

# SIDEREAL TIMES

The Official Publication of the  
Amateur Astronomers Association of Princeton

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## From the Director

What does it mean to “do” astronomy? This has been a question posed to me on several occasions. And I have various answers for this. Does doing astronomy mean looking at the stars and planets with your naked eye, a telescope or binoculars? Looking at computer screens full of data? Taking CCD pictures? There are various amount of aptitude and ability on these issues within the amateur community and our club. Some get into this hobby and then find an interesting thing or two to concentrate on like comet hunting or solar observing. Others like to look at objects, take measurements, and analyze the results. I’m a simple guy, so right now, I just like to look, read about what I’m seeing and enjoy the fresh air. Does doing astronomy mean getting together with a group outside to look at the sky or inside to hear a lecture? I think doing astronomy is all of the above. It’s social or non-social; all depending on your personality. It’s also participating in any way possible in conversations, writing, taking pictures, or studying; participation in the great and limitless facets of our universe. It cannot be done all at once. It takes time. It takes patience. I hope you will all participate to the best of your ability.

Along with my simple observations, I also enjoy going out to our public outreach events. Lately I’ve been a little busy so I have not been able to attend some of these. But I know David Letcher, our Outreach Organizer, has been doing a great job. One event coming up will be at Stuart Country Day School in April. On Saturday, May 7th, the Superscience Day at the NJ State

Museum and Planetarium will be happening. Every Friday night starting April 1st are public nights at our Simpson Observatory. Of course, as I write this, the forecast is for rain, snow, clouds.... typical.

Last week I was up at Jenny Jump to attend a board meeting of United Astronomy Clubs of New Jersey (UACNJ). We are a member club, and we have not had any real representation up there for many years concerning its activities. We also have an observatory there. What I found was a very busy and engaged group of volunteers that are doing many organizational activities to promote astronomy. They have some major astronomical projects going on also. We’ll be talking about this during future club meetings and how we can be more involved with UACNJ. Our observatory there needs some work. The enclosure for our 12” telescope has wood rot in some areas, and it needs a paint job and some maintenance. So I hope we can also organize this in the future.

Our next meeting is in Peyton Hall on Tuesday, April 12th at 8 PM. See you all there!

*Ludovico D'Angelo, Director*

**The deadline for the May issue is:**

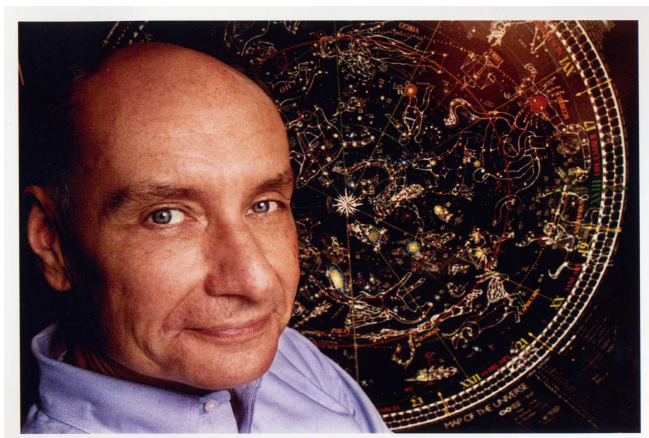
**Friday, April 29, 2010**

**Send your submissions to:**

[editors@princetonastronomy.org](mailto:editors@princetonastronomy.org)

## From the Program Chair

On April 12<sup>th</sup>, we will be treated to a talk by Dr. Michael R. Molnar on the subject of his researches on the Star of Bethlehem. Since one of the celestial events he will be discussing occurred in a long-ago April, the timing of his talk is very appropriate. He will be offering copies of his book on this subject for sale during the intermission, which he would of course be glad to sign.



Dr. Molnar is an astronomer, educator, and researcher with a long history in academe and industry. He received his Ph.D. in astronomy from the University of Wisconsin in 1971 and went on to do pioneering research in the field of magnetic stars by using satellite observations. Dr. Molnar served on the research teams for several space missions such as the Orbiting Astronomical Observatory-2 (1971) and Mariner 9 Mars Orbiter (1973). He has lectured and conducted research at the University of Colorado, the University of Toledo, and Rutgers University.

