Aurora
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Three Steps in My Discovery of Astronomy by Bert Huneault

Editor's Note: Bert's article is a wonderful idea for a series of articles from members on how they became interested in astronomy. I would love to receive a few of these so please consider putting your story down on paper and sending it along to me for future publication in Aurora. It can be as short as a couple of paragraphs or a full story as Bert has provided here. I am sure we would all enjoy sharing in your discovery of astronomy.

As a youngster I didn't have an opportunity to join the Cubs or Boy Scouts; as a result I did not learn to recognize stars and constellations at an early age, as many kids do. Neither my parents nor my teachers clued me in to the wonders of astronomy. So how did I become interested in this fascinating hobby?

To answer that, let's move back the clock to the summer of 1944 when I was a teenager having just finished my first year in high school. It was wartime and Canadian, British and American armies had just invaded Normandy.

Since the beginning of the war Canada had been training thousands of airmen in the British Commonwealth Air Training Plan. As a result I had been witnessing the daily routine of countless military flights above my home town (Montreal), as well as in the skies over the Ottawa Valley countryside where I spent my summers on a farm. I thus became keenly interested in aviation.

One day, while reading an aviation magazine, I noticed an ad by the Macmillan Company of New York, announcing the availability of an aeronautical chart of southeast England and northwest Europe – perfect for following the invasion and progress of Allied armies on the continent. I didn't have any money back then, but the map was free so I sent away for it, pronto!

When the anxiously awaited chart arrived in the mail, I noticed an advertisement on the back. Macmillan had just published a new book titled *Aircraft Navigation* which cost $2.00. To me that was an astronomical sum, but I somehow managed to scrape up the two bucks and ordered the textbook.

The book turned out to be most interesting. In addition to covering basic aircraft navigation concepts, it introduced me to the fascinating science of meteorology which I found so captivating that I started thinking about a career in that field. But the book also dealt with star identification. I studied it from cover to cover and, in the process, became acquainted with the major constellations used in celestial navigation. **That was my first step in discovering astronomy.**

To this day, a special moment stands out clearly in my memory. One of the pages featured a chart showing Polaris and the Big Dipper, and I decided to use it as a guide to help me find this constellation in the night sky. So I stepped outside on a clear, dark night and scanned the northern half of the sky. I looked and looked, but to my disappointment I could not locate Ursa Major. The star chart was quite small, the seven stars of the Big Dipper covering an area hardly larger than three centimetres across. As a result, I was expecting to see a *small* group of stars in the sky. But I persisted in my search for the asterism and, all of a sudden, I found it. It was a *huge* constellation covering a great big chunk of the sky. Was I ever pleasantly surprised! I soon learned to recognize other constellations and some of the brighter stars used by navigators.

The second step resulted from a letter I wrote. The book's chapter on star identification had only served to whet my appetite. Unfortunately it did not explain *how* fliers used the stars to navigate, and I wanted to know! Curiosity was killing me, so I wrote to the Macmillan Company and asked them to explain just how aviators navigate by the stars. In retrospect I guess it was a pretty tall order, but I didn't know any better then.

Enter a new player in my budding love affair with astronomy – a wonderful man by the name of Charles L. Skelley, an editor at Macmillan's. He answered my letter and regretted that he had no knowledge of the subject, but he had gone to the trouble of contacting an officer in the U.S. Army Air Corps and had asked him to kindly answer my query. Mr. Skelley had enclosed the officer's three-page long succinct explanation and informed me that if I wanted further information on the subject, a brand new comprehensive textbook titled *An Introduction to Navigation and Nautical Astronomy* was available from Macmillan for

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In This Issue

Calendar of Events

Our next meeting…

Tuesday, May 20, 2003
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 Determined"

