

Rick Wagner created this stunning image (with Iridium flare) on June 3/4 using a Canon 30D with 10-22mm Canon lens at 10mm f/4, ISO1600, and stacking 494 JPEG exposures of 30s each in PhotoShop. Total exposure was 4hr 7min (23:20:26 to 03:48:23 EDT, giving a gap of 2½s between exposures).

Meeting Report: June 3

Susan Gagnon

IT WAS A LOVELY DINNER WITH DAVID LEVY, for which 13 came out to enjoy the conversation at the Dox Restaurant, Holiday Inn.

The night then progressed with the talk at Ellis Hall which was quite comfortable for the 55 people which included 20 KC members, 8 Belleville members, **Terence Dickinson**, **David Levy** and the balance of the public.

Ruth Hicks welcomed everyone to the talk. Our president **Susan Gagnon**, gave **Walter MacDonald** his NGC pin for observing all the

continues on page 3...



David Levy sets up for his talk as Susan does the announcements.

Current and former Centre members, now far-flung in space and time, gathered at the appointed hour in Ellis Hall. It was just like old home week, and this night showed that the magic is not only still there, but is undiminished. It was yet another successful chapter in the Centre's greatest tradition!

Reports and Other Items

QUEEN'S OBSERVATORY UPDATE

...the June and August Open Houses have been cancelled. Summer is a difficult time for the Queen's Observatory, as we run low on manpower and resources. We strive to be a source of education for the

community, but do not want to sacrifice the quality of our events when we are low on resources...

TORONTO STORM JULY 8TH

National Office was closed July 9th and 10th due to a hydro outage.

Upcoming Meetings

Saturday, June 8 9 p.m.

KAON ~~Cancelled~~ Observing Session

Monday, June 17 7 p.m.

Member's Night

New location:

MacIntosh Corry Hall, Room B201

Saturday, July 13 9 p.m.

KAON Observing Session

Gwendolyn Eadie, M.Sc.

Ringing in the Summer with Saturn

Saturday, August 10 9 p.m.

KAON ~~Cancelled~~ Observing Session

Meetings are held in Room 324 at Ellis Hall on University Avenue at Queen's University in Kingston, Ontario. **KAON** (Kingston Astronomy Outreach Network) sessions are held at Queen's Observatory on the 4th floor of Ellis Hall. ★

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

KC MOVES AHEAD!

Despite the recent turbulence in our meeting schedule, Centre activities continue to advance. The Storage Shed project is virtually finished now and the Tardis Observatory has an assembled & working 16" scope. ★

The Tardis Observatory Project

Kevin Kell

I HAVE PUT A PILE OF IMAGES of the Torus Telescope project into kingston.rasc.ca/secure/torus (in the members-only area). There are three subfolders: the disassembly, move, and mount operations. There is also some video footage still to add.

Thanks to **Paul, Susan, Kim, and Hank** for their help with the Mounting the Mount project on May 25th. No one suffered any (major) injuries and the mount is not looking too bad at all.

We assembled at 1 p.m. and started planning the operation. Many times we ran into a roadblock, re-planned and moved ahead. The plywood adapter plate was found to be in the way of the flippy door so it was offset to the north. The flippy door was removed and shortened by 1/4" as well. In the end, it was still in the way and a corner of the flippy door was chiseled/cut/screwed off in order for it to pass.

The plywood adapter needed a big honkin' recessed hole cut in the middle to countersink the big honkin' bolt of the telescope mount into it. That went pretty quickly with a hole saw, chisel, and hammer. Old video and imagery was reviewed to note which way the mount was to face

north.

The dolly was given up as requiring too much bending over to move, so we brought out power tools, *i.e.* a lawn tractor and wagon. Moving at 2 km/h with four escorts with their hands on the mount to steady it brought exclamations of...a funeral procession! Or that Clint-Eastwood-as-a-secret-service-guy movie...

In the end, the plywood adapter was attached to the pier, the metal telescope plate was attached to the adapter.

The tripod and hoist proved to be too cumbersome and short, so 5 people manhandled the mount off the wagon and onto the pier. A series of

continues on page 8...



May 25: Here is the fork on the pier. They nicely fit into the new observatory building. The next job will be getting the scope onto the fork, and then getting the electronics going.

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:

walter.macdonald2 (at)
gmail (dot) com

or:

Walter MacDonald
PO Box 142
Winchester ON K0C 2K0

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NGC objects that are listed in the *Observer's Handbook* and are part of the RASC observing certificate program. Walter commented, "Wow, I completed that 14 years ago," but alas the recognition is the same. Congratulations Walter, it is a feat that not many have accomplished. [In fact, it turns out that it has been 18 years—where do they all go?—Ed.]

Terence (Terry) Dickinson gave a 20-minute introduction of David, with many interesting tidbits.

