

# SIDEREAL TIMES

The Official Publication of the  
Amateur Astronomers Association of Princeton

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John Miller

**Treasurer**

Michael Mitrano

**Program Chairman**

Ludy D'Angelo

**Assistant Director**

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Ron Mittelsteadt

**Editors**

Bryan Hubbard and Ira Polans

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Number 7

## From the Director

Lucky for you, Dear Reader, that I write this during frantic packing for a trip to India tomorrow. I've never been east of Point Pleasant, NJ, and they've got me hauling off to Chennai, Bangalore and New Delhi. Hold on, got to take my anti Malaria pill. There. Maybe the Indian mosquitoes think they're tough – but I'd put 'em up against those beasts at our Simpson Observatory anytime, and watch those Malaria-carriers get torn asunder. How does all this make you lucky? 'Cause this report will be nice and short due to preparation chores!

We have a club planning meeting (aka Board Meeting) scheduled for Thursday, July 19<sup>th</sup> at 7:00 PM. The location is on the basement level of Peyton Hall, in the central meeting room. Any member is encouraged to attend these sessions; your input really is valued. We will be talking about the October StarQuest agenda, including catering options, guest speakers, prize drawings, and observing/imaging contests. StarQuest will be held October 12, and 13<sup>th</sup> with pack up the morning of the 14<sup>th</sup>. Mark your calendars; October offers us a higher probability of clear, crisp nights, and longer observing windows to boot. Complete details regarding registration, fees and schedules will be sent to you very shortly.

If all goes according to plan, readers will see one or two new features [See *Picture-This* starting on page 3—*Editors*], in this edition of *Sidereal Times*. I think you'll find these columns interesting to read and might get you started in a new facet of our terrific hobby. If you think feature columns are a good idea, perhaps you might wish to create one discussing a specific topic. Don't be shy—drop a note to our ST editors: [editors@princetonastronomy.org](mailto:editors@princetonastronomy.org) and become the next David Levy or Roger Sinnott.

Oh, and elsewhere in this issue, you'll find a report describing the AAAP picnic. Did you attend? If not, I hope the pictures and prose will convince you to try for next year.

Well, I'm off to the Subcontinent. Would love to see some sky from those latitudes, but alas, major light pollution knows no cultural boundaries.

Hmm. Wonder if I can get that Dob past customs?

Cheers—*John Miller*

## In Memoriam

It is with regret that we must announce the passing of Louisa L. Lockette, a member of long standing, on Friday, June 29, 2007. The club made a donation as requested by the family.

## Minutes of the General Meeting

*Amateur Astronomers Association of Princeton*  
June 12, 2007

Meeting called to order by John Miller at 8:07pm with a lecture by Dr. Tony Del Genio on the Cassini Mission to Saturn.

AAAP picnic at Rex Parker and his wife residence on June 16th will start at 4:30 pm with observing at the Simpson observatory at twilight. Costs of burgers, hotdogs, etc. will be absorbed by the club.

A thanks to Ludy D'Angelo for cutting the grass around the Simpson observatory, that was getting rather high. The park superintendent will be notified of this oversight by the park.

*Sidereal Times* is still looking good to the credit of our two new editors Bryan Hubbard and Ira Polans. Vic Belanger left his position in good hands.

A discussion on Starquest. Found that in October the lower kitchen/dining hall will be closed for the season. The upper kitchen has fold down tables for dining. Another item suggested is that the club buy and serve the meals themselves and not use a caterer. This would require an effort from club members to help with this chore. The consensus is to supply two or three meals where one crew cooks and another cleans up afterwards. This subject to be discussed further during the July board meeting. Larry Smith will find prices of food at the local Costco. All agreed that there should be speakers at Starquest. It was suggested that a listing of graduate students was needed as an aid to seeking their help. Some door prizes were already purchased for the event. One of the donated Coulter Dobs will be one of the prizes.

Observatory work: Additional grounding of the observatory electrical system; a copper rod and wire has already been purchased.

Treasury Balance: \$12,172.58. A vote was taken to authorize the treasury checking account to be switched to a money market account. The vote passed. Treasurer Mike Mitrano will take care of this transition.

Two notes of thanks. One from girl scouts who visited the observatory. Another from the Allentown school PTA for public outreach. The membership gave thanks for the volunteers who participated in these events and for those that helped at the NJ State Museum Super Science Weekend.

Meeting adjourned at 10:37pm.

*Ron Mittelsteadt, Secretary*

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## Treasurer's Report

As of June 30, the Club's total account balance stood at \$12,202.00 During June, following recent Board approval, an AAAP money market mutual fund account was opened up so that the Club will be able to earn interest on its funds.

