

STARFEST

A Celebration of Astronomy

August 20 – 23, 2009

The **North York Astronomical Association** invites you to attend its 28th annual Starfest. Starfest is Canada's largest observing convention and star party. It attracts over 800 astronomy enthusiasts from Ontario, and neighboring provinces and states. It has been ranked among the top seven star parties in North America by *Sky & Telescope* magazine, and among the top ten star parties in the world in the *BBC Sky at Night Magazine*. Starfest offers a wide variety of observing-oriented activities that address the needs and interests of experienced observers and astrophotographers, as well as those new to the hobby. Activities include observing sessions, formal and informal presentations, workshops, commercial exhibits, and a children's program. You are invited to bring your telescope and astronomical images, and share your observing experiences with others.

Program Monday - Thursday:

Monday August 17, Tuesday August 18				
2:00pm	Campground Opens			
10:00pm	Observing Session Begins			
Wednesday August 19				
6:00pm	Starfest Registration Tent Opens			
10:00pm	Observing Session Begins			
11:00pm	Registration Tent Closed			
Thursday August 20	Main Tent	Baseball Field	Small Tent	Mirror O Matic Tent*
9:00am	Starfest Registration Tent Opens			
10:00am				
11:00am				
12:00 noon	Lunch			
1:00pm		Build a Radio Telescope	James Kelley - Starfest Mirror Grinding Project	Making Neutral Grinding Tools
2:00pm			Ray Khan - Twenty Five Years in the Telescope Industry	Finding the Neutral Grinding Position
3:00pm	Eclipse 2009 Roundtable		Larry McHenry - Astro Sketching	Hogging
4:00pm	Steve Barnes - Building Robotic Observatories in Chile		Paul Markov - The Observing Logbook	
5:00pm	Dinner			
7:00pm	Astro Rap - Show off your own images, equipment and projects.		Dan Ostler - Finding Their Way Home: Celestial Navigation Through the Ages	
8:00pm				
10:00pm	Observing Session Begins	Red Light Café Opens		
	Celestrivia if overcast			
11:00pm	Registration Tent Closed			

*The Mirror O Matic tent will be found outside the Small Tent

Program Friday:

Friday August 21	Main Tent	Baseball Field	Small Tent	Mirror O Matic Tent
9:00am	Starfest Registration Tent Opens			
10:00am			Bruce Engels, Efston Science - Telescope Basics	Fine Grinding
11:00am	Dr. Ray Carlberg - Old and New Canadian Telescopes	Commercial Exhibits Open	ASX - Mars Desert Research Station Experience	Making a Polishing Tool
12:00 noon	Lunch			
1:00pm	Jane Houston Jones - A Woman's Place is in the Dome			
2:00pm	Dr. Jerry Bonnell - APOD on the World Wide Web		Larry McHenry - Solar Observing Talk and Hands-on Observing	Polishing
2:30pm	Sunspot Solar Observing Session			
3:00pm	Wilfred Buck - First Nation Astronomy Stories		Alan Ward - Optical Coatings for Telescopes	
4:00pm	Peter McMahan - Marshmallows on Venus: A guide to campsite astronomy in our nation's wild spaces		Greg Bragg - Meade Instruments	
5:00pm	Dinner			
6:00pm		Commercial Exhibits Close		
7:00pm	Paul Mortfield - The Sun and Spaceweather		Friday Night at the Movies	
8:00pm	Dr. Ian Shelton - A Personal Reflection on 400 years of Modern Astronomy			
10:00pm	Observing Session Begins	Wilfred Buck - First Nations (Cree) Sky Tour		
	Celestrivia if overcast	Red Light Café Opens		
11:00pm	Registration Tent Closed			

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Program Saturday:

