

# SIDEREAL TIMES

The Official Publication of the  
Amateur Astronomers Association of Princeton

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Program Chairman:  
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Volume 31

February 2002

Number 2

## From the Director

As I grind through a busier than normal month I find I have less time than I had hoped for to launch us into the spring with this report. First, I'd like to let everyone know that members of AAAP have been showing increased interest in special members oriented events. At this time we are discussing a number of items to address this. First I plan to spend a few minutes now at the beginning of each monthly meeting announcing *Hot Topics* which will give us a chance to talk briefly about items of interest to everyone. Please feel free to submit to me via email or via phone any ideas you would like me to bring up.

Second, we hope to initiate some special events and field trips. Again, please feel free to submit ideas. At the moment we are considering a Messier Marathon to be held at Jenny Jump in March, a special observing night at an interesting dark site not far from Washington Crossing and a club sponsored field trip to a location such as the Hayden Planetarium in New York, The Naval Observatory (if it re-opens to the public), the new exhibit at the Smithsonian's National Air & Space Museum called "Explore the Universe" which is featured in the March issue of Sky and Telescope or the Radio Telescope at Lucent. Please come to the next meeting with new ideas and/or thoughts on these. A few folks have even spoke up about the idea of visiting a spot somewhere in Arizona!

As a last request related to Administrivia, we are in need of a few new volunteers to help keep things running smoothly in our club. I think all of these needs are relatively small commitments but important enough to match with a single individual who will accept the responsibility. At the present time I would like new members to come forward to help in the following areas:

- Public Events Coordinator - this person will be the contact point for member or public inquiries related to bringing groups to Washington Crossing for observing or requests for members to help out at a public event requiring astronomer expertise and/or additional telescopes
- StarQuest sign maker. We decided at the recent board meeting that we need a couple of bigger/better signs made to post at the main turn-off that takes one up to the StarQuest observ-

*(Director, continued on page 2)*

Simpson Observatory (609) 737-2575

## From The Program Chairman

If you have ever spent any amount of time observing M31, you might have asked yourself this question. How did this galaxy or any other of the unknown number of galaxies in the universe form and evolve? If you have ever wondered about this, then the guest speaker for this month's meeting will tell us how astronomers are trying to answer this question. This month, Dr. Charles "Chuck" Joseph, an Assistant Research Professor in Rutgers University's Department of Physics and Astronomy, will be speaking to us on Project VIRGO: The Velocity Imager for Resolving Galaxy Origins.

The Velocity Imager for Resolving Galaxy Origins is a telescope that will be built, flown, and operated from Rutgers University. Dr. Joseph, the Principal Investigator for Project VIRGO, and his team are proposing to NASA to build a 2.35 -3 meter aperture telescope that will be larger than the Hubble Space Telescope (HST). It will have twice the spatial resolution as Hubble in its spectrographic mode. New technologies developed by NASA's Next Generation Space Telescope and other NASA programs will enable the VIRGO telescope to be much lighter than Hubble and it is projected that it will be built at 1/20 the cost of the HST. VIRGO will create images that are 3-dimensional data cubes. These images will be a function of velocity with an efficiency greater than 100 times that of the Hubble. In addition, the wavelength coverage of the VIRGO telescope will be 180-700 nm (Visible to Near-ultraviolet).

The scientific objectives of Project VIRGO will be to survey the distribution and motions of gas clouds both within and around galaxies and in clusters of galaxies at the time of their formation. It will measure how both dark and baryonic mass content of disk galaxies grew over time. The VIRGO telescope will also measure the fossil imprint of stellar velocities in elliptical galaxies to determine the formation processes of super-massive black holes. Another scientific objective of VIRGO will be to constrain more tightly the demographics of the central, super-massive black holes in near-by galaxies. VIRGO will also explore the causes for the abrupt end of the quasar epoch. Finally, it will infer the rate that binaries of super-massive black holes collapse. This will be one of the primary

*(Program, continued on page 2)*

(Director, continued from page 1)

ing site. These can be made anyway you like, they just need to be strikingly visible from the highway.

- T-shirt Designers. Although we have one willing designer in our group we would love to review suggested T-shirt designs that would be made into shirts and sold at StarQuest. If you're interested, just let me know!

To throw out one little bit of non-business material I would like to mention a book that members might want to look into. It is actually a reprint of a book originally issued in 1965. It is called "*Starlight Nights, The Adventures of a Star Gazer*" and is written by Leslie C. Peltier with a forward by David H. Levy. Peltier relates that he taught himself to know the sky by devouring Martin Evans Martin's classic book, *The Friendly Stars*.