*Michael Mitrano, Treasurer*

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## Picnic with the Stars

This was a different kind of star party. Rather than hearing names like Arcturus, Rasalhague or Delta Scorpi, monikers of Bill, Vic, Rex and Manik were voiced. The stars were members of the AAAP and the party was our 2007 AAAP Picnic, graciously hosted by Rex and Carol Parker at their Titusville home.



*Former AAAP Director Rex Parker and chef extraordinaire at work!*

You couldn't reserve a better setting. The centerpiece of the party was on Rex and Carol's multitiered backyard deck, overlooking expansive greenery leading down to a couple of ponds, adjacent to Washington Crossing State Park. Along with the grill, burgers, dogs and setups, Rex also provided a Hydrogen-alpha filtered Takahashi FC 76 which offered impressive prominence views late in the afternoon.



*Picnickers viewing the sun in hydrogen-alpha light.*

About 30 AAAP members, some with accompanying family came to the picnic. Was there enough food and drink? Are there enough stars in M 13? Guests brought everything from salads to desserts, accompanying the grill courses. Member Tito Bastianelli brought his wife's sensational homemade Italian puff pastries.



*Some AAAP members enjoying the picnic.*

Although get-togethers like this inevitably invoke lots of discussion about astronomy-related issues: equipment, vendors, astro imaging, AAAP history, there was equal conversation about family, politics, and entertainment. It really allows AAAPers to get to know each other a little better. Great for the club. Great for them. One group was involved in a lively talk about classic science fiction movies. Some cited 2001 A

*Space Odyssey* as one of the best, and some agreed *Forbidden Planet* was the definitive player in the classic film genre. They all agreed the burgers to be first rate.

As the afternoon turned into evening, a good percentage of picnickers made the short trip over to the AAAP Simpson Observatory. It had been quite a while since so many members had been at the observatory for a single event. The Hasting-Byrne was most happy indeed. Earlier in the day, a contractor cleared a 40' x 50' section of wooded area just to the east of the observatory. He did a great job, (making the observatory appear as if it had been moved back from the entrance gate by 40'!).

Although the sky wasn't very cooperative, these astronomers were undaunted, and waited patiently for sucker holes to offer up some celestial gems.

If you missed the picnic this year, come to StarQuest in October to make up for it. And although this Star Picnic would be difficult to improve, maybe the 2008 AAAP party will equal the fun and camaraderie.

*John Miller*

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## From the Program Chair 2007 AAAP Lecture Season

**On June 12, Dr. Tony Del Genio**, a member of the Cassini Imaging Team from the NASA Goddard Institute for Space Studies (GISS) in New York City, gave a fascinating talk on "*Cassini's Excellent Adventure through the Saturn System*". The June 12 meeting was the closing lecture of the 2006-2007 Season and my tenure as AAAP Program Chair. Despite a change of venue to the Friend Center at the request of Princeton University, well over 120 people attended. And all enjoyed the delicious pastries and drinks courtesy of Princeton University. This huge and enthusiastic crowd would have filled Peyton Hall to capacity. Thus there were three Standing Room Only lectures this season. My thanks to the many members and public who strongly supported the Monthly Lecture Program, the additional Special Science Lectures and the Science Lab Tours which I have arranged for the past two years.

Dr. Del Genio presented the story of Cassini from "inside mission operations" through a selection of the most breathtaking pictures and science from the Saturnian system. The NASA/ESA Cassini Huygens Mission has just celebrated its 3<sup>rd</sup> anniversary at the spectacular ringed planet. Tony explained that the spacecraft is now about halfway through its overall mission. He said that one more year remains for the primary mission phase and the team has just submitted a detailed outline to NASA of the orbital tour for a two year extended mission which will focus on close flyby's of Titan, Enceladus and several icy moons.

Dr. Del Genio's lecture began with a collage of 64 of the most dazzling Cassini images composited into a poster which is dedicated to the 64<sup>th</sup> birthday of the Beatle, Paul McCartney. He described his major new research finding elucidating the belts and zonal bands of Saturn. Tony energetically and artfully highlighted the teams major scientific discoveries including the methane lakes at Titan's poles, the unexpected ice geysers at Enceladus which also contain organic materials and are the source of E-ring particles, the "Mimas" Paradox, the mysterious

albedo asymmetry and unique 33 km equatorial bulge at Iapetus and disruptions of various rings by moons and moonlets.

