Messier Marathon
Barry Spletzer

It’s March and spring is in the air. Ahh, the gentle breezes, the fragrant pollen, and for astronomers, the Messier Marathon. Every spring, amateur astronomers all over the Northern Hemisphere gather at their favorite dark sky haunts peering through telescopes all night long trying to find the 110 Messier objects in a single night. The time of year is not chosen for the pleasant weather but for the unusual fact that there is only one sizable region near the celestial equator that is devoid of Messier objects. During late March and early April, the Sun is in that region so, for a few weeks, none of the objects are obscured by the Sun’s glare. That means that it is possible to see all 110 objects in a single night. I use the phrase “obscured by the Sun’s glare” loosely here. Some of the objects (M74 and M77) are at best just barely visible after sunset and another (M30) rises so shortly before dawn that only those with the best imaginations can find it. The window of opportunity is relatively narrow, but you can still have a successful Marathon earlier or later than the optimal time.

Each year, I construct a one-page guide to the Messier Marathon (see page 6). This year’s version, calculated for the TASS April 13th Messier Marathon at GNTO, is included with this article. The primary uses of the guide are to give a logical order to find the objects, provide a checklist to keep track of what has been found, and to show at a glance when things rise and set. All you really need is my guide, a pretty basic star chart, and some persistence to complete a successful Marathon and see at least 100 of the objects.

Because there is a lot of stuff crammed into the guide, a little beforehand preparation in learning to interpret the information can be valuable and can make your observing time much more productive. Putting all this information on a single sheet makes things quite crowded so a little explanation might help. The guide contains two columns of objects. The order of observation goes from top to bottom through the left column then the right.

Each column of objects has 12 different pieces of information as follows:

Num. - Messier object number
R.A. - Right dissension in hours and minutes
Dec - Declination in degrees and minutes
Rise - Rising time of the object based on a 24-hour clock.
Set - Setting time
Trans - Transit time along with the indicator “Trans.”
Con - Abbreviation of the constellation in which the object lies. If you’re not familiar with the abbreviations, most of them are pretty obvious (Ori for Orion, CMa for Canis Major) but some are a little obscure (Cnc for Cancer, Sge for Sagitta.) In any event, they are usually included with any star chart or handbook.
NGC - NGC number of the object except for M45 (the Pleiades) and M40 (a double star) that do not have an NGC number.

For those objects that are circumpolar (always visible) the transit time, that is the time when they are highest in the sky, is listed along with the indicator “Trans.”

Continued on Page 3
Astronomy is a feast, spread for the joy and sustenance of people of incredibly diverse world views: it is the opportunity to look, together, beyond this world. TAAS members have impressed me over the years as some of the best exemplars for demonstrating, abstractly and concretely, that astronomy appeals to both the poets and scientists among us.

I have been impressed for years at a lesson my students learn well long before they arrive in my classroom: Science, with all its cold reason, practiced by great analytical minds, is the antithesis of Poetry, with its evocative gifts, practiced by those who dwell only in the realm of sensation and expression. My students’ best example of the “real scientist” may be Christopher Lloyd in the Back to the Future films, frizzed-out hair, overblown rhetoric, and all. This lesson is pervasive: our culture reinforces these impressions in all of the popular media, to the extent that if a TV news story concerns a famous scientist, or a great discovery, we can fairly depend on the “anchor persons” exchanging sidelong and knowing glances. The message is clear: while the poet may be a bit odd, it is everybody’s business to guess at the meaning of the verses. Meanwhile, a scientist mumbles badly or finds true expression with a chalk board and a series of equations understandable only to other superhuman intelligences.

Do either scientists or poets delight in this dichotomy, or actively participate in building these misleading impressions? A very few, perhaps. I rather suspect that the culprits are teachers of either science or the arts who lay claim to an expertise they do not altogether possess, and seek to mask this lack by accentuating artificial differences. The language of the two disciplines differs markedly, to be sure, as was remarked upon by the eminent British physicist Paul Dirac: “In science one tries to tell people, in such a way as to be understood by everyone, something that no one ever knew before. But in poetry, it’s the exact opposite.”

As I write this, two days remain until TAAS members are gathered at GNTO for the Equinox Picnic and Open house. At about the time twilight fades into night, I will be sitting with Ina at Pacific Beach in San Diego, looking out at a sun setting over the Pacific. (We are perennial chaperones for 3 or 4 dozen Marine Biology students, on a field trip from Valley High School.) I will think of Rayleigh scattering, as well as the fact of the sun’s angle refracted by the atmosphere. When we sit still, very close and holding hands, I will sense our racing backward, away from the sun, at several hundred meters each second, even as I contemplate that the sun appears at a place it occupied some seven minutes earlier. I will consider our sun’s passage around our Galaxy, and the dance of galaxies through illimitable space. And do I miss the beauty of the sunset? Absolutely not!, and I will maintain to my students that a perspective in science is additive, never subtractive. Astronomers already know this, of course: the scientific appreciation only deepens the esthetic enjoyment wherever, and however, we contemplate our universe.

