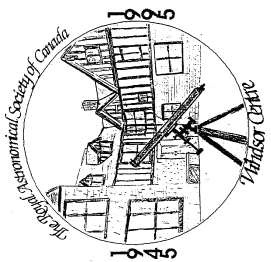




# AURORA



January 2011

The Royal Astronomical Society of Canada - Windsor Centre

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*Photo by Brian Thomas. Messier 42 was imaged on December 28, 2010 through the Celestron 14 at Hallam Observatory. Dave used his modified Canon 5D and a focal reducer (f/7) for this image. The image is a combination of 8 3 minute exposures at ISO 800 and processed with Images Plus. See page 6 for more of Brian's images.*

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## Calendar of Events

### Our next meeting...

Tuesday February 15, 2011

7:30 p.m.

at

Maidstone K of C Hall

10720 County Road 34 (Old Highway #3)

### Main Speaker...

Juliana Grigorescu

### Topic...

"It's All Stars!"

### Activities...

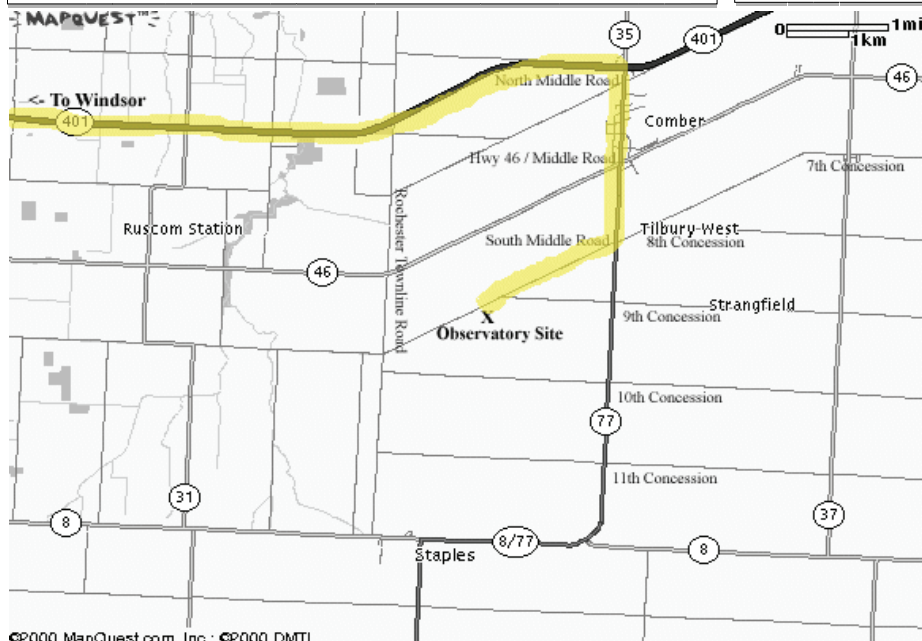
**Jupiter Double Transit:** January 24th 7:05 p.m. both Io and Ganymede will be crossing the disk of Jupiter - note this a moon transit and not a shadow transit however Io's shadow will join them at 7:57 p.m..

**Mars in Conjunction with Sun:** Thursday February 3rd Mars drifts behind the Sun and will emerge in the morning sky.

**Hallam Open House:** Saturday February 5th at 7:00 p.m.

**Conjunction:** The Moon and Jupiter will be in conjunction on Sunday February 6th. They will be less than 5 degrees apart and will make a nice photo opportunity.

**Council Meeting:** Tuesday February 8th at 7:30 p.m. at Pierre Boulos' house.



### Hallam Observatory Site

**Directions:** The map above shows the Comber area and it includes the major highways (401, 77, 8 and 46) that are in the area of the observatory.

The most direct route from Windsor is "highlighted" on the map which is to take Highway 401 East to Highway 77 South to South Middle Road. Turn right onto South Middle Road and go about 1 kilometer and just after the point where Concession 9 joins it (it is hard to see this intersection) you will find the observatory site on the South side (left) of the road.

If you hit the Rochester Townline Road (you come to a stop sign) you have gone too far.

## Submissions

Aurora is published monthly except for July, August and December. The September, October, January, March and May issues are full newsletters (usually 6 pages) with a number of member submitted articles. The November, February, April and June issues are short flyers (2 pages).