Saturday August 22	Main Tent	Baseball Field	Small Tent
9:00am	Starfest Registration Tent Opens		
TBD – likely 9:00am - 10:00am	Contact Australia - Queensland Astrofest		Kidfest: Ages 3-6 Expand your Horizons
10:30am			Kidfest: Ages 7-9 Gravitating towards gravity
11:00am	Alan Ward & Bob Odaiskey - The Foucault Test: A New Revolutionary Approach	Commercial Exhibits Open	Kidfest: - Ages 9 + Pushing the Boundaries
12:00 noon	Lunch		
12:30pm			Swap Table Opens
1:00pm	R. Scott Ireland - Solar System Volcanism		Kevin Kawai and Gary Stephey, Celestron Inc - what's new with Celestron
2:00pm	Dr. David Lafreniere - A new chapter in the hunt for exoplanets: direct imaging		Dr Brady Johnson - Fundamentals of Autoguiding
3:00pm	Dr. David Pearson - Meteorite impact in Sudbury basin		Hugh Chesser - Algonquin Radio Observatory
5:00pm	Banquet and Dinner	Commercial Exhibits Close	
7:00pm	Door prizes and Announcements including Imaging Salon Prizes. (6 of them)		
8:00pm	Jane Houston Jones - The Cassini Mission to Saturn: Past, Present and Future		
10:00pm	Observing Session Begins	The Sky Tour (alternate)	
10:00pm	Registration Tent Closed	Red Light Café Opens	

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Presentations

Starfest 2009 - A Celebration of Astronomy

With 13 billion years and counting since the beginning of, well, everything, we've only just begun to understand how colossal and amazing a place the universe truly is! And even with all the big questions and mysteries that arise from the modern science of astronomy, it doesn't make it any less FUN!

For many of us, there is no better way to pass an evening than spending it with one eye peeled, peering through a telescope, finding our latest challenging object or embarking on a journey of discovery with a new set of binoculars. In this ever-changing hobby, hobbyists and professionals alike are enthralled by the beauty, majesty and immensity of what we see and are mystified by the many things we have yet to learn. The universe truly is the biggest mystery of all. So join us as we celebrate 2009 as the International Year of Astronomy and share in the furthest horizons and the latest innovations of the profession and hobby of astronomy.

KEYNOTE SPEAKERS

Jane Houston Jones **The Cassini Mission to Saturn: Past, Present and Future**

Saturday 8 pm Main Tent

The Cassini Spacecraft, launched in 1997, has been in orbit for over 5 years and is now more than halfway through a 2-year extended mission after a thrilling 4-year prime mission. Cassini Outreach's Jane Houston Jones will tell the tale of getting to Saturn, 4 years of science, followed by one and perhaps two extended missions. There will be Cassini handouts!

A Woman's Place is in the Dome *Friday 1 pm Main Tent*

There are dozens of celestial objects and lunar features named for or discovered by women astronomers. Join Cassini outreach and amateur astronomer Jane Houston Jones as she takes you on a magical history tour of Caroline Herschel's clusters, Carolyn Shoemaker's comets, Annie Jump Cannon's variable stars, Deborah Fischer's exoplanets and all the lunar features named for women astronomers through the centuries, and more! There will be an observing list of the objects visible to the amateur telescope, with images or sketches of the objects and star charts.

Jane Houston Jones is a senior outreach specialist with the Cassini Mission to Saturn at NASA's Jet Propulsion Laboratory. She also develops a monthly astronomy podcast called 'What's Up' (in the night sky). She's had several amateur astronomy articles published in *Sky and Telescope* and *Astronomy Magazine*, and others. From 1998 to 2008 Jane participated in NASA and USAF airborne meteor counting missions as part of the Leonid Multi-Instrument Aircraft Campaigns, observing several of the Leonid storms, and Perseid and Aurigid showers. Jane has earned two NASA Group Achievement Awards, and has received many awards from amateur astronomy clubs, including the WAAG Bruce Blair medal. She is also an avid amateur and sidewalk astronomer and takes one or more of her 12 telescopes out for public and personal observing sessions many times each month.

Dr. Ian Shelton **A Personal Reflection on 400 years of Modern Astronomy**

Friday 8 pm, Main Tent

Ian Shelton is best known for his discovery of Supernova 1987A, the brightest supernova since Johannes Kepler's of 1604. Kepler was a contemporary of Galileo Galilei and both men are considered giants in the history of modern astronomy. Kepler's Laws provided the mathematical underpinning for Copernicus' model of the Solar System and Galileo used a new device called a telescope to provide the observational proof establishing other worlds in orbit about the Sun as reality. Dr. Shelton will share his personal thoughts about what Kepler and Galileo may have felt at the time of their momentous breakthroughs and discuss how profoundly our world-view has changed since the birth of observational astrophysics 400 years ago. The talk will be richly illustrated with images and stories gathered while Dr. Shelton was on staff at some of the world's most remarkable observatories.

