

ORBIT

The Official Publication of the Hamilton Centre

RASC Hamilton Centre

June 2004

Volume 37, Issue 6

Message from the President

What a month. While I was skunked three mornings trying to see comet Bradfield (got out of bed VERY early only to have low clouds, haze and moonlight interfere) I did however get to observe and photograph comet Neat several times. While not a fantastic comet it was well placed and easily visible to the naked eye (in a relatively dark sky). It is still an easy binocular object and we were even able to view it at sidewalk astronomy on the 28th. Also visible was a very thin crescent Venus (less than two weeks before inferior conjunction and Transit!). Speaking of the transit of Venus, it will take place Tuesday morning June 8th (from sunrise at about 6:00am and last till about 7:20am or so). The transit will already be well underway by the time the sun rises for us so we only get to see the last 3rd or so of the transit. A clear (and cloud free) north east horizon is desirable so a number of Hamilton Centre members will be setting up at Hutch's on the beach strip in Hamilton. Remember your safe solar observing and come out and enjoy a truly rare event. The last time

anyone saw a transit of Venus was 122 years ago.

The Hamilton Centre doesn't usually have general meetings in July or August but this year we have arranged to have two "summer" meetings. They will be beginner oriented and take place at Paletta Lakefront Park at 4250 Lakeshore Rd in Burlington. The dates are Thursday July 8th and Thursday August 5th. We will meet at 8:00pm and have public observing after the meeting right there on the grounds. The meetings will be in the Cumis room in the fabulously restored mansion. Also on Sunday June 6th there is a discover the park day (9:30am-3:00pm) and members of the Hamilton Centre are invited to come and participate by doing solar observing. If you can help out please do. Also, on the summer meeting nights bring out a scope for observing after the meeting.

Thanks,
Steve Barnes

¡Expedición de una Semana al Lado Titicaca en Bolivia!

That's right! A one-week expedition to the royal blue waters of Lake Titicaca, Bolivia to observe the southern skies.

I'm planning to attend the June 2005 southern hemisphere star party and would like to extend an invitation to others to join me. This is an annual event organized by the Southern Skies Star Party association.

This expedition does NOT feature a resort with elegant dining, casino action, shops featuring fashions from top designers or even golfing. Indeed, this adventure will cost more than spending a few days at Starfest, approximately \$1,700 US return airfare from Miami to La Paz Bolivia. Transfers to Lake Titicaca are included as well as hotel, meals and the availability of an on-site US board certified doctor.

Inside this issue:

Board Shorts March & April	2
New Scope Q&A	3
Keeping in Touch	5
Calendar of Events	6



The Centre is ordering
SBIG STL11000M CCD
Camera
To learn more, see:
<http://www.sbig.com/>

Expedition for a week at Lake Titicaca in Bolivia (continued)

However, it does offer astronomers the following:

- A 12,000-foot observing site with about two-thirds of the earth's atmosphere below you.
- June is the dry season in this part of the world and one can expect little or no rain/dew.
- Transparent skies that provide 8th magnitude seeing (most likely restricted to those with young / healthy retinas).
- Site telescopes that include a 10 and 22 inch Dobsonians.
- Comfortable accommodation.
- The opportunity to visit a professional observatory (18,000-feet above sea level).
- Daytime excursions to several local points of interest.

Steve Barnes has expressed interest and graciously

agreed to help organize the expedition.

I hope you can join me.

Best regards, David Boki (dboki (at) cogeco.ca)

p.s.: I've personally hiked and climbed mountains in the Andes and noticed that most easily acclimate to moderately high altitudes (8,000 – 12,000 feet), including members of the geriatric set. Only for a select few was altitude an issue.

Southern Skies Star Party
Fly out Thursday June 2
Returning June 18, 2005.
Event runs June 4 -11, 2005.
On the web: <http://www.sssp.org/>

Board Shorts—March and April

March 11, 2004

This is a short precis of the March 11 Board Meeting, held at 8:25pm at Leslie V. Powis Observatory, designed to share board happenings.. Attendees were: Steve Barnes, Les Nagy, John Williamson, Rob Bodner, Scott Barrie, Colin Haig, with regrets from: Roger Hill, Mark Kaye, Ken Lemke, Gary Colwell, and absent was Grant Maguire.

Vice President Les reported three education tour groups were held in February. The web site calendar has been set up and is running. Tree issue has not yet been addressed. The theater AV equipment setup is yet to be completed. Security equipment needs to be set up now that the equipment has arrived.

Treasurer John reported purchase of a Term Deposit for 2 months for US\$25,000. Received a US\$200 rebate cheque from NEC Corporation that applies against the purchase price of the digital projector. We raised \$93 from the most recent draw at the regular meeting.

