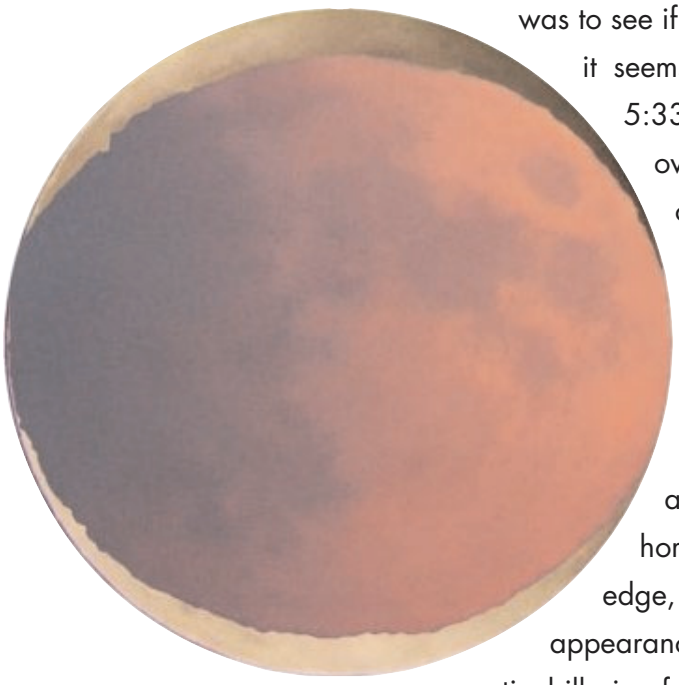
Saskatoon Skies

The Newsletter of the Saskatoon Centre of the Royal Astronomical Society of Canada

Vol. 35, No. 3 **March 2004**

Optical illusion…



An interesting side experiment of the total Lunar Eclipse of November 8 was to see if the moon is actually bigger when it is at the horizon, as it seems to be. This shows a picture of the moon taken at 5:33 p.m., just after the moon rose partly eclipsed, placed over a picture taken at 9:20 p.m. after the eclipse. The change in color is certainly noticeable. Here we see that the moon at the horizon is actually smaller rather than bigger, at least in one dimension. It is the same width but its height is smaller due to atmospheric refraction. At the horizon atmospheric refraction makes the moon to be seen a moon width higher than it actually is. The bottom edge of the moon is closer to the horizon and is refracted or lifted even more than the top edge, flattening the moon. Therefore the conclusion is that the appearance of the moon as being bigger at the horizon is just an optical illusion for it actually is smaller.

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Membership?

It's never too late to join!

Regular: $52.00/year
Youth: $27.50/year

The Saskatoon Centre operates on a one-year revolving membership. You will be a member for the next 12 months no matter when in the year you join. If you do not want to join at this time, ask to get onto our FREE 3-month Temporary Membership list. You will receive regular mailings of our *Saskatoon Skies* newsletter and will be invited to participate in Centre activities. Members are encouraged to renew early to avoid disruption in publications. Renew through the membership coordinator, Mike Clancy, or renew through the National Office and let Mike know that you did!

Benefits of Membership in the Saskatoon Centre

- knowledgeable & friendly amateur astronomers
- use of the Sleaford Observatory
- use of the U of S Observatory (after training)
- *Saskatoon Skies* Newsletter
- **Observer's Handbook 2004**
- **The Journal of the RASC** (bimonthly)
- **SkyNews Magazine** (bimonthly)
- use of the Centre library
- discounts to **Sky & Telescope Magazine**
- discounts of Sky Publishing merchandise
- free, no-cost, no-obligation, 3-month temporary membership if you don't want to join right now!

U of S Observatory

The U of S Observatory is open to the general public every Saturday of the year. Admission is free. The observatory is located on campus, one block north of the Wiggins Avenue and College Drive entrance. On clear nights, visitors may look through the vintage 6-inch and tour several displays. Current events are recorded on the Astronomy Information Line at 966-6429.

Observatory Hours:

January-February	7:30-9:30 pm
March	8:30-10:30 pm
April	9:30-11:30 pm
May-July	10:00-11:30 pm
August	9:30-11:30 pm
September	8:30-10:30 pm
October-December	7:30-9:30 pm

About this Newsletter...

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Saskatoon Skies is published monthly by the Saskatoon Centre of the RASC. Distribution is approximately 100 copies per issue. Saskatoon Skies welcomes unsolicited articles, sketches, photographs, cartoons, and other astronomy or space science articles. Articles can be sent by mail in any format to the Centre's mailbox. Submitted materials can be returned upon request. Submissions may also be sent by e-mail – preferred as **plain unformatted ASCII text files without line breaks**. Images sent by e-mail should be attached .JPGs (.GIFs also accepted). Send e-mail submissions to the editor at <tuomi@sasktel.net>. Please send articles in "generic" formats with simple formatting – one tab at the beginning of paragraphs, one space after commas and periods. A separate by-mail subscription to ***Saskatoon Skies*** is available for **$15.00** per year. ***Saskatoon Skies*** is also posted on our Saskatoon Centre homepage as a .pdf file and can be downloaded free-of-charge. Members may choose to receive the newsletter by regular mail or via the Internet. Articles may be reprinted from ***Saskatoon Skies*** without expressed permission (unless otherwise stated), but source credit is requested. **DEADLINE for submissions is the 26th of each month.** ***Saskatoon Skies*** accepts commercial advertising. Please call the editor for rates. Members can advertise non-commercial items free of charge.