Dr. Shelton was born on March 30th, 1957 in Winnipeg. He received his B.Sc. in 1979 from the University of Manitoba and in 1981 began his professional career working as Resident Astronomer at the University of Toronto Southern Observatory at Las Campanas, Chile. He discovered Supernova 1987A during his time off using another telescope on that mountaintop. In the fall of 1987, Shelton entered the School of Graduate Studies at the University of Toronto and received his M.Sc. in 1990 and Ph.D in 1996. He has since worked at Japan's 8.3-metre Subaru Telescope in Hawaii, the 1.9-metre David Dunlap Observatory in Toronto, Athabasca University north of Edmonton, Alta. and the 6.5-metre MMT Observatory south of Tucson, Ariz. Ian is married to Turkish-born astronomer Tuba Koktay and they reside with their daughter Victoria in Richmond Hill, Ont.

OTHER SPEAKERS

Dr. Jerry Bonnell - APOD on the World Wide Web *Main Tent Friday 2 pm*

After over a decade of editing the Astronomy Picture of the Day (APOD)

(<http://apod.gsfc.nasa.gov/>), Jerry Bonnell says he is still awed by the way art and science come together in astronomical images. In the last few years it has been particularly gratifying to see a major increase in APOD contributions from astro-imagers with very modest equipment. He will speak briefly on the history and operation of APOD, a website that presents images from robotic spaceships, space-based observatories, and professional and amateur cosmic tourists alike. He will also discuss recent submissions with an eye toward those from the amateur community.

Author of popular books, reviews, and magazine articles on astronomy and high-energy astrophysics, Dr. Bonnell is a founding editor and author of the Astronomy Picture of the Day (APOD). Begun in 1995, APOD remains one of the largest archives of annotated astronomy and space related images on the World Wide Web.

Dr. Bonnell received a Ph.D. in astronomy from the University of Maryland in 1987. He has since enjoyed working on a variety of astrophysical satellite projects at NASA's Goddard Space Flight Center including the Cosmic Background Explorer, the International Ultraviolet Explorer, the Compton Gamma Ray Observatory, and the Fermi Gamma Ray Space Telescope. While his research interests have wandered across the entire electromagnetic spectrum, since 1992, they have focused on the time histories and spectral evolution of cosmic gamma-ray bursts.

Dr. Bonnell lives with his wife (an art historian) and two sons in Greenbelt, MD.

Paul Mortfield The Sun and Spaceweather *Main Tent Friday 7pm*

Do the names SOHO, TRaCE, Stereo, THEMIS, and Hinode sound familiar? Maybe not. While the Hubble Space Telescope may get most of the news, there is a fleet of spacecraft busily studying the Sun and space weather. They do this in a variety of wavelengths to better understand our nearest star and the affect it has on Earth and around our solar system. Paul's talk will bring us up to date on the findings of this fleet, predictions for solar cycle 24, and discuss the exciting field of space weather.

Paul Mortfield worked with the NASA/ESA SOHO mission and its MDI instrument at Stanford University's Solar Observatories Group, in California. He has hosted many NASA education broadcasts for Sun-Earth Day and the series "All About the Sun". He created the concept and plan of space weather monitors that were deployed by NASA and UNESCO to 190 countries in 2007 to promote science education. Paul is currently chair of the long running Solar Program of the American Association of Variable Star Observers (AAVSO).

Dr. David Pearson Meteorite Impact in the Sudbury Basin *Main Tent Saturday 3 pm*

Dr. David Pearson is a professor of Earth Sciences at Laurentian University in Sudbury and the co-director of the Laurentian / Science North graduate program in Science Communication. From 1980 to 1986 he was the Project Director for Science North. He has hosted two TV series: Understanding the Earth and Down to Earth. In 2000, David received the Geological Association of Canada's Ward Neale Medal for public communication of earth sciences, and in 2003 he was awarded the McNeil Medal of the Royal Society of Canada for public communication of science.

Scott Ireland Solar System Volcanism *Main Tent Saturday 1pm*

Volcanism is one of, if not the primary force shaping the Earth, as well as other worlds in our Solar System and perhaps beyond. In this talk, Scott will use his own volcano images to present an overview of Earth's volcanic processes and landforms, as well as satellite and spacecraft images to highlight what we know about volcanism on other Solar System bodies.

