STARFEST 2010

Astronomy: The Next Generation

August 12 – 15

Last year, we celebrated 400 years of the telescope, but at 401 years, we are going to look ahead at what astronomy may have in store. This may include things like the continued hunt for exoplanets, a close look at Pluto as well as mammoth new telescopes opening massive new windows on the universe. Amateur astronomers with their continuing dedication and improved technology and techniques are certainly not about to be left out, especially, since their dedicated nightly watching of the heavens continues to bear new and unexpected fruit for the scientific community. So, let's get together and contemplate what the next years, decades and centuries may hold in stock for the future of astronomy.

Program Monday - Thursday:

Monday August 9, Tuesday August 10			
2:00pm	Campground Opens		
10:00pm	Observing Session Begins		
Wednesday August 11			
6:00pm	Starfest Registration Opens		
10:00pm	Observing Session Begins		
11:00pm	Registration Closed		
Thursday August 12	**Main Tent**	**Baseball Field**	**Small Tent**
9:00am	Starfest Registration Opens		
10:00am			
11:00am			
12:00 noon	Lunch		
1:00pm		Use Radio Telescope to listen to Perseids	**Andreas Gada** Easy Astrophotography (2hrs)
2:00pm	**Malcolm Park, Steve Barnes et al.** Eclipse 2010 Roundtable -		
3:00pm	**Dr. Rebecca Ghent** Very Hot and Very, Very Cold: New Results from the Lunar Reconnaissance Orbiter Diviner Thermal Mapper		**Dave Yates, Gary Bennett** Necessity is the Mother of Invention
4:00pm	**James Cackette** Extreme Observing		**Mark Fitkin** On the Right Foot: Starting out in Backyard Astronomy
5:00pm	Dinner		
7:00pm	Astro Rap - Show off your own images equipment and projects.		BCAS Annual Meeting **Kirsten Vanstone**
8:00pm			
10:00pm	Observing Session Begins	Red Light Café Opens	
	Celestrivia if overcast		
11:00pm	Registration Closed		

Program Friday:

Friday August 13	Main Tent	Baseball Field	Small Tent
9:00am	Starfest Registration Opens		
10:00am			
11:00am	**Klaus Brasch** - The Search for Life in the Universe	Commercial Exhibits Open	**Greg Bragg** – What's New at Meade Instruments
12:00 noon	Lunch		
1:00pm	**Bob Summerfield** The Physics of Rainbows (2 hrs)		**Brady Johnson** Line-Filtered Astrophotography With DSLRs and One Shot Colour CCD Cameras
2:00pm			**Paul Zelichowski** Deepsky Imaging from Starbase Six
2:30pm		Sunspot Solar Observing Session	
3:00pm	**Mark Bratton** Observing the Complete Herschel Catalogue		**David Shuman & Paul Simard** Journeys on Mars - A Panoramic HD 3-D Experience - *Sponsored by Efston Science*
4:00pm	**Jim Hesser** Beyond the International Year of Astronomy in Canada		**David Shuman & Paul Simard** Journeys on Mars - A Panoramic HD 3-D Experience – *Sponsored by Efston Science* (repeat showing)
5:00pm	Dinner		
6:00pm		Commercial Exhibits Close	
7:00pm	**James Cackette** Northern Lights and astronomy in The Great White North		Friday Night at the Movies
8:00pm	**Dr Roberto Abraham** From Cosmic Dawn to the First Planets: The Rise of Complexity		
10:00pm	Observing Session Begins	Sky Tour **Bob Summerfield**	
	Celestrivia if overcast	Red Light Café Opens	
11:00pm	Registration Closed		

Program Saturday:

Saturday August 14	Main Tent	Baseball Field	Small Tent
9:00am	Starfest Registration Opens		
10:00am			Kidfest What's so attractive about magnetism? 10:30 til 11:30am ages 5-8
11:00am	**Tom Trusock** New Astronomical Toys and the Future for Amateur Astronomers	Commercial Exhibits Open	
12:00 noon	Lunch		
12:30pm			Swap Table Opens
1:00pm	**David Levy** Poetry of the Night: A look at the relation between the night sky and literature		
2:00pm	**Terence Dickinson** – Backyard Astronomy circa 2060 A.D.		
3:00pm			
5:00pm	Banquet and Dinner	Commercial Exhibits Close	
7:00pm	Door prizes and Announcements Imaging Salon Prizes. (6 of them)		
8:00pm	**Dr Rene Doyon** Hubble's Successor: The Mighty James Webb Space Telescope		
10:00pm	Observing Session Begins	The Sky Tour (alternate)	
10:00pm	Registration Closed	Red Light Café Opens	

Starfest 2010 – Astronomy: The Next Generation

Presentations:

KEYNOTE SPEAKERS

Rene Doyon: Hubble's Successor: The Mighty James Webb Space Telescope

Main Tent Saturday, 8pm

The Hubble Space Telescope (HST) has revolutionized our understanding of the universe and fascinated the public with its stunning spectacular images. HST will soon be replaced by a new and more powerful telescope: the James Webb Space Telescope (JWST), a 6.5m space telescope operating at infrared wavelengths to be launched at 1.5 million kilometers from Earth in 2014. NASA is leading the development of this giant and complex observatory in collaboration with the European and Canadian space agencies. JWST will be one of the most complex machines ever built by humanity. Canada is contributing to this exciting endeavor by providing one of four science instruments onboard JWST. In this conference, the current status of development of JWST will be described and an overview given of its science programs, from the detection of the very first galaxies formed a few hundred millions of years after the Big Bang, to the detection of water in the atmosphere of terrestrial planets outside our solar system.

Born in Thetford Mines (Québec), René Doyon obtained his BSc in 1985 and an MSc in 1987 from the Université de Montréal. He obtained a PhD in astrophysics at the Imperial College of Science and Technology and Medicine in London (UK) in 1991. He is currently an associate professor from the physics department of the Université de Montréal where he holds a NSERC industrial research chair in experimental astrophysics. He is also Director of the Mont-Mégantic Observatory and the leader of an international science team for the development of the Tunable Filter Imager, one of the four science instruments aboard JWST provided by the Canadian Space Agency. His main science interests include the search and study of exoplanets and the development of state-of-the-art astronomical instrumentation. He is member of the science team who recently obtained the first images of a multiple planetary system outside our Solar system.