Dr. Molnar also has a diverse background in industry, where he developed spectrometer and fiber optic systems and managed various computer system projects. He was National Director of Academics at The Chubb Institute. A person of wide interests, he is also a maker of violins.

There will be a "Meet the Speaker" dinner at 6:00 pm before the meeting. Please email [redacted] by noon on Tuesday, April 12<sup>th</sup> for a reservation. I will respond with the dinner location, which has yet to be determined. It will be at either the Sports Bar (old Sotto) or the Triumph Brewing Company, which are close to one another on Nassau Street in Princeton. To insure a place or places at the table, it will be very important to make all reservations by noon on the 12<sup>th</sup>.

On May 10<sup>th</sup>, we will be hearing our own Dr. Ken Kremer's talk on the future of NASA. To round out our current session, we will have our traditional presentation by former Director Bill Murray in the New Jersey State Planetarium in Trenton on June 14<sup>th</sup>.

*John Church, Program Chair*

## Losmandy Mount Donated to AAAP

In March the club was the recipient of a generous donation by Bob Wolf, amateur astronomer and recent AAAP member. Bob donated a Losmandy G-11 Gemini Go-To mount. This is a "portable" German equatorial design similar to the classic G11 but with a more robust, DC-servo drive, mechanism instead of stepper motors. It includes the Gemini Go-To electronics and extensive deep sky database of 41,000 objects. The mount is in pristine condition and is packed in a Scopeguard transport case.

**Gemini  
GoTo**



At first the mount seemed to be a solution to the issues we've had on the classic G11/refractor mount at the Observatory. Those problems now appear to be solved by the recent repair efforts of John Giles and others. Alternatively, the new mount could be a great addition to AAAP's member observing and outreach activities by providing a solid platform for another telescope in the field adjacent to the observatory. Ideas for the mount are being considered and options will be reviewed by the Observatory committee. Thanks very much to Bob for this very generous gift which bolsters our capabilities for member and public access to the stars!

*Rex Parker*

## Membership Meeting Minutes March 8, 2011

The meeting was called to order by Director Ludy D'Angelo.

1. Bill Murray has accepted the duties of Nomination Chair.
2. It was announced that the club needs to pay its dues for UACNJ membership, and to send delegates to go to their board meetings. It was decided that Bill Murray will be the primary and Ludy D'Angelo will be the backup representatives. The UACNJ will have a booth at the balloon festival.
3. Two of the editors of Sidereal Times have resigned and a request was made for someone to assume the responsibility of editor. Ira will remain in his position until a replacement is identified.
4. The next Board meeting will be held on March 23.
5. There was no Secretary's report.
6. Program Chair report - Current chair, John Church, announced the details of the remainder of the season.
7. The Treasurer's report appears in another section of Sidereal Times.
8. Webmaster John Miller discussed a misuse of Twitter as a communications tool between members. He will set up the club's Facebook page for that purpose. He suggested that this page be made available to every member. He volunteered to be the administrator.
9. Member Michael Wright stated that the number of hits on the club's blog has increased and some members have left comments.
10. Outreach Coordinator - David Letcher discussed requests that have been received from the Hopewell Elementary School, the Millstone School in Plainsboro and the Stuart County Day School. The Waldorf School requested that we donate a star party for their fund raiser auction. The consensus was that we ask them to come to our observatory, but not on a public night.
11. Observatory Report - Gene Ramsey stated that a keyholder asked him to do a refresher course. He said that he would do so and invite all keyholders. John Giles reported that the repaired controller and guider were installed on the refractor but the motors did not respond. It was decided that the motors may require new grease and the gears may need to be cleaned. Gene and John Church will check out the mount motors. Gene and Jeff Bernardis are still getting information on security systems.

*Larry Kane, Secretary*

**Interested in keyholder training?  
Contact: Gene Ramsey (609-306-4297) or  
Larry Kane (609-273-1456)**

## Board Meeting Minutes March 23, 2011

Attending were Board members Jeff Bernardis, Ludy D'Angelo, John Church, and Michael Mitrano, and members Michael Wright, David Letcher, and John Miller. With notice having been properly given, a quorum was present.

