



## Highlights:

**I: ASX By-Elections  
& General Meeting**  
– Oct. 5, 2009

**II: ASX at Hart  
House Clubs Day**  
– Oct. 6, 2009

**III: ASX Observing  
Night**  
– Oct. 22, 2009

**IV: The Sky This  
Month**

**V: Other Astro/  
Space Events**

**VI: International  
Space News**

Dear Astronomy and Space Enthusiasts,

The new academic year is off to a great start. Hundreds of new space and astronomy enthusiasts have joined ASX and we have an exciting program lined up for all our members and audiences. Our welcome event was a great success, and we hope those of you who were able to join us enjoyed the event. We watched the movie “Sunshine”, followed by a fascinating talk by U of T graduate student Kaitlin Kratter, about star formation.

Our first observing event takes place in October (see section III), which we hope you will attend. We also have plans to host “The Wonder of it All”, a documentary by Jeffery Roth in November, and of course, our annual Symposium in January. We look forward to seeing you at our many exciting events this year.

Clear Skies,  
ASX

## I. ASX General Meeting & By-Elections

Twice a year, in October and April, ASX hosts a General Meeting to let you, our members, know how the society is doing strategically, financially and operationally. Our next General Meeting is on:

**DATE & TIME:** Monday, Oct. 5, 2009, 6PM – 9:30PM

**LOCATION:** Bahen Centre (40 St. George St.), Room 2165

You will also have the opportunity to run for one of our open position:

Marketing Director (executive position)  
Marketing Coordinator  
Sponsorship Coordinator  
Graphic Designer  
Events Coordinator  
Faculty/Department Liaison

If you are interested in any of these positions or have any questions, please email [space.society@utoronto.ca](mailto:space.society@utoronto.ca) and be prepared to give a short speech (maximum 3 minutes) about your skills and experiences at the meeting.

For descriptions about these positions, please see:

<http://asx.sa.utoronto.ca/events/elections/>

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If you did not receive this e-newsletter directly, and would like to hear about future ASX news and events, please email [space.society@utoronto.ca](mailto:space.society@utoronto.ca) with subject line “Newsletter Signup”. We also invite you to join our Facebook group: <http://www.facebook.com/group.php?gid=2226718345>

## II. ASX at Hart House Clubs Day

ASX is participating in U of T Clubs Day taking place in Hart House. Look for our booth, or someone in an astronaut costume!

**DATE & TIME:** Tuesday, Oct. 6, 2009, 10:30AM – 2:00PM  
**LOCATION:** University of Toronto St. George Campus, Hart House (7 Hart House Cir), Great Hall & East Common Room  
**MORE INFO:**  
<http://www.harthouse.utoronto.ca/hh/shownewsitem.php?id=332>



## III. ASX Observing Night: Black Holes and The Galilean Nights



Join us for the first ASX Observing night of the year:

**DATE & TIME:** Thursday October 22, 2009; 7:45PM  
**LOCATION:** University of Toronto St. George Campus, McLennan Physical Labs (60 St. George St), Room 102

At 8PM watch “*Monster of the Milky Way*”, a documentary about the compelling evidence that suggests there is a super-massive black hole at the centre of our galaxy! At 9PM, join us on the McLennan roof as we observe Jupiter and its moons. Be a part of The Galilean Nights and celebrate the 400th anniversary of Galileo looking at Jupiter through a telescope.

## IV. The Sky This Month

### October evenings:

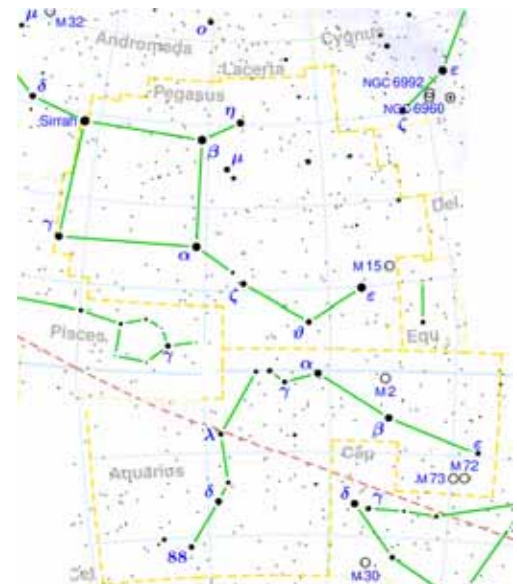
The *Great Square of Pegasus* is easily visible in the southern sky. The constellation of Aquarius can also be spotted near Pegasus to its lower right. The handy star chart on the left will help you identify the constellations of Pegasus and Aquarius.