I came across a poem recently, which summarizes for me – beautifully and mysteriously – the thesis of science and art working in concert to inspire and inform.

I could not sleep for thinking of the sky,
The unending sky, with all its million suns
Which turn their planets everlastingly
In nothing, where the fire-haired comet runs.
If I could sail that nothing, I should cross
Silence and emptiness with dark stars passing,
Then, in the darkness see a point of gloss
Burn to a glow, and glare, and keep emassing
And rage into a sun with wandering planets
And drop behind, and then, as I proceed,
See his last light upon his last moon’s granites
Die to dark that would be dark indeed.
Night where my soul might sail a million years
In nothing, not even
Death, not even tears.

– John Masefield

For a man of the late 19th century and early 20th, (and a British merchant seaman who jumped ship in New York City and worked for a time there as an assistant bartender before becoming the Poet Laureate of England), Masefield seems to have had an extraordinary understanding of the Cosmos, to include extrasolar planets! Do any of you have a favorite poem which pertains to astronomy? Could I ask for you to submit it for Dan’s consideration in a future Sidereal Times?

Here’s to art and science, and here’s to synergy! And here’s to raising up future students who will expect more reverence for the broad range of human genius and understanding in all of their classrooms.
Messier Marathon
continued from page 1

Typ - Abbreviation for the type of object: OC - open cluster, Gx - galaxy, PI - planetary nebula, Gb - globular cluster, Nb - emission nebula, S2 - double star, and CN - cluster with nebulosity.
Mag - Total visual magnitude of the object. To put this in perspective, the dimmest naked eye star is around 6th magnitude. For each increase of 1.0 in magnitude, the brightness decreases by a factor of 2.5.
Size - The angular size of the object in arc minutes. The Moon averages about 32 arc minutes in size while Jupiter is 3/4 arc minute. The combination of the size and magnitude gives an idea of an object's appearance. For example, M101 is a bright galaxy (Mag. 7.7) but it is large (26.9 arc minutes) making the average surface brightness quite low so it can be difficult to find in a small telescope. M82 is smaller (11.2 arc minutes) and dimmer (Mag. 8.4) but has over three times the surface brightness making it easier to find. These two numbers can be very useful when figuring out what you are looking for.
Found - This column is simply a checkbox to keep track of which objects have been found.

The last section consists of a number of vertical gray and white bars. At the top of the bars are numbers ranging from 20 to 24 and then from 1 to 6. These numbers refer to the hour of the night and each vertical bar (either gray or white) corresponds to one hour of time. The range of time represented by the vertical bars goes from sunset to sunrise. For each Messier object there is a horizontal black line crossing the gray and white bars. The black line shows when the object is visible. For example, looking at the fifth object on this year's list (M76, the Little Dumbbell) you can see that it is visible until 11:30 PM and rises again at 3:10 AM. This is perhaps the most useful section since it allows you to determine at a glance what objects are rising or setting in the near future. Objects in the northernmost part of the sky (above +55 degrees declination) are circumpolar and never set. For these objects, a dashed line is used to represent that they are visible all night.

This year, the TAAS Messier Marathon is later than usual, on the evening of April 13th at GNTO. A later Marathon requires a few changes. All in all, a later Marathon is more relaxing for the casual astronomer. For a Marathon at the end of March, I would be scrambling and straining to find M74 in the evening twilight. On April 13th M74 is only seven degrees from the Sun. Usually when we observe Mercury, it is 20 degrees from the Sun and about 4000 times brighter than M74. In short, I won't be looking for M74 because it will not be visible. Similarly, M77 is only 20 degrees from the Sun and sets 40 minutes after sunset so I do not expect it will be possible to find it. M33 might be the first difficult object possible to observe. It is a relatively low surface brightness galaxy but since it sets about 70 minutes after sunset, it may be possible to see it.

Normally after finding M33, you proceed to the three objects in the Andromeda group (M31, M32, and M110) but these three objects set shortly after M77. Fortunately, since Andromeda is so far north, the group rises again 2 1/2 hours before dawn (the guide shows this.) Because of this, I placed these at the end of the guide instead of the start. Usually a Marathon keeps you pretty busy, but this year there's something else visible that you can't miss. After you find M52, look about 7 degrees below it for comet Ikeya-Zhang. It should still be a naked eye object. If you are too busy then, don't worry, the comet is nearly circumpolar so it will be visible all night (it sets around 10:30 PM and rises again around midnight.) It should be really worth it to take a look. If you have trouble finding it, imagine adding another star to the zigzag pattern of Cassiopea (at the counterclockwise end relative the the North Pole.) The comet is about where that 6th star would be.

