

AURORA

A Message from the President

The Centre's Observatory Project has seen phenomenal progress during 2001, and especially in recent weeks. There is no doubt that this facility will soon become a valuable asset and a symbol of pride for every member. It will also serve as a focus for astronomical activities in our area for many years to come, and foster an increased interest, understanding, and love for the science and pastime of astronomy in all who will visit.

If you have not seen the site yet, you are encouraged to go out (see map on page 3)! Once you've experienced astronomy from this peaceful, secluded, yet readily accessible rural setting, it will very possibly become your favourite location to enjoy exploring the heavens.

You'll recall the observatory's purchase from St. Clair College, and its subsequent move to temporary storage near Comber, last April. Negotiations with the Town of Lakeshore over the summer months, spearheaded by our Observatory Committee Chair, Peter Bondy, resulted in a successful rezoning of the small parcel of land we are now renting for a nominal annual sum, on a long-term (10 year) lease from the Ainslee family of Comber. A building permit was quickly secured, and no time was lost before the first shovel went into the ground.

Because of the tremendous efforts of many volunteer workers guided under the watchful eye of "foreman", Tim Bennett; in just a month's time this building has rapidly taken shape and it is anticipated that members will be able to enjoy some fine preliminary views of the heavens from within the dome before the year ends!

As an added bonus, the observatory boasts a spacious and comfortable 10 foot by 20 foot attached "warm room". This area will provide an excellent setting where we can host smaller visiting groups for presentations, as well as somewhere for members to just relax, chat, read a book, or enjoy a tea or coffee during their long night observing sessions.

It is hoped that a bit farther down the road, perhaps as early as the end of next year, a corner of this room will be used as the computer control area for a much larger, state-of-the-art telescope under the dome, that will allow members to probe the sky as never before. It will also provide a unique educational and research resource for future programs we'll be conducting in our community.

We are looking into specific funding grants to help make this future instrument a reality, and Peter Bondy is working with his team on this aspect of the project. In the meantime, we will install the Centre's fine 8" Celestron telescope for members to use, and concentrate the Centre's resources on finishing the facility itself.

Over the coming winter, as resources permit, attention will no doubt turn to completing interior construction details. If all goes well, by next spring we will be enhancing the exterior surroundings of our facility. This will include installing a number of individual concrete pads with electricity, for members personal use when they visit with their equipment; a gravel access roadway, an outdoor amphitheatre, and general landscaping details.

We have so far handled costs by utilizing a portion of the financial resources we have built up over
(Continued on page 3)

In This Issue

A Message from the President	Cover & Page 3
Calendar of Events / Maps / Submitting Articles / Membership	Page 2
Auroral Activity	Pages 3 & 4
Asteroid 225 Henrietta Occultation	Page 4
Obituaries	Page 5
2001 Leonid Report / 2002 RASC Windsor Centre Council	Page 6



Calendar of Events

Our next meeting...

Tuesday, January 15, 2002
 8:00 p.m.
 at
 St. Stephen's Church
 Howard Road, 1.4 kms. south of
 Hwy # 3

Main Speaker...

To Be Announced

Topic...

"To Be Announced"

Activities...

Winter Solstice: On December 21 at 2:21 p.m. Winter officially begins in the northern hemisphere.

Saturn Occultation: On December 28 at 3:56 a.m. Saturn will slip behind the nearly full Moon.

Jupiter: Jupiter blazes at magnitude -2.7 and is at opposition on January 1. If you were standing on Jupiter the Earth would transit the Sun's disk.

Earth at Perihelion: On January 2 the Earth is at its closest to the Sun - 147,098,058 kms.

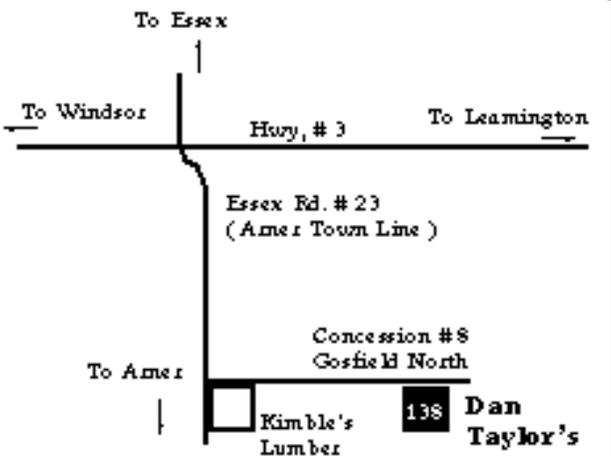
Quadrantid Meteors: Look for the Quadrantid meteor shower to peak on morning of January 3. Although the Moon will all but wipe out this year's view you can look for meteors originating from a point halfway between the end of the Big Dipper's handle and the head of Draco.

