



Regulus



The Newsletter of the RASC Kingston Centre

2001 July-August

2001 - A Kingston Odyssey

40 years of Astronomy in Kingston RASC

One of the “celebration” ideas we have is to create a 40th anniversary yearbook of the centre, publish it on CDROM and include it in the November/December issue of Regulus. Please consider submissions of photos and stories to us soon!

Submissions have been sent in by: Diane Torney, Ray Berg, Dick Adduci, Leo Enright, and others.

Astronomy Day 2001

Astro Day was held this year at the Cataraqui Town Centre Mall on Saturday April 28th. For a whole pile of photos from the event, check out <http://members.kingston.net/rasc/astro2001.htm> for approx 100 photos of this years event.

Astronomy Day 2001

By Kim Hay

The blue skies and the sunshine were the perfect touch to an extremely well attended and interesting International Astronomy Day.

The many volunteers for this year’s presence at the Cataraqui Town Centre in Kingston, started around 7:30 am. Though the mall did not open up to the general public until 9:30 am, there was much traffic and interest from the public that was present, that made us all feel that this was to be a mall display to be remembered.

Once the setup was finished, the center court of the mall was transformed into a central hub of galactic wonders and space exploration, due to the guidance of this year's Astronomy Day Coordinators, Don Mastrianni and Susan Gagnon.

On the inside, there were displays of Light Pollution, Amateur Telescope Making, Photography (Solar/Meteor/Aurora) from Leo



Susan Gagnon and the 1st coffee of the day
Enright's collection and from Don Mastrianni's personal collection, several models ranging from the lunar lander, a Saturn 5 rocket, a space flight suit, lots of Lunar Landing posters and information and photo's.



Hanging Solar System courtesy of Hank Bartlett

The solar system was on a rotating hanging display courtesy of Hank Bartlett. Several and personal telescopes along with binoculars on tripods were in the centre of the

display to show the public that observing need not be an expensive hobby and that simple equipment can give you a look at the night time sky that can leave you in awe.



View from the top floor of the mall, onto the centre of activity

While this was going on inside, there were several telescopes setup on the south side of the mall, for Solar, and planetary (Jupiter and Venus) observing and of course the moon was present. Though the wind did pickup throughout the day with some cloud, it was a very good day with people always curious of what you can see in the daylight hours.



South side of the mall. (Laura Gagné, Dave Maguire, Norm Wellbanks and Don Mastrianni)

At dusk, the observing continued with many members setting up at Murney Tower. The weather remained clear and cool, with many

people from the day's trek at the mall showing up. The Kingston Centre's Astronomy Week celebrations continued on into the next week (April 28 to May 5) with Solar observing at noon and night observing at dusk. Our numbers of public attending the week long observing sessions were very good. The weather did not co-operate to its fullest extent, but the public interaction made all the weeks events worth while.

And now, may I introduce the volunteers that made this years Astronomy Day, April 28, 2001 a great event and success.



Shown from the back row starting at the left are the volunteers for this year's Astronomy Day 2001.

Back row: Tom Dean, Hank Bartlett, Czar, Peggy Hurley, Doug Angle, Dave Maguire

Middle row: Leo Enright, Susan Gagnon, Laura Gagné, John Hurley, Kim Hay, Kendra Angle

Front row: Kevin Kell, Don Mastrianni, Paul Winkler, Stephen Gagné, Jessica Gagné, Sylvain Gagné

Absent: Norm & Nancy Wellbanks.

All pictures taken by Kim Hay

Submissions from Members

ATM - Telescope Transport Box by Dave Pianosi

When we moved to the Kingston area I was full of intention that I'd build an observatory (my second) for my scope. Our last house near Hay Bay south of Napanee had pristine night skies (naked eye M35!). I even got a 10' X10'

cement pad poured at our new lot near Kingston in preparation of the new astronomical chapel, but I couldn't follow through with the new observatory #2. My new skies near Kingston were not bad (naked eye M31, barely) but it was too large a change from what I was used to. I was disheartened by my new night sky and stopped any further building.