The advantage of a late Marathon comes before dawn. I have never seen M30 during a Messier Marathon because it normally rises too close to the Sun. Looking at the guide, you can see that M30 will rise more than two hours before the Sun and should be easy to spot.

Finally, by looking at the guide, you may notice that the objects are not sorted simply by the rising and setting times. They are grouped in areas of the sky to make it relatively easy to hop from one to the other. I will generate a set of charts showing these groupings and suggesting how to go from object to object. These charts are available to anyone who wants them. If you would like a set, contact me at barry@swcp.com.

All in all, it should be relatively easy to bag 107 of the 110 objects and still get several hours sleep during the night. In any event, whether you see 10 objects or 100, whether it's cloudy or clear, warm or cold, windy or calm, the TAAS Messier Marathon is always an event worth attending. If it's your first time, please come and see what all the fuss is about. If it's your 10th time you already know and I'll see you there.

See Barry's one-page guide to the Messier Marathon on page 6
# April 2002

## General Meeting
**March 30th - 7 P.M.**

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<td>Sunrise/Sunset</td>
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### School Star Parties

*Judy Stanley, Education coordinator education_coord@taas.org*
- **April 23** Tomasita Elementary 701 Tomasita St NE
- **May 14** Central Elementary 520 N Main St - Belen

#### Limited School Star Parties

*Sammy Lockwood for more info, go to www.taas.org*
- **March 26** Heritage Hills Park, near Ventura and Harper NE
- **April 30** Griegos Elementary, near Valley High School

### Astronomical Events

- **April 7** - First Sunday in April: change clocks forward 1 hour, from Standard time to summer (“Daylight-Saving”) Time.

- **April 15 @ 1200 MDT** - The equation of time is 0. That is, sundial (apparent solar) time and mean solar time are the same.

- **April 18** - Spring equinox on Mars.

- **April 20** - Astronomy Day; started in 1973, and held in April or May on the Saturday closest to the 1st-quarter Moon.

- **April 22** - Lyrid meteors.

- **Late April** - What is arguably the most thrilling 4 or 5 planet gathering and interaction in more than a decade (or longer!) transpires in the west after sunsets these next few months... There are no planet-planet conjunctions this month but there is the majesty and suspense of watching the motions of all five of the classic planets as they head towards what will be their tightest bunching, early in May.
### May 2002

#### SUN  MON  TUE  WED  THU  FRI  SAT

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**Planet Rise / Set (5/15/2002)**
- Mercury 05:52/20:36
- Saturn 06:23/20:36
- Venus 06:46/21:23
- Uranus 01:14/12:07
- Mars 06:38/21:11
- Neptune 00:14/10:35
- Jupiter 08:18/22:44
- Pluto 20:15/07:06

**ATM Workshop**

Ray Collins/Mike Pendley
atm@taas.org

The Amateur Telescope Making workshop is now in operation. The workshop meets the first and third Wednesdays of each month at Valley High School, 1505 Candelaria—the north side of Candelaria, just west of 12th street. The meetings begin at 7 P.M. and are in Building E, Room #3.

**TAAS General Meeting**

Saturday, March 30, 2002  7 P.M.
Regener Hall - UNM

Subject: *Emptiness in Modern Astronomy*

Speaker: Dr. Stephen Gregory

Kid’s Activity: Popcorn Solar System

**Notes**

**TAAS** = The Albuquerque Astronomical Society
**GTTO** = General Nathan Twining Observatory - premium observing night.
**GTTO-CTC** = Must confirm with GTTO Director - Pete Eschman (gtto@taas.org, or 873-1517). Check TAAS-L listserv for information
**GTTO Training** = GTTO observing and training
**UNM** = University of New Mexico Observatory. Call the TAAS hotline @296-0549, or the UNM hotline @277-1446 to confirm, or unmm_coordinator@taas.org
**ACSA** = Albuquerque Coffee Shop Astronomers. Contact Sammy for information or visit www.taas.org and select sidewalk astronomy
**ATM** = Amateur Telescope Making. Call Michael Pendley for information @296-0549, or atm@taas.org
**PandA** = UNM Physics and Astronomy. Corner of Lomas and Yale.
Once you see her in action, it is easy to understand how Dr. Monica Cyrino became the recipient of the 2002 Faculty Award from the UNM Alumni Association. The peppy Dr. Cyrino delighted the TAAS membership once more with a highly entertaining evening at the intersection of astronomy and Greek mythology.