David started his talk at 8:30 pm, "Visual Comet Searching: A Requiem?" that took us through his life as a child attending a camp in the Adirondacks where he was inspired to observe comets. This passion continued to grow with him in life, from being a member of the RASC-Montreal Centre, to attending Queen's University and graduating with bachelor's and master's degrees in English literature. While in Kingston, he attended many Kingston Centre meetings with longtime centre members **Ruth Hicks** and **A.V. Douglas**, and took several courses with **Terence Dickinson**, in Astronomy. David met Terry in 1979 and they have been friends ever since.

His love of comets continued to grow, when he found his first comet with 1984t (Comet Levy-Rudenko); later David asked Terry to confirm a discovery. This study carried on with 21 more comets discovered, for a grand total of 22; nine of these



comets were discovered (visually) using his own equipment in Arizona. The most famous comet of course was **Shoemaker-Levy 9** which was discovered in 1993 and started to crash into **Jupiter** on July 16, 1994.

His passion is still evident in his talks, and his recitations of poetry.



He is currently taking a break from writing his bimonthly column in *SkyNews*, but divulged he has a new and exciting project with an internet project: *Skies Up Magazine* which will include writings from children. The children are our next generation, and to inspire children to look at the heavens and have conversation and passion is a very positive goal.

After his talk of over an hour, David signed posters and books for the public. The Kingston Centre has a poster that is signed and will be framed to be placed in our observatory, which the Centre and executive are working on making a reality.

David will continue his speaking tour for another week, ending in

London, Ontario.

Thank you David for your passion for, and wonder of, the night sky. You have taken us on a trip across the universe and let us share your sky at the eyepiece.

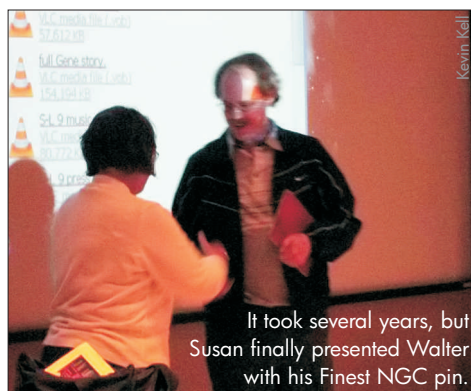
If anyone is interested in more information about David H. Levy, please visit this Wikipedia page: en.wikipedia.org/wiki/David_H._Levy

Thank you **Susan** for arranging the pickup and delivery of David to the Kingston Centre, and all the work you have done with **Randy Attwood** to make this possible, through the RASC's Public Speakers Program. Thank you **Kevin** for your work in helping with the audio/visual setup for David and the audience. The centre also has the talk on video, of which a copy will be going into the Centre's library, and hopefully on the website soon.

It was great to see lots of familiar faces, and friends who we only see once a year at Fall'n'Stars. Remember to take advantage anytime you can to look up at the stars, they are beautiful. Come out to Fall'n'Stars on September 6-7th to enjoy the skies, friendship, and a great time.

Rose-Marie: It was an enjoyable talk. And thank you to Kevin and Kim for your work in this event as well. I was happy to have a chance to hear David Levy talk and even got to talk to him for a minute afterwards; my signed poster will be soon be attached to coroplast and hung on my wall. I'm just sorry I couldn't attend the dinner earlier; it looks like a memorable gathering. Too darned much work around here.

Kevin K: Phew! It's over. A lot of stress went into this production and I am glad it is over. Kim counted 55 warm bodies and I am pleased at the number (my fears were in the 20-30s). Given Ottawa at 197 and Montreal at 75 (though plagued by a big thunderstorm), I think we did great! ★



WED/THU, MAY 15/16

Kevin K: We didn't get home until late last night and after a very long day there was no energy to go outside and observe in the clear skies. Allsky1 picked up some minor [aurora](#) around 22:40 and from 23:30–00:00 EDT. Nothing to write home about.

WED/THU, MAY 22/23

Rose-Marie: Cloudy weather and bright moon ain't good for my stargazing. But when you have the two of them together, you still might see something good. I had the camera set up at the basement window, hoping to catch some pics of lightning, but it was that “wrap-around up in the clouds” type that lights up the sky but no visible bolts. After the rain stopped and the clouds started to clear a bit I went down to the dock to see what was brewing, got the [Moon](#) through broken clouds with crepusculars.



Rose-Marie Burke

SUN/MON, MAY 26/27

Paul Winkler: Last night when I went to a nearby hill to watch [Venus](#), [Jupiter](#) and [Mercury](#), I also ran into **Stephen Manders!** I haven't seen him in about seven years. It seems he's been travelling the world, taking thousands of nature photographs, and uploading them to Google Earth (I wasn't able to find them, but I'm not very patient with Google I'm afraid.)