One challenge he throws out at us is whether one learns best how to love the stars by following this path of personal discovery or whether it can come "through the eyes of another." Peltier doesn't seem to think that organized star parties are as successful making one's interest in the sky really stick. On the other hand, I know that I have found many a thrill at the eyepiece of someone else's pride and joy and that I have, in turn, felt tremendous satisfaction each time someone screams in pleasure at their first sight of the moon's craters or Saturn's rings. Surely there is value in both, but what do you think?

### Hot Topics for the February Monthly Meeting

This will be come a regular feature of our monthly meetings in the months to come. Please submit your suggestions before each meeting to Kirk Alexander by email or phone (see above or Side-real logo section.)

- Field Trips
- Messier Marathon
- Possible May Observing Event
- Volunteers Needed

Happy star trails, Kirk

(Program, continued from page 1)

gravity-wave signatures that should be seen by NASA's LISA Mission.

VIRGO will serve as an important stepping-stone for major future NASA missions such as the Next Generation Space Telescope (NGST) and the Space Ultraviolet and Visible Observatory (SUVO). In addition, new ultra-light-weight mirror technologies for very large mirrors will be tested in flight. The VIRGO telescope will incorporate a new image sensor that increases the observing efficiency by a substantial factor.

As you can see, Dr. Joseph and his VIRGO team will be hard at work for some time as they develop and deploy this new generation of space telescope. With it, Dr. Joseph will try to answer some of the most compelling questions that we as students of astronomy have. I invite you to come to this month's meeting and find out how he and his team will try to find the answers to some of the most puzzling questions about the origins of the galaxy that we live in and in the ones that we observe. I hope to see you there.

If you would like to enhance your experience on Tuesday evening, come join Dr. Joseph and myself for dinner. This is an excellent opportunity to get to know the speaker and your fellow club mem-

bers. We always have a great time and the food is very good too. Just ask anyone. As usual, we will be meeting at The Annex Restaurant, 128 1/2 Nassau St., at 6:00 PM. If you would like to join us for dinner, please email me at \_\_\_\_\_ or call me at \_\_\_\_\_ at home at \_\_\_\_\_

Please let me know by Monday evening, February 11 if you can make the dinner. If you want to come and you haven't called me, no problem. We will just add another chair to the table. I look forward to seeing you there. You can find out more about Dr. Joseph and Project VIRGO by going to the AAAP website and clicking on the speaker links that are posted.

**Upcoming Events** The speaker for the March 12 meeting will be Dr. Orsola DeMarco of the Hayden Planetarium, American Museum of Natural History. The topic of her talk will be "Reborn Stars-Stellar Evolution In Earth Time".

In April, the guest speaker will be Dr. J. Anthony Tyson of Bell Laboratories, Lucent Technologies. The topic of his talk will be "The Dark Matter Telescope".

More details to come

Mark Lopez

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## Observations

On Saturday Jan 12th and 13th the New Jersey State Museum held it's annual Super Science Weekend. I have attended this event for the past twenty-two years. I still have the pin that was given out on that first year. This year only Mark Lopez and I were present to man the AAAP table. Mark and I switch off handing out literature or showing sunspots through my Comet Catcher.

This year the museum held a treasure hunt where the kids were given a quiz sheet where there were questions about each exhibiter. The AAAP question was what were we showing through the scope? I estimate that more than five hundred attendees viewed through the scope.

The best statement heard was from a mother who said that after a religious retreat she saw the Sun spinning and dancing in the sky, sometimes even turning blue. She said there is a web site on this occurrence, I haven't look for it.

With just Mark and I, it was difficult to view the other exhibits. Thanks to Bill Murray, Pete Oppenheim and Ralph for stopping by.

Mark and I were not able to attend the event on the next day, Sunday but John Miller and Brian Vanlieu pitched in and provided a AAAP presence. Sunday usually proves to be the busier day.

Ron Mittelstaedt

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## From the Treasurer

Welcome to four new members, Skip Olinger, Marek Grodzicki, Rick Kane and Ed Hume. The treasury balance stands at \$8,447.86. Membership expiration dates will now appear on your Sidereal Times mailing label, so be sure to check each month to keep your membership current! Basic AAAP membership is \$30 per year. \$60 includes a one-year membership and a one-year subscription to either Sky and Telescope or Astronomy Magazine. Both magazines with membership is \$90. Renewing members should include their magazine renewal form with their payment. Checks should be made payable to Amateur Astronomers Association of Princeton and mailed to P.O. Box 2017, Princeton, NJ 08543.