In her lecture entitled “Myths of the Spring Sky”, Dr. Cyrino focused on Sirius, Gemini, Hercules, and Corvus. The first reference in Western literature to a star was to Sirius, found in Homer’s epic poem, The Iliad. Sirius, which is in the constellation Canis Major (the Big Dog) is also known as “The Dogstar”; the word Sirius actually means “scorcher”, and brings to mind the expression “dog days of summer”. Canis Major is one of Orion’s hunting dogs, and so hunkers near Orion’s feet in the sky.

The myth of Gemini the Twins is that of a pair of heroic figures, Kastor and Pollux, sons of Zeus and Leda (and conceived in the famous “swan encounter”). The Gemini were highly-skilled hunters, horsemen, and sailors, and sailed with Jason on the famous ship Argo. In fact, the phenomenon we know as St. Elmo’s fire was believed by ancient sailors to be a visitation of the Gemini. The various myths that account for the placement of the Gemini in the sky center around the fact that Kastor was mortal and Pollux immortal, an odd circumstance of their birth.

Hercules, both warrior-like and primitive, is a key figure in Greek mythology, with references to his amazing labors found throughout Greek literature. The constellations Leo, Hydra and Cancer are associated with those mythic labors. Leo is the representation of the Nemean Lion, which Hercules slays in his First Labor by strangling it, since its invulnerable hide could not be pierced by weapons. Hydra is the many-headed water snake that Hercules polishes off in his Second Labor, only by cauterizing each neck as he cuts off each head, lest two grow in its place. A formidable opponent indeed and impressive in the sky too, as Hydra is the longest constellation. To make matters worse for our hero, the Crab was attacking him as he was combating the Hydra; in a fit of pique he kicks the Crab into the sky, so that amateur astronomers throughout the ages might enjoy looking at The Beehive (no, really!)

The constellation Corvus, which is Latin for “raven” or “crow”, is linked with the god Apollo. The myth indicates that Corvus gets into trouble with Apollo, either by not serving him properly or by carrying tales of the infidelity of Apollo’s lady love. As a result, the enraged Apollo banishes the poor crow to the sky and turns the originally white bird to black for all eternity.

Dr. Cyrino skillfully enhanced her stories of these mythological figures with beautiful images of the same as found on ancient Greek pottery, not to mention pithy humor (I will not soon forget the telling of the tweezers incident).

Following the lecture, Larry Cash presented a wonderful slide show promoting GNTO, which was created by Nancy Davis and Larry. The show featured images of the observatory’s facilities and past activities at the site. Larry then delivered a visual quiz, testing members’ ability to identify images of Messier objects. I am constantly amazed at the knowledge of our members.

Continued on Page 8
Our young astronomers then came down from their Kids’ Activity to demonstrate their string-and-flag scale models of the solar system. If the solar system were 40 feet across…well, you do the math!

March 2 General Mtg
continued from page 7

Lyman Sandy, Alison Schuler’s husband, passed away this week after a long struggle with cancer.

The last time many of us saw Lyman, was at a TAAS meeting late last year when he shared his story of the total solar eclipse that he, Alison, Bruce, and others traveled to Africa to witness last summer.

Please remember Lyman, Alison, Ted, and the family in your thoughts and prayers. Below is the obituary that appeared in the Friday Albuquerque Journal.

Lyman Gage Sandy, age 56, entered eternal life on Tuesday, March 5, 2002, from the arms of his loving wife of almost 28 years, Alison K. Schuler.

A man of extraordinary brilliance, wide-ranging knowledge, wit, talent and integrity, he was admired, loved and emulated by all who knew him. He graduated magna cum laude from Harvard College in 1967, and then served for two years as a VISTA volunteer in Pueblo, Colorado. He returned to The Harvard Law School, where he was an editor of the Harvard Law Review, and from which he earned his Juris Doctor, cum laude, in 1972. After law school, Mr. Sandy spent a year clerking for Judge John Minor Wisdom of the 5th Circuit Court of Appeals, and thereafter joined the prestigious Washington, D.C., law firm of Covington & Burling, where, among more intellectual legal pursuits such as native claims to Alaskan land, he reviewed transcripts of Captain Kangaroo for educational content.

To her great good fortune, Mr. Sandy married Alison Schuler, a law school classmate, in 1974. In 1975, at the urging of their good friend and now 10th Circuit Court of Appeals Judge, Harris Hartz, Mr. Sandy and his wife came to New Mexico as Assistant United States Attorneys, as the first married couple permitted to be hired by the Department of Justice. Mr. Sandy later joined the eminent local law firm of Miller, Stratvert, & Torgerson, concentrating primarily in complex defense litigation, where he continued to practice as a partner with his esteemed colleagues until his death.