Mr. Ireland has been photographing nature and the heavens for over 25 years. His photographs have been published internationally in many books, textbooks, periodicals and calendars, and have appeared in various museum and gallery exhibits.

Scott's publication credits include *Nature's Best*, *Nature Photographer*, *Sky & Telescope*, *Astronomy Magazine*, NASA/JPL, University College, London; The Smithsonian Global Volcanism Program, *Audubon Field Guides*, *Peterson Field Guides*, The International Association of Volcanology and Chemistry of the Earth's Interior and Adobe Systems, Inc. He was a part of the National Geographic film team for a documentary entitled *Volcano Hunters*. Adobe Systems, Inc. recently published a Customer Success Story on Scott and will use his images as part of a special Adobe 25th Anniversary promotion. Scott is the author of the recently published book *Photoshop Astronomy*, and is a frequent lecturer on image processing topics.

Dr. David Lafreniere A New Chapter in the Hunt for Exoplanets: Direct Imaging

Main Tent Saturday 2 pm

Since the historic discovery of 51 Peg b in 1995, over 300 exoplanets have been discovered indirectly through the subtle effects that they induce on their parent stars. These discoveries have revealed a wide diversity of "exo-worlds" and have brought forth crucial information to advance our understanding of how planets form and evolve around stars. Planets in orbits the size of our solar system or larger cannot be detected using these indirect techniques, however, and direct imaging detection is currently our only means to complete the picture, and would offer new possibilities to characterize the planets in more details. Huge effort has been put into achieving this highly difficult task over the last decade, and the first direct imaging detections of exoplanets finally occurred in late 2008.

Dr. Lafreniere will highlight some important discoveries made over the last decade and discuss the great challenge of imaging planets directly. He will present techniques developed by astronomers over the last decade to achieve this difficult task. He will also illustrate the first direct imaging discoveries of exoplanets, including that of a 3-planet system not too dissimilar to our own solar system and will conclude with an outlook on the future of this field.

David Lafrenière obtained a B.Sc. in physics/mathematics from McGill University in 2000, an M.Sc. in astronomy from the University of California, Los Angeles in 2002, and a Ph.D. in astronomy from the Université de Montréal in 2007. Since 2007, he has worked as a postdoctoral fellow at the University of Toronto. He specializes in direct imaging of exoplanets using adaptive optics on ground-based telescopes, with an emphasis on the development of new observing and image processing techniques. He co-led the Gemini Deep Planet Survey, the most sensitive and systematic imaging search for planets to date, and he is a co-discoverer of both the first image of a compelling exoplanet candidate, 1RXS J1609-2104 b, and the first image of a multiple-exoplanet system, HR 8799 bcd. His research interests also include brown dwarfs, the mechanisms of stars and planets formation, and the development of new instrumentation.

Wilfred Buck First Nation Astronomy Stories *Main Tent Friday 3 pm*

Sky Tour at Night *Friday night in the Baseball field at 10 pm*

Wilfred's presentations will center on Cree stories and legends concerning various stars and star groups, both obvious and not so clear. There is artwork that accompanies this presentation and stories which highlight the Ininewuk (Cree) astronomical mythology. A hand drum and song accompaniment feature prominently during the sky tour.

Wilfred is originally from the Opaskwayak Cree Nation in northern Manitoba and holds a B.Ed. and Post Bacc. from the University of Manitoba. He has taught for 16 years in both urban and reservation school systems at the high school, middle school and elementary school levels, as well as adult education. He is a father of 4, a husband, sweat lodge keeper, pipe-carrier, sundance chief, singer, artist, dream interpreter and teacher. He has had the opportunity to travel to visit the Zapoteca people of southern Mexico, the Kiapoa of southern Brazil and some highland clans of the Scottish Highlands in Great Britain.

Dr. Ray Carlberg Old and New Canadian Telescopes *Main tent Friday 11 am*

Telescopes have been important in Canada since the days of Champlain when they were used to establish positions as part of map making. International politics, Canadian politics and astronomical map-making interplayed in several important border disputes at the beginning of the 20th century. The first national observatory was established to accurately determine the position of Ottawa. Along with their time and position duties, the astronomers laid out an ambitious program of research which was incorporated into two national observatories which laid the basis for a century of exceptional astrophysical research. Canada is now in the process of renewing its facilities for the 21st century, including participation in the Thirty Meter Telescope project.