Bottle Drive & Canadian Tire $

by Darrell Chatfield

Canadian Tire Money collected to date is $34.25. Thank you to all who contributed to our fundraising for the Centre. Please bring your bottles and Canadian Tire Money to the General meetings. I will collect them after the meeting concludes. If you cannot make it to the meeting but would like to contribute, please call me at 374-9278.

2004 RASC Calendar of Events

DATE	EVENT	CONTACT	TELEPHONE
Mar. 15	**Executive Meeting** – Rm 175 Physics, U of S, 6:30 p.m.	Rick Huziak	665-3392
Mar. 15	**General Meeting** – Rm 175 Physics, U of S, 7:30 p.m. – **A Tale of Two Comets, with More to Come** – Rick Huziak; **A Tour of the Physics Roof Observatory** – Stan Shadick	Rick Huziak	665-3392
Mar. 20	**Messier Marathon Night** at Sleaford Observatory – sunset to sun-up	Brent Burlingham	244-9872
Mar. 29	**Venus & Mercury at greatest eastern elongation** (visible in west after sunset) – best view of Mercury in 2004		
Apr. 17	**Saskatchewan Winter Warm-up** – BBQ with Regina Centre at Sleaford Observatory – Details tba	Rick Huziak	665-3392
Apr. 19	**General Meeting** – Rm 175 Physics, U of S, 7:30 p.m. – **A stargazer's dreaming: Kathleen Houston's mixed media artwork** – Kathleen Houston	Rick Huziak	665-3392
Apr. 21-22	**Lyrid Meteor Shower Peak**		
Apr. 24	**International Astronomy Day** – The Mall at Lawson Heights, 9:00 a.m. – 5:00 p.m.	Brent Burlingham	244-9872
Apr. 24	**Astronomy Day Gastronomy** – The Mall at Lawson Heights, 5:30 p.m.	Rick Huziak	665-3392
Apr. 24	**International Astronomy Day Starnight** – Beaver Creek Conservation Area, 7:30 p.m. – 11:00 p.m.	Brent Burlingham	244-9872
May 4	**Rosthern Astronomy Students** at Sleaford Obs. (May 6 backup date)	Rick Huziak	665-3392
May 17	**General Meeting** – program & location tbd, 7:30 p.m.	Rick Huziak	665-3392
May 22	**Noctilucent Cloud Season begins**	Rick Huziak	665-3392
June 8	**Transit of Venus** – Canadian East Coast or Eastern Hemisphere		
June 21	**General Meeting** – program & location tbd, 7:30 p.m.	Rick Huziak	665-3392
July 8-11	**AAVSO, ALPO, AL, Annual Meeting** – Oakland, CA	Rick Huziak	665-3392
Aug. 11-12	**Perseid Meteor Shower Peak**	Rick Huziak	665-3392
Aug. 12	**Noctilucent Cloud Season ends**	Rick Huziak	665-3392
Aug. 12-15	**Saskatchewan Summer Star Party (SSSP '04)** – Cypress Hills Interprovincial Park	Les Dickson	249-1091
Aug. 14-22	**Mt. Kobau Star Party** – Osoyoos, BC	Jim Failes (250)	763-6962

Monday, March 15, 2004 – Room 175 Physics, U of S – 7:30 pm

Presenting:

A Tale of Two Comets – with More to Come

by Rick Huziak

Comet LINEAR is already a very nice binocular comet and will become 1st magnitude at the end of April. Then at the beginning of May, it is joined by Comet NEAT which suddenly appears from the southern skies. And there are even more comets around later in the year. See these simulated in Guide.

A Tour of the Physics Roof Observatory

by Stan Shadick

Astro 212 students are now using three remote controlled 12" telescopes on the roof of the U of S Physics building to do their CCD photometry and imaging labs.

Note: There will be an Executive meeting at 6:30 p.m.

Margo's Marathon Tips

by Margo Millar <millars@telusplanet.net>

[I'm a new member. I've transferred from Calgary Centre to 'Toon Centre.]

Well it's that time of year again. This will be my seventh Messier Marathon (I have yet to break 80 objects) but I do last the entire night. How do I last, you ask? There is more to it than just hunt and find (although that is the main object of the night!) The camaraderie is half of what keeps you going for the full night. Knowledge is shared amongst friends and new friends are picked up as the night wears on. The other half of what keeps you going is what you pack in your bag to bring. This is very important. First off, don't have a heavy meal before you come, nor drink coffee or beer (this from the voice of experience). As we all know, food turns to something else once it's digested and the old has to make room for the new – translation – potty time!!! When you dress in layers, it takes forever to gear off, do your thing, then layer back up (notice the lingo… pretty hip, huh?). By the time you're ready to go back outside, you're sweating bullets. These bullets immediately freeze the moment you reach the outside air. Not a pleasant feeling. So, here are my tips to stay warm and enjoy the entire night:

Starting with your head… pack a headband, earmuffs, tube toque and a warm toque. I find if your head is covered, your body heat can't escape; it bounces off your toque and back down to your body. By the way, you don't wear all of the above at one time. Pick and choose according to the temperature. Next, your neck. I find that if the back of my neck is covered, I don't get chilled. So I use my tube toque as a neck warmer. Then when my teeth or chin get cold, I pull the front up over my mouth. This in no way hampers one from talking (again, from the voice of experience).

