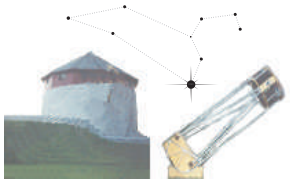
October 2010

Regulus

RASC Kingston Centre



Fall'n'Stars 2010

Friday night (Sept. 17/18) featured some clear skies with lots of telescopes out, including the Centre's 24-inch Venor. Read the full report on page 9.

Reports & Other Items

From Kingston Centre, the RASC, and Beyond...

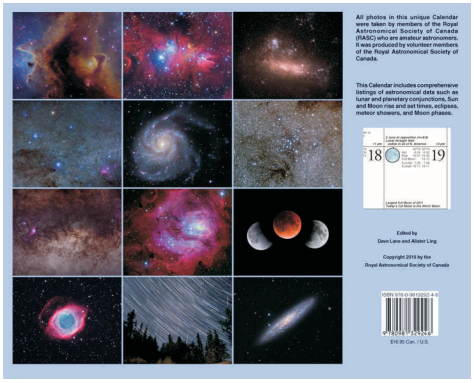
2011 Observer's Calendar

Kingston Centre has ordered 20 copies of the 2011 *Observer's Calendar*. We hope to have them available at the October 8th meeting. They will be priced at $17 this year.

2011 Observer's Handbook

The 2011 *Observer's Handbook* is supposed to be shipping in mid-October directly to all members in good standing. In addition, Kingston Centre has ordered a small quantity of extras to resell locally. They should be available in time for the November 12th meeting and will sell for $25 this year.

Note: Ordering directly from the rasc.ca website for single quantities will be much more expensive (i.e. the Calendar would be approx $24.80 with shipping, handling and HST, the Handbook $33.50).



2009-2010 Volunteer Hours Summary for the RASC-KC

The following is a summary from the detailed log that **Kevin Kell** keeps for tracking the volunteer hours logged by members of the Kingston Centre.

In general, volunteer hours com-

Continued on next page...

Upcoming Meetings

Friday, October 8, 2010
Members' Night 7:30-9:30 p.m.
various members
Astronomy Software Demonstrations

Friday, November 12, 2010
Annual Meeting 7:30-9:30 p.m.

Friday, December 10, 2010
Members' Night 7:30-9:30 p.m.

Meetings are held at 7:30 p.m. at Stirling Hall Theatre "A" on Bader Lane at Queen's University in Kingston, Ontario. Our meetings are co-sponsored by the Queen's Physics Department and include Astronomy lectures open to the public. ★

KAON Public Observing

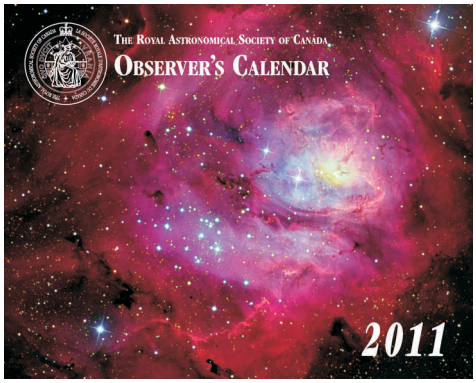
Saturday, October 9 7:30 p.m.
Saturday, December 19 7:30 p.m.

KAON (Kingston Astronomy Outreach Network) sessions are held at Queen's Observatory on the 4th floor of Ellis Hall. ★

More info at kingston.rasc.ca

RASC Kingston Centre

In this issue:



...Reports & Other Items

...continued from front page

piled during any organizing activity for the Board of Directors (regular meeting preparation, attending regular meetings, public talks, public outreach events, preparation for any of those events) count.

For regular members, volunteer hours compiled during public outreach activities, preparation for those events, but perhaps not actually attending a regular function like a meeting, will count.

2009 October: . . . . . 80 hours
2009 November: 70
2009 December: 43
2010 January: 55
2010 February: 51
2010 March: 44
2010 April: 39
2010 May: 38
2010 June: 49
2010 July: 52
2010 August: 34
2010 September: 58
2009-2010 Year total: 613 hours

Summary:

2009-2010 Year Total:	613 hours
2008-2009 Year Total:	1053 hours
2007-2008 Year Total:	776 hours

A great big thanks goes out to all those who step forward and help out!

Buckyballs in Space

After four decades of unsuccessful searches, C_{60} has been found in space at last by astronomers using the Spitzer Space Telescope. This continues a tradition of finding ever more complex molecules in space. Clear evidence of C_{60} and C_{70} was found in a spectrum of the planetary nebula Tc 1 which is 6500 light years distant in the constellation of Ara.

Interestingly, NASA says Tc 1 does not show up very well in images, so instead it used an image of NGC 2440 in its artist's conception of buckyball emission. That sounds like a big challenge to any southern hemisphere CCD imagers out there! Tc 1 now falls into the category of obscure, but famous, object. ★

2010 September 27. This image was taken by the Cassini spacecraft from a distance of 1,282,259 kilometres.

RASC-KC Board of Directors

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Librarian:	David Maguire
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KAON:	Susan Gagnon
Webmaster:	Walter MacDonald

Regulus Needs You!