After a number of observing outings I had found that the simple act of lugging of my scope and gear (I'd had an observatory for 5 years now) was something that I'd lost my taste for and my observing frequency dropped dramatically. A friend of mine from the Belleville astronomy club reminded me about how he simply leaves his scope in his cargo van. Everything he needs always on standby. Then it hit me...he has a mobile observatory (of sorts). I quickly adopted this idea. My cargo van would do nicely but I wanted protection for my scope and gear. I



decided to make a carrying case that would hold everything. The scope, the eyepieces, the base, the new observing chair that I'd recently made. I wanted it all to go as one

trip kind of set up. Some of the places that I observe still require a walk from the car. The idea

only one trip for the 7" Newtonian, the base with the observing chair, the eyepieces and stuff sounded good in theory but how was I going to budget it?!



The newly made telescope box transferred easily from my van, but moving it down to the beach for our Bon Echo public

observing session was an entirely different problem. I'd decided that I'd use drop away wheels and retractable handle extensions to achieve that wheelbarrow effect that really makes it stand out and shout, 'this is a scientific instrument?'

The box is basically a custom fit for my telescope, battery pack, eyepiece and paraphernalia box, solar filter, charts, etc...everything that I'll be needing. The observing chair attaches to the lid and the base sits on the chair and viola!it all moves in one direction at the same time and easily at that. Wheels of larger diameter would be nicer to smooth out some of the roots and parking lot bumps but all in all I'm really happy with it.

Since discovering astronomy, I've learned that many side trades are acquired when you are 'doing' astronomy. Making a 7" Newtonian mirror and scope were obvious trades affiliated with astronomy but I'd no idea that carpentry had such a large part. This little box is another in a long list of things, my first observatory, my observing chair, my LED flashlight, don't forget 'Junior Computer expert'



From
<http://www.cosmiverse.com>
 Some words from the
 Artist: Hi! My name is
 Theodore Micholias and
 this photo showing myself
 in front of an Inflatable

Planetarium teaching the public and the school
 children Astronomy here in Kingston Ontario
 Canada where I live.

Astro Decorating... or What Astronomers Do in the Winter

by Kevin Kell

This past winter of 2000/2001 seemed to
 me to be a particularly loooooonnnngggg winter
 with statistically far more clouds than I
 remember. But then again, what with the nature
 of human memory, that's what I have thought
 about every winter for the last 10 years.



Starry-Moony-Sunny Kitchen tablecloth, candle
 fixture centerpiece and decorative glasses

I was particularly fortunate to visit the
 domicile of a fellow astrodude and significant
 other and was taken aback at the wonderful
 interior decorating scheme.

A few bits of cloth here, a few pounds of
 plaster in a cast there and pretty soon you are
 surrounded by astronomically friendly digs.
 So without further delay, here are some of the
 items.



Starry-Moony Valence over patio doors with glass
 suncatchers hanging off the doors.



One of many wall hangings



A decorative throw

Science Fair Followup

by Christine Kulyk

Leo Enright presents a Special Award from the
 Kingston Centre to
 Daniëlle Auclair and
 Erin McRae of
 Ecole Élémentaire
 Mille-Iles for their
 display about
 Comets at the 2001



Frontenac, Lennox & Addington Science Fair.
 Both girls received copies of the RASC
 Beginner's Observing Guide.

A Kingston Centre Special Award was also given
 to Ted Down (home-schooled) for his project,
 "Detecting the Pulse of the Earth," about Earth's

magnetic field. His prize was an RASC Youth membership. Damon Surgenor of Winston Churchill school was presented with an RASC Observer's Calendar for his "Mars Sojourner" project.

At the same event, Kingston Centre member Kendra Angle took home a bronze medal in the Intermediate/Senior Open Category, along with partner Elizabeth Hadwen, for "Drink Milk, Love Life," a project that tested the optimum feed for dairy calves. Congratulations, Kendra!

Editor's Corner

by Kevin Kell

For some years now we have had Regulus available on our secure website in adobe acrobat format. Starting immediately I will be offering a service to email the adobe .PDF file to any member wishing it (and notifying me). I realize that there is a difference between going and hunting down something on the net and having it delivered in your email box. Realize that the regulus issues can run anywhere from 300 kb to over 1 mb. If you have a small emailbox account (less than 2mb) or a really slow modem you may not want to consider this at this time. In addition, if you want to help save the planet and not receive a paper copy of Regulus in the mail, let me know and you can help save us a little on postage.

