

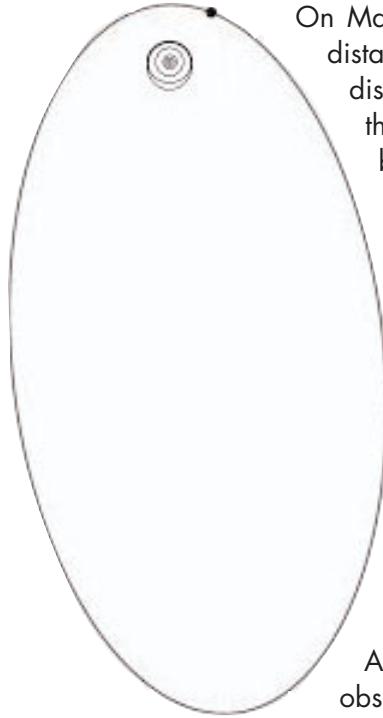
Saskatoon Skies

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

Vol. 35, No. 4

April 2004

Is it a planet, asteroid or a planetoid?



On March 14, 2004 astronomers at the Palomar observatory site discovered the most distant object in the solar system. It is 90 AU from the sun, twice as far as anything discovered to date, and three times further than Pluto. It has a highly elliptical orbit that will take it 1000 AU from the sun in the next 5000 years. Its size is estimated to be up to 1800 km, somewhere between the 1250 km of the largest known Kuiper belt object, Quaoar, and the size of Pluto at 2390 km. (Largest asteroid is Ceres at 933 km.) It seems to have a rotational period of 40 days, and appears to be the reddest object in the solar system. Currently known as 2003 VB12, it has been suggested that because of its frigid temperatures it be named Sedna, after the Inuit goddess of the sea.

There is much debate on what to call it. It is further than the objects discovered in the Kuiper belt, the zone of large objects discovered around and beyond Pluto, but nearer than the hypothesized Oort cloud zone believed to be the source of comets. It has rekindled the debate over whether Pluto is a planet. If Pluto is a planet then this, and many other large objects, should also be called planets. If this can't be a planet then maybe Pluto should be declassified. Some have suggested a new category called planetoids.

At magnitude 20.5 amateur astronomers won't have much opportunity to do direct observations of this new object, but we can contribute to the discussion of what the definition of a planet should be.

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Saskatoon Centre

The Royal Astronomical
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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!

Saskatoon Centre's main officers:

President – Rick Huziak
Vice-President – Ron Waldron
Secretary – Al Hartridge
Treasurer – Barb Young

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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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
Apr. 17	POSTPONED until further notice: Saskatchewan Winter Warm-up – BBQ with Regina Centre at Sleaford Observatory		Rick Huziak	665-3392
Apr. 19	Executive Meeting – Rm 175 Physics, U of S, 6:30 p.m.		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
April 26	Dale Jeffreys' Rosthern Kids at Sleaford – dusk	Rick Huziak	665-3392	
May 17	General Meeting – Rm 175 Physics, U of S, 7:30 p.m. – The Geology of Mars – Kim Mysyk	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	

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.	Price
		Avail.	Cdn\$
RASC 2004 Calendar	Rajiv Gupta, Editor	9	\$ 5.00
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		36	\$ 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 Copernican 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.

The Cambridge Star Atlas, Wil Tirion

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

Touring the Universe through Binoculars, Philip S. Harrington

The Deep Sky, An Introduction, Philip S. Harrington

Observing Variable Stars, David Levy



MEETING!!

Monday, Apr. 19, 7:30pm
Room 175 Physics, U of S

Presenting:

A Stargazer's Dreaming
by Kathleen Houston

Kathleen Houston, our member from Price Albert, presents a mixed media show inspired by stromony. See her article in this newsletter.