ITEMS OF INTEREST FROM MEMBERS—full articles, or even just a couple of paragraphs are always welcome. Items are gratefully accepted on each and every day of the year! Send items to:

walter2 (at) starlightccd (dot) com

or:

Walter MacDonald
PO Box 142
Winchester ON K0C 2K0

The Fine Print:

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RASC Kingston Centre
PO Box 1793
Kingston ON K7L 5J6

E-mail:
kingston@rasc.ca

Website:
kingston.rasc.ca

President's Message

Susan Gagnon

Welcome to Fall 2010! I hope that everyone had a great summer. All that daylight gives astronomers a chance for some guilt free sleep! Over the last few months there have been some terrific observing nights but they were few and far between. We are probably the only group looking forward to nightfall at a reasonable hour.

Several events were attended by KC members in Napanee, Maberly, and Perth; in Smith's Falls a new club tackled a full week of sidewalk Astronomy. I envy their energy and enthusiasm. Closer to home, I had a chance to participate in one Queen's open house event and two observing sessions after the Thursday night Movies in the Square. Terry Dickinson's August **Charleston Lake Star Party** was well represented by KC members and we had a great sky and some pretty bright Perseids. As usual it was well attended by the public.

September 10th KC Meeting

We got off to a good start in September with **Terry Dickinson** as our speaker at the meeting on the 10th (see also the report on page 5). We were presented with a full demonstration of how lucky we are to be living within 20 to 30 minutes of some of the best dark sky sites in Ontario.

Michael Billingsley, a Vermont member dropped in and spoke to us of some ideas he has on the origin of certain craters on Mars. Perhaps not created by impacts but subsurface erosion by long gone underground rivers. He has requested more detailed NASA photos to assist in his research. Good luck Michael!

Queen's Obs'y Open House

The following night was open house night at Queen's and it was quite busy even though the skies were overcast. **Wolfgang Rau** spoke in the warm room on dark matter and it seemed to be a hit. There has been a lot of construction in the building seemingly centered on the elevator, but it is to be complete by October. Let's hope so, it has been quite a dirty disaster zone.

Astrophotography Workshop

On September 15th, several KC members attended an astro-photography workshop in Napanee at the Smiling Wilderness restaurant. It was hosted by the county tourism folks who ran the Best Day Ever campaign for Lennox and Addington in 2010. Over 100 of us came out to get tips from **Terry Dickinson** and the Q and A was often over my head, with many camera club folks in attendance. There is a photo contest with cash prizes that you can read about on their website (see page 4). It was their way to kick off a campaign to sell the county as a dark sky destination. There was a lot of very good free food too!

Fall'n'Stars 2010

September 17–19th: a smallish but hardy group attended the **Fall'N'Stars** camp out at Van-derwater Conservation Area (see report on page 9). This is an annual event that we co-host with **Belleville Centre**. Plenty of photos can be seen on the KC website. The swap table was very busy and there are several Centre members who look forward to trying out new equipment. The weather was variable for night time observing but the faithful were rewarded on Friday night with a Jupiter/Ganymede shadow transit. It really was the highlight of the weekend. Thanks to all who came out. I look forward to next year.

October 8th KC Meeting

Our October Workshop-style meeting should be very interesting for all who want more info on planetarium software. **Fred Barrett**, **Ken Kingdon**, and **Doug Angle** will demonstrate free and purchased software which can be used to help in planning observing sessions and in printing charts. I have been using the same software for years and with what I have heard so far I may have to update my stuff! Come on out and see what they have to say.

October 9th KAON Session

The October KAON open house at Queen's is an official KC par-ticipation night and if there is anyone who would like to do a 15–20 minute talk please let me know. If it is cloudy you would be doing it twice if there is a big crowd.

November 12th KC Meeting

Please keep the November meeting on your radar as it will be a member's night meeting, and email me if you wish to be on the list of presenters. I am hoping to have a guest speaker for December's meeting but the speaker and title are yet to be confirmed. ★

Above: The Venor scope after a good night.
Below: A big scope and a big ladder require a big vehicle!

For Your Compendium of Esoteric Facts

Walter MacDonald

WITH DAYS SHORTENING, nights lengthening, and Halloween growing near it is only natural that our thoughts should turn to the dead —and some of them were astronomers. (Insert blood-curdling scream here!)

Throughout history dead people have been interred in grounds sacred or not, either singly or in mass graves. Some had resting places in more formal tombs or crypts, perhaps even inside a church building. But did you know that a few "lucky" people are buried in observatories?

One observatory with such permanent "staff" is the Alleghany Observatory in Pittsburgh, home to a giant 31-inch refractor. Conveniently, such a large telescope requires a large pier and so buried in vaults in the basement section of that pier are **James Edward Keeler** (a former director there, and also of Lick Observatory), and **John Brashear** (the preeminent optician) and his wife **Phoebe**. The Brashears' epitaph is "We have loved the stars too fondly to be fearful of the night." Of course nobody (no body?) was buried in their telescope pier when they were observing, so that was easy for them to say!

At Lick Observatory, the remains of its benefactor **James Lick** were interred at the base of the pier of the great 36-inch refractor. The legendary observer **E. E. Barnard** was mindful of this and thankful for the company of the observatory's janitor, slumbering nearby, as he recounts:

At times it was pretty lonesome. For when one stopped to think, the dead body of James Lick lay under the pier of the great telescope only a few feet away. This was specially trying after the servants had reported seeing Mr. Lick looking through their window at them one dark night. The proximity of a live human being, though sound asleep, did much to offset the equally close proximity of a dead human being who according to the above reports might not be so sound asleep as is customary under such conditions.