Proposition #1 - receive by email Regulus in adobe acrobat format and still get the paper copy in the mail

Proposition #2 - receive by email Regulus in adobe acrobat format and do not get a paper copy from us (note you always have the option of going to the web site, getting the adobe version and printing it off locally).

Bookmarks- Well, I've run out of ideas for bookmarks so they've been discontinued for now.

Messier Hunters

Name	Last status	recent adds	Current Total
Tom Dean	36	0	36
Laura Gagne	65	0	65
Peggy Hurley	55	0	55
Kevin Kell	51	0	51

OK, what's up with the rest of you?? Haul out your logbooks and do a count... Gotta get that competitive spirit up and running to get you motivated to get up and outside!

Another addition to our Outdoor Sundial Collection:

<http://www.escape.ca/~sabanski/sundial/sundial.htm>

Welcome new members:

Doreen McDonald ,Kingston Ont., K7L 4V1
Kimberly Lannon , RMC Kingston,
Ted Down, Kingston

News from the Net

May 3, 2001 Last week NASA received a weak signal from Pioneer 10, twice as far from the Sun as Pluto and speeding toward the constellation Taurus. The well-traveled spacecraft is currently exploring the outer heliosphere, but soon it will take on a new job: ambassador to the stars. FULL STORY at http://science.nasa.gov/headlines/y2001/ast03may_1.htm?list81655

Treasurer's Corner

For the year ending September 30th, 2000
151 members (-25 from 1999)
Revenue \$16864
Expenses \$8496
Net \$8742
End of Year Balance \$17110

Notes: Centre surcharge down to \$5 from \$9, National fees up to \$40 from \$36; no net change. Donations to the amount of \$4342 helped out this year tremendously... Thank You All!

Notes from the Secretary

Minutes of the Regular Meeting May 11th, 2001

Laura called the meeting to order and called upon Doug to fill in for Tom in his capacity as presenter of what's up in the sky this week. Doug included M5, the Beehive, and the Virgo cluster, as well as some great starhopping tips for beginners.

Leo gave us all a stay of execution on the David Levy favourites list and wants to check with us in 2 months time (trips to the southern hemisphere are not obligatory). Laura handed off to Paul to introduce our speaker for the evening, **Dr.D.J.Saikia**. Dr. Saikia gave an absorbing lecture on active galaxies and the tricks of interpreting observations made of these enigmatic bodies.

After a short break there was a round of very brief reports. V.P., Paul ran through the speaker line up. There had some idea that we should book a larger room for the June meeting with Terry but since his people were not advertising and the talk was very geared to members, we would use our usual room. Paul also had a notice of the Laurel Highlands starparty. **Treasurer, John** reported that the bank was quiet as all he seemed to be doing was paying the bills. Laura had a list of new members to be voted in and they were, William Stapely, Peter Ouder Kirk, Elias Patterson, Robert Olson, Kimberly Lannon, Doreen McDonald, Ted Down, and Wojciech Skoczylas.

Editor, Kevin reported that the latest edition of Regulus was in the mail and new submissions would be welcomed for the next edition, deadline June 20th. Kevin reminded members about GA registration, and the use of proxy forms and that NYAA was also now registering for Starfest. Kevin also did the Observing date reports and the next public night would be May 29, May's members night was cancelled due to lack of a dark sky host. June's members night 24th, would be at Steve Manders' including BBQ like last year. **Kendra's ATM** report was good progress but time consuming. The next ATM meeting will be May 26th and the Angle home. **CCD Host Jan** say's 7pm at his house next Saturday the 19th. Hank the YOG leader reports that there are 3 meetings left for the year and September requires a new leader. Please give it some thought. **Kim as LPA** chair says nothing new since Astro Day. **The Doug and Dave Team for**

Fall'n'Stars have been to Vanderwater Park where the scouts stay and they say it may be a better site than the Provincial Park, research continues. In Don's absence Susan gave a quick report on **Astronomy Day activities**, a full report will be seen in future editions of Regulus.