Submitted articles can be of any length from a paragraph to multiple pages. I can scan pictures and/or diagrams (both prints and film) to support your article and the originals will be returned to you.

Submission deadline is the 1st of the month.

Editor: Steve Mastellotto Email: mmastellotto@cogeco.ca

## Membership

The Windsor Centre of The Royal Astronomical Society of Canada meets on the 3rd Tuesday of every month (except July and August) at the K of C Maidstone Recreation Centre. In addition to regular meetings the centre hosts a number of observing nights, a picnic and a December social. Members receive a copy of the Observer's Handbook, a subscription to SkyNews magazine and access to the Centre's library and telescopes. And optionally the RASC Journal in print form—online version free.

Annual Membership Fees: Please see the RASC website at [www.rasc.ca](http://www.rasc.ca) for current rates.

Contact Greg Mockler at (519) 326-7255 or visit our website at <http://www.rascwindsor.com> for more information.

# November 2010 Meeting Minutes by Dave Panton

Minutes from the meeting of November 16, 2010 at the Maidstone Recreation Centre.

The meeting was chaired by President Paul Pratt. Paul asked for members to read the minutes from the October meeting. Tina Chichkan made the motion to accept them, Donna Ronconi seconded and the motion carried.

Paul then introduced our main speaker, Paul Gray, a very accomplished RASC member from the province of New Brunswick currently on a speaking tour of RASC Centres in Ontario.

**Main Talk, Paul Gray: Trials and Tribulations of a Supernova Hunter.** Paul briefly reviewed his interest in astronomy going back to 1984 when he witnessed a partial eclipse of the Sun. It led his joining the RASC at age 16 and persevering ever since, attending star parties and observing 109 Messier objects on two Messier Marathons. He served as President of the NB Centre and has also served on the board of RASC. His prime astronomical interest is the search for Supernova in which he has had six successes to date.

The technique in finding objects which appear rarely in galaxies typically 50 to 100 years apart and last only a few days is to photograph lots of galaxies frequently and compare images to detect the enormously bright spots of light that appear when a star suddenly erupts into brightness often a billion times normal. At age 19 via a combination of circumstances involving Paul's university attendance, a friend in the right place, use of the university's telescope and early CCD camera Paul was fortunate in discovering Canada's first super nova, 1995F. The event made headlines all across the continent and resulted in many radio and TV interviews. Paul was sold on searching for these rare events. Years later Paul is equipped with his own telescope, CCD camera and ancillary equipment making the searches more systematic and effective by using Maxim DL and it's very efficient "blink" image comparison program to help detect changes in the 50 galaxies he monitors on a regular basis. There are not many amateurs in the field partly due to the patience it demands. Paul searched 15,000 images to find a single supernova. Then in a rare moment he found two a mere 15 images apart. A reward is personal satisfaction in making a contribution to the world's scientific knowledge base and in being officially recorded doing his part in astronomical history.

President Paul Pratt thanked Paul for coming all the way to Windsor to present to the RASC Windsor Centre with his very unusual astronomical story. He also wished him success in future searches.

## Coming Events

Next **observatory public open house** date Saturday Dec 11th at 7:30 p.m.

**December Social:** Friday December 3rd starting at 6:00 p.m. Pot luck supper served at 7:00 p.m.

## Annual Elections

Dr. Pierre Boulos, Past President rose to thank current council and executive for their many good works this year past. He presented a list of nominees who have agreed to serve for the coming year. Also Pierre noted the list is not exclusive of others who may wish to run in an election for any position. All that is required is a nomination from the floor.

|                  |                       |                  |
|------------------|-----------------------|------------------|
| <b>Executive</b> | President             | Paul Pratt       |
|                  | First Vice President  | Peter Bondy      |
|                  | Second Vice President | Sue Iihola       |
|                  | Secretary             | Arthur Rae       |
|                  | Treasurer             | Greg Mockler     |
|                  | National Council Rep. | Mike Mastronardi |
|                  | Past President        | Pierre Boulos    |

Susan Sawyer-Beaulieu made the motion to accept the list, Sue Iihola seconded and the motion carried.

|                |                   |                       |
|----------------|-------------------|-----------------------|
| <b>Council</b> | Tina Chichkan     | Dave Gabriele         |
|                | Steve Mastellotto | Randy Groundwater     |
|                | Dave Panton       | Steve Pellarin        |
|                | Paul Preney       | Donna Ronconi         |
|                | Brian Thomas      | Susan Sawyer-Beaulieu |
|                | Joady Ulrich      |                       |

Steve Pellarin made the acceptance motion, Brian Thomas seconded and the motion carried.

