Star Gazer News

Astronomy News for Bluewater Stargazers
Vol 6 No. 9 Sep 2012

Neil Armstrong, Aug 5, 1930 - Aug 25, 2012

God speed, Neil Armstrong, and Rest in Peace

September 2012 Contents

THE family of the late US astronaut Neil Armstrong, the first person to set foot on the Moon, has spoken of their shock and heartbreak after he passed away.

Praising Armstrong as a "reluctant American hero", his family said in a statement that he had "served his nation proudly, as a navy fighter pilot, test pilot and astronaut".

Announcing his death, Armstrong's family said in a statement: "We are heartbroken to share the news that Neil Armstrong has passed away following complications resulting from cardiovascular procedures.

Neil was our loving husband, father, grandfather, brother and friend.

"Neil Armstrong was also a reluctant American hero who always believed he was just doing his job.

"He served his nation proudly as a Navy fighter pilot, test pilot, and astronaut.

"While we mourn the loss of a very good man we also celebrate his remarkable life and hope that it serves as an example to young people around the world to work hard to make their dreams come true, to be willing to explore and push the limits, and to selflessly serve a cause greater than themselves."

Armstrong underwent cardiac bypass surgery earlier this month after doctors found blockages in his coronary arteries.

Armstrong and fellow Apollo 11 astronaut Buzz Aldrin landed on the moon in 1969.

An estimated 600 million people watched the grainy black and white television broadcast that showed Armstrong, clad in a white space suit, climb down the lunar module's ladder on to the Moon's desolate surface.

As commander of the Apollo 11 mission, it was also Armstrong who had notified mission control that the module had made a successful landing.

"Houston, Tranquility base here. The Eagle has landed."

In those first few moments on the moon, during the climax of heated space race with the then-Soviet Union, Armstrong stopped in what he called "a tender moment" and left a patch commemorate NASA astronauts and Soviet cosmonauts who had died in action.

"It was special and memorable but it was only instantaneous because there was work to do," Armstrong said in a rare interview in 2012.

Armstrong and Edwin "Buzz" Aldrin spent nearly three hours walking on the lunar surface, collecting samples, conducting experiments and taking photographs.

Astronomy Kids Camp Pictorial

Above Left: *Using the analemmatic sundial at Keppel Henge to tell time (11 am DST).*

Above Right: *Kids use the monoliths for shade on a hot and sunny day in July while the adults are standing in the sun...*

Right: *Happy and cool faces look relaxed in the shade of an apple tree at Keppel Henge.*
Photos by J. Hlynialuk

Above: *A well-decked out junior astronaut (including diaper and Urine Collection System under the suit) is pretty much ready to fly.*

Right: *One of five teams that built and flew model rockets on the last day of Astronomy Kids Camp. Only two rockets were lost to the "rocket-eating tree." Photo by Dave Skelton*

BAS Executive 2011-2013

President:	Brett Tatton	tattons@bmts.com
Vice-President:	John Hlynialuk	stargazer@wightman.ca
Secretary:	David Green	davgre@bmts.com
Treasurer:	Cheryl Dawson	cheryl.dawson@bell.net
Past-President:	Dan Gieruszak	hiddenwell@bmts.com
Membership:	David Skelton	dskel@golden.net
Public Outreach:	Joan Skelton	andromeda@gto.net

BAS Events for September 2012

Sep	**5**	Wed	BAS Meeting	ES Fox Obs	7:00 pm.
			Show&Tell -gadgets, new equipment, Starfest recap.		
Sep	**7**	Fri	Night Sky Tour	Grey Roots	dusk
Sep	**8**	Sat	Owen Sound Field Nats viewing backup date: Sep 15	ES Fox	8:15 pm
Sep 15		Sat	BAS Viewing	ES Fox Obs	dark
Oct	**3**	Wed	BAS Meeting	Grey Roots	7:00 pm
			speakers: Doug and Paula Cunningham Shadow Over Easter Island		

President's Report by Brett Tatton

As August winds down we have a lot of great astronomical memories to add to 2012. The Kids Astronomy Day Camp was a big hit again this year. This summer's stargazing programs were also a great success. Chief amongst these were the Tuesday night public Lecture series held at the Outdoor Education Centre. I want to extend my thanks to John, Joan, Ross and Angelia for the efforts that went into those nights. I'd also like to thank all of the members who came out to help with the viewing sessions after the lectures at the OEC as well as those who came out to the Grey Roots this summer. Also to be recognized are the hardy souls who made it to the Bruce Peninsula National Park again this year for the fourth Dark Sky Weekend at Cypress Lake campgrounds. This is a fun event which attracts crowds each night of the weekend under pristine skies.

The crowning event of the summer for many of us is the Starfest star party and convention at the River Place campground near Mt. Forest. This year's event was a big one for the club as many BAS members were in attendance and the Webster C28 telescope was there for the first time. As the largest telescope on the field it was a big hit. Our little club has gained new recognition in amateur astronomy circles as owners of this amazing instrument!

As we plough into September there is plenty of good BAS stargazing to enjoy. I expect we will have pleasant weather for observing this month. FYI...the insects that challenged all but the most hardy earlier in the year are all but absent these nights!

The upcoming observing highlights for the month are the September BAS meeting at the ES Fox observatory on Sep 5, public sky viewing at Grey Roots Friday Sep 7 and the club viewing night Saturday Sep 15 at the observatory.

Looking ahead to the fall please consider attending the Fall Harvest Dinner fund raiser coming up. This event is a chance to socialize with our partners at OEC, enjoy a good meal and entertainment. The cost is reasonable and goes towards a good cause...US!! Tickets will be available soon.

