

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC
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Remembering Karl Miller

by Marla Daskis

On September 17 this year, the RASC Vancouver Centre lost one of its most longest serving members, J. Karl Miller, at the age of 86.

Karl always loved astronomy, starting as a teen in post-war Berlin, where he was deeply involved with the Berlin Association of Variable Stars (BAV). His interest did not wane after his immigration to Canada, where he settled in Vancouver with his beloved wife Hilikka. It was here that he first joined the RASC Vancouver Centre in 1977. By 1979, he had become active on council, eventually serving as president from 1986 to 1987, and as the National Repre-

sentative at the same time.

Karl was a Life Member very early on. The RASC used to allow members to purchase

chase one, figuring it would save him money in the long run. Since he was a member for 48 years, his conclusions were correct!

His astronomy interests ranged from astrophotography to variable stars, public education and the application of electronics to astronomy. He won first prize at the 1985 RASC General Assembly for computer-aided astronomy. Professionally, he was also a member of the Applied Scientists and Technologists Association of BC, serving on their council in various positions, including as

Secretary Treasurer.

In 1987, Karl had to move
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Karl and Hilikka Miller at the Apollo 11 50th anniversary event at SFU in July of 2019

Life Memberships, so Karl did the math and concluded it made sense for him to pur-

NOVEMBER 12

SFU

We will be hosting a "Show and Tell-telescope" event at the HR MacMillan Space Centre at 7pm. Register via Meetup.



DECEMBER 11

SFU

Our Annual General Meeting followed by a lecture. Watch Meetup for details.



JANUARY 8

SFU

Speaker TBD. Watch Meetup for updates.



to Toronto as part of his work as a technical resource manager for a national food company. He retained dual membership along with the Toronto Centre. He continued to serve as the Vancouver National representative but also served on the RASC National council as Treasurer. If that wasn't enough, by 1990 he also was Chairman of the Finance Committee and of the Computer Use Committee. However, his work situation changed unexpectedly

in May of 1990, and he made the decision to resign from the National council and return to where his family lived in Vancouver.

Once Karl returned to Vancouver, he continued his involvement with RASC Vancouver but wasn't active again on council until 2008. He was designated as an Honorary President in October of 2016, then asked to become an At-Large council member again in 2024 so he could vote on council initiatives!

Karl was a tireless volun-

teer, regularly bringing out his telescope at SFU's Starry Nights, and almost every other local event where someone needed to bring a telescope. He was always ready to show something interesting through the eyepiece, at night or with a solar telescope during the day. Karl was always ready to share information, stories, and a smile.

Thank you, Karl, for your dedication to the RASC and for sharing the wonders of the night sky with so many people, you will be missed! ★



Karl at a public outreach event for the Perseid meteor shower (above) and at another event in Belcarra. Images courtesy of Doug Montgomery and Leigh Cummings.



President's Message

How to Prepare for Winter Telescope Observing: A Guide to Staying Warm and Seeing Clearly

by Robert Conrad

Winter nights offer some of the best conditions for stargazing: crisp, dry air, longer darkness, and reduced atmospheric turbulence. But cold temperatures, wind, and frost can turn an exciting observing session into a miserable ordeal if you're not prepared. This guide covers equipment setup, site selection,

and—most importantly—how to keep yourself warm and functional for hours under the stars.

1. Choose the Right Location

- **Minimize wind exposure:** Even a light breeze at -10°C can drop the wind-chill to dangerous levels. Scout sites with

natural windbreaks (tree lines, hills) or set up behind your vehicle.

- **Avoid low-lying areas:** Cold air pools in valleys, creating frost pockets and fog. Higher ground is usually drier and clearer.

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About RASC

The RASC Vancouver Centre meets at 7:30 PM on the second Thursday of every month at SFU's Burnaby campus (see map on page 4). Guests are always welcome. In addition, the Centre has an observing site where star parties are regularly scheduled.

Membership is currently \$104.00 per year (\$61.10 for persons under 21 years of age; family memberships also available) and can be obtained online, at a meeting, or by writing

to the Treasurer at the address below. Annual membership includes the invaluable Observer's Handbook, six issues of the RASC Journal, and, of course, access to all of the club events and projects.

