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Winnicentrics

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

LIGHT POLLUTION:
THE BAIN OF ASTRONOMY
by Fred Wood

Light pollution -- we all have it although we don't want it. This is a problem that hinders us all when it comes to enjoying our hobby. This problem can be remedied. All it takes is getting the word out.

As an astronomer and a city dweller, I find it very hard to find the planets, let alone any of the Messier objects. My problem is compounded by not being able to get into a car and driving for hours to get away from the city. But who has the time to drive to get to dark skies every night? We don't have to, if we educate our neighbors.

The first thing that we should do is to invite them to look through our telescopes and explain what we do. This might show them the things that they might never have seen before. It even could be the first time that they have ever looked through a telescope. The next thing to do is tell them what light pollution is and how it affects not only astronomy but the overall environment as well. I know from experience that when I tell people that light pollution can help contribute to the air pollution by increasing the carbon dioxide in the air, they are startled. Then tell them how they can help you do astronomy by just aiming their lights down to the ground. Another thing you can do is to tell them how much money they can save by replacing their dusk-to-dawn lights with motion detectors. This is just the beginning of enlightening the quality of our hobby and their life.

If your neighbors or yourself have any questions, they or yourself can email the lpac at: rascwpglpac@hotmail.com.

If you would like to help with the light pollution abetment committee, you can email myself at: fred_wood@shaw.ca.

In the next issue: *Are you practicing what you are preaching*?

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Deadline for the next issue is December 22, 2002

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November

Beginners Session 7:00
Regular Meeting 7:30

November 8 Friday

The Leonids Are Coming

Jay Anderson and Stan Runge will bring us information on the Leonids meteor shower – where to go, what to look for. Ron Berard will tell us about different telescopes and what to buy (just in time for Christmas shopping).
Also, we will have news from the national council meeting.

Plus the regular features: "What's New" with Lloyel Hull, "Explore the Universe" Observing Certificate by Lindsay Price and Gail's "Constellation of the Month" looks at Cepheus the King.

December

Beginners Session 7:00
Regular Meeting 7:30

December 13 Friday

Pinawa Sundial

Tonight we have a guest speaker, Carl Sabanski who did the planning, designing and building of the sundial in Pinawa. Jay Anderson will show us video of the solar eclipse.

Plus the regular features: "What's New" with Lloyel Hull, "Explore the Universe" Observing Certificate by Lindsay Price and Gail's "Constellation of the Month" looks at Pisces the Fish.

Observing Sessions

November 9 Saturday

Members Observing Night

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

The 12" and 14" scopes will both be up and running.
The moon is almost at 1st quarter and we can see the winter constellations on their way.
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: ***Stan and Robin***

December 14 Saturday

Members Observing Night

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

Come out and work on your observing certificates, clear skies permitting.
If we stay late enough we can catch the Geminids meteor shower which peaks at 4 a.m.
Be sure to dress warm as it gets cold at night!

Your hosts this month: ***Sean and Gail***

Coming up: January 12th at Glenlea

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 10

Continued from last issue

Where the previous installment of *Humans in Space* left off, the Soviets had just upstaged the American Gemini program again with another Voskhod mission (Voskhod 2); this time, by performing the first ever extravehicular activity (EVA). Voskhod 1, launched five months earlier in October 1964, had been the first space flight with a multi-person crew. The Voskhod program did achieve a number of space firsts planned by Gemini, but it did so in somewhat shaky fashion (see Part 9 for more details), and it did not achieve *all* of the Gemini Program's objectives. Most notably, the Voskhod spacecraft had no maneuvering capability so in-orbit rendezvous and docking would have been impossible.

Meanwhile, both the Gemini program and the Apollo program had been progressing well in the United States.

Gemini had required a new launch vehicle, something more powerful than the Atlas rocket which launched the Mercury spacecraft. NASA elected to go with the U.S. Air Force's Titan II launch vehicle. It was simpler, but more powerful. The Atlas used kerosene for fuel and cryogenic liquid oxygen at a temperature of -270°F which required special storage and handling. The Titan II used hypergolic fuels, easily stored at normal temperature, and easily ignited when they came into contact with one another. The easy storage and handling of propellant greatly simplified prelaunch procedures.

Apollo and Gemini missions would require more astronauts than the first seven selected for the Mercury Program. By October 1963, 23 new astronauts had been selected to join the original Mercury seven.

Gemini II, the second unmanned test flight, was launched on January 19, 1965. All primary objectives were met, including re-entry of the spacecraft, and splashdown in the Atlantic (it missed the planned landing point by 63 km). After three years of designing and building, the first Gemini was ready for its test. On April 8, 1964, the unmanned Gemini I was successfully launched. It achieved all its objectives which included demonstrating the performance and structural integrity of the launch vehicle and spacecraft, and demonstrating the performance of the ground guidance systems. With no plans to recover it, the spacecraft's orbit was allowed to decay until it burned up on re-entry 3.5 days after launch. After this successful test flight, the first manned launch was scheduled tentatively for November 1964, with a second unmanned test, Gemini II, to take place in

September 1964.

But the unmanned Gemini II launch was delayed due to weather and technical problems, pushing the first manned launch into the spring of 1965.