Speaker: Robert Burcher
"The Leather Boat: Ancient Celts in North America?"
Wayne Burke Catering
Menu: Four course served dinner
salmon, beef, soup, desserts, coffee and tea
Pelee Is. Wine and Local Beers (cash bar)
Silent Auction
Music by Paul Williamson

3rd Annual Fall Harvest Dinner Oct 27, 2012

an evening of great food and entertainment supporting ES Fox Observatory Celebrating 40 Years of Outdoor Education at the Bluewater Outdoor Education Centre

#3092 Bruce County Rd 13
near Oliphant
Tickets $50.00 per person
(tax receipt issued for portion)
Doors open at 5:30 pm
Dinner at 6:30 pm
Limited Seating
Only 76 tickets will be sold
Call Now for Tickets
BAS: (519) 376-9554 (Owen Sound)
(519) 371-0670 (Owen Sound)
(519) 389-3922 (Port Elgin)

Last Chance for Saturn: *Saturn (top star of triangle) is quickly disappearing in the West and will be gone by month end. Mars (left star) is heading East and will be around longer. J.Hlynialuk image Canon 50D 60 mm. 2 s, 1600 ISO*

One more point for the Earth team

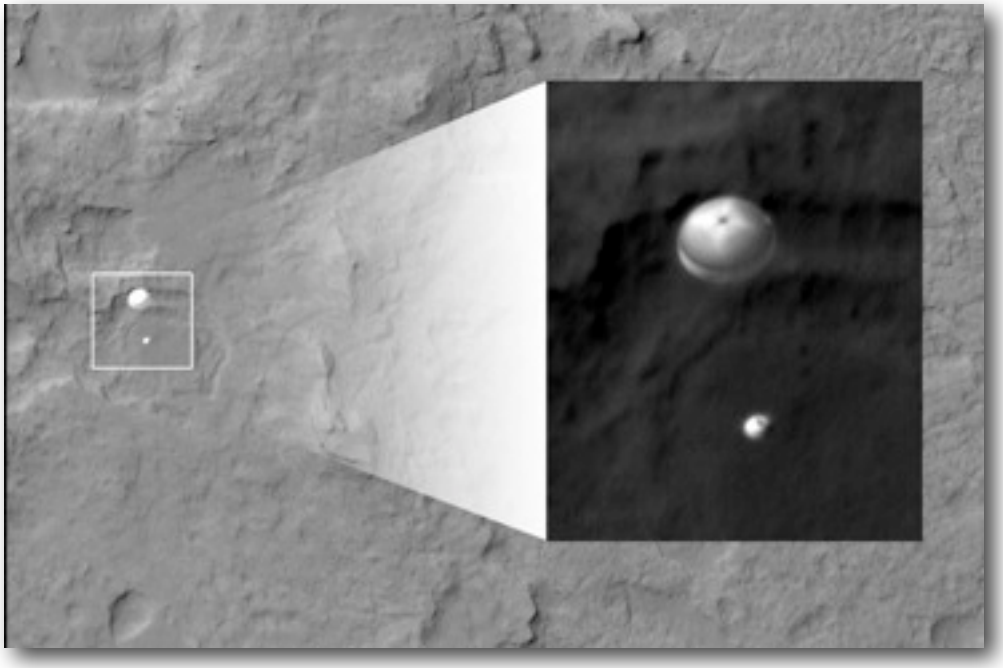
This artist's scoreboard displays a fictional game between Mars and Earth, with Mars in the lead. It refers to the success rate of sending missions to Mars, both as orbiters and landers. Of the previous 39 missions targeted for Mars, 15 have been successes and 24 failures. For baseball fans, that's a batting average of .385. ***Credit: NASA/JPL-Caltech*** *[I have not been able to confirm these numbers. For ex. Wikipedia gives 24 successes out of a total of 50 missions. It is also not clear if the 15 successes above include Curiosity. The image came from a pre-landing conference and if Curiosity was included as successful, that was taking a liberty that seems to me to be the height of arrogance. -ed]*

Left: *One of the first Hi-Res panoramas of the landing site of Curiosity, now named Bradbury Landing after Ray Bradbury, sci-fi writer who died in June, 2012. The rim of Gale Crater is on the left and Mt Sharp is on right. Curiosity is due to climb to the 5 km summit before the end of its 2-yr mission. It power supply (a nuclear generator) will allow it to operate for much longer than that.*

$2.5 Billion dollar delivery to Mars

NASA's Curiosity rover and its parachute were spotted (image below) by NASA's Mars Reconnaissance Orbiter as Curiosity descended to the surface on Aug. 5 PDT (Aug. 6 EDT). The High-Resolution Imaging Science Experiment (HiRISE) camera captured this image of Curiosity while the orbiter was listening to transmissions from the rover. Curiosity and its parachute are in the center of the white box. The rover is descending toward the etched plains just north of the sand dunes that fringe "Mt. Sharp." From the perspective of the orbiter, the parachute and Curiosity are flying at an angle relative to the surface, so the landing site does not appear directly below the rover.

The parachute appears fully inflated and performing perfectly. Details in the parachute, such as the band gap at the edges and the central hole, are clearly seen. The cords connecting the parachute to the back shell cannot be seen,



although they were seen in the image of NASA's Phoenix lander descending, perhaps due to the difference in lighting angles. The bright spot on the back shell containing Curiosity might be a specular reflection off of a shiny area. Curiosity was released from the back shell sometime after this image was acquired.

This view is one product from an observation made by HiRISE targeted to the expected location of Curiosity about one minute prior to landing. It was captured in HiRISE CCD RED1, near the eastern edge of the swath width. This means that the rover was a bit further east or downrange than predicted.

The image scale is 33.6 cm per pixel .

HiRISE is one of six instruments on NASA's Mars Reconnaissance Orbiter. The University of Arizona, Tucson, operates the orbiter's HiRISE camera, which was built by Ball Aerospace & Technologies Corp., Boulder, Colo.

Credit: NASA/JPL-Caltech/Univ. of Arizona

(More about Curiosity on Mars on pg 5)

Scene of a Martian Landing

The four main pieces of hardware that arrived on Mars with NASA's Curiosity rover were spotted by NASA's Mars Reconnaissance Orbiter (MRO). The High-Resolution Imaging Science Experiment (HiRISE) camera captured this image about 24 hours after landing. The large, reduced-scale image points out the strewn hardware: the heat shield was the first piece to hit the ground, followed by the back shell attached to the parachute, then the rover itself touched down, and finally, after cables were cut, the sky crane flew away to the northwest and crashed. Relatively dark areas in all four spots are from disturbances of the bright dust on Mars, revealing darker material below the surface dust.