For more information regarding the Centre and its activities, please contact our P.R. Director.

NOVA, the newsletter of the Vancouver Centre, RASC, is published on odd-numbered months. Opinions expressed herein are not nec-

essarily those of the Vancouver Centre.

Material on any aspect of astronomy should be e-mailed to the editor or mailed to the address below.

Remember, you are always welcome to attend meetings of Council, held on the first Thursday of every month at 7:30pm in the Trotter Studio in the Chemistry wing of the Shrum Science Centre at SFU. Please contact a council member for directions.

2025 Vancouver Centre Officers

President	Robert Conrad president@rasc-vancouver.com
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At Large	Michael Levy, Gordon Baush, Norry Dogan, Chandan Prashar, J. Karl Miller

Library

The centre has a large library of books, magazines and old NOVAs for your enjoyment. Please take advantage of this club service and visit often to check out the new purchases. Suggestions for future library acquisitions are appreciated.

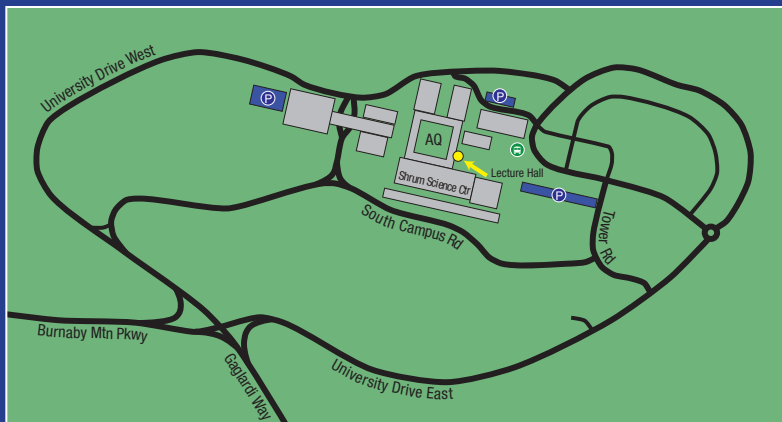
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rasc-vancouver.com
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Burnaby, B.C.
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Map to Meeting Site



Our SFU meetings are in the Academic Quadrangle, usually near the southeast corner next to the cafeteria, as indicated by the arrow on the map.

Pay parking is available at several locations located around campus (indicated as “P” on the map).

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- **Check light pollution:** Use tools like lightpollutionmap.info to find dark-sky sites. Winter’s bare trees often reveal more distant light domes—plan accordingly.

2. Telescope and Equipment Prep

Protect Your Optics

- **Acclimate slowly:** Bring your telescope outside 1–2 hours before observing to match ambient temperature. Sudden changes cause tube currents and dew.
- **Dew prevention:**
 - Use a flexible dew shield
 - Low-wattage dew heater strips (powered by a 12V battery or power bank) are gold in winter.
 - Keep lens caps on until ready to observe.
- **Battery management:**
 - Cold kills batteries fast. Keep spares in an inside pocket to warm them.
 - Use lithium batteries (e.g.,

Energizer Ultimate Lithium) for mounts and cameras—they perform better below 0°C.

- **Mount stability:** Frozen ground can be rock-hard. Use a sturdy tripod with wide feet or snow pads to prevent sinking.

3. Dressing for Sub-Zero Observing

Layering is key—think **moisture-wicking base** → **insulation** → **windproof shell**.

Layer 1: Base (Wicking)

- Merino wool or synthetic long underwear (avoid cotton—it holds sweat and freezes).
- Thin wool socks + liner socks.

Layer 2: Insulation

- Fleece jacket or puffy mid-layer (down or synthetic—synthetic stays warm when wet).
- Fleece pants or insulated bibs (e.g., Carhartt Arctic).

Layer 3: Shell

- Gore-Tex or similar hard-shell jacket/pants with pit zips for ventilation.

- Insulated boots rated to at least -20°C (e.g., Sorel Caribou or Baffin Impact).
- **Gaiters** to keep snow out of boots.

Extremities (Critical!)

