

Saskatoon Skies

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

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February 2013



Vincent Van Goh's painting entitled The Starry Night. Painted with a reed pen in 1889 it depicts the view from a hill of exaggerated stars next to a bright crescent moon. Its almost as if English poet Ralph Hodgson was looking at the painting when he wrote these words:

*Without a wish / without a will
I stood upon that silent hill / And stared into the sky until
My eyes were blind with stars and still / I stared into the sky*



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To view *Saskatoon Skies* in colour, see our Website:
<http://homepage.usask.ca/~ges125/rasc/newsletters.html>

MEMBERSHIP? JOIN TODAY!

Regular: \$80.00 /year

Youth: \$41.00 /year

Associate: \$33 /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 National Office at <national@RASC.ca>!

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
 - Journal of the RASC (electronic format)
 - SkyNews Magazine (bimonthly)
 - use of the Centre library
 - rent the Centre's Telescopes
<http://homepage.usask.ca/ges125/rasc/telescopes.html>
 - discounts to Sky & Telescope Magazine*
 - free, no-cost, no-obligation, 3-month temporary membership if you don't want to join right now!
- *New subscription or renewal of Sky & Telescope? Send new info or renewal notice, plus credit card # to Norma Jensen, 128 – 4th Street East, Saskatoon, SK S7H 1H8, or email her at norj@sasktel.net.

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

SASKATOON CENTRE'S MAIN OFFICERS:

President – James Gorkoff, 644-1343
Secretary – Tenho Tuomi, 306-858-2453
Vice-President – Jim Goodridge, 370-8530
Treasurer – Norma Jensen, 244-7360

**Bottle Drive &
Canadian Tire \$**
By Colin Chatfield

If you cannot make it to a meeting but would like to contribute your Canadian Tire money please call me at 934-7046.

**LIGHT POLLUTION
ABATEMENT
WEBSITE AT:
www.ras.sk.ca/lpc/lpc.htm**

Newsletter Editor – Ron Waldron
Copy & Collate – Les & Ellen Dickson
Labels & Temps – Mark de Jong
Web Posting – Gord Sarty

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 material. **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 to the editor at rmwaldron@shaw.ca as a .doc, no indents, no tabs, one line between paragraphs. Images: .jpg please, no larger than 1 – 1.5 MB, sent by e-mail as attached files. **Deadline for submission of all articles for an upcoming issue is the first Friday of the month!**

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 indicated), provided that proper source credit is given. **DEADLINE for submissions** for each month's issue is the 1st of the month. Saskatoon Skies accepts commercial advertising. Please call the editor 306-665-3392 for rates. Members can advertise non-commercial items free of charge.

RASC CALENDAR OF EVENTS

Feb. 18	Executive and General Meetings	Jim Gorkoff
Jan 21	Gibbous Moon and Jupiter conjunction	
Feb. 4	Observer's Group - Sleaford	Larry Scott
Feb. 8	Mercury and Mars conjunction at dusk	
Feb. 18	Executive and General meetings	Jim Gorkoff
March 2	Observer's Group - Sleaford	Larry Scott
March 9	Messier Marathon - Sleaford	Larry Scott
April 6	Observers Group/Alternate Messier Marathon	Larry Scott

For a complete list of club events, please check out: <http://www.usask.ca/rasc/activities.html>

General Meeting for all members

February 11th at 7:30 PM

(note meeting date moved ahead one week to avoid Family Day Holiday)

Room 175 Physics Building
University of Saskatchewan

PROGRAM

“Showing the Structure of Our Galaxy as Seen from Deep-Sky Objects”

Speaker - Tenho Tuomi

Tenho will illustrate his updated self-written planetarium program that now shows the Milky Way in 3D!

Note: there will be an executive meeting at 6:30 PM



Notice of Upcoming Expenditure

It is the intent of the executive to have built on the Sleaford Site, a 24' X 30' garage package complete with shingles and siding. The amount spent (delivery and construction) would be approximately \$22,740. (actual amount may be different). A vote on this building project will be taken by the membership at the March, 2013 General Meeting.