**Appointed Positions** (see page 4 for a complete list):

|                          |                    |
|--------------------------|--------------------|
| Honorary President       | Dr. William Baylis |
| Directorate of Observing | Juliana Grigorescu |
|                          | Matt McCall        |
|                          | Steve Pellarin     |

## Business

**Awards, Paul Preney and Joady Ulrich:** Paul and Joady spoke of the long and dedicated service (25 years) to RASC Windsor Centre by Dan Taylor. Dan has pursued the problem of Light Pollution Abatement over many years with notable success not only locally but in helping other communities draft sensible lighting legislation. Dan was presented with a certificate specially prepared for the occasion.

**Public Education, Randy Groundwater:** Paul noted Randy's Rotary Club presentation and observing session at Hallam brought in a donation of \$250. He also mentioned a new DVD titled "Journey to the Stars" is an excellent astronomy teaching aid.

**Treasurer, Greg Mockler:** Greg reported our current bank balance stands at \$7,337.

**Librarian, Rick Marion:** Rick had nothing to report.

*(Continued on page 5)*

## Hallam Happenings by Dave Panton

Comet Hartley was imaged in several sessions throughout its' passage nearest Earth. All had high hopes for a spectacular (or at least naked eye) comet but it only became binocular visible at best. Nevertheless, it provided lots of valuable astroimaging practice and proved our observatory in Comber is now equipped well enough to do serious astrophotography.

The dome remote rotate project suggested in the last Hallam Happenings article has been completed thanks to donations for the heart of the mechanism, a salvaged D.C. motor, gearbox and bearings from Dave Gabriele. Other components and materials were donated by another member. Al DesRosiers took on the ugly task of smashing out a slot in the concrete dome floor for control wiring piping and filled it in with ready mix concrete and then worked on the installation and final adjustments.

Observers can now rotate the dome via a switch mounted on the observer's ladder. Now we have a working dome rotate drive, automated dome rotation controlled from the computer is a future possibility.

After Al's necessary assault on the floor it was feared telescope pointing might be lost and require total re-leveling, polar alignment and creating a new T-Point model. This is an ugly job and can waste quite a lot of observing time. Later it was found pointing accuracy had not been affected in the least.

Steve Mastellotto installed the latest version of Sky 6 from Software Bisque on our computer. A big advantage is ridding us of the confusing daylight savings time changes on the computer. The old program was out of sync with reality requiring the computer clock be set to a different time than the atomic clock for a period in Spring and Fall.

Al battled an unusually large infestation of cluster flies in the dome this year. These beasts gather in large masses to overwinter in protected spaces. There were hundreds in the dome and there is still evidence of them at this writing. He also coped with a great grass growing season, hauling his heavy duty lawn motor to Hallam and mowing the grass a total of nineteen times!

Our little collection of Hallam tools saved the night for Moe Tre-

panier when he came in looking for a special set of pliers after midnight. His combine had a minor failure while he was harvesting soybeans in his big field South of the observatory. We happened to have a pair that did the job for him. The member on hand was rewarded with a two hour ride along with him in his big "Gleaner" combine as he casually harvested 36 tons of beans in the blackness of night..

Visitor nights were all successes with lots of people showing up on clear nights and others curious to see the observatory and learn a little about astronomy on overcast evenings. Randy hosted a group from Cottam United Church. And another from the Rotary Club of Leamington who generously donated \$250 to our treasury.

The dome shutter mechanism again began to run slowly for unknown reasons Al and I could not be certain of the cause until we changed a weak motor which only needed some minor internal maintenance. We must recall in the event of total failure the dome can always be manually opened and closed. Recall also it is vital in Wintertime to never fully close the shutter. The lower section must remain hanging from the big latch, clear of the bottom rim of the dome. If parked fully closed it is very nearly impossible to open it again until weather warms enough to thaw it from the bottom seal. Remedies to solve this problem have all failed but leaving the shutter hanging open a tad always works.