Area Gear Recommendation

- | | |
|--------------|---|
| Head | Balaclava + fleece-lined beanie + hood. 60% of heat loss is through the head/neck. |
| Face | Neoprene face mask or buff for wind. Ski goggles (clear lens) for eye protection. |
| Hands | Thin liner gloves + heavy mittens (with hand warmers inside). Use a hand muff attached to your waist for quick warm-ups. |
| Feet | Chemical toe warmers + thick wool socks. Battery-heated insoles if budget allows. |

4. On-Site Warmth Hacks

- **Portable heat sources:**
 - Catalytic heaters (e.g., Mr. Heater Buddy—**use only in**

well-ventilated areas, never inside a vehicle with you).

- Hot water bottle in a fleece sleeve—tuck inside your jacket.
- **Chair setup:** Use an adjustable observing chair with a foam pad. Sit on a **closed-cell foam pad** to insulate from frozen ground.
- **Warm fluids:** Thermos with hot tea, cocoa, or soup. Avoid alcohol—it dilates blood vessels and accelerates heat loss.
- **Movement breaks:** Every 30–45 minutes, do jumping jacks or walk briskly for 2 minutes to restore circulation.

5. Health and Safety

- **Frostbite watch:** Check exposed skin every 15 minutes. Numbness or white patches = **go inside immediately**.
- **Hypothermia signs:** Uncontrollable shivering, confusion, slurred speech. Have a plan to warm up fast (car heater, heated

blanket).

- **Buddy system:** Never observe alone in extreme cold. Share plans with someone.
- **Vehicle prep:** Keep a winter survival kit (blankets, shovel, traction mats, extra warmers).

6. Sample Winter Observing Kit Checklist

Telescope & Mount

- ☐ Dew shield + heater strips
- ☐ Lithium batteries (warmed)
- ☐ Red flashlight + spare

Clothing

- ☐ Base layers (top/bottom)
- ☐ Puffy jacket + fleece
- ☐ Hard-shell suit
- ☐ Balaclava, beanie, goggles
- ☐ Mitten/glove system + hand muff
- ☐ Insulated boots + gaiters

Warmth

- ☐ Thermos (hot drink)
- ☐ Chemical hand/foot warmers (x6)

☐ Foam sitting pad

☐ Catalytic heater + fuel (if safe)

Safety

- ☐ First-aid kit + space blanket
- ☐ Fully charged phone + portable charger
- ☐ Headlamp (white light for emergencies)

Final Tips

- **Start short:** Your first winter session should be 1–2 hours max. Build tolerance.
- **Log conditions:** Note temperature, wind, and comfort levels to refine your setup.
- **Join a club:** Local astronomy groups often host winter star parties with shared heaters and experience.

With the right prep, winter observing isn't just survivable—it's magical. The Orion Nebula never looks sharper than on a -15°C night with steady seeing. Stay warm, stay safe, and clear skies! ★

Membership has its Privileges!

Are you tired of looking at the same objects again and again (planets, moon, etc.)? Is your telescope collecting dust because it's hard to locate deep sky objects? Would you like to bring your observing to a stellar level? Robert Conrad, our observing director, leads the Vancouver RASC observing group and invites you to join by sending him an email at observing@rasc-vancouver.com. Some of the benefits of belonging to this group include:

- Hands on training on how to operate the SFU Trottier observatory
- Weekly observing sessions at the observatory or at dark sky locations
- One-on-one coaching on how to locate thousands of objects in the night sky
- Attend small interactive seminars delivered by Robert on a range of topics including failsafe star-hopping, charting challenging objects and understanding the motions of the cosmos
- Learn to make your telescope dance by locating objects such as asteroids, nova, and supernovae
- Spectroscopy and imaging training from Howard Trottier and an opportunity to collaborate on observatory research projects
- Updates on observable sky events happening during the week like asteroid/comet/deep sky conjunctions
- Access to observing guides and lists that Robert created that took hundreds of hours to create and will help with planning observing sessions
- Knowledge and expertise from other observing group members
- Learn how to quickly and efficiently find and star-hop to deep sky objects using a range of binoculars and telescopes