Mercury: Look for Mercury in the evening sky from January 9 - 15. Mercury is at its greatest elongation east (19 deg.) on January 11th.

Council Meeting: Tuesday February 5, 2002 at Steve Mastellotto's house. Meeting begins at 7:30 p.m..

Membership Meeting: The next monthly meeting of the Windsor Centre will be held on Tuesday February 19, 2002.

Maps



**Dan's House
 (776-4493)**

Observing Nights

Frank Shepley's.....Last Quarter Moon
Dan Taylor's.....New Moon

(please call before showing up)

Submissions

Aurora is published monthly except for August. The September, November, January, March, May and July issues are full newsletters (usually 6 pages) with a number of member submitted articles. The October, December, February, April and June issues are short flyers (2 pages) with one short article. Submitted articles can be of any length from a paragraph to multiple pages. I can scan pictures and/or diagrams (both prints and film) to support your article and the originals will be returned to you.

Submission deadline is the 1st of the month. I will accept Emails at the address below, floppy disks, or written submissions.

Editor: Steve Mastellotto Email: smastell@wincom.net

Membership

The Windsor Centre of The Royal Astronomical Society of Canada meets on the 3rd Tuesday of every month (except July and August) at St. Stephan's church. In addition to regular meetings the centre hosts a number of observing nights, a picnic and a December social. Members receive a copy of the Observer's Handbook, the RASC Journal, a subscription to SkyNews magazine and access to the Centre's library and telescopes.

Annual Membership Fees are Regular - \$44.00, Youth - \$27.50 and Life - \$880.00.

Contact Frank Shepley at (519) 839-5934 or visit our website at: www.mnsi.net/~rasc for more information.

A Message from the President (continued)

(Continued from page 1)

the years through responsible money management, as well as with many generous donations from individual members who have come forward in recent weeks without even being asked. This is an important reason we're making such outstanding progress right now.

At the Annual Meeting on November 20th, for the first time since the project began, I requested members to consider making a private donation, no matter the size, to ensure we can keep up the momentum. I believe that we easily have the will and the resources within the membership to finish the work planned over the coming months, especially as labour is in many cases being cheerfully volunteered. Money is never spent before we have it, and the project will continue onward, as it has so far, debt-free.

It seems entirely reasonable and attainable at this point, therefore, to target our annual "Astronomy Day" picnic / observing night to be held in June, 2002, as the time we'll gather as a Centre at our new facility, to formally dedicate and celebrate our great achievement. What a great day that will be!

It also comes to mind that we will at some point soon have to establish a mechanism by which we'll determine a name for the site. It would be nice if this can happen by next June! Your thoughts or suggestions would be appreciated. More on this later.

In the meantime, kindly think about this project, about what it means to you and how it will benefit your interest in astronomy in the coming years, and consider making as generous a donation as you can to help make the dream a reality. All donors can be issued a tax receipt for the full amount of their contribution, for income tax purposes.

If you're not able to make your donation in person at a meeting, mail your important contribution to our treasurer, Frank Shepley, at 671 Inman Sideroad, R.R.#2, Ruthven, Ontario, N0P 2G0.

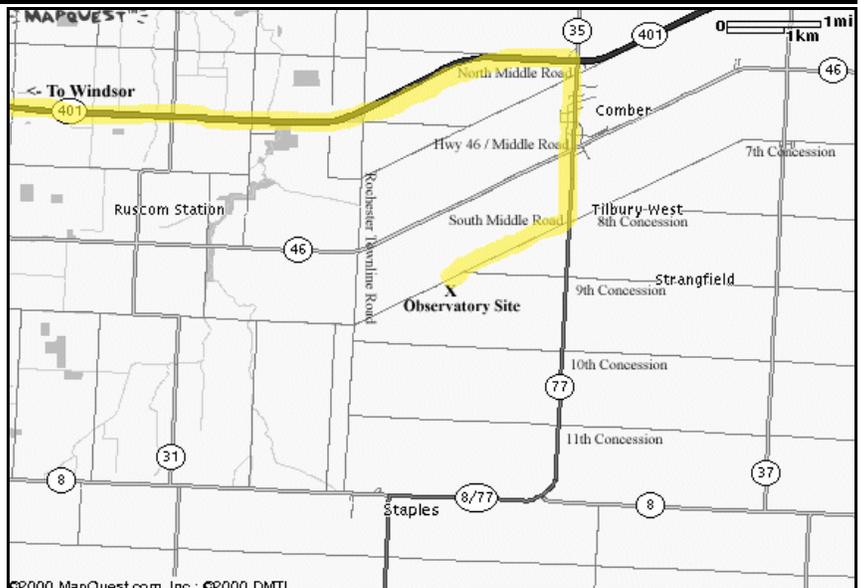
Best wishes for the coming Holiday Season, a Merry Christmas, and a Happy and Prosperous New Year, 2002.