Learn more about Dr. Del Genio's research, the Cassini Mission and download the 64 image poster at these links:

<http://saturn.jpl.nasa.gov/home/index.cfm>

<http://ciclops.org>



*Giant crowd greets Dr. Tony Del Genio at 12 June AAAP Monthly Meeting. Photo Credit: Steve Krisocki*



*The June 2007 AAAP meeting was held in the Friend Center on the Princeton University campus for a lecture by Dr. Tony Del Genio (front right) on the "Cassini's Excellent Adventure through the Saturn System". Photo Credit: Steve Krisocki*

For more details please contact

*Ken Kremer*

*AAAP Program/Lecture Chairman 2005-2007*

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## Picture This—My Beginning

I am going to try to write a column "Picture This" about something I've imaged for each edition of the Sidereal Times. I would like to take this opportunity to give a little background on how I got introduced to the club and into astrophotography.

I first got a telescope, an 8-inch dobsonian, seven or so years ago. I spent many evenings looking for things and finding fewer than I had

hoped for. A friend of my in-laws mentioned she belonged to a club right near my home here in Princeton, the AAAP. I would like to take this moment and thank Marion Palmer, as she was this friend of my in-laws who introduced me to the club. I joined after the first monthly meeting I attended. I couldn't wait to get with others and their scopes and dip into the pool of knowledge and experienced of these visual observers. I spent my first Starquest talking with Gene Ramsey who graciously spent hours talking to me about astronomy and getting me more familiar with my equipment and how to use it. John Miller who also owned the same type of scope as mine enlightened me on what to expect to see through my scope and how to collimate it when it needed it. I really enjoyed the local spur of the moment observing sessions with many of the club's members.

After doing the visual observing for a year I started trying to take pictures through a C11 SCT of the moon and planets. Particularly Saturn and Jupiter for at that time they were both high up in the night sky and very near each other. I was using an Olympus 3030, three mega-pixel camera with an IR remote. This camera had a permanent lens that popped out when it was turned on so all my imaging was done through an eyepiece (afocal imaging). I bought some adapters to couple the camera to the eyepiece at the right distance. The camera IR remote let me snap off pictures with out shaking the camera. I would take literally tens upon tens upon tens of single snapshots of images, adjusting the exposure and other settings to try to get that one shot when the air was still. I would finally go inside to look at what I had by downloading the cameras contents to my PC and found out of the almost one hundred shots only handful were worth keeping. Not very efficient but it was all that I had. I did this over and over as long as the sky was clear, snap . . . snap . . . snap . . . snap . . . . . delete . . keep . . delete . . delete . . . . .

I then tried my luck at video astronomy and found this very discouraging. I wanted to see things better than what visual observing brought and the video path just didn't cut it for me.

About four years ago the closest approach of Mars in the history of man was coming up on us. Was I going to have to just dust of the Olympus camera or maybe try something new? I had been reading on-line about people using a webcam to capture hundreds of images and then stacking them to get a final averaged image with great success. Well with Mars just around the corner I had to try one of these. Once I received it I practiced on Mars as it was getting bigger and bigger. I had heard if you could see any features on Mars visually, you were very lucky. On a night close to its opposition I got my best image. On this night I owe thanks to Rex who let me borrow his 2x Barlow at one of the Friday nights at the observatory to bump up my image scale. I now use this camera and a 2.5x Televue Powermate when seeing permits to do all my planetary imaging on the brighter planets (Venus, Mars, Saturn and Jupiter).

Later I started experimenting with modifying the webcam to allow it to do long exposures. The directions on how to do the modifications were posted on some websites I had visited. Now I had a dual-purpose webcam capable of doing planetary imaging and imaging the brighter DSOs. Since this camera wasn't cooled I was limited to how deep I could go . . . but hey it was better than nothing.

Of course after time my taste for a better imaging camera got the better of me and I wanted to see if I could do better than an

uncooled webcam for DSO imaging. So now I was considering what it would take to get a real astrophotography camera. At one of the monthly meetings I spoke with Bob Vanderbei, who had been doing deep sky astrophotography from his backyard. I asked him if you could really do deep sky imaging in NJ. The answer he gave me was "I do it all the time with my 3 1/2 inch Questar". So I got a ton of advice on equipment and how realistic it was for me to get into this part of the hobby. I acquired a camera and software to control it. Bob helped me get it up and running and so off to the observatory I went. The only thing I had to do once there was focus my camera through the C14. Slewing to the target, imaging and then slewing to the next target; it was a snap with the observatory's new Paramount ME. Okay now I have the images how do I process them? I know, I'll call Bob. So the next day I got my first lesson of processing images. He really helped me get up to speed and to understand how to work the raw images into final product. It got so that after one evening at the observatory I could come home with six or so objects in the bag . . . . this is easy I thought. So then I decided I wanted to use my own equipment to capture images. . . . . big mistake and a BIG step backwards. I was spoiled by the ease the observatory made my early imaging attempts and when I went to my equipment I got a taste of what it was really like to struggle for just one object if that. After many failures with some successes I have gained much respect for those who go into the field and can come home with an image seeing how much effort there is in acquiring it. I have gotten some things down but there are still many times I have gone out in my own back yard and come back with nothing to show except for the experience and struggles dealing with this aspect of the hobby.