1. John Miller reported that the web site is up to date, except that the 2011 public observing duty rotation has not yet been posted. Public observing will begin on April 1 with Team 1. Users of mailing lists other than the roster are cautioned to check the roster each time to make sure that their list agrees with the roster. John will set up a Facebook group for the AAAP.
2. David reported that outreach events are upcoming on :
  - a. Friday, March 25, at Hopewell Elementary School
  - b. Tuesday, March 29 (rain date March 30) at Millstone River school
  - c. Wednesday, April 6 (rain dated April 13) at Stuart Day School
3. David also outlined a proposed astronomy class for the general public -- following in the tradition of the course most recently taught by Vic Belanger -- to be held at the Nature Center in Washington Crossing State Park for the four Fridays beginning on September 30. They would take place from 7:30- 8:30 pm and be followed, skies permitting, by visits to the observatory. The Board endorsed David's proposal and encouraged him to continue its preparation.
4. It was also suggested that coffee and conversation time be planned before the Peyton Hall lectures from 7:30- 8:00, to encourage member conviviality.
5. Ludy proposed that members be designated to attend NEAF and obtain donated gifts or purchase items of up to \$300 in value as prizes for the next StarQuest. Ludy and Jeff will prepare a letter to prospective donors and at the next business meeting, we will discuss who will go.
6. Ludy will attend the UACNJ upcoming board meeting to represent the AAAP and obtain more information about UACNJ plans. Their symposium coincides again with StarQuest.
7. Michael Mitrano reported that membership is up to 83 and predicted that it will match last year's final total. Cumulative reserves exceed \$20 thousand, and he expects a strong surplus for this year.
8. Michael Wright reported that publicity for lectures is taking place as planned.
9. Ludy will provide Michael Mitrano with information necessary to send a letter of recognition to the donor of the AAAP's new Losmandy G-11 Gemini GoTo mount.
10. The board discussed opportunities to improve its facilities at Washington Crossing and make use of the mount

and a recently donated telescope. This could be a tripod, a permanent outdoor pier and slab, or a second observatory building. It was resolved that the foundation for any new building would not be hand-dug. Plans might begin with a slab designed with a later structure in mind. The board agreed that a planning group should be appointed to consider alternatives, assess their benefits, and estimate costs.

11. The observatory will need to be ready for opening on April 1 with the water turned on.

*Michael Mitrano, Acting Secretary*

## Treasurer's Report

Membership has increased to 85 with many late-in-the-year renewals. We are now only four shy of last year's full-year membership. Outreach contributions already exceed last year's and match the full-year amount for two years ago. Our routine expenses have remained modest, and the AAAP's surplus for the year-to-date has therefore risen to \$2,500. On a cumulative basis, the surplus is almost \$21,000.

*Michael Mitrano, Treasurer*

## From the Outreach Chair

Tuesday evening, March 25 proved that the U.S. Weather Service can provide a precise, down-to-the-minute forecast. Five of us came to the Hopewell Elementary School star party at about 6:30 and so did the clouds! But, we relied on the forecast and, sure enough, the skies began to clear and the kids showed up. We had good views of the Orion Nebula, the Pleiades, and Saturn. Thanks to volunteers Matt Stires, Kevin Burkhart, Gene Ramsey, Jeff Bernardis, and me.

Clear, dark skies on Tuesday, March 29th enabled Jeff Bernardis and me to give a very successful, well-attended star party at the Millstone River School in Plainsboro. We were able to show the children and their parents the Orion Nebula and Saturn, among other objects. We even received a \$100 donation from the school!

As of this writing, we have another star party on Wednesday, April 6 at the Stuart Country Day School.

I have received a few requests from scout troops too, but it looks like they will generally be satisfied with future visits to our Friday evening open houses.

*David W. Letcher, Outreach Chair*

## Snippets

### NASA Lunar Reconnaissance Orbiter Delivers Treasure Trove Of Data

NASA's Lunar Reconnaissance Orbiter (LRO) team released Tuesday the final set of data from the mission's exploration phase along with the first measurements from its new life as a science satellite. With this fifth release of data, striking new images and maps have been added to the already comprehensive collection of raw lunar data and high-level products, including mosaic images, that LRO has made possible. The spacecraft's seven instruments delivered more than 192 terabytes of data with an unprecedented level of detail. It would take approximately 41,000 typical DVDs to hold the new LRO data set.

