



The Guide Star



Newsletter of the Amateur Astronomers Association of Pittsburgh, Inc.

Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon

Website: 3ap.org



Mingo Creek Park
Observatory

October 2005

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Nicholas E. Wagman
Observatory

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The Sloan Digital Survey: Bringing the Universe to Our Doorstep, October 14th

At the next AAAP meeting (October 14th, 7:30 p.m. at the Carnegie Science Center), Professor Andrew Connolly of the University of Pittsburgh will talk to us about "Mapping the Universe: The Sloan Digital Sky Survey." The following is from the Sloan Digital Sky Survey website (<http://www.sdss.org/background/science.html>):

The Sloan Digital Sky Survey, the most ambitious astronomical survey project ever undertaken. The Sky Survey will obtain high-resolution pictures of one quarter of the entire sky in five different colors. From these pictures, advanced image processing software will measure the shape, brightness, and color of hundreds of millions of astronomical objects including stars, galaxies, quasars and an array of other celestial exotica.

Selected galaxies and quasars will be examined with a spectrograph to determine accurate distances to a million galaxies and 100,000 quasars. This will result in a three-dimensional picture of the universe through a volume one hundred times larger than that explored to date.

By systematically and sensitively observing such a large fraction of the sky, the Sky Survey will have a significant impact on astronomical studies as diverse as the large-scale structure of the universe, the origin and evolution of galaxies, the relation between dark and luminous matter, the structure of our own Milky Way, and the properties and distribution of the dust from which stars like our sun were created.



Come and join us! Show your support at the upcoming joint **SSP-AAAP** meeting... More **SSP** info on **Page 5**.



Join Us for a "Deep Impact" Gathering! Our Annual Joint Meeting with the SSP

by Dave Pensenstadler

Our speaker, Dr. Dennis Wellnitz, Deep Impact Mission Researcher, will discuss the NASA Discovery Mission "Deep Impact". He will discuss what has been learned to date about the surface and interior of a cometary nucleus. After introducing the mission design and implementation, Dr. Wellnitz will review some of the results from this impressive experiment.

The Joint Meeting will take place on Wednesday, October 19th, 2005, at 8:15 p.m. at the Duquesne University Mellon Hall of Science. AAAP members are welcome to attend the dinner prior to the meeting. The Social Hour begins at 6:00 p.m. and dinner is at 6:30 p.m. Dinner will cost \$8.00 and checks can be made out to the SSP. Reservations are required and must be made by the Friday preceding the meeting. In early October, the SSP will send out meeting notices to each member of the AAAP. Please contact Carolyn Banga at 412-487-0915, or email crbenga@aol.com to make reservations.

The Technology Forum meeting precedes the dinner. AAAP member Jack Greenberg has arranged for Dr. David Turnshek, Professor, Physics and Astronomy Department, University of Pittsburgh, to discuss the subject: "Probing the Universe with Quasars".

This joint meeting between the Spectroscopy Society of Pittsburgh and the Amateur Astronomers Association of Pittsburgh has been taking place for more than 20 years. The AAAP is very grateful that the SSP values this relationship and continues to support our organization. Let's show our appreciation with a large turnout for this October 19th meeting.

Our Annual Astrophotographic Extravaganza: The 2005 Kevin Brunelle Astrophotography Contest

A Bit of Background: *The Kevin Brunelle Astrophotography Contest*

Each year, AAAP members look forward to the November business meeting—the meeting where the entries in *The Kevin Brunelle Astrophotography Contest* are collected all together so can admire the best of the fabulous pictures our co-members have taken over the last year. For the pleasure and excitement that we derive from this event, we can thank former member Kevin Brunelle and Sukolosky-Brunelle, Inc.

Kevin was part-owner of Sukolosky-Brunelle, Inc., a full-service photographic lab and digital imaging center that deals with professional photographers, advertising agencies, designers, and amateur photographers. He was also an active member of the AAAP, and because of his interest in astronomy, was generous enough to sponsor our annual astrophotography contest. After his death, we renamed the contest in his honor.

Sukolosky-Brunelle, now under the ownership of Tony Marshall, continues in its sponsorship and support of the contest, traditionally awarding gift certificates to the winners in each category. For more information about Sukolosky-Brunelle, Inc., visit *BI Media Wire* at <http://www.sbi-online.com>.