### October nights:

Watch for Jupiter, visible as a bright yellow “star”, in the southern sky.

### October early mornings:

Mercury, Venus and Saturn are visible dancing around each other throughout October.



## Observing Calendar:

Watch for these special astronomical events during the month of October

October 14th: Look for Mars high in the eastern sky. It lies almost in a straight line with Castor and Pollux. Pollux and Castor are the brightest stars in the Constellation Gemini.

October 16th: The crescent moon, Venus and Saturn appear together in the early morning.

October 20-22: After midnight look to the east where Orion is rising, and you will be able to see the Orionids Meteor Shower. It will peak from about 1:00 am until morning twilight. Given sufficiently dark skies, about 20-25 meteors at most can be seen every hour. Some of these are tiny remnants of Haley's comet burning up in the atmosphere.

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

## V. Other Upcoming Astronomy/Space Events (free unless specified)



**Wednesday, September 30, 2009, 7:30 PM**

**RASC Toronto Meeting**

***“ALMA: Imaging the Invisible Universe”***

By Prof. Christine Wilson, McMaster University

LOCATION: Imperial Oil Auditorium, Ontario Science Centre (770 Don Mills Rd., Toronto)

MORE INFO: <http://toronto.rasc.ca/content/whatsup.shtml>

**Saturday, October 3, 2009, All Day**

**STAR Symposium**

Day Event: 11 AM – 4 PM; Night Event: 10 PM – 1 AM

Main Event: 6 PM – 9:30 PM (feat. Bob McDonald and Ivan Semeniuk)

LOCATION: York University

MORE INFO: <http://starsymposium.ca>



**Friday, October 9, 2009, 8:00 PM**

**RASC Mississauga Speaker's Night**

Featuring Terence Dickinson

LOCATION: University of Toronto Mississauga Campus, Room SE2082 in South Building

MORE INFO: <http://www.mississauga.rasc.ca/meetings.htm>

**Friday, October 30, 2009, 7:30 PM – 10:00 PM**  
**Halloween Star Party – Ontario Science Centre**

Special Presentation: “In space, no one can hear you scream...”  
Also featuring children's author and science journalist Peter McMahon

LOCATION: Ontario Science Centre (770 Don Mills Rd., Toronto),  
TELUSCAPE - outdoor exploration plaza in front of Main Entrance

MORE INFO:

<http://www.ontariosciencecentre.ca/calendar/default.asp?eventid=899&ddmmyyyy=27092009>



## VI. International Space News



### Water Found on the Moon

Ready for a swim in Lake Luna? How about bottled water from Shackleton Springs? With the discovery of water on the moon, all this now may be possible!

In August, Chandrayaan-1, the first Indian lunar probe detected signs of the chemical bond between water and hydrogen. Cassini, a NASA spacecraft had previously detected signs of the hydrogen-oxygen bond. NASA's most recent probe, Deep Impact, has confirmed that the hydrogen-oxygen bond confirm that there is water/hydroxyl on the lunar surface.

Lunar water comes from two main sources. Exogenic sources include the impact of comets in the early days of the solar system. Endogenic, or sources of water native to the sun, are believed to be caused by the interaction between the solar wind, regolith and lunar rocks.

The lunar surface is composed largely of oxygen (45%). When the solar wind hits the surface, there is a chance that the high velocity protons (i.e., positively charged hydrogen ions) break apart the oxygen bonds, and may then re-bond with the negatively charged free oxygen ions.

NASA scientists estimate that the surface regolith contains about 32 ounces of water per ton, or about a liter of water in about a meter cubed of lunar dirt. That makes the moon drier than any desert on earth, so don't make any plans to go fishing just yet.

Sourced from, and more info at: <http://www.space.com/scienceastronomy/090923-moon-water-discovery.html>

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