Roberto Abraham: From Cosmic Dawn to the First Planets: The Rise of Complexity
Main Tent Friday, 8pm
The universe, soon after the Big Bang, was a dark, bleak place, devoid of galaxies, stars, planets and even the basic elements of life. This cosmic Dark Age ended with "First Light" - the illumination produced by the first generation of stars and galaxies. We know almost nothing about these early objects except that they somehow began a cycle of cosmic birth, death and rebirth, in a chain reaction that ultimately resulted in the complex Universe seen around us today. In this lecture Dr. Abraham will show how, after decades of searching, astronomers are now on the verge of finally observing the sources of First Light, using the latest generation of monster telescopes, both on Earth and in space. He will also highlight some recent work suggesting that we may now be detecting light from the formation of solar systems in distant galaxies, thus witnessing the formation of planets billions of years before our own Earth came into existence.

Dr. Roberto Abraham is a Professor of Astronomy and Astrophysics at the University of Toronto and the Principal Investigator of the Gemini Deep Deep Survey, an international project designed to study galaxies formed when the universe was only a few billion years old. His many awards include the E.W.R. Steacie Memorial Fellowship from the Natural Sciences and Engineering Research Council of Canada, the Canada Foundation for Innovation Career Award, and the University of Toronto's Outstanding Teaching Award.

James Cackette: The Northern Lights and Astronomy in The Great White North
Main Tent Friday, 7pm
also **Extreme Observing**, *Main Tent Thursday, 4pm*
James Cackette, an amateur astronomer from Whitehorse, Yukon, has come to share his experiences with the Northern Lights and astronomy in The Great White North. From quick photo tips, to finding the best of observing sites, the Northern Lights and the Yukon make for the ultimate night skies adventure. With pristine viewing conditions, little or no light, or air pollution, the Yukon Night Skies offer spectacular opportunities to view and photograph the Northern Lights. As you will soon discover with his tales of astronomy in the Yukon, it does have its extreme challenges. Obstacles are plentiful, including –30 to –40 Celsius temperatures, bloodthirsty insects, local wildlife, (including bear, porcupines, fox, wolf, coyote, beaver, and all creatures curious and hungry) as well as the better part of 3 months of 24-hour sunlight.

James Cackette has been viewing the night skies in the Yukon for over 15 years. He has worked with CBC North co-hosting a local radio show to keep people in the information loop of night sky events, and how to have some fun with astronomy. He is a writer for What's Up Yukon (a weekly local publication) for over 5 years. This has given him an opportunity to share the Yukon Night Skies with the general public and encourage interest in astronomy. He was also recently featured in the North Of Ordinary magazine. He is the founder and director of operations for Yukon Night Skies, the local astronomy club. He actively promotes astronomy, with humour and simplicity.

OTHER SPEAKERS

David H Levy: Poetry of the Night: A look at the relation between the night sky and literature *Main Tent Saturday, 1pm*
Astronomy was not invented for astronomers, nor was poetry invented for academics to study. Music was not made for conductors. All these were made for the rest of us to enjoy and appreciate, and about which we can become passionate. In this talk David will discuss how writers like Shakespeare used his love of the sky to enrich his works of literature.

David H. Levy is one of the most successful comet discoverers in history. He has discovered 23 comets, nine of them using his own backyard telescopes. With Eugene and Carolyn Shoemaker at the Palomar Observatory in California he discovered Shoemaker-Levy 9, the comet that collided with Jupiter in 1994. That episode produced the most spectacular explosions ever witnessed in the solar system. David is currently involved with the Jarnac Comet Survey, which is based at the Jarnac Observatory in Vail, Arizona but which has telescopes planned for locations around the world.
David is the author or editor of 35 books and other products. He won an Emmy in 1998 as part of the writing team for the Discovery Channel documentary, "Three Minutes to Impact." As the Science Editor for Parade Magazine, he is able to reach more than 80 million readers, almost a quarter of the population of the United States. A contributing editor for Sky and Telescope Magazine, he writes its monthly "Star Trails" column, and his "Nightfall" feature appears in each issue of the Canadian Magazine Skynews. David Levy has given more than 1000 lectures and major interviews, and has appeared on many television programs, such as the Today show (4 times), Good Morning America (twice), the National Geographic special "Asteroids: Deadly Impact", and ABC's World News Tonight, where he and the Shoemakers were named Persons of the Week for July 22, 1994. Also, David has done nationally broadcast testimonials for PBS (1995-present), and for the Muscular Dystrophy Association Telethon (1998-1999). He and his wife Wendee host a weekly radio show available worldwide at www.letstalkstars.com. In 2004 he was the Senator John Rhodes Chair in Public Policy and American Institutions at Arizona State University.He has been awarded five honorary doctorates, and asteroid 3673 (Levy) was named in his honor.

David Levy is President of the National Sharing the Sky Foundation, an organization intended to inspire new generations to develop an inquiring interest in the sciences, or in other words, to reach for the stars.

David resides in Vail, Arizona, with his wife, Wendee.

Terence Dickinson - Backyard Astronomy, circa 2060 A.D.
Main Tent Saturday, 2pm
Fifty years ago, most astronomy buffs could see the Milky Way from their backyards. A 10-inch Newtonian was a colossal telescope. Astrophotography didn't exist apart from a handful of aficionados spilling chemicals in darkrooms. Deep sky observing was in its infancy. The space program was ramping up for high adventure. Fifty years into the future, what will the astronomy hobby landscape look like? Terence Dickinson takes a stab at predicting the future, safe in knowing that he won't be around in 2060 to see himself proved wrong.