The Brunelle Astrophotography Contest: November 18th

by Dave Conte

November is just around the corner and it's time to gather your entries for the *Kevin Brunelle Astrophotography Contest!* This year, there are three people serving as co-coordinators of the contest: Dave Conte, Dave Smith and Mark Arelt. We are looking for photos, digital images and slides of astronomical objects. Peruse your images from this last year and choose your best to compete for fame, honor and prizes. (See contest rules to decide what qualifies.) As in years past, the contest will be held at the November AAAP meeting, which will be Friday, November 18th at the Carnegie Science Center. **The deadline for entry submission is 10 days before the meeting, November 8th.** Please get your entries to me in one of the following ways:

Hand them to me, Dave or Mark at the Friday, October 14 AAAP meeting, 7:30 P.M at the Carnegie Science Center

Mail them to me at 112 Bower Dr., Sewickley, PA 15143-8412

E-mail them to me at allybiz@verizon.net

Please include your **name, your telephone number, the category for each entry, and the titles** of your images with your entries

Digital images (JPEG, GIF, TIFF) are easiest for us to work with. Mark Arelt will be happy to scan your slides or negatives into a digital format for projection. Please allow extra time for him to do this. If you have questions, please call Dave Conte @ 412/366-4846, Mark Arelt @ 412/835-6806 or Dave Smith @ 412/390-0870.

The Brunelle Astrophotography Contest: Contest Rules

1. The contest is open to all active members of the AAAP.
2. The contest date is the November 18th meeting of the AAAP. Entries will be viewed and judged by all AAAP members present at this meeting.
3. All images entered must be originally captured by the contestant.
4. Entries are limited to images concerning areas of interest within the AAAP.
5. Images may be submitted as 35 mm transparencies or negatives, photographic prints, or as digital media (in formats accepted by the AAAP Audio-Visual Committee).
6. Only images taken since the date of the previous contest (November 19th, 2004) are eligible.
7. There are 3 categories:
 - A. *Astronomical images taken with optics of focal length no greater than 150mm*
 - B. *Astronomical images taken with optics of focal length greater than 150mm*
 - C. *Images of atmospheric phenomena*
8. No more than 5 entries per contestant per category are allowed for each contest.
9. Entries must be received by the contest coordinator no later than 10 days before the contest date.
10. Entries will be judged for 1st, 2nd, and 3rd place in each category, with each voting member assigning points respectively (3, 2, and 1). The entry with the highest total number of points in each category will be declared the winning entry, and will be eligible for prizes. Entries that place 2nd and 3rd in total points in each category will be recognized by the AAAP.

Of Possible Interest to Astrophotographically-gifted Members: The Imaginova-Nokia Amazing Images: Summer Under the Sun Contest/Sweepstakes

Why is it a contest? Because the Grand Prize Winner is selected from the top ten space-related photo submissions as rated by users and voters.

And why is it a sweepstakes? The Grand Prize winner is selected randomly from those top ten, and secondary winners are selected randomly from all submissions entered during the sweepstakes. (The Grand Prize, however, is a 3-day/3-night vacation to Hawaii, complete with an observing session atop Mauna Kea volcano...so it might be worth a shot.)

The period to enter photos will end on October 31st, 2005. Participants are encouraged to enter as many photographs as they wish. For more information about entry guidelines and regulations, visit <http://www.space.com/amazingimages>.

Education News

AAAP Accepted for Membership in the Night Sky Network

By Craig Lang



The Night Sky Network is a partnership between NASA, JPL, the Astronomical Society of the Pacific, and Amateur Astronomy clubs all over the United States. The partnership exists to help disseminate astronomical science to the public via Amateur Astronomy club events and to form a communication network between scientists, amateurs, and the public.

Presentations and demonstrations presently include programs such as "PlanetQuest, the Search for Other Earths", "Our Galaxy, Our Universe", and "Black Hole Survival". Now that we, the AAAP have been accepted for membership in the Night Sky Network, we will be delivering presentations and demonstrations from these programs to public and to other club members. The Night Sky Network is a great means of adding to our already successful star parties and outreach events, it will help to gain pre-prepared presentation materials, and possibly net the club some astronomy goodies as we are entered in drawings they hold often.

The coordinators for the AAAP's membership in the Night Sky Network are Chrissie Chojnicki and Rich Bailey. Contact either them if you are interested learning more about participating in the NSN program. Training sessions will be held soon and any AAAP member is welcome to participate.

