Newsletter Editor Ken Garber
December/January were rolled together for lack of articles but no shortage of minutes. Steve Mastellotto added there were some other centre's newsletters at the desk for the taking. Also he mentioned a Celestron NexStar 8 SE telescope valued at $1800 only six months old was locally advertised for sale at $900.

Librarian Rick Marian
Rick had more books declared surplus from the Essex County Library free for taking at the front desk.

Public Education
Randy Groundwater spoke to a group of 25 retired professional businessmen. Steve Pellarin did an astronomy presentation to 18 Cub Scouts at Cedar Wing Camp. Pierre asked any who speak to groups let him and Dave Panton know for the record.

Public Relations Tina Chichkan
Hallam Open House in January was well attended in spite of cloudy skies early in the evening. The December Social was a successful event.

Light Pollution Abatement, Dan Taylor
Dan reported he has been asked to assist a committee in Toronto dealing with street lighting standards and reduction of light pollution. The City is experimenting with FCO fixtures with mixed results to date. Locally Dillon Consulting have acknowledged they will specify FCO fixtures on the planned Manning road expansion. The Big 3 auto dealership lighting at Campbell and Tecumseh's lighting situation turned out to be a bit confusing but it still seems possible to use 311 to try to have the lighting changed. Dave Panton will follow up. The new Home Depot off Cabana has FCO lighting except one in their loading dock facing Cabana. It will also be reported. The new Morris Sutton Funeral Centre on highway 3 is a wonderful example of subtle non intrusive full cutoff lighting.

National Council, No representative, no report

Ob**servatory Report**
Peter Bondy was absent. Randy and Steve Mastellotto have had their first observatory fund raising meeting.

Memberships
Paul Pratt was unable to attend the meeting.

Director of Observing,
Pierre filled in and showed some shots of Mercury taken as the Messenger space craft approached on the first of three planned orbits. The laws of orbital mechanics proved once again valid as it skimmed by a mere 200 km above the surface. For February we have a total Lunar eclipse and a close approach of Mercury and Venus.

Pierre adjourned the meeting at 9:56 p.m.

Aurora

Feb. 2008 The Royal Astronomical Society of Canada - Windsor Centre Volume 33, Number 7

Flyer

Next Meeting

Tuesday, Mar 18th, 2008
7:30 p.m.
Maidstone K of C Hall
10720 County Road 34
(Old Talbot Road)

Speaker: T.B.A.

Topic: **T.B.A.**

NOTE THE NEW STARTING TIME.

Upcoming Events

Hallam Observatory Open House:

March 15, 2008 7:30 p.m.
April 12, 2008 8:30 p.m.

Celestial Events:

Mar 20 Equinox
Mar 21 Full Moon

Centre Events:

Council Meeting rescheduled due to weather
Date to be determined

Our new e-home:

http://www.rascwindsor.com

Monthly Meeting Minutes for January 15th2008 by Dave Panton

Chaired by Dr. Pierre Boulos

Members and visitors were welcomed and minutes from the November meeting reviewed and checked for accuracy. Steve Mastellotto made the acceptance motion, Steve Pellarin seconded and the motion carried.

Short Presentation by Tom Sobocan

Tom showed a variety of astronomical photos taken at the observatory and locations such as Malden Hill. They included a rare and difficult shot of a jet airliner streaming contrails as it passed very near the Moon. He included a Moon shot taken by the Apollo Astronauts on their first approach. Others were piggy backed on the C14 looking at the Pleiades being occulted by the Moon.

Main presentation by Dave Panton and Juliana Grigorescu
The Adventure of Spectroscopy

Dave opened by describing how Susan Sawyer-Beaulieu took an interest in his idea of building a spectroscope last Summer, loaning a book describing how a simple spectroscope could be made from a portion of a CD disk. Enthused by its success it also impressed Juliana with her extensive knowledge of physics and astronomy. His brother Stan in Peterborough also took an interest, offering his expertise writing computer programming to analyze photographic images should any be obtained. The idea was to build a spectroscope "from first principles" as a learning project. Should it prove usable at the observatory it would be donated for future observers to enjoy seeing and photographing astronomical spectra in the C14.

Given the many variables involved and potential for embarrassingly poor results they decided to keep the project under wraps until successful photographs were obtained. It turned out to be a project fraught with an astounding number of variables and unknowns.

Juliana described the basic principle of a transmission grating spectroscope after Dave showed the construction of its basic components, a variable width slit, tubing turned to fit the C14 diagonal and the final collimating lens and grating mount tube and clamp.

Dave was able to see spectra easily in the spectroscope mounted the C14. In dozens of trial shots he caught a dim photo of Vega's spectra taken with a small hand held point and shoot digital camera. This was the shot that he described as "now I was hooked". This led to building a shop test bench, a mount for the camera but less than successful trials at Hallam. .

Juliana saved the day with her Nikon D50 DSLR camera with its 55mm telephoto lens. Good photos began to appear after many shop trials to find suitable settings. Stan was now doing computer analysis of spectra from test light sources. Dave showed how the camera mount was modified to hold the Nikon and how it was used at Hallam after initial calibrations were done on a distant farm yard light. Working in the cold of the observatory Al DesRosiers joined in to ably assist taking the final star shots a mere three days ago!

Juliana took the stand and provided members with some of the basic physics of the atom, electrons, their changing orbits, photons and conditions needed for elements to generate or absorb light. Each element exhibits unique spectra illustrated by Juliana comparing spectra of Neon light from a standard source with one taken in the shop.

She explained star spectra is highly complex due to all their elements and the interactions in the extremely hot environment. Spectra of some stars and our own Sun were shown along with characteristic graphs of their light intensity curves across their color spectrum. The graphs came from Stan's computer programs and the shots from Hallam observatory. Reflected sunlight spectra from Mars and the Moon also shot at Hallam showed dark lines where some light was absorbed by our atmosphere or not reflected from their surfaces.

Members and guests were surprised on receiving small transmission spectroscopes to take home and do some of their own basic research and return to the next meeting with their findings.

Juliana concluded with suggestions spectroscopy has now been proven to be possible at Hallam with basic equipment. A more capable commercial spectroscope and CCD camera for Hallam purchased under a grant might equip Hallam well enough to become a recognized important small observatory.

Pierre thanked Juliana, Dave and his brother Stan in absentia for putting a lot of effort into the project and to introduce amateur spectroscopy to RASC Windsor.

Coffee Break and 50/50 Draw

Members enjoyed the usual goodies at coffee break and many also tried their new spectrographs to see spectra from a CFL light brightly shining from a tiny hole in a metal container set up at the front of the room for that purpose. Some checked out street lights from the front porch in the cold Winter night.

Notes by Pierre

Pierre announced the program for February will be a video from PBS "Seeing in the Dark". He also noted the need for speakers from within our Centre for future programs. A Directorate of Observing is needed. Membership is increasing, always a good sign. Also needed is a Director of Public Education to "carry the banner" of local astronomy. In times past RASC Windsor Centre was well represented at National. Without a National Representative we are no longer heard so that is another opening to be filled. The next Council Meeting will be held at Donna Ronconi's home on February 12th 2008.

Secretary Dave Panton, no report

Treasurer Ken Garber

Ken reported our current bank balance is $4557.37. Membership cards are available. There are two planispheres in stock. All our calendars have been sold. Ken also reminded members to keep their memberships up to date and for those wishing to use the observatory, to keep their key fee current.