Terence Dickinson is the editor of SkyNews, Canada's national astronomy magazine. He is the author of 14 astronomy books and is a former staff astronomer at the McLaughlin Planetarium in Toronto and the Strasenburgh Planetarium in Rochester N.Y. In the mid-1970s he was the editor of Astronomy magazine. Over the years he has made numerous predictions about the future - most of them wrong.

Tom Trusock: New Astronomical Toys and the Future for Amateur Astronomers
Main Tent Saturday, 11am
Tom Trusock has been an active amateur astronomer for well over 30 years, and for more than a decade has been a principal writer, editor and contributor for the extremely popular cloudynights.com website with his own contribution involving several hundred articles to the site. His freely downloadable semi-regular observing series "Small Wonders" has been translated into five languages and is popular the world around. In addition, Tom's well known as one of the Net's best gear-heads and has been bringing the premiere gear trade show (NEAF) to amateurs through articles and videocasts.

Tom is a popular speaker at star parties throughout the US. He has written for several print publications as well: *Astronomy* and The BBC: *The Sky at Night* being the two most notable. He's active in outreach and education. He currently teaches a High School Astronomy Class.

His favorite current project involves visual classification of galaxies using the Hubble scheme with an array of telescopes from 3 to 30 inches in size from a variety of dark sites including his home observatory in Michigan's Thumb (USA).

Jim Hesser: Beyond the International Year of Astronomy in Canada
Main Tent Friday, 4pm
Both globally and within Canada the enormously successful IYA 2009 was the largest scientific education and public outreach activity ever. In Canada its success reflected in very large measure the tireless and highly creative contributions of amateur astronomers. In a richly illustrated presentation, Jim shares the accomplishments and summarizes the efforts underway to capitalize on the successful and active CASCA/FAAQ/RASC partnership, the three-year NSERC PromoScience grant allocated to CASCA, and the experience being gained in engaging traditionally underserved youth (e.g., in inner cities, rural, and Aboriginal communities). As you will see, we truly have the opportunity to weave our successes into the fabric of Canada's future.

Jim Hesser is Director of the National Research Council's Dominion Astrophysical Observatory at the Herzberg Institute of Astrophysics in Victoria, B.C., where he has been since 1977. He received his Ph.D. in Astrophysical Sciences at Princeton University, and was on the staff of the Cerro Tololo Inter-American Observatory, La Serena, Chile for nine years prior to joining NRC. He has researched many different topics in astronomy and laboratory astrophysics, with particular interest in the properties of different types of stars and star clusters in the Milky Way and nearby galaxies. Since 2002 he has been serving as Canada's member on the Board of Directors for the Atacama Large Millimetre Array, the first global astronomical observatory under development in northern Chile by Europe, North America and East Asia. A former President of the Canadian Astronomical Society(2004-2006), Jim is a Life Member of the Royal Astronomical Society of Canada, where he currently (2009-2013) serves as the Honourary President. He has been honoured by a Michael Smith Award for Science Promotion (1997), and since 2007 has chaired the Canadian committee for the International Year of Astronomy 2009.

Klaus Brasch: The Search for Life in the Universe *Main Tent Friday, 11am*
Probably few questions have captured human imagination more than whether or not we are alone in the universe. Thanks to rapid scientific and technological advances in recent years, we may actually get some real answers in the foreseeable future. Key issues in this regard are whether life is rare or a natural by-product of cosmic evolution. So far we only have a sample on one, the Earth. However, if even primitive life forms are found elsewhere in the solar system, what about advanced life on other planets? How can we find out and is contact a realistic possibility? Alternately, if SETI is futile in the long run, does that make Earth extremely rare or even unique?

After enjoying rewarding careers at several universities in the US and Canada, Klaus and his wife, Margaret, retired to Flagstaff, AZ in 2006. Though a biologist professionally, he got hooked on astronomy in his teens through the RASC and the A.L.P.O. and has maintained an active interest ever since. He is presently VP of the Coconino Astronomical Society and a docent at Lowell Observatory. In the 1970s, at Queen's University, Klaus teamed with radio astronomer, Alan Bridle, to develop a then-pioneering course on “Planets and Life” and later taught “Life in the Cosmos” at California State University, San Bernardino. An avid astrophotographer, he took his first grainy moon pictures in 1957 and now enjoys digital imaging from his backyard observatory. His work has been published in Sky & Telescope, Astronomy Now, Sky News, and Astronomy Technology Today. Klaus has translated several French books into English, including Urban Astronomy, Great Observatories of the World and New Atlas of the Moon, and frequently lectures on topics, ranging from astroimaging to life in the universe, to students, clubs and the public.

Bob Summerfield: The Physics of Rainbows *Main Tent Friday, 1pm*
From ancient times to the present, rainbows have fascinated and delighted all who have witnessed them. They have appeared in the historical record of every culture throughout mankind's journey. It is only within the past 400 years that we have begun to unravel the mysteries of this best known and universally loved atmospheric phenomenon. Originally intended as a technical college lecture (The Physics of Reflections and Refractions of White Light in a Drop of Water!), this talk has grown and evolved into a highly technical yet fun and entertaining introduction, geared for all ages, into all that makes a rainbow, with its usual (and unusual) features for the alert observer to understand and enjoy.

Bob Summerfield is the founder and director of *Astronomy To Go*, a non-profit education and public outreach organization, based out of the Philadelphia (PA) area. Bob works with Astronomy clubs, schools (K-12 and College), camps, scout troops, museums and civic groups, including an adult school class he has taught for 31 years. His goal is to bring the wonder, beauty, and excitement of both the science and hobby of Astronomy to any and all who want a better understanding of the skies above, day or night. Usually working with his wife, Lisa, they present hundreds of programs each year to thousands of students of all ages across the U.S. Bob has appeared on numerous TV programs on ABC, CBS, NBC, PBS, Discovery Channel and NASA-TV, as well as many radio programs, and in print media from newspapers nationwide to Parade and Sky & Telescope magazines. He has worked as an Outreach Presenter with the American Astronomical Society's Division for Planetary Sciences annual conference for the past 10 years. Bob and Lisa were honored by the International Astronomical Union in 1997 when as Asteroid was named "7344 Summerfield" in recognition of their educational efforts. They were also honored to receive The Omega Centauri Award at the 2002 Texas Star Party for "bringing Astronomy to the public." Fundraising with *Astronomy To Go's* Traveling Museum Shop, Bob and Lisa are regular attendees and vendors at Star Parties from coast (Winter Star Party) to coast (RTMC) and all sorts of astro-gatherings in between (TSP, NEAF), where Bob is better known as "The T-shirt guy," "Crazy Bob," or "Everyone's favorite Pain in the A**!"

