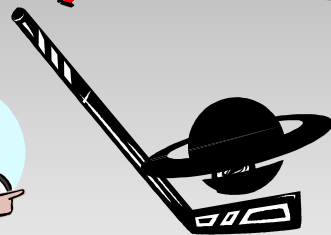
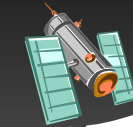


*GAME DAY PROGRAM*

# ASTRONOMY NIGHT IN CANADA



***Official Program***  
***Issue # 4 June 27 to July 1 2008***

## ASTRONOMY NIGHT IN CANADA

### Welcome to Toronto and the 2008 General Assembly!

Greetings astronomy fans from Canada, the United States and Newfoundland!

On behalf of the organizing committee it is my pleasure to welcome you to York University for the 2008 General Assembly of the Royal Astronomical Society of Canada. For almost 50 years the Society has been using the occasion of our annual meeting to share, compare and become more aware of what our fellow RASCals are doing from coast to coast to coast.

The theme of this year's GA is "Astronomy Night in Canada". While we are planning to have a lot of fun by mashing up hockey and astronomy the theme is directly connected to our preparations for the International Year of Astronomy in 2009. How will your Centre be bringing "Astronomy Night in Canada" to your community? What special events are you planning? How will you take advantage of initiatives being planned by the RASC, CASCA and the FAAQ?



The IYA is a once in a lifetime opportunity to exercise the Society's mandate to Advance Astronomy in the most public way possible. Our partners—the Canadian Astronomy Society (CASCA) and the Fédération des astronomes amateurs du Québec (FAAQ) are here in Toronto to share their insights and plans with us—seek them out and talk up 2009—it is only a few months away!

Clear skies,

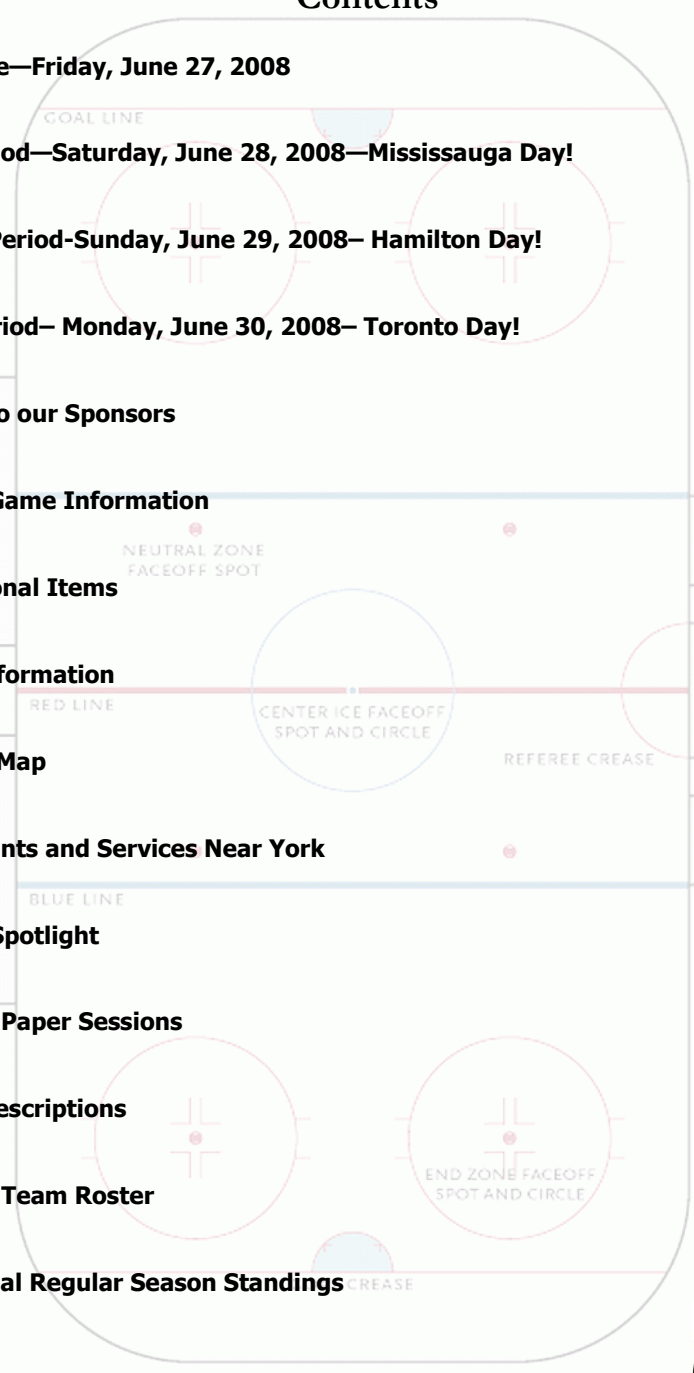
Denis Grey, Chair  
2008 General Assembly Organizing Committee



OFFICIAL GAME DAY PROGRAM

Contents

<b>Pre-game—Friday, June 27, 2008</b>	<b>1</b>
<b>First Period—Saturday, June 28, 2008—Mississauga Day!</b>	<b>3</b>
<b>Second Period—Sunday, June 29, 2008— Hamilton Day!</b>	<b>5</b>
<b>Third Period— Monday, June 30, 2008— Toronto Day!</b>	<b>7</b>
<b>Thanks to our Sponsors</b>	<b>9</b>
<b>All Star Game Information</b>	<b>11</b>
<b>Promotional Items</b>	<b>13</b>
<b>Guest Information</b>	<b>14</b>
<b>Campus Map</b>	<b>15-16</b>
<b>Restaurants and Services Near York</b>	<b>17</b>
<b>Awards Spotlight</b>	<b>18</b>
<b>Index to Paper Sessions</b>	<b>19</b>
<b>Poster Descriptions</b>	<b>29</b>
<b>2008 GA Team Roster</b>	<b>31</b>
<b>RASC Final Regular Season Standings</b>	<b>32</b>



ASTRONOMY NIGHT IN CANADA

Pre-Game– Friday, June 27, 2008

Time	Activity	Notes
7:00 a.m.	Registration Opens	Vanier College 119
<b>National Council Meeting</b>		
9:00 a.m.	National Council Meeting Begins	Stedman 120E
12:30 p.m.	Lunch Break	York Lanes
1:00 p.m.	Set-up for Poster Sessions	Olga Cirak Common Room
1:00 p.m.	Bus Departure for MDA	Vanier College
1:30 p.m.	National Council Meeting Resumes	Stedman 120E
5:00 p.m.	National Council Meeting Ends	
5:00 p.m.	MDA Bus Tour Returns to Campus	Harry Arthurs Common (East End)
<b>Toronto Telescope Tour &amp; Welcoming Reception</b>		
5:30 p.m.	Toronto Telescope Tour Departure	Harry Arthurs Common (East End)
8:00 p.m.	Welcoming Reception / Observatory Night	Olga Cirak Common Room
9:00 p.m.	Observatory Tours Begin	Depart from Olga Cirak Common Room
11:00 p.m.	Welcoming Reception Ends	



**EfstonScience**  
*The Science & Astronomy SuperStore*



## OFFICIAL GAME DAY PROGRAM

### MDA Space Exploration Tour —Departure at 1:00 pm!

General Assembly guests and delegates will be treated to a firsthand look at Canada's role in space exploration. The Space Missions division of MDA hosts a special tour of their facilities for the General Assembly:



- 1:00 pm - Transfer by bus to MDA
- 1:30 pm - Arrival and welcome by Michael Hiltz
- 1:45 - 2:45 pm - Multimedia presentation highlighting current projects
- 2:45 - 4:00 pm - Tour of the facilities
- 4:00 - 4:45 pm - Return to York University



This is a preregistered event and you must have a valid ticket to board the bus. Buses will depart from Eastern end of the Harry Arthurs Common at 1:00 p.m. promptly. Your host is **Katrina Ince-Lum**.

Please note that **NO Cameras** are permitted at MDA. You will be asked to leave them on the bus or at security.



### Toronto Telescope Tour —Departure at 5:30 pm!

For a cloudy city with terrible light pollution Toronto hosts some of the finest telescope stores in Canada. Come on down for the "Toronto Telescope Tour". This road trip will include:

- Round-trip transportation via chartered coach (pre-registration required first-come, first-served)
- An opportunity to dine at **Katz' Deli and Corned Beef Emporium** - a Toronto landmark featuring freshly prepared deli sandwiches and outstanding desserts - note that food and beverage is **NOT** included
- Shopping at Gold Patrons **EfstonScience** and **Khan Scope Centre** - both located steps away from Katz's Deli.

To participate in this tour you may drive directly (ask for a map at the registration desk) **OR** take our chartered bus which will depart from the Eastern end of the Harry Arthurs Common. A limited number (55) of bus tickets will be available at the registration desk on a first-come, first-served basis.

Both of our Triple T destinations will be welcoming General Assembly attendees and staying open late (to 8:30 p.m.) to serve you so plan to take advantage of this excellent social / dinner / shopping experience as part of the lead-up to this year's General Assembly!.

### Friday Night Observatory Tours (Rain or Shine)

Tours of York University Observatory will depart from the Olga Cirak Room every thirty minutes. Your hostess is **Tatiana Ouarova**.



ASTRONOMY NIGHT IN CANADA

First Period– Saturday, June 28, 2008

Welcome to Mississauga Day—Hosted by Randy Attwood!