"The release of such a comprehensive and rich collection of data, maps and images reinforces the tremendous success we have had with LRO in the Exploration Systems Mission Directorate and with lunar science," said Michael Wargo, chief lunar scientist of the Exploration Systems Mission Directorate at NASA Headquarters in Washington.

Among the latest products is a global map with a resolution of 100 meters per pixel from the Lunar Reconnaissance Orbiter Camera (LROC). To enhance the topography of the moon, this map was made from images collected when the sun angle was low on the horizon. Armchair astronauts can zoom in to full resolution with any of the mosaics—quite a feat considering that each is 34,748 pixels by 34,748 pixels, or approximately 1.1 gigabytes.

[http://esciencenews.com/articles/2011/03/16/nasa.lunar\\_reconnaissance\\_orbiter\\_delivers\\_treasure\\_trove\\_data](http://esciencenews.com/articles/2011/03/16/nasa.lunar_reconnaissance_orbiter_delivers_treasure_trove_data)

*Snippets compiled by Bryan Hubbard*

**FOCUS**, the Newsletter of  
United Astronomy Clubs of NJ  
March issue available here:

[http://www.uacnj.org/focus/Focus\\_2011-N2\\_\(March\).pdf](http://www.uacnj.org/focus/Focus_2011-N2_(March).pdf)

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## Springtime is for Galaxies

With the passing of the equinox it's time to start searching for the great sweep of galaxies in Leo and Virgo. This is absolutely the best time of year for observing galaxies both visually and astrophotographically. In the last week of March, I set up my Takahashi FS128 at f/6 to get a fairly wide field of view (~1 degree). Tracking was accomplished using a Losmandy G11 mount off my deck in Titusville, and an SBIG ST-10XME was used to capture the images below.



**Leo Triplet (or Leo Trio) – M65, M66, and NGC3628. North is to the upper left. 120 min exposure time. Credit: Rex Parker**



**A Section of Markarian's Chain of Galaxies in Virgo. North is up. A dozen or more galaxies are visible in this image. The large round one near the center is M86. 75 min exposure time. Credit: Rex Parker**

The parade of galaxies is seldom more fun than on these spring evenings in Jersey. Head on out to the AAAP observatory in Washington Crossing Park to see more.

## Miss Mitchell's Telescope, Part 2



**The Business End of the Vassar Telescope**

Credit: Mr T in DC (CC license) <http://flic.kr/p/7vKTGx>

Last month I wrote about Maria Mitchell's connection to the Vassar Telescope, which is on display at the National Museum of American History of the Smithsonian. This second installment covers the telescope itself and its maker, Henry Fitz.

Vassar College purchased "an Achromatic telescope objective object glass 12 inches aperture, 12 3/8 inches in diameter" from Henry Fitz for \$2500 according to the April 6, 1863 minutes of the Trustees. Also, they record that there were only four larger glasses in the US at the time. In September, 1863, the Trustees contracted with Henry Fitz "to mount & furnish said object glass in all respects conformable to the annexed specifications for the sum of two thousand & three hundred dollars." The specifications were as follows:

*Style the general style of mounting shall be the Fraunhofer Equatorial.*

*Iron The Bolster, Saddle, the declination box, the adjustable weights, the two axes & the counterpoise may be of iron. The counterpoise is to be globular & ornamental.*

*Circles The circles shall be the best-variety of brass with inlaid silver plate for the division marks. The Declination circle shall be twenty inches in diameter & accurately divided to read to thirty seconds of arc; & the Right Ascension circle shall be eighteen inches in diameter & divided to read to four seconds of time. Both circles shall be furnished with vernier & reading glasses.*

*Tube The tube of the Telescope shall be made of mahogany with rosewood finish & well polished.*

The finder scope was to be "of the best quality & whose object-glass shall be three inches in diameter set in a tube of like material and finish as the main tube." Eyepieces were to be one set of eight "positive" (Ramsden) eyepieces and one set of nine "negative" (Huygens) eyepieces of powers ranging from "50 to 1500" for direct observation. (150x?). The balance rods, which I believe are the two long rods with brass balls at one end, were required to be "firm & of tasteful pattern with brass adjustable weights. The rods may be of wood but must be seemly and neatly attached with brass mountings." In addition, Henry Fitz was to provide a "prismatic mirror for diagonal views", a filar micrometer, a ring micrometer, a Bond's and Dennison's spring governor and a spectroscope. As one can tell from the photo above, this was a handsome instrument, but how did the optics perform? Perhaps not so well. In 1868 shortly after installation, Alvan Clark & Sons reground the lens to such a degree that they considered it their own according to Deborah Jean Warner in *Alvan Clark and Sons Artists in Optics*.