Mark Bratton: Observing the Complete Herschel Catalogue *Main Tent Friday, 3pm*
From 1783 to 1802, William and Caroline Herschel laid the foundation for our modern understanding of the universe by sweeping the entire northern sky in search of undiscovered nebulae. They met with extraordinary success, recording almost 2500 galaxies, star clusters and nebulae that had been previously unknown. Using an 18.7-inch reflector, arguably one of the most effective telescopes in astronomical history, the Herschels discovered the full extent of the Local Supercluster, as well as the principal members of the great galaxy clusters in Coma Berenices, Perseus, Pisces and Andromeda. They also discovered many of the most significant nebulae, open and globular clusters of our own Milky Way.

Very few astronomers, either professional or amateur, have ever succeeded in observing the entire Herschel catalogue because many of the faintest members have been shrouded in mystery. The present speaker embarked on a project to observe the entire catalogue in 1992 and completed the marathon in the spring of 2010. The result is the forthcoming book "The Complete Guide to the Herschel Catalogue: Sir William Herschel's galaxies, star clusters and nebulae" to be published by Cambridge University Press in 2011.

Dr. Rebecca Ghent: Very Hot and Very, Very Cold: New Results from the Lunar Reconnaissance Orbiter Diviner Thermal Mapper *Main Tent Thursday, 3pm*
The Lunar Reconnaissance Orbiter (LRO) launched in June 2009. Since then, the Diviner Thermal Mapper has been measuring radiant thermal energy from the Moon's surface; from this, we can calculate the Moon's surface temperature. These temperature measurements can help us determine the chemical composition and physical properties of lunar surface materials. They also allow us to find and map the coldest places at the lunar poles, which are some of the very coldest in the entire solar system. These "cold traps" are sites of deposition for water, organic molecules, and a host of other chemical species. During the first year of orbit, Diviner will have mapped nearly every point on the surface of the Moon at least once, with very dense coverage at the poles. In this talk, Rebecca will present some of the most exciting Diviner results thus far, and discuss their significance for lunar science.

Dr Ghent grew up in Western New York state, not far from the Canadian border. She studied physics in college, and earned a B.A. from Randolph-Macon Woman's College in Lynchburg, VA, in 1993. She then earned an M.S. in physics from Georgia Institute of Technology in Atlanta. Following that, she taught physics for a year at Gordon College in Barnesville, GA; during that time, she recalls with great fondness her 8th grade Earth Science class. “I decided to get a first-year geology textbook and refresh my memory. I couldn't put it down! I decided to return to school to study geophysics. I went to Southern Methodist University in Dallas in 1996, and ended up doing what I thought would be a semester-long research project on the tectonics of Venus. Five and a half years later, I graduated with a PhD in geology, having written a thesis on Venusian structural geology and tectonics.” She then moved on to a postdoctoral fellowship in the Center for Earth and Planetary Studies at the Smithsonian Institution in Washington, DC. In 2006, she joined the faculty at University of Toronto, where she teaches quantitative geology and remote sensing. Dr Ghent’s research includes projects on the Moon, Venus, and Mars; and someday, she might even "branch out" to include Earth!

Andreas Gada: Easy Astrophotography Using A DSLR *Small Tent Thursday, 1pm*
Today’s modern DSLR cameras are well suited for Astrophotography. High ISO settings, long exposure capability (30 seconds), and built-in high ISO and long exposure noise reduction, enable these cameras to capture stunning images of the night sky. This workshop explores what can be accomplished using a tripod-mounted DSLR camera and standard lenses. Andreas begins by talking about the image-capture processes, some of the problems that may be encountered and how to prevent them. He then illustrates how to apply this process to photographing constellations, planetary conjunctions, meteor showers, satellites, northern lights, moonrise / moonsets, sunrise / sunsets and other astronomical phenomena. Next he explores two methods that can be used for creating star trails, and the pros and cons of each method. He finishes by looking at the use of the time-lapse movie creation as a method for illustrating the motion of the night sky.

The workshop consists of a presentation, lasting about an hour. This is followed by a practical, hands-on session where workshop participants will have the opportunity to create their own star trails or time-lapse movies. To participate in this portion of the workshop, ideally, you will need to have a high-speed laptop (minimum 1.6 Megahertz), with one gig of RAM and a minimum of 50 Megs of free space on your hard drive. You should also have a working copy of Photoshop (any

version). As part of the workshop you will be given a demo disk containing images that will be used for the hands-on exercises as well as StarTrails (freeware) and a trial version of ProShow Gold.

Andreas has been involved in astronomy since his teens. He is the founder and Past President of the North York Astronomical Association, and in 1982, started Starfest. He enjoys doing astrophotography and puttering in his "dungeon", machining telescope parts.

Dave Yates and Gary Bennett: Necessity is the Mother of Invention
Small Tent Thursday, 3pm
How often do we need something that can't be bought? Or, that you can buy it, but it isn't the right size. Sometimes you just have to make it yourself. In this workshop, we will feature some accessories that you can make yourself using common (mostly) tools that a typical "handy-man" would already own.

The workshop is divided into 2 parts:

1) **"How To" Electronics Projects:**
    a. How to make your own Dew Heater strips from commonly available components and "dollar store" materials.
    b. How to make a single source Power Distribution Console that eliminates DC/AC Inverters, AC Adapters. The Console provides outputs for 12V, 5V (USB Hub) and 8V (DSLR Camera)

2) **"How To" Mechanical Projects:**
    a. How to make aluminum accessories such as Dove Tails from common woodworking tools. Your router and table saw can do a great job cutting aluminum. We will present some short videos of cutting operations and tips on drilling, tapping and cutting of aluminum.