Volunteer Opportunity: Penn State Star Party

The AAAP is always looking for new ways to educate the public, and here's an opportunity for members to help out a few new sky buffs:

We've been contacted by Mike Manojlovich, an instructor in the School of Information Sciences and Technology at Penn State McKeesport. As it turns out, two students in the Physics Department intend to pursue Astrophysics for their undergraduate degrees. To support them, Mr. Manojlovich and colleagues have resurrected a Mead LX200 12" SCT and have asked for our assistance in planning a campus star party. "We know the viewing will be fairly poor," he says, "but if we can get some views of some visible planets and perhaps some other objects, and maybe have a video, slides, or talks...we hope to make it an entertaining and informative evening."

The projected date is October 28th or 29th. A rain date has yet to be established. If you have suggestions for preparations or would like to attend, please contact Mike Manojlovich: (w) 412-675-9149 (h) 412-741-6541

Mingo News

Autumn is here! This is an exciting time as the days are shorter and often the sky is beautiful with clear, crisp weather. It is also a time of some of our last public star parties for Mingo Observatory.

This month we will host the girl scouts as we have various troops coming in from Washington County and the Johnstown areas. We always welcome the scouts, as many are impressed to see the stars in a relatively dark sky and also to see a real planetarium show.

Our 10-inch refractor is stealing some of the limelight too, with its great size and sharp optics. It is truly a joy to let the public see the Moon, Mars, star clusters, and other interesting objects. Many often gasp at the sight of the lunar terminator or M-13, proclaiming, "what a beautiful view" as they peer into the magic of the telescope. People of all ages come to see the stars. It is not uncommon to see the very young and the elderly climb a 5-foot tall ladder to the eyepiece of the great refractor. It must be important for all to share—the waiting lines go out the door!

Just down the hall; what the 10-inch reveals to the public by length and bulk, the 16-inch Ritchey-Chretien shows with light-gathering power and sophistication. With GOTO Computer and push-button controls, this telescope can show hundreds of objects an hour. Star Parties can see very faint objects in no time flat or simply hit another button to see the Moon, or whatever is above the horizon at the time.

It's sort of strange, in a way, the contrast between the instruments. The refractor is the classic telescope, while our 16" is on the cutting edge of current technology. It's good to have both worlds—something like having a classic Jaguar and a brand new Corvette in the same garage. We've said it before: the telescopes are so different they actually compliment each other!

One of Mingo's greatest assets this year has been the Planetarium. This device has the remarkable ability to allow everyone who sits beneath the dome to see the sky as it would look like on a good dark night. Your writers, Dan and Al, as well as Eugene and Kathy, among others, have completed dozens of successful planetarium shows. We believe that the awe-inspiring views of a starlit night are certainly one of the most beautiful things a person can experience. How it humbles us, to think that we are just specks of dust in a great big universe! The Planetarium helps participants to understand this, as we talk about objects a million light years from home!

It's hard to believe that the season is coming to an end. The efforts of all who so gallantly helped shape this Observatory's first year must soon acquiesce to the harshness of winter. We still have all this month to enjoy our new facility, and of course we will use the colder months to prepare for the arrival of our new 24-inch in January or February 2006.

And perhaps those of you who *haven't* enjoyed Mingo will come out and see us. If you are interested in learning to run the Planetarium, email Al Paslow at alpaslow@yahoo.com. We'll spend some time with you!

32 New Members! Welcome!

Since spring, we've added thirty-two new names to our membership list. Welcome these new members to the AAAP!

ROBERTT. ANDERSON
LINDA M. EVANS
BOB GOETSCHKES
JON W. JOHNSON
AL MARINELLI
KEYUR K. MITHAWALA
LAURA RHODES
MARY-JO SHINE
JOSEPH J. TONECHA

ERNESTO B. ARAVENA
JAMES FLAHERTY
TIM HAGAN
STEVE KALAN
LEONARD MARRACCINI
GARY MOURFIELD
FLORENCE A. RUSCH
TED SOFISH
JOHN E. VARELLIS

KATHLEEN DESANTIS
ARTHUR W. FLEMING
MILES HILSEN RATH
JEFF LEWIS
THOMAS E. MCDERMOTT
LAURA PEACE
NICOLE SCHLUEP
RICH SPRINGFIELD

JIM DIXON JR
DON FRANK
FRANK JEFFERS
MARK J. MAGUDA
JUSTIN MOREAU
GARY RHODES
DON SHESTACK
BECKY STABILE

More SSP Info

SSP-AAAP Joint Meeting, October 19th: Lecture Abstract & Speaker Bio

by Dave Pensenstadler

Each year, the SSP makes a significant donation to the club and invites us to participate in one of their meetings. They always make an effort to provide a speaker who will be interesting for us, and offer a very enjoyable evening with a reasonably priced dinner. All AAAP members are encouraged to attend—to come and show our appreciation for the SSP's continued support.