Upcoming Events

December
11 – AGM

Observational Astronomy Book Excerpt 7

by Robert Conrad & Andrew Krysa

Star Charts and Atlases

There are a variety of star charts available to purchase, including two popular books of star charts called *Sky Atlas* and *Uranometria 2000.0*. These, however, are pricey and some are no longer published. Also, these atlases usually don't show stars of lower magnitudes that many medium-sized and larger telescopes can see. *Uranometria 2000.0* only shows stars up to a magnitude of 9.75 and *Sky Atlas* only shows stars up to magnitude 8. This is an important point to consider because you may have a telescope that allows you to see stars up to magnitude 13 or 14 and using a chart that shows fewer stars than you see in your telescope can be confusing. You want to match the star chart you're using with the limiting magnitude power of your telescope as closely as you can because, in either case, when you have more or fewer stars on your chart than what you actually see in the eyepiece, it can be bewildering and disorienting. We have especially seen many beginners struggle with this discrepancy between what they see on the chart and in their eyepiece be-

cause they're taking the chart literally and expecting to see something in the eyepiece that is there or not there exactly how it appears on the chart. The problematic fact that these atlases only go up to a magnitude of 8 or 9.75 can be further intensified when you are navigating your way through areas of the sky that have very few stars and you may find yourself in a situation where you may not have any dimmer recognizable star patterns or stars to navigate with on the chart. These star atlases may not include some fainter objects still visible in some telescopes. Atlases also don't include objects such as asteroids, comets, newly discovered novae or supernovae which you will want to chart as they occur and become visible in the night sky. A problem with atlases is that it isn't really desirable to mark them up constantly with new objects you may want to observe. However, these atlases can be good for beginners with lower-power telescopes who want to explore the major "wow factor" objects one can observe and also for the very experienced observer who will not take the atlas charts too liter-

ally and realize that not all the stars they see in their telescope are shown in the atlas.

There is another sky atlas which is indispensable for identifying and learning constellations and the stars that are connected within them. This is the *Pocket Sky Atlas*. Everyone should have one of these when they are out observing and trying to locate where certain constellations are, where certain stars are, and where possible objects you might want to search for are located. A good idea would be to take the Pocket Sky Atlas out on occasion even without a telescope or binoculars just to study the sky and learn your constellation shapes and locations. This atlas also has a good scale for binocular viewing. As a beginner, you should create a field of view circle on a small piece of acetate that represents your binocular true field of view or angular field of view with the scale of the sky atlas book charts. Your binocular true field of view is usually written on the side of the binoculars and is somewhere between 3 degrees and 6 degrees for most types. The scale of the Pocket Sky Atlas charts is 1° is equal to 6.2 millime-

tres. So for a pair of binoculars with a field of view of 3.5° you would multiply 3.5 by 6.2 which would give you a circle with a diameter of 22 millimetres that you should draw on your piece of acetate. Then, if you place your acetate binocular field of view circle, for example, on the star Mizar in Ursa Major on the pocket sky atlas chart number 43, you should compare the stars that you see in that field of view circle with what you see in your binoculars as an important first step in star hopping. If you look in the telescope eyepiece to compare what you see on the chart in the field of view circle, you will see not only Mizar but its optical double Alcor along with some other bright stars and star patterns. You could then use your field of view circle to navigate to the next bright star in the handle of Ursa Major, known as epsilon Ursa Majoris or Alioth. Once you are there, you will also find the second brightest star in that field of view known as 78 Ursa Majoris which happens to be a fine-looking double star (which

only really appears double in telescopes). Even with binoculars, before we move from Alcor/Mizar to Alioth, we need to ensure that we have oriented the chart in the correct manner. Depending on

It is worth mentioning here that you should probably familiarize yourself somewhat with the Greek alphabet so you can recognize the labelling of stars on star charts. Most stars are designated by Greek letters

Name	Uppercase	Lowercase	Name	Uppercase	Lowercase
Alpha	A	α	Nu	Ν	ν
Beta	B	β	Xi	Ξ	ξ
Gamma	Γ	γ	Omicron	Ο	ο
Delta	Δ	δ	Pi	Π	π
Epsilon	Ε	ε	Rho	Ρ	ρ
Zeta	Z	ζ	Sigma	Σ	σ
Eta	H	η	Tau	Τ	τ
Theta	Θ	θ	Upsilon	Υ	υ
Iota	I	ι	Phi	Φ	φ
Kappa	K	κ	Chi	Χ	χ
Lambda	Λ	λ	Psi	Ψ	ψ
Mu	M	μ	Omega	Ω	ω