Time	Activity	Notes
7:00 a.m.	Breakfast Available	Stong Cafeteria
<b>Morning Program (Computer Science C)</b>		
8:30 a.m.	<b>Opening Ceremony &amp; Welcome</b>	O Canada Opening Face-off: Dave Lane, Glenn Hawley & Bonnie Bird Official Welcome: Dr. Nick Cercone, Dean of Science and Engineering
8:45 a.m.	<b>Keynote</b>	<b>All Aboard for International Year of Astronomy 2009</b> <i>Dr. Jim Hesser (HIA)</i>
9:30 a.m.	SA1—Paper	Northern Star: The Public Science of C. A. Chant <i>David Smillie</i>
9:50 a.m.	SA2—Paper	Setting up a Remote Observatory <i>Paul Mortfield (Toronto)</i>
10:10 a.m.	SA3—Paper	30 Years of Solar Filters <i>Dr. B. Ralph Chou</i>
10:30 a.m.	Coffee Break	Computer Science Foyer—Sponsored by <b>EfstonScience</b>
10:50 a.m.	SA4—Paper	The FAAQ's Participation in IYA2009 <i>Remi Lacasse, FAAQ</i>
11:10 a.m.	SA5—Paper	Canada's Space Program – Lost or Found? <i>Chris Gainor (Victoria)</i>
11:30 a.m.	SA6—Paper	Deep Sky Imaging under Arizona Skies <i>Klaus Brash</i>
12:00 noon	Luncheon	Stong Cafeteria and York Lanes <i>Final sign-up for All Star Game at cafeteria (by the IYA Cup)</i>
<b>Afternoon Program (Computer Science C)</b>		
1:00 p.m.	SA7—Paper	The Great Siberian Meteor: Tunguska 100 Years Later <i>Dr. Wayne Edwards (UWO)</i>
1:30 p.m.	SA8—Paper	International Year of Astronomy - A Chance to Grow <i>Ron Macnaughton (RASC Education Committee)</i>
1:50 p.m.	SA9—Paper	Mining the Unknown in the Sloan Digital Sky Survey <i>Dr. Patrick Hall (York University)</i>
2:10 p.m.	SA10—Paper	Ottawa's Urban Roadway Lighting Policy - Take it home to your City <i>Robert Dick (Chair, RASC Light Pollution Abatement Committee)</i>
2:30 p.m.	Coffee Break	Computer Science Foyer - Sponsored by <b>Apogee Books</b>
2:45 p.m.	SA11—Paper	Canada's Fifty Years in Space <i>Dr. Gordon Shepherd (York University)</i>



RASC  
**MISSISSAUGA**  
CENTRE

OFFICIAL GAME DAY PROGRAM

First Period– Saturday, June 28, 2008

Time	Activity	Location	Notes
<b>All-Star Game</b> (Vanier Residence Basketball Court)			
4:00 p.m.	Floorball Game	<b>Eastern All-stars vs. Western All-stars</b> <i>David Lane, Captain, (Eastern)</i> <i>Glenn Hawley, Captain, (Western)</i>	
<b>Evening Program</b> (Olga Cirak Common Room & Observatory)			
5:45 p.m.	<b>Group Photo</b>	Please Report to the Olga Cirak Pit Area Promptly! Group photos will be available for download from <a href="http://www.rasc.ca">www.rasc.ca</a> !	
<b>6:00 p.m.</b>	<b>Saturday Evening BBQ</b>	Cash Bar Available	
<b>7:00 p.m.</b>	<b>National Members Night</b>	Randy Attwood Emcee / Host Sponsored by <i>Diffraction Limited</i>	
8:00 p.m.	Award Presentation	<b>2008 Chant Medal</b> <i>Presented to Dr. Geoff Gaherty (Toronto)</i>	
9:00 p.m.	Observatory Tours Begin	Physics Bldg <i>Tours are Rain or Shine—Observing Weather Permitting</i>	
9:00 p.m.	Snack Service	Sponsored by <b>Diffraction Limited</b>	
11:00 p.m.	National Members Night Concludes		

**National Members’ Night Preview**

Astronomy Night in Canada presents a pot-pourri of short talks on many aspects of astronomy and space science - astrophotography, equipment, travelogues and short videos to compliment an evening of astronomy fellowship.

Tonight's sponsor, Diffraction Limited President Doug George will demonstrate the new MaxIm DL Version 5. Major new features to be demonstrated include the new Observatory Control window, Stack command, and the redesigned Camera Control window.

Other talks by Ralph Chou, Dr. Bob Garrison, Paul Mortfield, Tom Glinos, Dan Falk, Jay Anderson, Dave McCarter, Paul Mortfield, Guy Nason, Alister Ling, Eric Briggs and others. A special talk will be presented by Ray Khan at 9:00 pm on the David Dunlap Observatory.

**Saturday Night Observatory Tours (Rain or Shine)**

Tours of York University Observatory will depart from the Olga Cirak Room every thirty minutes. Your hostess is **Tatiana Ouvarova**.

<p><b>Thanks to the National Members’ Night Sponsor:</b> <i>Diffraction Limited</i></p>	<p><b>MAXIM DL</b><sup>TM</sup> Advanced CCD Imaging Software</p>
---	---



ASTRONOMY NIGHT IN CANADA

Second Period– Sunday, June 29, 2008

Welcome to Hamilton Day—Hosted by John Williamson!

Time	Activity	Notes
7:00 a.m.	Breakfast Available	Stong Cafeteria
<b>Morning Program (Computer Science C)</b>		
8:45 a.m.	<b>Keynote</b>	<b>Black Holes: Seven ways they can kill you</b> <i>Dr. Phil Plait</i>
9:45 a.m.	SU1—Paper	Observatory Park Project Report <i>Denis Grey (Toronto)</i>
10:10 a.m.	SU2—Paper	Brightness Measurements of Mars in 2007-2008 <i>Richard Schmude</i>
10:30 a.m.	Coffee Break	Computer Science Foyer—Sponsored by <b>EfstonScience</b>
10:50 a.m.	SU3—Paper	Tagish Lake Meteorite: A Messenger from the Early Solar System <i>Dr. Phil J.A. McCausland (UWO)</i>
11:20 a.m.	SU4—Paper	Einstein's Dark and Bright Universe Paradox <i>Saul Windman (Mississauga)</i>
11:40 a.m.	SU5—Paper	The One Metre Initiative (OMI) – A New Premier Telescope in Canada <i>Frank Roy, Dr. Robert Gauthier, Peter MacKinnon, (Carleton)</i>
12:00 noon	Luncheon Available	Stong Cafeteria and York Lanes.
1:00 p.m.	Transfer to OSC	Depart from the East End of Harry Arthurs Common via chartered buses.
<b>Afternoon Program (Ontario Science Centre)</b>		
1:30 p.m.	Arrival at OSC and check-in	NOTE: Tickets are required for entry to the OSC. Look for GA Hospitality Team members to obtain your entry.
2:00 p.m.	<b>Panel Discussion</b> <i>Imperial Oil Auditorium</i>	<b>IYA from the Ground Up</b> <i>Denis Grey, Glenn Hawley, Leslie Harvey, Scott Young</i> ☎
3:00 p.m.	<b>Tour of Facing Mars</b>	Note that GA participants must attend at 3:00 p.m. Please obtain your timed tickets upon arrival at the Ontario Science Centre.
4:45 p.m.	<b>Return to Buses</b>	Transfer to Mongolian Grill, 900 Don Mills Road, Toronto
<b>Hamilton Centenary Banquet (Mongolian Grill Restaurant)</b>		
5:00 p.m.	<b>Cocktails &amp; Dinner</b>	Emcee: John Williamson, President, RASC Hamilton Centre
6:30 p.m.	<b>Keynote</b>	<b>Facing Facing Mars—Dr. Devon Hamilton (Ontario Science Centre)</b>
7:15 p.m.	<b>Presentations and Awards</b>	Simon Newcomb Award Presentation Ken Chilton Prize Presentation
8:00 p.m.	Return to York	Via chartered buses
8:30 p.m.	Arrival at York	Bus Loop (Harry Arthuirs Common)



1908  
**HAMILTON** 2008  
CENTENARY



## The Mongolian Grill

In 1162 A.D. Genghis Khan was born into a Mongol noble family. By the 1180s he had organized a group of loyalists into an army that quickly dominated a large swath of Asia. His empire expanded and began to trade with Northern China, Central Asia and the Middle East. Part of the cultural heritage from this period was the development of the "Mongolian Grill" as a cuisine form. Due to a lack of cooking utensils on the battlefield, Mongolian warriors were forced to cook their food on their shields over an open campfire. The large hot (600° F) wok is a direct descendant of this cooking style and heritage.



## Facing Facing Mars

Dr. Devon Hamilton (Ontario Science Centre)

Devon Hamilton, a Senior Scientist with the Ontario Science Centre and a lead developer on the project will provide an inside perspective on the creation of the Facing Mars exhibition during the Hamilton Centenary Banquet. Will humans ever walk upon the surface of the Red Planet? Is the idea of humans exploring Mars only a dream, or could it happen? Capturing the essence of some of the real trials involved in sending humans to Mars - and doing it in a way that connects with different science centre audiences and perspectives, comes with many challenges. Get an inside perspective on the creation of the Facing Mars exhibition and how the development team responded to some of the unique demands posed by such a complex topic.