Pete Oppenheim

Minutes of the  
Regular Meeting of the AAAP  
Jan. 8, 2002

Director Kirk Alexander called the meeting to order at 8:23 PM.

Program Chairman Mark Lopez introduced the evening's speaker, Dr. Philip R. Goode of NJIT. The topic of Dr. Goode's talk was "The Sun (and Moon) from Big Bear Solar Observatory". The talk was well received.

In the business meeting Kirk stated that the board meeting (Jan. 24<sup>th</sup>, 7 PM) would be held in his old office. Future meetings will be held near his new office. Ideas for spring trips ( Naval Observatory, etc.) are requested. Suggestions can be e-mailed to the board or brought to the board meeting on the 24<sup>th</sup>. There is still an ongoing debate about whether the Sidereal Times PDF should be posted in a public or private (password protected) area of the club website. Discussion on this topic will be held at the board meeting. Kirk has received requests that the club meeting schedule be moved from the "Activities" section of the website to a more conspicuous and easily found location. John Miller will look into doing this.

Treasurer Pete Oppenheim reported that the treasury balance is \$8393.56. We currently have 150 members. Current copy costs to produce one issue of the Sidereal Times are \$63.

Assistant Director Ralph Marantino reported that the cost for the brass tailpiece for the 6" refractor would be ~\$600. John Church will contact the machinist to see when it will be ready and get an exact figure.

Program Chairman Mark Lopez reported that the schedule for speakers and topics for AAAP meetings for the next few months is as follows:

February	Charles L. Joseph, Rutgers University, "The VIRGO Project"
March	Orsola DeMarco, American Museum of Natural History, "Reborn Stars - Stellar Evolution in Earth Time"
April	J. Anthony Tyson, Bell Labs, Lucent, "The Dark Matter Telescope"
May	Mark Jaworski & Bob Vanderbei, AAAP, "Contemporary Astrophotography"

Secretary Bill Murray stated that he will be unable to attend the February meeting and asked for a volunteer to take the minutes at that meeting. Mark Lopez volunteered to do it.

Observatory Chairman Rex Parker was not present. Gene Ramsey reported that Rex has received approval from the park for filling and leveling the ground around the observatory. The contractor has stated that since the ground is frozen the work will not be done before spring.

Sidereal Times Editor Vic Belanger reported that the deadline for submissions for the Feb. issue of the Times is Friday Jan. 25<sup>th</sup>.

John Church asked if anyone had checked to see if the observatory alarm was working. Ron Mittelstaedt reported that the alarm was working fine.

Greg Mauro stated that the first Starquest mailings would go out in March. The magazines have already been contacted and provided with information for the event. Starquest will be discussed at the

board meeting on the 24<sup>th</sup>.

Ron Mittelstaedt asked for volunteers to man the AAAP booth at the NJ State Museum for Super Science Weekend (Jan. 12<sup>th</sup> & 13<sup>th</sup>). Volunteers are especially needed for Sunday the 13<sup>th</sup>.

Librarian Pete Oppenheim asked for suggestions for new additions to the AAAP library.

Vic Belanger asked about the status of the new Paramount drive for the 14" scope. Ron Mittelstaedt stated that SBIG was unwilling to send out any new mounts until all of the first line of production had been completed.

The meeting was adjourned at 10:24 PM.

Bill Murray, Secretary

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Minutes of the  
AAAP Board Meeting  
Jan. 24, 2002

The meeting was called to order at 7:07 PM. All board members were present.

Don Monticello reported that the information on the 2002 Starquest had been forwarded to the astronomy magazines. Discussion was held on updating the Starquest information flyer. This flyer will be mailed to all previous Starquest attendees and astronomy clubs in the northeast starting in March. Larry Smith stated that he would contact the caterer to confirm that the meal prices will be the same as last year. A suggestion was made that we contact Mike Peoples to give a talk at Starquest about his recent co-discovery of three supernovas. Bill Murray and Vic Belanger volunteered to talk to Mike at the Winter Star Party to see if he could give us a good deal on eyepieces as Starquest door prizes. The Board authorized a \$125 expenditure for the purchase of eyepieces as Starquest door prizes. Ralph Marantino will ask his daughter Amy if she is interested in designing a T-shirt for Starquest. If there is a new T-shirt the number purchased will be limited to 50 to avoid having a backlog.