Galaxy NGC 3631 by Tenho Tuomi



On Friday night, January 11 the sky cleared, and in fact was one of those nights when you could feel as if you could touch the stars. Only thing was that the temperature was -25.5C. There was no wind so I decided to take advantage of the rare clear sky that we have had this winter to take galaxy pictures in Ursa Major. Most of the pictures were of nondescript ellipticals but one turned out to be of a beautiful spiral, NGC 3631.

NGC 3631 is not far from M108. Go to M108, hop to M97, then two hops to NGC 3631. It is rather isolated with no other deep-sky objects nearby or even any bright

stars for star hopping. There is a broken line of stars from M108/M97 that I used to get into the area. It was a little difficult to find stars for framing the picture, but fortunately it was one of those super clear nights where I could see fairly faint stars in the camera viewfinder.

NGC 3631 is one of the Herschel 400 objects. It is about the same size as M108, but one and a half magnitudes fainter, so has a very low surface brightness. It is probably not much to see in an eyepiece. I wrote "Larger faint galaxy" when I observed it with my 8" scope, and "Round galaxy with bright core" when I observed it with my 12".

My unmodified Canon Rebel XT camera does not take very good pictures of nebulae because it is insensitive to red, but I have had great pleasure in photographing galaxies with it. Most of my galaxy pictures recently have been ten or more stacked one-minute unguided photographs at ISO 1600 through my Orion XT12 on a Byers 612 mount.

Centre Representative Needed

Rick Huziak has given notice that effective April, 2013 he will no longer be serving as our Centre Representative. Rick has done an outstanding job for several years, keeping abreast of changes at the national office and making the wishes of our membership known with respect to proposed changes.

Centre Representative is an elected position and is one that will need to be filled very shortly. If you have an interest in the workings of the society at the National level, this would be an excellent opportunity for you. Please contact our president, [Jim Gorkoff](#) if you are willing to let your name stand.

Dark Sky Hunting *by Norma Jensen*



The weekend is coming and the beginning of the dark sky period. The Clear Sky Clock entices travel to the south rather than Sleaford for tomorrow night. After that, it appears the clear sky door will close shut. What to do? Juggle things, phone calls to Tenho and Velma and it's a go – a haven for the night. We leave town Thursday late afternoon, fighting the setting sun as we race down the 219 and beyond towards Lucky Lake and the farm.

As soon as we arrive we see high snow and a trail to Tenho's Observatory. He has shovelled out an area for Larry to set up. Viewing space is at a premium so I don't set up and am able to use Tenho's scope.

Fortified by a great meal, we are ready to go by 19:00. Tenho points out zodiacal light in the west. The skies continue to darken and we settle in. It starts with photographs and observations of comet C/2012 K5(Linear) near M36 in Auriga. Larry and Tenho spend time at the 18" looking for some of David Levy's Deep Sky Gems. Jupiter rises high and is steady in the scope.

I am learning to track down planetary, emission and reflection nebulae.

Orion has all of these and is perfectly positioned in the sky. I am able to find and be amazed by emission nebulae NGC 2024 near Zeta Orionis. Using a 10 mm Pentax with a UHC filter, I see the north-south split by a dark lane rift. This bleeds out smaller lanes from its sides.

From time to time, I catch a meteor streaking through the southern sky, one a particularly long diamond line.



Photo taken by Tenho Tuomi – a two minute exposure taken with his Rebel XT

Tenho's Observatory stands on a hill which has a negative 1/2 degree horizon to the south. The temperature was comfortable (-3 to -9 degrees Celsius) over the precious five and a little hours we had before the moon rose. Once it did we were still able to observe until 1:30.

There were brisk winds from the west when we started which diminished.

They then shifted to the north-west to worry us from time to time.

The most difficult thing is to describe the utter beauty of the night – dark, quiet - full of wonder.



January Executive Meeting Minutes *by Tenho Tuomi, secretary*

Chairman Jim Gorkoff opened the Executive meeting at 6:40 PM.

Minutes of the November 19 executive meeting be accepted as circulated. Carried.

Vice-President's Report - by Jim Goodridge, read by Jim Gorkoff in his absence.

