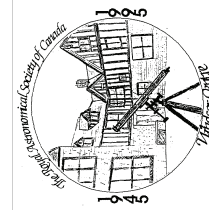
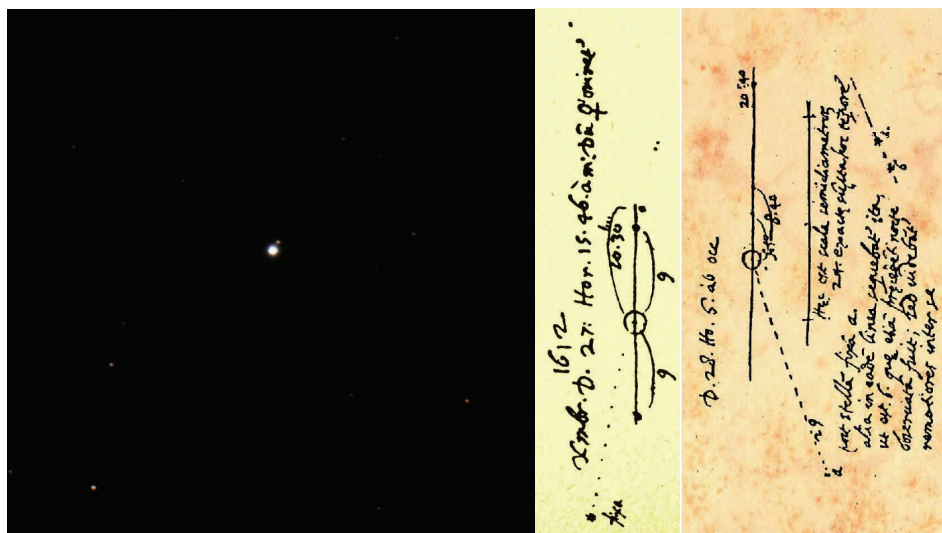


Neptune by Matt McCall and Brian Thomas

Before the invention of the telescope, only five visible planets beyond Earth were known to observers throughout history, but as early as the nights of December 27/28, 1612, Galileo saw what would become the eighth. After drawing the planet in his notebook as a star near Jupiter; he noted a fixed star in a different position the evening of January 27, and on January 28, 1613. Neptune really was stationary before the new year, but could have been found as it moved retrograde.

University of Melbourne physicist David Jamieson claims he may have known it was actually a planet, as the ink used to mark an object for January 6 differed from the black dot on late January observations, suggesting Galileo searched earlier records to correlate his findings. More info in an original July '09 article can be found here: <http://www.space.com/6941-theory-galileo-discovered-neptune.html>. However, why is there no evidence of further observations through 1613? It's even been theorized his discovery is in a secret anagram to colleagues kept hidden by the Vatican.

Brian however, explains his photo of Neptune's officially known discovery location, the story most astronomers feel familiar with, which was 5 deg. NE of δ Capricorni: Neptune had its first complete orbit since its discovery the night of September 23/24 1846, but on October 29, it was just where it was in the sky when Johann Galle and Heinrich d'Arrest first observed it 165 years ago. After taking the image I observed it visually and drifted into the past! Triton is magnitude 13.5 for reference to the field stars visible in the photo. Image is 31.9 minutes wide.



AURORA



Volume 37, No. 3

The Royal Astronomical Society of Canada - Windsor Centre

November 2011

Flyer

Next Meeting

Tuesday, January 17, 2012
7:30 p.m.

at

Ojibway Park Nature Centre
5200 Matchette Road

Speaker: Patricia Hanlan

Topic: "*X-rays and Galaxies*"

Upcoming Events

December Social: Our annual December Social will be held on Friday December 2, 2011 at the Ojibway Park Nature Centre. The centre will be open at 6:00 p.m. with dinner served around 7:00. Dinner is "Pot Luck" style so please contact Sue Iihola (sueiihola@hotmail.com) to coordinate what dish you plan on bringing. A reminder that alcohol is not permitted.

Meteors: The Leonids peak just before midnight on Thursday November 17 and the Geminids peak on Wednesday December 14.