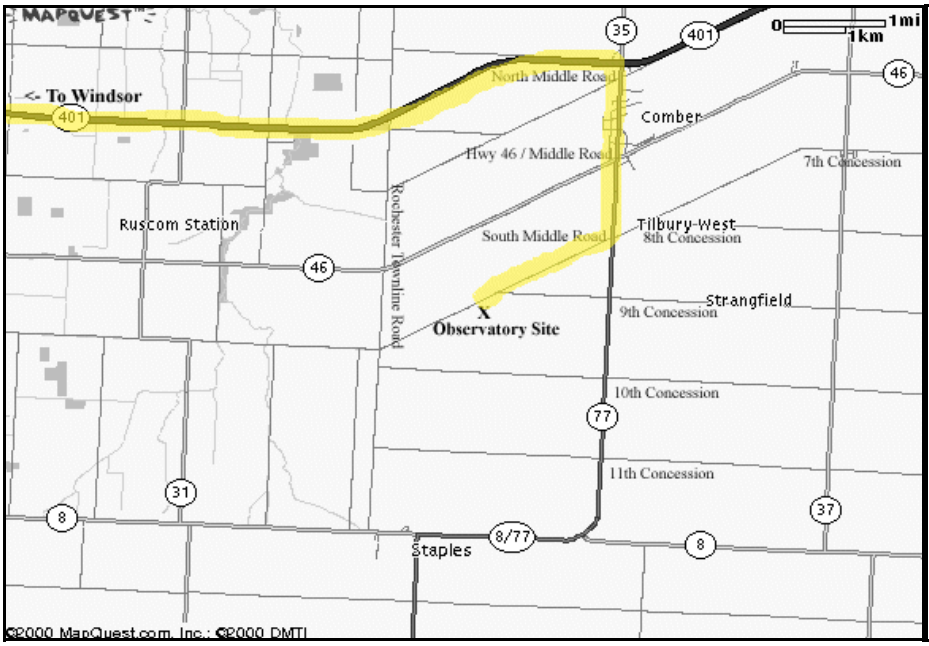
Activities...

Earth Day: On Sunday April 27 the Windsor Centre will have a display at the annual Earth Day celebrations at Ojibway Park. The event runs from Noon - 4:00 p.m. and setup will be from 10:00 - 11:00 a.m..

Centre Observing Night: We will be hosting a club observing night on Thursday May 15 at the Hallam Observatory site. Participants will enjoy the first of two total lunar eclipses visible from North America this year (the other is on November 8).

Council Meeting: The next council meeting will be held on Tuesday June 3 at 7:30 p.m. at Randy Groundwater's house.

Annual Picnic: We will once again be holding our Centre's annual picnic at the Hallam Observatory site on Saturday June 7. More details to come as the date approaches.



Hallam Observatory Site

At left 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) 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. On most clear nights someone is usually out there observing but if it happens to be a clear, moonless, weekend night you should have many observing buddies.

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: mmastellotto@cogeco.ca

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 Ken Garber at (519) 966-3478 or visit our website at: www.mnsi.net/~rasc for more information.

Three Steps in My Discovery of Astronomy (continued)

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$8.75.

The U.S. airman's technical explanation only served to sharpen my interest in celestial navigation and made me wish I could purchase that new book. However it was out of the question; I didn't have that kind of money. I was quite impressed by the interest Mr. Skelley had shown and I wrote him a thank you letter in which I explained that I would dearly love to get that book but pointed out that, unfortunately, as a student I did not have $8.75 to spare. That was a lot of money back in those days!

Well, you can imagine my surprise when, a few days later, I received a complimentary copy of the book from Mr. Skelley. Wow!... was I ever excited! The book really got into the nitty-gritty of celestial navigation, chronometers and the measure of time, Mercator charts, the concept of latitude and longitude, the Equation of Time, the celestial sphere, the use of a sextant to determine geographical position at sea, stellar and planetary motions, and all sorts of mathematics and astronomy. The textbook even taught me logarithms and trigonometry, necessary to solve its numerous navigation problems. Incidentally, I sure appreciated that new knowledge when logs and trig were studied during the following term in high school.

As I studied the various chapters in the book, I learned to use the *Nautical Almanac* and got to know many of the 55 stars listed in its navigation tables. I fell more and more in love with astronomy and navigation. However, having earlier been exposed to **meteorology** in the *Aircraft Navigation* manual, I was already hooked on that science and had decided that after high school I would go to university to study math, physics and weather, and eventually become a meteorologist.

Throughout my high-school years I kept in touch with Mr. Skelley. He encouraged me towards a career in meteorology and kindly sent me books on weather. However, by the time I reached Grade 12, I realized that family finances would not allow me to go to college. Upon learning this, Mr. Skelley astounded me by trying to arrange a university scholarship for me through his friends. My parents and I were flabbergasted by this man's kindness and generosity; after all he was in a different country and knew me only through correspondence. Unfortunately it turned out that his friends had not yet returned from military service and he was unable to access funds for the scholarship.