Ralph made the suggestion that we form a new committee called the public works committee to handle all requests for public observing from various groups that do not fall on the usual public observing nights (first & last Fridays of the month). Announcement of this new committee will be published in the Sidereal Times. Kirk Alexander will also make an announcement at the next club meeting and get input from Gene Ramsey, who has coordinated these activities in the past.

It was proposed that we adopt a new format for the monthly club meeting. Since many people leave after the speaker has finished his talk it was proposed that the first 10 minutes of the meeting (before the speaker begins) be devoted to handling action items that require input from members. This new format will be tested beginning with the February meeting.

Ralph suggested that we contact Garden State tours about the proposed AAAP field trip to the Naval Observatory in Washington. However, Mark Lopez reported that public tours at the Naval Observatory have been discontinued due to security concerns. Alternate trips to Allegheny Observatory in Pittsburgh and the new Hayden Planetarium in NY were discussed.

Rex Parker opened a discussion about keyholder teams for the  
*(Board Meeting, continued on page 5)*

*[This is a brief update from Snowbird Wes Walton of Saint Petersburg, Florida on what's happening down his way. Wes was an active member of AAAP during the '80s and even served as Treasurer before Larry Smith assumed the post. He continues to maintain his membership to this day even though he lives over 1000 miles away. --ed.]*

Walton's Farout Collection of Galaxies and Nebula  
TOWARD THE EDGE OF DEEP SPACE  
Wesley Wills Walton, Ed. D.  
Saint Petersburg, Florida

This is about the vastness of deep space. Does the universe have an edge? Or are those pioneers right on target who say the dimensions of the universe are infinite? Will the expanding universe be expanding forever? Why is it that the farther out and the farther back we "look" with the CCDs, etc., the more galaxies show up. As the visions of the HUBBLE spur the understanding of present-day astronomers and other scientists, and the awe and appreciation of the rest of us, more and more challenges there are to push us on towards understanding what, as Alexander Graham Bell queried, "...Hath God Wrought?"

Meanwhile, mankind can distill a keener appreciation of the greatness of creation, much as humankind has learned to enjoy other masterpieces on seeing the ceiling of the Sistine Chapel, hearing Beethoven's Ninth, or assimilating Shakespearean plays. One might hope the Farout Collection will at least in small measure enable the man in the street the better to appreciate what HUBBLE shows us of God's Creation. To succeed the Farout Collection would simply show interested observers successful manifestations of God's omnipotence, omnipresence, and omniscience, the ultimate powers over all of creation. With the coming of 2002, blessings upon us all. Let us stand in awe of the magnificence of what has been wrought.

It was 1982 that I retired from Educational Testing Service after nearly thirty years in program development. It was about then that I joined AAAP, traded in my professional library for books on astronomy, and grew through four Celestrons. When I was treasurer we had 98 members. It should come as no surprise to the old timers then to see a new Walton development coming along.

This one --- still in the advancement of education --- with focus on teaching and learning. Educational Psychology teaches us of classes of learning outcomes. At the basic level come skills, abilities, and understandings in the "cognitive domain," Relatively easy to master. Often, repetitive drill and practice until learned. Beyond that, in the affective domain, come attitudes and appreciations - more subtle and harder to surmount. Values oriented; deep-down feelings you could say. Challenges, even philosophical in nature. Least well understood. Most in need of cost effective research and development. This is the field I intend to plow, and in such a way as to involve at least some of you.

Now perhaps we can look at what the Farout Collection is, and might become. When First Presbyterian Church was a presence on Nassau Street, and I was a Deacon there, one is taken back to potluck dinners at which conversation turned to the key questions Who am I? Why am I here? Where are we heading? When will I find comfort upon reading the first chapter of Genesis? When will the Church bring its story of creation into synchronization with contemporary knowledge from studies in the sciences about how

the world got to where she is. After all, Galileo lived more than a few hundred years ago, and now we have THE HUBBLE inundating us with mind-stretching images to the "end" of space and the "beginning" of time. Now that it's 2002, the time might be right to right the wrong. Enter: The Farout Collection.

The start-up of the Farout Collection has been most gratifying indeed. One has needed merely to look (with great excitement needless to say) at some of the output of HUBBLE. Look through the fantasmagorical pages of the Second Edition of Hubble Vision by Carolyn Collins Petersen and John C. Brandt. Or for a further gee whiz appreciation of the Splendors of the Universe; see that title by Terence Dickinson and Jack Newton. The "State of the Art" has reached a new level of excellence and sheer beauty!