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

Astronomy – A Personal Journey – One Year Later

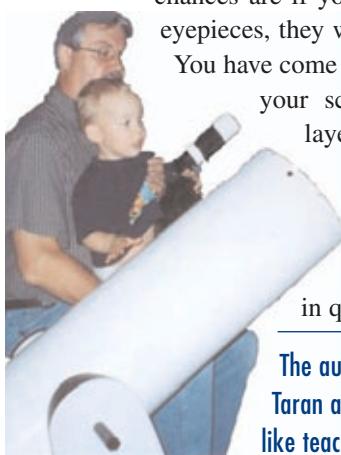
by Ron Waldron, Vice President, Saskatoon Centre RASC

As many of you know, it has been nearly a year since I purchased my Sky Watcher 10" Dobsonian Telescope (*see Saskatoon Skies, May 2003*). Since that time I have used the telescope a great deal and have learned many things about its strengths and its shortfalls. Over the course of the year, thanks to fellow amateur astronomers in our society, I have learned a great deal about telescopes in general. I have assembled this newfound knowledge into what I call the top ten astronomical "truths." It is my hope that as you read them, you will see and identify a part of yourself within each truth. I list them below in random order.

Truth #1 – The purchase of a telescope is the first of what will turn out to be a long series of purchases. As you use your telescope you immediately develop a 'want' list of upgrades and additions. The first is usually additional eyepieces, followed by filters and finder upgrades. You will find yourself aimlessly thumbing through copies of *Sky and Telescope* and *Astronomy Magazine*, reading the ads and ignoring the articles. My list of wants included all of the above plus the purchase of a brand new vehicle that would accommodate transporting my scope to observing sessions and sites. In October, I purchased a 2004 Toyota Matrix, (known as a crossover between an SUV and a station wagon). The design of the vehicle neatly accommodates the telescope tube, mounting, portable folding table and accessories case, plus two passengers.

Truth #2 – Be prepared to become paranoid about protecting your eyepieces! You may find yourself being very careful if not somewhat dubious about which eyepieces you choose to use for public star nights (all of us have personal experience or have heard horror stories about members of the public touching the glass in the eyepiece similar to a novice blowing into a microphone.) You will find yourself keeping your eyepieces covered at all times, even between uses in the field. A telescope is an important purchase but eyepieces are for life! During your lifetime you may make several telescope purchases but chances are if you have purchased high quality eyepieces, they will travel from scope to scope.

You have come to realize that the view through your scope is only as good as the layers of glass between you and the focused image. In non-astronomical terms, eyepieces are 'where the rubber hits the road'. It does not pay to skimp in quality and expense.



The author with his 2-year-old grandson Taran at the 10" SkyWatcher (nothing like teaching them early).

Truth #3 – It won't be long before you will become fanatical about light and air pollution. You will find yourself cursing neighborhood street lamps and vapor trails left by highflying aircraft. You may be tempted to ask your neighbors to keep their yard lights off at night when they are not in the yard. You will almost certainly find yourself keeping closer tabs on the phases of the moon and experience symptoms of 'lunacy' hereafter known as telescope withdrawal in the days before and after a full moon. I have experienced the full range of these symptoms and most recently have changed the interior bulbs in my new car to red, and my outdoor yard lighting to very low wattage colored bulbs. Since purchasing the telescope, I have completely refurbished my outdoor shed both exterior and interior in order to accommodate the telescope at outside temperature year round.

Truth #4 – Because viewing from your backyard is convenient, you find yourself doing that whenever you can. The problem is that most of us bought or built the house we're in before we bought a telescope. And what was one of the first things we did? Plant trees of course. After nurturing the trees over the years they have now become mature and adorn and shade our yard and home beautifully. But now that you have a telescope, many of those trees are now objects you have to dodge in order to get a clear view of what it is you're trying to see. One more good reason to buy a telescope that's simple to set up and portable enough to move around the yard or to a dark site.

Truth #5 – You may begin to become paranoid about protecting your eyesight. The loss of or damage to your vision is your worst nightmare – a scenario that would remove most if not all of the joy in amateur astronomy. To prevent this from occurring, you find yourself visiting the optometrist regularly and keeping your optical prescription current. If you don't wear glasses, you will likely purchase and wear sunglasses outdoors at all times and in all seasons. I even went to the extent of purchasing and placing a glare screen in the front of my computer monitor to reduce glare and strain on my eyesight.

