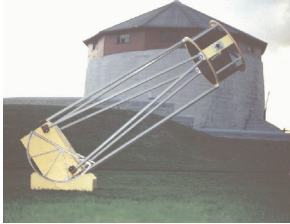




Regulus



The Newsletter of the Kingston Centre of the Royal Astronomical Society of Canada - June 2003



The 61 cm Venor Dobsonian-Mount telescope.

2003 - The Year of The Observatory*

**Our primary goal this year is to find a location to build an observatory for the Centre in general and the Venor telescope in specific.*

Next Meeting

Friday June 13th at 7:30pm
Stirling Hall Theatre D (normal room) on
Queen's Crescent, Queen's University

Guest Speaker:
Rajiv Gupta
(President RASC)
"Astro Imaging Techniques"



Contents of this Issue

available at
<http://130.15.144.99/rasc/secure/regulus/reg200306.pdf> and include:

- * The President's Voice
- * Starfest 2003
- * Astronomy Day 2003
- * Canadian AAVSO Challenge
- * Mars Society AGM
- * Ramblings from the Editor
- * News from the Internet

Contents of the May 2003 issue are available at

<http://130.15.144.99/rasc/secure/regulus/reg200305.pdf> and include:

- * The President's Voice
- * Internet Sites of Daily Interest
- * Ramblings from the Editor
- * A Letter from Bill
- * Cosmic & Event Calendar
- * News from the Internet

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The President's Voice by Hank Bartlett



The "Cloud Nebula", the "Cloud Mercury Transit of the Sun", the "Cloud Lunar Eclipse", those of you who have not been energetic enough to get out and observe when the night is clear should be as familiar as I am with these astronomical wonders. Am I whining? Yes! Ok, I know we all have to seize the moment and take advantage of the clear weather when we can get it but it would be nice to have some clear sky for special observations.

On May 7 our guest speaker David Levy trusted the accuracy of Attila Danko's Clear Sky Clock

(http://cleardarksky.com/csk/index.html#clock_list)

and drove to Albany N.Y. from Montreal for the Mercury Transit. Thank you Attila, David was rewarded for his effort with a clear sky and an unforgettable observation. On his return to Kingston for the 7:30 lecture that night David told us of his experience and gave Attila recognition and praise for his program. It was a benefit to those of us who could not travel to see the transit to hear it explained by someone such as David Levy who always expresses himself with a warm and wide eyed wonder when he speaks of astronomy. David followed with his talk on the Eclipses of 1605 and at break Kingston area students displayed three of this year's Science

Fair projects. It was an unforgettable night, in many ways.

May 10, just 3 days after our monthly meeting was Astronomy Day for RASC Kingston. If our only intent was to acquire new members we have to call our day a failure. Fortunately there is not a member in the Kingston Centre that has only numbers at heart when working with the public. We were a great success and even managed to be interviewed by Chris Harvey of CKWS Kingston (appearing on the news Monday night). We had a good number of volunteers and as many as 6 telescopes for the public to observe the Sun, Venus and the Moon. This event was also a trial run for my new solar projection system (perhaps an article and photo will be in the June Regulus). Static displays included meteorites, a computer lunar eclipse display, a Hubble DVD on laptop, a solar system mobile, solar photography, membership info, and our own mascot Csar. The best part of the day was of course the oooooo, and aaaahhhhs of the public as they observed through our scopes. A big thanks to all the volunteers (one all the way from Ottawa) that made our day a success.

Now it is on to the "Sky is the Limit" festival on July 5, come share some time for a worthwhile cause and a fun event. Be sure to check the RASC Kingston website and your current issue of Regulus for upcoming events in which you can participate.

I look forward to hearing the observing reports of those of you who can make it to our monthly meetings. If you cannot make it in person you can always send interesting reports or observations to the newsletter editor for publication in Regulus.

Share the view,
Hank



Internet Sites of Daily Interest:

<http://antwrp.gsfc.nasa.gov/apod/>

Astronomy Picture of the Day
(good to visit every day!)