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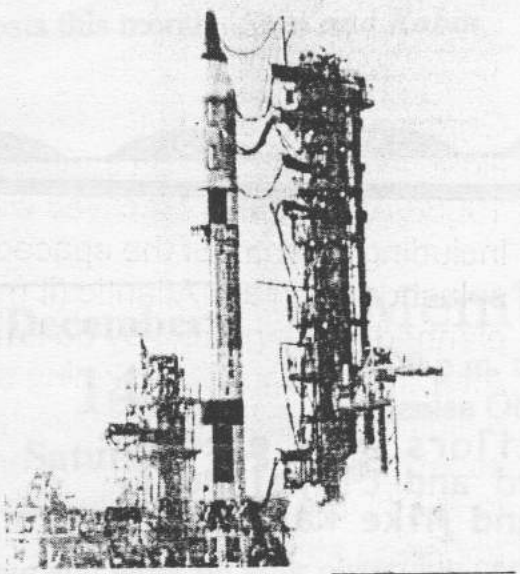

Gemini III lifts off

On March 23, 1965, only five days after the Voskhod 2 launch, Gemini III blasted off carrying commander Virgil (Gus) Grissom and pilot John Young into orbit. Alan Shepard, the first American in space, was originally selected to command Gemini III, with Grissom as his backup. But, when Shepard was diagnosed with Meniere's Syndrome, an inner ear disorder that caused periods of nausea, dizziness and disorientation, he was grounded and Grissom replaced him in the commander's seat. The spacecraft splashed down at 2:15 PM after flying eighty thousand miles and completing three successful orbits around the earth. Grissom refused to open the hatches until the divers had attached floatation collars. He still had the Liberty Bell on his mind, and he was not going to lose another spacecraft! Grissom and Young were ecstatic about their textbook flight, which was followed by an enthusiastic reception and parade at Cape Kennedy. The following day Grissom and Young, accompanied by their families, flew to Washington. President Lyndon Johnson awarded both men NASA's Distinguished Service Medal.

Commander Virgil "Gus" Grissom

What you are unlikely to read on the official NASA web sites is the fact that pilot John Young snuck a corned beef sandwich, one of Grissom's favorites, onto the spacecraft. Gus was constantly complaining about the dehydrated space food packages NASA was providing. Now, as he tasted the sandwich, tiny bits of rye bread began

floating around the cabin. After the flight, their NASA superiors, not amused, made it clear that there were to be no unapproved sandwiches on future missions.

Gemini III had the distinction of being the only Gemini spacecraft to carry a nickname: The Molly Brown. Grissom had insisted on christening his ship. His choice for a nickname was inspired by the Broadway musical *The Unsinkable Molly Brown*, in reference to the sinking of his Mercury 4 capsule, the Liberty Bell, after splashdown (see Part 6 for details). Molly Brown, the lead character in the musical, was aboard the Titanic on its fateful maiden voyage and managed to survive. She was unsinkable! It was a perfect name for Liberty Bell's successor. NASA officials didn't like the idea, but when it became clear that Grissom wasn't going to back down, they capitulated.

The Gemini III mission patch

Continued in next issue

News in a minute . . .

At the October meeting four new councilors were elected: Jennifer West, Sean Ceaser, Ron Berard and Lloyel Hull. Continuing councilors are Fred Wood and Mike Karakas.

Our wandering student, Andora Jackson has returned after a two year absence. Welcome back, Andora !

Twelve of our members came out to Fort Whyte Centre on October 12th to show the public the best of the "city" deep sky objects. M13, M31, the Perseus Double Cluster and the 1st quarter moon were some of the highlights. The cold evening ended with hot cappuccino at Tim Horton's

The C8 has gone missing. Whoever has it, please call Ray Andrejowich at 667-6896 and bring it to the next meeting.

OBSERVING

THE FOLLOWING MEMBERS ARE WORKING TOWARD THEIR

Explore the Universe

Janice Low	34
Lindsay Price	29

Finest NGC's:

Stan Runge	61
Sean Ceaser	52
Gail Wise	102

Herschel 400's:

Stan Runge	47
Sean Ceaser	104
Gail Wise	244

Messier Certificates:

Eugene d'Auteuil	40
Mike Karakas	99
Robin Woods	75
Lindsay Price	11
Wayne Keith	20

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!

What do you really need to know about the predicted Leonid meteor storm in November?

Let us fill you in!

The Leonids (LEO) are debris from Comet Tempel-Tuttle. The earth will intersect the path of this debris from November 14th until the 21st, with a special concentration of debris hitting the earth's upper atmosphere around November 18th and 19th. Leonids occur every year when the earth passes through old comet debris.

So, what makes this year special? The rates are predicted to be much higher than normal this year, in fact to hit 'storm' level of at least several thousand meteors per hour, for several short durations of time! This activity is in addition to the much lower general Leonid meteor rates over the period November 14th to 21st.

A basic checklist for casual sky watchers would include the following:
- campcot or reclining lawnchair
- foam mat to put on chair
- sleeping bag to put on mat
- a spare blanket
- a pillow (yes, use a pillow, it helps keep you comfortable!)
- waterproof tarp to put over sleeping bag to keep off dew and frost
- star charts, printable from our NAMN site at: http://www.namnmeteors.org/charts.html
- a red flashlight to read your charts
- paper, pencils and clipboard to record any notes you take
- some hand warmers, either the lightable stick kind (take matches or lighter), or the disposable pouch kind
- thermos of coffee, and a snack (but be cautious if animals around)
- warm coat, hat, mittens, scarf to keep nose and neck warm
- if down south - appropriate attire and insect repellant
- small pair of binoculars to watch meteor trains with
- last, but very important - a dark colored umbrella to help block the full moon from your view! (an appropriately placed mountain or tree would suffice as well)

Clear skies to all... and good luck for the 2002 Leonid storm season!

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The "NAMN" is an internet-based organization founded in 1995. Our aim is to encourage amateur visual meteor observing in Canada and the USA. To find out more about NAMN, see our site on the Web at: http://www.namnmeteors.org