Randy Groundwater

Auroral Activity Report

The following note was from Dave Panton and is representative of a number of emails I received. Steve - Editor

Thanks for the note regarding the possible auroral display on November 5, 2001. I went to Comber that night to try to find some double stars and set up to the west side of the building to avoid moonlight in my face as it rose. I was alone. In the area 18hr to 21hr I was doing quite well from a list off the internet. At 9:45 p.m. the object I was looking at (my records are not handy) was to the Northwest. Darned if it didn't fade in the eyepiece. The eve-



Above is a map showing the Comber area and it includes the major highways (401, 77, 8 and 46) that are in the area of the observatory. I "highlighted" the most direct route from Windsor on this map which is to take 401 East to Highway 77 South to South Middle Road. While on South Middle Road you will cross some railroad tracks (they just removed the tracks last week) and just after the barely discernable point where Concession 9 joins it you will find the observatory site on the South side of the road. If you hit the Rochester Townline Road (i.e. you come to a stop sign and have to turn left or right) you have gone too far.

ning was about as good as it ever is so I was puzzled as there was not a sign of clouds approaching.

I looked to see what the problem might be. It took a few moments to realize the elongated whitish blob was not a cloud at all! Sure as heck it was the start of an amazing display. I called Robin from my cellphone and left word on his answering machine. Then I repeatedly called my wife on our phone and got through (she was on the phone with a girlfriend) about 10:10.

(Continued on page 4)

Asteroid 225 Henrietta Occultation by Dave Panton

The night of Oct 17/18 was almost perfect, clear and cold with a light Northwest breeze. Steve Mastellotto had sent an e-mail flagging an astronomical event to occur that night. At approximately 12:51 a.m. magnitude 13.2 asteroid 225 Henrietta was to occult the 10.6 magnitude star TYC543-855-1 in Aquarius for just a few seconds. It appeared a Comber observer would be on the path of the happening.

Observable occurrences of this type are few and far between. Sky conditions cut the odds of success even further. The late hour on a weeknight made the event even less appealing. Most likely it would be a solo affair. On the other hand, a better chance might never come. Why not go out and make the attempt?

Preparation is very important! "Starry Night Pro" was used to prepare two computer images of the area down to magnitude 14. One was made large enough to fit both M2 and TYC543 in the same field. Another was made to show only the exact area as it would look like in my 40mm eyepiece (a 0.8 degree circle). Extra mirror and normal image printouts were run on the chance others might be on site, willing and able to stay late enough to join in the effort.

On arrival about 10:00 p.m. Larry Burgess was found casually observing with his 10" Dobsonian partly sheltered behind the building. A light cool breeze freshened the air. Larry had just worked two 12 hour shifts. He was very interested in the project but felt 12:51 a.m. would be too late. Graciously he accepted the normal view charts "just in case". My Celestron Nexstar 8 is a remarkable piece of equipment. As simple as it's operation appears, it demands a competent operator. It was not my best night. The star pointer battery was dead! Fortunately Larry had a spare.

Dew is always a threat later in many sessions so a bit of lens heat is good insurance. Clumsily I made a wrong connection to the heater control. Then I tore the end connector off my only heater cable. Again Larry saved the session. Miraculously he had found and saved one dropped in the dark by a prior Dome Site observer (Call me if yours is missing). A computerized telescope is not very useful until it is correctly aligned. No problem, there was lots of time. Initially all seemed to go well as did the alignment checks. Somehow as time grew short a problem developed. For some reason it would not point quite to the correct target area co-ordinates. Nor would it point exactly to nearby backup M2.

Aurora (continued from page 3)

She went out in our yard on Ducharme street, phone in hand as saw much the same sights as I was seeing at Comber.

The period between 10:00 p.m. and 10:30 p.m. was really spectacular from Comber. I saw a nice displays in the Kamloops area in B.C. This was very similar. Pink white and even a touch of blue colors changed and flowed, at one point it looked like I was under a giant changing flower.