Raymond Carlberg works as both a theorist and an observational astronomer at the University of Toronto, mainly in the area of galaxy evolution and cosmology. He was one of the leaders of the CNOG galaxy surveys and the current Supernova Legacy Survey. He is the Canadian project director for the Large Optical Telescope project, the Canadian component of the Thirty Meter Telescope project. Carlberg is a graduate of the University of Saskatchewan and UBC. He is currently a Fellow of ClfAR and a past Killam Fellow.

Peter McMahon Marshmallows on Venus: A guide to campsite astronomy in our nation's wild spaces *Main Tent Friday 4 pm*

Join award-winning science journalist Peter McMahon for a whirlwind tour of Canada's best-kept secrets for seeing the night sky from the great outdoors. From the portage trail to the R/V park, from stargazing through the door of a tipi on the Prairies to watching the Northern Lights from a hot spring in the Yukon, find out the spots to hit, the gear to take, and the little-known stories that make the Canadian wilderness an exciting observing site for back-country astronomy.

Currently serving as Producer in charge of Original Content for DiscoveryChannel.ca, Peter McMahon is an award-winning science writer/producer/online personality and avid "campsite astronomer". He has written science stories for CTV.ca, Discovery Channel, the Toronto Star, the kids magazine *YESMag*, and is editor of the journal of the Canadian Science Writers' Association. While traveling the nation in search of the best campsites for stargazing, he's spoken on wilderness astronomy at the Banff Centre, Jasper National Park, the Ontario Science Centre, and Whitehorse's Yukon College. His kids science experiment book on space tourism is due to be published in 2010 by Kids Can Press.

Alan Ward & Bob Odaiskey The Foucault Test: A New Revolutionary Approach

Main Tent Saturday 11am

For over 100 years amateur & professional telescope makers have relied on this simple but very effective device for evaluating the surface quality of lenses and mirrors.

Although highly accurate in its ability to reveal minute imperfections, the Foucault Tester requires the user be highly skilled in his/her ability to properly interpret the characteristic "shadows" it produces. This has always posed a problem in that readings taken by the human eye are subjective and prone to misinterpretation.

Due to these misinterpretations, the test has been limited in its ability to produce repetitive measurements necessary for the production of high quality large aperture mirrors. Alan Ward and Bob Odaiskey will present the workings and advantages of their new video/computerized testing system which produces consistent readings regardless of who is conducting the test.

Alan Ward Optical Coatings for Telescopes *Small Tent Friday 3 pm*

Optical surfaces of all modern quality astronomical instruments are coated with very thin layers of metallic or dielectric materials to improve optical performance. This presentation will describe the mechanics of depositing & the theory of thin-film interference, and give an overview of what every telescope user should know about the many available optical coatings for lenses & particularly large mirrors.

Alan Ward is sole proprietor of Moonward Vacuum Coatings since 1995. His interests in astronomy are primarily telescope making, and the promotion and teaching of telescope-making, through the art of grinding, polishing, and figuring of mirrors and lenses. Alan is employed full time as a Materials Management Controller at Vale Inco in Sudbury Ont.

Bob Odaiskey has been involved in telescope making since the early 1960s learning the art of all aspects of telescope making from lens design to the chemical silvering of mirrors through his father Ken. Bob is a retired chemist from Vale Inco and now serves as a technical collaborator for Moonward Vacuum Coatings.

Dan Ostler (Bruce County Astronomical Society) Finding Their Way Home: Celestial Navigation Through the Ages *Small Tent, Thursday 7 pm*

Water covers over two-thirds of the surface of the earth, and while man has travelled over this vast unmarked expanse for millennia, the mighty oceans remain the final arbiter of who may pass. Join Dan Ostler as he goes back to the times of the Vikings, the Polynesian navigators and finally, the early European explorers to explore their navigation techniques and uncover the astrophysical basis of clever tricks they used to find their way home.

Dan graduated in biophysics from the University of Waterloo and pursued a career in medical radiation physics. Working in forefront research, product design, manufacturing and marketing, Dan had a ringside seat to the emergence of modern diagnostic radiology technology.

Dan's interest in the way things work in the world of nature and the effect of these interactions on the course of history has given rise to the 'Earth Wind Fire and Water' lecture series, one of which will be presented here. This entertaining and informative series has been presented in enrichment programs on ships cruising the Baltic, the Mediterranean, the Amazon, Africa, Panama, Hawaii and Tahiti.