So who was Henry Fitz? Fitz was a contemporary of better known telescope maker Alvan Clark. Born in 1808 in Newburyport, Massachusetts, Henry Fitz became a locksmith and well-known amateur astronomer by the 1830s. In 1839, he traveled to Europe to learn about astronomical and photographic optics. While there, he established connections with French glass-suppliers, learned the new Daguerreotype photographic process and learned lens making from English and German opticians. Upon returning to the US, he patented an improved Daguerreotype camera and opened a successful optical business in Baltimore, which allowed him to experiment with optics. In January 1845, he succeeded in producing a high-quality achromatic lens. Later in the year, he made a six-inch refractor, which received a gold-medal at the American Institute Fair. With earnings from public stargazing with the telescope, Fitz launched into making telescopes full time.

Fitz' innovative lens-grinding techniques allowed him to produce large, high-quality objectives using lower-quality, cheaper glass so American's did not have to rely on expensive imports from Europe. This contributed to the proliferation of American observatories during the mid-19<sup>th</sup> century. His important telescopes are as follows:

- 1848, a six-inch refractor for Lt. James Gillis for his Chile expedition – The objective was tested against and judged equal to a high-quality German import demonstrating that Fitz could produce high-quality objectives.
- 1849, a 5.6-inch telescope for Erskine College, which was his first observatory instrument
- 1849 or 1850, a 6 3/8-inch refractor for Robert Van Arsdale of Newark, New Jersey
- 1851, another 6 3/8-inch refractor for South Carolina College
- 1852, an eight-inch refractor for Haverford College
- 1856, a 9 3/4-inch refractor for West Point Academy - This \$5000 telescope was 14 feet long and came with 13 eyepieces.
- 1857, 12 1/4-inch for the University of Michigan in Ann Arbor – At the time, this was the largest American-made telescope and the third largest refractor in the world. It is probably the most important surviving Fitz telescope because it has the largest objective untouched by later refiguring. It is still on its limestone pedestal and in working condition after 154 years.
- 1861, a 13-inch for the Allegheny Observatory in Pittsburgh. Eleven years later, the lens was stolen and held for ransom. (Even criminals new the value of a big scope back then!)
- 1861, Fitz delivered his largest and most innovative telescope, a 16-inch refractor with a two-element corrector lens midway down the tube, to William Vanduzee of Buffalo, New York. This was the largest telescope in the world at the time.
- 1863, a 13-inch refractor for Dudley Observatory in Albany, N.Y.

At the time of his death in 1863, Henry Fitz had plans for a 24-inch scope and was working with Lewis Rutherford on a telescope for astrophotography. The later scope was completed one year later by Henry's 16-year old son, Harry, who carried on the business for another 20 years. Henry Fitz' techniques were state-of-the-art for his time. As testing procedures rapidly improved, many of his objectives were refigured by other artisans, so few Fitz objectives remain in their original condition.

This brief biography of Henry Fitz was distilled from the [Journal of the Antique Telescope Society, Volume 6, Summer 1994, revised 1995, 2000](#). The journal contains more detailed information on Fitz, his telescopes and his lens-grinding techniques. Also, NMAH has an interesting [podcast](#) about his workshop, which was donated intact to the museum in the 1950s.

The next time you are in Washington, DC be sure to visit the Vassar Telescope at the entrance to the science and technology wing of the National Museum of American History and enjoy this beautiful icon of 19<sup>th</sup> century American astronomy.