*With a PhD in astronomy from the University of Toronto, Devon Hamilton is delighted to have the opportunity to explore some of the ground-breaking techniques geologists and astrobiologists are using to ask some fundamental questions about Mars. The Content Coordinator and Exhibit Developer for Facing Mars started his career at the Ontario Science Centre as a Host, later returning as Senior Scientist for Physics. Previously, Devon was the content coordinator for the Agents of Change Initiative and the Strange Matter exhibition. Devon has taught astronomy and astrophysics at the University of Toronto and remains active in public education.*

**Thanks to our Hamilton Centenary Banquet Sponsor:  
EfstonScience**



ASTRONOMY NIGHT IN CANADA

**Third Period– Monday, June 30, 2008**

**Welcome to Toronto Day—Hosted by Denis Grey!**

Time	Activity	Notes
7:00 a.m.	Breakfast Available	Stong Cafeteria
<b>2008 Annual Meeting (Computer Science C)</b>		
8:30 a.m.	RASC Annual Meeting	Agenda available on-site
11:30 a.m.	National Council Meeting	Stedman 120E
12:00 noon	Luncheon	Stong Cafeteria and York Lanes
<b>Afternoon Keynote Presentations (Computer Science C)</b>		
1:00 p.m.	<b>Keynote</b>	<b>50 Years of Amateur Astronomy and the RASC</b> <i>Terence Dickinson (Toronto)</i>
1:45 p.m.	<b>Keynote</b>	<b>Astronomy Nights in Canada: A Look Ahead to the IYA</b> <i>Terence Dickinson, Remi Lacasse, David Lane, Kim Hay, Kim Berland. Moderator: Denis Grey</i>
2:45 p.m.	Coffee Break	Computer Science C—Sponsored by <b>Khan Scope Centre</b>
<b>Helen Sawyer Hogg Lecture (Computer Science A)</b>		
3:30 p.m.	Helen Sawyer Hogg and the IYA	Introduction by Randy Attwood
3:45 p.m.	<b>Keynote</b>	<b><i>Bad Astronomy</i></b> Dr. Phil Plait
<b>Closing Banquet at the Schulich Executive Learning Centre Dining Room</b>		
6:00 p.m.	<b>Cocktail Reception</b>	
7:00 p.m.	<b>Closing Banquet</b>	
7:20 p.m.	<b>Keynote</b>	<b>Really Cool Stuff About the Future of Amateur Astronomy</b> Dr. Roberto Abraham
8:15 p.m.	<b>Presentations and Awards</b>	Toronto Gold Medal National Service Awards Bonnie Bird Retirement Recognition
9:00 p.m.	<b>Closing Ceremonies</b>	SSSP '09 Presentation Presentation of IYA Cup Thanks / volunteer recognition



## Closing Banquet

A tradition at the General Assembly is the closing banquet where we recognize our Royal heritage as well as excellence in the Society. Of special note is that at the end of this year's banquet we will be exactly 1/2 year away from the official beginning of the International Year of Astronomy!

## Banquet Program

- **Welcome**—Denis Grey, Chair GA2008
- **Toast to Her Majesty / Invitation to Dinner**—Paul Delaney (York University)
- **Keynote Presentation:**  
*Dr. Roberto Abraham (University of Toronto)*
- **Toronto Centre Gold Medal Presentation** - Denis Grey (Toronto)
- **Presentation of the RASC Service Awards**—Dave Lane, RASC National President
- **Retirement Recognition of Society Executive Secretary Bonnie Bird**—Dave Lane
- **Invitation to the 2009 General Assembly** - Les Dickson (Saskatoon)
- **Closing Ceremonies**—2008 General Assembly Committee



### Some Cool Stuff About the Future of Amateur Astronomy

*Dr. Roberto Abraham (Toronto)*

Former Toronto Centre Honorary President Roberto Abraham will describe some recent developments in professional astronomy that will have a big impact on amateur astronomy in the future. His expectation is that many of these developments will be surprising to General Assembly delegates—since they sure as heck were surprising to him! In fact, as a professional astronomer, he is actually a little jealous: amateur astronomers are going to be getting a pretty sweet deal from Mother Nature.

*N SERC Steacie Fellow and Distinguished Teacher Award Winner Dr. Roberto Abraham of the University of Toronto is a past Honorary President of the RASC's Toronto Centre and accomplished amateur astronomer. Dr. Abraham is looking forward to building a backyard observatory in the near future to complement his time spent on the 8.1 metre Gemini telescope in Hawaii.*



## ASTRONOMY NIGHT IN CANADA

### Thanks to our Sponsors!

#### Gold Patron—Khan Scope Centre

Khan Scope Centre now entering our 24th year of serving Amateur Astronomers across Canada. As Toronto's Only Specialist Telescope Store, we carry a huge inventory of Telescopes and accessories with Brand Names such as: Meade, Celestron, TeleVue, Coronado, APM, Skywatcher, Williams Optics, Baader, Nikon, Antares, Denkmeier, Equinox, Thousand Oaks, Kendrick, Lunt Solarsystems, TeleGizmos, Ioptron, Sky Publishing & many others.



We offer New, Used and accept Trade ins and ship Canada Wide. We invite you to experience the Khan Scope Centre Difference!

We are proud of our long association with the RASC and to be a Gold Patron of the 2008 RASC General Assembly!

#### Gold Patron—EfstonScience



# EfstonScience

*The Science & Astronomy SuperStore*

#### Bright... Sharp... Focused... and that's just our staff!

From popular to obscure astronomy brands, everything you're looking for is all under one roof... the one with the giant telescope on it! The Science & Astronomy SuperStore is an amazing hands-on store with over 8000 sq ft of innovative and unique products for the whole family.

**When in Toronto, visit this fantastic one-of-a-kind store** where you'll find a vast selection of telescopes, binoculars, and specialty optics that will suit every need and budget. But that's not all that EfstonScience has to offer – they're the "source for everything science".

**If you can't visit in person**, browse through thousands of products and shop at your convenience at [www.telescopes.ca](http://www.telescopes.ca) Serving observing since 1970.

#### Silver Patron—Diffraction Limited

**Diffraction Limited**, located in Ottawa, Ontario, produces imaging products for the astronomy and laboratory imaging markets. Our most popular product is MaxIm DL, which integrates complete observatory control with a comprehensive suite of image processing tools. We also produce MaxPoint telescope pointing refinement software and the MaxDome II observatory dome controller system. Diffraction Limited is also the exclusive distributor of the popular Boltwood Cloud Sensor.

The logo features the text 'MAXIM DL' in a large, white, serif font. Below it, in a smaller, white, sans-serif font, is the text 'Advanced CCD Imaging Software'. The background is dark.



The Boltwood Cloud Sensor provides weather protection for hundreds of observatories worldwide, including a growing number of major professional installations.

## Thanks to our Sponsors!

### **Special Patron—Rod Ends Mechanical Ltd.**

Mississauga based Rod Ends Mechanical Ltd. are wholesalers of rod end bearings and other power transmission products. Some of their suppliers' bearings are on the ISS, roving the surface of Mars, orbiting Saturn, and on the surface of Titan.



### **Patron—Quantum Scientific Imaging**

The QSI 500 Series is the next generation of cooled CCD cameras designed to produce scientific grade images with wide dynamic range, excellent linearity and exceptionally low noise. Seven different models are available employing a comprehensive range of scientific grade CCDs.



### **Patron—Apogee Books**

Apogee Books, an imprint of C. G. Publishing Inc., Burlington Ontario, is well known as THE Space Book Company. The Apogee Space Book Series has over 115 titles including the award winning NASA Mission Reports, Space Biographies, Space Histories, Space Science, & Pocket Space Guides. Many of our titles include DVDs or CD-ROMs. Apogee Books also publishes a limited number of classic science fiction titles.



### **Patron—K-W Telescope and Nature**

The Golden Triangle's full-line telescope dealer offers unique products for astroimaging including the FotoSharp accessory for DSLRs, the KWIQ guiding package and the EQ6 Pro mount from Skywatcher. Visit our retail store and seminar room in Kitchener, Ontario.



### **Friend—Cambridge University Press**

Cambridge astronomy ... the Universe at your fingertips. Our list is the largest and most prestigious of any publisher in the world. We cater for general readers, amateur astronomers (from beginners through to advanced), undergraduates, graduate students, and researchers.



### **Friend—Labatt Breweries**

Helping Canadian astronomers deal with cloudy nights since 1847. Please drink responsibly!



## ASTRONOMY NIGHT IN CANADA

### All Star Game Information

#### About the Game

The fact that it is summer has not gone unnoticed by the General Assembly Organizing Committee so we're not going to play hockey but **floorball** instead. Floorball is a new game that has all the fun of hockey but is a lot safer!



FLOORBALL is meant to be a truly offensive game, enjoyable and affordable for everyone. To create enough space for creativity many defensive actions are not allowed. Here's a quick overview

1. **No Face-off**—Instead you have a Free-hit or a Hit-in. The game starts with a Start-off.
2. **Throw-out**—The goalie has no stick, and starts the play with a throw-out. The ball must bounce before the centre line.
3. **No Pass to Goalie**—when you're fore checking it's not fair if the defenseman can give the ball to the goalie
4. **No Field player in Goalkeeper Area**—This area belongs to the goalie alone. Players on both teams, stay out!
5. **No Stick-Check**—The stick can only be used to play the ball. Hacking and whacking on the opponents stick might only break it and cause injuries
6. **No Contact with Stick**—You wear no padding, so even an accidental hit might hurt. So control your stick at all times.
7. **No Stick-lift**—Since you are not allowed to wear gloves, you don't want anyone to lift your stick and break your finger by accident.
8. **No High Stick**—Regardless if you're using your stick, knee or foot, the ball can only be played under knee level.
9. **No Pushing**—Do you want to push and shove? Join WWF!
10. **No Hands**—You can't use your hands to play the ball. If it's lower than your knee, use your stick. Otherwise, let it go
11. **Only Feet May Touch the Floor**—This makes the game faster and more open. No jumping!
12. **No Stick between Feet**—This gives you offensive freedom to roll off the checker at all times.
13. **No Slap Shot**—Work on your wrist shot, and you'll be able to shoot the ball quicker and almost as hard. Slap shots might only damage your stick.
14. **No Kick-pass**—You can only kick the ball one time and only to your own stick.

#### Waiver Requirement

York University has requested that all participants in this activity sign a waiver before being permitted to play—no exceptions will be made to this rule!



## OFFICIAL GAME DAY PROGRAM

### Teams

The General Assembly All-Star Game will pit the Eastern All-stars versus the Western All-stars in a battle for astronomy supremacy! The Team Captains are:

- **Eastern All-Stars**—Dave Lane (Halifax)
- **Western All-Stars**—Glenn Hawley (Calgary)

### Location and Time

The game will be played beginning at 4:00 p.m. on the basketball court outside of Vanier Residence (north of map reference #22). Everyone is encouraged to come on out and cheer for their favourite team. We will play three periods of 15 minutes each.