Oooh, spooky! Happy observing.★

Shooting the Stars in L&A

Kevin Kell, Hank Bartlett

KEVIN KELL REPORTS: A number of RASC-KC members were at the *Shoot the Stars in L&A County* workshop last night with **Terence Dickinson** in Napanee. In the audience I saw **Steve Manders, Fred Barrett, Hank Bartlett, Susan Gagnon** and me. 106 photographers who have an interest in astro-photography were there. This turnout astounded the organizers, and I was pretty impressed too!

Terence's talk was very similar to our Friday Sept 10th RASC-KC meeting but with some updates and more geared towards the photo contest. They handed out colour copies of relevant sections of Terry's books *Nightwatch* and *The Backyard Astronomers Guide*, nicely bound in a spiral booklet.

The gist of the talk is that to take good or better astrophotos from a non-telescope point of view, don't even think about handheld consumer cameras but go for a Digital SLR (DSLR). And after seeing his 25 second exposure over his house with the Milky way showing up WAY better than my low-light all-sky camera does in 120 seconds, and my handheld consumer camera shots of 64 seconds, I have to agree...if you have the $$$.

The photo contest is part of a marketing idea for L&A county economic development. There are three cash prizes: $250, $125, $75. Photos must be taken in L&A county. There is a maximum of three submissions per person, reformatted down to 1024x768 and emailed into the contact person. Sounds like fun!

HANK BARTLETT REPORTS: The evening began with a pre-reception meeting at "Frankie G's" pizza where the wisest of RASC-KC members had a brew and shared oven baked fries. FG's is right next door to the "Smiling Wilderness" with a nice pub atmosphere and great pizza.

As Kevin stated, L&A was overwhelmed by the response and 106 people would have been totally impossible for Terry to coach in the field; the cloud cover was a good thing in the long run. As well, when we got back to the burgh where imaging was going to happen, the adjacent fire department was hopping with a fire call and there were bright lights and trucks coming and going from the water filling station.

As for the slide show and talk, it was very informative and some great recommendations for cameras and imaging were given by Terry. Canon is for sure his favorite brand of camera. The booklet that was supplied is full of good excerpts from the *Backyard Astronomer's Guide.* I looked through it today and got good tips for my new Canon Rebel XS before hitting Fall'n'Stars 2010. If you are interested check the web site Kevin sent out, you still may be able to register for the contest.

I am glad I took this event in.

HOW TO ENTER THE CONTEST

Go to the contest web page at:

lennox-addington.on.ca/shoot-for-the-stars.html

and download the contest guidelines. The deadline for entries is Monday, November 1 at 5 p.m.★

Meeting Report: September 10

Kevin Kell, Walter MacDonald

The September meeting, coming as it does after the summer break, always seems particularly energetic. With **Terence Dickinson** on tap, this year's was no exception.

KC's newest affiliate member, **Mark Coady**, came from Peterborough. (His primary affiliation is with the Belleville Centre). Even better, **Michael Billingsley** came all the way from Vermont and even gave a talk after the break about Victoria crater on Mars and his theory that it is not a meteor impact crater.

There were lots of announcements including a Queen's Observatory Open House on Saturday evening at 7:30, with additional ones coming up in October and December for which KC needs to supply a speaker and some hands on deck.

Ken Kingdon and **Doug Angle** were received their Finest NGC Certificate pins. Congratulations! Hopefully this will serve as inspiration to other Centre members who may be working on completing an observing list.

Terry talked about his current observatory setup near Yarker. Its large 24'x20' size allows for the use of multiple telescopes during sessions (he always likes to have lots going on!). He uses a 6" AstroPhysics refractor, 8½" Maksutov-Newtonian, and a 20" f/4.3 Starmaster Newtonian. He also has a small travel telescope for his periodic global jaunts.

Like all of us he has done his fair share of public viewing sessions. For the last 27 years the Charleston Lake Star Party has been a major part of that. This provincial park has a nice, dark sky with a big field that is good for observing. Terry has attended many star parties in many locations, and not all of them have a great sky. Even Starfest, while good, has deteriorated noticeably over the last 25+ years.

Kim Hay, Ruth Hicks, and Terry Dickinson have a chat during the break.

Susan presents Ken Kingdon (left) and Doug Angle (right) with their NGC pins.

Having recently become an "official" senior citizen, Terry has been doing astronomy for over 50 years now. He talked a bit about the procession of telescopes he has owned. The first one was basically what we think of as a "trash scope" today! His early scopes included a 6" reflector, a 3" Unitron, and a 7" f/17 refractor. Telescopes were quite expensive back then compared to the current day. Cast iron mounts and Ramsden eyepieces were the state of the art! Telescopes have come a long way since then, not just in price, but also in features.

Next Terry talked about light pollution. He noted how lucky we are to have most of the most southerly area of dark sky in Ontario. Even Muskoka skies (traditionally very dark) are now quite light polluted due to the large cottage population. A number of people in the audience pointed out their favourite local dark sky sites and Terry enumerated a number of great observing spots around L&A county.