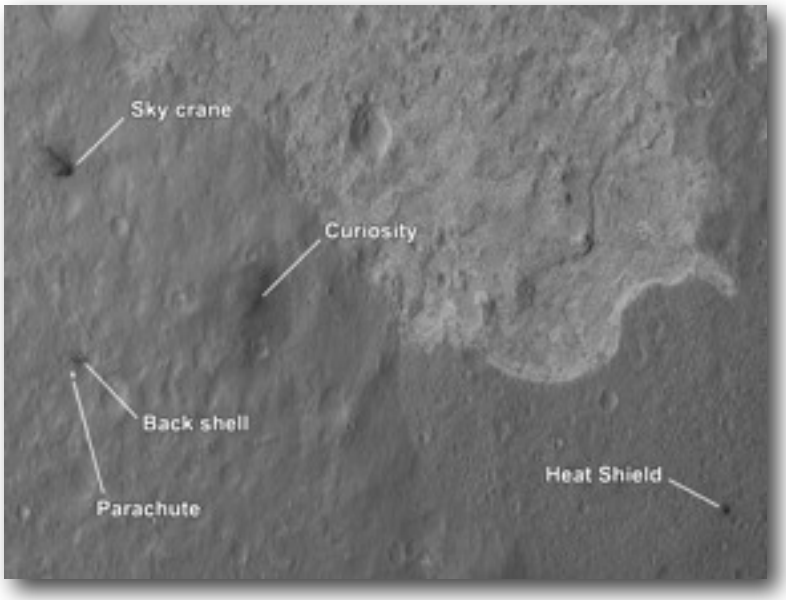
Around the rover, this disturbance was from the sky crane thrusters, and forms a bilaterally symmetrical pattern. The darkened radial jets from the sky crane are downrange from the point of oblique impact, much like the oblique impacts of asteroids. In fact, they make an arrow pointing to Curiosity.

The Curiosity rover is approximately 4,900 feet (1,500 meters) away from the heat shield; about 2,020 feet (615 meters) away from the parachute and back shell; and approximately 2,100 feet (650 meters) away from the discoloration consistent with the impact of the sky crane.

This image was acquired from a special 41-degree roll of MRO, larger than the normal 30-degree limit. It rolled towards the west and towards the sun, which increases visible scattering by atmospheric dust as well as the amount of atmosphere the orbiter has to look through, thereby reducing the contrast of surface features. Future images will show the hardware in greater detail. Our view is tilted about 45 degrees from the surface (more than the 41-degree roll due to planetary curvature), like a view out of an airplane window. Tilt the images 90 degrees clockwise to see the surface better from this perspective.

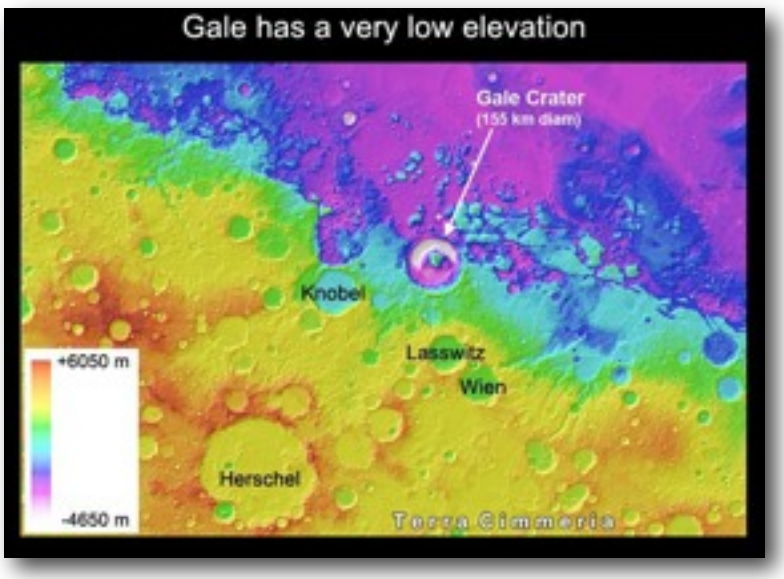
The image scale is 39 cm per pixel.
Complete HiRISE image products are available at: http://uahirise.org/releases/msl-descent.php.

HiRISE is one of six instruments on NASA's Mars Reconnaissance Orbiter. The University of Arizona, Tucson, operates the orbiter's HiRISE camera, which was built by Ball Aerospace & Technologies Corp., Boulder, Colo. NASA's Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Mars Reconnaissance Orbiter Project for NASA's Science Mission Directorate, Washington. Lockheed Martin Space Systems, Denver, built the spacecraft.
Image credit: NASA/JPL-Caltech/U. of Arizona



Left: *Curiosity hardware is strewn about the Martian desert in this image. More details in text at far left.*

Left: This image taken by NASA's Curiosity shows what lies ahead for the rover -- its main science target, Mount Sharp. The rover's shadow can be seen in the foreground, and the dark bands beyond are dunes. Rising up in the distance is the highest peak Mount Sharp at a height of about 3.4 miles, taller than Mt. Whitney in California. The Curiosity team hopes to drive the rover to the mountain to investigate its lower layers, which scientists think hold clues to past environmental change.



Left: Gale Crater on Mars, where NASA's Curiosity rover has landed, belongs to a family of large, very old craters shown here on this elevation map. It has one of the lowest elevations among this family.

The data come from the Mars Orbiter Laser Altimeter instrument on NASA's Mars Global Surveyor.

Image credits: NASA/ JPL-Caltech

Speakers Impressive

Starfest 2012 had its share of excellent topics ranging from supermassive black holes to hunting meteorites in Antarctica to the perennial astrophotography including a "bass-akwards version". The speakers were certainly knowledgeable but unfortunately one (who shall go unnamed) had a habit of turning away from the mic and talking more to the screen with a voice that trailed off into a whisper right at the critical part of the sentence. Enough said about that.