### Sign-up Procedures

Waivers are available at the Registration Desk until 1:00 p.m. on Game Day. Players are asked to report to the playing area no later than 3:45 p.m. to meet with their captains, receive their uniforms and to choose a goaltender. Shorts, t-shirt and running shoes are all that is needed. Ladies are welcome!



## ASTRONOMY NIGHT IN CANADA

### Promotional Items

Take home some cool RASC merchandise as a souvenir of this year's General Assembly—these items are on sale at the Registration Desk in Vanier College Room 119 (GA HQ). Cash, Visa and MasterCard are accepted!



#### 2008 General Assembly Golf Shirt

Available in limited sizes and colours this classic golf shirt is high quality cotton and features the Astronomy Night in Canada logo as well as the General Assembly wordmark on the left sleeve.

Only \$35.00 on-site—includes shipping!



#### Observer's Handbook Centenary Mug

Our flagship publication is celebrating its 100th year—this handsome mug is available for only **\$10.00** at the General Assembly—save \$5.00!



#### RASC Baseball Cap

A new order of this classic item features the Society wordmark embroidered on the brim. Only **\$12.50**.



#### RASC Bullet Thermos with Seal

This flexible accessory keeps drinks hot or cold and comes with an attractive leatherette carrying case. Available for only **\$15.00** at the General Assembly—save \$2.50!





## Visitor Information

### Check-in to Vanier Residence

If you are staying on-campus, check-in for rooms in the Vanier Residence is in **McLaughlin College** (map # **52**) or **Pond Road Residence** (map # **35** after 10:00 p.m.). If you wish to change your prepaid reservation you must do so at the Welcome Centre in Vanier 119.

### Welcome Desk (7:00 a.m.—9:00 p.m., closed Monday)

The General Assembly Welcome Desk is located in Vanier College, room 119 (map reference **56**). At the Welcome Desk you can purchase promotional items, sign-up for All Star Hockey, obtain tickets for the Toronto Telescope Tour and make adjustments to your account. You will also be able to obtain assistance from our volunteer team.

### Public Transportation (TTC Cash Fare \$2.75)

York University is well-served by a wide variety of public transportation routes. All bus services depart from the Harry Arthurs Common in the middle of Campus—here are some of the key routes—call the TTC info line for schedule information at 416-393-4636 / [www.ttc.ca](http://www.ttc.ca).

- **196 & 196B**—York University Express—Bus to Downsview Subway station (no weekend/holiday service on this route).
- **106**—York University—This bus services provides a direct link between the York Keele Campus and Downsview station, traveling throughout the entire campus as it goes along Ian MacDonald Boulevard (the campus road ring). This route makes many stops adjacent to major buildings on campus.
- **60/B/C/F**—Steeles Avenue — This bus service provides access to shops and services along Steeles Avenue. Be sure to catch 60C to return to York.
- **36**—Finch Avenue—This service connects Finch station with the Keele and York University 196 bus routes and provides access to Finch Avenue.

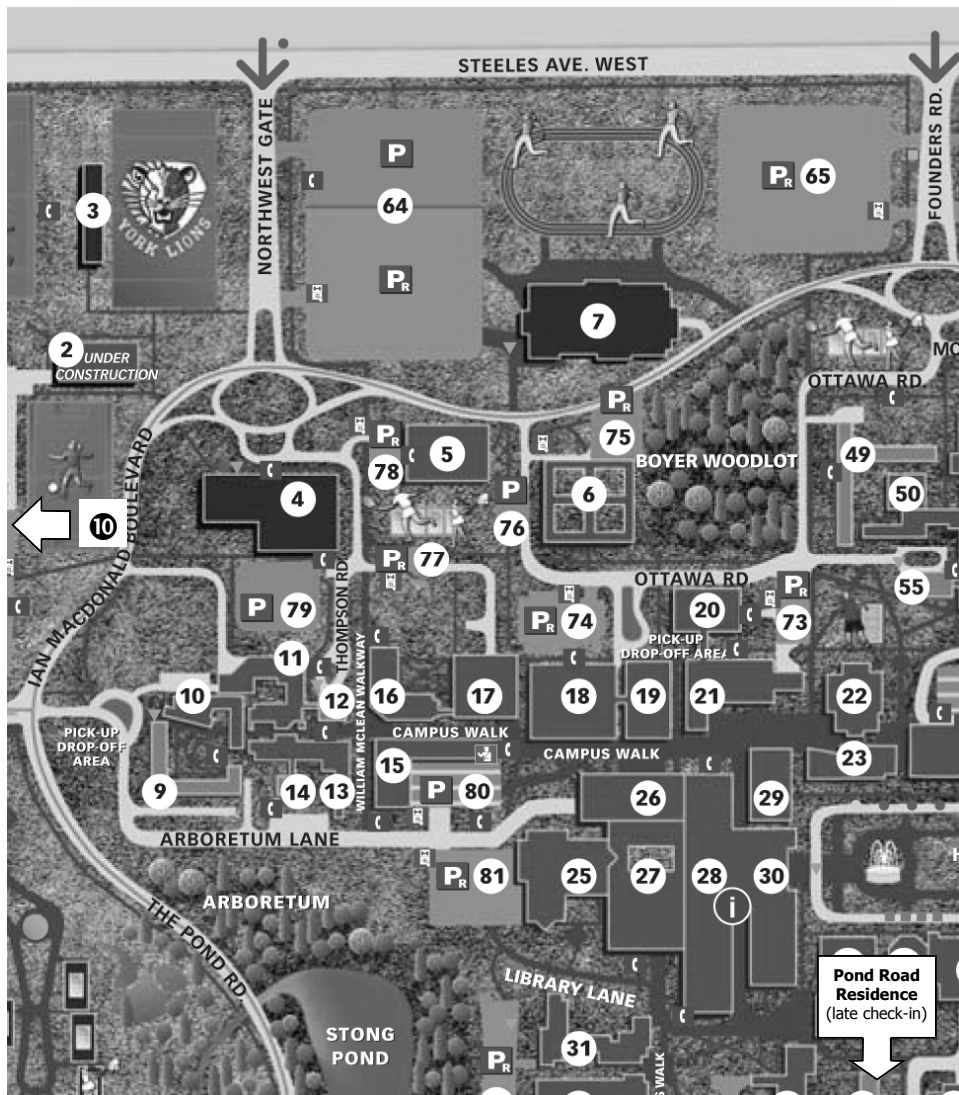
### Taxis

- Best Choice: 416-241-4700 (Recommended)
- City Taxi: 416-740-2222
- Beck Taxi: 416-751-5555
- Royal Taxi: 416-779-2222

Most of the locations listed in the Restaurants & Services Guide are fairly close to York, and would cost only about \$7-10 for the ride.



## ASTRONOMY NIGHT IN CANADA

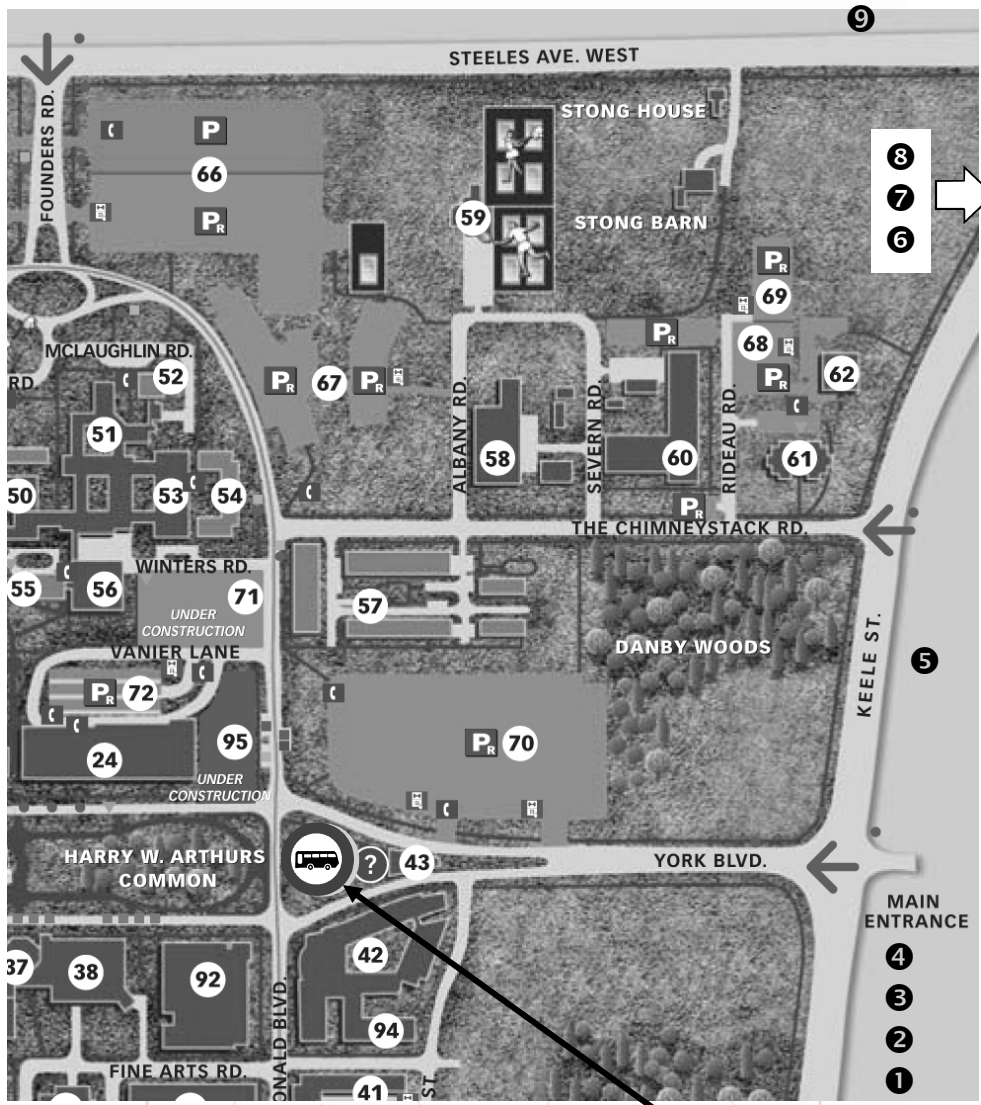


### On-Campus Conference Locations

- 19—Computer Science and Engineering (Paper Sessions)
- 52—McLaughlin College (Vanier Residence Check-in)
- 42—Schulich Business School (Executive Dining Room)
- 94—Schulich Executive Learning Centre (Accommodations)
- 22—Stedman Lecture Halls (National Council Meetings)
- 13—Stong College (Olga Cirak Common Room)
- 14—Pit Area (Group Photo)
- 35—Pond Road Residence (Late Check-in Service)