Jumbo Enlargements, dry-mounted on foam board stand in my study stacked on studio storage and display racks, most pieces laminated, and of various dimensions, lots of them very large. The pieces that came into being via HUBBLE in my book are absolutely gorgeous, and what is more in some cases are even "mind-blowing". WOW!!!!!! The foyer of our double shed form modern home (called by one of my ultraconservative neighbors as Walton's monstrosity) is an ideal venue for putting up some of the pieces to look at, and handy to organize as compatible pieces of art into presentations of one kind or another, since the house is very museum-like in appearance with the roof ridge at 35 feet, way up in the air, and an abundance of wall space.

There is the possibility of course that our cathedral ceiling house could double as a family residence and an operating museum with a limited exhibiting schedule. It seems likely that the Farout Collection accession list will round out at about one hundred pieces for hanging in primary locations, with an additional hundred or so of smaller size for secondary locations (More than a house full). For the most part, the Collection will be expected to be shown off site, on College and school campuses, hospital corridors and medical centers, and churches and houses of worship. Early on, exhibition venues would include such sites as Eckerd College, Morton Plant Mease Medical System, Admiral Faragut Academy, Chapel By The Sea, and Saint Petersburg College. Later on attention could be turned to more diverse climes such as Saint Petersburg's International Museum, New College, University of South Florida, New Jersey's State Museum, and Princeton, Rutgers, and Duke Universities Etc., Etc.

The expectation is to see the Farout Collection as an organic part of my family foundation soon to be chartered under IRS 501 c(3). The Farout Collection will be the sole operating program under the foundation's auspices. My hope is that it would be seen by thousands, and globally. This is my request, to let me hear from any of the AAAP membership who might have an interest in collaborating on rounding out the Collection. PEACE, Wes

Deadline for the March Issue

of the Siedereal Time

March 1, 2002

## Notes on Hubble Deep Field (HDF)

In 1995 and 1998 the Hubble Space Telescope carried out two experiments designed to probe the early universe. These experiments, designated HDF-N and HDF-S respectively, revealed thousands of galaxies never before seen and have served as the basis for a number of studies that give new insight into the evolution of galaxies.

The latest such study, which made the news last month<sup>1</sup>, puts forward a radically new timetable for star formation in the early universe. For HDF-N, the Hubble's Wide Field and Planetary Camera 2 (WFPC2) was targeted for ten consecutive days in December 1995 on a small region near the handle of the Big Dipper. WFPC2 was installed during the 1993 servicing mission and compensates for the spherical aberration of the primary mirror. In the wide-field mode the camera's field is a square 2.6 arc minutes on a side, with a resolution of about 0.1 arc seconds. The total exposure time during 150 consecutive orbits was 100 hours. The target area was chosen to be well away from bright local stars of our own Milky Way Galaxy, and also away from bright galaxies, nearby star clusters and bright radio sources. With these precautions it was possible to record objects as faint as nearly 30th magnitude with unprecedented resolution. The result is in effect a "core sample" of the visible universe extending deep into space and also far back in time.

In this small area of sky (only a thirty-millionth of the celestial sphere) the WFPC2 recorded some 3000 galaxies of all shapes and sizes, some perhaps in their formative stages<sup>2</sup>. Assuming this area is typical, the HST would access about  $3000 \times 30$  million = 90 billion galaxies if it scanned the entire sky! The total number of galaxies is probably much greater than this since there are undoubtedly many more down in the noise, beyond the reach of HST. Some estimates<sup>3</sup> say that the universe may contain more than one trillion ( $10^{12}$ ) galaxies.

How far was the Hubble seeing? In early 1996 a follow-up red shift study of HDF-N was made using the low-resolution imaging spectrograph on the 10-meter Keck I telescope<sup>4</sup>. It was found that 24 of the 3000 HDF galaxies had red shifts in the range  $Z = 2.2$  to 3.4. The red shift of an object simply tells how much the light wavelength has been stretched due to the expansion of space while the light is traveling to us. The expansion scale factor is  $Z + 1$ . Thus we see a galaxy with  $Z = 2.2$  as it was when the universe was  $1/3.2$  or about 30% of its present size, and if  $Z = 3.4$ , we see it as it was when the universe was less than one quarter its present size! For two reasons it is difficult to relate these large  $Z$  values to distances or look-back times.