Moving down… your torso is next (that would be the part between your neck and your knees – sort of). Dress in layers. I like to wear a t-shirt. It won't ride up if tucked into your pants. I like to have my kidneys covered. When your kidneys get cold, guess what? POTTY TIME! We want to avoid this act as much as possible. I pack a flannel shirt (they're cozy, and have long sleeves), a thick sweatshirt, my hoody, a ski jacket and my fleece astronomy jacket. Sometimes I do wear all of these items at one time, depending on the weather. As your body gets acclimatized, layers can be removed.

For the butootski, I like to wear long johns or leggings. Then I wear sweatpants over them and if needed, ski pants, and of course my fleece astronomy pants.

Now for the biggie… feet! My feet get cold first. Then my fingers. How do I manage to stand all night, you ask? Well if there is snow on the ground, shovel it out of your way. If you are standing on bare ground, your feet will stay warmer longer. Bring extra fleece or wool socks. No nylon socks. When your feet get warm, they sweat a little. Then your socks become damp and you feel the cold sooner. If you keep changing your socks, your feet will stay warm and dry. I bring two pairs of winter boots. I wear one pair (oh duh!) and leave the other in the clubhouse to keep warm. Don't leave them in your vehicle. When you open your car door to get your clothes, your interior light will come on and someone will surely yell at you. I alternate my boots every now and then, just so I have a warm pair on.

For my hands, I have a good pair of ski mitts, a pair of woolly gloves and a pair of those flap-down-off-the-fingers gloves (how come no one has invented the flap-down-gloves with a flap-down for the thumb. That is so annoying!)

Now that we have covered the outside of the body (pardon the pun) we can't forget about the inside. Like I said before, watch what you eat before you come. Don't get me wrong – eat a good supper. Have something that's going to stick with you, not something greasy that will slide right thru you. Don't bring coffee or hot chocolate. Just bring a water bottle. Bring lots of munchy food (not a piece of steak, or a drumstick – we know what happens to that food after a while!) but bring juicy fruits such as apples cut up, oranges already segregated, melon, etc. These fruits will provide you with enough liquid to keep from dehydrating and will GREATLY reduce the need for the inevitable POTTY TIME!

Last but not least, lower your stress level so you can enjoy the evening and hopefully the night. Have your charts ready. Bring extra flashlight batteries. Stand near someone who sounds like they might know something. Early evening and morning are both very rushed times for the hunt/find. If you're busy looking for a certain chart or picture, or your light has gotten dim and no one will lend you theirs, it can get very frustrating. I'm sure some people pack up and go home, when this happens. If you are organized, BEFORE you start the marathon, your stress level should remain low.

I hope these tips will encourage you to come out in March and try the Messier Marathon. You don't need to get 100 objects. If you only get one object, that's one more you got than if you didn't come out at all. Besides, it's fun to spend real quality time with people. When you've been standing next to someone for 10 hours, in the cold, at night, you really see them at their best (NOT). You always go away with more knowledge than what you came with. Everybody rubs off on everybody (not literally!) and you can't help but learn something.

So remember…

- Eat sensibly before you come
- Pack more than what you need (it's better to have more than less and not get chilled – that thoroughly will ruin your night!)
- Get organized before you come
- Don't expect to top the charts, just come out and enjoy

Rick's Ramblings... Meetings Room & Light Pollution *by Rick Huziak, President*

Attendance at the February meeting was pretty light, with only 21 members attending. Please attend the March meeting and see our new room. Those who came liked the new facility. It has more room and better AV facilities. I think we will all like this new place.

On January 29th, Vance Petriew (Regina Centre), Darcy Kozoriz (SaskPower) and I headed off to Swift Current for a meeting with Cypress Hills Inter-provincial Park managers, Brad Mason and Rick Goett. The subject of the meeting was a proposal by our Light Pollution Abatement Committee to create a Dark Sky Preserve in the Cypress Hills. We'd been talking about this informally at the last two SSSPs, but the opportunity began to accelerate as Bob King of the Calgary Centre began pushing the same idea on the Alberta Side of the Cypress Hills, called CHIPP West Block. We decided to formally take up a parallel program on this side of the border.

> Adding a Dark Sky Preserve to the arsenal of what Provincial Parks can give us seems to be an idea whose time has come.