In spite of nearly constant cloud cover and heavy snow drifts the observatory has been used primarily for astroimaging during brief breaks. Brian Thomas recently obtained an excellent image of M42 via the C14 with his Canon 5D camera.

A new threat to our skies appeared over Christmas as the Mortenson Company from Minneapolis, wind turbine contractors for the Brookfield Power Comber project began setting up a construction yard across Hwy 77 from the Comber truck stop. There are already 22 Mercury vapour fixtures blazing into the night sky with many more to come. Lakeshore Building Department authorities have been advised of our serious concerns regarding the firm ignoring Lakeshore lighting standards. If they can, so can others and our observatory will become nearly useless.



*The dome rotation project is complete. As seen in this photo all moving parts are safely covered by Plexiglas. A wheel at the top of the mechanism runs on the dome track and the entire dome rotates by friction which can be adjusted by the black knob.*

## November 2010 Meeting Minutes

(Continued from page 3)

**Newsletter Editor, Steve Mastellotto:** Steve was out of town on business (in Florida!).

**Observatory Director, Dave Panton:** Dave reported the dome rotate project was well under way.

**Christmas Social, Peter Bondy:** Pete asked participants to send him e-mails indicating the food items they planned to bring to the affair to help him plan.

**National Council Representative, Mike Mastronardi:** Mike had nothing to report.

### Short Talks

**Short Presentation, Art Rae:** Art has ventured into astrophotography by setting up his DSLR camera on a tripod in his yard and successfully caught some pretty presentable images of comet Hartley. He showed how poor they look until stacked and processed to bring out their finest detail.

**Director of Observing, Steve Pellarin:** Three Meteor showers are upcoming to conclude the year. The Leonids are tomorrow night! Then the Taurids follow and finally ending 2010, the Geminids which happen to peak at the time of our Dec 11th open house at Hallam. Another naked eye event, a total lunar eclipse will occur early in the morning of December 21st between the hours of 2:40 to 3:53 a.m..

Steve pointed out that Winter is a great time to see lots of galaxies. Some are observable in field glasses, 7x50 or 10x50 recommended. Use them merely to enjoy the vast fields of stars in our home galaxy by cruising the Milky Way.

Paul thanked Steve and adjourned the meeting a few minutes past 10:00 p.m.

## 2011 Council of the RASC - Windsor Centre

### Elected Officers

|                       |                  |
|-----------------------|------------------|
| President             | Paul Pratt       |
| 1st Vice-President    | Peter Bondy      |
| 2nd Vice-President    | Sue Iihola       |
| Secretary             | Art Rae          |
| Treasurer             | Greg Mockler     |
| National Council Rep. | Mike Mastronardi |

### Councilors

|                       |                   |
|-----------------------|-------------------|
| Tina Chichkan         | Dave Gabriele     |
| Randy Groundwater     | Steve Mastellotto |
| Steve Pellarin        | Dave Panton       |
| Paul Preney           | Donna Ronconi     |
| Susan Sawyer-Beaulieu | Brian Thomas      |
| C. Joady Ulrich       |                   |

### Appointed Officers

|                                |                    |
|--------------------------------|--------------------|
| Honorary President             | Dr. William Baylis |
| Past-President                 | Dr. Pierre Boulos  |
| Librarian                      | Rick Marion        |
| Recording Secretary            | Art Rae            |
| Public Education Director      | Randy Groundwater  |
| Public Relations Director      | Sue Iihola         |
| Directors of Observing         | Matt McCall        |
|                                | Steve Pellarin     |
|                                | Juliana Grigorescu |
| Light Pollution Abatement Dir. | Dan Taylor         |
| Hallam Observatory Director    | Dave Panton        |
| Aurora Editor                  | Steve Mastellotto  |
| Webmaster                      | Steve Mastellotto  |



*Elephant Trunk Nebula (IC 1396A) photo by Steve Mastellotto*

## Astrophotos by Brian Thomas



*Top Left: The Crab Nebula (Messier 1), Top Right: Messier 82, Middle Left: The Double Cluster (NGC 869 and 884) along with Comet Hartley, Middle Right: Bode's Nebula (Messier 81), Bottom Left: The Pleiades (Messier 45), Bottom Right: The Andromeda Galaxy (Messier 31 along with 32 and 110).*