This talk was illustrated with many great DSLR pictures that Terry has taken. DSLRs can easily do things that were almost impossible with film just a few years ago, and combined with various lenses and very dark observing sites the images were truly spectacular.

Terry's Perfect Observing Site would meet the following criteria:

- > 4000' altitude
- above freezing all night
- > 300 clear nights per year
- negligible light pollution
- comfy on-site accommodation
- no mosquitoes!

Terry's then reviewed four locales with these ideals in mind:

1. **Texas Star Party**, but the accommodation is quite spartan (unless you have an RV).
2. **Arizona Sky Village**, started by Jack Newton, has great rental accommodation and the best zodiacal light he has ever seen. This site is tops for North America with ~260 clear nights per year.
3. **Australia**, despite its desert reputation tops out only around 50% clear skies. Many visitors have been clouded/rained out.
4. **Atacama Desert in Chile**: As it turns out, this is the place that meets **all** of Terry's requirements for world's best observing spot. It is the darkest, driest site in the world. On his first trip down in 1992, he was able to take a 7-hour star trail picture. Accommodations at the Atacama Lodge are excellent and there are good stores and restaurants in the area. With ~330 clear nights per year it is truly the place to be! ★

Speaking of the Zodiacal Light, Mr. Elvins described its appearance as seen in these latitudes, and regretted that owing to the introduction of electric arc-lamps, Toronto was no longer a good observing station.

-Toronto Astronomical Society Meeting 1900 March 6

Observing Reports: September 2010

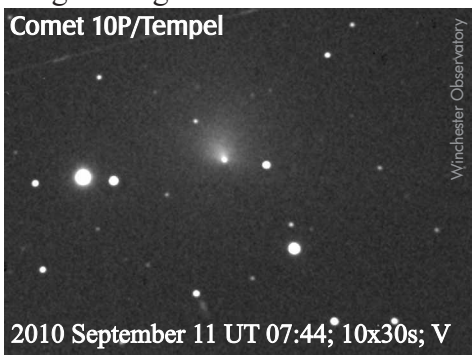
Various Members

Thu/Fri, September 2/3

Kevin Fetter: I observed a lunar occultation, something I haven't done in awhile. I woke up last night to a clear sky—I was expecting to see a cloudy sky, so was nice to see. I looked to see what stars would be occulted by the moon and I had a magnitude 7 star (Tycho 1864 564) that I could observe reappear. So I aimed at it and watched it reappear. It reappeared at 6:57:45 UT (Sept 3). Then it was back to my regular satellite observing.

Fri/Sat, September 10/11

Walter MacDonald: It was a cool, clear, transparent night with no moon. How nice it would be to have a bunch of these this fall! The AAVSO Chat Room was hopping tonight with half a dozen occupants doing imaging runs. The Winchester Observatory *Live Session* was running as an all-night variable star run was underway. Around 03:30, I got up an interrupted the session to grab a few images of Comet Tempel, which is moving slowly southward in Cetus. The nights are longer now, so I had to add a bunch of cataclysmic variables to keep the telescope busy for the full night. 216 variables were imaged tonight.

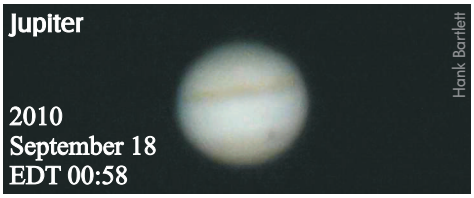


Hank Bartlett: If you ever want to clean an SD card I left one in my work pants today, it came through the wash fine with all data still intact.

Walter *joins in*: Well, I guess that's one way to clean up your images! Which developer—I mean detergent—did you use? Does this mean you are all washed up as an astroimager?

Fri/Sat, September 17/18

It was a clear night at Fall'n'Stars 2010. **Hank** *reports that he and* **Susan G** *observed a shadow transit on Jupiter. Various night shots appear on pages 1, 9, and 10 of this issue.*

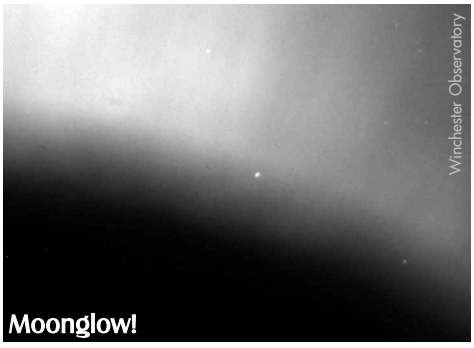


Sun/Mon, September 19/20

Walter: The CSC called for a clear night except from 23h to 2h, and that forecast turned out to be just about spot on. The *Live Session* web page was running and a few people in the AAVSO Chat Room tuned in to follow Winchester Observatory's variable star imaging run.

One interruption occurred at 23h because I forgot to remove the Aquarius variables from the night's plan: they were too close to the almost-full moon! The image below shows what it looks like when that happens. I restarted the run (and the *Live Session* page) and things continued on until 23:24 when cloud put an end to the run. A total of 94 variable stars were imaged.

I went to bed around midnight and when I woke up at 7:30 the skies were crystal clear again.