The Greek Alphabet

in alphabetical order of brightness in the constellation that they reside. Alpha (α) is for the brightest, Beta (β) for the second brightest, Gamma (γ) for the third brightest, etc., followed by the Latin possessive or genitive form of the constellation they are in, for example Geminorum or

what season or time of night it is, we may need to move our binoculars up, down or to the left or right. As it rotates counterclockwise around the stationary star Polaris or the North Star, Ursa Major may appear tipped on its side with either the handle facing down if it's to the right of Polaris or with the bucket facing down if it's to the left of Polaris or straight on and upside down if its directly above Polaris or straight on right side up if it's just below Polaris (or any other orientation in between these four points).

Aquarii instead of Gemini or Aquarius. We see names like Alpha Aquarii or Tau Ceti in the constellation Cetus designated by their Greek letter on star charts so a knowledge of the Greek alphabet is indispensable when reading star charts. Some of the brightest and more recognizable stars also have their own proper names as well as their Greek designation like Vega (also known as Alpha Lyrae as it is the brightest star in the constellation Lyra). Fainter stars and less well-known ones usu-

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ally have a numbered designation in several different cataloguing systems.

We discovered a few years ago a set of star charts called Triatlas charts which were available online for free that met all of our observing needs. The star charts include stars up to magnitude 13, which at the time matched my telescope's limiting magnitude almost perfectly. Also, they were a perfect scale for drawing my field of view circles. In addition to that, they also contained many more deep sky objects than any other atlas in publication. What was also nice is that they were in PDF format and could easily be printed and marked on and then recycled when they became too marked up or ruined by dew (a common enemy of the amateur astronomer). These charts also came in three different scales. The A scale charts were great for naked eye observing and constellation identification. In fact you can very easily use these A charts as you would the *Pocket Sky Atlas* to identify constellations, stars and objects of interest when you are out in the field, and the nice thing is that they are free. The B charts were a perfect scale for drawing a binocular field of view. The C charts were most appropriate for telescope eyepiece field of view circles.

Let's explain how the C

charts work. If you would like these charts we will send you the links—simply email us at observing@rasc-vancouver.com. You'll notice that there are 570 pages of C charts alone which cover the entire sky including northern and southern hemispheres. You can print up single pages or as many pages as you need for your star hopping or observing needs whenever you like. All of the Triatlas charts, whether they are A,B or C, contain a key that shows a pictorial representation of all the constellations and the chart numbers and is in the form of a grid. So if my object is near the star Betelgeuse in the constellation of Orion, then I would look at the key and locate the constellation Orion on the key and see that the top-right star in Orion, which is Betelgeuse, is on C chart C251. This is one example where it helps knowing your constellations well. How they are shaped, which stars they contain and where they are located in respect to other constellations is very important. You will notice that the chart pages are connected in such a way that they are connected by the corners and sides and top and bottom to adjoining chart pages. You will see little black boxes in the corners and around the chart which contain the C chart numbers of adjoining chart pages. For example, if I wanted to navigate from Betel-

geuse to the star Bellatrix, also in Orion, I would need the adjoining chart C252 to continue on my star hop. Alternatively, if I wanted to navigate to the open star cluster M35 in Gemini from Betelgeuse, you can see that I would need chart C 203 to continue star hopping.

The Triatlas charts match the orientation that you would see in any star atlas. One of the extreme benefits of using these charts is that if you have a telescope configuration (as many people do) that creates what's known as a "horizontal flip" or "mirror image," you can easily use software or your printer driver to print them out in this different orientation so they will match what you see in your telescope. The disadvantage of using *Uranometria* or *Sky Atlas* is that they don't publish their star charts with this mirror-flipped orientation. This is key because there is no way that you can hold your star atlas or chart to match this type of orientation unlike simply turning it upside down or sideways for a reflector telescope. Many telescope companies will include an accessory called a star diagonal which allows for more comfortable viewing by not requiring you to bend or kink your neck when looking through the telescope but creates this inconvenient mirror flip orientation/view. It is strange that telescope manufacturers

would include this sort of accessory but do not instead include an accessory which only costs a fraction more than a star diagonal called an erecting prism that does the same in allowing for more comfortable viewing but which shows a correct orientation (no mirror flip) when looking through it.