It was a pretty good apparition of the triplet, by the way. Rather hazy, though—I was unable to find any of Jupiter's moons or cloud bands, and although [Mercury](#) was in phase I couldn't tell through my scope (my mirror needs resurfacing.)

Kevin K: We have managed to view it from the living room twice in the last three days but no images. Hopefully that will be tonight.

We put a new roof on the observatory shed (the vinyl storage shed that the snow load collapsed the roof on over last winter), moved a lot of equipment out of the observatory and into that shed and voilà! We have an observatory that you can move around in and not run into one another!

Walter: The nights are much shorter now (only six hours, including astro twilight) but I still managed to image 147 [variables](#) (Miras and CVs).

Rose-Marie: I was tired last night after another day of chores, but managed to get in a bit of viewing. After sunset Dad and I were sitting in the living room talking, I was facing the windows, and saw a bright blue-white blob descending across the horizon from northeast to southwest, very nice [meteor](#). It wasn't quite a fireball, left no trail, but would have been pretty spectacular in a dark sky, it showed up nicely even in the bright twilight.



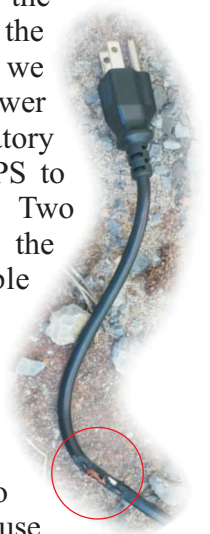
Rose-Marie Burke

A bit later I went down to the dock to see if I could find the planetary grouping, western sky was just a tad too bright. Later when it got dark, before moonrise, I set up the

camera to do some continuous shots, got a short run of the spring sky. In one of the shots there's a bit of a streak, since the ends are not tapered I'm suspecting it may be a flaring satellite.

Kevin K: The Allsky1 computer almost had a failure yesterday... While searching for the block and tackle for the Torus mount project, we came across this power cable in the observatory running from the UPS to the Allsky computer. Two conductors bare and the third insulated cable chewed on.

It's a wonder there was not an electrocuted rodent lying on the ground. The rodent also tripped a standard mouse trap, and chewed through a bit of a plastic mouse trap to boot.



MON/TUE, MAY 27/28

Susan G: I went out but it was too soupy at the horizon.

Walter: As I was walking out to the arena (where the low horizons are), I noticed cloud in the west, hugging the horizon. I thought at that point I might only see Venus, but pressed on anyways. I was very pleased to see that the cloud did not extend up to around azimuth 300 where the planets were. I saw all three naked eye by 21:10. It was a very nice arrangement and very cool to see them up so far north.

As it happens the cloud did not invade here all night—we were right at the edge! Unfortunately I was too exhausted to take advantage of the 15 minutes of moonless sky for visual or to do a CCD session. Anyways, I did all my Miras (and a bunch of CVs too) Sunday night except for a handful in Peg and And so I still have

lots of photometry to do whenever I can get the time and energy for it.

TUE/WED, MAY 28/29

Rose-Marie: A couple of nights ago before I set up the camera for the series shots I took a few shotgun pics of the western sky. It was too bright yet for me to make anything out naked eye, and I was too tired to hike back up the hill for binocs. Here's one of the shots, if any of you are energetic enough to figure it out maybe you can tell me if that conjunction is in there or not, I don't have a clue.



Mark K: You are too far south. Late too. The bright star just above the trees left of centre is **Procyon** in Canis Minor and the second bright star in the upper left corner is **Altarf** in Cancer.

THU/FRI, MAY 30/31

Rose-Marie: Last night was such a lovely dark clear night, but I was too tired from working all day to sit out

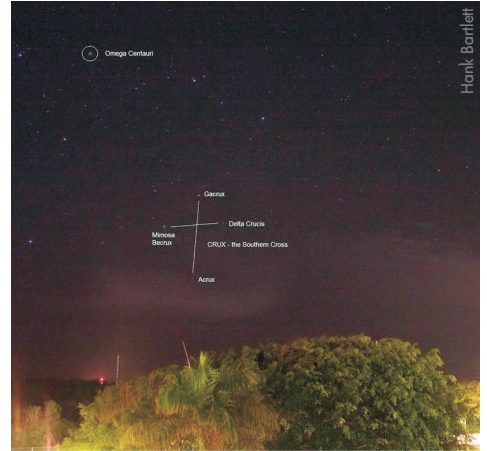


and enjoy it. So I got out the camera for a set-it-and-forget-it session. Nothing like a little armchair astronomy.