At the Swift Current meeting, we gave the Park about a one-hour presentation on the concepts of light pollution control and how it would enhance the park. Brad and Rick immediately embraced the concept, thinking that is fits current Provincial Park policy perfectly, since parks are now batting around the new concept of "Envirotourism". Adding a Dark Sky Preserve to the arsenal of what Provincial Parks can give us seems to be an idea whose time has come. We spent the next 3 hours discussing a detailed plan to move forward. The meeting was extremely encouraging. Our hope is to end up with the Park whose light pollution status is legislated.

The Light Pollution Abatement Committee is composed of members from the Regina and Saskatoon Centres. We will be building a Light Pollution website to keep everyone informed of our progress. The current plan to get the CHIPP declared a Dark Sky Preserve, then to move back to pushing our major cities to pass bylaws to stop the spread of light pollution.

Sky Buys & Mirror Cells

The Saskatoon Centre's Swap and Sale Page!

For Sale: ***Astronomy 2002,*** by Robert Burnham – colour sky charts, planet information, etc. – $15.00.
35mm Bausch & Lomb Plossl eyepiece, fully coated. Excellent shape, in original box with dust caps – $80.00. Call Darrell at 374-9278.

For Sale: RASC Royal Centenary coffee mugs. Pick yours up at the next General Meeting – $9 each

For Sale: ***Millennium Star Atlas,*** 3-volume set – $200; **REALSKY CD's** – $200. Call Dale Jeffrey at (306) 223-4447 or dalejeffrey@sk.sympatico.ca

BOOKS FOR SALE

by Bruce Brandell, Sales Coordinator

We have a number of books, calendars and pins left over from SSSP Sales. Call 249-1119 or email ***bruce_brandell@yahoo.com***

Title	Author	No. Avail.	Price Cdn$
RASC 2004 Calendar	Rajiv Gupta, Editor	9	$ 5.00
Messier Marathon	*Howard Tennington*	*1*	*$20.00*
Nightwatch	*Terrance Dickenson*	*1*	*$20.00*
Astrophotography	G.N. Patterson	oodles	$ 5.00
SSSP 2003 Lapel Pin		5	$ 5.00
SSSP 2002 Lapel Pin		34	$ 4.00
SSSP 2001 Lapel Pin		24	$ 4.00
RASC Centenary Mugs		136	$ 9.00

The following books can be ordered from Sky Publishing (Sky and Telescope):

Parallax: the Race to Measure the Cosmos, Alan W. Hirshfeld. This is a very interesting biographical history of the origins of modern astronomy, bringing to life the long standing controversy, esp. 16th to 19th centuries, between the Ptolamic and Corpernican concepts of the universe, and the astonishing attempts to use parallax to determine distances to the stars.

June 8, 2004: Venus in Transit, Eli Maor.

Transit, When Planets Cross the Sun, Michael Maunder & Patrick Moore.

Touring the Universe through Binoculars, Philip S. Harrington

The Cambridge Star Atlas, Wil Tirion

Chatfield's Binocular Certificate – The Observing Session

by Mike Clancy

Mike and Garry instructing Martha, Wilma and Roy on the use of Sky Atlas 2000.

Several friends of Garry's and Tenho's had stated their interest in doing some astronomical viewing so they thought a binocular certificate would be a great first gathering, an idea raised from the club's planned gathering at the Sleaford site. To this end, Tenho Tuomi and Garry Stone organized a gathering at the Stone residence near the Gardiner Dam while Anna and I agreed to drive down to help with the session as well as to start Anna off with her own certification. We departed Saskatoon about 1900 hrs, arriving just after 2010 hrs to find Garry and Myrna Stone, Tenho, Jonathan and Nicole Bloomfield and their two children and Martha Tastad already waiting for darkness to fully descend; Roy and Wilma Fielden would join us shortly. After introductions, we got started observing at 2030 hrs, with Anna logging her first object visually with Aldebaran and the Hyades at 2032 hrs. The temperatures hovered near the -5 C mark although a south-west wind had a surprising bite to it as the night wore on. Seeing was very good for the first while, with the Milky Way stretching from horizon to horizon in one grand arch and the smaller stars of Ursa Minor easily seen with naked eye.

Garry had his 5" refractor set up and Roy Fielden brought his brand-new 4" Newtonian, so we also had telescopic verification of some of the "faint fuzzies" we saw with a variety of binoculars. Besides the binocular list we also saw several shooting stars and satellites, and one blinking anomaly* just below and right of M42, the Orion nebula. Comet Linear was a fine sight telescopically although mildly disappointing with binoculars, and we saw the Zodiacal light about 2100 hrs. The planets are always favored objects, with Saturn's rings drawing appreciative remarks from the gang in Garry's observatory. Tenho had taken the liberty of making observing guides for everyone, with the Chatfield list presented in order of brightness, with objects visible at this time of year in bold type; both of these adaptations were highly useful and greatly appreciated.