<http://science.nasa.gov/ppod/>

Space Station Picture of the Day

<http://www.space.com/>

Space.com - good news site

<http://www.universetoday.com/>

Canadian Space News site

<http://www.heavens-above.com/>



Our anti-mosquito suit model as seen by a bug

Satellite prediction site good for ISS and Iridium flares

<http://www.astrobio.net/>

Astrobiology network

<http://starryskies.com/>

Good news source

Internet Site of Special Interest:

Want to see the night sky, live, from some of the worlds great observatories? Check out

<http://concam.net/>

and see all-sky cameras from places like the Canary Islands, Kitt Peak, Mauna Kea, and Siding Spring.

<http://www.friendsofnasatv.org/>

Lobbying to get NASA TV on Canadian TV

<http://www.spaceimaging.com/default.htm>

Commercial space-based Earth imagery

http://www.ccrs.nrcan.gc.ca/ccrs/data/calendar/calendar_e.html

Calendar with space images of Canada

News from Other Places



Starfest 2003

The North York Astronomical Association invites you to attend its twenty-second annual Starfest, August 21 - 24, 2003. Starfest is

Canada's largest annual observing convention and star party. It attracts over nine hundred astronomy enthusiasts from Ontario, and neighbouring provinces and states. It has been ranked among the top seven star parties in North America by Sky and Telescope magazine. Starfest offers a wide variety of observing-oriented activities that address the needs and interests of experienced observers and astrophotographers, as well as those new to the hobby. Activities include observing sessions, formal and informal presentations, workshops, commercial exhibits, and a children's program. You are invited to bring your telescope, astronomical images, and share your observing experiences with others.

"The Starfest 2003 Not Only A Mars Tour". This year, to celebrate the close approach of Mars, we explore the wonders of our solar system. Our understanding of this amazing place is growing at an incredible pace. As we further probe the surface of Mars, circle the gas giants and their moons, land on asteroids and collect comet dust, we continue to expand our knowledge. The latest discoveries about the sun, planets, moons and asteroids will be examined at Starfest this summer. We will also focus on how to maximize the way in which we observe these solar system objects. You are invited to join us for this unique opportunity to enjoy Mars at its very best, within the context of the solar system as a whole.

Starfest 2003 features over eighteen presentations and workshops, given by leading professional and amateur astronomers. This year's stellar line up includes: Terence Dickinson, Doug Hallman, David Levy, Doug Welch, and many more.

Full details to help you plan your agenda are available on our webstie at www.nyaa-starfest.com.

A printed brochure will be mailed to you in early June at the following address. If this information is incorrect or incomplete, or if you wish to be removed from the mailing list please reply to this email.

WHAT'S NEW AT STARFEST

Starfest Registration Mailing Address Change
Kirth Borsato and Peter Kiedrowski have joined the Starfest registration team and will be processing the majority of online and mail in registrations. To facilitate this the mailing address for Starfest registration has been changed to: STARFEST, 92 Earth Star Trail, Brampton, Ontario, L6R 2N7

Also please note that the "From" address on the electronic registration confirmation letters will be different.

Solar System Social On Saturday evening as part of the festivities,

a gala Solar System Social will be held. You are invited to participate by dressing up as a representative of your favorite solar system object. Prizes will be awarded to the most original and outlandish attire. Let your imagination run free and surprise us with your creative fashion statement.

Red Light Café is under new management. We have made arrangements with a professional food service provider to run the Red Light Café. They will bring their portable kitchen on site which enables them to have a more extensive selection than our pervious supplier. See meals section for a complete menu.

New Caterer. We have changed caterers for the banquet on Saturday evening and expanded the menu. See the meals section for details.

We hope to see you at Starfest,
Andreas, Bonnie, Kirth, Peter and Team Starfest.

North York Astronomical Association
26 Chryessa Avenue, Toronto, Ontario M6N 4T5 416-761-1798 Email: nyaa@ca.inter.net



Canadian AAVSO Challenge

Things are going well - very well - a few newbie observers have come on line, bringing the total to 49 new Canadians who have committed to do at least one

reported variable star estimate to the AAVSO. This leaves ONLY 20 new observers to commit, and we will then reach to goal of having 100 Canadians (mostly RASC) reporting to the AAVSO from September last year to September

this year. (The count difference is made up by veteran observers).

So...time to be one of the 20! Since the weather has broken and most are getting pretty good skies, finding a favourite variable should not be that hard, and making that estimate, or estimates, should be dirt easy. :-) Cygnus has more than 300 variables that are in the AAVSO program, and it everyone's favourite summer stamping ground!

Just 20 more!