Basic electronics which I had studied in Grade 12 physics had begun to fascinate me, and with my interest in navigation, the lure of the high seas and the thought of becoming a radio officer in the merchant marine began to appeal to me; and I had already learned Morse code in the Army Cadets while in high school. So after Grade 12 I enrolled in a Marine Radio course at a technical school in Montreal. Mr. Skelley then started sending me books on electronics; there was no end to this man's kindness!

Upon graduation I obtained a "Certificate of Proficiency in Radio" from the federal government and I applied for employment at various marine and airline companies. I soon received a telegram from Canadian Pacific Airlines, granting me an interview. It so happens that one of our Marine Radio instructors, familiar with my interest in meteorology, had encouraged me to write an article on the subject and suggested I submit it to a magazine. I had done that, and much to my surprise the nine-page article was published just when I completed the course. Knowing that weather was very important in aviation, I took the magazine to the interview, along with my radio operator's license. One of the first questions the airline official asked was "Do you know anything about weather?". When I showed him the magazine with my article, he said, "That does it, you're hired!" That's how I became a commercial radio operator – not on an ocean-going vessel like I had originally envisioned, but in a log cabin in the Labrador bush country where the airline sent me to work as a radio operator and weather observer! I was stationed hundreds of miles north of the nearest town, so you can imagine how dark the skies were up there on clear nights. I had never seen so many stars! So I became even more interested in astronomy. My location within the auroral zone in that sub-arctic region was fortunate because it happened at a time when solar activity reached the peak in Cycle 18 (1947-48). As a matter of fact that peak was so active it has since been exceeded in strength only by Cycle 19 which peaked in 1959. Needless to say, we were frequently treated to incredibly awesome displays of northern lights but also had to contend with frequent severe geomagnetic storms which, unfortunately, affected shortwave radio communications very adversely. I remember once being completely out of radio contact with the outside world for a long four days. All of this kindled a special interest in solar astronomy, the ionosphere, shortwave radio propagation, aurorae, sunspots, etc., so that by the time I returned to civilization I was ripe for further involvement in astronomy.

After spending two and a half years in the Labrador wilderness, I quit my job and went to Toronto to study Radio & Television Technology; then moved to Windsor to begin a career as a TV technician and eventually as a college instructor in electronics. I discovered the Windsor Centre of the RASC in the early 1950s and soon joined the society. **That was the third step in my discovery of astronomy.** The monthly meetings greatly enriched my knowledge of astronomy and awakened an interest in cosmology. As well, observing sessions provided opportunities to actually use telescopes. I was hooked! The rest is history, and as I contemplate the nearly 60 years that have elapsed since that fateful day in 1944 when I ordered the aeronautical chart, little did I realize then that it would turn out to be a milestone which led to an interesting forty-year career in electronics and provided me with lifelong enjoyment of astronomy and meteorology. I retired from St. Clair College 15 years ago, and I still retain a very keen interest in shortwave radio, weather and the cosmos.

In the 1950s, I unfortunately lost track of Mr. Skelley. My preoccupation with career, marriage, raising a family, etc., brought an end to our correspondence. However in the 1980s, as I reflected on the strong influence this kind gentleman had had on my career and hobbies, I found myself wishing I could discover him again. So I made enquiries and was indeed able to re-establish contact. Then, in the summer of 1988 during a visit to New York City, I finally met that wonderful friend. He was 98 years young! We spent a few pleasant hours visiting with him and his wife, and recalled many highlights of our correspondence from the 1940s. Characteristically, he even insisted on giving me a few books from his bookshelves! Sadly, Mrs. Skelley informed me the following winter that her husband had passed away.

What about the aeronautical chart and navigation textbooks acquired 60 years ago? I still have them on my bookshelves; they are lasting mementos of **how I discovered astronomy** and found an amazing friend in New York City.

March Meeting Minutes

General Meeting Minutes
March 18, 2003

Vice-President, Steve Mastellotto: The meeting was chaired by Steve Mastellotto in President, Randy Groundwater's absence. Steve opened the meeting and requested and received a motion to accept the minutes of the February 2003 meeting. The motion was made by Harry Brydon and seconded by Mario Fabris, the motion was carried.