Anna saw a total of 14 certificate objects of all sorts from asterisms to nebulae, binary stars to globular clusters, as well as planets, satellites and comets. I'm not certain of anyone else's numbers, but we were all busy observing for the better part of an hour and a half, so I'm sure the others had similar success. This all occurred before the seeing deteriorated to the point where Sirius was obscured in the mist! The time was ripe to gather in the house to warm up and sample some of Myrna's extraordinary cookery; the Saskatoon Berry pie was particularly choice although it was all far too good! Maybe the gang at Sleaford had better skies, but I challenge them to prove they ate better! As always, Myrna's gracious hospitality knows no bounds with coffee, pizza and dainties for all. After an hour or so of eating and reviewing celestial objects on Tirion's "Sky Atlas 2000" we checked the skies and behold! The mist had passed and we were back on track with our viewing. Unfortunately, the temperature seemed to have dropped and we still had to dodge the deer on our way home so we packed up and left about 2315 hrs although the others would continue observing for a while yet.

In closing, it was another wonderful night's observing with new friends and as always, the splendor of the night sky to share and marvel at. Anna's success may well have given her the bug, too, which is another plus!

*[Ed. – maybe the anomaly was what Kevin Fetter described in the RASCals list on Feb 25] *"Tonight go look at above alp orion, for flashes coming from the apple geo sat. This is discovered to be flashing 4 days ago. The last three night I have observed it flashes, flashes are bright (mag 6 or more) and were easy to see in a 10*50 binoculars when it was in the area left of alp orion."*

MY BIG FAT GREEK TRANSIT

On June 8 2004…

For the first time in over 120 years, Venus transits the sun…

Where will you be?

Join Murray Paulson and see the tranist from the Island of Crete.

Depart May 28 for Athens, spend a 1½ days in Athens. Cruise boat through the Greek islands and spend a week on Crete. Stopover on Santorini and spend a last day in Athens before returning to Canada on June 12.

Accommodations, some meals and transfers included. We have 14 bookings so far and can take up to 8 more.

16-day excursion from $2300 from Toronto.

For complete details, contact Murray Paulson: 780-459-1168 or mpaulson@ecn.ab.ca

Advanced booking bonus by March 15, cruise cabin upgrade.

Confessions of an Amateur Astronomer: Part 2
An Indirect Introduction to the Sky *by Mike Clancy*

The fact that astronomy is inherently interesting is a feather in the amateur astronomer's cap. Whether just visually, or at a deeply intellectual level, anybody can appreciate the heavens. If only some way could be found to break through the stigma that some family members may have built up about the hobby, they might give the sky a chance and find a glimmer of fascination!

I have found that impressing other people, especially friends and relatives, usually ends up profoundly impacting my wife. For example, one of my favorite things to do with an astronomy newbie is take them on a short tour of the cosmos, working from nearby objects to distant ones. Invariably I end the tour with the Andromeda Galaxy although in winter I'll end with the Orion Nebula. I encourage them to take their time and visually explore the object. As they do so, I explain that the light they are seeing has been en route for millions of years and is ending its journey in their eyes. I believe this to be standard fare, but I have yet to encounter someone that hasn't been duly impressed. I find the resulting enthusiasm intoxicating, but the look of pride on my wife's face is better still. When surrounded by a bunch of excitedly babbling people glancing into the eyepiece she ends up sneaking several peeks herself.

The trick here is to use astronomy newbies and to make a good impression on them: if they aren't impressed, the whole thing backfires. So keep the presentation really short (no more than ten minutes), try not to say anything superfluous, and don't show them anything the least bit subtle. Set your equipment out in advance, then start with a quick naked eye tour of a few of the more prominent constellations and point out any planets that happen to be in the sky. This serves the dual purpose of bringing back any long forgotten astronomy experiences and allows everybody's eyes to get somewhat dark adapted. Then dive into a very short hand-picked list of the most profound astronomical objects available in your skies.

I hate to say it, but most of the objects we spend hours searching for and staring at are excruciatingly boring to the uninitiated. All but the most amazing clusters, the Beehive or Double Cluster for example, are completely lost on newbies. They just don't understand what they should be looking at. Reserve globular clusters for particularly enthusiastic individuals. Even then, a peek at M13 is probably enough to convince most newbies that globular clusters actually exist. Finally, to a newbie, double stars and variables are generally pretty much as boring as black sky.

The moon, Jupiter, Saturn, the Orion Nebula, the Beehive Cluster, and/or the Andromeda Galaxy are usually more than enough for a two-person tour. If it's cold, keep the tour extra short and ask your tourists to bundle up. Always avoid taking more than a couple of people out at the same time. One or two at a time will minimize the amount of time that anybody is standing around with nothing to look at. Don't forget to encourage people to take a good long look through the eyepiece. Asking a tourist to describe what they are seeing is useful in making sure that they are looking at what they should be. Most importantly of all, know what you are talking about. Attend the observation night in October at Sleaford and watch more experienced presenters in action: learn what thrills and bores a newbie. Sidewalk astronomy sessions are also important; make it obvious that you are excited about what you're presenting. Just try not to appear too enthusiastic. A reasonably quick pace and a strategically placed 'wonderful' or 'beautiful' is often enough to give an otherwise dry technical speech a bit of life. Keep current events in mind as news coverage (the near approach of Mars, for instance) often sensitizes people to astronomy. I scored serious brownie points by showing Mars to my mother-in-law last summer. She'd lived her entire life on a farm and knew stars, etc., but had never seen another planet nor looked through a telescope. Suddenly I'm a hero!