The first run was by the garage, as there was a lot of haze to the south over the lake. Caught one faint meteor whizzing into Ursa Major. When I went out to retrieve the camera I saw that it was yet clearer and darker, so put a fresh battery in the camera and set it on the patio, and set the alarm to retrieve it after an hour. While I was setting up I saw a **satellite** coming and quickly turned on the camera, caught one flaring satellite. Settings were with Sigma 10-20 lens at 10mm, f/4, ISO 1600, 30 second exposures. The meteor timestamp was 22:55, the flaring satellite 23:41. Don't have time today to scour through the rest of the shots, a quick glance over them shows no big sparklies other than some of the mass of fireflies that appeared last night.

MON/TUE, JUNE 3/4

After David Levy's talk at the June 3rd meeting, a few of us had a very brief naked eye look at the brightest objects in the sky outside Ellis Hall—besides the completely unshielded streetlights, that is. Walking out to the west of Mack-Cory Hall, there was a soccer game in progress with all the field lights on. The proximity of these lights to the Queen's Observatory is unfortunate, to say the least.



Hank: Last night (May 21st) while walking into the meeting I met up with **Ken Kingdon** and friends in the parking lot. When I mentioned having been down south Ken asked me if I had seen **Omega Centauri**, as I hadn't really mapped out my observing or taken an appropriate scope I really didn't know if I had. Just now I checked back in my images and my error, what I had marked as M83, the Southern Pinwheel, is actually the cluster Omega Centauri. I expected that if I had anything wrong someone would correct me but you are all obviously too nice. I also learned to turn on ALL features such as NGC-IC when using a map to identify an image. Thanks Ken.

Walter: I arrived back in Winchester just after midnight. I stopped at Development & Church Roads for a quick look at a dark sky with a low horizon. Ottawa's light dome was prominent in the north, but of course that did not interfere with the glory of **Sagittarius** and **Scorpius** in the south. It was a nice cool, breezy night (so no haze or mosquitoes). I did a quick 3-hour CCD session, bagging 88 LPVs and came within one star of cleaning out my Pegasus list before twilight ended things. The dome is acting up (sticky, binding) when it hits 90 degrees. I thought I had it fixed, but I guess not. On the upside, I saw a bright (-1.9) pass of **ISS** through

Cassiopeia when I went out the first time to tend to the dome; I also saw a nice pulsating satellite going through Cyg-Cep—its flashes seemed to alternate bright and brighter.

While closing up the dome I saw the **Moon** rising through the trees.

Kim: Sounds like you had a great observing evening. We were going to go to the L&A dark site last night, but the note came through too late (I had a meeting in Napanee which ran overtime), and we had not packed the van. Got home late, exhausted, and there was cloud moving in from the north. Alas, we did not go observing, but it was clear out. Did see **Saturn**, and the **Dipper** is high.

Coming home on Monday night we did see the **ISS**, mag -2.3 , very long pass.

FRI/SAT, JUNE 14/15

Walter: We had a nice clear, cool night last night. Saw **Venus** as I was opening the dome. I had to forgo visual observing with the C8 in order to babysit the dome. First I had to put a fan in front of the computer to keep the processor from overheating. (I have a tube of thermal grease, and will redo it on Sunday to stop this overheating.) Then the dome developed this problem where a rotate command would be issued and the dome would keep turning around and around until I turned off the dome controller (which also cuts power to the camera and scope!). Pushing the stop button in software would not stop it. This is probably some kind of fault on the dome motherboard (but I'll try re-seating all the cables first, just in case it isn't). So for the last 3 hours of the session I had to go out and use the hand paddle to keep the dome slot aligned with the scope. On the upside, I saw a couple of **meteors** and enjoyed a nice view of the **Milky Way**. It is kind of fun to be out in the dome and watch the scope at work. It

sits on a target for a couple of minutes then slews to the next one, beeping once upon arrival. Truly magical technology! (When it's working, that is...) I finished all the **Miras** with an hour left to go, so I did a run of **CVs** in Cygnus to use up that hour. **V795 Cyg** is in a very bright outburst, but I see it was already reported to CVNet a couple of days ago. The total haul was 124 variables—not bad for a short June night.

It is so nice not to be baking in high heat and humidity in June! I saw **Capricornus** at dawn, and **Arcturus** was setting in the west—perhaps autumn is not so far away as we think it is...