3) **Show and tell of other creations**
    a. Tripod Leg levelers
    b. CGE Mount Motor Cable Kit – Replacing those silly Ethernet Cables
    c. Spreader (Spider Assembly) for EQ6 and other tripods

Complete plans will be available for download and include drilling templates, complete parts lists, and information on where to buy parts and materials.

Kirsten Vanstone (BCAS Annual Meeting): Feuds among the Stars
Small Tent Thursday, 7pm
Feuds among the Stars: how astronomical rivalry helped to move science forward.
Meet the great personalities of astronomy and discover how some famous and not-so-famous disputes helped advance astronomical knowledge. Learn about some current feuds and decide if competition or cooperation is the best way forward.

Paul Zelichowski: Deepsky Imaging From Starbase Six *Small Tent Friday, 2pm*
Join Paul as he talks about deep sky imaging, with his experiences from the "early years" and his evolution to more advanced imaging techniques. Paul has been interested in astronomy and science in general since he was about 8 yrs old. His first imaging sessions were in the mid 1980s with film and manual guiding. Since then, he has built several domed observatories and is in the process of constructing a roll off roof design in his back yard with two piers. Paul lives on the shores of Lake Huron near Kincardine, Ontario, where he currently images from Starbase Six (aka Kinhuron Imaging Center Kincardine or KICK 1)

David Shuman & Paul Simard: Journeys on Mars 3-D **Sponsored by EfstonScience**
This Presentation is to be shown back to back in the Small Tent Friday at 3pm and at 4pm
Join us on an incredible experience traversing the surface of Mars in 3-D.

This 36 minute *HD 3-D* movie chronicles the journeys of Spirit and Opportunity as they make new discoveries on Mars. Evidence of past flowing water, soil samples, and strange land formations are looked at in a new dimension. Actual images taken from these rovers and computer generated sequences allow us to present this to the audience as if they were standing on the surface!

"Palomar 3-D"
A 12 minute short *HD 3-D* looks at the 200" inch Hale Telescope, made world famous by Edwin Hubble in the early 1900s. This gorgeous iconic observatory can be seen in all of it's splendor in this film.

Eclipse 2010 Roundtable *Main Tent Thursday, 2 pm*
On July 16, 2010, a total eclipse was visible in the South Pacific Ocean. Join us for an open forum report from our eclipse chasers as they share their experiences in hunting down the shadow of the moon.

Perseid Meteors on the Starfest Radio Telescope *Baseball Field Thursday, 1 pm*
Gather in the baseball field to construct a small radio telescope. After trying to detect radio waves from the sun, we will try to pick up Jovian radio waves at night.

FEATURED VENDORS

Dr. Brady Johnson (KW Telescope) Line-Filtered Astrophotography With DSLRs and One Shot Colour CCD Cameras
Small Tent Friday 1 pm
The digital age has brought new opportunities for urban astrophotographers. No longer is it necessary to pack up equipment and drive for hours to find a suitable dark sky site. Stunning deep space photography can be performed from even the most light-polluted locations with a digital SLR or astronomical CCD camera and a suitable set of filters. This talk provides beginners with information about the various line filters, such as hydrogen alpha, oxygen-III and others, and how they can be used take stunning astrophotos from the convenience of your urban back yard.

The founder and Education Director of KW Telescope, Dr. Brady Johnson, served 6 years on the executive council of the KW Centre of the Royal Astronomical Society of Canada including three years as Vice President, two years as President, and one as Past President. Brady has given many talks at club meetings, and is a regular contributor to the club's professional newsletter. He also gives talks to schools, businesses and astronomy clubs in and around southwestern Ontario. Brady has been an industry consultant for telescope and accessory design since the store began doing business in 2004. Brady and his business partner Brian Dernesch are both active in product development and work hard to put new products and innovations in the hands of fellow enthusiasts. FotoSharp and the KWIQ Guider are two examples of products developed by KW Telescope.

Marc Fitken (EfstonScience) On the Right Foot: Starting out in Backyard Astronomy
Small Tent Thursday, 4pm
Just starting out in astronomy? Not sure where to begin? You've started, but aren't sure if you're on the right path? With over 20 years of experience, join Marc in this basic introduction to amateur astronomy and how to do Backyard Astronomy.

Greg Bragg - Meade Instruments What's new at Meade: "The Meade LightSwitch"
Small Tent Friday 11am
Join Greg Bragg, VP of Sales - Specialty Channel to experience the new LS 8" and 6" scopes. Meade's LightSwitch technology automatically delivers telescope location, time, date, orientation and alignment — all with the flip of a single switch.

Calif. based Meade Instruments is a leading designer and manufacturer of telescopes and optical accessories with products that enable both professional and amateur astronomy enthusiasts to

experience the wonder and excitement of exploring the universe we live in..
Greg is the VP of Sales at Meade Instruments, and resides in Roswell GA, just north of Atlanta. His career has included more than 2 years as vice-president - Specialty Channel with Meade Instruments, 2 years as independent representative for Meade prior to employment at Meade, seven years as independent representative for various photo manufactures including Mamyia America Corp, Leica, Schneider, Bogen, LowePro, Samsung, 8 years as manufacturer's representative for Olympus Camera and 15 years at Wolf Camera in retail sales and management.

STARFEST INTERNATIONAL SALON OF ASTROPHOTOGRAPHY
Enter your astro-images in the Starfest Imaging competition Deep Sky or Solar System categories. Judging will be done prior to Starfest. Deadline for entries is July 1, 2010.

Please only enter images taken between July 1, 2009 and July 1, 2010. Winners, runners-up, and honorable mention awards will be handed out Saturday Night and the winning images shown to participants in the conference. All images submitted to the competition will be used as a slide show-screen saver on the big screen in the main tent throughout the conference.
Rules are posted on the Starfest website http://www.nyaa.ca/starfest.htm

OBSERVING SESSIONS
Bring your telescope and binoculars, and join us for our evening observing sessions.