Whenever I get some new equipment, I make a special point to use it in viewing one of my wife's favorite objects. I bought a Plossl lens (at great expense to be sure!) and was met with a certain amount of skepticism until she saw the Orion Nebula from our back yard, clearer and closer than with my Kellners. Suddenly my purchases seem reasonable! This allows her to experience first hand why I spend our money on these weird gadgets. We both enjoy these little sessions and she gives me a fair amount of feedback. God help me if I ever get it wrong, though!

I'm still waiting for the day that I come home from some evening event and find her in the backyard with a pair of binoculars trying to sketch the last of the objects for her binocular observing certificate. Frankly, I'm not expecting this to happen any time soon, but as I continue to modify my own behavior and gently communicate my interests, I am pleased with the patience and support she offers. For me, it's more than enough.

Newsletters from Other Centres... These are all the newsletters that have been received during the past month. Contact Ellen Dickson (249-1091) if you would like to borrow any of these or other newsletters from our library.

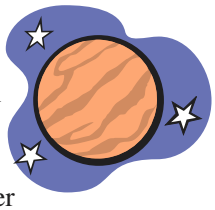
- Saskatoon Skies (Saskatoon Centre) – *"Asteroid Named After Local Astronomer (4143) Huziak"*
- Skyward (Montreal Centre – English) – *"Look back at 2003's May 15 & Nov. 8 Lunar Eclipses"*
- Skyward (Montreal Centre – English) – *"Martian Moonrise"* (Nov/Dec Issue)

The Planets This Month, March 2004

by Murray D. Paulson, Edmonton Centre

Last month the skies were kind to us in the latter half of February. A good string of clear nights allowed lots of quality eyepiece time and one night at Blackfoot let me watch Jupiter transit while the Great Red spot transited it's meridian. Earlier in the evening you could see Venus casting shadows!

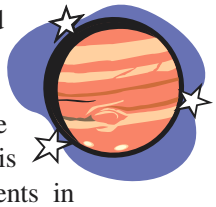
The planet **Mercury** starts off the month in conjunction, behind the sun and over the month of March it will swing out to greatest eastern elongation on March 27. This is an evening apparition and even though Mercury never strays more than 19 degrees from the sun, it sits well above the ecliptic and is well positioned for an early evening view. It will show a 7" half phase in the eyepiece and it shines at magnitude -0.4 on the 26th of March. At this time Mercury sets 2 hours after the sun, 22 degrees north of due west so you have a reasonable chance of catching it. Check the skies an hour after sunset over the week surrounding the date of the elongation. Binoculars will really help you locate it, then try and catch it naked eye.



Venus starts off this month as a 18" gibbous disk and it shines as a magnitude -4.2 beacon in the evening sky. It has been carried by the ecliptic high up into the night sky. It now sets after 10:30 pm and by month's end sets after midnight! Over the month it continues on its swing northward and its disk in the eyepiece grows slightly over the month as it heads to dichotomy on March 30. It is interesting to note that Venus and Mercury are both at quadrature with respect to the Earth's position in their orbits. Both are catching up with us and will pass us in short order. Venus is at Greatest eastern elongation on March 30th, 46 degrees from the sun. The eyepiece will show you a 23.4" half phase. Brilliant white and dazzling! If you want to check out your chromatic aberration in your refractor, this is the planet to do it with! My 90 mm unit passed the test, but don't be confused by the atmospheric refraction effect that puts blue on one side of the planet and red on the other.

Mars is just another star in the night sky, abandoning its former brilliance as we leave it about a quarter of an orbit behind us. If you examine it with a telescope, you may see it's diminutive gibbous disk and possibly some fleeting details along with that polar cap. It shines at magnitude 1.4 now and the disk is 5.7" in diameter.

You need upwards of 300 power to make much out of its details. I saw it in our week of great seeing back in late February and could see some dusky markings and a polar cap or hood. Boy was it small! Watch as it heads on its approach to Venus over the next month.



Jupiter is at opposition on March 4th and is now an easy evening object. It is the second brightest "star" in the night sky, shining at magnitude -2.5. In the eyepiece it will show you its 44.5" oblate disk. This month we have a number of great events in shadow transits. There is almost a bullseye transit on the night of March 4/5 with Europa. These transits are really cool, and they only happen if there is a moon transit on the same day as opposition. We are one day early. Basically what you see is the shadow enter the Jovian disk followed by the disk of the moon itself. You should see a whitish disk with it's shadow in contact with it. Next on the bill, March 13, there are two events that almost overlap, then on the 20th, a double event, and then the cream of the crop, a triple event on March 27! (Note these dates are local time.) Check the transit table for details. The observer's handbook includes the complete listing of all satellite events; eclipses, occultation's transits and shadow transits. During the observing session in February, I saw the Great Red Spot transit. It now has a pale straw yellow color, and the southern equatorial belt is quite distinct. It seemed to be split down the middle. The North equatorial belt had a number of dark spots or barges and showed some festoon activity. On March 6th you will get to see Jupiter rise with a full moon following it. One month later on April 2nd, Lunar month that is, we get a repeat of the event with a moon one day past full.