OFFICIAL GAME DAY PROGRAM



- 66**—Overflow Parking
- 55**—Vanier Residence (On-campus Accommodation)
- 56**—Vanier College (Conference Registration)
- 72**—York Lanes Parking Garage (Parking passholders)
- 24**—York Lanes Retail Centre and Dining
- 17**—York Observatory (Petrie Science Building)

**Chartered Bus  
Pick-up Location  
(Friday & Sunday)**

*Note: All-Star Game will be played on Vanier Basketball Court just north of map #22.*



ASTRONOMY NIGHT IN CANADA

**Restaurant and Services Guide**

**Around the Campus Perimeter...**

- |   |  |
|---|--|
| <p><b>1</b> 4207 Keele St.</p> <ul style="list-style-type: none"> <li>• Hoops Sports Bar &amp; Grill – F-Sa-Su 11am-2am</li> <li>• Domino's Pizza – Fr-Sa-Su 11am-3am</li> <li>• Quizno's Subs – Fr 10:30am-9pm, Sa-Su 11am-8pm</li> </ul> <p><b>2</b> 4205 Keele St.</p> <ul style="list-style-type: none"> <li>• Pita Pit – Fr 10:30am-12mid, Sa 11am-10pm, Su 12nn-10pm</li> <li>• Hasty Market Fr-Sa-Su 7am-11pm</li> </ul> <p><b>3</b> 4211 Keele St.</p> <ul style="list-style-type: none"> <li>• Tim Horton's – Fr-Sa-Su 5:30am-11pm, 24-hour drive-thru</li> </ul> <p><b>4</b> 4699 Keele St.</p> <ul style="list-style-type: none"> <li>• Keele Copy Centre— (416) 665-9675 Fr 8:30am-4:30pm</li> </ul> <p><b>5</b> Randy's Sports Bar (Caribbean) (416) 667-7177</p> <p><b>6</b> Keele &amp; Steeles</p> <ul style="list-style-type: none"> <li>• PetroCanada Gas Bar</li> </ul> <p><b>7</b> 2150 Steeles Ave. W.</p> <ul style="list-style-type: none"> <li>• Thai Bamboo (Thai), 905-761-7598 (closed Sundays)</li> </ul> <p>2160 Steeles Ave. W.</p> <ul style="list-style-type: none"> <li>• Staples Business Depot – Fr 8am-9pm, Sa 9am-6pm, Su 11am-5pm</li> </ul> <p><b>8</b> 2180 Steeles Ave. W.</p> <ul style="list-style-type: none"> <li>• Philthy McNasty's Bar &amp; Sports Grill (905) 738-9888</li> <li>• LCBO—Fr-Sa 10am-9pm, Su 12pm-5pm</li> <li>• Smoke Shop / Concord Bakery Café / Subway Subs</li> </ul> | <p><b>9</b> 2300 Steeles Ave. W.</p> <ul style="list-style-type: none"> <li>• TD Bank – 2 ATMs, Fr 8am-8pm, Sa 8am-4pm</li> </ul> <p><b>10</b> 4702 – 4734 Jane St.</p> <ul style="list-style-type: none"> <li>• PharmaPlus Drug Mart Fr9am-9pm, Sa 9am-6pm, Su 9am-5pm</li> <li>• Royal Bank – 3 ATMs</li> <li>• Mac's Milk</li> <li>• Galati Bros. Supermarket Fr 8am-9pm, Sa-Su 8am-6pm</li> <li>• PetroCanada Gas – 1 ATM</li> </ul> |
|---|--|

**On Campus...**

**York Lanes (Map #24 overleaf)**

- Second Cup
- Taco Villa
- Great Canadian Bagel
- Alterna Savings – 1 ATM
- Indian Flavour
- Berries & Blooms Salads
- Mangia Mangia Mangia
- CIMS York Lanes Pharmacy
- Sakura Japanese
- Ink Blotz Gifts & Cards
- Campus Bubble Tea
- Popeye's Chicken & Biscuits
- Falafel Hut Village
- Bakery Café
- The General Store
- Blueberry Hill
- Tastes
- Bank of Montreal – 3 ATMs

**York Student Centre (Map #24 overleaf)**

- Gateway Cigar Store
- Scotiabank – 1 ATM
- Yogen Früz
- Pagoda
- Original Panzerotto & Pizza
- KFC / Taco Bell
- Jimmy the Greek
- Wendy's
- Subway Subs
- Treats Coffee Emporium
- The Underground
- Embers, Stone's Throw Pub
- Chancellor's, Contact



## Awards Spotlight

### Chant Medal

Awarded to an RASC member whose body of work over an extended period of time is exemplary. To be presented to **Geoff Gaherty** (Toronto) during the National Members' Night.



### Simon Newcomb Award

Awarded for outstanding work in the field of astronomical writing and communications. To be presented to Gary Seronik (Victoria) during the Hamilton Centenary Banquet.

### Ken Chilton Prize

Awarded to RASC members who have made a significant contribution to astronomical research project over a short period of time. To be presented this year to participants in the Puckett Supernova Search Program— **Eric Briggs** (Toronto), **Debra Ceravolo** (Ottawa), **Peter Ceravolo** (Ottawa), **Lou Cox** (Ottawa), **Steve Gauthier** (London), **Doug George** (Ottawa), **Paul Gray** (New Brunswick), **Walter MacDonald** (Kingston), **Jack Newton** (Victoria), **Ajai Sehgal** (Ottawa), **Jennifer Tigner** (Victoria) and **Dave Toth** (London). The Ken Chilton Prize is named after a respected member of the Hamilton Centre and will be presented during the Hamilton Centenary Banquet.

### Toronto Centre Gold Medal

Presented annually to the top graduating student in the astronomy programs of York University and the University of Toronto. Award this year to **Sarah Nickerson** (Toronto). To be presented at the Closing Banquet.



### RASC Service Award

Awarded to members of the Society who have made a significant contribution over a period of 10 years or more to the activities and operations of the Society, either at the National or Centre level. To be presented this year to **Denis Grey** (Toronto), **Leslie Harvey** (Toronto) and **Tony Horvatin** (Toronto) at the Closing Banquet.



## ASTRONOMY NIGHT IN CANADA

### Index to Paper Presentations



#### KEY (8:45) All Aboard for International Year of Astronomy 2009!

Dr. James E. Hesser (NRC-HIA) and the International Year of Astronomy 2009 Canada Committee

IYA2009 offers opportunities limited only by imagination to share our passion for astronomy with Canadians of all ages and backgrounds during a global education and outreach year. With your participation, success is assured. I'll discuss our developing ideas and implementation plans with emphasis on how you may become involved. Our national plans focus on maximizing the number and diversity of Canadians who will experience sometime in 2009 a moment of personal astronomical discovery, *The Galileo Moment*, through participation in astronomical observation or broadly defined activities with significant astronomical content that evoke awe and wonder. Ideas for inclusiveness fall into at least three broad categories: a) programmes involving Aboriginal children, youth and elders, b) partnerships with arts and cultural organizations, and c) astronomical imagery exhibits in high-traffic areas (malls, airports). Programme delivery rests upon a strong partnership between members of the Royal Astronomical Society of Canada, Fédération des astronomes amateurs du Québec, and independent clubs, professional astronomers in the Canadian Astronomical Society, as well as some amazing collaborations with diverse sectors of society. Moreover, using the RASC's Astronomy Hockey Cards, participants will have the opportunity for their name to be launched into space aboard a 2010 mission of the Canadian Space Agency.

*Dr James (Jim) Hesser is Director of the Dominion Astrophysical Observatory in Victoria, BC. His research applies ground and space-based facilities, like the Canada-France-Hawaii Telescope and the Hubble Space Telescope, to questions concerning the history of how the Milky Way and other galaxies formed and have evolved, with particular emphasis on the oldest stars and on clusters of stars. He joins us at the 2008 General Assembly in his role as Canada's country representative for the International Year of Astronomy.*

---

#### SA1 (9:30) Northern Star: The Public Science of C. A. Chant

David Smillie (Toronto)

Clarence Chant is regarded as the "father of Canadian astronomy" largely on the basis of his establishing the first university program in astronomy in Canada and his work to establish the DDO. My work is on Chant's role as a public scientist and popularizer of science. Chant, in his day, was an extremely prominent scientist and something of a local celebrity in the Toronto newspapers of the 1920s and 1930s. I look at how the papers used Chant (and vice-versa) at this period in time.

*David Smillie is a PhD candidate at the University of Toronto's Institute for the History and Philosophy of Science and Technology. A former reporter for the CBC and a producer for Discovery Channel, David has a real interest in the history of communicating science to a general audience.*



## SA2 (9:50) Setting up a Remote Observatory

Paul Mortfield (Toronto)

Few of us have the luxury of living under dark skies far away from light polluted urban centres. Today, many amateurs are taking the path of building remote observatories in ideal dark locations to make the most use of their telescope/CCD investment. This talk will summarize the relocation of my telescope 4000km and three time zones away from home. I will focus on specific components needed to make it all work as well as caveats, gotchas, and their solutions for hands-off operation.