Truth #6 – You will begin to wonder about the psychology of your stargazing fetish and the state of your mental health. After all, the bulk of what you see up there is what most people might describe as a 'dim fuzzy'. Why is it that the dimmer and more elusive the object, the more exciting it is to see? My answer – the thrill is in the chase and the reward is in the finding. I never cease to enjoy star hopping with both my naked eye and through the telescope finder in the quest to see things both old and new.

Truth #7 – Bigger is definitely better and size matters! You will find yourself thirsting for more inches (centimeters) of aperture and taking advantage of any opportunity to look through a

larger scope that may be at your observing site. Although you know in your heart that useful observing can be done with almost any telescope, you still may occasionally develop symptoms of inferiority as your ‘large’ telescope is dwarfed by even larger ones owned by others observing around you. Don’t dismay – you can always take consolation in the fact that yours may be quicker and easier to setup and take down, resulting in more frequent observing sessions.

Truth #8 – You will almost certainly develop an obsession with dark skies. You will go out of your way and spare almost any expense to experience true darkness only to find that even the darkest sky is not quite dark enough. You develop a sudden interest in discussions around the creation of ‘dark sky preserves’ within our national and provincial parks. But mostly, you thrill when the sky conditions allow you to use eyepieces below 10 mm in diameter and still see things with a good degree of clarity.

Truth #9 – You will begin using the Internet to whet your appetite for astronomical pursuits. Web sites devoted to astrophotography, telescope building, eyepiece reviews, are just a few of the ones that stimulate your need for more information and ideas. You might even be tempted to share your astronomical experiences by posting your own Web Site as I did at: <http://www.members.shaw.ca/rmwaldron/>

Truth #10 – Finally, you will almost certainly develop a bond and camaraderie with those who share your passion,

particularly members of the Saskatoon Centre, RASC. You will share your interests with anyone who will listen and delight in any opportunities to show the wonders of the heavens through your telescope. I enjoy the opportunity to attend Star Parties and Public Star Nights as well as smaller gatherings for viewing lunar eclipses and the occasional appearance of a new comet.

The purchase of any telescope is the beginning of many stellar adventures and a journey into the realm of lifelong learning. Like me, you will probably never grow tired of seeing new objects and revisiting those found previously. It is perhaps one of the few purchases in your life that keeps rewarding you time and time again, clear night after clear night. For me, it continues to be a thrill, and I know I am not alone.



The 10" SkyWatcher's Outdoor Home year round makes outdoor viewing easy and quick.

Message from the Prez... *by Rick Huziak, President*

Tenho tells me I have only a half page, so I will be brief.

On March 19th I had the opportunity to present the concept of the Cypress Hills Dark Sky Preserve at the Saskatchewan Eco-tourism Conference. Everyone there was very interested in supporting this concept, so plans are moving on quickly to work toward this goal. Park Manager Brad Mason, and his right hand, Rick Goett attended. Brad has already changed several lights in the park, embracing the concept. He’s also met with the Alberta side of the Park to get both LP programs in step. As for the City of Saskatoon, Dan Neves with Gord Sarty presented a request to City Council that was unanimously voted to take the concept of full cutoff light fixtures to committee. On March 30th, Dan and I will re-present a request for a Light Pollution Guideline to the 10-member committee. We are quite hopeful that progress will be made.

I cannot tell all of you how encouraged I am by this Centre’s turnout for the Messier Marathon on March 20th. We had 18 members and 3 guests out! Fantastic – thanks to everyone for your effort. We all had a great time.

Complicating my time this month were the appearance of three fireballs across Canada, with a magnificent fireball that flew from about Rosetown to Kindersley at 8:32:50 p.m. CST on March 21st. This flight was a startling tumble though the atmosphere for 7 seconds. The Calgary and Regina fireball cameras caught enough of the fall to determine that its low velocity made it a candidate for meteorites on the ground. Gord Sarty and I gave almost a dozen TV and radio interviews and I took about 100 phone calls to get the best directions. With the guidance of Martin Beech (U of R) and Alan Hildebrand (U of Alberta), we’re on the way to pinpointing the stones.

Lastly, about the LINEAR and NEAT comet tracks I showed last meeting, I had planned to scan these and place these on our website, and still may, but I’d really recommend picking up a copy of May’s Sky & Telescope – they have excellent articles and maps for these comets.