First, the Hubble constant ( $H$ ), which gives the expansion rate, is not accurately known<sup>5</sup>. ( $H$  is probably somewhere between 50 and 80 km/sec/Mpc, the range of values being due to the uncertainties in cosmic-scale distance measurement). Second, the curvature of space (i.e. the extent to which the universe is either open or closed) also is not accurately known. However, for the purpose of an example we can assume a "marginally open" universe, one that is nearly flat but which will continue to expand forever, and also assume that  $H = 65$ . Given this situation, a galaxy with  $Z = 3.4$  would lie at a distance of 4800 Mpc (15.6 billion light-yrs) and our look-back time would be about 90% of the present age of the universe.

For HDF-S, the Hubble and WFPC2 was targeted on a small

area in the constellation Tucana (near the south celestial pole) for another 100-hour exposure. The resulting image is very similar to HDF-N, revealing thousands of galaxies in a fantastic array of shapes and sizes<sup>6</sup>. The good news is that the HST is to receive an improved camera during the next servicing mission (launch date: Feb.28). The "Advanced Camera for Surveys" (ACS) will have five times the resolution and twice the field of view, as compared to the WFPC2. I can't wait to see the results!

If you have not done so, I recommend a look at the 12 ft x 2 ft backlighted mosaic located on campus in the lower level of Fine Hall. This mosaic, showing an area about that of the full moon, is put together from 28 observations taken by the WFPC2 in 1994. A few nearby (i.e. Milky-Way) stars are seen, but otherwise the mosaic is a menagerie of distant galaxies. It is these observations that inspired the HDF project.

1. N.Y.Times, Jan. 9, 2002, Article by John Noble Wilford, p.A20.
2. See Sky & Telescope, Jan 2000, p.43 for a nice true-color picture of HDF-N.
3. Astronomy! by James T. Kaler, p.503.
4. Lowenthal et al, American Astronomical Soc. meeting, Jan.16, 1997, paper #103.5.
5. Sky & Telescope, April 2000, p.33.
6. Both HDF-N and HDF-S, together with much detailed information, are beautifully reproduced on a color poster obtainable from The Astronomical Society of the Pacific. Also, many pictures and a wealth of information can be found on the Internet: Search "Hubble Deep Field".

Jim McFee

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### *(Board Meeting, continued from page 3)*

coming year. It was decided to move from the current system of seven teams to a system of six teams. The new team list and schedule will be published in the Sidereal Times. Rex also proposed that the club hold an observing session for interested members near the summit of Baldpate Mountain. in order to check out the site. This will probably take place in April or May. Rex is also interested in interfacing with the Hopewell Township recreation official to promote interest and appreciation of the Washington Crossing Observatory. This may involve having a special observing session out at the observatory. Details and dates for both these activities will be discussed at future meetings and published in ST.

Larry Smith suggested that the club hold a field trip up to Jenny Jump. Ron Mittelstaedt has suggested that the club hold a Messier Marathon up at JJ this year. The date of Saturday, March 16<sup>th</sup> was chosen. Larry said he will inform UACNJ of the date. It was also decided to hold another "Members Only" star party at Washington Crossing. The date for this event is Friday, April 12<sup>th</sup>.

Pete Oppenheim reported that he has renewed the club's incorporation. He has begun the practice of sending out post card notices to people who have let their membership lapse (3-4 months after the end of their membership). Pete will make it easier for members to know when their membership is expiring by printing their expiration date on the Sidereal Times mailing labels. The current Treasury balance is \$8447.86. There are ~150 members.

The meeting was adjourned at 9:10 PM.

Bill Murray, Secretary

[The following announcement is being published as a service to our friends at the Rockland Astronomy Club. -- ed.]

## ANNOUNCING NEAF-2002

Listed below is preliminary information concerning the 2002 Northeast Astronomy Forum & Telescope Show. Please share this information with your club members.

Dates: Saturday, May 18 8:30AM to 6:00PM  
Sunday, May 19 8:30AM to 4:30PM

Location: Rockland Community College (RCC), 145 College Road, Suffern, NY

Sponsors: Rockland Astronomy Club and Sky & Telescope Magazine

Admission fees: \$15.00 daily at the door or by pre-registration \$25.00 for a 2-day ticket (pre-registration only) Ages 17 and under are free, but require a ticket. Mail requests for tickets with your check payable to "RAC" to NEAF Tickets, C/O Don Urban, 73 Haring Street, Closter, NJ 07624-1709 Please indicate your ticket choice - 2-day ticket, 1-day Saturday or 1-day Sunday. Please include a self-addressed stamped envelope with your ticket order. (Tickets will be mailed on May 8)

### Special activities:

More than 50 vendors and 100 booths -largest indoor display of telescopes and equipment under one roof in the USA.