*Paul Mortfield is an accomplished astro imager and science educator. Co-winner of the Toronto Centre's Ray Thompson Award for astronomical imaging in 2007, Paul is also a contributor to the RASC's Observer's Calendar.*

---

## SA3 (10:10) 30 Years of Solar Filters

Dr. B. Ralph Chou (Toronto)

The technology of solar filters for white light and monochromatic observations of the Sun over the past 30 years is reviewed. Transmission data for a new "white light" solar filter product are presented.

*A life member of the Toronto Centre, Ralph Chou has been active as a solar observer and eclipse chaser for over 30 years. He is a recognized authority on the safety of solar filters and is a regular contributor to the NASA solar eclipse publications authored by Fred Espenak and Jay Anderson.*

---

## SA4 (10:50) The FAAQ's Participation in IYA2009

Rémi Lacasse (FAAQ)

The FAAQ is over 1700 members grouped in 40 astronomy clubs in all areas of the province of Québec. The FAAQ will be an important partner for the IYA2009 activities in Canada by participating and delivering programs for Québec but will also support the French communities throughout the rest of Canada where and when needed. A small team has been active for a few months in planning different processes to leverage as much as possible existing science programmes through encouragement of strong emphasis on astronomy in 2009. Each of our 40 clubs will have a responsible person for their IYA2009 activities. A substantial amount of money has been reserved by the FAAQ to cover certain expenses generated by those activities. We anticipate that each club will initiate different events for the public, in school and in local libraries.

*Rémi Lacasse is Past President of the Fédération des Astronomes Amateurs du Québec and a former member of the Centre francophone de Montréal now living near Mont Tremblant. Forty local astronomy clubs in Québec are organizing their efforts for the Année mondiale d'astronomie 2009. Rémi Lacasse will highlight opportunities for sharing expertise and resources between the RASC and the FAAQ both during his paper session and Monday's IYA Panel where he will be participating.*



## ASTRONOMY NIGHT IN CANADA

### SA5 (11:10) Canada's Space Program: Lost or Found?

Chris Gainor (Victoria)

In January, Canada's space program was rocked by the news that Canada's largest space contractor, MacDonald Dettwiler and Associates (MDA), was being sold to an American company, and that the president of the Canadian Space Agency had resigned after only a few months on the job. For one of the rare occasions in Canada's 50-year history in space, the Canadian space program became a political issue. Finally in May, the Canadian government blocked the sale of MDA and began taking modest steps to deal with the neglect of Canada's space program. The launch of the Radarsat-2 imaging satellite, the deployment of the final segment of the Canadian-built Mobile Servicing System on the International Space Station, and the scheduled end of Space Shuttle flights in 2010 mean that changes are coming to Canada's space program. This presentation will look at where Canada's space program has gone in recent years and discuss some steps that are needed to reinvigorate it.

*Victoria Centre Member Chris Gainor is an author and historian who specializes in the history of the space program, particularly Canada's roles and contributions.*

---

### SA6 (11:30) Deep Sky Imaging under Arizona skies

Klaus Brasch

Imaging from dark sites in Arizona using a straightforward combination of optics, camera and processing tools, yields pleasing images with cumulative exposures of 10 to 30 minutes rather than hours. DSLRs in particular do not require computers to operate or cooling devices. When the telescope is polar aligned, you are ready to go. This presentation focuses on specific techniques and approaches for success in the still challenging world of astro-imaging.

*Klaus Brasch is an experienced astro imager who has been taking photos of the night sky for over two decades. He has many published works to his credit.*

---

### SA7 (1:00) The Great Siberian Meteor: Tunguska 100 Years Later

Dr. Wayne Edwards (UWO)

On June 30, 1908 at 8:14am local time (00:14 UT) a large bright meteor was spotted traversing the sky over central Siberia. Before reaching the surface, the object exploded with an energy of some 5 to 15 Megatons of TNT, flattening more than 2000 km<sup>2</sup> of the local forest, and heard (and felt) over more than 1 million km<sup>2</sup>. Seismic waves from the event were recorded throughout Russia, while atmospheric pressure waves were observed throughout Europe and North America. To date the event remains the largest impact event in modern history. Since its occurrence, the Great Siberian Meteor has prompted a variety of explanations as to the nature of the object, from the exotic to the mundane and launched numerous campaigns searching for its remains. Even a century later, aspects of the event remain a mystery, as it inspires the search for hazardous near Earth asteroids, while modern global monitoring networks continue to detect the numerous impacts of large bolides (mini-Tunguska's) around the Earth.





## OFFICIAL GAME DAY PROGRAM

*Wayne Edwards is a post-doctoral student working in the University of Western Ontario's Meteor Physics Group.*

---

### **SA8 (1:30) International Year of Astronomy—A Chance to Grow**

Ron Macnaughton (RASC Education Committee)

The 400th anniversary of Galileo's first use of a telescope will be an extra opportunity to meet the public - at public viewing sessions and increased school/ scout/guide visits. The RASC Education Committee has been working on several items which we can use to help visitors get more interested in astronomy. The presentation will describe these including collectable "hockey cards" of interesting astronomical objects, a Star Finder which participants can use to find constellations and planets at any date, and resources for beginners. We want all GA participants to be aware of the different resources available and to encourage all members of their Centres to use them effectively at public sessions.

*Ron Macnaughton is a member of the RASC's national education committee which is a key contributor to the Society's plans for the IYA2009.*

---

### **SA9 (1:50) Mining the Unknown in the Sloan Digital Sky Survey**

Dr. Patrick Hall (York)

The Sloan Digital Sky Survey has obtained spectra of about a million galaxies, 100,000 quasars and 300,000 stars. Because the automated classification software is not perfect, there are also about 24,000 objects classified as Unknown. By training oneself to recognize the spectra of galaxies, stars and quasars, and by incorporating information from the SDSS images using simple rules, it is possible to improve upon the automated software and to classify the majority of these 'Unknown' objects. Preliminary investigation of some of these objects by two high school students has yielded a previously overlooked cool white dwarf only 100 light-years from Earth and a possible 'orphan' gamma-ray burst (one where only the optical afterglow and not the gamma-rays are seen). Is there interest among RASC members in classifying these unknown spectra and following up on interesting objects discovered with observations and publications? If so, it should be possible to set up an online interface similar to the Galaxy Zoo to find even more interesting objects for follow-up.

*Dr. Hall has been an Assistant Professor in the York University Department of Physics and Astronomy since 2004.*



## ASTRONOMY NIGHT IN CANADA

### SA10 (2:10) Ottawa's Urban Roadway Lighting Policy - Take it home to your City

Robert Dick, Chair, RASC LPA

The City of Ottawa has just adopted a very progressive lighting policy. It contains a strategic shift in the goals and strategies of urban lighting. Although not perfect there are several important initiatives that can be adopted by other cities. This presentation will outline the process for developing the policy, the good and the not so good parts and help audience members to plan to "sell" a similar policy to their city administrators to improve local lighting policy.

*Member of the RASC Ottawa Centre since 1969 Rob Dick has designed, built and operates an observatory with a 24" Newtonian/Cassegrain Telescope. He acted as Chair Ottawa Centre Light Pollution Abatement Committee from 1994-2000 and Chair of the RASC-Light Pollution Abatement Committee 2000-Present. He is an Astronomy Lecturer, Carleton University and a Lead Engineer in the Department of Mechanical and Aerospace Engineering, Carleton University.*

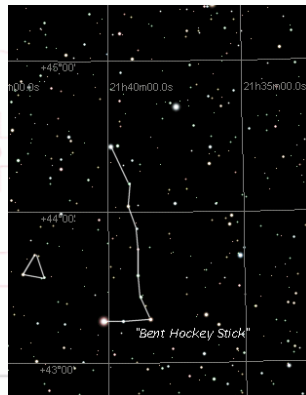
---

### SA11 (2:45) Canada's Fifty Years in Space

Dr. Gordon Shepherd (York)

The space age is considered to have begun with the launch of Sputnik 1 on October 4, 1957 and so the focus here is on the following fifty years. However, Canada had a head start through its long-standing interest in the Arctic, through observations of the aurora borealis and its influence on northern radio communications. Thus it was well-placed to become a major space player from the beginning. Astronomy is a part of this, as all "sky observers" share the same inspiration, whether it be observing the atmosphere, or the planets, stars and galaxies beyond. Indeed the Canadian space program has made major contributions to astronomy, as will be described.

*Gordon Shepherd (Ph.D. Toronto) is a graduate of the University of Saskatchewan. He is currently Director of the Centre for Research in Earth and Space Science at York University; he is Chair of the Executive Committee for the COSPAR 2008 Scientific Assembly. His career has spanned the 50 years that is the subject of this presentation.*



**KEY (9:00) Seven Ways a Black Hole Can Kill You**

Dr. Phil Plait

We all know that falling into a black hole is a one-way trip to being crushed into a submicroscopic dot. But it turns out that's the \*least\* interesting way a black hole can kill you, and there are many more, far more interesting (and a tad gruesome) methods as well. Astronomer and author Phil Plait discusses all the myriad ways a black hole can ruin your day, using cutting-edge science and more than a little dash of humor.

*Dr. Plait is an internationally renowned astronomer, author, and lecturer. His numerous appearances on radio, television, podcasts, and live in front of audiences have made him a celebrity in science circles, and put him in demand as an expert on astronomical matters. He has been interviewed on literally hundreds of national and local radio and TV stations about astronomical topics ranging from lunar eclipses to the fate of the Universe. His writing has appeared in dozens of magazines, and his first book, *Bad Astronomy*, was a trade science hit.*

---

**SU1 (9:45) Observatory Park Project Report**

Denis Grey (Toronto)

In 2007 the RASC's Toronto Centre undertook an ambitious effort to create a Concept Plan and Business Case for the future use of the David Dunlap Observatory given the University of Toronto's decision to declare the facility surplus in October 2007. The consulting report commissioned by the Toronto Centre outlines a possible future for the DDO in the post U of T era that continues its legacy of astronomy outreach, education and research. This presentation outlines the work undertaken by the Toronto Centre in this very unique and difficult situation and reports on future prospects for Canada's largest optical telescope and its associated facilities and lands.