The C charts also contain a legend at the top of the chart that shows different deep-sky objects represented by different symbols. For example, globular clusters appear as a circle with a cross in them. The brightest globular cluster in the northern hemisphere, M13 in the constellation Hercules, is shown on chart C 139 or C99. The reason M13 appears on both charts is because M13 appears near the top of page C 139 and near the bottom of chart C99 and all of the charts have some overlap in all directions—top, bottom, sides, corners—or, in other words, overlapping right ascension lines and declination lines. The legend also contains a magnitude scale from bright -1 to a faint 13. You'll notice that the larger the circle is, the brighter the star is and the scale shows the different sizes and their corresponding magnitudes. You will also notice the abbreviations for the constellations on the chart pages. For example, on chart page C 264 you will see **PSC** which represents the constellation Pisces and **AQR** which

represents the constellation Aquarius. The charts do show the constellation boundary lines between the 88 official constellations but also show the lines that connect the stars within the constellations so be careful not to confuse these lines which look similar. If you look at star chart C221 you can see the boundary lines between Pegasus (**PEG**) the winged horse, Delphinus (**DEL**) and Equuleus (**EQU**) but the chart also shows the lines connecting the brighter stars in the constellation Equuleus, the small horse, and part of Delphinus, the dolphin.

The chart pages are organized in such a way that they go in descending declination order. If you remember, we discussed declination and right ascension on the night sky which are similar to latitude and longitude on the Earth's surface in an earlier section of the book. So on chart page C1 you will find declination +90° and on the last chart page C570 you will see declination -90°. The declination lines appear vertically along the sides of the chart pages in 1° increments. The right ascension lines appear horizontally at the bottom of each chart page. On chart page C1, the 0 hour 0 min line appears at the middle of the bottom of the page and goes in one hour increments. As you spiral down in declination, the charts can go down to either

5- or 10-minute intervals. So as you go from chart page C1 to chart page C570, the charts essentially spiral downwards from the north celestial pole to the south celestial pole, covering the entire celestial sphere. Let's say we want to find the gorgeous ring nebula in the constellation Lyra the harp, which is located at declination 33° 1 min 45 sec and RA 18 hrs 53 min 35 sec. You would first go to the key included in the TriAtlas C set charts and locate where the constellation Lyra is. You will notice that this constellation is covered by charts C96, C97, C135, C136. If you look at the *Pocket Sky Atlas*, you will notice that M57, the ring nebula, is between the bottom two stars of Lyra, so these two stars are located on TriAtlas chart page C135. In this case, the starting star for your star hop to M57 would be either beta or gamma Lyrae. This is nice because your starting star is on the same page as your object so you only have to print out one page and the star hop isn't too far from either star.

You will need to draw a field of view circle around the starting star you pick, which will represent what you see in your telescope wide-angle eyepiece, ideally between a 24' and 30' eyepiece. If your wide-angle eyepiece field of view for your telescope is, for example, 1.5°, which is pretty average (you

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can figure out how to calculate this from many resources online or see our article on star hopping in a previous NOVA edition for November, 2019) then you can draw a circle on the C chart. On the C charts, 1° is equal to 20 millimetres. So a 1.5° view in your telescope eyepiece would be represented on the C chart by a circle 20×1.5 millimetres, which is a circle 30 millimetres in diameter. Draw this 30 millimetre circle centred on your starting star and then you should orient the start chart to what you see in the eyepiece. Usually with refractor telescopes, you would start by turning the page upside down and then adjusting left or right from there. If you would like to draw consecutive circles all the way to your destination object, then feel free to, especially at the beginning of learning star hopping, as it makes it easier to reference what is in the circle on the chart to what is seen in your eyepiece.

Another advantage of the TriAtlas charts is that they are quite detailed and include thousands of objects like double stars or small planetary nebulae that you can use as stepping stones along the way from your starting star to your target object. With other atlases, you would never know these objects are there and would pass over them without even noticing. Robert has

created a binder that contains thousands of objects that are part of his regular observing list and has charted the paths to these objects using many of these “signpost” objects. This creates a rewarding experience because instead of just randomly jumping from star to star, he can take in many of these objects and enjoy them along the way to his target.