Maintenance Director Rob indicated he is compiling a detailed list of items for refurbishment and upcoming maintenance work. WebMaster Scott indicated that the service provider that we have been using at no charge has sold their business, and so this may impact our hosted site. Les volunteered to host the site.

Secretary Colin By-law committee has not made progress yet, as we have just received the new bylaw template information from National's bylaw committee presented at last Saturdays National Council meeting. The centre's annual report was submitted in time for publication in the society's annual report.

Under Old Business, the motion tabled at the last board meeting regarding the purchase of the CCD camera, could not be untabled and discussed due to loss of quorum as Steve would not be able to participate, due to his declaration of conflict of interest. The discussion will be deferred to April.

Under New Business,

- a. Steve reported that the City of Burlington contacted him about possible dates at Paletta beachfront park for summer.
- b. Discussion around conducting a membership survey. Specifically the board wants to know about centre activities, meeting location, Orbit printing vs email vs web hosting. The Orbit editor will print and bring the April issue to the next meeting and mail out the remaining copies, with an inserted member survey. The web master will send out an email with highlights about the new issue.
- c. There was discussion to have the Membership director Ken to organize a drive to locate former members and associate members, and get them to renew.

The meeting adjourned at 10:10pm.

April 8, 2004

For communication purposes, this is a short summary of the April board meeting. Attendees were: Les Nagy, Scott Barrie, Roger Hill, John Williamson, Mark Kaye, Ken Lemke, Grant Maguire, Colin Haig, Gary Colwell, Rob Bodnar, and regrets from Steve Barnes. The meeting was held at the Observatory at

(Continued on page 4)

New Scope Questions and Answers

The May 2004 General Meeting featured a lot of group discussion about the new telescope equipment, including an update from President Steve, and a review of the Trillium Grant process from Grant Maguire.

Telescope Committee Formed

During the meeting, some great questions were asked, and Treasurer John recorded them, with a promise to get back to the group, with some initial answers. Steve also requested some volunteers for a Telescope Committee to sort out a number of issues raised by the membership. A number of people volunteered, and we would be happy to have a few more. The first committee meeting will be at the Observatory on June 28, 2004 at 8:00pm. Feel free to attend.

People raised many questions that were raised, some of which are about policy, some are about the equipment, and some are about the site. The questions are included below, with answers where possible. The Telescope Committee will need to address any outstanding items, in addition to formulating plans and presenting recommendations.

Questions and Answers

The following questions are in no particular order, but were raised by members at the May meeting.

1. Does the observatory have to be modified?

Some work is needed at the observatory in the next two months. Repairs to the roof and dome are necessary. The dome shutter should also be replaced, as the current arrangement is not very workable, and has been an ongoing source of problems.

2. What's going to happen to the equipment presently in the dome?

The computer and desk will stay, and the Marsh mount and telescope will need to move. The telescope committee needs to address this issue.

3. Would the Marsh Scope have to be kept on the site?

The telescope committee needs to address this issue.

4. How is the time allocation going to work?

The telescope committee will develop a plan for time allocation, which may include reserved time slots, open "first-come-first-serve" time, public education nights, and project time slots which span longer periods. There will be "open" time, when the scope is available without a reservation, when nothing conflicting is booked.

5. Are any research programs possible?

Yes. This telescope has a high quality mount, which is essential for many types of research projects, including visual, photographic, spectrographic, and imaging activities. The telescope can be adapted to support different kinds of instrumentation.

6. Real science should be done.

There is a great opportunity for Hamilton Centre members to perform science activities. In the past, the Centre worked with

NASA to image Comet Hyakutake, and members reported variable star observations to the AAVSO, and planetary observations to ALPO. All proposals for research projects are welcome.

7. Will the telescope have to be set up for certain tasks for certain amounts of time?

The telescope committee will need to address this issue. Certain projects may require several nights in a row, but the goal is to make sure the telescope is accessible to all.

8. What is OGS doing to train us?

Documentation is provided with much of the equipment, and OGS provides technical support to their customers. It will be our responsibility to disseminate the knowledge on how to operate the equipment.

9. Will a program be in place to train people?

Yes, we think this is a good idea. The telescope committee will help develop a training plan.

10. Are we looking into buying any specific CCD camera?

Yes. See Question 11 and 12.

11. Are we locked into buying any specific CCD camera?

Yes, we are obligated under the terms of the Trillium Grant to purchase a CCD camera that is the same or similar to the one specified. In other words, we cannot buy other things with the funds (like a new dome), and the camera purchased must be of comparable specifications.