*Michael Wright*

## More Snippets

### Gas Rich Galaxies Confirm Prediction Of Modified Gravity Theory

Recent data for gas rich galaxies precisely match predictions of a modified theory of gravity known as MOND according to a new analysis by University of Maryland Astronomy Professor Stacy McGaugh. This -- the latest of several successful MOND predictions -- raises new questions about accuracy of the reigning cosmological model of the universe, writes McGaugh in a paper published in March in *Physical Review Letters*. Modern cosmology says that for the universe to behave as it does, the mass-energy of the universe must be dominated by dark matter and dark energy. However, direct evidence for the existence of these invisible components remains lacking. An alternate, though unpopular, possibility is that the current theory of gravity does not suffice to describe the dynamics of cosmic systems.

A few theories that would modify our understanding of gravity have been proposed. One of these is Modified Newtonian Dynamics (MOND), which was hypothesized in 1983 by Moti Milgrom a physicist at the Weizmann Institute of Science in Rehovot, Israel. One of MOND's predictions specifies the relative relationship between the mass of any galaxy and its flat rotation velocity. However, uncertainties in the estimates of masses of stars in star-dominated spiral galaxies (such as our own Milky Way) previously had precluded a definitive test.

<http://esciencenews.com/articles/2011/02/23/gas.rich.galaxies.confirm.prediction.modified.gravity.theory>

## Perfect Landing Concludes Final Mission of Space Shuttle Discovery



**Space Shuttle Discovery Lands at the Kennedy Space Center**  
 Credit: Ken Kremer

Farewell Discovery! The epic voyages of Space Shuttle Discovery now belong to history. The final magnificent mission of Space Shuttle Discovery and her all-veteran, six-astronaut crew wrapped up on March 9 with a safe landing at the Kennedy Space Center in Florida at 11:57 a.m. EST after a flawless mission. Steve Lindsey commanded the STS-133 flight and was joined by Pilot Eric Boe and Mission Specialists Alvin Drew, Steve Bowen, Michael Barratt and Nicole Stott. Discovery's 13-day flight ended after a journey of more than five million miles on a joyous and bittersweet note. I was watching from just a few hundred yards away at the shuttle landing strip.

The entire NASA shuttle team is proud of the accomplishments of the Space Shuttle Program but sad that the program is ending so soon. The sentiment from everyone involved with the shuttle program from top management to the flight team to the astronauts corps is that the orbiters could be safely and usefully flown for many more years.

The STS-133 mission was the 39th and final flight for the illustrious orbiter which first flew in 1984 and is NASA's longest serving orbiter. NASA Shuttle managers emphasized that the safe conclusion of the STS-133 mission was due to the hard work of everyone on the team and the absolute requirement that everyone stay totally focused on getting the done job correctly and perfectly. "Spaceflight doesn't come easy," said Bill Gerstenmaier, Associate Administrator for Space Operations. "We need to stay focused, keep our heads down and recognize that this is not easy. I think Discovery's legacy will be the future."

Altogether, Discovery spent a full year in space during the 39 missions, orbited Earth 5,830 times and traveled 148,221,675 miles during a career spanning 27 years. "We wanted to go out on a high note and Discovery's done that," said Mike Leinbach, shuttle launch director. "We couldn't ask for more. It was virtually a perfect mission conducted by a perfect flight crew and a perfect ground crew. I couldn't be happier."



**Discovery Crew at Post-Landing News Conference**  
 Credit: Ken Kremer

The primary goal of the STS-133 mission was to deliver the "Leonardo" Permanent Multipurpose Module to the ISS. Leonardo was attached to the ISS as a new and permanent habitable module that will provide extra storage and living space for the six person ISS crew. Also aboard Discovery was R2, or Robonaut 2, which is the first humanoid robot in space. R2 was unpacked from Leonardo a few weeks later and become an official member of the station crew.





**Discovery Towed from the Shuttle Landing Facility to Orbiter Processing Facility-2** *Credit: Ken Kremer*

Discovery will now be decommissioned over the next few months and then be prepared for a museum display, most likely at the Smithsonian National Air and Space Museum in Washington, D.C.

Next month I'll report about my up close visit on top of Launch Pad 39A with Space Shuttle Endeavour for her final flight on the STS-134 mission.