Current speakers schedule,

- February, Tenho Tuomi
- March, Sleaford & Astronomy Day discussions

- April, Dr. Erica Bird

- May, Jim Goodridge

- June, Ron Waldron

The U of S campus observatory has a new computer/projector.

Tenho Tuomi was asked to send an email asking for more volunteers to help at the observatory on Saturday nights.

Committee Reports:

Fundraising Report - by Jim Goodridge, read by Jim Gorkoff in his absence.

- One request for grant writing for a dark skies sign for the Cypress Hills Park.

- Sobey's gift cards are available for fund raising. Membership should be canvassed for pledges to see how many could be used.

Events Co-ordinator Report - by Barb Wright.

Astronomy Days:

- March 23 - Earth Hour at the Centre Mall.

- April 13 - Children's Discovery Museum at Market Mall, Astrolab by Ron Waldron, 2-3 volunteers needed for RASC display tables.

- April 19 - Astronomy Day observing at Lakeview Civic Centre.

- April 20 - Astronomy Day observing at Beaver Creek Conservation Centre.

- May 11 - Astronomy Day display at Farmers Market

- May 25-31 - Nature City Festival

Other Business:

The Executive Budget was discussed, thought to be \$200/year presently.

Saskatchewan Light Pollution Abatement Committee - by Rick Huziak

Ongoing initiatives at Cypress Hills and the City of Saskatoon, plus seven smaller ones.

Motion by Rick Huziak and Jeff Swick that the Light Pollution Abatement Committee be given a \$500.00 budget for this year. Carried.

Motion by Rick Huziak and Ron Waldron that Darrel Chatfield and Les Dickson be asked to join the Sleaford Planning Committee to replace Rick Huziak who is going off.

Rick Huziak announced that he will be leaving the position of Centre Rep.

Meeting adjourned at 7:30 PM.



January General Meeting Minutes *by Tenho Tuomi, Secretary*

Chairman Jim Gorkoff opened the General meeting at 6:40 PM.

Minutes of the November 19, 2012 General meeting will be passed at the February meeting.

Vice-President's Report - by Jim Goodridge, read by Jim Gorkoff in his absence.
See Executive minutes for details.

Committee Reports: -- see Executive minutes for details.

Fundraising Report - by Jim Goodridge, read by Jim Gorkoff in his absence.

Events Co-ordinator Report - by Barb Wright.
April, Environmental Film Festival

SSSP Report - by Barb Wright
SSSP August 8-22, 2013
Permanent place in Meadows Camp Ground
Working on new "Celebrating the Night sky" sign for entrance to Cypress Hills Park

Book lodge rooms by the end of March, book camp sites through the SSSP committee

Centre Rep Report - by Rick Huziak
Executive meeting March 23, main agenda re-writing the by-laws for passing at the General Assembly.
Rick is resigning as Centre Rep after March, new Rep needs to be voted on at the March meeting.

Saskatchewan Light Pollution Abatement Committee - by Rick Huziak

Ongoing initiatives at Cypress Hills and the City of Saskatoon, plus seven smaller ones.

Open forum Q&A:
Why do we need to join the National organization?
Could we have a table at the Gardenscape show?

Meeting adjourned at 8:20, followed by a break and a presentation by Rick Huziak, "So You Think You've Discovered Something! Digital Cameras, False Reports and IR Leaks".

STARLAB COMING TO CHILDREN'S DISCOVERY MUSEUM



In partnership with the [Royal Astronomical Society of Canada - Saskatoon Centre](#) and Saskatoon Public Schools, the Children's Discovery Museum will be kicking off International Astronomy Week on Saturday, April 13, with free public shows in [STARLAB](#), a portable planetarium. Centre member Ron Waldron will be conducting up to six shows that day. Shows will be pre-booked – contact the Children's Discovery Museum if you are planning to attend

Oops! – November 2012 General Meeting Minutes

Editor's Note: The minutes of the General Meeting held on November 19, 2012 were accidentally omitted from the December newsletter. They are printed here for your reference and for archival purposes.