In 1985, as Mr. Sandy reported in his 20th anniversary

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Minutes of the Board of Directors Meeting

David Blair

Minutes of The Albuquerque Astronomical Society Board of Directors meeting, 28 February 2002, Physics and Astronomy Building, The University of New Mexico:

President Ray Collins called to order the Board of Directors at 7:26 p.m. Attending were the president, Karen Keese (vice president), Dave Brown (treasurer), David Blair (secretary), Eric Bucheit, Larry Cash, Pete Eschman, Neil Goldberg, Dan Richey, Barry Spletzer, Judy Stanley. Absent was Chris Wilson. Society members Barry Gordon and Gordon Pegue also attended. Ray expressed support for board members who had lost parents in recent weeks and concern over the illness of member Lyman Sandy.

Minutes of the January 31 meeting were accepted without amendment.

Treasurer’s Report

Dave reported checking account funds of $5,040.20, a decrease of $1,497.58; savings account funds of $1,208.45, no change; total funds on deposit, $6,248.65, a decrease of $1,497.58.

Total funds stand as follows: General, 1,713.39; Observatory, $2,182.05; Education $1,401.86; Explorer, $66.99; Dark Sky, 184.36; Broline, $700.00.

Major revenues for the month:

Membership, $625; Donations, $218; Far Horizon ad, $90.

Major expenses:

Carl Frisch Chaco payment, $750; Newsletter Feb & Mar, $667; Astronomy Day, $350; Letterhead, $188; Bulk Mail Fee, $125.

Membership: Regular 203, down 3; Family 60, down 2; Educational 23, up 1; Total paid 289, down 4; Honorary 4, no change; Complementary 11, no change; total 301, down 4.

The Board consented to the expenditure of $100 for the renewal of Society membership in the International Dark Sky Association.

Ray gratefully acknowledged receipt of a $50 check to TAAS from member Dee Friesen, given in the name of the late Robert Ortega at a lunch party given by Ruby Ortega.

GNTO Report

Pete noted upgrades to the observatory in the past month, including wiring from the main dome to the Astrophysics dome. Installation of a motorized focuser for the Astrophysics dome is in progress. Pete reported donations of software from

Software Bisque: The Sky, Level 4; CCD Soft; and CCD Soft documentation. Barry Spletzer will write thank-you notes.

Pete acknowledged donations, in particular a hard drive donated by Bill Tondreau. He encouraged Board members to attend the GNTO Open House and TAAS Picnic on March 16.

Education

The Board approved expenditure of $163.26 for a spectral analysis presentation for school star parties, as requested by Judy. Judy reported a successful star party at Dennis Chavez, with 350 to 400 attending. The school donated $250 to the Society. She has developed education packets to make available to teachers when their requests for star parties cannot be scheduled. She also expressed the desired to develop audio-visual presentations, feeling that this medium would be a positive development for star parties.

Grants

Eric expressed the goal of looking for corporate sponsors that would enter into a perpetual relationship with the Society—for example, by underwriting the newsletter. He noted that many such sponsors aspire to demonstrate strong community outreach, for which the Society is a good partner. He distributed a list of potential sponsors, which included five potential corporate sponsors and twenty-one grant-making organizations. Additional names were offered by the board. Eric asked for Board input on contacts.

Corporate sponsorship of the newsletter led to discussion of the appropriateness of making the newsletter available beyond the membership, which might make it more attractive to corporate sponsors. Pete and Gordon expressed reservations involving the security of GNTO. Dan had no issue with corporate sponsorship, but opposed any idea of two separate newsletters—one for members, one for greater distribution.

Events

Ray noted Jay Harden’s absence, due to illness, from UNM observing, and wished him well. In his absence, UNM observing is nonetheless going well, Gordon reported. A recent meeting of the Explorer Post involved four adult TAAS members, but only one Post member. Coffee Shop Astronomers and Amateur Telescope Makers programs are doing well.

For coming general meetings, Karen reported that Monica Cyrino of the University of New Mexico would speak March 2 on Myths of the Spring Sky. She reported leads she is following for March 30 and April 27.

Neil reported that Len Duda of the University of New Mexico would speak on the Cassini probe on June 1, and that Neb Duric, also of UNM, would speak on cosmic rays on September 21. Both those General Meetings will occur at the Lodestar Planetarium.

Judy requested that a work day be set to establish teams and to examine Astronomy Day materials well in advance of the event, noting that some materials had been damaged in storage in recent years. The Board agreed.

Power Plants

The Board discussed potential opposition to power plants being proposed for the vicinity of GNTO. Pete reported venues for such potential action: the March 9 meeting of the Belen West Mesa United Community Association, which seeks a comprehensive plan for the mesa top, and the Rio Communities Air Quality Permit Hearing on March 29. The Board reached a consensus, initiated by Ray, for TAAS representation at the meeting, but to hold off on any formal participation.