12. What kind of CCD camera are we presently getting?

The selected camera is a Santa Barbara Instruments Group SBIG STL-11000M CCD Camera. The camera is a "research grade" monochrome self-guided CCD camera, and features a total of 11 million nine micron (9u) square pixels in a 4008 x 2745 array. The pixels can be binned together in order to match seeing, speed download time, and to boost the equivalent electron well count.

The camera is designed as an air-cooled camera with the ability to be water cooled optionally. There are options available, including a ST237 guiding camera, and

Telescope Committee Volunteers

Betsy Rennie	Peter Fedirko
Heather Neproszel	Bert Rhebergen
Mike Spicer	Colin Haig
Steve Barnes (<i>ex officio</i>)	

LRGB color filter wheel, and other filters.

13. What kind of finder scope is on the new telescope?

Like most large telescopes, including the ones Hamilton Centre members have installed at Saltfleet High School and the Tim Horton's Onondaga Farm, a finder scope is not really necessary, except for initial installation and alignment. The finder scope is not used on these other two scopes. The hand controller for the scope is used to select the object or to move to the coordinates in right ascension and declination (RA&Dec). Alternatively, a computer can drive the telescope using software such as The

New Scope Questions and Answers (continued)

Sky, Earth Centred Universe, DeskTop Universe, or Starry Night. The drive and mount on the new telescope is a Software Bisque Paramount, which can be computer controlled to point to exactly where you want to look. If users find it helpful, we can attach a guide scope to the instrument at a later time.

14. How is the observatory going to survive if no one goes there anymore?

The recent membership survey has shown that at least half of the respondents use the site, and there is potential to continue to grow the use of the site in the coming years.

15. Will the CCD camera only be used on the 16" OGS?

In order to use any CCD camera, it is important that the telescope it is used on has an accurate, driven mount. This precludes it being used on the rest of the scopes at the site. Experience with the old Cookbook CCD and member cameras has shown that the drive on the Celestron C8 was the best of the bunch, but that it was not good enough for exposures longer than about 30 seconds.

16. Is the CCD camera USB or USB 2?

The camera is USB 1.1, with a transfer rate of approximately 425,000 pixels/second. This means a full frame takes about 25 seconds. This performance is comparable to (actually a touch faster) the Meade Pictor 1616 camera some of you may be familiar with, with the ex-

ception that the SBIG camera is transferring over seven times (7x) the number of pixels.

Binned frames take proportionally less time (e.g. 2x2 binning translates to about 6 seconds to download). The transfer rate is not just a function of the type of interface (USB, USB2, SCSI, etc.), but is also related to the speed of the analog-to-digital converter's ability to translate the voltage in each pixel to a numeric value.

17. There should be special people to maintain the new telescope.

Agreed. The club will be seeking advice from Optical Guidance Systems on telescope maintenance. Our members on the installation team will be actively involved during the initial installation and shakeout for problems. Longer term, there will need to be a pro-active maintenance program.

18. Is the new telescope going to have the shiny finish?

Yes, the Optical Guidance Systems telescope tube is made of Tuned Carbon Fiber Xze, which is strong, lightweight, and thermally stable. That is, it does not expand/contract a lot with temperature shifts, and the shiny nickel coating reflects infrared light, keeping the telescope cooler.

19. Is the new telescope going to be equipped for solar observations?

This hasn't been decided, and will depend on both budget and whether a

smaller scope would be a better option for solar observing. Many people have noted that for visual work, the C8 is a great option. The telescope committee will need to look into the right options for solar observation.

20. What will the cooling down time if the telescope is used to look at the sun?

Since the telescope will be at ambient temperature during the day, there should be little difference in temperature in the optics. The dome may need a vent to ensure temperature does not rise inside. The telescope's performance will need to be determined after installation.

21. Has daytime public education been considered?

This is a great idea, but requires volunteers who are available to do daytime sessions. If you are available, this would help. Let the telescope committee know of your specific ideas.

Summary

The telescope committee will be asked to provide recommendations on how to solve the outstanding issues, and to make sure the Centre has a solid plan to ensure success of the new project. The equipment will be arriving in the late summer, if all goes well. We need to have the decisions made and action under way soon.

Board Shorts—March and April (continued)

(Continued from page 2)

8:15pm. Guest observers included Mike Spicer, Peter Fedirko. The minutes for the March meeting were approved.

National Rep Ken stated that he is uneasy with having his name put forward as a proxy-holder, and so will be declining that option at the next National event. On the publicity front, despite the weather, 25 people turned out for the Chapters event in Ancaster. Astronomy Day will be observed on April 24th with a start time of 5 pm. The rain date will be the following day at 7. Treasurer John brought forth 3 new member applications that were then accepted.