So you see, without this club's members who have helped me out on my path from NOT knowing much of anything to being able to capture some pretty cool things that cannot be seen visually, I would not be where I am today. There is a wealth of information in this club so take advantage of it . . . I did.

That's my story.

For those of you who are interested my current arsenal to date and what they are used for,

- Olympus 3030 digital camera for lunar shots.
- Philips Toucam Pro webcam for lunar and planetary imaging.
- Starlight Xpress SXV-9H Monochrome Camera for DSO imaging.
- Astronomic LRGB, H-alpha and OIII filters to get color from the monochrome SXV-9H.

The object of this summer's edition of "Picture This" is going to be NGC 6205 or better known as M13. The Great Globular Cluster in Hercules. This globular is a magnitude 5.8 and is one of the summers DSO showpieces for visual observing. It was taken through an Orion ED80 refractor using a Starlight Xpress SXV-9H camera and Astronomic LRGB filters. The scope/camera was mounted on a C1700 mount and guided with an SXV guider through an Orion ST120 refractor. The exposures were 60 seconds long and for each R, G and B channel for a total of 18 exposures for each. For the Luminance channel 60 second exposures were used and a total of 45 exposures. The software used to acquire and process the image was Astroart3 and post process adjustment made in PhotoShop.

The wider shot shows two galaxies NGC6207 toward the lower left edge and about halfway between M13 and NGC 6207 is the smaller fainter edge on, IC4617. In the cropped shot of the core of M13, IC4617 is between M13 and the left edge.



*Cropped shot showing IC4617 between M13 and the left edge*



*Wide shot showing NGC6207 toward lower left edge*

*Brian Van Liew*

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## Observations A.O.S. Starfest

I was contacted by Barlow Bob Godfrey about his old club, the Amateur Observers Society of New York, was planning their first public Star Party for June 15, 16, 17, 2007.

I contacted AOS Starfest 2007 organizer, Geoff Cintron, for more details. I found that the idea of holding their Starfest was sparked by the moving of our own Jersey Starquest to October. They figured that there were no observing events in the local area in June, so why not have one.

The AOS picked a location in the Catskills Mountains at the Stone Tavern Farm. This farm is located near Roxbury, New York. After exiting off the New York Thruway at Kingston, NY we drove another 35 miles on country back roads to Stone Tavern Farm.

After registering, we set up our observing equipment in a large horse corral. It was clean of any remnants of horses. I was happy to get my C-11 out for only the second time this year. Last year at this time I'd had it out to four events.

Like Starquest, registration, bunkhouse, and meals were bought separately. I bought all three. The only draw back was that the bunkhouse was some 250 yards from the observing field. Makes it tough walking up hill to the bunkhouse after observing until the early a.m. On Friday night there was a pizza party with a lecture by Bob Bremen on the principals of dark adapting.

There was an object observing challenge for which one could earn a certificate signed by Phil Harrington. On the list were 80

objects with planets, M, NGC, PK, Asteroids and SAO objects. There was another observer who was able to observe the same amount of objects as I, 66. We both laughed at not being able to find Pluto in Ophiuchus, sorry, Ken, at least they didn't list it as an asteroid. I looked, but with so many points of light, how could I say I actually observed Pluto. The clouds rolled in around 1:30am so it was time for the hike to the bunkhouse.



*The AOS Starfest observing site.*

The breakfast and lunch meals were adequate, but the dinner meal was special. There was a choice of hamburgers and pulled pork BBQ sandwiches. The pulled pork sandwiches were made in the true southern fashion, really tasty.

Our own Rob Teeter gave a talk on his experiences of owning a telescope making business. His humorous account of one custom telescope project was of a customer who wanted a scope that was .658 scale of his 20 inch scope, about 12.5 inches. At one point in a communication to the customer, he mentioned that the primary cell box was 5/8 of an inch too long. If Rob was to live up to his slogan that he scope were precisely made he had to rebuild the box to the correct scale. This customer stated that he could see a part was out of tolerance by 3/8 of an inch at distance of 20 feet. Talk about the bionic man.