Informal observing session Saturday evening, weather permitting, on RCC campus, a great opportunity to try out that brand new equipment you purchased during the day.

Notice: Do not expect dark-sky, star party conditions.

Astrophotography and CCD Imaging Workshops, limited to the first 100 registrants for each workshop

Starlab Planetarium shows for kids

College cafeteria will be open each day serving a variety of hot and cold meals

Telescope display by the Springfield Telescope Makers (VT)

Door prizes and raffle

### Workshops:

Saturday:

09:00 - 12:00 Dennis diCicco - "Introduction to Astrophotography"

Pre-registration and pre-payment of \$25.00 class fee required

Sunday:

09:00 - 12:00 Richard Berry - "Advanced CCD Image Processing".

Pre-registration and pre-payment of \$25.00 class fee required.

Make checks payable to Rockland Astronomy Club indicating your workshop choice and mail to NEAF Workshops, C/O Jim Burnell, 160 Pine Island Tpk, Warwick, NY 10990

### Celebrity Speakers:

Saturday

- 09:30 Dr. Ted Williams, Rutgers University, "The South African Large Telescope"  
11:30 Richard Berry, "The Milky Way in 3D Perspective"  
13:30 Rob Gendler, Noted Astrophotographer from Avon, CT, "Pushing the Envelope - Advances in Aesthetic CCD Imaging"  
15:30 Dr. John Grunsfeld, NASA Astronaut, "Hubble Space Telescope Repair Mission"

Sunday

- 09:30 Dennis diCicco, Sky & Telescope magazine, "Telescopes 101"  
11:30 Dr. Mary Lou West, Montclair State College, "Solar Astronomy - The Active Sun"  
13:30 David Eicher, Astronomy Magazine, "Finding Our Place in the Universe"  
15:30 David Levy, University of Arizona, "Tails and Trails: A Lifetime of Observing the Night Sky"

Raffle awards at conclusion of David's talk.

Watch for advertisements in the Spring issues of Sky & Telescope magazine and updates on speakers at our web site [www.rocklandastronomy.com](http://www.rocklandastronomy.com) in the near future.

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## From the Editor

Typically our January issue is small with the busy holiday schedules that precede it but I'm glad to see submissions have bounced back for February. You will find this edition filled with many interesting efforts by members of your club. In addition, you will see from our Director's report and minutes of our regular meeting and the Board meeting that there are many ideas in the works for making an exciting upcoming season.

In case you missed the comment in the Treasurer's report, Pete has added a new feature to the address label on your copy of the *Sideral Times*. Now you will always know the status of your membership as your expiration date will be sent to you monthly, similar to how it may appear on your favorite magazine subscriptions. Thank you Pete for this excellent idea.

For those of you that used to rely on Mike Peebles at Pocono Mountain Optics to supply you with the latest technology for your hobby, you'll be pleased to know that Mike is still around. After the demise of PMO (not Mike's fault), Mike has started his own business. High Point Scientific will be carrying many of the items you've gotten from him before. Look for their add in *Sky and Telescope* or call them at (570) 842-1500.

Vic

Mark Your Calendars for

Jersey Starquest '02

June 7 - 9, 2002

# Simpson Observatory

## 2002 Duty Roster and Public Nights Schedule

Chris Moser  
Greg Mauro  
Rich Armington

Team 3  
Bill Murray \*  
Tim Young  
Pavel Studenkov  
John Miller  
Steve Kesces

Team 4  
Ralph Marantino \*  
Saul Moroz  
Bill Fesio  
Don Monticello

Team 5  
Ron Mittelstaedt \*  
George Walker  
Mark Lopez  
Larry Smith

Team 6  
Rex Parker \*  
Mark Jaworsky  
Nick Hillman  
Manick Rajendran

\* Team Leader

### Weather Policy

- b. On scheduled public nights the observatory will be open for the scheduled public nights when the skies are clear, partly clear, or partly cloudy.
- c. When the sky conditions are uncertain, it is the responsibility of the team-members to phone the team leader to decide on the evening's status.