- Minutes of the General Meeting, November 19, 2012
 - Moved by Ellen Dickson and Barb Wright that the minutes of the October 15 meeting be approved as circulated. Carried.
- Treasurer's Report – by Norma Jensen and Jim Gorkoff.
 - Moved by Norma Jensen and Jim Young that the September 30 year-end financial statements be approved by this General Meeting. Carried.
- December 17 RASC Saskatoon Centre Potluck Supper with speaker Richard Hydromako who will be speaking about his work with CERN, the world's largest particle physics laboratory.
- Newsletter Report – by Ron Waldron. Deadline for articles is December 7. More articles needed.
- SSSP Report – by Barb Wright. Help needed on the planning Committee. We may need to move our observing site at Cypress Hills from the Meadows to the Ball Diamond.

Committee Reports:

- Fundraising Report – by Jim Goodridge. Seven applications will be made for community grants in the coming year.
- Sleaford Site Report – by Norma Jensen. Snow removed and squirrel hole repaired in warmup shelter floor.
- Membership Report – by Jeff Swick on behalf of Mark de Jong. Three to six more members than last month.
- U of S Observatory Report – by Jim Goodridge. Good attendance even on cloudy nights. We could use more help.
- Events Coordinator – by Barb Wright.
 - November 28, Galileo project at 3rd Avenue United Church. Volunteers need to help with table and telescopes.

The meeting was adjourned and followed by a talk and slide show at 8:30 PM via Skype from California, by Mike Simmons, Founder and President of Astronomers without Borders. Questions and answers followed.

Meeting closed at 9:45.

Observer's Group Notes – by Larry Scott

On Thursday, January 3rd, clear skies to the south beckoned and following some frantic negotiations, Norma and I headed for them. We enjoyed a great night of observing and wonderful hospitality at the home of Tenho and Velma Tuomi. (As described elsewhere in this issue by Norma.) The next day our good fortune continued as we were welcomed by Garry and Myrna Stone for lunch and a tour of Garry's workshop and observatory.

The January 5th Observers Group at Sleaford was cancelled due to the continued cloudy skies plaguing us. There were a few clear nights after that but temperatures were around -30C. Too cold for me, I'm afraid.

Next Observers Group will possibly be held on March 2nd with moonless evenings from about February 28th till March 13th.

The 2013 Messier Marathon will be on March 9th at Sleaford Observatory. Please contact me if you have any questions regarding the Marathon. Anyone desiring to make an attempt should be set up by sunset to catch the first few objects as soon as possible

*The Five Visible Planets This
Month
adapted from Earthsky.org*

February is really **Jupiter's** month to take center stage, but let us now focus on the almost out-of-sight and out-of-mind red planet **Mars**.

Binoculars may come in handy, although **Mars** might be visible to the unaided eye in a clear sky. This world feebly glimmers over the southwest horizon at dusk and follows the sun beneath the horizon before nightfall. If all else fails, use the planet **Mercury** to guide you to **Mars** on or near February 8 or **use the young waxing crescent moon to locate Mercury** on February 11 and 12.

You'll have absolutely no trouble spotting the king planet **Jupiter** this month, which pops out high in the southern sky at evening dusk. At mid-northern latitudes, Jupiter shines until 2 or 3 in the morning in early February and approximately 1 a.m. by the month's end. In December 2012, Jupiter was shining at its brightest best in the night sky until the year 2021. But you'll continue to see Jupiter blazing away in the evening sky for several months to come! The king planet ranks as the fourth-brightest celestial body to light up the heavens, after sun, moon and the planet Venus. However, **Venus** will be obscured in the glare of sunrise all this month. Look for the moon to pass close to Jupiter on February 17, 18 and 19.

Only two of the five visible planets – **Jupiter** and **Saturn** – will be easy to spot in the February 2013 night sky. But for the Northern Hemisphere, February 2013 provides the best chance of catching **Mercury**, the innermost planet, at dusk and/or nightfall until late May and early June 2013. On or near February 8 use binoculars and the brighter planet Mercury to spot fainter **Mars** in the glow of evening twilight. **Venus** will be especially difficult to see in February because this world sits close to the glare of sunrise all month long.