Speaker: Dr. Dennis Wellnitz, University of Maryland and Project member for the Deep Impact Mission, will be giving a lecture entitled "The NASA Discovery Mission 'Deep Impact.'"

Lecture Abstract:

The NASA Discovery Mission "Deep Impact" was the first planetary-scale experiment attempted by NASA, and was spectacularly successful, starting off this past Fourth of July's festivities with a bang! The concept was quite simple: impact the nucleus of comet 9P/Tempel 1 with a 350-kilogram impactor moving at a relative speed of 10 kilometers per second and watch the impact from a second flyby spacecraft, to learn about the surface and interior of a cometary nucleus. However, the technical challenges were formidable: this was by far the most complicated and difficult mission so far undertaken in the Discovery series. After introducing the mission design and implementation, we shall see some of the results from this impressive experiment.

Speaker Bio:

Dennis D. Wellnitz received his Ph.D. degree in Physics and a minor in astronomy from the University of Maryland in 1982. Dr. Wellnitz's main focus of study involves instrumental design, development, and their use in both astronomy and physics.

Dr. Wellnitz is currently involved in:

- Observations of comets and asteroids by various methods
- Participation in observations of man-made satellites of the Earth
- Pursuit of optics-related consultation and collaborative projects with private industry
- Further development of the University of Maryland's Optical Observatory and Amplitude Interferometers

His experience includes:

- Design and development of a number of different observing instruments, including astronomical refractometers, auto-guiders, stellar interferometers, balloon-borne atmospheric dispersion instrumentation, CCD imagers and spectrographs, and telescope control systems, many of these automated or semi-automated in operation
- Contributions to research in observational astronomy and theoretical astrophysics, satellite and lunar laser ranging, experimental general relativity, optical computation and holography, solid state physics, applied mathematics, and meteorology; research, academic, and business programming in a variety of languages under a number of different operating systems using several types of computers
- Teaching and tutoring astronomy, physics, and mathematics at both undergraduate and graduate levels
- Dr. Wellnitz has also had an asteroid named for him, *Asteroid 4958Wellnitz*



Upcoming dates for Wagman Observatory Star Parties:

Saturday, October 8th will be a Public Star Party.

Saturday, October 22nd will be a Public *Moonrise Special* Star Party.

Upcoming Dates for Mingo Observatory Star Parties:

Saturday, October 1st will be a Public Star Party.

Saturday, October 22nd will be a Public *Moonrise Special* Star Party.

VID (Very Important Dates) Quick Reference:

Friday, October 14th: Regular AAAP business meeting

Wednesday, October 19th: Joint SSP-AAAP meeting

Tuesday, November 8th: Deadline for submissions to the *Kevin Brunelle Astrophotography Contest*

Friday, November 18th: The *Kevin Brunelle Astrophotography Contest* and joint meeting with the Photographic Section of the Academy of Science and Art

Another Joint Meeting on November 18th: Academy of Science & Art Photographic Section

This summer, the Photographic Section of the Academy of Science and Art made a significant donation to the AAAP. In an effort to show our gratitude, President Rich Bailey has invited them to join us at our November 18th business meeting, the night of our *Brunelle Astrophotography Contest*.

The Spectroscopy Society of Pittsburgh: Our Partners in Public Education

The Spectroscopy Society of Pittsburgh has supported education in science since 1946. Its alliance with the Society for Analytical Chemists of Pittsburgh (SACP) gave rise to the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (otherwise known as Pittcon, the world's premier Conference and Exposition devoted to laboratory science). As of October 2004, the SSP had distributed \$14,000,000 worth of Pittcon-generated funds to a bewildering variety of programs and organizations devoted promoting education in the sciences.

The AAAP is fortunate enough to have been one of those organizations. Since the beginning of our association in the mid-1980's, the SSP has not only made annual grants for the purchase of planispheres for our observatories, but has also made a number of additional, special-purpose donations.

Annual Grants for Planispheres:

Initial annual grant:	\$200.
Grant increased in 1991:	\$500.
Grant increased in 2001:	\$800.

Special-Purpose Grants:

Wagman Fund, 1996:	\$700.
Binocular Viewer, 1996:	\$1000.
Spectrograph:	\$4950.