See everyone at the next General Meeting, then the next weekend at Astronomy Day!

A stargazer's dreaming: KATHLEEN HOUSTON'S MIXED MEDIA ARTWORK

by Kathleen Houston <mcintosh.houston@sasktel.net>

What do you dream about, when your retinas make contact with starlight? For me, the night sky dreaming crept into my art making, and over time I have accumulated a variety of experiences.

Sky themed artwork is risky, to say the least, not considered serious art, though some artists have pulled it off. My big break came when the Little Gallery in Prince Albert asked me to show Skylore, stories from the night sky, for the Western Canada games, in 1999.

After moving to P.A. from Montreal in '98, I became more sky-smitten. My first brave night sky artwork, Skylore was an interactive tent, which included an audio piece on headphones. I used words and sounds to express where my skyward obsession began and where it might be headed. This was my first digital experiment. I displayed astrophotos and a creativity table for kids and adults. It was a success!

I began a series of viewing boxes, one of which was accepted into the curated portion of the P.A. Winter Festival, last year. It was entitled "Spot the new Moon". These miniature illuminations, gave me the idea to create larger ones from a series of pictures I took on the west coast at night. I played with a flashlight and made light drawings. Not new, but fun.

The centre of my 2002 show in Regina, was a floor piece, entitled In the clearing. On black felt, I drew a wrap around drawing of the clearing's horizon, at the local park Little Red,

where we watched the fabulous 2001 Leonid storm. (My four-month-old daughter, and my enthusiastic husband in tow. Thankfully, he motivated me to get my butt out there!) I wrote a text that needs to be read from the centre, about my sky dreaming, and the power of the clearing as a gathering place of energies.

I will also bring my most recent work: Kingfisher bay labyrinth, Waskesui...in photos and video (sorry, won't be bringing all those stones!) These are some of the works I will bring and discuss. I see my presentation as a time to swap stories, and finally admit my obsession with real astronomers!



A peek preview at one of Kathleen's pieces...

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

Minutes of the GENERAL MEETING

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

Recorded by Rick Huziak

1. Meeting called to order 7:40 p.m.
2. Announcement: Plea for members to attend the Astronomy Day booth and starnight on April 24th
3. Presentations:
 - a. The New and Improved Beginner's Observing Guide – Ron Waldron
 - b. Milling a Wooden Body Spotter – Garry Stone
 - c. A Tale of Two Comets, with More to Come – Rick Huziak
 - d. An 80mm Catadioptric from X S Cargo – Jeff Vollmer, Loreburn
 - e. Solar Observing in Radio, Calcium & H-alpha – Paul Campbell, Edmonton Centre
 - f. The Upcoming Edmonton Tour to the Venus Transit in Greece – script and photos by Murray Paulson, presented by Rick Huziak
 - g. A Tour of the Automated Telescopes in the Physics Rooftop – Stan Shadick
4. Adjournment at 10:40 p.m.

Confessions of a Messier Marathoner by Ron Waldron – AKA “No pain – No Gain

Okay, for the record I must admit that Saturday evening, March 20th was my first ever Messier Marathon, that is I was a full-fledged card carrying neophyte. I left home at 7:30 PM excited at the prospect of hunting down 110 of Charles Messier’s finest. The thrill to be sure, would be in the hunt. Weather was perfect – clear skies with no prospects of cloud cover and about -10°C. I arrived at about 8:15 PM with my 10" Dobsonian and was pleasantly ushered in by Jim Young who along with others had spent considerable time prior to the event shoveling hard packed snow both in the parking lot and the viewing area. A thanks goes to Jim and to all others who had helped.

Now for the Marathon. I obtained a list of the objects to view in the approximate order that they should be located and along with Larry Scott, we began with M74 over in the west, low and well into the twilight. After about 15 minutes we located it (faint as it was) and it was on to M77. At about this time, I heard a surprising but clear clinking sound in the snow in front of my observing table and at about the same time the appearance of both stars and star labels on my charts became blurred. It did not take me long to realize that the left lens of my glasses had popped out and fallen into the snow. With Larry’s help, I located the lens, but now how to proceed. Without my glasses, any hope of using star charts to locate the Messiers was hopeless. The way I saw it I had three choices: 1. Cover the other eye and use the one remaining lens as a monocle, allowing me to locate the objects; 2. Try to repair the glasses in the warm-up shelter; 3. Go home early and blame “Murphy” and his laws for the handicap that forced me to go home.