An enthusiastic proponent of adult education, Dan is a board member and program chair of the Bluewater Association for Lifelong Learning. A major project for the coming season is a lecture series entitled 'Those Who Looked Up: A Celebration of the International Year of Astronomy'. Scheduled for September 2009 in Owen Sound Ontario, speakers are to include Terence Dickinson, Ivan Semeniuk, and Dr. Richard Epp of the Perimeter Institute in Waterloo.

Larry McHenry Astro Sketching Hands-on Demonstration and Tutorial *Small Tent, Thursday 3 pm*

Larry has been putting pencil to paper for over 20 years, drawing various objects and will present a short discussion on Astronomical Sketching, focusing on the deep sky. Larry will demonstrate an easy, 3-step process for sketching any type of deep sky object. He will then lead the audience in a hands-on group sketching activity.

Solar Observing Talk and Hands-on Observing *Small Tent, Friday 2 pm*

Larry will present a discussion on observing the Sun, which will include examples of various solar filters and equipment, solar observing techniques, and his specialty of video-capture solar imaging.

Weather permitting; the talk will be followed by a solar observing session using his Meade 8" LX200 with a Daystar .6A H-alpha filter, along with Coronado's PST Ha and CaK telescopes. We hope to be able to view sunspots in white-light, and active-regions, prominences in H-alpha, and if we're lucky, perhaps even a solar flare!

Larry McHenry has been active in amateur astronomy for over 30 years, and is currently a member of the Kiski Astronomers club from Southwestern Pennsylvania in the Pittsburgh area. One of Larry's favorite astronomical activities is sketching deep-sky objects. Larry has had a number of sketches published in past issues of *Astronomy* and *The Observers Guide* magazines, and completed his Messier Observing Certificate by sketching the entire Messier catalogue.

James Kelley Grinding a Mirror *Small Tent beginning Thursday at 1 pm through Friday*

From the pop-up tent, by the Small Tent, we will hog grind and then fine grind one 8-inch plate glass (and probably polish it) in 2 days. Anyone and everyone is welcome to come by and help with the hogging session (it takes about 10 seconds to show you how to put on the grit) and later help with the fine grind. We will show live, hands-on, how to actually make the grinding and polishing tools (as we need them) over the two days. It takes less than one hour to make a grinding tool and we will need at least one extra tool about four hours into the hogging session to replace the one that will be worn down. Similarly, we will want to polish so we will need to make a polishing tool (the hogged out mirror itself is used as the imprint) and James will show people how that is done as well.

The entire process will be completely hands-on. The pop up tent outside the Small Tent will be the location where all this takes place..

Schedule

- 1) Hogging (about 5 to 6 hours)
- 2) Making the neutral grinding tool (1-hour demonstration)
- 3) Finding the neutral grinding position (1 to 2 hours)
- 4) Fine Grinding (2 hours)
- 4) Making the polishing tool (1-hour demonstration)
- 5) Polishing (6 to 8 hours)

Hugh Chesser Algonquin Radio Observatory (ARO) – Update *Small Tent Saturday 3 pm*

Situated on 130 acres in the northeast corner of Algonquin Park, the Algonquin Radio Observatory's 46-metre dish is the largest in Canada and one of the largest fully steerable telescopes in the world. Built by the National Research Council and commencing operations in 1966, York University faculty members have used the dish in numerous geodetic experiments. Now operated by Thoth Technology, the dish is being restored to state-of-the-art condition for radio-astronomy research, space tracking, navigation and communications. ARO is the ground station for the Northern Light Mission to Mars for launch this decade. Visitors are welcome to tour the telescope and stay at the Observatory House by reservation. The official ARO website is at www.arocanada.com.

Hugh Chesser has been an associate lecturer of space engineering at York University since 2006 and is co-director of the YuSEND student nanosatellite program. Prior to changing his career focus to education, he spent 20 years in Canada's space industry working on a number of scientific instruments and missions, including the MOST microsatellite - a.k.a. the "Humble" space telescope - which was launched in 2003. He became fascinated with ARO while working on a Canadian-led Mars mission study, is thrilled to be assisting Thoth Technology with its repair, and is looking forward to using it for the exploration of asteroids and planets.