Reports

Correspondence Secretary, Joady Ulrich: Joady reported he had no correspondence.

Treasurer, Ken Garber: Ken announced he had the new membership cards on hand. The current membership is 125 members.

Librarian, Tom Sharron: Tom did not have anything to report.

National Council Representative, John Welsh: John reported National is setting up two new standing committees. In April the Annual Report and proxies should arrive from National.

Newsletter Editor, Steve Mastellotto: As usual the newsletter is under control. Steve mentioned that some other Centre's newsletters were on hand for the taking.

Public Relations, Robin Smallwood: The public observing night on Saturday March 8th. was attended by 15 to 20 people in spite of the -14C temperature. A strong wind brought the chill factor down to about -30C. Forest Glade and Malden Park were the chosen sites.

Robin reported Randy had done an astronomy presentation to a city school's Book Club members.

Robin also reported Randy had done a presentation to a home school group. They donated $50 to the club in appreciation.

Director of Observing, Steve Pellarin: Steve presented a summary of recent events in astronomy. Among multitude of news bits were mention of "exo-planets" orbiting nearby stars and how one gas giant is estimated to be losing 10,000 tons of mass per second.

Galileo Spacecraft, on its journey for fourteen years has made a multitude of surprising discoveries in its many orbital loops around Jupiter and its moons. Galileo suffered numerous technical failures and handicaps but most were corrected from Earth. This Fall will be mission's end when it is crashed into Jupiter.

Cassini flew past Jupiter sending back some 30,000 high-resolution images. From them it was learned Jupiter's steady cloud belts have large plumes of rising gases with lightning at high altitudes.

From Earth using the latest telescope technology Jupiter's moon count has risen to fifty. Many are small; several could be parked in Essex County. Their orbits are varied in plane of orientation and direction of rotation.

NASA will launch the fourth of a spacecraft series in 27 days. This one will have unusually cold infrared detectors. It will follow Earth around the Sun in an L5 orbital position.

Then Steve produced descriptions of astronomical events we can view in March and April. Asteroid Vesta will be naked eye visible, brighter than Uranus. Leo and Sextans have Messier and NGC objects easily found in modest telescopes.

An animation of Jupiter and its moons moving across the night sky approaching M44 and receding was done via Starry Night Pro.

Business

Steve Pellarin asked for **volunteers** to bring telescopes to Brennan High School for an observing session to be held at the athletic field about three weeks hence. Please contact him at break period for further detail.

Robin asked for help with **Earth Day** at Ojibway Park on April 27th. He especially needs photographs taken by local amateurs. Visitors seem particularly interested in astronomical photographs. He also asked for members with telescopes fitted with solar filters to bring them for public Sun observing.

A Windsor Centre **public observing night** at the Hallam Observatory is set for the evening of May 15th. The date was chosen for it's total lunar eclipse to occur at that time.

The **Annual Centre picnic** date is unchanged and set for the afternoon of June 7th at the Hallam observatory.

Observatory report by Steve Mastellotto. Steve reported the new 14-inch Celestron telescope and mount assembly are still on track for delivery in September. Software Bisque is building the mount and its long delivery determined the shipment date. John Welsh reported he had contacted Ash Dome and was waiting their reply regarding ways and means to motorize the dome.

Meeting Venue: Steve Pellarin asked if there were any plans to look for a larger meeting place more suited to Windsor Centre's growing numbers.

50-50 Draw Winner: After the break, Ken Garber drew the 50-50 ticket won by Tom Sobocan.

Main Speaker: Juliana Grigorescu—"Celestial Co-ordinates". Steve introduced Juliana, a Windsor Centre member for the past four years. Juliana has an impressive science education and a keen interest in the night sky since the age of nine. She did ex-

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March Meeting Minutes (continued)

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tensive preparation and used both video and three-dimensional models to give an excellent presentation on the complex topic of Celestial Co-ordinates.

She started by showing how our own locations on Earth are determined. Then she showed how the locations of stars in the night sky are plotted on the celestial sphere. Then Juliana delved into the complications ground observers face. We view the sky from our bulged, tilted, spinning, precessing and elliptically orbiting humble little planet Earth.