Secretary, Susan read thank you letters from Ray Berg and Warren Morrison for the recognition shown in the cards of congratulations signed at the March 9 meeting recognizing their AAVSO awards. Leo at this time Moved, Seconded by Doug: That the Kingston Centre send a letter to the National Executive informing them of the record for the Messier Marathon, which was established by David Levy of the Kingston Centre in his observing session #6207 on March 15-16 1983, and that the letter be signed by the current executive of the Kingston Centre and by as many members as wish to do so, and that, and David Levy has requested, a copy of the letter be sent to him. The motion was passed and the letter was given to the secretary for photocopying and mailing. The meeting was adjourned at 2300 hrs.

Minutes of the Regular Meeting June 8th, 2001

The meeting was called to order at 20:00hrs by our VP, Paul and he introduced Tom and his **What's Up** observing forecast. Tom pointed out various items of interest in the Summer Triangle, Sagittarius and Scorpius. It was then time for Paul to introduce our guest speaker of the evening, **Terry Dickinson**.

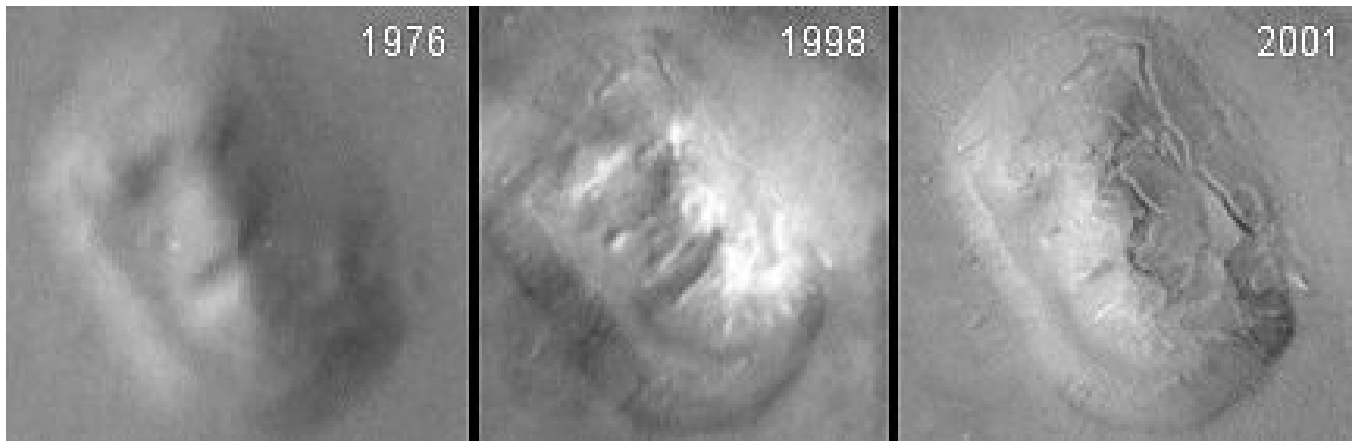
Terry's topic for the evening was **Mars 2001:**

Observations and Expectations. It was a great talk covering the history of Mars observing, exploration and the mythology that surrounded early study of the planet. Terry likes Mars!

After a short break, Paul began the business end of the meeting with a request for comments on the topic of meeting **room change** tentatively set for September. The potential meeting room is Stirling D, several aspects were discussed. If you have any comments please bring them along to the next meeting or contact a member of the executive.

Paul also reminded the members to get their **proxies** in to people attending the GA, as well as the speaker line up for the coming months and that the October meeting would be our election night. Susan presented a brief **secretary** report including a brief rundown of correspondence in the past month.