I will recap some of the highlights in the list of talks I attended.

Modified Gravity -Dr J. Moffat

The theme this year was gravity and John Moffat, a retired professor of Physics, spoke on his Modified Gravity theory (MOG) which according to him fit astronomical data very well without having to hypothesize dark matter. To do so, you have to make some assumptions about light having a variable speed which was much higher in the past. Perhaps the biggest hurdle for MOG is this particular point. There is no experimental evidence that light speed has been anything but 300 000 km/s through the entire lifetime of the universe. By many mainstream astronomers, Moffat is consider a bit of a maverick, -an "iconoclast" was the term used in his introduction. [Def'n: **Iconoclast**, noun, a person who attacks cherished beliefs, traditional institutions, etc., as being based on error or superstition.]

Above: Dr Ralph Harvey poses with one of the larger meteorites recovered in Antarctica in 2003. Most are much smaller, on the order of a hundred grams or less. Most specimens are made available to researchers all over the world who present a legitimate scientific proposal.
PHOTO: CARI CORRIGAN/ANSMET

Hunting Meteorites in Antarctica - Dr. Ralph Harvey

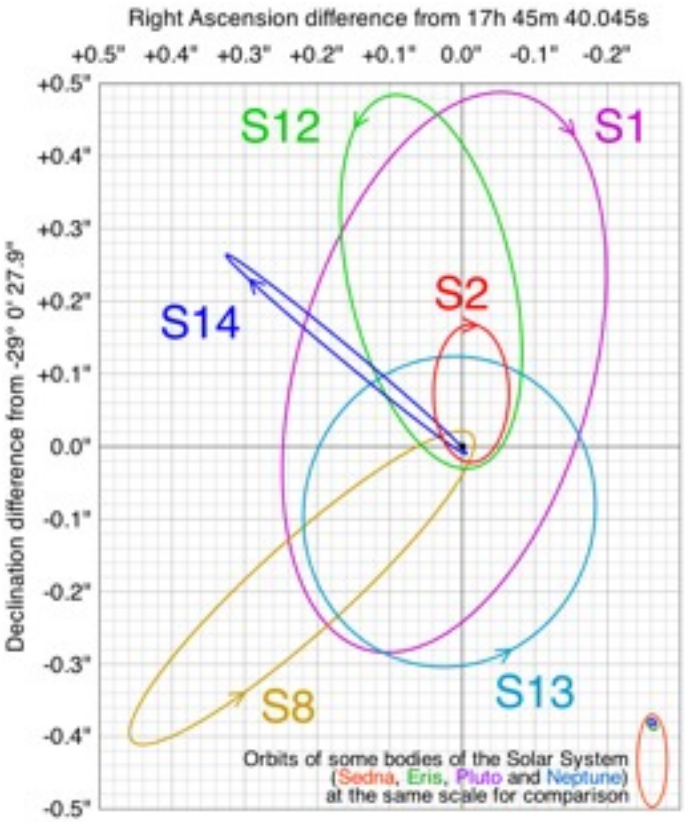
At the other end of the scale was a down-to-earth presentation by Dr. Ralph Harvey about the meteorites being found on the ice in Antarctica. Since the Japanese first started finding them in the mid-70's, the number discovered is over 50 000 -more than the total in all the collections found outside Antarctica prior to that. There were 300 plus found by Harvey's team in just the most recent season of searching.

In the last 30 years, the US effort netted 20 000 samples including the famous ALH 84001, discovered near the Allan Hills in 1984. That 1.9 kg meteorite was not linked to Mars until 1993 and only after the atmospheric composition of Mars was determined by the Viking landers. The most striking slide I recall from Harvey's talk is the one comparing the chemical makeup of the Martian atmosphere with measurements of the concentrations of gases found trapped in the melt glass found in ALH84001. The points fell EXACTLY on the line, indicating a definite Martian origin for the gases trapped in the meteorite!

Other intriguing finds in Antarctica include meteorites that have no counterparts in current classification schemes. These may be from one or more of the other rocky planets like Mercury or Venus, but until direct samples of those planets are acquired, it remains an interesting speculation. It is also more difficult for fragments of the inner planets to be hurled up the gravitational slope to Earth than down from farther out so the origins of these unusual specimens may be from further out in the solar system.

Supermassive Black Holes at the Centres of Galaxies -Dr Brian McNamara

Evidence is pretty clear nowadays that each galaxy in the universe has a supermassive black hole at its centre. Our own has been studied with IR telescopes to cut through the massive amount of dust between us and the galaxy's core.



Star movements around Sag A* ("Sag A star") clearly show a very massive dark object which whips the stars around at incredible accelerations. Check the following links for information (http://en.wikipedia.org/wiki/Sagittarius_A*) and a video at (http://www.youtube.com/watch?v=duoHtJpo4GY)

The MW black hole is estimated at 4.3 million solar masses with a diameter not much larger than our solar system. Orbital motion of several dozen stars shows that they are being whipped around by a very massive object. In the image at left, note especially S14 which gets accelerated around violently since it appears to approach the black hole very closely.

Dr. McNamara admitted that it is still not clear how these SBHs form (a million solar masses is a sizable fraction of the stars in galaxies) or how they evolve with time. On top of this are the really massive supermassive black holes like the 3 billion solar mass object in the heart of M87 in the Virgo Cluster of Galaxies. The Hubble telescope has imaged huge nuclear jets streaming away at high speed from the nucleus of M87. More research obviously needs to be done on these "cosmic monsters".

Top Left: The Webster 28 got a good workout both Friday and Saturday nights and there was always someone around interested in having a look. There were no larger telescopes at Starfest this year.

Top Right: An unknown observer pre-flashes his eyes with red light to help??? with observing??.

Centre Left: Part of the usual BAS Starfest crew, checking out the Sky News Photo Contest winners and keeping guard over the Webster.