A great project is to print up all the chart pages of, say, all the Messier objects to start with and put them in order from M1 to M110 in a binder labelled Messier objects. Then, when you go out observing, you can have the binder for star hopping to or locating any Messier object that might be visible that night. In a period from mid March to early April, many people attempt a “Messier Marathon” when you can see most of the Messier objects of mid northern latitudes in one night. This binder would be perfect for a Messier marathon and you can also find many Messier marathon events organized by astronomy groups in your area. Later, you may want to create other binders for, say, the Caldwell objects or specific objects like nebulae or double stars. A good thing to make up as you go along and learn more objects is a binder organized like a “key” by constellations and what objects are visible in those constellations and their corresponding C chart pages

and binder locations. This is where a good knowledge of what constellations are visible at what time of year and time of night is indispensable so you know which objects you are able to view or not view on any particular night you want to go out observing.

There are other objects that you won’t find on any star charts that you might want to include in your observing sessions. These include objects that are either not always visible or are constantly moving like comets, asteroids, planets like Uranus and Neptune and dwarf planets like Ceres and Pluto. To chart these objects, you need to determine what the coordinates will be, i.e. right ascension and declination, for the approximate time you will be viewing them. There are a variety of resources online available to help you determine the coordinates of these objects and when they are visible from your location. Two of these resources are heavens-above.com and theskylive.com as well as free, downloadable simulation software like Stellarium which we will be covering in detail in this book. Also in the Stellarium section is a complete guide to creating a special kind of star chart called an AAVSO (American Association of Variable Star Observers) which you use in conjunction with your C chart out in the field to find these transitory objects. ★

Members' Gallery



Comet C/2025 A6 (Lemmon)

by Leigh Cummings

Early on the morning of Oct. 15, I started packing some equipment across the street from my house to my neighbour's unfenced back yard. He has an extra big property and few trees so the view to the NE is quite open. I was set up with my Seestar by 4:15 and got imaging by 4:26. My first couple of images were only 1 minute as I was trying to adjust my framing. As I was worried about the beginning of twilight, I decided to start imaging with the comet centred like the Seestar tends to do. As I also took out my new (to me) alt-az mount with the club's Williams Optics refractor, I left it to do its thing while I got that scope set up. Twenty minutes later, I realized my mistake. The Seestar tracks the stars, not a comet. I kept the image as it will make an instructional tool as to how comets and asteroids are discovered. The last image I took shows less tail because I adjusted the contrast which lost me some of the tail but made the comet stand out a little better. These are the stacked jpegs. I'm just happy to have captured my first comet.

Imaging Group News

by Marla Daskis

Meetings and Presentations

The imaging group has changed meeting frequency to once a month on the third Thursday. Next meeting is November 20.

Trottier Telescope Access

We are looking for interested members to attend Trottier image capture Zoom sessions on clear Tuesday evenings. Please contact the imaging group email and we will follow up with more information. Having a reliable group able to attend Tuesday evening sessions ensures our opportunities to access this world-class telescope continue.

First remote access achieved at the VRO!

A significant milestone was

achieved in October: Rick Schneider, Alan Jones, Bart Adrian and Marla Daskis were able to access the VRO remotely, capture data on NGC 7479, and download it to the RASC-Vancouver Google drive. Rick then processed the image (see below). Although there were a few unexpected hiccups during the sessions, there is nothing so far that is insurmountable, and we look forward to making the setup more resilient for member use. Remote access should enable us to have longer and more frequent sessions when the weather cooperates!

The next steps include addressing power issues due to shorter, darker days, creating and documenting the access and use processes for members, and identifying

Imaging Group Meetings:

- 3rd Thursday of every month
- Quarterly In-Person at SFU
- Contact Imaging@rasc-vancouver.com to be added to email list for invites.

Benefits:

- Like-minded people to share with
- Range of skills from beginner to expert
- Access to world-class imaging equipment
- Member viewing at VRO

Please note: You must be a RASC Vancouver member to join the imaging group.

ing remaining site work for 2026.

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