By this time Larry was becoming interested in my problems and the occultation. He decided to stay. It was becoming very cold in the faint breeze. Larry had no gloves. I had spares and extra "Hot Hands" hand warmers. We broke them out and soon enjoyed cozy fingers. My telescope would still not point to the exact spot. Larry helped by sighting it manually using it's star pointer to find M2. My aged vision goes down only to magnitude 4.3 so such a feat is virtually impossible. Star hopping via the eyepiece and chart, I was then able to find exact star. Larry easily repeated the feat with his Dobsonian in the last few minutes and we were in business.

Our views perfectly matched our respective map sets. My telescope was responding ever more slowly to it's controls as I tweaked it to keep the star dead centre. I reasoned it was simply due to the growing cold. There was no sign of Henrietta.

Countdown began and we watched very carefully. The final minute or two took ages. Perhaps ten seconds after 12:51 a.m. the star's magnitude seemed to vary just a tiny a bit. Then it vanished! My watch read 12:51:20 a.m. a moment later Larry called "It's back again". All the stars in the area looked exactly like nothing had happened. We both cheered. Invisible little Henrietta had revealed her presence. Neither of us had ever seen such an event. It was a great experience. Was this the first star/asteroid occultation observed from the Comber Dome Site?

On teardown I noticed the rechargeable power pack was nearly dead. So were the telescope's internal set of eight double A backup batteries. Later I determined the source of the problem. In making the connections I had connected the lens heater cable to the controller's full power outlets in the dark. It should have been plugged into it's variable power outlet. The lens heater had rapidly pulled the battery pack and backup batteries down. Had I arrived at the site a bit earlier it might have crashed in the last crucial minutes!

During our session we noticed many small meteors flash across the sky. Two zipped across my eyepiece field of view. Could they have been part of a shower?

The next night I returned to Comber with a freshly charged power pack. I aligned the telescope, punched in "GOTO" and entered the R.A. and Dec. of TYC543. The telescope obeyed perfectly and motored over precisely to the desired star. There is a saying appropriate to this story: "We grow too soon old and too late smart".

By 11:00 p.m. the super colors seemed to be about done. Mostly there were changing areas of white patches blocking the stars. I tried to observe through them but could see nothing. I packed up my equipment, drove out and closed the gate. Then I sat there a few moments taking off my warmer clothing (there was frost on everything). Robin drove in and we spent another hour just observing on foot.

Obituaries

John McDermott

On Friday, November 2nd, 2001, the Windsor Centre lost one of its most senior members with the sudden passing of John McDermott, at the Marentette Rest Home, his place of residency. He was 68.

John joined the Windsor Centre during the 1960's, and through the years rarely missed a meeting. He was a great believer in the R.A.S.C. Observer's Handbook, regularly giving presentations and a quiz or two now and again concerning its contents, to inform and entertain the membership.

John served on the Centre Council for many, many years and during that time never allowed his disabilities to slow him from contributing as much as he could. Kindly and gentle in character, John's respect and love for the science of astronomy always shone through. I'll remember him for his patient manner, and the way I benefited so many times through the years from his words of advice and encouragement.

Though I am saddened that we will no longer see his large form walking through the doorway, we can be thankful for his presence in our lives and the fond memories we will carry always, of John.

David Marchand

Few were aware through the years of his struggles with respiratory illness, so when word came of the passing of David Marchand at the age of only 45, on November 8th, 2001, we were shocked and saddened.

I first met Dave when he attended an Introductory Astronomy class I led at St. Clair College, during the 1980's. After joining the Centre, he wasted no time and immediately began finding ways in which he could contribute. Thus he served in many capacities on council through the years, including recording secretary, newsletter editor, and webmaster.

Dave totally immersed himself in his love of astronomy. He was a familiar and utterly reliable presence at virtually every meeting and every special event. He'd always be one of the first to arrive, and among the last to leave, giving freely and generously of his resources.

Dave was a regular at Star Parties such as Starfest, and frequented farther astronomical destinations such as Astrofest, in Illinois, and The Winter Star Party, in Florida.

A man of many talents, Dave will be sorely missed and always remembered by those of us who were privileged to be able to call him our friend.

Season's Greetings



from



UNIVERSAL SCIENCE

*We are operating on a pick-up and delivery system
Competitive pricing on MEADE, CELESTRON and SKYWATCHER scopes and accessories*

Contact Robin Smallwood
Monday - Friday 9:00 a.m. - 5:00 p.m., Saturday 9:00 a.m. - Noon, Closed Sunday
Telephone: (519) 967-1655 Fax: (519) 967-1657
Email: unisci@sympatico.ca

2001 Leonid Report from Florida

I Just thought I would drop you a line about the Leonid observing in the Everglades. There is a dark site in the Everglades frequented by members of the Fort Myers and Naples clubs, and on Saturday, it appeared to be congregation central. With just a sliver of a moon, everyone decided to get to the site early to do observing throughout the night until the meteor shower commenced. I left home about 5:30, and arrived at the site about 6:40 when it was already quite dark. There were three vehicles there, and telescopes were already set up. A steady stream of observers arrived, and soon the whole place was buzzing with people and equipment. The sky was clear, the air was relatively dry and the temperature was around 70 degrees. There were no mosquitoes.