I chose the second one as the screw had miraculously remained in place. Again it was Jim and others who came to my rescue with small screwdriver and patience to replace the lens and tighten the tiny screw. (Remember I was legally blind without my glasses so doing this myself was not an option). It wasn’t long after I was back looking for M77 – yeh right! It was too low to be located. What to do now – here I was missing the second of the 110 object with no chance of ever seeing it for the next 23 hours. I was miffed.

I resolved to go ahead and hunt down as many of the remaining ones anyway, since there were lots of new ones I had never seen worth looking for. Away I went and for the next six hours (including warm-ups, coffee, snack breaks, etc.) I was able to find 22 of the Messiers, at least 10 of which were new to me. (Those mathematicians reading this will realize that as impressive as I made this sound, I had only viewed 1/5th of the total.)

Both Scott and I noticed that after midnight, the viewing seemed to deteriorate, yet when we looked up with the naked eye, the skies still seemed reasonable transparent. Yep, you guessed it – our telescopes had been hit with the vampire of astronomy – cold, icy, frost – covering mostly the eyepieces and the secondary. Somehow the temperature in the last few hours had dropped to -20°C and the moisture in the air was causing water to condense and freeze everywhere. It was now

2:30 AM and that was enough for me – I was packing up and going home but not before spending a good deal of time in the warm-up building sharing successes and defeats with the others still present.

On the way home, I had time (45 minutes to be exact) to ponder the whole concept of the Messier Marathon. This both kept me awake and alert and allowed me to prepare my excuses for family members when they asked me about how it went the next day.

I concluded by saying that my first Messier Marathon was less than successful but fun anyway. No one else around me seemed the least bit perturbed by the cold, the frost, the appearance of the northern lights or any other problems they encountered. It was just astronomical viewing as usual. I, on the other hand, now have some definite ideas and conclusions about Messier marathoning drawn from my experiences that Saturday night. I sum them up below:

Ron’s Top Ten Things Learned from the Messier Marathon

#10 – Murphy’s Law is still alive and active, especially at Messier Marathons (my glasses, Brent Burlingham’s dead 12 volt battery, etc.)

#9 – Two pairs of socks and running shoes does not cut it for marathoning in -20° temperatures.

#8 – Bring your own coffee in a thermos, as the Centre coffee maker cannot keep up with the demand.

#7 – A dew cap is a must for the next Messier marathon and for any other late night astronomical viewing challenges.

#6 – The concept of a Messier marathon must have been concocted by amateur astronomers in warmer climes. No one in their right mind would have thought of this while viewing in sub zero weather conditions.

#5 – The importance and usefulness of zip-lock freezer bags for carrying your eyepieces in your jacket pocket cannot be overestimated.

#4 – Jim Young deserves free coffee for the next three monthly meetings for the role he played while most of us were marathoning. Which begs the question – how much marathoning did you get done Jim?

#3 – Charles Messier must have been a loner

#2 – People, especially amateur astronomers, have fun doing the strangest of things

#1 – Richard Huziak can still be depended on for locking up at the end of any and all Messier marathons or for that matter any late night viewing session.

And what about next year – Well, I am neither discouraged nor beaten. I will be out there with others (hopefully minus cold weather and snow) doing the same strange thing again in the interest of adding to my total. By the way, I never once heard any one tell me what the prize was for seeing all 110 Messiers in an evening’s viewing session. I’m guessing it’s bragging rights and personal satisfaction. Truth is – that’s enough for me.