Saturn is a long way from opposition and the planet's shadow on the rings is quite prominent. At the beginning of March Saturn shows a 19" disk and shines at magnitude 0.0. It will still be a pleasant view right until Astronomy days in April. The seeing over the last week of February made for many a good view of the rings and divisions. The polar hood is quite distinct and there is some belt structure visible. At high powers, I could still see the rings above the pole of the planet. On March 28th, watch the moon which is high above the ecliptic pass above Saturn which is 1/2 degree below the ecliptic.

Well, we have an amazing few months ahead, lots to watch. *So good luck and clear skies.*

continued next page

Jovian Moon Events

Note UT is 6 hours later than time here in the Central Time zone. For example March 14 at 3:44 UT occurs on March 13th at 9:44 pm (21:44) local time.

DATE	HOUR	MOON	EVENT
14-Mar	0:02	III	Sha start
14-Mar	2:02	II	Occ start
14-Mar	2:26	III	Tra end
14-Mar	3:27	III	Sha end
14-Mar	3:29	I	Tra start
14-Mar	3:44	I	Sha start
14-Mar	5:18	II	Ecl end
14-Mar	5:44	I	Tra end
14-Mar	5:59	I	Sha end
21-Mar	2:24	III	Tra start
21-Mar	4:00	III	Sha start
21-Mar	4:16	II	Occ start
21-Mar	5:14	I	Tra start
21-Mar	5:38	I	Sha start
21-Mar	5:45	III	Tra end
21-Mar	7:25	III	Sha end
21-Mar	7:29	I	Tra end
21-Mar	7:52	II	Ecl end
21-Mar	7:53	I	Sha end
28-Mar	2:58	IV	Tra end
28-Mar	4:56	IV	Sha start
28-Mar	5:43	III	Tra start
28-Mar	6:31	II	Occ start
28-Mar	6:58	I	Tra start
28-Mar	7:32	I	Sha start
28-Mar	7:59	III	Sha start
28-Mar	8:18	IV	Sha end

Minutes of the EXECUTIVE MEETING Feb. 16, 2004, 6:30pm – Rm 175 Physics, U of S

Recorded by Al Hartridge, Secretary

1. Additions to the agenda: Mike Clancy wants clarification on complimentary newsletters.
2. Adoption of the agenda: moved by Jim Young and seconded by Les Dickson and carried.
3. Treasurer's report: Present balance is $17,600.00. The Royal Bank wants to charge the club for deposits of over $1000.00. We will look for a new account at a different bank or credit union, possibly The Teacher's Credit Union.
4. SSSP committee report: The web site address has been changed. The Cypress Hills resort can do the barbeque for $15.00 per person and also the brunch for $10.00 person. We will have to rent the cook hut east of the meadows for the barbeque. Sky and Telescope will give a deluxe edition of "Sky Atlas" as a door prize.
5. Meeting: Rick Huziak attended a meeting with Brad Mason. The future of the Meadows campground was discussed. Some development at the campground has already taken place.
6. Move to 175 Physics: It appears that this will become the new meeting place for the Saskatoon Centre.
7. Observer's report: The Chatfield challenge will be held this coming weekend. The Messier Marathon will be held on March 20. The Sask. Winter Warm up will be held on April 17.
8. Astronomy Day: April 24. The [Lawson Heights] mall and Beaver Creek will be contacted this week.
9. Centre Rep: Constitution amendments. Jim Young has emailed National some information and is presently waiting to hear back from them.
10. Joint Sleaford Management Committee report:
    - A motion was made by Rick Huziak and seconded by Jim Young and carried that we pay the U of S $1031.00 for one half of the construction costs at Sleaford.
    - need to make an accurate site model and need to get the site plan survey from Ken Noesgaard.
    - need to create and post Code of Conduct for the Sleaford Site.
    - need a Site Training Manual.
    - need to register a Caveat against U of S to make Agreement visible.
    - need Training Manuals for U of S equipment for RASC use.
    - need to review RASC site plan w.r.t. recent telescope developments. $5000.00 would allow us to put up the new dome for the 16 inch.
11. Light Pollution Abatement Committee: met January 13th in Swift Current with CHIPP and SaskPower. All agree that the creation of a dark sky preserve is a desirable goal.
12. Complimentary Newsletters: Mike Clancy wants to list businesses and certain individual memberships with "C" indicating that they receive only a complimentary newsletter. This would appear only on our local list and not on National's list.
13. Meeting adjourned at 7:28 pm.

Minutes of the GENERAL MEETING Feb. 16, 2004, 7:30pm – Rm 175 Physics, U of S

Recorded by Al Hartridge, Secretary

1. Presentations:
   - Darrell Chatfield "How to Observe."
   - Les Dickson " Detecting Earth-like Planets and Astrobiology"
2. Adoption of the minutes of the previous meeting: moved by Ron Waldron and seconded by Mike Clancy and carried.
3. SSSP report: see executive minutes.
4. Observing report: Brent Burlingham reminded members that the Chatfield binocular challenge will be held next Friday at Sleaford site. The Messier Marathon will be held March 20.
5. Cypress Hills Dark Sky Preserve: Rick Huziak mentioned that creation of a dark sky preserve is already underway on the Alberta side. At the meeting last Friday the idea of a preserve on the Saskatchewan side was also agreed to.
6. Meeting adjourned at 9:50 pm.