Read Ken's STS-133 articles online at Universe Today, The Planetary Society & CWEB:

[Discovery Lands to Conclude Historic Final Flight to Space](#)

[Discovery's Last Launch and Landing Captured in Exquisite Amateur Videos](#)

[Robo Trek Debuts ... Robonaut 2 Unleashed and joins First Human-Robot Space Crew](#)

[NASAs Navy tows Discoverys Last Rocket Boosters into Port Canaveral – Photo Album](#)

[Discovery Docks at Space Station on Historic Final Voyage with First Human-Robot Crew](#)

Landing and Towback of Discovery: Photo Reports: [1763](#) [1759](#)

## Astronomy Outreach

**Yuri's Night at West Windsor Arts Center:** West Windsor, NJ, April 12, 5:30 - 9 PM, "50 Years of Human Spaceflight from Yuri Gagarin to the Space Shuttle and Beyond". Website: <http://www.westwindsorartscenter.org/>  
Yuri's Night Home Page: <http://yurisnight.net/>

**Amateur Astronomers Association of Princeton:** Princeton, NJ, May 10, 8 PM "Whats Beyond for NASA: Shuttle, Station, Orion, SpaceX & Robots". Website: <http://www.princetonastronomy.org/>

**International Astronomy Day at the Franklin Institute:** Philadelphia, PA, May 7, "The Search for Life on Mars"

**Rittenhouse Astronomical Society (RAS) at the Franklin Institute:** Philadelphia, PA, Jun 9, Wed, 7 PM. "Opportunity Mars Rover Update", "NASA Flybys of Comets Hartley 2 & Temple 1." Website: <http://www.rittenhouseastronomicalsociety.org>

Ken Kremer: Spaceflight magazine, Universe Today & The Planetary Society

Please contact Ken for more info or science outreach presentations:

Email: website: [www.kenkremer.com](http://www.kenkremer.com)

<http://www.universetoday.com/author/ken-kremer/>

*Ken Kremer*

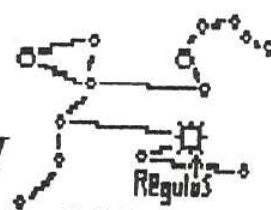
## Twenty Years Ago in Sidereal Times



Director:  
 Larry Smith  
 Assist. Director  
 Greg Mauro  
 Editor:  
 John Simpson

# SIDEREAL TIMES

THE OFFICAL PUBLICATION  
 of the  
**AMATEUR ASTRONOMERS  
 ASSOCIATION**  
 of  
**PRINCETON**



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 Ron Mittelstaedt  
 Secretary:  
 Richard Sivel  
 Program Director:  
 Victor Belanger

**APRIL 1991**

THE MESSIER MARATHON  
 OF  
 "MURRAY'S MADNESS"

March 17 [AP]: Publications representative John Simpson of the Amateur Astronomers Association of Princeton reported from his hospital room in the Princeton Medical Center this morning, where he was hospitalized for "mental exhaustion", that the AAAP held a "Messier Marathon" last night in which 70 of the 110 celestial objects recorded by French astronomer Charles Messier were viewed at the AAAP's observatory in Washington's Crossing State Park.

The Observatory Chairman William Murray, who is also at the Princeton Medical Center could not be reached for comment. Apparently Mr. Murray was admitted to the Center's Emergency Care Unit after he was found wandering aimlessly in Princeton. According to a police spokesperson Mr. Murray was "mumbling incoherently", and eyewitnesses indicated that Mr. Murray was admitted after he mentioned that he "wanted to show Charley our list".

This is the list that Mr. Murray referred to:

M1:	John Zysk	8:50 PM
M3:	Ron Mittelstaedt	9:50 PM
M5:	Ron Mittelstaedt	10:45 PM
M10:	Bill Murray	1:20 AM
M12:	Bill Murray	11:17 PM
M13:	Bill Murray	11:41 PM
M14:	Bill Murray	1:25 AM
M29:	Bill Murray	1:42 AM
M31:	Nathan Shaner	7:50 PM
M33:	Bill Murray	7:43 PM
M34:	John Zysk	8:22 PM
M35:	Bill Murray	9:10 PM