Centre Right: Another part of the usual BAS Starfest crew, renewing acquaintances. Not shown here are another half dozen members that appeared now and then. See image below. There was also one or two who were not captured on camera.

Bottom Left: Most of the BAS contingent of Starfest attendees is shown here. A 10-inch Orion Dob belonging to Cheryl D. is our stand-in for the Webster-28 which was sleeping in its trailer after two nights of hard work examining the Universe. Among the old hands are 3 new BAS members that have never before appeared in the annual Starfest group picture. Unfortunately several old-timers have left and we wish them continued clear skies.

Bayside Astronomy at the Lion's Head POD

"We had that sky up there, all speckled with stars,
and we used to lay on our backs and look up at them,
and discuss about whether they was made or only just happened"
"**Adventures of Huckleberry Finn**" by Mark Twain

" The night sky doesn't come with fruits and flowers,
It comes with stars and stardust ... mystery and nirvana !"
Naturalist, John Burroughs

The Pod" (Peninsula Observing Deck) in Lion's Head

It's called the " **POD"** and my wife, Paula, came up with the name. It was appropriate, memorable and unpretentious. I liked it! It stands for "Peninsula Observing Deck" and it identifies Lion's Head's new open air observatory. The POD is located in a stunning setting, behind the Lion's Head marina, and is framed by the harbour entrance, the escarpment cliffs, and the beautiful waters of Georgian Bay. In the daytime it is used to view the escarpment cliffs and rock climbers through the two pedestal mounted all-weather binoculars. On Friday and Saturday nights throughout the summer, it is the focal point for our Bayside Astronomy Program.

The POD was officially opened on Tuesday, July 3rd, 2012 and 45 guests were in attendance; including our MPP, Bill Walker, our Mayor, Milt McIver, Councillor and Dark Sky Committee Member, Tom Boyle, and our UNESCO Biosphere and Dark Sky Committee Chairlady, Elizabeth Thorne. Elizabeth, through hard work and skillful persuasion, secured funding from many sources, including local business leaders, to support the Bayside Astronomy Program and help with our Dark Sky Initiative. These funds were used to build the POD, purchase two telescopes, a Celestron CPC 11, a Meade 8 SCT, rent an Antares 12 inch Dob from BAS, and to hire a Bayside Astronomy Program Manager, a York University graduate student, Amanda Stanger. Paula and I agreed to serve as Amanda's mentors .. enjoyable for both of us.

Amanda as People Arrive for the Program

Amanda Stanger with the CPC 11

Ribbon Cutting by Doug and Paula Cunningham

Now, for us, Bayside Astronomy and the POD, involves bringing the beauty and mystery of the night sky to the general public in an incidental and informal way. Other BAS members, under the guidance of Joan Skelton and John Hlynialuk, have been active in this form of public astronomy education for many years. Some will say that public astronomy outreach all began in 1967, in San Francisco when John Dobson, astronomer, chemist, and former Vedantan monk, along with Bruce Sams and Jeffrey Roloff, began to share telescopic views of the night sky with passing pedestrians. Others will say that sharing the night sky has always been an essential ingredient of the stargazing experience. Robert Frost, in his poem, "The Star Splitter" identified an essential component of the pleasure of sharing views of the star-filled night sky with another person.

"Bradford and I had out the telescope ...
Pointed our thoughts the way we pointed it,
And standing at our leisure till the day broke,
Said some of the best things we ever said".

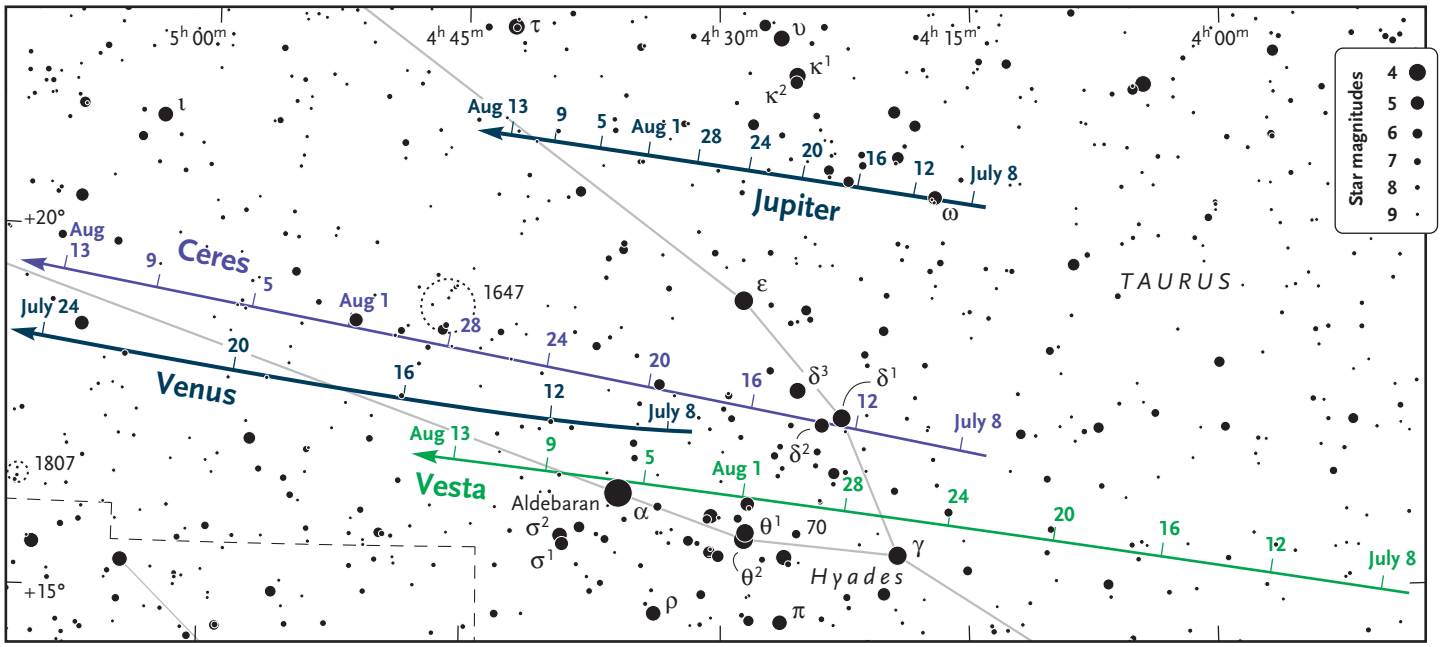
Whatever the origin of this shared experience the public response to our program has been enthusiastic and gratifying. We even extended the Bayside Astronomy program to include two additional nights of stargazing per week, one at Miller's Family Camp and the other at Summerhouse Camp. The attendance to date, over a 7 week period, is just shy of 1500 people! Their comments and sincere appreciation make it all worthwhile. Here is a sample of their exclamations:

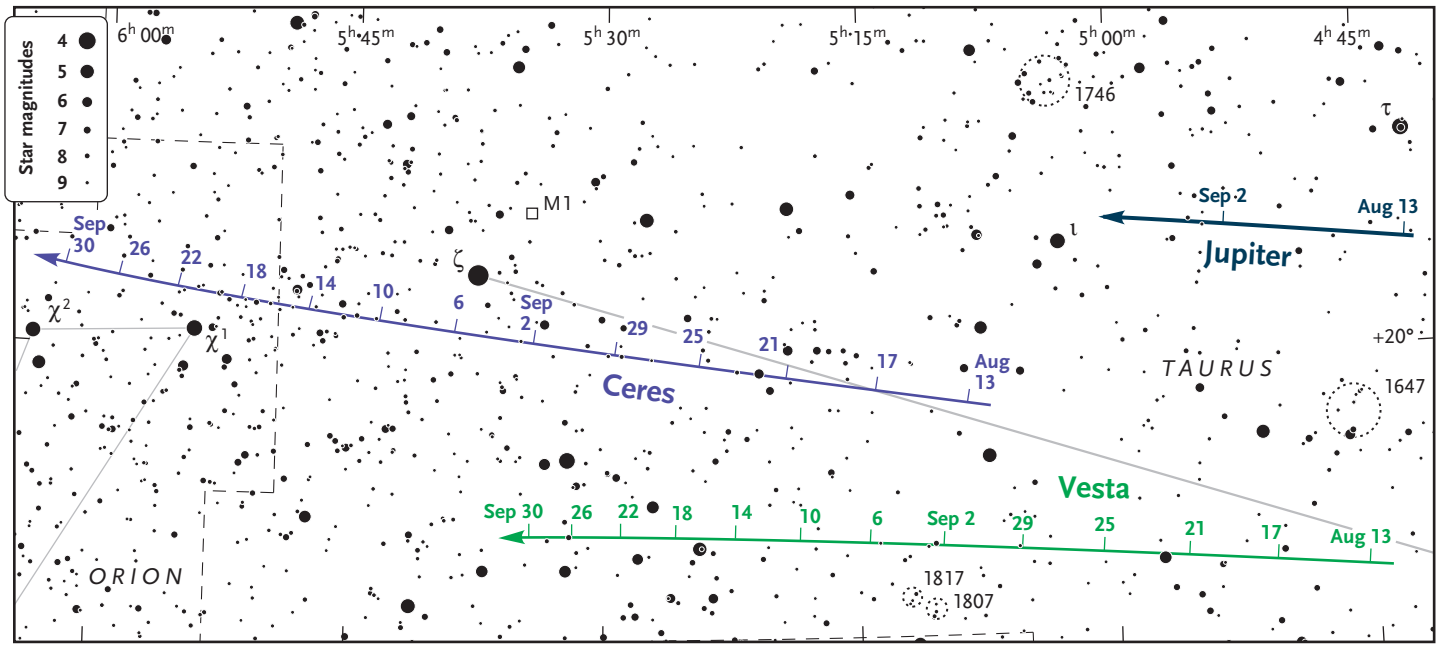
" That's the most amazing thing I've ever seen!" when looking at the rings of Saturn;
" Oh my! look at the lunar mountains" .. where did the astronauts land ?"
" So, that's how you find the North Star! ... neat"
"Look at the Milky Way! "
"Ooohhh! ...!" when observing the Globular Cluster M13

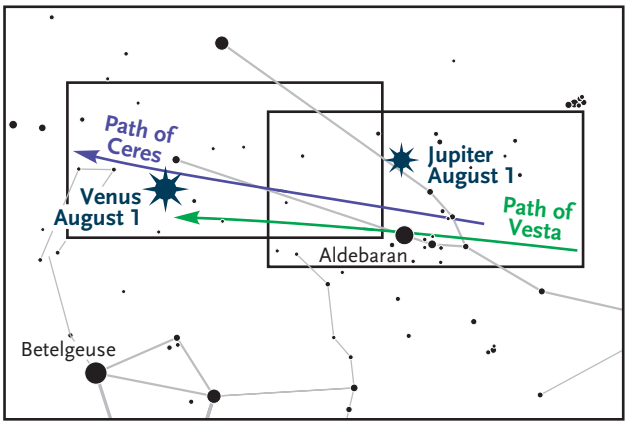
One night, as Amanda, Paula, Jim Kuellmer, and I set up at the POD, the clouds rolled in and didn't leave. However, 70 people still showed up! We opened a question and answer session, and fielded questions on everything from how to choose a telescope, to other life in the Universe, to the landing of Curiosity of Mars. Astronomy is best experienced as using both the mind and the eye. On this night for an hour their minds were engaged! Wonderful!

Two asteroids make prominent passes through the same part of the sky in the dawn hours in September. So if you are up to watch Venus and Jupiter, have a look with scope or binos. If you have your camera, take an image. Currently around mag 7 and 8, respectively, Vesta and Ceres are in Taurus between Jupiter and Venus. Both reach opposition in December and will brighten to mid 6th magnitude at that time (possibly visible to the naked eye under the best conditions).The Dawn spacecraft is presently thrusting away from Vesta en route to Ceres arriving in 2015.