October AstroEvents By Al Paslow

Mercury is close to the horizon as an evening star as the planet has returned to the sky from last month's superior conjunction. It should be visible for most of October.

Venus, an "evening star" is brilliant at magnitude -4.25 by midmonth. Venus brightens to become dazzling in Libra, but remains low in the southwest as evening twilight fades. The planet will about 20.4 arcseconds by midmonth and will continue to increase in brightness and diameter through the month as the planet's illumination dwindles to nearly 50 percent. For fun, compare its size to Mars!!

Mars rises this month by 9:00 p.m. local time, on October 1st but at 8:00 p.m. EDT by midmonth. The Red Planet will increase its brightness from magnitude 1.7 on Oct 1st to an incredible -2.27 by the 31st, and is brighter than any other object in the heavens except for the Moon and Venus. The planet's diameter increases from a huge 17.6 arcseconds to a dramatic 20.2 arcseconds by month's end! This is the time to observe MARS!!! Note: for northern hemisphere observers, this year's Opposition on Nov 7th will be much more favorable than the highly touted one of 2003, since the Red Planet will be over 30° higher in the skies as compared to the close approach two years ago. That will put Mars at its highest—65° above the horizon—in much steadier skies! Even a 3-inch telescope will reveal surface features now. Larger instruments can look for cloud formations and dust storms! The "Eye of Mars," *Solis Planum*, is well placed for evening observing during the third week of October and the last week of November. The famous triangle-shaped *Syrtis Major* will be nicely positioned for us also in the evening in early November, at Opposition making surface viewing that much more familiar. This is our last chance to see Mars this large and bright until the year 2018. Enjoy it!!

At magnitude 11.67, **Jupiter** sets about a half-hour or so after Sunset in early October. By month's end, the Giant Planet will be in conjunction with the Sun on Oct 22nd and not visible until early 2006 for favorable viewing.

Saturn, at magnitude +1, will be visible best before dawn skies, rising only at 2:17 a.m. in early October, but then by about 12:30 p.m. at the end of the month. Saturn and the stars of M-44, the Beehive Cluster, still make a beautiful sight this month. Take a look with binoculars!

Uranus is visible a good part of the night in Aquarius, and sets just before 4:00 a.m. by midmonth. This distant planet is observable in moderate-sized telescope as a very distinct disk-like bluish object, shining at about magnitude 5.8, bright enough to spot in even small telescopes.

Neptune is faint at magnitude 7.9. The distant Neptune sets by 2:00 a.m. by mid-October and is located in Capricornus.

Pluto sets by 10:20 p.m. midmonth and is visible in the constellation of Serpens. It is extremely dim, at magnitude 14, and must be observed with large instruments and star charts to be located.

Meteor Showers: The Orionids can produce some interesting activity from October 17th through 25th. Unfortunately, this year the Moon is full at the start of that period and proceeds to march eastward. It remains high in the sky and isn't far from the Orionid radiant during the shower's normal maximum. This year's shower will probably be washed out!

Comet Temple 9P/T: the comet moves from Scorpius into Sagittarius. This object became famous when a manmade satellite crashed into the comet's nucleus in July of this year. It is too low to be visible without exceptional skies, and is becoming very hard to see for northern observers.

Comet McNaught C/2005: this comet is currently in Sagittarius. It begins in October at perhaps at magnitude 11.0 and heading north-east.. Discovered in March 2005. Estimates predict it to be at magnitude 10.5 by the end of the month as it crosses into the Capricorn in very late October or early November. However, it is very small, with a diameter of around 1 arcminute, and is very strongly condensed, making this still a difficult object for northern observers to see!

Comet Swan C/2005 P3: a new object discovered by the Swan imaging team. in August. It has faded rapidly in September to perhaps 12.2 magnitude as I write this in late September. It is very diffuse. It was reported very faint, around 15th magnitude by CCD observations, which estimate somewhat differently than visual measurement. This will be quite a difficult object.

For all comets, use finder charts as published on the Web or at the AAAP site as posted.

Iridium Flares: Times for some flares for the weekend of Oct 14th and 28th are listed.