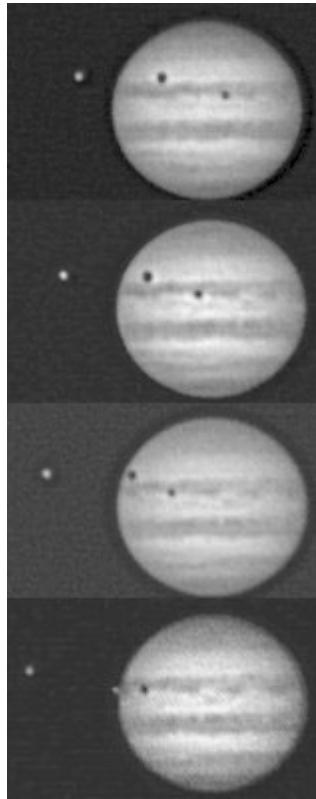
The Planets This Month, April 2004

by Murray D. Paulson, Edmonton Centre

We had a fine apparition of **Mercury** near the end of last month. Did you get to see it? Over the next three weeks, Mercury heads back down to the sun for it's April 15th conjunction, at which time it will pass between us and the sun. It will be 2 1/2 degrees above the sun. No, no transit. You will have to wait a few years for the next one. Its close proximity to the sun will make it a daytime pursuit for the month of April. Get out those setting circles.

Venus starts off this month as a 24.7" crescent disk and it shines as a magnitude -4.4. It starts the month in the Pleiades. I watched a similar close approach during the Hyakutake apparition in 1996, **exactly** 8 years ago to the day! Mars and Venus become a close pairing for the month of April and near their closest approach on April 22 the thin crescent moon makes it a trio. The grouping will be quite tight with Venus 3 degrees above the crescent moon and Mars 5 1/2 degrees to the east of the pairing. This will be a brilliant photo opportunity with earthshine on the moon. Mars will shine at Magnitude 1.6 contrasted to Venus's magnitude -4.5. In the eyepiece the contrast is even more impressive. Venus will show a 32" crescent compared to Mars's 4.4" gibbous disk. Can you see a polar cap or any details on Mars? I did back in February with my 90. One more interesting detail here is that this night coincidentally is the latest that Venus sets this year, 1:38 am daylight savings time. This is one of those soft boundaries where over the week surrounding this date that Venus will set close to 1:38 am. If my memory serves me well, this is the latest setting time I have ever seen. Accompanying this is the place it sets, 36 degrees west of true north. Venus rises the next morning at 7:16 am, just less than 5 3/4 hours later. By month's end, Venus swells to a 36" crescent that now shines at magnitude -4.5. [Venus setting and rising times for Saskatoon for April 22: 12:51 am and 7:09 am CST. – Ed.]

Last month we were treated with quite a few good double shadow events on **Jupiter**. I was lucky enough to get a good image sequence of the March 20th event. This month is not quite as good as the cycle of events has shifted to later and later in the day, and now into the daylight hours. I have



Moon shadows on Jupiter with a 5" at f 40 through light haze and cloud, March 21, 0634 to 0155 UT. The exposure time on the TouCam was 1/25 sec and the gain was at max. Boy were the original images noisy!

included a listing of my picks for the month. At the beginning of the month, Jupiter shines at Magnitude -2.4 and shows a disk 43.2" in diameter. Jupiter now is far enough from opposition that Jupiter's shadow is cast to the east of the planet, where you can watch a moon coming out of eclipse. If you get some great seeing, try and crank up the power and see if you can see Jupiter's shadow coming off the moon. You might see a half moon shape if you are lucky on the little Jovian lunar disk. By the month's end Jupiter will shrink slightly to 40.3" and it will shine at magnitude -2.3. On April 29th, we get the closest passage of the moon with Jupiter, only 2.5 degrees apart.

Saturn is a long way from opposition and the planet's shadow on the rings is quite prominent. At the beginning of April Saturn shows a 18.25" disk and shines at magnitude 0.0. It will still be a pleasant view right through Astronomy days in April. On April 24th, watch the moon, high above the ecliptic pass above Saturn which is only 1/2 degree below the ecliptic. Quite nice and it coincides with Astronomy days. The public is sure to enjoy.

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

Jovian Moon Events

Note UT is now 6 hours later than time here in the Central Time zone. For example April 13 at 5:49 UT occurs on April 12th at 11:49 pm (23:49) local time.