Winter Solstice: December 22 at 12:30 a.m. EST

Double Shadow Transit: On December 27 at 10:51 p.m. the shadow of Ganymede will be leaving the disk of Jupiter while the shadow of Europa enters the disk.

Monthly Meeting Minutes

October 18, 2011

The Royal Astronomical Society of Canada - Windsor Centre, Ojibway Park Nature Centre.

Windsor Centre **1st Vice President Peter Bondy** chaired the Meeting. Peter called the Meeting to order at 7:35 p.m. and welcomed members and guests.

Motion to accept the minutes of the September 20, 2011 meeting moved by Susan Sawyer-Beaulieu, seconded by Randy Groundwater. **MOTION CARRIED.**

Pete called upon Past President Pierre Boulos to introduce a proposed slate of officers and directors for the **Windsor Centre 2012 Council** in preparation for nominations at the November 2011 Monthly Members Meeting.

Peter Bondy introduced the guest speaker of the evening, Mr. Derry Ross, from the Warren Astronomical Society in Michigan.

Main Talk: The World of John Philoponos

The story of John Philoponos also called John the Grammarian is about non-linear human progress and a clash of intellectual civilizations that took place around 500 AD. Philoponos lived as a philosopher in the period from 475 to 565 AD. We know nothing about the studies in Natural Science of John the Grammarian, a resident of Alexandria and pupil/scrivener of philosopher Ammonios (440-520AD) as none presently exist.

In his earlier life Philoponos wrote major works on natural philosophy. He inquired about cosmology, arithmetic and maybe medicine. He was the “whole range of inquiry in natural science”. Later works were on theology, no natural science.

Philoponos and Simplicios were the two most outstanding men of science of their time, Philoponos best in philosophy, Simplicios best in mathematics. “The Hawking and Einstein of their time”. With the closing of the Greek Academy in Athens in 529AD and Simplicios moving to Persia Philoponos became the last Christian philosopher scientist of the second renaissance of the empire. In 681AD after his death he was made a heretic by the Church.

Philoponos studied dynamics, what we now call physics. He made a two pronged attack on Aristotelian physics saying science was empirical not historical and that there was no peristasis essential to Aristotelian concept of motion. He believed that incorporeal motive force would work in a void and not the concept that motion is inversely proportional to weight. His celebrity achievement was his notion of inertia although he did not do actual experi-

ments to back his theory. Revolutionary was his idea that absolute space is “entity in itself...never devoid of bodies”.

Another concept of his was that of the concept of atoms as spherical shapes because those can be the smallest of objects because, “the sphere is the most perfect shape because God created the sphere”. Philoponos connected science with religion when he theorized that the soul has the smallest atoms and can't be seen when they leave the body.

In contrast to Aristotle's vision being from reflected and emitted rays, Philoponos took a bolder view that included geometric optics, thermic effects of light and rejected previous Greek theory of light as “all garbage”. This led to a radical conception of the universe as a physical entity. It wasn't till the 17th century that this was accepted and later scholars such as Bacon, Galileo and Al-Kindi were affected by his theories.

Peter Bondy thanked the speaker on behalf of the Windsor Centre RASC.

Break and Monthly 50/50 Draw: Was won by Tom Sobocan who kindly donated it back to the Windsor Centre.

Peter Bondy introduced this month's Director of Observing report by Steve Pellarin.

Director of Observing Report

Steve used the planetarium program Stellarium to demonstrate this month's sky events including positions of planets and constellations.

Jupiter is at opposition on Oct. 29, Mars near Regulus Nov. 10, Saturn rising before sunrise in November noting the Saturn rings are opening up.

Other objects of note are the Orionid meteor shower Oct. 21-22, Comet Garrad which is mag. 7 to 6.5 moving from Cygnus to Hercules and comet Elenin “a big dud” which failed expectations of brightness and broke up in September. An asteroid close approach on Nov. 8 passing between Earth and Moon is number 2005YU55 at 11th magnitude.

The deep sky object of the month is the M30 globular cluster at mag. 7 noted for it's dense core (only 17LY wide) in Capricorn near Zeta Cap.

Peter Bondy thanked Steve Pellarin for his presentation and the audience for attending.

The Meeting was adjourned at 9:50 p.m..

Reported by Arthur Rae, RASC Windsor Centre Secretary.