### Absences and Substitution Policy

- e. If you know in advance that you will be unavailable for a duty night, arrange in advance for your own substitution.
- f. If last minute events prevent your attendance on a duty night, it is your responsibility to contact the team leader before dark.

### Keyholder Duty Roster

#### Team 1

Kirk Alexander \*  
Gene Ramsey  
Darryl Foyuth  
Pete Oppenheim  
Peter Fireman

#### Team 2

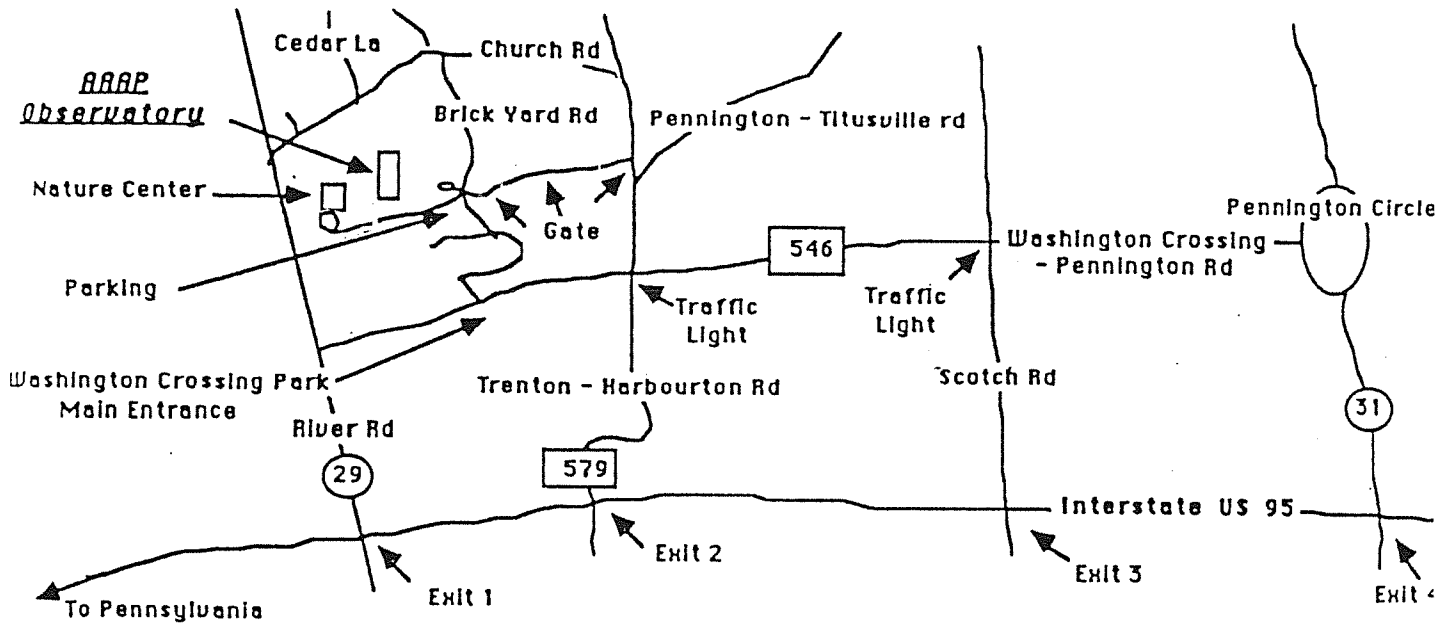
Vic Belanger \*

## 2002 Observatory Public Night Schedule

<u>Team</u>	<u>Cycle 1</u>	<u>Cycle 2</u>	<u>Cycle 3</u>	<u>Cycle 4</u>	<u>Cycle 5</u>
1		3-29-02	5-24-02	8-2-02	10-18-02
2		4-05-02	5-31-02	8-30-02	10-25-02
3		4-26-02	6-7-02	9-6-02	11-01-02
4		5-3-02	6-28-02	9-27-01	
5		5-10-02	7-5-02	10-4-02	
6	3-1-02	5-17-02	7-26-02	10-11-02	

### Important phone numbers

AAAP Observatory 737-2575  
Observatory Chairman: Rex Parker  
Wash Crossing State Park HQ 737-0623  
Wash Crossing Park Ranger after-hours 292-7172



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.

February 2002

Amateur Astronomers'  
 Association of Princeton  
 PO Box 2017  
 Princeton, NJ 08543



Exp. Date: 10/02

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