After dinner, the main speaker, Phil Harrington, had the stage. Phil's talk was on amateur astronomy from the year 1900 to present. Much talk about Russell Porter and how he changed the hobby of amateur astronomy with the introduction of Stellafane.

In the early years of the 20th century, only the rich could afford factory made telescopes. Russell Porter from Springfield, Vermont gathered some interested local residences to form a club of amateur telescope makers and starting grinding mirrors and fabricating Newtonian type telescopes. Some members that were versed in machining made refractor type telescopes. In the mid 1920's Russell Porter acquired a parcel of land that is now the site of the present day Stellafane. Walter Scott Houston who wrote many articles for Sky and Tel magazine was a frequent visitor to this event. Phil Harrington stated that any true amateur astronomer should visit Stellafane convention at least once in their lifetime. I have been there twice.

*Ron Mittlestadt*

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## Science Outreach and Exploration Update

**Stuart Country Day School:** Princeton, NJ. On Jun 1, the enthusiastic and courteous students at this local all girls school were thrilled to hear my presentation on the intrepid adventures of the Mars Rovers "*Spirit*" and "*Opportunity*". We delved into numerous astronomy topics ranging

from the origin of the solar system to the origin of life. And quite a few were ready to sign up for the first Human Mission to Mars, with a female Commander!



5<sup>th</sup> grade girls "On Mars in 3-D" at Stuart Country Day School

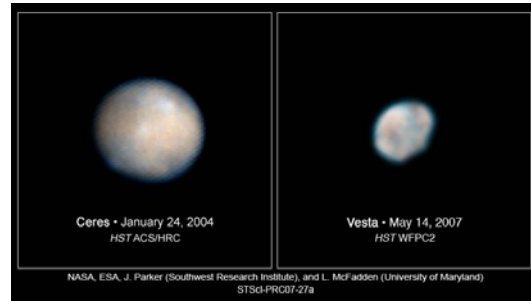
**Symmetrical ISS from Orbit:** Following the just completed mission by the crew of the Space Shuttle Atlantis in June 2007, the International Space Station (ISS) has finally taken on a look similar to its final configuration. This view shows the newly expanded station after the addition of the second giant energy producing solar array by the combined work of the crew of STS-117 and the Expedition 15 ISS crew. Each of the arrays are about 240 feet in length.



*Backdropped by the blackness of space and Earth's horizon, the International Space Station moves away from the Space Shuttle Atlantis. This view is from orbiter Atlantis, which undocked from the ISS on June 19, 2007. The two sets of symmetrical solar wings are attached to the truss (horizontal). The living modules are at center, perpendicular to the truss, and the robotic arm is seen left of center. (Credit: STS-117 Shuttle Crew, NASA <http://spaceflight.nasa.gov/gallery/images/shuttle/sts-117/lores/s117e08011.jpg>)*

Later this year, two new pressurized modules built in Europe will be delivered by space shuttles to expand the ISS living and science capabilities. I will discuss these and much more space science at a lecture in Princeton on Sunday Dec 2 titled "Italian Contributions to Space Exploration" at the Dorothea House of the Italian Cultural Society.

**Hubble view of CERES and VESTA:** NASA's DAWN mission will send the first spacecraft to orbit and provide close-up views and science of the two most massive bodies in the main asteroid belt between Mars and Jupiter. As we go to press, the launch has just been delayed from July to September due to poor weather and conflicts with launching the Phoenix Mars lander. For more details on DAWN, please read my report in last month's Sidereal (June 2007) and also the richly detailed and illustrated cover story for the July 2, 2007 issue of Aviation Week and Space Technology magazine. DAWN will be the first spacecraft to orbit two bodies, which is only made possible via Ion Propulsion technology. DAWN and Ion Propulsion were the topics of two lectures which I arranged (as AAAP Program Chair) by Dr. Marc Rayman from NASA's Jet Propulsion Lab (March 2006) and Princeton U Prof Edgar Choueiri (March 2007). See my upcoming article describing the club's tour of Prof Choueiri's Propulsion Lab on June 21.