Starfest Radio
Tune your radio to 93.2FM for cool music, interviews and announcements.

THE SKY TOUR
Bob Summerfield will give a tour of the night sky on Friday at 10pm.The Sky Tour will be conducted in the field just west of the main tent.

CELESTRIVIA
If it is cloudy on Friday or Saturday night, the CELESTRIVIA challenge will be held in the Main Tent following the evening program just after 10pm. In this test of astronomical knowledge, we will break into teams and compete for valuable prizes! To participate, simply form a team of four people, give your team a name and be ready to quickly answer astronomical questions in the following categories: Constellation Lore, Famous Astronomers, Star Names, the Solar System Telescopes Big and Small, The Messier Objects, Astrophysics 101, Music of the Spheres, Identify the Photo, and Grab Bag. The team with the most correct answers wins.

"SUNSPOT" SOLAR OBSERVING SESSION
Join us for a solar viewing session on Friday 2:30 to 4pm next to the baseball field. A variety of telescopes and filters will be used to observe the sun.

COMMERCIAL EXHIBITS
Astronomical dealers will be on hand to demonstrate and sell the latest from the world of astronomy. If there is something that you've been thinking of adding to your observing equipment and want to examine, or even test, under actual observing conditions, this is your golden opportunity. Commercial exhibits are located in the open field to the west of the main tent and along the roadway just north of the main tent. Commercial exhibits are open on Friday 11am to 6pm and Saturday from 11am to 5pm.

SWAP TABLE
Participants will have the opportunity to buy, sell or trade astronomical articles on Saturday, 12:30 to 2:30 pm. The swap tables will be located south of the Food Booth. These tables are not for commercial sales. Individuals will be responsible for their own property at the tables.

KIDFEST

KIDFEST is a special program for younger astronomers, from 10:30 am – 11:30 pm Saturday in the Small Tent.

What's so attractive about magnetism?

The sun has a magnetic field, the earth has a magnetic field, and so does our experiment. Join Brian and Diane for some fun experiments with magnetism. Find out how important magnets are to your daily life and your future, and then enjoy a fun activity.
Ages 5-8, Parent or Guardian attendance required.

FRIDAY NIGHT AT THE MOVIES

On Friday night at 7pm a movie with an astronomical theme will be shown in the small tent..

CONVENTION REGISTRATION – all prices in CAD$

A registration fee of $50 (individual rate) or $80 (family rate) is charged to cover the expenses of the convention. Family registration is defined as two adults in a legally recognized relationship and their dependent children (age 15 and under). Youths ages 16 to 19 are an additional $20 each. Brothers, sisters, cousins, uncles, aunts, nieces, nephews, in-laws, or best friends (regardless of age) do not qualify for the family rate. You are urged to pre-register by mail before July 1, 2010. Please complete and return the registration form, with payment, to the address indicated. After July 1, 2010 and at the gate, the registration fee will be $60 per person or $90 per family and $25 per dependent child (age 16 - 19). Registration confirmations will be mailed, or emailed (if your email address is included on the registration form) to you, if payment is received prior to July 1, 2010.

(A note to our friends from the United States: The volatility in foreign exchange rates exposes the NYAA to significant risk. As such, all prices will be charged in Canadian dollars. Your credit card company will convert the charge to US$ for you).

DOOR PRIZE DRAW RULES

On Saturday night at 7pm the door prize draw will be held in the Main Tent. Thousands of dollars of astronomical merchandise, provided by the astronomical retailers and manufactures participating in Starfest, will be given away. You must claim your prize at the time your name is drawn. If you are not present when your name is drawn, another name will be drawn until the prize is given away. Your name is automatically entered into the draw if you paid a registration fee as follows: one draw ticket per individual registration, two draw tickets for each family registration, and one draw ticket for each youth registration.

CAMPGROUND REGISTRATION

This is a camping weekend, so bring your tent or trailer. The River Place is a private campground with a pool; children's play area, and a few flush toilets and coin-operated showers. Please complete the camping section of the registration form and enclose payment. If you are not camping, but staying elsewhere, please complete only the entrance fee of the camping/entrance section of the registration form, as well as the Starfest convention registration.

ELECTRICAL HOOKUPS

Electrical Hookups, apart from trailer sites, are for astronomical equipment only and should not be used for electrical appliances such as portable coolers.

TRAILER SITES

A limited number of trailer sites are available by **advance reservation only**, on a first-come, first-served basis. Please indicate the size of your trailer and your hookup requirements (water, sewer, electrical) on the registration form, as well as your phone or email address in case we need further details. Trailer sites will be assigned two weeks prior to Starfest based on the order in which registrations were received. You will be notified of your site assignment at this time. Please note that some trailer sites are obstructed by trees. If you feel your assigned site is not suitable you will be given two options:

A. Set up your trailer in the general camping area (without hook ups) at a reduced cost
B) Cancel with our apologies and a full refund.

MEALS

A buffet style dinner will be served in the Main Tent on Saturday evening. The buffet offers roast beef, roast chicken and dressing, seafood Newburg, mini red potatoes, vegetable medley, two salads, assorted breads, various desserts, coffee, tea and soft drinks. To reserve your dinner, please indicate on the registration form the number required, and enclose payment. We cannot guarantee a dinner unless you reserve one in advance.

During the day, the Red Light Café provides breakfast, light meals and snacks on a pay-as-you-go basis. Menu items include Hamburgers, Cheeseburgers, Chickenburgers, Hot Dogs, Sausage on a Bun, French Fries, Onion Rings, Cheeseballs, Perogies, Fish & Chips, Shrimp & Chips, Chicken Fingers & Chips, BBQ Beef & Fries, Butter Tart Squares, Belgian Waffles, Muffins, Ice Cream Bars and Drumsticks, Soft Drinks, Juices, Milk, Chocolate Milk, Coffee and Tea. The breakfast menu includes – Scrambled Eggs, Sausages, Home Fries, Waffles, Breads, Juices and Coffee. The Café is open late on Friday and Saturday nights and provides coffee and doughnuts, etc. and a chance to sit and chat with friends.