Observing was excellent for the first hour or two, then would deteriorate slightly, then improve, depending on the amount of moisture moving through the upper air. All in all, it was an excellent observing session, and I was using Digital Sky Voice to suggest objects. With this program, I get to see objects I would not choose for myself, and all I have to do now is learn to record the objects in my observing log before going to the "next" object suggested.

During the course of the night, there were between 50 and 100 people show up. Many brought recliner chairs and sleeping bags to ensure they would be comfortable, and protect them from the breeze and moisture. There was a moderate breeze from the north, but the temperature went down to only 66 or 67 degrees. The combination of breeze and humidity in the air made a sweater and other warm clothing necessary for most.

About 1:30, there was a noticeable increase in meteors streaking across the sky, so I dismantled my equipment and stowed it in the truck, as did most others, and began to watch the show. About 2:30, Rick Piper from the Naples club began a count to acquire an hourly count of meteors. This was to be an all-sky count, and as meteors were observed, people would shout the observance, and Rick would make a mark on his writing pad. After an hour, the tally was 187. During the course of the night, the frequency increased, and most seemed to come from the "sickle" of Leo. Occasionally a meteor would streak across from a different direction, but they were few and far between. The variety of meteors was astounding, from very faint with short streaks, to very large, bright, with a very distinct smoke trail. Sometimes they came in simultaneous groups - three, four or five within a fraction of a second - all to the "oohs" and "ahhs" of the crowd. One exceptional meteor streaked across fully 60 degrees of the sky - outstanding.

At 4:00 a.m., more observers arrived, with headlights on, much to the consternation of everyone there. Since the road consists of a laneway across a man-made lake, there was little room for parking and maneuvering. I never saw so many vehicles there in my life! In the period between 4:30 and 5:30, the sky seemed to put on a fireworks display. With Leo almost directly overhead, the meteors were *everywhere*. No part of the sky was spared, and the intensity of the shower seemed to alternate between various directions in the sky - but always excellent in any direction. Rick was marking on his notepad, and at the end of the last hour, had four pages full of marks. He did not tally the count, but promised that he would let us know what it was as soon as he counted it. We estimated that the count would easily exceed 1,000. When the dawn began to brighten the eastern horizon, the encampment stowed chairs and cots, and the exodus began. I left the site shortly after 6:00 a.m., arriving home about 7:15. It was quite a night. I've seen "meteor showers" before, but this gave new meaning to the term. In those intense periods of activity where the sky was literally being bombarded, there was no thought of the nature of the meteor shower - just a sense of wonder, excitement, amazement, and exhilaration. Only later could it be described as beautiful, inspiring, overwhelming and magnificent. On reflection, one can never remember the sight the way it occurred - only the feeling

2002 Council of the RASC - Windsor Centre

Elected Officers

President	Randy Groundwater
1st Vice-President	Steve Mastellotto
2nd Vice-President	Robin Smallwood
Treasurer	Frank J. Shepley
Secretary	Joady Ulrich
National Council Rep.	Tim Bennett

Councilors

Paul Preney	Susan Sawyer-Beaulieu
Henry Lee	Lindsay Fish
Steve Pellarin	Peter Bondy
Rev. Harry Brydon	Tom Sharron
Ken Roung	

Appointed Officers

Honorary President	Dr. William Baylis
Past-President	Susan Sawyer-Beaulieu
Librarian	Tom Sharron
Recording Secretary	Dave Panton
Public Education Director	Randy Groundwater
Public Relations Director	2nd Vice-President
Newsletter Editor	Steve Mastellotto
Director of Observing	Robin Smallwood
Assistant D. of O.	Steve Pellarin
Assistant Treasurer	Ken Garber
Alternate Council Rep.	

it invoked.

This was definitely a once-in-a-lifetime event for me. The previous Saturday I had gone to the same location in the Everglades to do some observing, only to have the clouds close in suddenly and completely. I felt at that time that luck was not with me. Luck not only returned for the Leonids, but came back in spades. I wish everyone could experience the magical evening I did that night. It was truly awe inspiring.

Joe Cambala