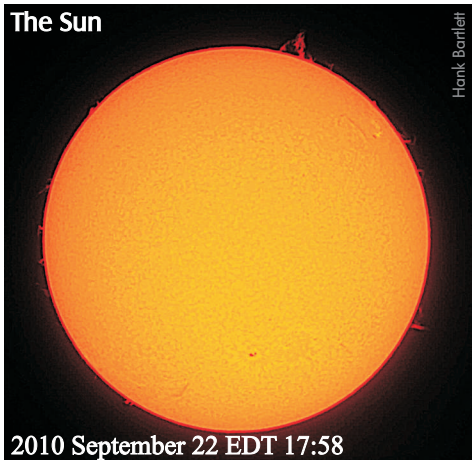


Mon/Tue, September 20/21

Walter: A great imaging run tonight (177 stars) from 20:37 to 05:34. I was able to finish the Mira stars and filled out the night with CVs.

Wednesday, September 22

Hank *reports that he was imaging the Sun, the Moon, and Jupiter with two different cameras: his old Canon A70 and a new EOS.*

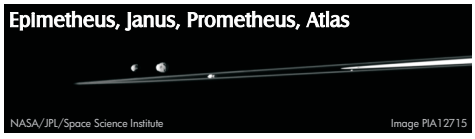


Mark Coady: I finally had a good opportunity, despite the full moon, to try out the William Optics Binoviewer that I picked up from **Norm Wellbanks**' estate sale at Fall'n' Stars. I was strictly looking at the moon and Jupiter and it is a definite keeper with nice crisp images.

Hank *replies*: That is good to hear, I am glad his equipment is back in use.

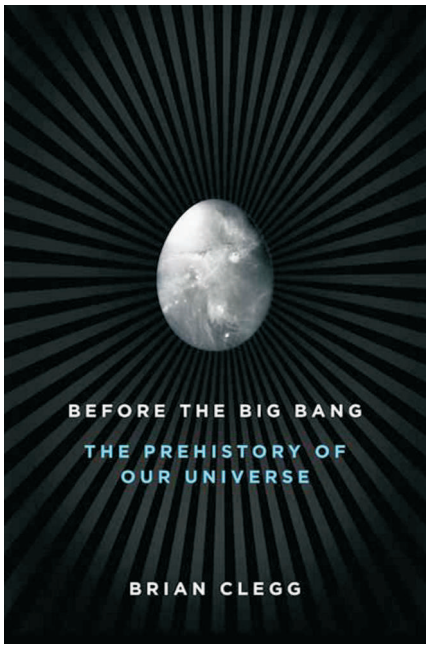
Mark Kaye *notes*: Norm's WO66 has been a real hit at public star nights. People are amazed at how well such a small scope works.

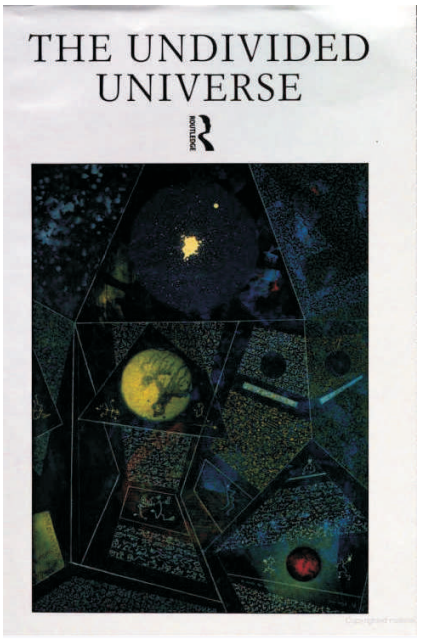
Hank *gets the last word*: As was I when Susan and I observed the shadow transit on Friday night through his Celestron 80ED with some of the many eyepieces. He will always be a a part of our observing sessions.★

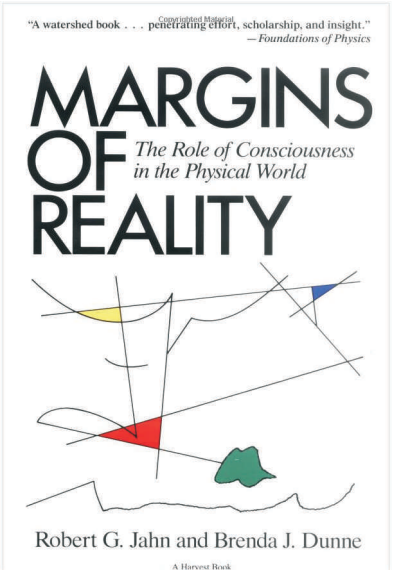


Book Reviews

Hal Boden



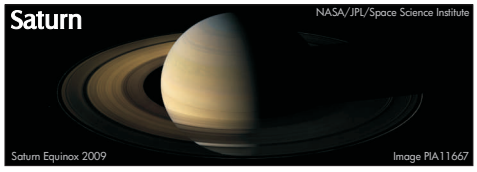




THIS WORK is a surprisingly comprehensive discussion of the ideas which have been proposed for the nature of the universe. Clegg starts with the Greeks and the Renaissance and continues to the modern era discussing and critiquing the various proposals put forward. The narrative is in easily assimilable form until the modern era. Here some of the discussion takes the form of essays on the various mathematical models which have been proposed most without much relation to reality and with little possibility of experimental verification. Their greatest weakness is their lack of verifiable predictive power. Many have more an aspect of science fiction rather than science fact.