The Messier, H-400 & H-400-II, FNGC, Binoc & EtU Club

Join the Club! Observe all 110 Messier, 110 Finest NGC, 400 Herschel I or 400 Herschel II, Explore the Universe, or 35 Binocular objects and earn great OBSERVING CERTIFICATES!

MESSIER CLUB

Certified at 110 Objects:

R. Huziak, G. Sarty, S. Alexander, S. Ferguson, D. Jeffrey, D. Chatfield, B. Christie, K. Noesgaard, M. Stephens, B. Hydomako, T. Tuomi

Mike Oosterlaken		93
George Charpentier		90
Lorne Jensen		84
Mike Clancy		81
Wade Selvig		75
Brent Burlingham		58
Brent Gratias		39
Kathleen Houston	Up!	33
Les Dickson		28
Ellen Dickson		17
Brian Friesen		15

FINEST NGC CLUB

Certified at 110 Objects:

R. Huziak, D. Jeffrey, G. Sarty, D. Chatfield

Scott Alexander		97
Tenho Tuomi	Up!	94
Sandy Ferguson		23
Mike Oosterlaken		20
Bill Hydomako		20
Mike Clancy		4

Chatfield BINOCULAR CERTIFICATE

Certified at 35 Objects:

M. Stephens, T. Tuomi, M. Clancy

Mike Oosterlaken		32

EXPLORE the UNIVERSE

Certified for Certificate:

M. Clancy, T. Tuomi

HERSCHEL 400 CLUB

Certified at 400 Objects:

D. Jeffrey, R. Huziak, D. Chatfield

Gord Sarty		251
Scott Alexander		102
Mike Oosterlaken		68
Sandy Ferguson		18

HERSCHEL 400-II CLUB

Certified at 400 Objects:

Richard Huziak		196
Darrell Chatfield	Up!	136

The Messier & Finest NGC lists can be found in the *Observer's Handbook*. The Explore the Universe list is available on the National web site. The Binocular List & Herschel 400 lists will be available at each general meeting or can be mailed out on request to distant members. Each month I'll be posting updates.

RASC Observing Group Notes

by Brent Burlingham, Observing Group Coordinator

Three new observing totals to report this month – Kathleen Houston has added 3 more Messiers for a total of 33, Tenho Tuomi has added an amazing 48 FNGC objects to his total, bringing him up to 94, and Darrell Chatfield has added 19 objects to his Herschel 400-II list for a total of 136. Congratulations Kathleen, Tenho and Darrell!

The Chatfield Binocular Challenge on February 20th at Sleaford was plagued by some very foggy skies, but four of us gathered to set up our scopes, hope for the best and talk shop. Ron Waldron, Larry Scott, Jeff Swick and myself attended. Jeff had his new Celestron 8" Newtonian go-to and Larry set up his recently purchased 12.5" Dobsonian. Many thanks to Tenho for his Binocular List star charts – we'll save them and re-schedule the challenge for another night.

Garry Stone and Tenho Tuomi hosted a Chatfield Binocular Challenge the same night at Garry Stone's Observatory south of Saskatoon which was more successful weather-wise and in attendance. See Mike Clancy's report elsewhere in this issue.

Garry Stone and Tenho Tuomi have been busy photographing the Moon and Mars conjunctions towards the end of February, and Tenho snapped a shot of the Moon and Venus in conjunction, as well as a large sunspot grouping. Garry managed a daytime view of Mars by locating it through his setting circles. Kathleen Houston has been observing a gibbous Venus through her moon filter, Jupiter's Galilean moons and the Cassini Division in Saturn's rings.

Drop me a line or phone (brent.burlingham@usask.ca or 244-9872) any time you add to your observing totals, or any time you do any observing you'd like to share with the club.

Upcoming observing events to note on your calendars:

Saturday, March 20th – Messier Marathon

Attempt all 110 Messier objects in one night. Arrive at Sleaford well before dusk, as some of the Messiers are only visible early in the evening.

Depending on weather, there will be other Messier sessions around this date – let me know if you're interested in heading out to Sleaford any other evenings, and I'll notify the Observing Group mailing list.

Saturday, April 17th – International Astronomy Day

We'll celebrate International Astronomy Day with a display for the public featuring telescopes and RASC centre information at the Mall at Lawson Heights during the day, and end off with a public starnight and slide show presentation at Beaver Creek in the evening. Come out and help support this important public outreach.

Clear Skies!

On-line Messier List – For those who'd like an electronic Messier list (with DSS images), check out:

http://www.seds.org/billa/dssm/messier.html

On-line Finest NGC List – For those who'd like an electronic FNGC list, check out the Edmonton Centre's version at:

http://www.edmontonrasc.com/catalog.html