Let me know if you will commit to this task. If so, you need to download a chart or a few off of the award-winning AAVSO website at www.aavso.org. Then make your estimates, apply to the AAVSO head office for your observer code (aavso@aavso.org), then report using Webobs or Perlobs software available free on the site. It's fun!!

For some of you 49 newbies, I do not know your status. Please get back to me about whether or not you have reported or if you are having other problems that need to be resolved. These observers are: SIU, SVH, ZW, TLN, KTM, BQE, MBJ, SXU, FSM. I also need updates from Kovacs, Renault, D'Amerlio, Cheaney, Haynes, Pickett, Krochko, Clancy, Alexander, Fleming, Hall, Tubb, Foster, Pulley, since I do not know your AAVSO observer codes. Get back to me on private channels, or, if you are proud of you varstar accomplishments, let the RASClst know! I also need to thank Geoff Gaherty, Vance Petriew, and a host of others who have not only taken up the challenge themselves, but have also recruited new observers after they found out how fun and productive variable star observing can be, and how it can be done from your light-polluted backyard any mostly-clear night!

Thanks to everyone for the amazing effort so far! The AAVSO's response to the Challenge should appear in the July Journal, if Vance and I get our article acts together in time. :-)

Submissions from Members



A Trip to the Canadian Space Agency by Kevin Kell

On the May long weekend, Kim & I were able to travel to

Montreal to participate in the Mars Society (Canada) Annual General Meeting.

We have had contact with the Mars Society previously in Kingston at the 2002 Astronomy Day and were making efforts to keep in contact with them.

Among the highlights of the AGM were paper sessions throughout the morning, a lunch break out on the grounds of the CSA headquarters in St. Hubert, and a few more papers in the afternoon followed by tours of the facilities.

Marc Garneau gave a short address in the afternoon about the CSA and the need for lobbying the federal government for funding.

We also had a chance to meet up with Denis Legacey from the Montreal Centre. You may remember him from the registration desk at the 2002 Montreal RASC General Assembly.

Astronomy Day 2003 May 10 images (story to follow in July issue)





Peggy Hurley and the Equipment Loan Program
Astroscan



The Douglas 25 cm and Baader solar filter



Norm Welbanks and his refractor



**General Assembly 2003
in Vancouver BC, June 27-29**

It's not too late to register!
<http://ap.stmarys.ca:8080/rasc/index.jsp>



**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 Kevin Fetter if you are interested in hosting a session in 2003.

June: TBA
July: TBA
August: Cancelled due to Starfest
September 26/27: Fall'N'Stars 2003



The Messier Certificate Holders (16)

Leo Enright (1982), Gus Johnson (1983), Jim Scotti (1983), Mark Sorensen (1986), Stan Hanna (1990), Steve Manders (1990), Bill Broderick (1993), Dan Rombaugh (1993), Ray Berg (1996), Ken Kingdon (1998), David Pianosi (1998), Doug Angle (1999), Vic Smida (2002), Mark Kaye (2003), Norm Welbanks (2003), Kevin Kell (2003)



Public Observing Sessions

These are the public observing sessions, normally held at Murney Tower Park on the Kingston waterfront on King & Barrie Sts. On the first Tuesday after a new moon.

The next POS are:

Tuesday June 3rd at dusk

Wednesday July 2nd at dusk (moved to accommodate Canada Day!)



Equipment Loan Program

Members in good standing are able to sign out Centre equipment, including:

- ☆ 25cm (10") f5.5 Douglas Dobsonian Advanced Users
- ☆ 20cm (8") f7 FitzGerald Dobsonian Intermediate Users
- ☆ 20cm (8") f4.5 Barney Dobsonian Intermediate Users
- ☆ 11cm (4.5") f4.3 Bushnell Voyager Starter Users
- ☆ 11cm (4.5") f7.9 Orbitor 3500 Equatorial Starter Users
- ☆ 5 barndoor tracking platforms 1999 February - Starter Users
- ☆ Collimating Tool 2001 August - All Users
- ☆ Binocular Set #1 B&L7x50 1999 April - Starter Users
- ☆ Binocular Set #2 B&L10x50 1999 April - Starter Users
- ☆ Binocular Set #3 Bushnell 7x50 1999 April - Starter Users
- ☆ Binoculars Set #4 Stem 7x50 1995 - Starter Users
- ☆ 19mm Televue Panoptic Eyepiece 2000 March - Intermediate Users
- ☆ Filter Set - ND13, 4 colour, O3 nebula - all 1.25" 2000 September - Intermediate Users
- ☆ Kodak Ektagraphic 35mm slide projector 2000 November

Contact Tom Dean



RASC Kingston Centre Meetings

The Kingston Centre RASC meets once a month on the **2nd Friday of each month at 7:30 pm (19:30) in Stirling Hall**

Theatre D on Queen's University Campus **unless noted otherwise**. We have adopted a policy of moving any meeting that is held on a holiday weekend.