Ceres and Vesta Finder Charts to Sep 30, 2012







The tick marks are for 0 hours Universal Time on the dates indicated. This moment falls on the evening of the previous date in the time zones of the Americas.

Sep 1 Venus 9° S of Pollux
Sep 7 Last Quarter Moon rises at 11:24 pm DST
Sep 8 Jupiter 0.6° N of Moon
Sep 9 Ceres 0.6° S of Moon
(occultation 3:47am-4:21am DST)
Sep 12 Venus 4° N of Moon (See Special Events)
Sep 13 Venus 3° S of Beehive Cluster (M44)
Sep 14 Zodiacal Light visible in East before dawn for next 2 wk.
Sep 15 New Moon rises at 6:34 am DST
Sep 18 Spica 0.8° N of Moon
Saturn 5° N of Moon
Sep 19 Mars 0.1° N of Moon
Sep 22 Fall Equinox (10:49 am DST)
First Quarter Moon rises at 1:45 pm DST
Sep 24 Pallas at opposition (mag. 8.3)
Sep 29 Uranus at opposition (mag. 5.7)
Sep 30 Full Moon (Harvest Moon) rises 7:04 pm DST

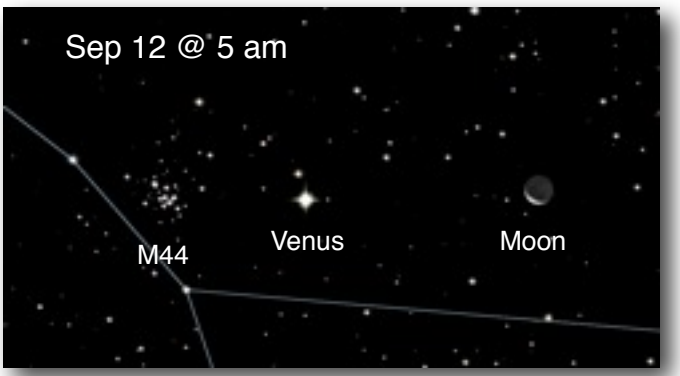
BAS Events

Sep 5 BAS Meeting ES Fox Obs 7:00 pm.
Show&Tell -gadgets, new equipment, Starfest recap.
Sep 7 Night Sky Tour Grey Roots dusk
Sep 8 Owen Sound Field Nats viewing ES Fox 8:15 pm
backup date: Sep 15
Sep 15 BAS Viewing ES Fox Obs dark

Oct 3 BAS Meeting Grey Roots 7:00 pm
speakers: Doug and Paula Cunningham Shadow Over Easter Island

Special Events

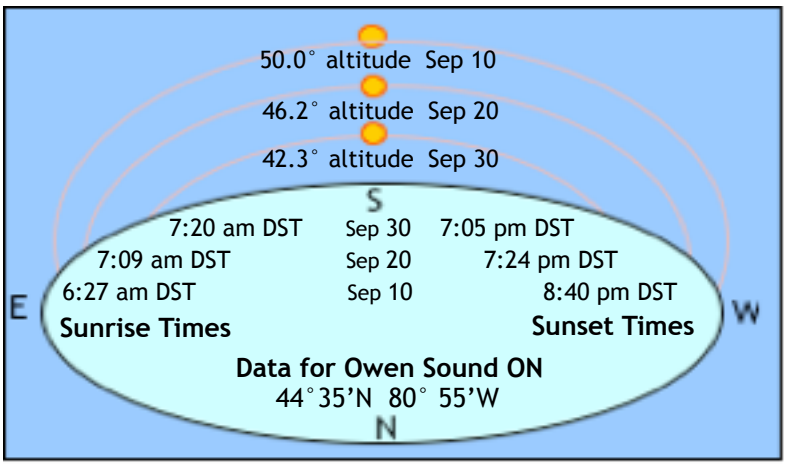
M44, Venus, Moon Sep 12 am
Mars, Moon, Saturn Sep 18 pm



Planets

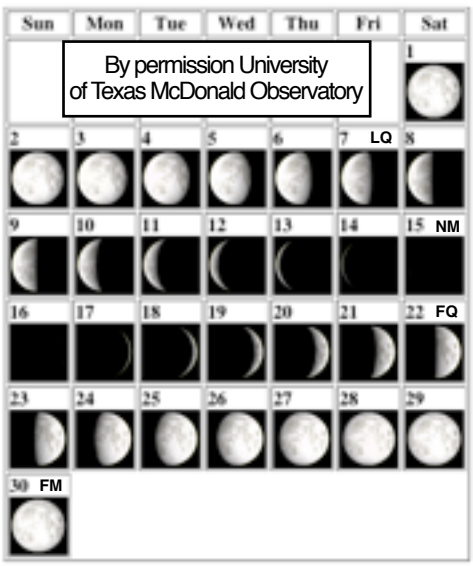
MERCURY, is not visible in September since it is close to the sun all month. **VENUS**, (-4.2) is a dawn planet in Sep and moves quickly away from Jupiter towards a rendezvous with the Beehive and crescent Moon on Sep 12. It continues to race across the sky through Gemini and then into Leo for a very close Oct 3 meeting with Regulus (0.2° !!). **MARS** (1.2), in the west, continues eastwards and passes into Libra by month-end. It is only 2° from the crescent Moon on Sep 19. **JUPITER**, (-2.4) rises around 11 pm and is still between the horns of Taurus in Sep. The last crescent Moon is about 2 degrees away on Sep 8. **SATURN**, (mag 0.8), is located above Spica in the western sky and sets shortly after the end of twilight. Early September is the last chance to see Saturn in relatively dark sky. Ring tilt is 15° by month-end. **URANUS**, (5.7) and **NEPTUNE**, (7.8) straddle the meridian mid-month and are highest at 1 am. Uranus is at opposition on Sep 29.
Two **asteroids, Vesta (8.2)** and **Ceres (9.0)** are passing through the Hyades in August and September and can be found using the charts on page 9. They are this close to each other only every 17 years or so. **PLUTO** (mag. 14) is past the meridian at midnight and may be found with accurate charts and large telescopes.