At the end there is a discussion of Bohm's ideas concerning quantum potential (guide waves?) and their consequences regarding the universe as a single interconnected entity which can only be treated as a whole (D. Bohm, B.J. Hiley, *The Undivided Universe*). This concept perhaps gets some support from a surprising avenue of research concerning mind-matter interactions (R.G. Jahn, B.J. Dunne, *Margins of Reality*). These two books are reviewed here next.

Bohm has proposed an alternative to the widely accepted Copenhagen interpretation of the solution to the Schrodinger equation, etc. From a strictly mathematical approach he proposes that each particle of matter has associated with it a wave (guide wave?) which dictates its behaviour. The wave would be independent of time and distance. This corresponds to the non-local effect of the standard interpretation. It is clear that as systems become more complex all the matter/guide wave interactions also become complex so that the concept of individual behaviour loses its meaning. So he proposed the concept of one entity, an 'Undivided Universe.' The book itself is heavy going except for those with a strong mathematical bent. Nevertheless it is worth the effort if only to see an alternative to matter having to choose to be a particle or a wave or whether wave functions collapse or not when we observe them. Bohm's approach is much more objective, not requiring observer input.



If Bohm had to go against the flow of the accepted interpretation in quantum theory, Jahn and his group had to suffer derision for their research into mind-matter interactions and remote sensing. After decades of work on the matter of the effect of a subject's intention on the outcome of random event generator experiments at Princeton they proved that there was a small but statistically significant effect. Needless to say this has not received wide acceptance. On the other hand that hard headed organisation, the American military, studied remote sensing for many years and retrospectively their results were shown to be statistically significant. This type of interaction is perhaps more comprehensible if, as Bohm's work implies, the human brain/mind/consciousness is an integral part of a greater whole, the universe. In this sense the two books complement each other. As yet these concepts have not been integrated into models for the universe but this does not diminish their possible significance...

These three books can be found online at your favourite book seller's website. ★

Blast from the Past: Mr. Pluto Visits Kingston

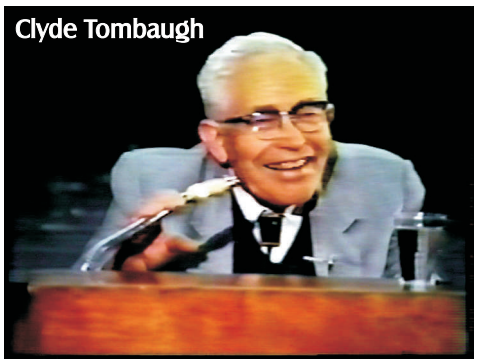
Leo Enright

On October 20, 1989, Dr. Clyde Tombaugh, the discoverer of Pluto, spoke to the Kingston Centre as part of his Canadian tour. Truly this was the greatest night in the history of our Centre and one that nobody present then will ever forget as long as they live! As the foremost member of our Centre, it was quite appropriate that Leo Enright gave the introductory remarks on this most auspicious occasion. Here is the text of those remarks, which ran approximately seven minutes:

GOOD EVENING LADIES AND GENTLEMEN, guests from the Kingston area, from Queen's University, from the schools in Frontenac County and other areas, from other more distant parts of Ontario and New York state. My name is Leo Enright. I'm a representative of the Royal Astronomical Society of Canada Kingston Centre which has been a sponsor for this occasion here tonight.

I stand here to say that on behalf of the Kingston Centre and Queen's University, I am very thrilled to welcome to our area the man who is quite literally the most distinguished and eminent astronomical guest we have ever had in our city. We welcome from the United States—from Las Cruces New Mexico—**Dr. Clyde Tombaugh**, his wonderful wife **Patricia**, and **Dr. Bernie McNamara**, of the Department of Astronomy at New Mexico State University in Las Cruces.

For almost six decades now, Dr. Clyde Tombaugh has been known throughout the astronomical world as the man who discovered the planet Pluto, the man whose enormous dedication in the tedious search for the trans-Neptunian planet led to the exciting announcement of success in February 1930. I simply cannot help marveling at the kind of perseverence that was needed in those years


Clyde Tombaugh

to take the numerous photographs required for that project at the Lowell Observatory in Flagstaff Arizona, to process and prepare and blink those images of millions of stars—and there were millions.

I have myself observed Pluto on a few dozen occasions with an instrument whose aperture is only a tiny bit different from the 13" discovery telescope that came into use at the Lowell Observatory in 1929, and I can testify to its faintness and to the fact that observing Pluto is a challenge though it is now fully a magnitude brighter than it was at its discovery. And of course I have the precise list of coordinates and the numerous maps to help me, and the knowledge that what I am looking for is there.

How appropriate to be talking of Pluto in late 1989. Just six and a half weeks ago, the planet passed perihelion and I understand that Dr. Tombaugh was at a perihelion party in California six and a half weeks ago! Past perihelion for the first time since its discovery, and something that will not happen again for almost


Leo Enright

248 years. And at almost the very same time we get an opportunity to meet its discoverer.

Seeing this distant planet will have a new and special meaning for me whenever I see it again. Last April and May I saw it a number of times and recalled that on the night of May 23/4 I waited at the telescope until 3 a.m. local time just to be able to say that I was viewing it at the precise moment of its opposition—an opposition which happened to be the closest opposition in time to that of its perihelion point, even though at that opposition it may not be any closer to us than at the next one next April. Yes, whenever I see it in the future, I will think of the very warm, kind, down-to-earth human being whom I have had the rare privilege of meeting today.