Other Business

Neil reported on the astrophotography exhibit in connection with Lodestar, hoping that it would be up and running when the Society meets at the planetarium on September 21. Barry Gordon, Gordon Pegue, John Sefick, and David Blair were suggested as reviewers for the exhibit. Ray noted that TAAS’s community hotline will need a new home if it is to continue. Discussion centered on whether the service was obsolete in an age of the growing internet. The Board decided to monitor the hotline’s usage and retire it if volume is low. Ray noted that Sam Lockwood is the new webmaster for TAAS. He praised Mike Pendley for long service in that role.

Karen noted that TAAS was among organizations invited to participate in the BANFF Film Festival March 11, and she asked for volunteers willing to bring telescopes.

The Board adjourned at 9:35 p.m.
Wrapping Up Another Great Season!

Another successful school star party season is coming to a close. This outreach effort has evolved beyond our wildest dreams! Thanks to the tireless efforts of our family of docents we have reached over 2,000 students, teachers and parents! Our efforts have raised close to $800 in donations for TAAS. WOW!

Bringing Astronomy to the masses is a mission that is tremendously rewarding in many respects. But...you don't have to take my word for it. Just ask Eric Bucheit how much he has learned about asteroids since he has been a docent. Pat Appel can tell you everything about making comets. John Laning, Dan Richey, and Nancy Davis take audiences on a tour of the Cosmos and field interesting questions from budding young astronomers. Chris Wilson and Kathy Gaunt have become experts on light since they have taken over the Spectral Analysis Demo. Mark Kroska and Doyle Boykin call the "Star Lab" their home these days. They have created a two-man tour of the night sky! And of course there are our die-hard "Scope Operators" Barry Spletzer, Larry Cash, Brock Parker, Jay Harden, Micky Bock, Dave Brown, Gordon Pegue, and certainly Sammy Lockwood who has stepped up to become a major force in our outreach program growth! Thanks to all of you!

Every single one of the people mentioned had doubts and fears about their abilities as docents in the beginning. I have seen these folks grow and blossom where they have chosen to be planted in this program. If you have been thinking about joining our family, but have doubts, simply ask one of the docents mentioned in this article about how they got started. You'll be surprised!

For more information on these parties, including a map, please visit www.taas.org
On February 16th, Larry Cash and Nancy Davis arrived early so they would have time to pull additional cable in the conduits that run from the Ortega Building to the Astrophysics Dome and main dome building. As I indicated last month, Larry’s company, Norstan Communications Inc, donated the new cable. The new cabling serves three purposes. One cable segment carries communication signals from the self-guiding chip on the CCD camera to the Astrophysics controller, while another section controls the Astrophysics motorized focuser. The remaining cable provides computer network connections between the three buildings. We were able to test the network cables, leaving only the two cables for the Astrophysics and CCD camera to be completed.

Later that afternoon, Joel C D’Baca, Ray Collins, Dale Murray, Mark Nagrodsky, Gordon Pegue, Jeff Schott and Dave Wilson joined us. Gordon barely made it to the observatory when his truck died about 50 yards away from the entrance gate. As I recall, the conditions were slightly breezy, but we got some good observing time. The drive home that evening was an adventure, when we used Dave’s tow strap to pulled Gordon’s truck with my truck. Larry and Nancy brought up the back of the entourage, with the emergency flashers going, and we made it safely to Gordon’s house in the Northeast heights.

Our most recent GNTO committee meeting took place on February 21st with seven attendees, including Larry Cash, Ray Collins, Barry Gordon, Karen Keese, Mark Kroska, and Gordon Pegue. We discussed progress made at recent work parties, and recent successful GNTO events.

Revisions to the GNTO portions of the TAAS web site are progressing, with Mark Kroska leading the committee work, which we hope to have in place in a month or so. Once we are happy with our new pages, they will be moved from the prototype area to the main web site.

We also discussed our progress on the TAAS screensaver project. A working group of Karen, Mark and Gordon are heading up this project. Using software donated by Dan Richey, we hope to emphasize images donated by TAAS members to produce a product that we hope to sell to raise revenue for TAAS. For those of you with some good CCD or film images, this is a great opportunity to help out TAAS, and maybe get a little recognition as well. Please contact us if you have any images to contribute.

We had a small work party at GNTO on March 8th, where we installed the appropriate cable ends for the new signal cables and tested the motorized focuser and self-guiding capabilities of the ST-9 CCD camera. The work group consisted of Larry Cash, Carl Frisch, Mark Kroska and myself. Part of our testing also included use of the new copy of CCDSoft software that was recently donated by Software Bisque. We think that the new controls will make imaging much easier.