*These recent Hubble Space Telescope views of Ceres and Vesta were taken to help scientists plan the DAWN mission and show large variations in surface features and composition. This is a mission devoted to comparative planetology. Three science instruments will study the surface and interior of these last unexplored worlds of our solar system. Ceres and Vesta are about 590 and 330 miles in diameter respectively. Ceres, newly classified by the IAU as a "dwarf" planet, resembles the icy moons of the outer solar system and may harbor an internal ocean of liquid water. Vesta is similar to the terrestrial planets of the inner solar system and may exhibit volcanism. Ceres was the first asteroid discovered in 1801. Link: [http://hubblesite.org/newscenter/archive/releases/2007/27/image/a/format/web\\_print/](http://hubblesite.org/newscenter/archive/releases/2007/27/image/a/format/web_print/)*

**Phoenix Mars Lander:** NASA's next planetary mission to Mars is set to launch on August 3.

**Mars in 3-D for the Explorers Club:** NY, NY. On April 23, I presented a comprehensive review of the Mars Rover mission at the Manhattan HQ of this International Society devoted to the advancement of Science and Exploration. This summer I published a Mars cover article for the Journal of the Explorers Club which includes comments from the mission's Principal Investigator, Cornell University Professor Steve Squyres, Pancam camera lead Scientist Prof Jim Bell from Cornell (AAAP speaker in Dec 2006), Honeybee Robotics Chairman Steve Gorevan (AAAP speaker in Sep 2005) and the top Mars Rover Landing Engineer from JPL, Rob Manning. At the October 19, 2007 monthly meeting of the AAI Club in Cranford, NJ, I will be presenting a lecture on the Solar System in 3-D. The "Opportunity" rover is currently perched at the rim of Victoria Crater and has been granted approval by the NASA Administrator to enter the ½ mile wide crater after the huge new Martian dust storm dissipates.



*Summer 2007: "Mars in 3-D" by Ken Kremer. The Explorers Club Journal cover (left) shows "Opportunity" glancing back to its landing site inside "Eagle" crater. Note the crater rim (back and right) and solar panels in foreground. Credit: NASA/JPL/Cornell/Explorers Club. Image at right shows a portion of the vast and deep Valles Marineres canyon system. Credit: ESA/DLR/FU Berlin/G. Neukum. <http://www.explorers.org/index.php>*

For science outreach presentations please contact

Ken Kremer

# JERSEY STARQUEST

**Hope Conference & Renewal Center:** <http://www.camphope.org/> 908-459-4435

## **Directions to Hope Conference & Renewal Center**

Hope Center is about 3 hours from Phila, 2 hours from NYC & Reading, and hour or less from Lehigh Valley. 1.5 Hours from New Brunswick

### **From the South & Southeast (Trenton NJ)**

Take State Road 31 North from I-95 on the north side of Trenton. Follow to its end at US 46 its Butzville, NJ. Turn left (west) on US 46 and at the end of the next light go right (north) onto State Route 519 to the flashing light in Hope. FOLLOW "From Downtown Hope" below

### **From the Southwest (Phillipsburg, NJ)**

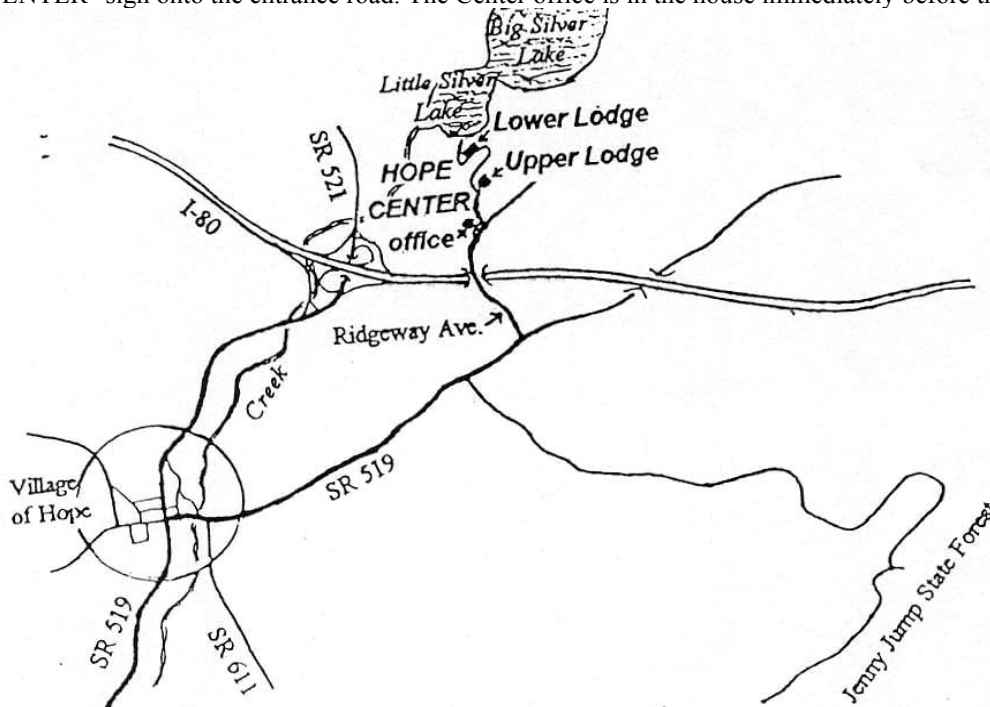
Take State Route 519 North, off of US 57 on the east side of Phillipsburg. Follow 519 North, across US 46 (near Belvidere & Butzville, NJ) to "downtown" Hope NJ marked by a flashing red light. Turn right at this light, continuing on 519 North. FOLLOW "From Downtown Hope" below