Rose-Marie: Yes, beautiful night last night. I set the camera up at the window at midnight and let it run, caught **Scorpius** going across the sky. I think I got one nice meteor, nice white streak whatever it was. Haven't had time to really review the download of shots. I was thinking this morning, too bad I don't have a window facing other directions. I had the camera out the other night, but the humidity from all this stupid rain fogs up the lens. Then I thought...hmmm. How about a box with a window? Had to spend the morning putting a culvert into a beaver dam, then help fix some eavestroughing, but this afternoon I got out in the workshop, rounded up some pieces of plywood and glass and had at it. Got me a nice little box slightly bigger than the camera. Still had me a T-bolt so have it rigged with a quick release plate to mount on the tripod. Going to give it a test run tonight. Granted, the little window could still fog up, but there's some stuff you can get at the sports store to rub onto faceplates on snowmobile helmets to prevent fogging up, may still have a stick at the winter residence. But for now I cleaned it off with soap, hopefully a no-see film is on there to help prevent fogging. I

guess I'll find out tonight. [*As so often happens in Astronomy, having new equipment resulted in cloudy skies!*]

Susan: I salute those of you who got out Friday p.m. I made an observing plan and set my gear in the kitchen for quick exit when I awoke after the moon set. What a plan! Unlike every other night of my life...I did not wake! I managed to get out on the Wednesday night (wrangled a deal to work 10 to 6 the next day...win/win situation).

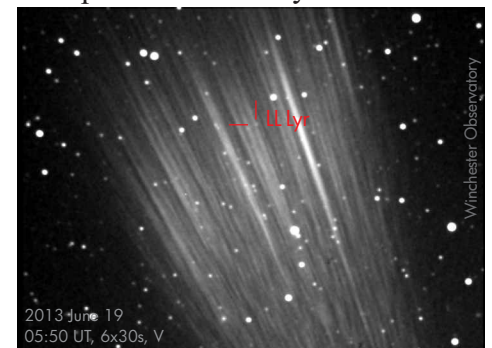
It is not long before the solstice will be here and we can look forward to shorter days.

Tim Seitz: Why not just submit to mother nature and make summer the time for viewing our nearest star.

Hank: That, Tim, is where the bulk of my observing has turned to since I went H α . I agree the **Sun** is a mysterious and changing orb that never shows the same view two days in a row. There is always something different in each daily observation. I think this and weather are about the only things I like change in—the rest can stay the same.

TUE/WED, JUNE 18/19

Walter: I am loving this old-fashioned temperate summer we are having so far. It was another clear night so I imaged three dozen **CVs** as they transited (the low air mass is good during full Moon!). The one anomaly tonight was reflection from Vega in the **LL Lyrae** field—which is not a problem normally.



...Observing Reports: May-June

The new thermal grease I put on the CPU of the observatory computer is working wonderfully—the CPU runs 10-20C cooler than before. The old grease was pretty dried out, but I guess that will happen after six years! (During the operation I noticed that one corner of the heat sink retention bracket is broken. Why the heck do they make these brackets out of plastic anyways? Oh well, we'll see how much longer this one lasts...)

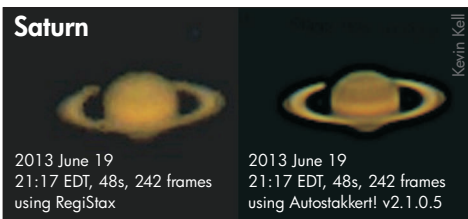
WED/THU, JUNE 19/20

Walter: It was another clear night, and I was able to make full use of it. 137 LPVs were imaged, and I was able to clean out Sge, Del, Peg, Aqr, and most of And (a good chunk of which clears the TV antenna in time to image). There was even lots of time left over at dawn to image Comet C/2012 F6 (Lemmon).



Kevin K: Thanks to Walter's note, I was outside imaging Wednesday evening while watching the Boston Chicago game through the basement windows. I did an hour (about 20:30 to 21:30) of the Moon and Saturn using HandyAVI. Then the long day got the best of me.

Wow, what a difference! Handy-AVI took a 48-second video of Saturn



(242 frames). At left is what I came up with from using Registax and not knowing how to use it at all. At right is the result of Autostakkert! v2.1.0.5 and not knowing how to use it very well. I like this one much better!

SUN/MON, JUNE 23/24

Kevin K: This is the compilation image from last nights (Sunday/Monday) run of the Allsky2 camera. Anyone care to guess as to what the events displayed are?



Rose-Marie: Fireflies.

Mark K: Well, you captured a meteor in image 04:37:55 through Full Moon-illuminated clouds [circled].

Kevin K: Way too easy I guess...I didn't think they flew that high; meteors have been few and far between of late...just a lot of cloud. ★

TERRY'S DARK SKY NIGHT

Kevin K: On Thursday, May 16th, 2013 **Terry Dickinson** hosted a public observing session at the L&A Dark Sky Viewing Area north of Tamworth.