*Denis Grey is President of the RASC Toronto Centre and acted as a Co-chair on the Task Force that helped to create, fund and execute the study into the future use of the DDO. Many members of the Society have contributed to this both financially and through donations of time and talent.*

---

**SU2 (10:10) Brightness Measurements of Mars in 2007-2008**

Dr. Richard Schmude (Kingston)

The writer used an SSP-3 solid state photoelectric photometer along with a filter transformed to the Johnson V system to measure the brightness of Mars between March 18, 2007 and May 10, 2008. Mars was a bit brighter than predicted in March and April of 2007. This presentation recaps this research and its implications for better understanding of the albedo of Mars.

*Richard Schmude, Jr. first became interested in astronomy when he was six years old. He grew up in Maryland, California and Texas. He received his Ph D degree in Physical Chemistry from Texas A&M University in 1994 and has been teaching at Gordon College since then. Richard collects some Canadian and Newfoundland coins, but his main interest is measuring the brightness of solar system objects. He live in Barnesville, Georgia.*



ASTRONOMY NIGHT IN CANADA

**SU3 (10:50) Tagish Lake Meteorite:  
A Messenger from the Early Solar System**

Phil J.A. McCausland (UWO)

In the predawn of Jan. 18, 2000, an exceptionally bright fireball was widely seen traveling south-east across Yukon and northernmost B.C. The event was spectacular, but was surpassed by the recovery during the winter and spring of meteoritic material from the fall; in all some 10 kg of unique carbonaceous chondrite fragments were recovered from the frozen surface of Tagish Lake. Its unprecedented features, the pristine nature of the still-frozen fragments that were initially collected, and the large amount of material ultimately recovered make the Tagish Lake meteorite a premiere scientific event, the subject of essential early solar system research for years to come.

*Dr. McCausland is a researcher at the University of Western Ontario's Meteor Physics Group.*

---

**SU4 (11:20) Einstein's Dark and Bright Universe Paradox**

Saul Windman (Mississauga)

Einstein's 1936 prediction of gravity's affect on light has significant implications when extended into the context of a galaxy such as the Milky Way. Predictions of the distortion of galactic energy by galactic gravity allow a reinterpretation of other observations including gravitational lensing, Dark Matter, Dark Energy and galactic gravitational geometry in a simple and consistent manner.

*Saul Windman is an IT professional with a strong interest in the mysteries of Dark Matter and Dark Energy.*

---

**SU5 (11:40) The One Metre Initiative (OMI):  
A New Premier Telescope in Canada**

Dr. Robert Gauthier, (Canada Centre for Remote Sensing), Peter MacKinnon, (Carleton). Frank Roy.

Elektra Observatories, a not-for-profit corporation, was created to design, build and manage a wide-field, robotic, state-of-the-art one-metre telescope, to be located in the Madawaska Highlands of Ontario near Bon Echo Provincial Park. The One Metre Initiative (OMI) will be privately funded and operated. Our target audience is the Canadian professional astronomical community as well as serious nonprofessionals and those involved in astronomical education. We describe the driving requirements that led to the final design. The OMI will have a field of view of some 5 degrees together with several key technologies, advanced materials, active optics and innovative designs, we believe will put the OMI at the forefront of telescopes on Canadian soil.

*The proponents of this project are announcing this initiative for the first time at the General Assembly of the RASC.*



## OFFICIAL GAME DAY PROGRAM

### KEY (2:00) IYA from the Ground Up

Denis Grey (Toronto), Glenn Hawley (Calgary), Leslie Harvey (Toronto),  
Scott Young 📞 (Winnipeg)

Bringing the stars to the public is something that amateur astronomers do uniquely well and while our national IYA programs will have a large impact an equally important component is what will be happening at a local level at RASC Centres. Four experienced hands share how their Centres are reaching out and engaging the public in different ways—find out more about the successes of :

- Calgary Centre's active **Youth program** with twice as many Youth members as the next largest Centre in the Society
- Prince George Centre's innovative **NOVA program** which has grown the Centre by 150% in just four years while making excellent use of their observatory facility. This program has been adopted by many RASC Centres.
- Toronto Centre coordinates a team of volunteer presenters and educators for school groups—find out how shared presentation resources makes them more effective.
- Winnipeg Centre hosts **urban star parties** at the Forks of the Credit—find out how partnership with the community enhances their public outreach program



## ASTRONOMY NIGHT IN CANADA

### KEY (1:00) 50 Years in Amateur Astronomy—A Personal Perspective

Terence Dickinson (Toronto)

In August 1958, at age 14, Terry Dickinson joined the RASC. His talk will be a personal reflection on some of the changes in backyard astronomy over the past half century, with a few thoughts on where we go from here.

*Terence Dickinson has been editor of SkyNews since the magazine's first issue in 1995. He has been involved in astronomy full-time since 1967 as a writer, an editor, a teacher and a broadcaster and will celebrate his 50th anniversary as a member of the Society at the 2008 General Assembly. He is Canada's leading author of astronomy books for both adults and children. Notable among his 14 books is NightWatch, one of the best-selling stargazing books in the world. His popular articles on astronomy have appeared in dozens of magazines, from Reader's Digest to Popular Mechanics. He was a weekly columnist for The Toronto Star for over 20 years and is a regular commentator for the Canadian Discovery Channel and CBC Radio. Asteroid 5272 Dickinson is named after him. In 1995, he was appointed by the Governor General as a Member of the Order of Canada. Terence "the Dominator" Dickinson will have his number retired by the Toronto Centre in a special ceremony at the 2008 General Assembly.*

### Panel (1:45) Astronomy Nights in Canada

#### A Look Ahead at the IYA

Rémi Lacasse (FAAQ), David Lane (RASC), Kim Hay (RASC), Kim Breland (CASCA), Denis Grey, Moderator

Our closing panel discussion reflects on what we have learned about the IYA throughout the General Assembly and where this is leading the Society for our main event that begins only six months from now!

*Rémi Lacasse is Past President of the FAAQ, David Lane is President of the Royal Astronomical Society of Canada. Kim Hay is Chair of the RASC's Education Committee, Kim Breland is the IYA Program Manager for Canada.*



**HSH (3:30) Helen Sawyer Hogg and the IYA**  
Randy Attwood (Mississauga)

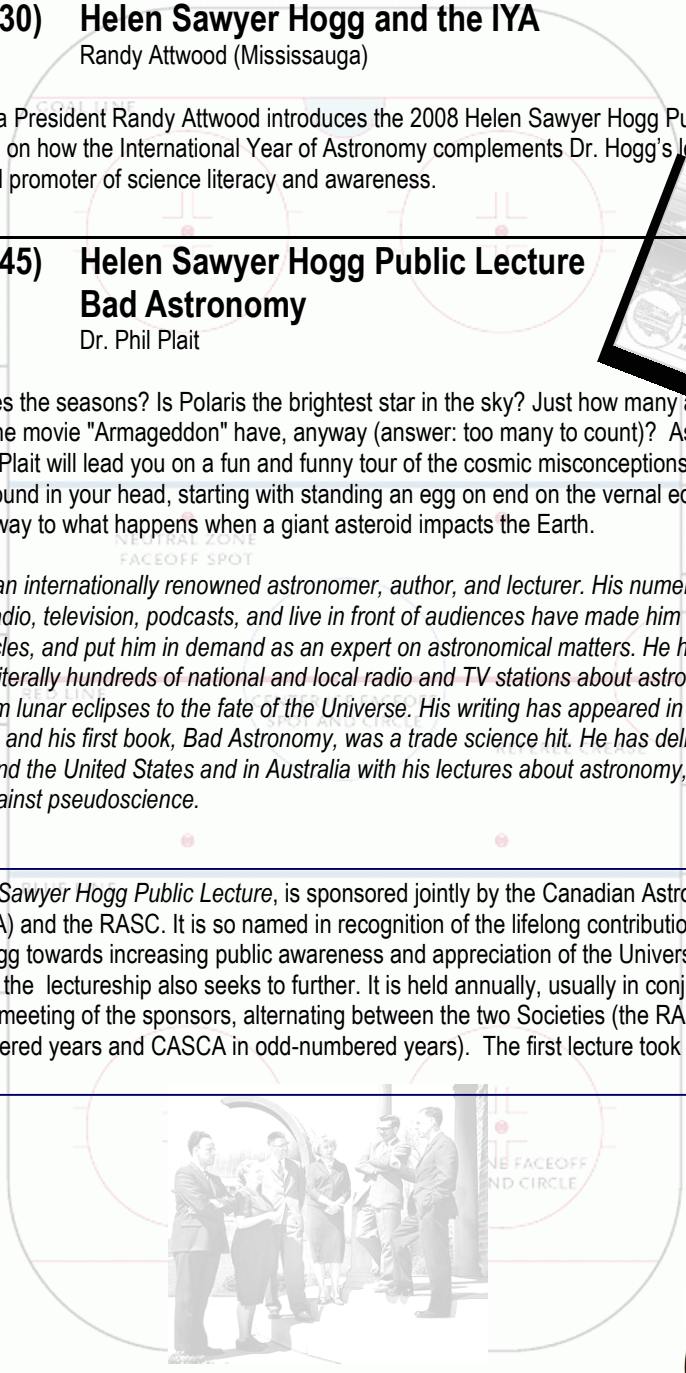
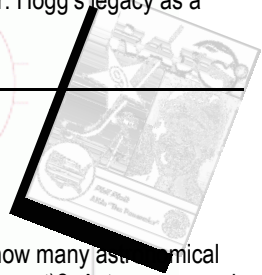
Mississauga President Randy Attwood introduces the 2008 Helen Sawyer Hogg Public Lecture and reflects on how the International Year of Astronomy complements Dr. Hogg's legacy as a teacher and promoter of science literacy and awareness.