Friday June 13th: Rajiv Gupta: Astro Imaging Techniques

Friday July 11th Dr. Richard E Jones (Kingston) - Amerigo Vespucci's Measurements of Longitude

Friday Aug 8th 5 pm Annual BBQ and Observing session at Mark Kaye's - Mystery guest speaker. For directions contact the executive (see below)



2003 Officers and Executive Council

PO Box 1793, Kingston, On K7L 5J6

Infoline & answering machine: 613-377-6029

Email:

[<rascexec@cliff.path.queensu.ca>](mailto:rascexec@cliff.path.queensu.ca)

We also have an email chat list "rascchat". Send your email address to Kevin Kell to be added to the RASCCHAT list.

President: Hank Bartlett

Vice President: Doug Angle

Secretary: Brian Hunter

Treasurer: John Hurley

Librarian: David Maguire

Editor: Kevin Kell

National Council Rep: Peggy Hurley

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Contributions are more than welcome. Submitted material will be edited for brevity or clarity. Copyright 2002 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. March Print Run=200

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

Newsletter Submission Info: The deadline is usually 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: 76 Colebrook Road RR#1, Yarker Ontario K0K 3N0 Canada

ascii or most major word processors (Corel WP8 for windows preferred) via E-mail or cdrom or 3.5" PC floppy disk

Resources Available to Members:

(See bottom of page 10 for passwords)

- **RASC-Kingston Centre Handbook** at:
<http://U99.N144.queensu.ca/rasc/secure/kingstonmanual.pdf>

-**RASC National manual** at
<http://www.rasc.ca/private/rascmanual.pdf>

- **RASC-Kingston Centre Loan Program** at:
<http://members.kingston.net/rasc/loan.htm>



Ramblings from the Editor

545-8550 is the number to call in the local Kingston area for Environment Canada Weather current and forecasts.

Too busy Too busy too busy!

There is so much activity going on around me and yet not nearly enough time to help out with all of it. So I try to organize a little, focus on what can be done quickly and well and see if that helps the grander effort at all.

To wit: we have moved the weather station to more suitable locations for better reading accuracy. You can see hourly updates on the weather data at:

<http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=IONTARIO51>

It has been running pretty smoothly since the move and we hope it helps with the longer term efforts of building observatories and remote telescopes.

Efforts to rebuild my 7" dobsonian mount scope have stalled while workshop time is being devoted to more pressing house upgrade matters. The rebuild should "only take a weekend or two" and a real deadline of Starfest (late August) is coming up quick.

Several of our subgroups/committees are moving towards an inactive state, as we search for more volunteer help from the membership.

Don Cooke can always use help for the Sky is the Limit Festival (Saturday July 5th) in City Park (Kingston), and for Fall'N'Stars 2003 (Fri/Sat September 26/27) at the vandewater conservation area north of Belleville.

The anticipated format is much the same as last year (2002, the year of clear skies and LOUD aurora!)

We are pulling together some construction plans for possible observatory designs to house the 61cm Venor Scope. Once that happens, we can price the observatory, come up with a spec sheet of what we need and go out searching for a suitable location. Ever built a 20'x24' shed? Put your thoughts down and send them in to us!

An Executive meeting was held on Saturday May 31st at the home of Kim Hay and myself and it was a relatively short meeting for a change. Minutes were not available at press time but they will be available on a web site near you soon.

A **Kingston Centre Manual** was given the stamp of approval at the meeting and is available online at
<http://U99.N144.queensu.ca/rasc/secure/kingstonmanual.pdf>

This has been around for a couple of years, but never really sanctioned by the executive before. It is a set of guidelines and info on the running of the Centre, loosely based on the Calgary centre manual. Paper copies will be made available to anyone who requests one (some of our members do not have computers and/or internet access) at a small fee to cover printing and mailing costs (to be determined), and a few will be made available at meetings prior to the Annual General Meeting of the Center, scheduled this year for Friday November 14th.