Selected Dates

- Oct 1:** Mars stationary. Begins retrograde motion among the stars.
- Oct 3:** New Moon. Rises at sunrise and sets at sunset.
- Oct 4:** The Moon passes 2° south of Jupiter.
- Oct 6:** Mercury 1.5° south of Jupiter.
- Oct 7:** Moon 1.4° south of Venus. Venus enters Scorpius.
- Oct 8:** The Moon passes 0.2° north of Antares.
- Oct 9:** Mars enters Aries, where it stays for the Opposition on November 7th.
- Oct 10:** First Quarter Moon. Rises at noon and sets at midnight.
- Oct 13:** The Moon passes 3° south of Uranus.
- Oct 14:** Iridium Flare. Time 7:54:01 p.m. EDT, magnitude -1.2. Look towards the constellation of Cepheus.
- Oct 15:** Iridium Flare. Time 7:47:57 p.m. EDT, magnitude -4.7. Look towards the constellation of Cepheus. Venus enters Ophiuchus. Mars brightens to magnitude -2.0.
- Oct 16:** Venus and Antares 1.6° apart.
- Oct 17:** Full Moon. Venus enters Scorpius.
- Oct 19:** Moon 5° north of Mars. Beautiful sight!!
- Oct 21:** Orionids peak, but strong Moonlight interferes!! Venus enters Ophiuchus.
- Oct 22:** Jupiter in conjunction with the Sun and cannot be seen.
- Oct 23:** Mars apparent diameter reaches 20 arcseconds between now and Nov 7th. It is at its maximum apparent size.
- Oct 24:** Last Quarter Moon. Rises at midnight and sets at noon.
- Oct 25:** Moon 4° north of Saturn.
- Oct 28:** Iridium Flare. Time 8:33:57 p.m. EDT, magnitude 2.8. Look towards the constellation of Camelopardalis.
- Oct 29:** Iridium Flare. Time 7:21:39 p.m. EDT, magnitude -1.4. Look towards the constellation of Camelopardalis.
- Oct 29:** Mars at closest approach to Earth at 43,140,000 miles. Magnitude -2.27 at 11:00 p.m. EDT.
- Oct 30:** Daylight Savings Time ends...TURN BACK YOUR CLOCKS ONE HOUR!! Also the 67th anniversary of the notorious 1938 Orson Wells broadcast "War of the Worlds," as creatures from Mars invade the Earth! (Original airdate: Sunday, October 30th, 1938, from 8:00 to 9:00 p.m. ET)
- Oct 31:** Sun enters Libra. Moon 1.2° north of Spica.
- Nov 2:** NEW MOON. Rises at Sunrise and sets at Sunset.
- Nov 3:** Mercury at Greatest Elongation at 23.5° east of the Sun. Venus at Greatest Elongation at 47.1° east of the Sun and Mercury at 1.3° north of the Moon.
- Nov 5:** Venus 1.4° north of Moon.
- Nov 7:** Mars at Opposition in Aries, visible all night long, and at its brightest at magnitude -2.33. Interestingly, though, its diameter falls below 20 arcseconds.
- Nov 9:** FIRST QUARTER MOON. Rises at noon and sets at midnight.
- Nov 10:** Moon at Perigee at 370014 km.
- Nov 15:** Mars 2.7° south of Moon.

Special Events of the Month:

First, be aware that the cool crisp fall evening skies bring on some of the best transparency and seeing all year. Enjoy the clear weather! The days begin to rapidly grow shorter, but that means more observing time, right after dinner! Daylight savings time will come to an end late in October, and that means dark skies even faster. The Moon rides higher in fall and winter months (runs low in summer months). It could be a good time to start back on the Moon.

Be ready for MARS this month. This is the most favorable Opposition for many years to come. Just drag out the small instrument if the big one is too much trouble! I have a few little 4.25-inch f-10 instruments that are great for the Moon and planets—that won't break your back taking them in after a long observing session. A small instrument getting some use is better than not looking at all!

Remember Saturn and the Beehive all this month!

That's all for now. See you next month!! Clear skies!

The Surprising Life of Truman Kohman: A Life in Science, & 30 Years in the AAAP



(The Guide Star editors requested that Truman share his remarkable story. The following is based mainly on Truman's writings and information from an article by Irwin Rosenberg.)

I was born in Champaign, Illinois, and grew up in and around Washington, DC. I got hooked on astronomy in 1929 at the age of 13. With the help of my father and Leon Campbell, the Recorder of the American Association of Variable Star Observers (AAVSO), I purchased a 3-inch (actually 70-mm) A. Bardou (Paris) refractor of approximately 1885 vintage on a ~1920 Clark/Lundin equatorial mount on a wooden tripod (all of which I still have). The picture above shows the telescope with me at a solar eclipse in Freiberg, Maine, in August 1932. (Totality was clouded out).