I will think also of the awe and respect that my friend **David Levy** has for this man, and the wonderful stories he has told me about him. David, I should mention, has been working on Dr. Tombaugh's biography for the past few years, preparing it, and it should be published by the University of Arizona Press about one year hence. David tells me about how Clyde maintained and has maintained over the years, the true spirit of the amateur. The same kind of spirit that led him to build his own telescopes years ago on a Kansas farm and to do the kinds of drawings of Mars and Jupiter that led to his being employed at the Lowell Observatory in the first place. I have also heard from David that Dr. Tombaugh is among the world's greatest punsters, and just at dinner a few hours ago I guess I had evidence of that, didn't I? He has truly raised the art of the pun to new heights within the English language.

I could not begin to list all the contributions to Astronomy of Dr. Tombaugh, and as Terry [Dickinson] said to me a few minutes ago, time

...Blast from the Past

has not diminished the accomplishments that took place back in 1929 and 1930. I would be here half the night if I were to try to list those accomplishments, and you want to hear him—not me. Let me say only that his interest in, and contribution towards research in planets and other solar system bodies has been very considerable. Not least among these contributions has been the setting up of a scholarship fund at his *alma mater*, New Mexico State University, and this lecture tour of five Canadian cities [Montreal, Ottawa, Kingston, Calgary, Edmonton] is a part of that project—one which will contribute toward research by graduate students in Astronomy and who knows, perhaps some day may lead to an announcement almost as exciting and momentous as the one of February 1930.

For making the arrangements for this occasion possible, I wish to thank of course **Dr. McNamara**, **David Levy**—comet discoverer *par excellence* and a member of our Centre and a member of the Tombaugh scholarship program, my wife **Denise**, president of the RASC Kingston Centre, and in a very special way **Dr. Martin Duncan** of the Astronomy group in the Physics Department at Queen's University.

I look forward to this talk very much. Join me please in extending to them a sincere and warm welcome to the Kingston area. Dr. Tombaugh, welcome!★

Dr. Tombaugh's talk ran 45 minutes and was very warmly received.

Clyde Tombaugh passed away in 1997. In 2005, two new moons (Nix and Hydra) were discovered with the Hubble Space Telescope. In 2006, the IAU demoted Pluto from 'planet' to 'dwarf planet' and NASA launched the *New Horizons* probe which will fly by the Pluto system in 2015. Pluto is now just one of many known trans-Neptunian objects, three others of which are large enough to also qualify as dwarf planets.

Fall'n'Stars 2010: September 17-19

Kevin Kell

Fall'n'Stars 2010 has come and gone. We had 22 registrants this year and at least one night of usable weather/clear skies (Friday night).

You can find some of the first images at:
kingston.rasc.ca/pics/fallnstars/2010
with more to come over the next few days.

The first 12 images there are 15 second exposures of Jupiter and ½ to ¾ lit moonlit clouds in the southeast. A few images of the area with the Pleiades rising in the east, and a couple of Orion rising the next morning.

Saturday was not bad at all, with a lot of chit chat and socializing. At 10:00 a.m. we had the official Rocket Launch to signify the opening but it was the only one as we had run out of

engine components for a closing launch. The rocket was recovered for the 2nd straight year however (we have lost two or three to trees in the last eight years).

The swap meet at 10:30 in the morning was great, with Hank bringing along what was left from **Norm Welbanks'** estate, and I hear that sales were brisk. The 60cm RASC-KC Venor telescope was on site that Friday night as well but it (as well as everyone else's) was packed up during the day as we were expecting rain saturday evening and night. These are some of the images on how the Venor gets packed up and travels.

We had three sets of talks in the afternoon: **Mark Coady** on DSP (Dark Sky Preserves), **Doug Angle** on some kind of historical thought bending science and Astronomy, and **Kevin Kell** with some images from the Radio Jove project that Kim & I are building, some images from our Canon A540, taking 64 second exposures and 64 sec dark frames but now using a script that took 17 images in a row without human intervention. Lastly was a quick trip to the RASC General Assembly in Fredericton New Brunswick.

We took some images of solar flares through a Coronado Solarmax80 and soon it was time for the catered dinner, always a highlight. The photo contest came next with **Hank Bartlett** coming away with first prize with a lunar image. There were only 3 people entering this year. Odds were very good! Door prizes came next and again this year we went through the entire attendance and started around a 2nd time. Thanks to all of the prize donors!

The grand door prize (the RASC-KC's 1999 Bushnell Astro-scan) was won by **Joanne Burns** and the Raffle prize (Celestron firstscope tabletop Dobsonian) was won by our own **Susan Gagnon**! Ask Susan how many telescopes she has now! It did start raining late in the evening with cloud and clear patches intermingling.

Many folks headed home that night and come Sunday morning it

Continues on next page...