John's **Treasurer's** report was brief with a highlighted Education order for 20 calendars and 20 ETU books, our largest order yet. **Newsletter Ed.** Kevin reminded us that the July meeting is a week early due to speaker availability and that the deadline for the next issue of Regulus is June 20th. Also **The Sky is the Limit** Festival is coming up in July so anyone who can come out is encouraged to participate, scopes are probably covered but people to talk to the public are always needed. **Observing** Chair Tom said that the public session was clouded out and that he was looking for volunteers for the members sessions for July and the fall. Tom will also attend the GA as Council Rep. Kendra announce that the **ATM** will be stepping up its activities to meeting every Tuesday to get some assembly work done. Hank has one **YOG** session left on June 20th. Activities will resume in the fall if someone else is willing to take over. Several ideas for revamping the sessions have been kicked around, so if you have an interest call Hank. David Pianosi reported that the **Fall'N'Stars** will probably be held at Vanderwater Park but final confirmation is forthcoming. Christine encouraged people to seek out a copy of Kingston Life as there was a report on the **CWSF** and a nice picture of Kendra. Steve Manders confirmed that the **June 23rd BBQ and observing session** was on and show up at 7 pm. Jan will host the last **CCD session** for the season next Saturday June 16th, the sessions will start up again in September. Many draws were held and just as many winners declared! The meeting was then adjourned to Harvey's at 22:45.



Three images of the "Face on Mars" by Viking (1976), Early image from Mars Global Surveyor (1998) and a better pass from the Surveyor (2001). http://mars.jpl.nasa.gov/mgs/msss/camera/images/moc_5_24_01/face/index.html

This is to let you know that Charles Manion, Kingston Centre member, has died. He was a member since 1965 and transferred to Kingston in 1995.

SPACE IS BIG

Space is big. Really big. You just won't believe how vastly hugely mind-bogglingly big it is. I mean, you may think it's a long way down the road to the chemist, but that's just peanuts to space.



Douglas Adams, author of the satirical SF novel *The Hitchhiker's Guide to the Galaxy* and its sequels, died unexpectedly May 11 of an apparent heart attack in Santa Barbara, Calif., the

Associated Press reported. He was 49. British-born Adams reportedly collapsed while working out at a gym.

The *Hitchhiker's Guide*, which began as a BBC radio series in 1978, was turned into a book, which sold 14 million copies worldwide, and later into a television series, the AP reported. *Guide* is a satirical adventure about a group of interplanetary travelers, including Arthur Dent, Ford Prefect, Zaphod Beeblebrox and Marvin the Paranoid Android.

Committee/Group News

ATM (Amateur Telescope Makers) Group News

The Mirror grinding machine has been dismantled and moved to its new location at the home of Tom Dean, along with most of the ATM supplies that were in Kevin's garage.

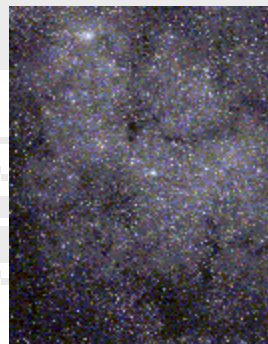
BOG (Beginners Observing Group) News

by Hank Bartlett

The Group has adjourned for the summer months of July and August and will be back in the fall, but in a different format. For more information call Hank at xxx-xxx-xxxx or email <xxx@xxx.xxx.xxx> .

CCD Group News

The last meeting for the summer was held on Saturday June 16th. The group will be on a summer hiatus and will return in September. To tide you over here are a couple of small images that I have print copies from Jan's collection of excellent work.



CCD Imagery by Jan Wisniewski



CCD Imagery by Jan Wisniewski

Education Group News

In preparation for our next editions of *Expanding Their Universe* and *Worlds to Discover*, we have applied for and received ISBN numbers for our publications, including the older *Careers in Space* and the upcoming *ATM Project Book Volume 1*.

Observing Group Meetings

These are regular meets at the home of members who volunteer their locations and homes to us on or near a new moon. Contact Tom Dean if you are interested in hosting a session.

Equipment Loan Program: Most of the slides have been out consistently but much of the telescope hardware has not :(Must be the cloudy skies!

11th Gateway To The Universe Starparty Presented by the North Bay Astronomy Club

July 20-22, 2001

Munro Park Powassan, Ontario Registration \$20 for further information contact Merlin Clayton (705) 472-1172 email: galaxy@efni.com or Tom Ouellette (705) 474-7666 email: quazar@hotmail.com

Starfest Thursday Aug 16 - Sunday Aug 19 at Mount Forest Ontario hosted by the North York Astronomical Association (NYAA). Many of the Kingston Centre members will be going this year but earlier, Wednesday or maybe even Tuesday!