### **From the North, Northwest & East (I-80)**

Take I-80 to Exit 12 in NJ. Exit onto State Road 521 south to Hope. In about two minutes arrive in downtown Hope, marked by a flashing red light. Turn left at this light onto St Route 519 north. FOLLOW "From Downtown Hope" below

### **From Downtown Hope**

Take State Route 519 North for 1.3 miles from the flashing red light (if you go under I-80, you've gone too far). Turn left onto Ridgeway Ave (you can only turn left) and go .5 mile, passing over I-80. Turn left at the "HOPE CENTER" sign onto the entrance road. The Center office is in the house immediately before the entrance road



PLEASE NOTE: NO WHITE LIGHTS AFTER DUSK. IF YOU ARRIVE AFTER DUSK, PLEASE MAKE PROVISIONS TO EXTINGUISH YOUR HEADLIGHTS.

PLEASE NOTE: NO GREEN LASER POINTERS

**THE AMATEUR ASTRONOMERS ASSOCIATION OF PRINCETON**

**PRESENTS THE 18<sup>TH</sup> ANNUAL**

## **JERSEY STARQUEST**

**GREATLY REDUCED PRICES FOR FAMILIES**

**(See below for details)**

Held at the Hope Conference and Renewal Center, Hope, NJ  
Beginning at 5 PM Friday, **Oct. 12<sup>th</sup>**, 2007 and running through 12 PM Sunday, **Oct. 14<sup>th</sup>**  
Please note: This event will take place regardless of the weather conditions!

### **Featuring**

Stargazing at an amazing, dark sky location  
DOZENS OF ASTRONOMICAL TELESCOPES IN OPERATION  
AAAP sponsored "Deep Sky Observing" contest  
Free space available for astronomical swap meet  
Indoor cabin accommodations (First come, first served)  
Ample space for camping & RV's, hot showers for all  
Three catered meals  
Raffle & Door prizes

### **Scheduled Lecture Program**

Exciting Afternoon Speaker!

### **Other Planned Activities Include**

Solar Observing  
Astrophotography Presentations and CCD Demo's  
Field Trip to AAAP Observatory at Jenny Jump  
Workshop: Learning to Use Your New Telescope  
**Plus**  
Fishing, Volleyball, Basketball, Hiking, Game room  
Kayaking/canoeing (bring your own) on two lakes and nearby Pequest and Paulins Kill Rivers

### **Registration Fees**

Camping and RV -- \$35.00 per adult (\$45 after Sept. 28), children (6-12) \$25  
Bunkhouse -- \$45.00 per adult (\$55 after Sept. 28), children (6-12) \$35  
Children under 6 years of age -- Free

### **Meals**

**Great Food Catered by AAAP, for Saturday ONLY**

**Volunteers needed to help with meals**

Saturday breakfast, lunch, and dinner: Adult -- 30.00 per person  
Child (ages 6 -- 12) -- \$20.00 per person ; Children under 6 years of age -- Free

Please send registration form and your check or money order (payable to AAAP) to:

Jersey Starquest Registration

Need more information? Send email to Anthony Monticello at



# JERSEY STARQUEST REGISTRATION FORM

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

EMAIL (for information about future events) \_\_\_\_\_

TELEPHONE \_\_\_\_\_

CLUB \_\_\_\_\_

TOTAL NUMBER OF ADULTS IN YOUR PARTY? \_\_\_\_\_

TOTAL NUMBER OF CHILDREN (Ages 6 – 12)? \_\_\_\_\_

TOTAL NUMBER OF CHILDREN UNDER 6 YEARS OLD? \_\_\_\_\_

## ACCOMMODATION PREFERENCE(S):

**Note: indoor accommodations are single sex (males in one set of cabins, female in another set of cabins).** There are a few accommodations for families that do not want to be split up. This is on a first come first served basis.