M36:	Bill Murray	9:05 PM
M37:	Bill Murray	8:53 PM
M38:	Bill Murray	8:25 PM
M41:	John Zysk	8:35 PM
M42:	George Walker	7:43 PM
M43:	Vic Belanger	8:20 PM
M44:	Vic Belanger	8:55 PM
M45:	Nathan Shaner	7:42 PM
M46:	John Zysk	8:57 PM
M47:	John Zysk	8:58 PM
M48:	John Zysk	9:12 PM
M50:	Ron Mittelstaedt	8:55 PM
M51:	John Zysk	9:35 PM
M52:	Bill Murray	8:50 PM
M53:	George Walker	10:02 PM
M56:	Bill Murray	1:02 AM
M57:	Bill Murray	12:50 PM
M58:	Bill Murray	11:19 PM
M59:	Bill Murray	9:19 PM
M60:	Bill Murray	11:19 PM
M61:	John Zysk	11:02 PM
M63:	John Zysk	9:41 PM
M64:	Vic Belanger	9:18 PM
M65:	Vic Belanger	9:18 PM
M66:	Vic Belanger	9:18 PM
M67:	Ron Mittelstaedt	9:05 PM
M68:	John Zysk	11:30 PM
M76:	Bill Murray	8:34 PM
M78:	John Zysk	8:30 PM
M80:	Bill Murray	1:35 PM
M81:	Bill Murray	9:15 PM
M82:	Bill Murray	9:15 PM
M83:	Bill Murray	12:08 PM
M84:	Bill Murray	10:30 PM
M85:	Bill Murray	11:31 PM
M86:	Bill Murray	10:30 PM
M87:	Bill Murray	10:40 PM
M88:	Bill Murray	10:57 PM
M89:	Bill Murray	10:51 PM
M90:	Bill Murray	10:50 PM
M91:	Bill Murray	11:16 PM
M92:	John Zysk	11:47 PM
M93:	Ron Mittelstaedt	8:40 PM
M94:	John Zysk	9:34 PM
M95:	Jamey Belanger	9:30 PM
M96:	Jamey Belanger	9:30 PM
M97:	Bill Murray	9:36 PM
M98:	Bill Murray	10:20 PM
M99:	Bill Murray	10:25 PM

M100:	Bill Murray	10:26 PM
M101:	Bill Murray	10:00 PM
M102 (NGC 5866?):	Bill Murray	12:18 PM
M103:	Bill Murray	8:43 PM
M104:	Bill Murray	10:07 PM
M106:	John Zysk	9:50 PM
M107:	Bill Murray	1:41 PM
M108:	Bill Murray	9:36 PM
M109:	Bill Murray	9:50 PM
M110:	Bill Murray	8:15 PM

Hospital officials reported that a rumpled piece of paper was found in Mr. Simpson's pocket that contained the following note: "Murray 41; Zysk 13; Jamey Belanger 2; Vic Belanger 5; Shaner 2; Walker 2; Mittelstaedt 5; Simpson 0".

MINUTES FROM MARCH 12, 1991 MEETING

Vic Belanger introduced the program for the evening---which was member's night---featuring John Church showing slides of the construction of the Observatory. Bill Murray and John Simpson exhibited prints of astrophotos taken at the Observatory, including several spectacular shots taken with the Schmidt camera.

Director Larry Smith in the chair. The meeting was called to order at 9:10 PM. Reading of the minutes was dispensed with, they having been published. The treasury balance was reported by Ron Mittelstaedt to be \$1,018.00.

Program Committee: Vic Belanger reported that for April, Scott Davis of GE Astrospace Division will talk on "Rain-Bows, Halos, Sundogs, and Other Astronomical Phenomena". For May, Dr. Neta Bahcall of Princeton University will talk on the new 100" telescope which will do a sky-survey and on the size of the Universe. For June, our regular planetarium visit; for September, our own Dave Brown will speak about Jupiter's nebula and his work with the 61" Catalina telescope (featuring a special pre-meeting dinner). And for October, our speaker will be Dr. David Spergel of Princeton, who will talk on Cosmology.

Program Committee: Louisa Lockette reported that the Trenton Times did a good job this month, and that Sky & Tel now needs five months lead-time to publish event notices.

Membership Committee: Greg Mauro reported that prospective members are being contacted and that notices are being posted on large companies' bulletin boards.

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