RASC Kingston Centre Meetings

The Kingston Centre RASC meets once a month on the 2nd Friday of each month at 8:00 pm (20:00) in Mackintosh-Corry Hall, Room B-201 on Queen's University Campus **unless noted otherwise**. We have adopted a policy of moving any meeting that is held on a holiday weekend to the **WEEK BEFORE**.

2001 Officers and Executive Council

PO Box 1793, Kingston, On K7L 5J6
Infoline & answering machine 613-542-3974

President: Laura Gagne

Vice President: Paul Winkler

Secretary: Susan Gagnon

Treasurer: John Hurley

Librarian: David Maguire

Editor: Kevin Kell

National Council Rep: Tom Dean

Regulus is published 6 times per year. Views and opinions expressed herein do not necessarily reflect the official position of the Royal Astronomical Society of Canada or its officers and members.

Subscriptions: Members of the Kingston Centre receive Regulus as a benefit of membership. Advertisements are free to members of the Centre. Commercial advertising is \$10/quarter, \$20/half page, \$50/ full page and should be in electronic format.

Contributions are more than welcome. Submitted material may be edited for brevity or clarity. Copyright 2001. All rights reserved. Permission is granted to other publications of a similar nature to print material from Regulus provided that full credit is given to the author and to Regulus.

July-August Print Run=200

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

Newsletter Submission Info: The deadline is the 3rd Friday before regular meetings in odd numbered months. The preferred method is E-MAIL, then disk, lastly paper.

E-mail: [<kell@cliff.path.queensu.ca>](mailto:kell@cliff.path.queensu.ca)

Fax: 1-613-533-2907 (with cover page to Kevin Kell) Post: Box 2033 Kingston Ontario K7L5J8 Canada ascii or most major word processors (Corel WP8 for windows preferred) via E-mail or cdrom or 3.5" PC floppy disk



Event Horizon 2001

☆☆☆ July ☆☆☆

NOTE JULY MEETING IS ONE WEEK EARLY!

Friday July 6th* Guest Speaker: **Richard Schmude (Kingston Centre)** Topic: **My Photoelectric magnitude study of Mars over the last 10 years.** The talk will include a few pictures of Mars along with drawings and summaries of magnitude and color measurements of the Planet Mars. Hopefully we will be able to look at Mars as well if it gets dark at the correct time. Mars rises at 18:59 EDT and hits max at 23:04 EDT Sunset is 20:51 Moonrise is 21:57 almost full Meeting gets out at 22:30 latest so it will be dark.

Saturday July 7th -10:00-16:00 The Sky is The Limit Festival (City Park on Bagot)- Aimed at kids - Solar Observing and other activities, volunteers needed! Contact Kevin Kell

Tuesday July 24th - 21:00-22:00 Public Observing Session (Murney Tower Museum Park) Contact: Tom Dean
TBA CCD Group Meeting

☆☆☆ August ☆☆☆

Friday August 10th 18:00- No regular meeting at Queens- Annual Markfest BBQ Contact Mark Kaye

August 16-19 Starfest in Mount Forest

Tuesday August 21st - 20:30-21:30 Public Observing Session (Murney Tower Museum Park)

Friday August 24th : dusk-late Charleston Lake Provincial Park Star Party with Terry Dickinson and Park Staff. Volunteers with scopes needed. Contact Tom Dean
CCD Group Meeting cancelled
TBA Education Group Meeting

☆☆☆ September ☆☆☆

Friday September 14th 20:00-22:30 RASC-KC Meeting Guest Speaker: Ken Kingdon Topic: TBA

Friday & Saturday September 21/22
Fall'N'Stars Star Party cohosted with Belleville Astronomy Club Contact: Dave Pianosi
Saturday Sept 22 - Fall Equinox

TBA Public Observing Session
TBA Beginners Observing Group Session
TBA CCD Group Meeting
TBA Education Group Meeting