The effects of all these factors are many and confusing but she made the whole package both enjoyable and understandable. The limits of our view of southern hemisphere stars from Windsor became very clear. One spectacular object, Omega Centauri can best be seen only a day or two a year under perfect conditions as it briefly rises and sets along our Southern horizon.

Spring Equinox two days hence, Juliana explained is significant as both start of Spring and the zero location of Right Ascension. She concluded her talk by answering many questions from members.

Steve Mastellotto thanked Juliana for her well-prepared presentation. Susan Sawyer Beaulieu added further thanks and additional compliments.

Meeting adjourned 10:20 p.m.

From the Treasurer

All of the 2003 RASC calendars are now sold and no more will be purchased. I will probably do a quick survey come the summer to see how many are interested in a 2004 calendar. Most likely I'll increase the initial order a bit to get more calendars at the start.

There were two calendars given away at the Christmas Social that were never claimed. If you can find your calendar certificate, hang on to it until the fall, and you will be able to use it to pick up the 2004 calendar instead.

Also, a reminder that you can send your RASC renewal directly to National Office. Please see the article in the March 2003 issue of Aurora (note that you can find the past years worth of newsletters on the RASC Windsor Centre's website at www.mnsi.net/~rasc. Just follow the newsletter links) for all the details.

Ken Garber

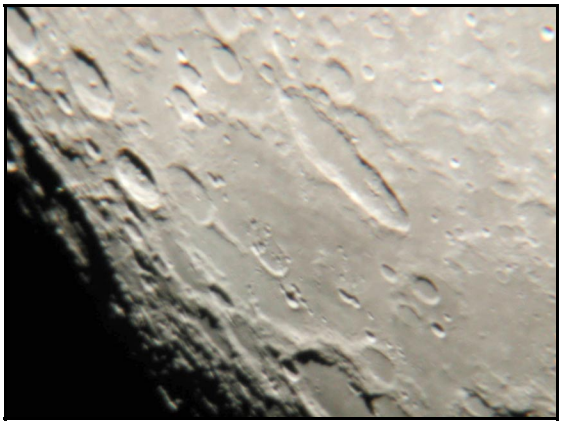

Photo by: Steve Mastellotto

Observing Asteroid 2002 NY40 by Dave Panton

Editor's Note: My apologies to Dave, I just noticed he sent this to me back in December and I forgot about it.

Earth has been hit by asteroids and will be hit again. Chances of observing one passing nearby are pretty rare. With the idea of seeing 2002 NY40 as it flew "close by" on August 17/18, 2002 neighbour and fellow Centre member Tom Sobocan and I prepared for the event. We set up his 6 inch Dobsonian and my Celestron 8 inch "go-to" telescope in my South Windsor driveway. Tom's scope could do the convenient wide area scanning and mine the more technical search.

We innocently made several mistakes. The worst mistake was believing the asteroid would be easy to find. The next worst was failing to set up at the Hallam Observatory under better sky conditions. Then we assumed by merely aiming in the right direction and doing a little scanning the asteroid would pop out like a big bright rock sliding across the night sky. Newspaper and Internet accounts made it look really easy.

We were dead wrong. Using a good series of maps and detailed eyepiece views printed via my Starry Night Pro program we hunted for three hours. The eyepiece views covered small areas, each only useful for a short time. It was tough to confirm matching star patterns in the poor seeing conditions. Go-to telescopes are great but confirming they have gone to the desired location is also an important part of a search.

We were both very near to packing it in when I caught a tiny dim dot of light moving across it's background stars. Even at a low 50x magnification it was really hiking for something further away than the Moon. We had found the Asteroid. Chasing this one by using direction buttons on a go to telescope was a genuine exercise in hand/eye coordination. Nevertheless we were able to take turns at the eyepiece. We shared the experience for half an hour marveling at the sight. Then clouds creeping across the sky ended our neat observing session.

The chance of being hit by an Asteroid is a pretty long shot. Being hit by one of significant size and speed would be a terrible tragedy for all forms of life on Earth. 65 million years ago dinosaurs suffered that fate. It was not all bad though, can you imagine dodging dinosaurs as well as trucks?

Members of the Akela 82nd Cub Pack enjoy a visit to the Hallam observatory on February 8, 2003. Photo by Jim Seguin.