Steve Barnes Building Robotic Observatories in Chile *Main Tent Thursday 4 pm*

Steve will give an update on the installation of robotic observatories in the Atacama Desert in Chile. He will also share some photos of the night sky from his recent trips there. Stephen has been an amateur astronomer since childhood. He has turned his love of astronomy into a vocation and, in 1996, opened Sky Optics, a retail telescope store in Burlington, Ont. Steve is also an award winning astrophotographer.

Paul Markov The Observing Logbook *Small Tent Thursday 4 pm*

Paul Markov is an avid deep sky observer who has logged every observing session and every deep sky object he has spotted (more than 1,000) since 1982. Paul will try to persuade you to start keeping an observing logbook by discussing the benefits of recording observations, by reviewing logbook format choices, suggesting which details to record, and how to best use today's technologies (hardware and software) for recording your observations at the eyepiece and afterwards. This presentation will be of interest to amateurs at any experience level.

Paul has been a member of the RASC Toronto Centre since 1982 and currently organizes Members' Nights meetings for the Centre. He is primarily a visual deep sky observer; however, he has dabbled with CCD imaging for the past four years. In his spare time he helps to run *Canada-wide Astronomy Buy & Sell* (www.astrobuysell.com).

ASX Mars Desert Research Station Experience *Small Tent Friday 11 am*

In order to help develop key knowledge needed to prepare for human Mars exploration, and to inspire the public by making sensuous the vision of human exploration of Mars, the Mars Society has initiated the Mars Analogue Research Station (MARS) project. A global program of Mars exploration operations research, the MARS project includes four Mars base-like habitats located in deserts in the Canadian Arctic, the American southwest, the Australian outback, and Iceland. In these Mars-like environments, extensive, long-duration geology and biology field exploration operations are conducted in the same style and under many of the same constraints as they would on the Red Planet. By doing so, we start the process of learning how to explore on Mars.

Members of the University of Toronto ASX will present a talk on their experience at MDRS in the American Southwest.

Eclipse 2009 Roundtable *Main Tent Thursday 3 pm*

On July 22, 2009, a total eclipse was visible from the Asian continent extending out into the sea south of Japan. Join us for an open forum report from our eclipse chasers as they share their experiences in hunting down the shadow of the moon.

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.

Contact Australia *time to be confirmed – tentatively Main Tent Saturday 9/10 am*

To celebrate the International Year of Astronomy, we will attempt an internet/skype call to Australia where the Queensland Astrofest will be under way.

FEATURED VENDORS

Dr. Brady Johnson (KW Telescope) Fundamentals of Autoguiding *Small Tent Sat. 2 pm*
Have you heard about autoguiding and are anxious to know what it is, why it's necessary and how it works? Or, have you been trying to autoguide for years and wonder whether it's necessary at all, or why it seems to never work? If so, then you'll want to attend this seminar by Brady Johnson of KW Telescope. He'll acquaint you with the fundamentals of autoguiding and explain clearly and simply how to get consistently great results.

Bruce Engels (Efston Science) Telescope Basics *Small Tent Friday 10 am*
Aperture? Focal length? Equatorial? To the seasoned amateur, these terms are as familiar as his or her own name, but for the beginning stargazer, they can almost seem like a foreign language. The helpful staff of EfstonScience's astronomy department can help you out with this presentation on the basics of astronomy and picking out a telescope. Bruce and Marc will describe to participants the different types of telescopes, what you can see with them and guide you through the maze of terms and technology to a clearer view of where the hobby can take you. In the end, participants will see it can be almost as simple as...looking up!

Greg Bragg - Meade Instruments Meade update *Small Tent Friday 4 pm*
Greg will introduce the Meade ETX-LS and give a brief talk about the technology and features of this exciting new product.

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.

Gary Stephey and Kevin Kawai – Celestron What's New with Celestron *Small Tent Sat. 1 pm*
Gary and Kevin will discuss what's new at Celestron, the new CGEM and CGE Pro Series telescopes launched this year, Celestron's role in the International Year of Astronomy and a look ahead to 2010 when Celestron will be celebrating their 50th Anniversary.

Kevin Kawai, Celestron's Community Relations Coordinator, has had a lifelong interest in astronomy and telescopes. After graduating from college, he began his career at Celestron, first assembling NexStar telescopes and then onto the highly successful NexStar 11 GPS Series. After fine-tuning his technical skills, Kevin was promoted to Repair Department Supervisor and most recently, has joined the marketing team. Kevin turned his love for astronomy into a rewarding career and represents the company at star parties, conventions and tradeshow.