GNTO saw a great group for the training sessions on March 9th, with at least eighteen folks attending training or observing later that evening. Karen Keese did the level I training, while Mark Kroska handled the Level III training. Level III CCD Imaging training included instruction on the basic operation of the Astrophysics Dome followed by CCD imaging sessions which used our new motorized focuser and self-guiding interface. Portions of Level II training were rolled in as well, when our newest copy of TheSky software was used to help locate and identify objects as we imaged them. This new copy of TheSky v5, Level IV was also donated by Software Bisque.

Other people attending the evening sessions included Roger Bilisoly, Fred Brandeberry, Elizabeth Burki, Larry Cash, Ray Collins, Nancy Davis, Dick Fate, Dave Frizell, Carl Frisch, John Gould, Bob Legasse, Mike Lilly, Dennis Mitchell, Dale Murray, and Gordon Pegue. Many of those who attended the Level I Isengard training were there for a refresher course, however two new trainees received their personal copy of the laminated GNTO glovebox guide.

One of the evening highlights was a stunning new comet (C/2002 C1 Ikeya-Zhang) that is rapidly brightening in the western evening sky.

In previous months, I have reported that Cobisa has plans for a power plant a mere 2 miles Southeast of GNTO, which places the plant in Socorro County. New developments include an extension of the moratorium that restricts any new power plant construction in Socorro County. Cobisa may be looking for alternative locations away from the Sabinal area. There are plans for as many as three power plants within a 10-mile radius of GNTO, and an air quality permit hearing is scheduled for April 8th for the Valencia Energy, LCC proposed power plant in Rio Communities. We will need everyone’s help to fight these new power plant locations, so please keep these threats to your observatory in mind as we go through the next few months of public meetings.

In other news, Larry Cash was instrumental in obtaining a donation of two used hard drives from Lafarge...
In addition to law practice and parenting, Mr. Sandy served as president of the Harvard-Radcliffe Club of New Mexico, co-chair of the Harvard Campaign, and Regional Director for the Harvard Alumni Association. He observed, after attending the celebrations of the 350th anniversary of the founding of Harvard College, “[I]t was good to listen to people like Michael Walzer without having to scribble notes. Even Prince Charles [of Great Britain] was worth listening to, despite a costume which gave him the appearance of an enormous bee.”

Mr. Sandy took great pleasure in classical music (and in particular the concerts of the June Music Festival), and doing the New York Times, Harper’s, and The Atlantic Monthly crosswords, crostics and puzzles in pen. His home is overflowing with books and magazines on every possible topic. His photographic memory served him well in his work and as a contestant on Win Ben Stein’s Money.

He and his family were long-term member of The Albuquerque Astronomical Society and avid eclipse chasers, having traveled to the last three total solar eclipses in the Caribbean, the Black Sea, and Zambia, respectively. In support of his son’s rise to the rank of Eagle Scout, Mr. Sandy served as Committee Chair for Cub Scout Pack 48 and Boy Scout Troop 444. He was also on the committee for Astronomy Explorer Post 110. He will be remembered as a ready mentor and guide, a firm and loyal friend, a man of ready wit and profound integrity, and a dedicated, loving and supportive husband and father.

Mr. Sandy is survived by his wife, Alison K. Schuler, and 16 year-old son, Theodore Schuler-Sandy, of Albuquerque. He is also survived by his parents, Elizabeth and Robert, of Deerfield Illinois, his brother, Robert E. Sandy, Jr. and wife, Joan Phillips Sandy, and their children, Mary Phillips-Sandy and John Phillips-Sandy, of Waterville, Maine, and his parents-in-law, Irma and Richard Schuler, of Albuquerque. Mr. Sandy’s remains will be cremated.

A memorial service, followed by a reception, will be held on Saturday, March 9, 2002, at 11:00 a.m. at St. Luke Lutheran Church, 9100 Menaul NE. The family requests that contributions in Mr. Sandy’s memory be made to the St. Luke Lutheran Church memorial garden fund, 9100 Menaul NE, 87112; The Albuquerque Astronomical Society, Observatory Fund, P.O. Box 50581, 87181; or the Great Southwest Council of the Boy Scouts of America, 5841 Office NE, 87109. Arrangements by French Mortuary, 10500 Lomas Blvd. NE.

GNTO observing sessions are open to all interested TAAS members. We meet on Thursdays, one week before the TAAS general meeting. Everyone is welcome to contribute at committee meetings. If you have questions about access and availability of GNTO, please contact me (Pete Eschman, gnto@taas.org, home phone: 873-1517, work phone: 277-0020.)