...Fall'n'Stars 2010

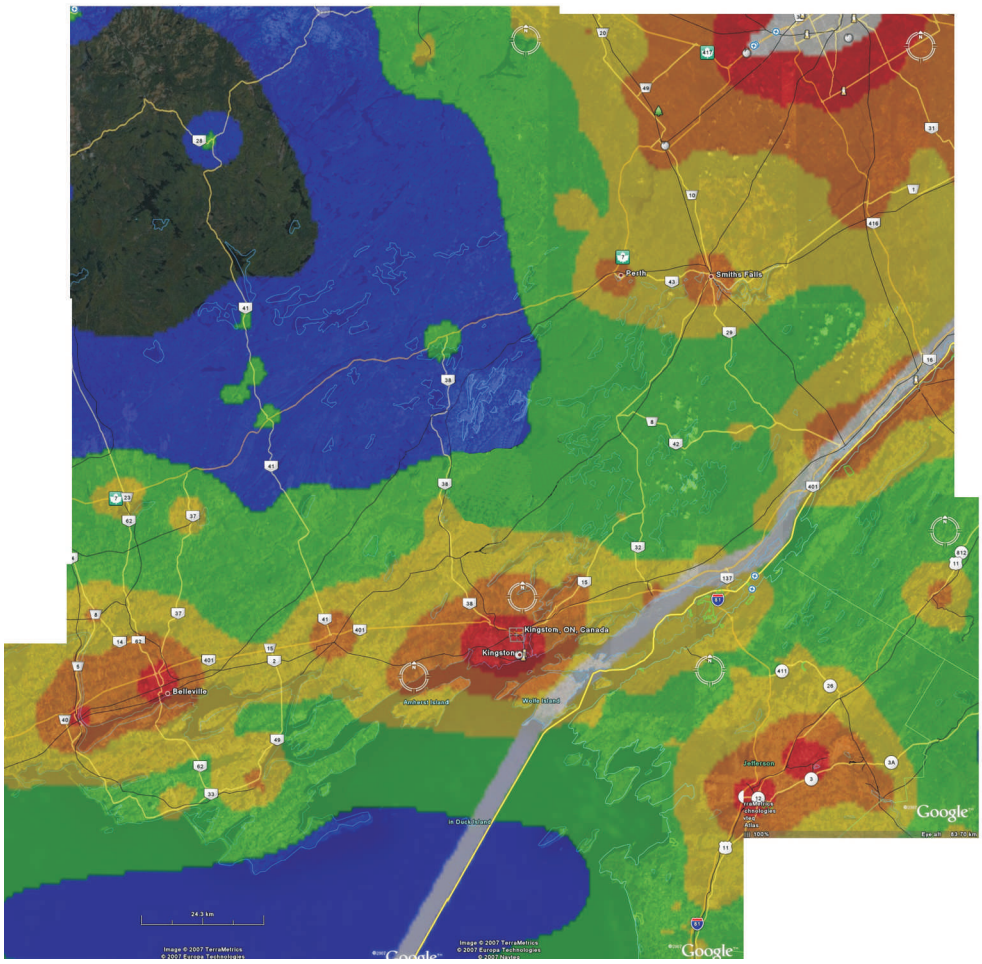
...continued from previous page

was basically the organizing committee and one or two others. It was a nice sunrise with fog in the field and trees. We managed to clean up, lock up and be out by 10 a.m., and most folks got home by 11 to a very nice day. Exhausted, but still a very nice day.★

Below: The Centre's 24-inch Venor Telescope was on hand for great views.
Left: The Fall'n'Stars 2010 group photo. There were 22 registrants this year.

Light Pollution in Central/Eastern Ontario

During Terence Dickinson's September 10th talk on "A Personal Quest for the Finest Stargazing Location in the World" there was some good discussion of the light pollution conditions around Kingston and how lucky we are to be so close to very dark skies! (See the meeting report on page 5.) Below is a Google Earth image with a light pollution map overlayed which shows this quite nicely. The relationship between map colour and sky brightness is as follows: white = hopeless, red = awful, orange =pretty bad, yellow = pretty good, green = very good, blue = excellent, black = fantastic.★



Prep for Power! Kevin Kell

It is always a good idea to prepare for a star party...in advance! Case in point: Fall'N'Stars 2010.

Last year, you may remember, we took the Centre's portable power pack (the big one on wheels) to use on the Douglas telescope and it failed miserably dew-wise. We opened it up to discover that three of the cells inside had ruptured and had leaked and basically we wrote off the seven year old unit.

This year, the last item that I packed was a car-sized deep cycle/rechargable Nautilis battery. We hooked up the dew gear on our 20cm dob and none of the lights on the controller came on. Hmm, another bad controller? (We had previously had our Kendrick controller die). After a lot of wiggling wires, we gave up on the battery and hooked into the vehicle power. That worked! Now we had lights, power and heat on the eyepiece.

Back home I took that large battery and tested it: hmm, it read only 3 volts DC; hooked it up to the trickle charger: nothing...the charger said there was nothing there; hooked it up to the regular large battery charger: hmm, no current was flowing. So I opened up the battery lids. Hmm, looked pretty dry. Four litres of distilled water later the charger started working. Yay! It started to bubble as hydrogen gas was pro-duced as a charging byproduct. A few hours later I found a large puddle of water on the battery, in the box, and leaked out onto the table... Hmm, not water...sulphuric acid! A box of baking soda later, the acid was neutralized and the battery was rinsed off and taking a break until a better charging location can be found. But the battery is now reading over 12VDC!

The moral of the story: better prep work (and battery maintenance!) will make your observing session a better experience.★