*A reminder that *ALL* executive positions are open to *ALL* regular members in good standing. There are some fine print restrictions on National Council Rep but that's about all.*

The long-ongoing saga of **achieving charitable status** still appears to be stalled. This causes in turn an excess of bureaucratic paperwork when we attempt to apply for grants or other funding. Very frustrating to say the least.

The other legal issue we are looking into is that of **incorporating the Centre**. We believe this may be the only way to go if we need to purchase

land to house our observatory and telescope equipment.

If anyone has experience in incorporating federally or provincially, please contact us.

Educational Publications

We have not made a lot of efforts in promotion of late but two new developments came out of the May executive meeting, one we will try placing some commercial ads in local papers and two, we have put the 35mm slide sets on sale (see below).

Starfest is coming up shortly, brochures and other information are now available (see story earlier this issue). Kingston will not be fielding a single contingent this year but rather will probably be spread out all over the campsite in an attempt to blend in and make contact with more people (so don't go looking for a "Kingston Site".. It won't exist!)

Tshirts: We have talked this concept to death for years as well, but this time it appears as if we are getting somewhere. Prices will be forwarded to us in the next week or two for bulk runs of Tshirts. More details to follow. We haven't done a Tshirt run since the General Assembly in 1997.

Lastly, **the July issue of Regulus** (paper edition, mailed out) will be late as I return from the Vancouver General Assembly. The submission deadline is Sunday July 6th at 18:00 EDT. The newsletter will go to press Monday morning July 7th and hopefully be in the mail by Wednesday July 9th.

2003 PUBLICATIONS ORDER FORM

Item	Price per unit (Shipping and taxes included) Regular (Member)	Quantity	\$ Total
*Expanding Their Universe 2 nd Edition - The Teacher's Companion for Secondary School Astronomy 161 pg 2002 NEW!	\$30 (\$24)		
*Worlds to Discover 1 st Edition - Astronomy for Elementary School 154 pg 2000	\$15 (\$12)		
*Slide Set #1 companion for Expanding Their Universe 40 slides	\$75 (\$60) \$50		
*Slide Set #2 companion for Expanding Their Universe 40 slides	\$75 (\$60) \$50		
*Slide Set #3 companion for Worlds to Discover 20 slides	\$35 (\$28) \$25		
*Students Guide to Careers in Space, 2 nd edition 33 pg 1998	\$5 (\$4)		
*Secondary School Combo 1: ETU book, Slide Set #1 OR #2 (Circle choice), Careers in Space	\$100 (\$80)		
* Secondary School Combo 2: ETU book, Slide Sets #1 AND #2 (Circle Choice), Careers in Space	\$160 (\$125)		
*Elementary School Combo : WTD book, Slide Set #3, Careers in Space	\$50 (\$40)		
Beginner's Observing Guide by Leo Enright	\$15		

* Consider a membership in the RASC-KC. It includes a 20% discount on Centre produced material. * 20% discount now extended to members of RASC (other centres included)

**SALE effective 2003 June 01 until 2003 August 31

© Slide Sets #1 and #2 **NOW ONLY \$50** (no additional discounts applicable)

© Slide Set #3 **NOW ONLY \$25** (no additional discounts applicable)

News from the Internet



SPACECRAFT AND EXPENDABLE VEHICLES STATUS REPORT May 27, 2003

George H. Diller Kennedy Space Center 321/867-2468

MISSION: Mars Exploration Rover (MER-A)

LAUNCH VEHICLES: Delta II

LAUNCH PADS: 17-A

LAUNCH DATES: NET June 8

LAUNCH TIMES: 2:05:55 p.m. / 2:44:07 p.m. EDT

The MER-2 rover, mated to the upper stage booster and contained within its payload transporter rolled out of the Payload Hazardous Servicing Facility this morning at 2:20 a.m. It arrived at Pad 17-A at 4:30 a.m. It was hoisted atop the Boeing Delta II rocket at 9:15 a.m. A spacecraft state of health check is scheduled to occur on Wednesday and the integrated vehicle/spacecraft Flight Program Verification test will follow on Thursday. Installation of the fairing around the spacecraft is scheduled to occur this Saturday, May 31. Fueling of the Delta second stage with its complement of storable hypergolic propellants is currently planned to occur June 5.