Jupiter beams as both an evening and morning planet this month, because it stays out past midnight. This giant world is the first star-like object to grace the sky at evening dusk. But the other morning glory – **Saturn** – becomes an evening planet later this month, because it rises in the eastern sky somewhat before midnight. When **Jupiter** sits low in the west, look for **Saturn** to be hovering over the horizon in the east.

On and near Groundhog Day in 2013, watch for the moon to swing close to the ringed planet on February 2 and 3 (and then again on February 28 and March 1). Saturn will shine relatively close to Spica, the brightest star in the constellation Virgo. However, you can distinguish Saturn from Spica by color. Saturn shines with a golden hue whereas Spica sparkles blue-white. Binoculars help to accentuate color if you have difficulty discerning color with the unaided eye. Better yet, view Saturn with the telescope. The rings look spectacular even through a modest backyard telescope!

Normally, you can't miss **Venus**, because it's the second-brightest celestial body to light up the nighttime after the moon. But the planet named for the goddess of love and beauty won't be easy to spot this month. Venus sits low in the glare of morning twilight and sinks closer to the sunrise with every passing day. Venus rises about 40 minutes before the sun in early February and only about 15 minutes before sunrise by the month's end.

February 2013 presents four of the five visible planets, although only Jupiter and Saturn are clearly visible all month long. Mercury and Mars are evening planets as well, though they follow the sun beneath the horizon before dark. As far as February 2013 is concerned, this is really Jupiter's turn to take center stage because this brilliant world, which is far brighter than any star, beams in both the evening and morning sky!

Observing Clubs and Certificates

Join the Club! Observe all 110 Messier, 110 Finest NGC, 400 Herschel I or II, 140 Lunar, 154 Sky Gems or 35 Binocular objects, or Explore the Universe 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. Hydorako, T. Tuomi, L.
Scott, G. Charpentier, B. Johnson, M.
Clancy, L. Dickson, B. Burlingham, K.
Houston*

Norma Jensen	109
Ron Waldron	105
Wade Selvig	75
Garry Stone	57
Bernice Friesen	45
Wayne Schlapkohl	43
Barb Wright	40
Ellen Dickson	34
Jeff Swick	24
Graham Hartridge	9

Chatfield BINOCULAR CERTIFICATE

Certified at 35 to 40 Objects:

*M. Stephens, T. Tuomi, M. Clancy,
R. Huziak, K. Maher*

Jim Goodridge	Up!	12
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FINEST NGC CLUB

Certified at 110 Objects:

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

Larry Scott	Done!	110
Scott Alexander		97
Norma Jensen		61
Sandy Ferguson		23
Kathleen Houston		23
George Charpentier		13
Mike Clancy		7

EXPLORE the UNIVERSE

Certified at 55 to 110 Objects:

*M. Clancy, T. Tuomi, K. Maher,
B. Gratias*

Wayne Schlapkohl	Done	55
Sharon Dice		31
Jim Goodridge	Up!	35

Isabel Williamson Lunar Observing Certificate

Certified at 140 Objects:

T. Tuomi

Norma Jensen	133
Jeff Swick	29

HERSCHEL 400 CLUB

Certified at 400 Objects:

*D. Jeffrey, R. Huziak, D. Chatfield, T.
Tuomi*

Gordon Sarty	251
Scott Alexander	117
Sandy Ferguson	18
Larry Scott	20

HERSCHEL 400-II CLUB

Darrell Chatfield	Done!	400
Rick Huziak		246

LEVY DEEP-SKY GEMS

Certified at 154 Objects:

Tenho Tuomi	149
Darrell Chatfield	70



The Messier, Finest NGC and David Levy's Deep-Sky Gems lists can be found in the *Observer's Handbook*.

The Explore the Universe list is available on the National website.

On-line Messier and Finest NGC lists, charts and logbooks: <http://www.rasc.ca/observing>

On-line Herschel 400 List: <http://www.astroloague.org/al/obsclubs/herschel/hers400.html>

Binocular List is at: http://homepage.usask.ca/%7Eges125/rasc/Chatfield_Binocular_List.pdf

Copies of the Isabel Williamson Lunar Observing Program Guide can be purchased at meetings.

Program details can be found at: <http://www.rasc.ca/williamson/index.shtm>