DATE	HOUR	MOON	EVENT
13-Apr	5:49	I	Sha start
13-Apr	7:12	I	Tra end
13-Apr	7:30	II	Sha start
13-Apr	8:04	I	Sha end
13-Apr	8:34	II	Tra end
30-Apr	6:27	IV	Tra start
30-Apr	9:59	IV	Tra end
3-May	2:43	III	Tra end
3-May	3:54	III	Sha start
3-May	7:14	III	Sha end

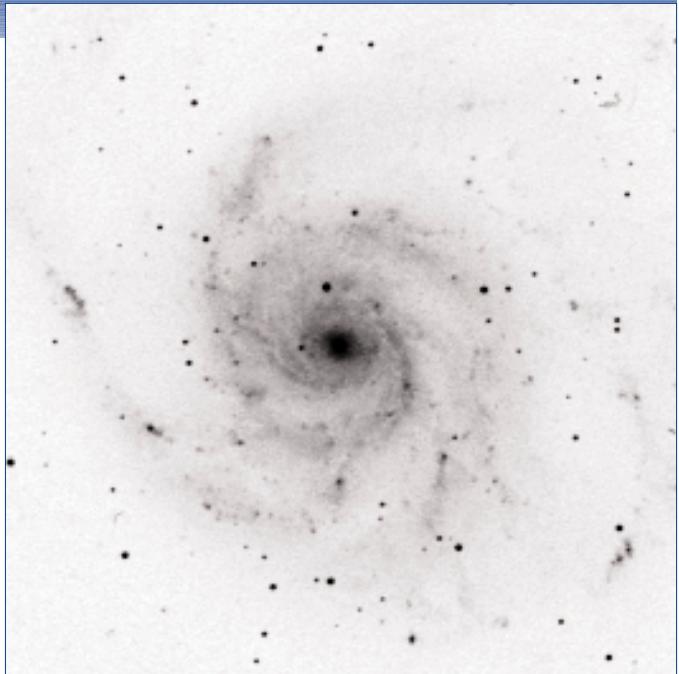
QUEST FOR M101: Hard times for a Backyard Astronomer

by Mike Clancy

I am currently working towards my Messier certification and I'm reasonably pleased with my progress. If truth be told it isn't a single-minded, all-consuming passion, but it does offer structure to my astronomical hobby; keeps me "looking up" as it were! To this end I research the objects on my working short list, checking for references in the software program I use (Starry Nights "Backyard" edition) and in Tirion's Cambridge Star Atlas and his excellent Star Atlas 2000. From these sources I can usually figure out some sort of star-hopping track to find the objects I want, then it's off to the backyard and a quiet evening of cursing and frustration, usually well peppered with statements like "That can't be it!" or "Blast; is this thing working?" You know the routine! Still, there are those glorious moments of epiphany when some faint fuzzy object slides like a thief into your field of view and all that effort seems worthwhile. It's at times like those that I wish I were a better artist, to better capture the moment.

One such project was my quest for M101, the Pinwheel Galaxy near the handle of the Big Dipper. The constellation was high in the sky when I first went after it and the above-listed sources showed several distinguishing features to landmark the object. From the Mizar/Alcor double star in the handle there was a short, chevron-shaped chain of magnitude 6 and 7 stars that terminated in a "basket" or quadrangle of 4 stars (all magnitude 8-ish), beside which should be the "majestic M101", a magnitude 7.9, diffuse face-on spiral galaxy. Even better, I knew I was following the right chain because the middle star (83 Ursae majoris), is a yellow star and a bit brighter at magnitude 4.62 than its erstwhile companions, all magnitude 5-ish. What could be simpler! Once the "basket" is found, M101 should be less than one FOV from the left-most side. I began looking for it 09Apr03 but had no luck as an auroral display moved in about 2215 hrs, just as I was getting settled in! I tried again over the next few weeks with no better luck