Some additional schedule margin is being added to complete the management reviews required prior to launch. Therefore, launch is being retargeted to occur no earlier than June 8. A final decision on the launch date will be made next Monday, June 2.

MER-A will have two launch opportunities each day during the launch period that closes on June 19. Arrival at Mars is set for Jan 4, 2004, regardless of the launch date within that period.

The Delta first stage for MER-A was erected on Pad 17-A on April 23. The second stage erection was completed on April 28, and the fairing was installed in the white room on April 30. The solid rocket booster erection began on May 13 with the first set of three motors being attached to the first stage. The second set of three was erected on May 14, and the final set was hoisted into position on May 15. The Simulated Flight Test, an electrical test of the vehicle's systems used during powered flight, was successfully completed on May 21.

MISSION: Mars Exploration Rover (MER-B vehicle/MER-1 rover)

LAUNCH VEHICLE: Delta II Heavy

LAUNCH PAD: 17-B

LAUNCH DATE: June 25, 2003

LAUNCH TIME: 12:38:16 a.m. / 1:19:19 a.m. EDT

Fueling of MER-1 began today and will be completed tomorrow May 28. Spin balance testing will begin the next day on May 29 and is to be followed by mating to the Delta third stage (upper stage booster) on June 14. Transportation to the launch pad is scheduled for June 15.

The MER-B vehicle's first stage is on Pad 17-B. Erecting the nine solid rocket boosters in sets of three a day was completed May 22. The second stage will be hoisted atop the first stage tomorrow, May 28.

The MER-B launch period closes July 15.

MISSION: SCISAT-1/Atmospheric Chemistry Experiment

LAUNCH VEHICLE: Pegasus XL

LAUNCH FACILITY: Vandenberg Air Force Base, California

LAUNCH DATE: NET July 25, 2003

LAUNCH TIME: 10:36:55 p.m. - 11:34:04 p.m. PDT

The SCISAT spacecraft is completing final testing at the Canadian Space Agency's David Florida Laboratories. The pre-ship review prior to transportation of the spacecraft to Vandenberg Air Force Base is scheduled for Friday, May 30. It is currently scheduled to arrive at Vandenberg on June 19.

SCISAT-1 weighs approximately 330 pounds and will be placed in a 400-mile-high polar orbit to investigate processes that control the distribution of ozone in the upper atmosphere.

Meanwhile, the Pegasus XL rocket is undergoing prelaunch preparations at Vandenberg Air Force Base in California by Orbital Sciences Corporation.

The scientific mission of SCISAT-1/ACE (Atmospheric Chemistry Experiment) mission is to measure and understand the chemical processes that control the distribution of ozone in the Earth's atmosphere, particularly at high altitudes. The data from the satellite will provide Canadian and international scientists with improved measurements relating to global ozone processes and help policy makers assess existing environmental policy and develop protective measures for improving the health of our atmosphere, preventing further ozone depletion. The mission is designed to last two years.

MISSION: Space Infrared Telescope Facility (SIRTF)
 LAUNCH VEHICLE: Delta II Heavy
 LAUNCH PAD: 17-B, Cape Canaveral Air Force Station
 LAUNCH DATE: August 27, 2003
 LAUNCH TIME: TBD

The SIRTF observatory is in NASA's class 10,000 laminar flow clean room at spacecraft Hangar AE awaiting its return to the launch pad, currently anticipated to occur in mid-August.

Project management of SIRTF for NASA is by the Jet Propulsion Laboratory. The observatory has been built for NASA by Lockheed Martin and Ball Aerospace.

For automatic email subscriptions to this KSC originated press releases, send an Internet electronic mail message to mailto:ksc-news_release_subscribe@kscnews.ksc.nasa.gov. With no subject or message. The system will reply with a confirmation via e-mail of each subscription.

To remove your name from the list at any time, send an email addressed to mailto:ksc-news_release_unsubscribe@kscnews.ksc.nasa.gov. With no subject or message.

or you can (un)subscribe on the World Wide Web at: <http://kscnews.ksc.nasa.gov/>

Status reports and other NASA publications are available on the World Wide Web at: <http://www-pao.ksc.nasa.gov/kscpao/kscpao.htm>.

More pictures from Astronomy Day 2003