INDOOR \_\_\_\_\_ TENT \_\_\_\_\_ RV \_\_\_\_\_

Would you like to enter into a "Deep Sky Observing" contest? \_\_\_\_\_

Will you need space to set up an astronomical swap table? \_\_\_\_\_

## FEES:

(No charge for children under 6 years of age)

Registration (per adult)	\$35.00 _____	(camping or RV)
	\$45.00 _____	(bunkhouse)
	\$10.00 _____	(late fee <b>after Sept. 28</b> )
Children (6-12) subtract	\$10.00 _____	
Meals ( <b>Saturday; breakfast, lunch, and dinner</b> )		
Meals (Adult)	\$30.00 _____	
Meals (Child, ages 6 – 12)	\$20.00 _____	

TOTAL ENCLOSED \_\_\_\_\_

Please send completed registration form and your check or money order (payable to AAAP) to:  
Jersey Starquest Registration

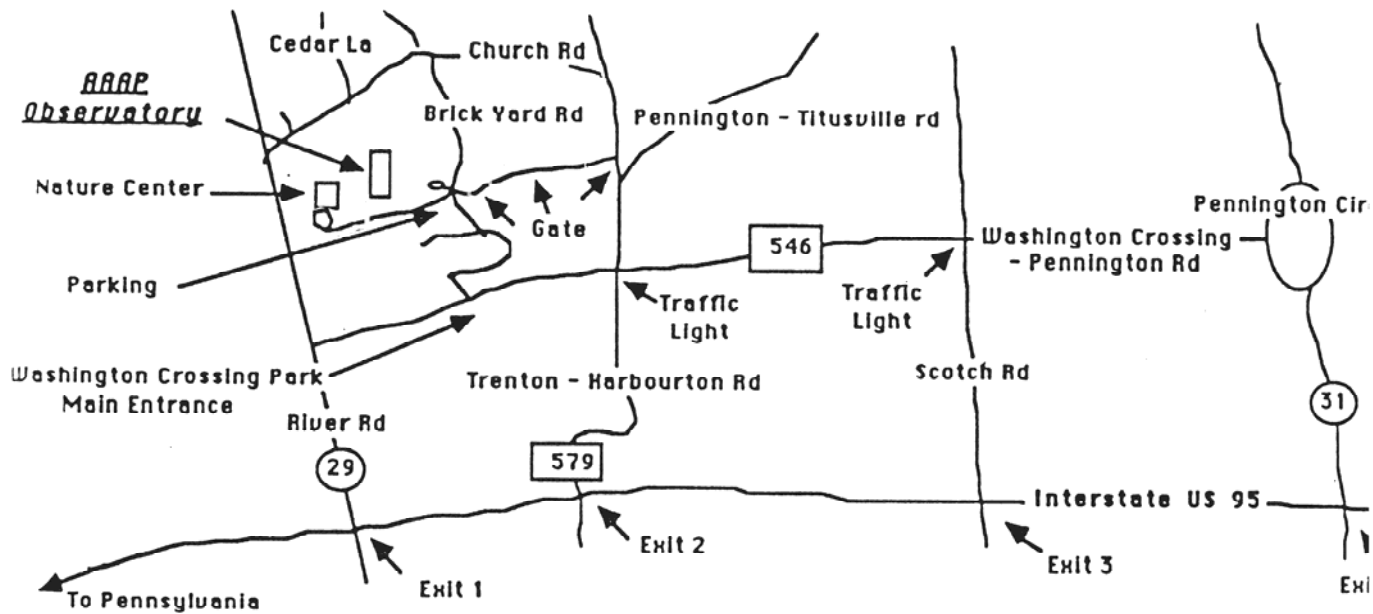
Need more information? Send email to Anthony Monticello

**IMPORTANT – We may not be able to accommodate meal requests for registrations received after Sept. 28.**

**Please Note** – Pets are not permitted at the site.

This event will be held regardless of the weather conditions.

**Sorry — No Refund for Cancellations received after Sept. 28.**



The best way to get to the observatory is to take Interstate 95 South towards Pennsylvania. Then take Scotch road at Exit 3 and proceed north (this amounts to right). Then, at the third traffic light take a left onto the Washington Crossing-Pennington road (County Route 546). Take this road to the first traffic light and take a right onto Trenton-Harbourton road (County Route 579). Take this road to the first driveway on the left, this is the Phillips Farm/Soccer Field entrance to the park. There is a series of three gates with club combination locks. If the gates are not open, you will need the lock combination to open the gate or be accompanied by a Keyholder member. The Simpson (AAAP) Observatory's phone number is (609) 737-2575.

See us on the Web: [www.princetonastrometry.org](http://www.princetonastrometry.org)

Amateur Astronomers  
 Association of Princeton  
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Midsummer 2007