Cooking is allowed in the camping area on camp stoves and charcoal grills. Open fires are not permitted. Restaurants are located in Ayton, Mount Forest, Durham, and Hanover, within a half-hour drive of The River Place.

Because of the large number of people attending Starfest, picnic tables are in short supply. We suggest you bring your own folding table and chairs.

STARFEST MERCHANDISE

A limited quantity of Starfest T-shirts, Sweatshirts, baseball caps, toques and pins will be available.
This year this is very important: To avoid disappointment, order your promotional items with your pre-registration, QUANTITIES ARE LIMITED.

GET INTO THE CLUB

Astronomy is a community activity. The North York Astronomical Association is an organized group of amateur astronomers who enjoy observing, astrophotography and many other astronomy related activities. To satisfy the needs and interests of our members the club maintains two observing sites, and holds monthly meetings and observing sessions. Membership in the NYAA is open to all. Membership: $40 individual, $50 family. In addition, there is a $20 site access fee which allows unlimited access to our two observing sites, one near Schomberg (approx. 45 mins. west of Toronto) and the other at Oak Heights (1 hour east of Toronto).

INTERNET REGISTRATION/CONFIRMATION

Our website and registration system have been upgraded to enable you to register over the Internet. Complete details and an online registration form are available on our website at http://www.nyaa.ca/starfest.htm If you include your email address on the registration form you will receive electronic confirmation.

CREDIT CARDS

We accept VISA, MasterCard and AMEX. Please note all prices quoted are ‘cash discounted’. A 4% administration fee will be added when payment is made via credit card.

PRIVACY POLICY

Protecting your privacy has always been a priority of the North York Astronomical Association. Please be assured that all information about you and your family is kept strictly confidential and is collected, used and only disclosed, where necessary, to facilitate your participation in Starfest.

REFUND POLICY

Cancellations will be refunded in full if notification is received by **July 20, 2010**.
If you cancel after July 20, 2010 a partial refund will be issued 6 – 8 weeks after Starfest as follows: 1.-Registration fee less a $25 (or $35 if you ordered promotional items) administration fee; 2.-Dinner fee, only if we were able to resell your dinner tickets; 3- Camping fee; 4. If you ordered Starfest Promotional items they will be mailed to you via parcel post.
If while at Starfest you decide to leave before the end of the conference and are out of the park **before** 2 pm, the camping fee for that day and any unused days will be refunded at the registration desk when you leave. If you are a “No Show” you must request your refund within 30 days of the end of Starfest.

STARFEST COORDINATES

Starfest is held at River Place Park,
RR 3, Ayton, Ontario, Canada,
Longitude: 80° 50’ 27” W, Latitude: 44° 04’ 28” N, Elevation: 400 metres.

STARFEST 2011

Starfest 2011will be held August 25-28 2011

STARFEST HOME PAGE

An electronic version of this brochure, and on-line registration is available on the Starfest website at: www.nyaa.ca/starfest.htm

An Important Note about Severe Weather.

At Starfest on rare occasions, severe weather warnings are issued by Environment Canada for the Mount Forest/Durham area. Weather warnings have been passed on to attendees by announcements in the Main Tent in the past, but we have decided to improve our weather warning capabilities during Starfest. Beginning in 2010, in addition to the Main Tent announcement, there will be blasts from an air-horn to notify attendees that severe weather is approaching. This usually means a severe thunderstorm with damaging winds, hail, etc. Environment Canada issues Weather Statements, Weather Watches, and Weather Warnings. Only Weather Warnings for the Starfest area will be broadcast.

Starfest 2010 Advanced Registration Form
All prices in Canadian $

To register, please complete this form and send it with your payment to: STARFEST, 39 Willowbrook Dr Whitby ON L1R 1S7. **Please make cheques payable to Starfest.** You can also register and pay online at www.nyaa.ca/starfest.htm

Name: _____

Address:_____

City: _____ Prov./State: _____Postal/ZIP:_____

Car License#: _____Number of people: _____

Telephone number: _____email address:_____

Arrival Date (please circle one): Monday Tuesday Wednesday Thursday Friday Saturday

One of Riverplace camping fee OR trailer site OR entrance fee is required in addition to the registration fee.

Individual Registration	Until July 1st $50.00	After July 1st $60.00	$_____
Family Registration (incl children under 16 and not those over)	Until July 1st $80.00	After July 1st $90.00	$_____
Youth Registration ages 16-19 are extra	Until July 1st $20.00	After July 1st $25.00	$_____
		Sub Total	$_____

Names: _____/_____/_____/_____

_____/_____/_____/_____

Camping and Entrance					
Individual	Number of Nights	_____ x Number of Campers	_____	x$16.00	$_____
Family		Number of Nights	_____	x$25.00	$_____
Electrical Hookup		Number of Nights	_____	x$3.00	$_____
Trailer Site Full Hookup Length _____		Number of Nights	_____	x$32.00	$_____
Partial service sites are available for overflow (no sewer hookup)		Number of Nights	_____	x$30.00	$_____
Single Non Camper	Number of Days	_____ x Number of People	_____	x$12.00	$_____
Family Non Camper		Number of Days	_____	x$20.00	$_____
Saturday Dinner		Adults:	_____	x$26.00	$_____
		Children:	_____	x$15.00	$_____
Promotional Items					
T-Shirts		S M L XL	_____	x$19.00	$_____
		XXL	_____	x$24.00	$_____
Sweatshirts		S M L XL	_____	x$36.00	$_____
		XXL	_____	x$39.00	$_____
Starfest Coffee Mug			_____	x$10.00	$_____
Starfest Car Window Flag			_____	x$25.00	$_____
Baseball Caps			_____	x$16.00	$_____
Pins			_____	x$10.00	$_____
NYAA Membership					
Individual				$40.00	$_____
Family				$50.00	$_____
Observing site access fee				$20.00	$_____
				Total	$_____
				4% credit admin fee	$_____
				Grand Total	$_____

Please circle one: VISA MasterCard AMEX
Card number: _____ Expiry Date: _____

*note: After July 1st and at the gate, the registration fee will be $60.00 per adult, $90.00 per family and $25.00 per youth.