In May 1931, while still a freshman in high school, I was elected to membership in the AAVSO. I submitted my first observations in July, and for a while was the youngest observing member. In those days, all observations were published in *Popular Astronomy*. A two-letter code was then sufficient to identify all observers, and I was assigned "Ko." I observed at my home in Bethesda, Maryland, until I entered Harvard College in 1934 September.

There, Mr. Campbell arranged for me to use the 6-inch domed Post refractor on the roof of the Harvard College Observatory, where I continued to observe variable stars. But I was also getting involved with playing the trombone in the concert and marching band (under Leroy Anderson!) and diversions common to college freshmen. One night—or rather morning—I woke up and found myself lying on the observatory floor, the telescope turned way past the slit, the sky cloudy, and dawn breaking. Needless to say, that was the end of my active AAVSO career!

At Harvard I majored in chemistry and got an AB in 1938. I attended the University of Wisconsin from '38 to '42 and received a Ph.D. in 1943. At Wisconsin I worked as a nuclear chemist—before the term was even invented!

In July of 1942, I joined the Manhattan Project, working in Glenn Seaborg's plutonium chemistry division in the Metallurgical Laboratory (Met Lab) at the University of Chicago, at first on the isolation of plutonium from cyclotron-neutron-irradiated uranium. We believed we were in a tight race with the Germans to develop a bomb. In fact, the German program wasn't that good, and the Manhattan Project was far ahead of them. In 1944 I was transferred to the Hanford Engineering works in Richland,

Washington, to help with chemical problems in the large-scale production of plutonium, and in 1945 back to Met Lab, which had been renamed Argonne National Laboratory. My group at Argonne, among other things, made an accurate determination of the half-life of radium.

The first atomic bomb was exploded in New Mexico in the summer of 1945. After that, my colleagues and I lobbied against the use of the weapon on civilians, suggesting the bomb be used in demonstration mode instead. We were not successful in our petitions, and two bombs were dropped, ending the war, but at a great loss of human lives and property.

During Manhattan Project days I had met Jake Warner, who was coordinating the work of the various chemistry sites, and who after the war was rebuilding the Chemistry Department at Carnegie Tech. I accepted his invitation to join his department in 1948. I taught nuclear chemistry and geochemistry as well as more traditional courses. Beginning in 1971, I taught the Introduction to Astronomy course.

The research accomplishment of which I am proudest was my involvement in the discovery of the long-lived radionuclide aluminum-26. My group first produced aluminum-26 in a cyclotron and later discovered its occurrence in meteorites as a result of cosmic-ray bombardment. The picture above shows me measuring aluminum-26 beta-radiations. The scientific applications of aluminum-26, which include helping us understand the history of meteorites, the Earth, and the early Solar System, are described in a paper, "Aluminum-26: A Nuclide for All Seasons." Another astronomical tie-in: this nuclide was the first to be detected in space by its characteristic gamma radiation. Incidentally, I coined the term nuclide! A nuclide is a species of atom characterized by the composition of its nucleus.



In 1962 I was fortunate to participate in an expedition with Bill Cassidy to the meteorite and crater field of the Campo del Cielo in Argentina. The picture below shows me locating iron meteorites with a mine detector.



My research has involved other astronomical themes. In 1969 I received lunar samples to test for isotopes of thallium and lead. I met the plane that carried the samples into Pittsburgh and took the dust home to Mount Lebanon, where everyone in the neighborhood came over to see it. That night I stored the valuable package of dust under a stack of shirts in my dresser drawer!



I retired formally in 1981, but continued to teach the astronomy course until 1990. For some years after my retirement I have been designing, with computer simulations, a coded-aperture telescope for X- and gamma-ray astronomy using least-squares image reconstruction. This is a completely different concept from existing X- and gamma-ray telescopes, since high-energy X-rays and gamma-rays cannot be focused. In my design, the rays pass through a coded aperture (with a random array of holes) and hit an array of detectors, and a computer program is used to figure out the type and positions of gamma-ray sources in the sky. I am keeping up some contact with students as Faculty Advisor of the CMU Astronomy Club, which in 1986 named its newly completed observatory in the Scaife Hall penthouse the Truman P. Kohman Observatory. I am still a Senior Research Associate in Physics.

