes.

## Getting to the point

Cosmology is essentially the study of the origin and structure of the observable universe. It's a witch's brew of particle physics (the study of the very small) and astrophysics (the study of the very far) with a generous measure speculation (the art of guessing) occasionally sprinkled with a pinch of theology (the study of why). Drinking deeply of this potion results in an enhanced understanding just how overwhelmingly ignorant we have been about exactly where we live, how we actually got here and why we exist at all.

But I digress.



As long as recorded human history and no doubt as long as homosapiens have been self aware, we have pondered about how the heavens and earth were created and ultimately how we came to be. As we learned more about our natural world, particularly through the scientific method, this query has shifted our understanding away from belief in supernatural creation events towards theoretical posits supported by empirical observation. As our tools for observing have become more powerful, and our knowledge in turn grown exponentially, theories have had to reconcile more and more data until many ideas about the universe fell by the wayside leaving us with a smaller number of well accepted laws and theories that physicists struggle to unify in the holy grail referred to as the grand unified theory (GUT), or what Steven Hawking affectionately refers to as “the theory of everything.” Heavy stuff!

In the next several articles I hope to provide a brief overview of current cosmological theories (historical perspectives only as needed) replete with color commentary and levity to keep the reader awake. I hope to share some of my enthusiasm for pondering such lofty ideas but make no allusions to enlightening or being enlightened. At best, even for leaders in the field, cosmology is well-educated guesswork, so if at any time things get a little fuzzy, don't fret; you'll be in good company. I do hope to eventually make a point but at the time of writing this introduction, I have no idea of what it will be. I just plan on reading and typing, stream of conscious, no synopsis, no references, **no math!**

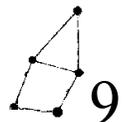
Next issue: In the Beginning

---

### *A Neophyte's National Council*

*Continued from page 1*

Amazingly to me, along the way two other people enter from various floors, swipe their cards and press other buttons, and four of us stand close together and pretend to be all alone. So with a country bumpkin attempt at humour, I said, "Gee, Visa cards before choosing the floor? Is it a buck and a half to ride the elevators here?" and without a second to think about it, the girl looked me straight in the eye and with a perfectly straight face said, "It's cheaper than the washrooms." and nobody laughed. Just then, the door opened and I was deposited without. The doors closed and a gentle whirring told me that the elevator was going on its way. I found myself in a small anteroom, at each end of which were glass doors, very large, very solid, and very locked. Also, located where no amount of knocking, yelling, nor arm waving could make one's presence know to the people having a meeting somewhere in the vastness of the 49th floor. After some time, and feeling very very silly, I began to wonder if one needed a smart card to get the elevator to go back down. The elevator had pity on my plight and took me back to the ground floor and to the little head over the stout stone counter. After some searching she found the telephone number of the office and passed me a telephone to call them to arrange for me try once more to gain entrance. It reached Randy Wood, and yes he would come to collect me but not for a few minutes as he was in the middle of presenting his report and had to finish before he could leave and come down. I never asked, and it was never explained to me why in that room with 35 people, the one who was in the midst of a presentation had to answer the phone. And it was not even his office. So... that was my first national council entrance.



*A Neophyte's National Council**Continued from page 9*

Here is a little of what transpired after I was admitted.

- \* We mailed out just over 4,000 handbooks to members, including 525 new members this year.
- \* The website is very busy with many hits every day, and most sales of RASC items are coming from the e-store.
- \* Our annual income and expenses are in the range of \$400,000.00
- \* The Calgary Centre had a request for a special projects grant to improve their observing site which is shared with Edmonton, and which all RASC members are invited to use. The improvements are budgeted at \$14,000 and they requested a \$6,000 grant to finish it. This was approved.
- \* In 2001 we sold about 5,000 Handbooks, 5000 Calendars, and around 1,000 copies of the Beginner's Observing Guide.
- \* Some of the RASC's library books are listed on an index at <[www.rasc.ca/library](http://www.rasc.ca/library)>. The library has too much material and the space for storing it is inadequate. (Sounds like us!)
- \* International Astronomy day is Sat 2002 April 20. There are 30 countries that observe it on this date.
- \* The Constitutional Committee moved that the General Assembly in Montreal be asked to approve a change in the way dues are accounted. At present National collects dues, and rebates 40% to the centres. Some Centres add an amount to this, called a surcharge and some do not. If passed, National Council will set dues independently of Centres. Each centre will set dues for its own operation and National will collect the total, keep its share and forward the centre's share to the local treasurer. Unattached members will be charged the national fee plus an amount approximately equal to that which most centres charge. This has been fairly contentious and it needed sixty six percent of the vote to go to the GA. Exactly 2/3 of the votes at national were in favour, so it passed by the narrowest of margins. Before taking effect it must pass again in Montreal in May.
- \* In future, if a centre is unable to send a delegate to a National Council meeting, someone from that centre can (if facilities can be arranged) participate by conference call.
- \* RASC members are eligible for a 10% discount on subscriptions to Sky & Telescope magazine. This takes co-ordination from some one at the centre level to make the order.
- \* There is a Youth Page on the RASC website, handled by Calgary.
- \* We have a new Webmaster for the National site; Kevin Kell, and he has made some changes. Check it out.
- \* Regarding Light Pollution, the International Dark Sky Association has sponsored RASC membership into the Illumination Engineering Society of North America.





# OBSERVING

## Messier Certificates:

The following members are working toward their

<u>Fin</u>	Eugene d'Auteuil	39
Sta	Ray Philippe	12
Sea	Mike Karakas	87
Gai	Sean Ceaser	109
	Robin Woods	50
	Lindsay Price	10



## Herschel 400's:

Sean Ceaser	92
Kevin Black	370
Gail Wise	201

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!



**YOU KNOW YOU'RE A HARDCORE ASTRONOMER WHEN . . .**

*By Gail Wise*

- There is no room in your trunk for a spare tire because all of your equipment is in there just in case it is clear tonight.
- You only have a social life during March and October because every night is cloudy then anyways.
- When you talk about heavenly bodies everyone knows what you *really* mean.
- You go to bed at 7:00 p.m. with your alarm set for 1:00 a.m. so you can be at your dark site just as the moon is setting at 2:00 a.m.
- Your favourite time of day is when it isn't.
- You are more interested in galactic clusters than in diamond clusters.
- You own 14 pairs of wool socks.
- You know the names of all the ancient Greek heroes, but not your own children.
- You have never seen a sunrise without feeling a little bit of disappointment.
- You consider Santa Fe pizza fine dining.
- You don't use your woodworking skills for furniture, but for making the prettiest darn dobsonian tube in the country.
- You are willing to pay \$300.00 for a piece of glass that is only  $1\frac{1}{4}$ " in diameter.
- People are afraid to ask what you want for Christmas.
- You make sure to get a glimpse of Jupiter through the clouds just so you can say you did some observing tonight.