MOTELS and BED & BREAKFAST

Motel and Bed & Breakfast accommodations are available, within a thirty-minute drive of the River Place, in Mount Forest, Durham, Hanover, Palmerston and Walkerton. Please make your own reservations.

Motels

Forest Plaza Motel	284 Main St. N., Mount Forest, N0G 2L2	(519) 323-1101
Canadiana Motel	617 10th St., Hanover, N4N 1S1	(519) 364-1580
Travellers Inn	244 7th Ave. S., Hanover, N4N 2H1	(519) 364-1911
Varney Inn Motel	R.R. #3, Durham, N0G 1R0 (Hwy #6)	(519) 369-9982
Ranton Place Hotel	120 King St., Palmerston, N0G 1P0	(519) 343-3906
Elm Park Motel	R.R. #2, Palmerston, N0G 2P0	(519) 343-2540
Hillside Motel	15 Maple St., Walkerton, N0G 2V0	(519) 881-1470
Walkerton Inn	1305 Yonge St. S., Walkerton, N0G 2V0	(519) 881-0629
Lighthouse Motel	1864 Hwy #9, Walkerton	(519) 881-0202

Bed & Breakfast

Silver Creek	17 Yonge St. S., Walkerton, N0G 2V0 (Box 957)	(519) 881-0252
Forest Edge	R.R. #3, Durham N0G 1R0	(519) 369-5661
Backdoor	240 Garafraxa St., Durham, N0G 1R0 (Box 426)	(519) 369-6507
Country Lane	9792 Creek Rd. (R.R. #3), Clifford, N0G 1M0	(519) 327-8236
Little Pond	211572 Baseline Rd. (RR#4) Mt. Forest N0G 2L0	(519) 323-4458
Andrews Berry Farm	6765 Hwy # 89 (RR #4) Mt. Forest, N0G 2L0	(519) 323-2097
Washer's Eden	270 Fergus St. N., Mt. Forest, N0G 2L2	(519) 323-0028
Viewfield Inn	951 Old Durham Rd. (RR #2) Walkerton N0G 2V0	(519) 881-0879
Still Life Retreat	394591 Concession 2 (RR #1) Durham, NOG 1R0	(519) 369-3663
Dr. James Gunn Inn	283 Durham Rd. E., Durham, NOG 1R0 (Box 925)	(519) 369-6876

Starfest Convention

To make **STARFEST** a safe and enjoyable experience for everyone, we would appreciate that you (and your dependants) abide by the following rules of conduct. The NORTH YORK ASTRONOMICAL ASSOCIATION **reserves the right to eject any person not willing to comply with these rules of conduct**.

1. **WALK, DON'T DRIVE** while inside the campground. It's a great way to meet people and make new friends. When walking on roadways please **walk on the left side of the road** so that you can see on-coming traffic. At night please bear in mind that the driver in an on-coming car may not see you as well as you see the car. Please **keep your red flashlight on so you can be seen; never play chicken with the cars. You will lose. Always yield the right of way.**

2. **DRIVE CAREFULLY.** People and telescopes are everywhere.

3. **DON'T MOVE CARS AT NIGHT** unless required by a medical emergency. If you must move your car, please use red filters to cover your headlights and backup lights. Red filters are available at the registration desk or in the main tent.

4. **PARKING FOR NON-CAMPERS.** If you are not camping, please park your car in the designated parking area, near the registration tent. If you have a telescope to set up, please do so in the special observing area set up for non-campers. Only campers may park in the camping area.

5. **RED LIGHTS AT NIGHT.** White lights are not allowed anywhere in the observing area at night. Please:
   - •cover your flashlight with a red filter and keep the beam aimed at the ground
   - •cover your trunk and car interior lights with red filters if you are going to be accessing your car during the night
   - •DO NOT USE propane or naphtha camping lanterns
   - •NO CAMPFIRES
   - •shield computer monitors, keep screen intensity to a minimum, and use night vision mode or a red filter.

6. **WE WILL NOT TOLERATE:**
   - •conduct which is offensive and disturbing to others
   - •loud noise or music
   - •excessive consumption of alcohol or use of other intoxicating substances.

7. **STARFEST IS AN ASTRONOMY CONFERENCE ... NOT A ROCK CONCERT.** You are encouraged to share your interest in astronomy, not your taste in music. Please use headphones if you must observe with music.

8. **PETS** We love them, **but would prefer you leave them at home**. If you feel compelled to bring your pet please ensure they are properly restrained, that you clean up after them and that they do not disturb others at Starfest. We have had complaints about dogs in particular. Some owners will end up spoiling it for everyone. Please leave dogs at home or board them if at all possible. This is a star party first. Complaints will result in the owner being refunded and respectfully asked to leave.

9. **PLEASE RESPECT THE PRIVACY OF THE SEASONAL CAMPERS.** Do not trespass or remove anything from their campsites (seasonal campsites will be clearly marked).

10. **THEFTS CAN OCCUR,** so please protect your valuables.

11. All vendors operating in the River Place Campground during Starfest must be vetted by the NORTH YORK ASTRONOMICAL ASSOCIATION.

12. Please obey all River Place Campground rules.

13. **Children and Teens.** Parents will be held accountable for the actions of their dependant children while at Starfest. Please review these rules of conduct with them and ensure they are in compliance. In particular, it's ok to hang out and chill with your friends, but not inside the recreation hall. The Red Light Café and Small Tent may be used providing nothing is damaged, nothing walks off and the area is left clean and tidy.

14. The NORTH YORK ASTRONOMICAL ASSOCIATION does not accept any responsibility or liability for damage or injury to you or your equipment.