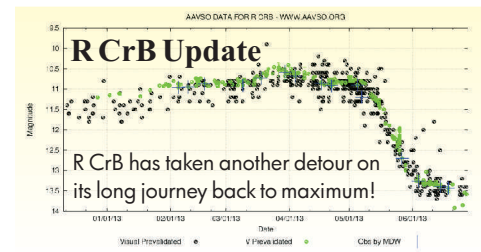
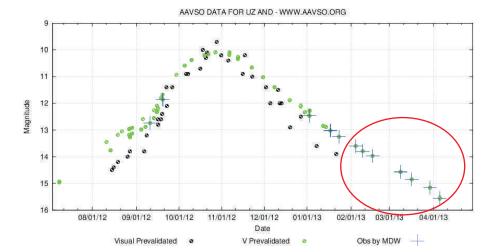
His slide presentation Tuesday night was about the area in general but he also reported that 50 people stopped in to view Jupiter, Saturn, and other astro-type stuff.

There is now a toilet facility on site and also maybe a visitor's log, where the majority of people using the facility after dark are from the GTA. Wow. ★

Odds & Ends

FROM WINCHESTER OBSERVATORY:

Extending the Season: I have been imaging Miras down to 10° altitude in the NW at dusk and similarly low altitudes in the NE at dawn in order to minimize the “annual gap” in the light curves. The images are a little on the ugly side at such high air masses, but the data is still usable!



FROM STARLIGHT CASCADE OBSERVATORY:



This is the Allsky2 camera, now in operation for over 12 months. The UWO Meteor Group suggested that the dome would need to be replaced every 1–2 years as it gets less transparent—dirty, scratched by birds and bugs, etc. So far it is looking OK.

The metal sleeve inside is a dryer vent product that channels the air from the heater and circulation fan inside in order to keep condensation from forming on the inside of the dome. We had a lot of problems with that last year, until the modification was made. ★

shims provided varying heights to allow for the washer, lock washer and bolt to be tightened down. The mount is mostly approximately aimed north. We leveled it as well, front to back and left to right.

The only concern is either the metal plate or the plywood of the pier ...something gives a little and there is a little motion where there should not be. We will investigate further.

We loosened the RA clutch and rotated the fork arms into a "park" position and re-tightened the clutch. At first glance, the doorway looked too narrow! We brought the building forward and in the end, cleared each side by at least six inches.

All in all, it only took two hours and things went very well. The BBQ also took place without incident or (major) injuries!

The mounting of the OTA and mirror cell looks to be in mid-late June. In the meantime there are plenty of little jobs to keep Kim & Kevin occupied (cable conduits, tables, bulletin boards, lighting, etc.).

Thanks again!

Susan: What a wonderfully successful day for the little band of members who made it out to work on the scope! Kim, Kevin, Hank, Paul and I got the job done and all came home with all of our fingers, toes and fully functional eyes! Great job for a cool day. Thanks to everyone for the work and the burgers!

Paul Winkler: I thought everyone should know...after all, credit where credit is due, and all that... The

Chiseller was Susan! And a fine Chiseller she is, too!

Susan: I had so much fun I chiseled at home on Sunday!

Hank: Were I in need of a chiseller Susan is the woman I would call. Seeing her in action was like watching botched brain surgery, but being done very delicately if you know what I mean.

UPDATE: JUNE 10TH

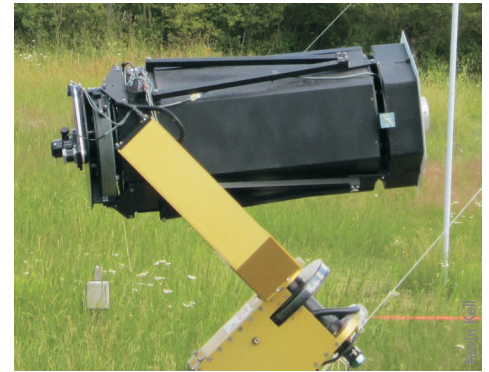
More work has been done on the Torus/Tardis project the last couple of weeks:

- ▶ the platform around the pier and mount was completed (previously there were gaps in coverage)
- ▶ the high-wind tiedowns were modified
- ▶ a large tarp was put over the pier/mount (wind/dust/rain just in case)
- ▶ a larger padlock was added and is always locked when unattended
- ▶ the data cables were brought out and design for the conduit has hit the brainstorming stage
- ▶ white lighting was installed with a remote switch at the doorway
- ▶ another 50lbs (20kg) of rock was added to each side of the pier for even more stability.

UPDATE: JULY 11TH

Brian Hunter, Kim & I assembled the Torus Telescope Optical Tube Assembly and Mirror Cell, connected it to the computer and were able to have command and control over the scope. Yay! Six hours in total including lunch, a dash to close everything during rain showers, and a lot of reverse engineering to figure out how things were originally taken apart.