☆☆☆ October ☆☆☆

Friday October 12th 20:00-22:30 RASC-KC Meeting

Wednesday October 31st Regulus Nov/Dec issue mailed out

Annual General Meeting and Elections
TBA Public Observing Session
TBA Beginners Observing Group Session
TBA CCD Group Meeting
TBA Education Group Meeting

☆☆☆ November ☆☆☆

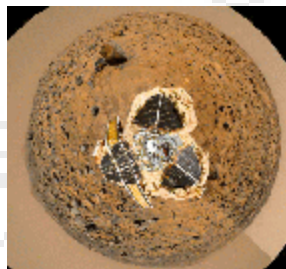
Friday November 9th Dr. Barry Robertson (Queen's University) Topic: SNO

TBA: Annual Awards Dinner
TBA Public Observing Session
TBA Beginners Observing Group Session
TBA CCD Group Meeting
TBA STAO Conference (Toronto)

☆☆☆ December ☆☆☆

Friday December 14th 20:00-22:30 RASC-KC Meeting










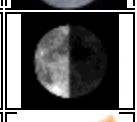




TBA Public Observing Session
TBA Beginners Observing Group Session
TBA CCD Group Meeting





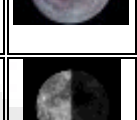







Mars Pathfinder donut shaped view from the IMP camera.

Kim's Kingston Kosmic Kalendar

Prepared by Kim Hay

General Assembly 2001 London, Ontario		June 29-July 1 http://www.rasc.ca/ga2001
Full Moon/Partial Lunar Eclipse		July 5 15:04 UT
3 rd Quarter Moon		July 13 18:45 UT
New Moon	DARK SKIES	July 20 19:44 UT
North Bay Astronomy Club Gateway to the Universe		July 20-22, 2001 Contact Merlin at 1-705-472-1182 Tom Ouellette at 1-705-474-7666 galaxy@efni.com
Roche Starfest Rochester, NY Lewis S. Wolk Observatory (Ionia NY)		July 20-22 http://www.ggw.org/asras/
1st Quarter Moon		July 27 10:08 UT
Island Star Party 2001 Cowichan Valley, British Columbia		July 27-30, 2001 http://starfinders.cvnet.net
Sd-Aquarid meteor peak		July 28 2 pm edt
Full Moon		Aug 4 5:56 UT
3rd Quarter Moon		Aug 12 7:53 UT
Perseid Meteor Peak		Aug 12 10 :00 UT
Starfest- Mt. Forest Host NYAA		Aug 16-19 http://www.nyaa-starfest.com/
Stellefane Star Party Springfield, Vermont		Aug 17-18 http://www.stellefane.com/
Nova East 2001 Smiley's Provincial Park, Nova Scotia		Aug 17-19 http://halifax.rasc.ca/ne/

Mt. Kobau Star Party Kellona, BC		Aug 18-26 www.bcinternet.com/~mksp
New Moon	DARK SKIES	Aug 19 2:55 UT
1 st Quarter Moon		Aug 25 19:55 UT
Great Manitou Star Party Carter Bay Resort, Manitoulin Island, Ontario		Aug 21-25 http://www.manitoulink.com/starparty
Full Moon		Sept 2 21:43 UT
3rd Quarter Moon		Sept 10 18:59 UT
Alberta Star Party, Caroline AB Eccles Ranch Observatory		Sept 12-16 http://www.syz.com/rasc/asp.htm
Zodiacal Light Visual in N. Latitudes in East before start morning twilight for the next 2 weeks.		Sept 16
New Moon	DARK SKIES	Sept 17 10:27 UT
Autumn Equinox		Sept 22 23:04 UT http://www.stcloud.msus.edu/~physcrse/ast106/e-mapautumn.html
Fall "n" Stars Belleville/Kingston Astronomy Clubs		Sept 21-23 http://www3.sympatico.ca/aimdave.pianosi/rasc.htm
1st Quarter Moon		Sept 24 9:31 UT



For more detailed information, please refer to the RASC 2001 Calendar, and the RASC 2001 Observers Handbook. Available from your local promotions committee or from National Office, <http://www.rasc.ca>
Venus over a radio telescope