**HSH (3:45) Helen Sawyer Hogg Public Lecture  
Bad Astronomy**  
Dr. Phil Plait

What causes the seasons? Is Polaris the brightest star in the sky? Just how many astronomical errors did the movie "Armageddon" have, anyway (answer: too many to count)? Astronomer and author Phil Plait will lead you on a fun and funny tour of the cosmic misconceptions you may be carrying around in your head, starting with standing an egg on end on the vernal equinox, taking you all the way to what happens when a giant asteroid impacts the Earth.

*Dr. Plait is an internationally renowned astronomer, author, and lecturer. His numerous appearances on radio, television, podcasts, and live in front of audiences have made him a celebrity in science circles, and put him in demand as an expert on astronomical matters. He has been interviewed on literally hundreds of national and local radio and TV stations about astronomical topics ranging from lunar eclipses to the fate of the Universe. His writing has appeared in dozens of magazines, and his first book, *Bad Astronomy*, was a trade science hit. He has delighted audiences around the United States and in Australia with his lectures about astronomy, science, and the fight against pseudoscience.*

The *Helen Sawyer Hogg Public Lecture*, is sponsored jointly by the Canadian Astronomical Society (CASCA) and the RASC. It is so named in recognition of the lifelong contributions of Helen Sawyer Hogg towards increasing public awareness and appreciation of the Universe around us, an aim that the lectureship also seeks to further. It is held annually, usually in conjunction with the annual meeting of the sponsors, alternating between the two Societies (the RASC hosts in even-numbered years and CASCA in odd-numbered years). The first lecture took place in 1985.



## ASTRONOMY NIGHT IN CANADA

### Poster Descriptions

*Posters will be displayed in the Olga Cirak Common Room*

#### **Deducing the Energy Balance of the Universe**

Saul Windman (Mississauga)

**See Paper Session SU4 on page 25 for details.**

---

#### **CASCA and the International Year of Astronomy**

Malcolm Scrimger (Victoria)

Abstract not available.

---

#### **RASC and the International Year of Astronomy**

David Lane (RASC and Saint Mary's University), Kim Hay, RASC Education Committee Chair  
Robert Dick, RASC Light Pollution Abatement Committee Chair

The Royal Astronomical Society of Canada, with its 29 Centres, has a long history of astronomy public outreach and education in Canada. This was recognized by the receipt of NSERC's Michael Smith Award for science promotion in 2003. For International Year of Astronomy (IYA), the RASC intends to step up its activities considerably from coast to coast. Many of our Centres are already forming IYA committees and are formulating plans for their local activities.

Nationally, the RASC has been participating actively in the IYA Canadian Coordinating Committee and plans to leverage its activities with the other participating groups, including CASCA and the FAAQ. The bulk of effort will likely be devoted to the delivery of Galileo Moments (GM) to hundreds of thousands of Canadians. These GMs include such things as views through a telescope (night or day) and visits to schools and youth groups by an astronomer. At the national level, the RASC has committed \$30,000 in funding (more to come) which will be used to produce and distribute materials for our Centres and other groups to use as part of their GM activities. Materials to be developed include a Sidewalk Astronomers Handbook, a Star-Finder, an illustrated children's book with a light pollution theme, and astronomical image collector cards (similar to hockey cards). The RASC has also recently approved formal definitions for Dark Sky Preserves (DSP) and Urban Star Parks (USP), and it is hoped that several new DSPs and the first USP will be declared in 2009.





## Connecting Amateur Astronomers by Amateur Radio

Malcolm Scrimger (Victoria)

This poster will address:

- Setting up amateur radio special event stations in each province in Canada to promote the mandate of the RASC and IYA.
- Educating amateur astronomers about ham radio and it's ability to foster realtime communications of international events.
- Educating the public about amateur radio and how they may obtain their Amateur Radio Certificate.

*Active amateur astronomer and member of the Victoria RASC Centre for 18 years participating in astronomy outreach programs and education Malcolm has also been a member of the Radio Amateurs of Canada for 10 years. He has provided educational and supervisory support for the Westcoast Amateur Radio Association in programs such as the RAC Youth Education Program and also provided technical support for WARA. A member of PEP (Provincial Emergency Program) in Victoria, British Columbia*

---

## RASC: One Hundred and Forty Years of Art and Observation

Randall Rosenfield (Toronto) & Peter Broughton (Toronto)

The goal of this poster is to make some of the more notable graphic observational records from the RASC Archives more readily available to RASC members. This poster will also serve as an introduction to a more ambitious undertaking of the History Committee to increase access for RASC members to the Archive's historical materials, including a soon to be completed online inventory and register, and the planned digitization of the entire holdings. "RASC: One Hundred and Forty Years of Art and Observation" will present the best of the non-photographic graphic records of observations by RASC members, chiefly from the earlier period, but with some representative images from later periods up to the present. High quality reproductions will be accompanied by analytic descriptions, with a particular emphasis on how the images were made.

---

## London Centre Public Outreach

Peter Jedicke (London)

Images of London Centre public outreach events and astrophotos by members show the activities and the capabilities of Centre members.



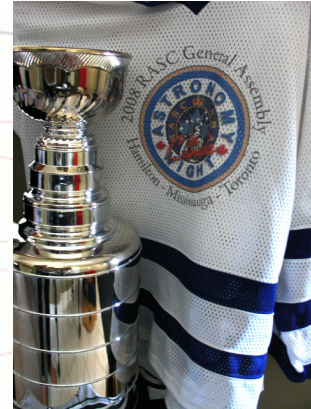
ASTRONOMY NIGHT IN CANADA

2008 GA Team Roster

**Head Coach** Denis Grey  
**Asst. Coaches** Randy Attwood (Program)  
 Ralph Chou (Registration)  
 Charles Darrow (Sponsorship / Publicity)  
 Katrina Ince-Lum (Volunteer Coordinator)  
 Tatiana Ougarova (York U Liaison)

**Committee**

Paul Brandon	Yvonne Penney
Rick Cudmore	Diane Shukla
Leslie Harvey	Rajesh Shukla
Roger Hill	John Williamson
Lloyd Penney	Scott Young



PLAYERS BENCH	Mahesh Aravamodan	Bryon Czarnik	Shawn Lee
	Kevin Arjel	Elaine Darrow	Terry Leeder
	Robin Allen	Kathleen Hadley	Tom Luton
	Angela Barbetta	Peter Hadley	Mickey Milankov
	Andy Beaton	Grace Horvatin	Blake Nancarrow
	Andy Blanchard	Tony Horvatin	David Parfett
	John Bohdanowicz	Colin Jackson	Harsh Shah
	Sabitha Chari	Jack Jackson	Sheila Stephenson
	Phil Chow	Erich Kralik	Leslie Strike
	Adam Clayson	Sue Kralik	Mark Taylor
Tracy Clayson	Isaac Kravec	Ed Treijs	

**Thanks to**

Bonnie Bird, Royal Astronomical Society of Canada  
 Marlene Caplan, Department of Physics and Astronomy, York University  
 Paul Delaney, Department of Physics and Astronomy, York University  
 Dave Lane, RASC Web Team  
 Lauren O'Brien, Department of Physics and Astronomy, York University  
 Marshall McCall, Department of Physics and Astronomy, York University  
 Jo Taylor, Royal Astronomical Society of Canada



OFFICIAL GAME DAY PROGRAM

# THE ASTRONOMY SONG

(with apologies to Stompin' Tom Connors)

Hello out there we're on the air it's astro night tonite  
Tension grows the sunset glows-& the eyepiece fits in right.  
The Go To hums and the public comes and the fans all go insane  
Someone sings "Saturn's rings!" at the good ole astro game

*Chorus:*

Oh the good ole astro game is the best game you can name  
And the best game you can name is the good ole Astro game

## (2nd period)

Where galaxies crash with nova flash and planets all align  
Messier's been our number one since seventeen fifty nine  
Clouds roll in and the seein's dim but we keep on viewing sky  
There's a sucker hole and its 10 below—it's fun-filled Astro game

*Chorus:*

Oh the good ole astro game is the best game you can name  
And the best game you can name is the good ole Astro game

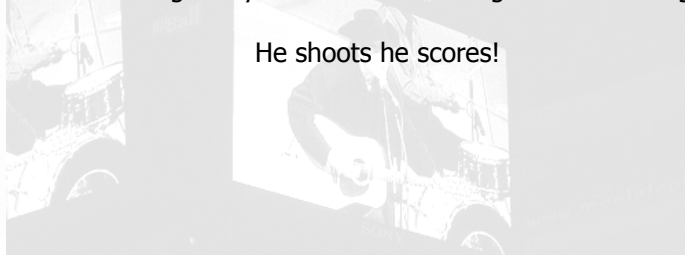
## (3rd period: last game in the playoffs, too...)

Oh take me where the seeing's sharp for 'scopes like yours and mine  
And the GA Cup is all filled up for nights when the Moon does shine  
Now the final pick on the target list is just inside the line  
The fuzzy's there! Time to share! The good ole astro game!

*Chorus:*

Oh the good ole astro game is the best game you can name  
And the best game you can name is the good ole Astro game  
Oh the good ole astro game is the best game you can name  
And the best game you can name is the good ole Astro game  
Oh the good ole astro game is the best game you can name  
And the best game you can name is the good ole Astro game

He shoots he scores!



# ALL STAR LINEUP

**Roberto Abraham**  
AKA: "The Ace"

**REMI LACASSE**  
AKA: "The Lacerator"

**Dr. James (Jim) Hesser**  
AKA: The "Hit Man"

**Terence Dickinson**  
AKA: "The Dominator"

**Phil Platt**  
AKA: "The Pummeler"

2014