We removed the external white lights for now, added the aperture filter with solar filter as the Sun tended to pop out now and again during the day. We have a 2" focuser



mounted for now with a 1¼" adapter and will put an eyepiece in for the next series of issues to resolve. The to-do list now looks like this:

- ▶ understand the limit switches and encoder limits
- ▶ orient and configure "stow/park"
- ▶ do some multi-star alignments and calculate out a position model
- ▶ collimate the optics
- ▶ run the power and data cables into a conduit and under the platform
- ▶ test the focus
- ▶ fix software permissions so a regular user (not the admin root account) can run it

UPDATE: JULY 13TH

We spent another four hours in mosquito hell, further reverse engineering the limits and encoders and pointing. That didn't work out so well. A few steps forward, a few back.

The mirror is quite dirty, from what we don't know (storage in our house for a month, storage in the warm room for 6+ months, etc) and this may need to be addressed once we get the mechanicals running.

There are continuous modifications being made to the Tardis (observatory) as well: new steps were built to climb into the building, the rails have been reinforced, a keyboard and mouse table/shelf were installed, and more.

UPDATE: JULY 14TH

What we did get done today:

continues on page 10...



The KC Storage Shed Project

Kevin Kell

THIS IS THE CENTRE'S new storage shed. Note the simplistic design, the faux-nouveau clean lines, the attention to detail in the ease-of-access and the following of modern day health and safety air exchange values...



We did six hours work on Saturday with at least five rain interruptions...bummer. **Montgomery Scott's** rule was to quote 4x the job estimate—so that when it takes you twice as long to complete it as you really thought it would, you are still 2x faster than your estimate and look good! So the “real” estimate was three hours...that should have been 12 hours, so we are still only halfway!

We actually got more accomplished than that but had to stop at some point, as once you start installing walls it's all or nothing.

Mucho thanks to **Rick & Jeanette, Hank, Brian, Susan, Paul** for coming out to the barn raising...err, shed raising, event on Saturday, June 22nd. Kim & I are grateful!

Everyone got to haul or pound or screw and there were no real injuries except maybe trying to screw off the non-screw off caps on beverages.

We got rained on much more frequently and heavily than the predictions were calling for, and as a result the event ran 3–6 hours overtime before we finally called it a day and went inside to see the Boston Bruins lose miserably.

Susan: I want to thank Kim and



Kevin for storing all that Centre crap for so many years! Soon there will be a great space to move it into. The choice of shed was good; it should store a lot of stuff.

Thanks for all the snacks and fluids especially today in the heat. I look forward to the next phase.

JUNE 24TH UPDATE

Just a lot of little touch-up to go but the heavy lifting was completed after another four hours of work on Sunday. There was no off-on rain, just a lot of heat and humidity!



Hank: The shed looks great from here. You all did a fantastic job and a big thank you to Kim & Kevin for housing yet another RASC-KC project on their estate.

WORK SUMMARY

6 hours with approx 7 people on Saturday, June 22: floor assembly and installation, 4 walls assembled.

4 hours with approx 4 people on Sunday, June 23: 4 walls installed, roof installed.

3 hours with approx 2 people on Monday, June 24th: doors and hinges reinforced, locking hardware installed, door trim installed.

1 hour with approx 1 person on Tuesday, June 25th: siliconing around the floor perimeter and adding in some floor/wall interface reinforcement.

SHED KIT REVIEW

Given this was an experiment in steel vs vinyl vs wood for an observatory, our conclusions are wood all the way. I don't think we would ever do a kit again. They are really designed for low-cost flimsiness. A lot of the price went into the pre-cut design labour and even then, in fine print, the floor paneling was not included—but the floor frame was...WTF?

PROS: approx 13 hours by 2-3 people could assemble it; nice primed outside walls, trusses are easier than I thought; good headroom; easy to modify/upgrade.

CONS: poor inside structure (2x3s) and flimsy; the kit had transport damage that was minor, some of the tradeoffs were ridiculous: for the two 10' lengths of the floor, they sent 4' and 6' lengths of wood (we replaced those with single 10' pieces); expensive delivery of the single, heavy package; poor labeling of hardware.

JULY 10TH UPDATE

Thanks to one and all who assisted in the assembly of the storage shed. All in all it looks like about 76 person hours were involved.

The after was taken yesterday after the completion of the shingled roof cap.

By completed I mean major structural/safety/functional stuff... there is still some minor trim painting, trimming of excess felt, removal of staples, etc. A high air vent is needed to cool the place down, along with maybe a floor vent as well to pull in the cooler air.

In the end, the rolled roof material was 2-3x as expensive as going the shingle route, so shingles it was, along with drip edge on the bottom bits.

The Centre's property is now inside (although we keep finding more items every day) and I am going to go out to do the inventory today. ★

- ▶ added two more hinges to the doors
- ▶ set up always-on power bar for lighting and moved the light control to the door area
- ▶ put up hooks for the aperture filter
- ▶ lowered the front end of the keyboard shelf for easier access
- ▶ ran through the permissions of XObs and XEphem and now the regular user "telescope" can start the graphical shell, starTel and XEphem with all running.
- ▶ got the computer on the network, so I will be able to do more configuration from the comfort of the inside of the house, away from the summertime bugs.
- ▶ setup a log book with some history and then day-to-day maintenance and operations.