Ah, but the "best-laid plans o' mice and men gang aft agley". How was I to know that the object's listed magnitude bore almost no resemblance to its actual value! The core of the galaxy may well be that bright, but the object itself is quite large, diffuse, and relatively dim. One needs nearly perfect viewing and a very dark-sky site to capture the galaxy, and my back yard offers neither. With so much waste light cast about, I



can't even see M33, the Triangulum Galaxy! I spoke with Rick Huziak one June night at Sleaford regarding my difficulties and he obligingly swung his 10" Dobsonian telescope over to show me the view through his viewfinder. Due to the rather pretty but overly bright aurora that was bouncing around the heavens, even his expertise and equipment couldn't show me much more than a very dim smudge, and even that was doubtful as it may have been an auroral artifact. I would have to wait for the Summer Star Party to actually capture M101. Mind you, that wondrous night the very heavens seemed so close one could reach out with a coffee cup and scoop up the Milky Way; M101 stood out from this dark sky site as a grey blob with no definition of the arms. My 114 mm reflector couldn't make that sort of distinction and I needed Tenho's verification to authenticate the observation, but there it was!

This pretty much typifies the sort of struggle one can expect with some of the fainter fuzzies on the Messier list. They aren't all blindingly beautiful but they do offer a chance to hunt among the heavens, which is perhaps more important than finally finding the object in question. Now I have to take the Virgo cluster apart, and that may take a lot longer; wish me luck.

Newletters 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.

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|--------|---|
| Mar/04 | • Scope (Toronto Centre) – "Science Centre Hosts Lunar Rock", "Winter Vacation Triangle"
• The Starseeker (Calgary Centre) – "Fish Creek Spring Star Night" |
| Feb/04 | • Stardust (Edmonton Centre) – "Deep Sky Corner", "Venus on the Half Shell"
• The Starseeker (Calgary Centre) – "To the Ends of the Earth – Antarctic Eclipse & Venus Transit" |
| Jan/04 | • Nova (Vancouver Centre) – "Warm Clothing for Cold Weather Observing" |
| Dec/03 | • The Starseeker (Calgary Centre) – "Astroday Hawaii Style or Telescopes & Volcanoes" |

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	Up! 88
Mike Clancy	Up! 83
Wade Selvig	75
Brent Burlingham	58
Kathleen Houston	Up! 48
Brent Gratias	39
Les Dickson	28
Ellen Dickson	Up! 22
Brian Friesen	15



RASC Observing Group Notes

by Brent Burlingham, Observing Group Coordinator

Observing activity picked up this month due to warmer weather and our very successful Messier Marathon (see Ron Waldron's article elsewhere in this issue) – Mike Clancy has added 2 more Messiers for a total of 83, Kathleen Houston has taken up residence at Sleaford for two consecutive Saturday observing sessions and added 15 new Messiers for a total of 48, Ellen Dickson added 5 new Messiers for a total of 22, Tenho Tuomi has added 3 FNGC objects to his total, bringing him up to 97, and our fearless leader Rick Huziak has added 5 objects to his Herschel 400-II total bringing him up to 201, as well as entering the Chatfield Binocular Certificate list with 21 objects. Congratulations Mike, Kathleen, Ellen, Tenho and Rick!

Tenho Tuomi and Garry Stone have been observing the shadow transits and eclipses of Jovian moons throughout March, and observing and photographing the Venus/Moon conjunction on March 24th. They also had a mini-Messier Marathon at Garry's observatory south of Saskatoon. Tenho observed 56 Messiers (all through his 80mm 16X refractor), and Garry observed 44 with his C8 and 120mm refractor.

Mike Clancy logged 32 Messiers during the Marathon as he struggled with the rest of us through the humidity. Mike's observing hint for the month is to take a warm shower after a night of chilly observing before entering bed and disturbing a warm, sleeping wife.

Kathleen Houston has been taking advantage of the club's Sleaford facility to add to her Messier totals and to use the club's 12.5" Dob.

FINEST NGC CLUB

Certified at 110 Objects:

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

Scott Alexander	97
Tenho Tuomi	Up! 97
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
Rick Huziak	Up! 21

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	Up! 201
Darrell Chatfield	Up! 143

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.

She enjoyed the double shadow transit of Jovian moons during the Messier Marathon on March 20th, and was looking forward to the triple transit on March 27th, but windy conditions turned Jupiter into a blob. Kathleen prefers globulars over open clusters – M48 and M67 were highlights in her observing activities.

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, April 24th – 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>