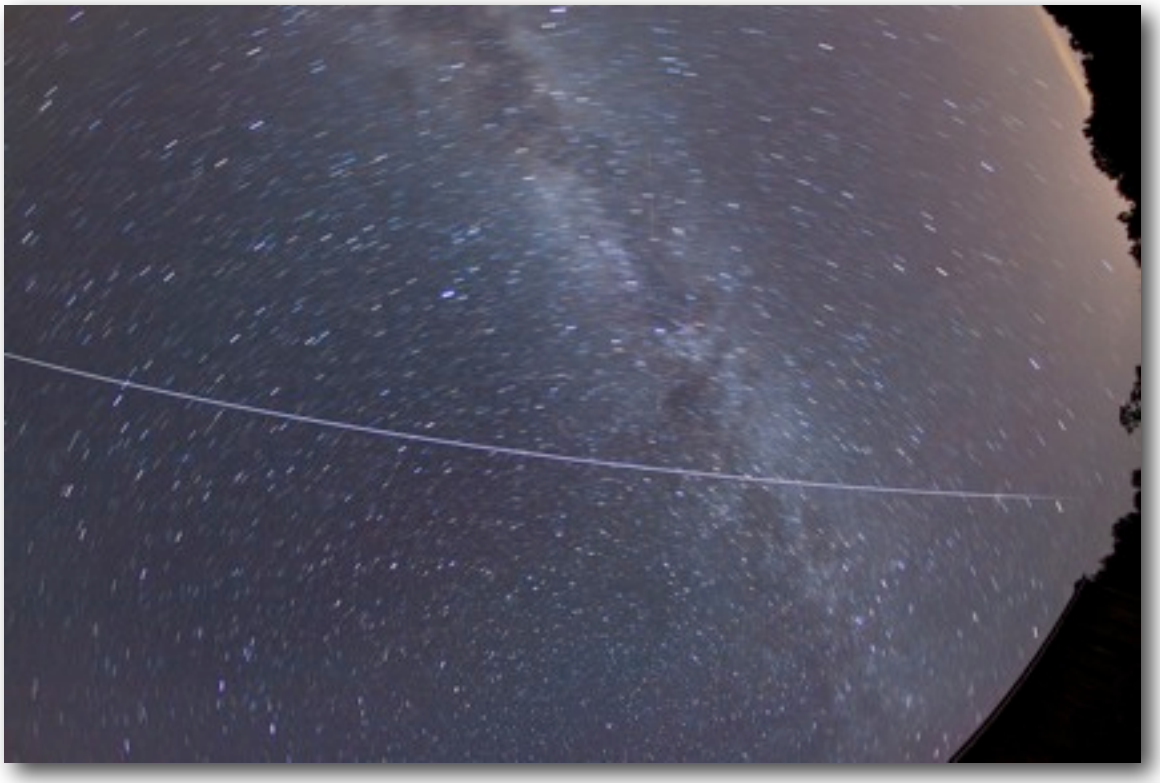
The diagram below gives the sunrise/sunset times and the sun's altitude on three dates this month. Note that Fall Equinox occurs on Sep 22 at 10:49 am DST. The moon calendar below the sun chart shows lunar phases for the month. Times of moonrise for NM, FQ, FM and LQ are in the Sky Calendar listing at left.



The last crescent moon shines in the same field with Venus on the morning of Sep 12.The first crescent appears with Mars and Saturn on Sep 18 just after sunset. The Sep 12 morning view also includes a nice cluster, - M44, the Beehive. In the evening sky of Sep 18, Mars, has moved 20° east of the Saturn-Spica line which it crossed in mid-August. Mars hangs around in our evening sky for several more months until it eventually crosses into Capricornus in January. After that it gets lost in the light from the Sun.

Sept 2012





ISS over ES Fox

The International Space Station has been making bright passes over North America and reached magnitude -3.3 on Aug 7, 2012 just after the Summer Stargazing Session. The view here over the Fox Observatory is about 160° wide from below Corona Borealis through the head of Draco and into Andromeda. In fact, I saw the station whiz through the field of view of the 10-inch which was focused on M31 at the time. Brett T. mentioned that he could see structure in the view through his telescope.

A closer examination of the image shows a tumbling polar satellite trail that crossed the ISS track. See the enlargement (turned 90° CW) below. A second blinking satellite was also recorded in the top left corner of the main image as well.
Photo by J.Hlynialuk Canon 50D 10 mm lens at f/2.8, ISO 500 exp. = 336 s

FOR SALE: Televue Pronto

2 element E.D. Refractor, 2.7" / 70mm diameter. f.l. 480mm, f/6.8. with 1-1/4" Star Diagonal, with 45 degree Prism diagonal (for terrestrial viewing), with TeleVue Red dot finder, complete with TeleVue Soft Case.
Asking $ 700.-- Firm Anton VanDijk 519 376-9912 ravand@rogers.com

Update on Rental Scopes

Both 12-inch Dobs now out on loan.

Both 12-inch telescopes have been loaned out for the summer, but if you would like to use an 8-inch dobsonian, we may be able to do something for your. Contact Brett T. or John H. if you are interested.

If you had your heart set on a 12-inch, one will become available in September. Call now to reserve.

For Sale: HUTECH part # 3101 Single Arm Compact Fork Mount Head,

Can be used in Alt-Az as well as Equatorial mode with lightweight Scope (I have used it with PRONTO on Manfrotto 128RC Photo-tripod). Has Slo-Mo knobs (flexible shafts can be added to it - not included)
1/4 - 20 thread on base Size: 3" x 3" x 6".
Asking $ 200.-- Firm

Anton VanDijk 519 376-9912
e-mail: ravand@rogers.com

Review/pictures can be found here: http://www.cloudynights.com/item.php?item_id=798