We did go through the spare parts bin and it looks like 2" adapters can replace the manual 2" focuser and accept a camera directly, using the secondary mirror as the primary focusing method.

There were no 1" thick "collars" to extend the eyepiece/focuser/diagonal out to the required distance to allow for visual observing focus. We can make one easily of wood, but I suspect there are not a lot of wooden telescope pieces because they change size with temperature and humidity? Where could we get a metal one made?

We did get a sprinkle of rain during all this activity. We did not power up the scope today at all, and did not test power to the secondary mirror focuser.



Working peacefully in my telescope shelter, I listened to good music and dreamed about the infinity of the universe. —Hans Vehrenberg

TARDIS COMPUTER DETAILS

The Tardis telescope control computer hails from 1999 and contains an ASUS P2-99 motherboard for Pentium 2 & 3 class CPUs:

- ▶ 1 AGP slot for video
 - ▶ 4 PCI slots 32bit
 - ▶ 3 ISA slots 16bit
 - ▶ 1 IDE drive controller
 - ▶ 2 SDRAM slots (up to PC100)
- The computer came with:
- ▶ 20GB IDE Maxtor drive, dated May 2001 (only 4 GB in use)
 - ▶ 3½" floppy drive
 - ▶ CD-ROM drive
 - ▶ 1 stick of RAM (256Mb)
 - ▶ 1 AGPATI video card with VGA output
 - ▶ 1 PCINIC 100mbps network card
 - ▶ 1 PCI I/O card with 4 jacks that look like 8 pin ethernet RJ45
 - ▶ 1 ISA full length motor control board

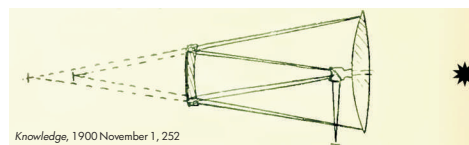
The motherboard manual was found and printed off as a reference. I removed the floppy drive and added a second stick of RAM to bring it up to 512MB. Three cloned copies of the hard drive were created using *Clonezilla*. The original drive was wrapped up in an antistatic bag and foamy bits and was stored safely away.

New on rasc.ca

1. The 1890s correspondence file has been scanned and placed online at rasc.ca/1800s:



2. Our resident archivist (**Randall Rosenfeld**) has added much info on a priority dispute over a new form of telescope, which you can read here: rasc.ca/1899-musson



3. Many hours of audio recordings from past General Assemblies have been digitized and uploaded. Search for 1960, 1961, 1965, 1968, 1974, and 1983 at the GA History page rasc.ca/ga/history [Note: the 1961 lecture is by A.E. Douglas, not A.V. Douglas as I had originally thought!]

I recorded the details of the ISA control board and then googled it. It turns out that this biggest risk of single point of failure is still for sale for around \$200-300 in various places. That's a good thing.

The cloned drives are still a little on the old side: 2004 Jan, 2003 May and 2003 Dec. That is a little worrisome. We may have to find newer ones, donated or purchased.

We will be looking for a couple of spare computers with ISA slots as well. **Brian Hunter** has indicated he has a couple someplace somewhere. Just in case however, if anyone else has one, please do not toss it yet! Not until we can verify we have a backup computer ready to go.

I am not sure if the I/O card is still needed or not. It may have been used in the past to control other devices like cameras, filter wheels, etc. We will have to see if anything plugs into it when it is all assembled and in place.

I took one of the cloned drives, labelled it "test" and plugged it into a more modern computer to see what would happen. The operating system is Redhat Linux 6.2 running kernel 2.2.14-5 and it starts up without errors. Yay! ★

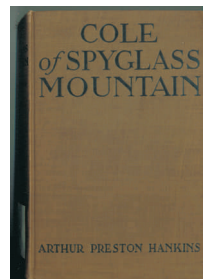
Walter MacDonald

4. A collection of pictures attributed to **Norman Green**, including about three decades worth of RASC Presidents and three pictures of the inside of the old RASC HQ at 252 College Street, has been added to the image galleries on these decadal archive pages:

- ▶ rasc.ca/archives/1960s
- ▶ rasc.ca/archives/1970s
- ▶ rasc.ca/archives/1980s

5. **David Levy** has talked about it for years. Now you can finally read it too! *Cole of Spyglass Mountain* can be downloaded from:

▶ rasc.ca/cole-spyglass-mountain



6. Volume 24 (2010-13) of the David Levy Logbooks is now online at rasc.ca/david-h-levy-logbooks ★