Colin and Grant are swapping/sharing jobs, effective this meet-

ing. Colin focus on Orbit, and Grant the Secretaries duties.

With respect to Orbit, we did a mailing of Orbit to all members, and have collated preliminary survey results.

Rob has compiled a list of projects to be done. A users guide, power to the parking lot and others. There is lots to do.

Scott reported the old website is inactive and it now re-directs people to the new one. Les is working on linking the calendar in the forum to the web site. Only seven people have signed up for the forum so far.

Gary stated that it has been the crumbiest March for observing that he can remember. Ken and Gary had bantered around some

(Continued on page 5)

Board Shorts—March and April (still continued)

(Continued from page 4)

dates to go away with the Beginners group. Ken noted that if we advertise public nights at the Observatory, then we need a ‘Plan B’ in case of clouds. Need resources like NASA videos, etc.

VP Les reported that the A.V. setup in the Observatory is finished. The assembled members extended their thanks to Les and Colin for all their hard work. There are no updates on either the tree issue or the security matters. Colin passed on another webcam. A letter will be sent to the Burlington Cub group that have still not paid for the tour recently.said he and National IT guru-Dave Lane will be setting up an ‘announce only’ email list for Hamilton. Mark has changed the locks on the buildings as per the announcement.

Old Business

Discussion regarding whether we should install a gate lock. Colin moved that a lock not be installed on the gate, seconded by Ken, and carried. The Board directed the Maintenance director to research the purchase of a new gate.

When it rains a Marsh forms, so the drainage needs to be looked at, and the cost of gravel will be looked at.

Hamilton Centre Annual Banquet plans are underway, with

emails going to all clubs in the area, RASCList, and local astronomy vendors Khan, Kendrick, Perceptor, Efstonescience, Sky Optics as well as Celestron and Meade. Donors will be mentioned in Orbit and on the web site.

There will be a Member Info night at the May meeting to address the Trillium Grant history and current update.

Several folks volunteered to put material together on Ritchey-Chretien Telescopes, how the grant was prepared, submitted, the tender process., etc.

The discussion to purchase the CCD camera was un-tabled by Grant, seconded by John, carried. Motion 2004-04-08-E that we purchase the Sbig STL-11000M CCD Camera from Perceptor at a time to be determined later was moved by Ken and seconded by Mark, carried with 6 for, 1 against, 2 abstentions.

New Business

A large amount of discussion occurred on member satisfaction, including how to better address member concerns, and better ways to disseminate past, present and future Board meeting info. The next regular Board meeting was set for Thursday, May 13th, 2004, at the L. V. Powis Observatory.

The Meeting was adjourned shortly after 10pm

Keeping in Touch

President	Steve Barnes	Sbarnes(at)worldchat.com
Past President	Mark Kaye	Mark.kaye(at)sympatico.ca
VP, Public Education	Les Nagy	Lnagy(at)thelightages.com
Treasurer	John Williamson	John.williamson (at)sympatico.ca
Recorder	Roger Hill	Roger.hill(at)sympatico.ca
Secretary	Grant Maguire	Maguires(at)lara.on.ca
Orbit Editor	Colin Haig	astronomer(at)cogeco.ca
Observing Director	Gary Colwell	Glcolwell(at)rogers.com
Web Master	Scott Barrie	scottbarrie(at)homeroom.ca
Librarian	Rob Bodner	Robbodner(at)sympatico.ca
Membership / Publicity	Ken Lemke	cfs(at)worldchat.com klemke(at)worldchat.com



RASC Hamilton Centre

P.O. Box 1223
Waterdown, ON L0R 2H0
Phone: 905-689-0266
Email: rasc@cogeco.ca

We're on the Web!
www.rasc.ca/hamilton

● For the Advancement of
Astronomy and Allied Sciences

June 2004

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3 Meeting	4	5
6	7	8 Transit @Hutches	9	10	11	12
13	14	15	16	17 Board	18	19
20	21	22	23	24 Scope committee	25 Sidewalk	26
27	28	29	30	1 NO MEET	2	3

Schedule of Events

June 3 Meet at Steam Museum

June 8 Venus Transit expedition near
Hutches on Van Wagner's Beach

June 17 Board Meeting

June 24 Telescope Use committee
8pm at Observatory.

Sidewalk astronomy June 25 July 23
Aug 27 Sept 24 Spencer Smith Park

July 1—No meeting—see July 8th
July 8 Summer Night at Paletta Lake-
front Park Burlington 8:00pm instead of
July 1 meeting

July 10 Hamilton Centre Picnic. Food
to be provided bring Lawnchairs and
something to drink.

August 5 Summer Public Night at Pal-
etta Lakefront Park Burlington 8:00 pm