Gary Stephey is the senior representative of Celestron's Canadian sales group and based in Barrie, ON. Gary has spent a career spanning over 25 years in the sport optics field, joining Celestron in 2005 as Director of Sales in Canada. Today, he markets Celestron as well as a number of other product lines to Canadian retailers through his own company, Cangar Agencies. In his spare time, Gary also enjoys observing the night sky.

Ray Khan (Khan Scope Centre) Twenty Five Years in the Telescope Industry
Small Tent Thursday 2 pm

Ray Khan will share some personal anecdotes and insights about some of the developments in the amateur Telescope Market. You won't want to miss this! It's stuff you won't read in the Astronomy Magazines.

Ray Khan is owner/manager of Khan Scope Centre (www.khanscope.com) a retail telescope store located in Toronto, Ontario. Ray is also an avid amateur astronomer, and has been in the telescope industry for over 25 years.

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, 2009.

Please only enter images taken between July 1, 2008 and July 1, 2009. 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

Starfest has invited a special guest to give the Sky Tour this year. Between 10 p.m. and midnight on Friday (or Saturday in case of bad weather), Wilfred Buck from the Manitoba First Nations Education Resource Centre will give a tour of the night sky based on Legends and Song from the Cree First Nation. 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 10 pm. 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

Larry McHenry will give a Solar Observing talk in the small tent at 2 pm, explaining and describing the sights that we may see through the telescopes. Following the introductory talk, join us for a guided solar viewing session on Friday 2:30 to 4:00 p.m. 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 11 am to 6 pm and Saturday from 11 am to 5 pm.

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 am – 12 pm Saturday in the Small Tent, there will be three presentations (10 - 15 minutes in length).

This year Kidfest looks at a wide variety of topics, from moons to gravity to the expanding universe. Join our Kidfest team as we bring the universe to the small tent. Crafts will follow each talk.

10 am - Kids 3-6

Expand your Horizons

Our moon is at our side constantly, but ours isn't the only one out there. Journey past Earth's little friend and meet others on the block. Meet the strange, bizarre, unusual little companions that circle almost every planet in our solar system.

10:30 am - Kids 7-9

Gravitating towards gravity

Gravity's pull influences everything, from falling down the stairs, to a black hole sucking up everything it comes across. This Kidfest we gravitate towards the dangerous side of gravity.

11 am - Kids 9 +

Pushing the Boundaries

How far are we going to go? Will we ever stop? Starting from the Big Bang the universe has been expanding outwards. How big is the universe now and, how much bigger will it get? In this Kidfest program we will introduce the theory of the expanding universe. Come and expand your knowledge.

Parent or Guardian attendance is mandatory up to the age of 9, and recommended for ages 10 and up.

FRIDAY NIGHT AT THE MOVIES

On Friday night at 7 pm 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, 2009. Please complete and return the registration form, with payment, to the address indicated. After July 1, 2009 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, 2009.

(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 7 pm 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, 2009**.

If you cancel after July 20, 2009 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

Longitude: 80° 50' 27" W, Latitude: 44° 04' 28" N, Elevation: 400 metres.

STARFEST 2010

Starfest 2010 will be held August 12-15 2010

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

Starfest 2009 Advanced Registration Form

All prices in Canadian \$

To register, please complete this form and send it with your payment to: STARFEST, 235467 Concession 2C, RR.1 Williamsford Ontario, NOH 2V0. **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)	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\$15.00	\$ _____
Family		Number of Nights	_____ x\$24.00	\$ _____
Electrical Hookup		Number of Nights	_____ x\$2.00	\$ _____
Trailer Site Full Hookup Length _____		Number of Nights	_____ x\$30.00	\$ _____
Partial service sites are available for overflow (no sewer hookup)		Number of Nights	_____ x\$28.00	\$ _____
Single Non Camper	Number of Days	_____ x Number of People	_____ x\$10.00	\$ _____
Family Non Camper		Number of Days	_____ x\$20.00	\$ _____
Saturday Dinner		Adults: _____	x\$25.00	\$ _____
		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	\$ _____
Baseball Caps			_____ x\$16.00	\$ _____
Toques	Black ___ Navy ___ Red ___ Cream ___		_____ x\$14.00	\$ _____
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 Etiquette

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.