I have played a role in getting asteroids named after important scientists: Hans Vehrenberg, John Brashear, Glenn Seaborg, Nicholas Wagman, Leo Scanlon, William Cassidy, and most recently Tom Reiland. In 2000 an asteroid was named 4177 Kohman, partly in recognition of my work on aluminum-26.

As for my various AAAP activities, I chair the Special Interest Group on Asteroids and Comets, every month preparing asteroid and comet tracking charts and posting them on the AAAP Web site. I have given AAAP lectures on a number of topics. My next talk for the AAAP will be 2006 January 13, on Visual Star Colors from Instrumental Photometry. (I have just published a paper on this topic). In my observing I specialize in asteroids. I use a Celestron-8 and have almost finished all the asteroids numbered 1 to 100, plus 100 more.

My most gratifying activity during the year in Richland was to woo and win Jane Sievers. The picture in the left-hand column shows us on a mail-boat trip up the Snake River in May of 1945. We were engaged within a week, and were married in Chicago in the fall of 1945.

My family and I spent a year each in Germany and India, and Jane and I have taken a number of astronomy-related trips to various parts of the world to see solar eclipses, Halley's Comet, and the aurora borealis.



We are well and healthy and enjoy gardening, biking, camping, dancing, church activities, trips, and visiting with our three children and grandson. October 13 will be our 60th wedding anniversary! Above is a recent photo of us.

Congrats & Condolences

- To paraphrase John Holtz's brief announcement at the September business meeting, he has been known as John Holtz, treasurer... John Holtz, grazing occultation enthusiast... and John Holtz, star party parking specialist extraordinaire. But next time we see him, he'll have added another title: *John Holtz, husband*. John and Katie Hammond (now Katie Holtz, of course!) were married on Saturday, October 1st. Congratulations to you both!
- Rowen Poole and Kelly Fletcher, will marry on Saturday, October 8th—which, incidentally, also happens to be a public star party at Wagman AND the peak of the Draconid meteor showers. Any bets on the weather?
- Ann Norman has gained a new family member: a young, extremely energetic, and passionately family-oriented dog who *adores* her boys. Ask her how he's doing.
- Our deepest sympathies go out to Jean and Tom Reiland on the loss of a family member: their cat, Shadow. Our thoughts and best wishes are with you both.

OCTOBER 2005

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
<p>Don't Forget to get your photos in! November 8th is the submission deadline for the <i>Kevin Brunelle Astrophotography Contest!</i></p>						1	
2	 Annular Eclipse	3	4	5	6	7	8 Star Party: NEWO ***Deadline for Photo Contest*** Draconid Meteors
9 Draconid Meteors	 10	11	12	13	14 AAAP Meeting 7:30 PM Carnegie Science Center	15	
16	 Partial Eclipse	17	18	19 Joint SSP-AAAP Meeting 8:15 PM Duquesne University Mellon Hall of Science.	20 Orionid Meteors	21 AO Lecture: "Particle Physics and Cosmology" Orionid Meteors	22 Moonrise Special Star Parties: NEWO & MCPO Orionid Meteors
23 Daylight Savings Time Ends	 24 HALLOWEEN 31	25	26	27	28	29 Mars Closest Approach	

Also this month: October 21st - Lecture: "Particle Physics and Cosmology"

by Professor Vittorio Paolone of University of Pittsburgh – Allegheny Observatory. Free. RSVP required. 7:30 PM. University of Pittsburgh (412)-321-2400.

Looking ahead: Star Parties: **Oct. 8 & 22 – NEWO.**

Oct. 1 & Oct. 22 – MCPO.

Dates and times are based on Eastern Time.

AAAP Long-Range Meeting Schedule

Oct. 14, 2005	Feb. 10, 2006
Nov. 18, 2005	Mar. 10, 2006
Dec. 9, 2005	Apr. 7, 2006
Jan. 13, 2006	May 12, 2006

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Notes from the Editor

Many thanks to Gus Johnson for sharing his discovery, complete with sketches; to Dave Pensenstadler for providing info about the SSP; and to Truman Kohman finally telling his story.

Apologies to Al Paslow for cutting his Iridium flare section and shrinking the text of his wonderful AstroEvents column, and also to any readers who experienced eyestrain while reading this issue.

Efforts to create extended online versions are underway.

* Amateur Astronomers Association of Pittsburgh, Inc. *

Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon

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COMING NEXT MONTH:

"How Mingo Observatory Began," by Dan McKeel & Al Paslow **AND** "Mingo Roof Design: The Untold Story," by Eric Fischer

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