I hope to see you soon at GNTO.
March 30, 2002 General Meeting
Karen Keese

It’s a Program About…Nothing
Have you ever wondered what’s in a
void? Well, wonder no more, because
at our March 30 meeting, we’ll have
the pleasure of hearing Dr. Stephen
Gregory, co-discoverer of the cosmic
void and the external supercluster,
enlighten us on this and other aspects
of his mind-bending research. In his
lecture entitled “Emptiness in Modern
Astronomy”, Dr. Gregory will include
a discussion of ‘dark energy’, a
recently-discovered component of
voids.
Dr. Gregory is an Associate Professor
at UNM, and co-author of the textbook
“Introduction to Astronomy and
Astrophysics”. In addition, Dr.
Gregory is TAAS’s liaison with
UNM’s Physics and Astronomy
Department.
For the Kids’ Activity, docent Judy
Stanley will be wowing her audience
with the Popcorn Solar System, an
exploration of the mass of the solar
system, as well as using balloons to
illustrate the expansion of the
universe. The Kids’ Activity begins
after the general announcements and
prior to the introduction of the guest
speaker, and is appropriate for ages 6
to 16.
So come one, come all, to expand your
mind. Then stay to expand your belt
and your circle of friends at the
mouth-watering munchies buffet (aka
the social hour). You’ll be glad you
did! The General Meeting starts at 7:00
PM. Regener Hall is located on UNM’s
Main Campus, west of Popejoy Hall.
For more information, call the TAAS
Information and Message Line at 296-

Astronomy Day Preparations
Get On Board!
National Astronomy Day is April 20.
National Astronomy Day is a national
celebration of what we as astronomers
do to share our love of astronomy with
the public. TAAS has used this event
to showcase every aspect of our
society. Here’s what’s in store for this
year.
April 20th we hope to have our TAAS
booth and demonstrations tastefully
displayed at the Coronado Mall. The
following teams of folks needed to
pull this event off in style will require
we set up Friday night April 19th -
break down Saturday afternoon April
20 - We are getting together March
30th at Regner Hall before our General
Meeting from 5:00 to 7:00 to bring
together all the “stuff” we plan to use,
display, and or will need for
Astronomy Day. We encourage all of
you to bring photos, equipment,
demos, and other materials you would
like to showcase. We will be using our
StarLab on Astronomy Day at the mall
to demonstrate our spectral analysis,
and show slides. We will be hosting
this demo as a practice run of sorts at
the Bound To Be Read Bookstore on April
6 about 2:00 P.M.
This is a personal invitation to YOU
to become a part of this exciting event.
EVERYONE is welcome and we will
definitely need EVERYONE! Please
contact Judy Stanley @
jstanley@sdc.org, (505) 838-2950 or
Sammy Lockwood @
ABQSAMMY@ATT.NET or just show
up on March 30th at 5:00 P.M. at
Regner Hall 2 hours before our TAAS
General Meeting. Don’t miss out! This
year will be our best ever!!!!
Lovely Evenings Coming Up

Barry Gordon

With Venus now back in our evening sky, and Jupiter and Saturn slowly but surely moving along to approach it, we are due for some very nice groupings. In fact, as moderating Spring temperatures make the great outdoors ever more inviting, our early evening skies from now through mid-May will be offering quite a show.

The warm-up act for the main event will take place on the evenings of April 14/15/16. As the sky darkens after Sunset, the bright stars of Orion, along with brilliant Sirius, will be in the southwestern sky.

Even more brilliant, the planet Jupiter will be above them. From Jupiter, working our way downward and to the right, we will find the planets Saturn, Mars, and dazzling Venus, in that order. (The bright star near Saturn will be the red giant Aldebaran, an “eye” of Taurus the Bull. Elusive Mercury, waiting in the wings for the “eye” of Taurus the Bull. Elusive Mercury, waiting in the wings for the “eye” of Taurus the Bull. Elusive Mercury, waiting in the wings for the “eye” of Taurus the Bull. Elusive Mercury, waiting in the wings for the “eye” of Taurus the Bull. Elusive Mercury, waiting in the wings for the “eye” of Taurus the Bull. Elusive Mercury, waiting in the wings for the “eye” of Taurus the Bull.)

Adding to the group of four (of the five) naked-eye planets, will be a “young” Crescent Moon moving upward among them — near Venus on the 14th, Mars on the 15th, and Saturn on the 16th.

As the Moon moves on, going about its business of getting fatter (though who am I to criticize?), two other things will be taking place: the planet grouping Saturn/Mars/Venus will be moving across the sky fairly quickly.

Here is some info:

COMET 2002 E2
Independent visual discovery reports of a comet have been received from Douglas Snyder and Shigeki Murakami. Available observations:

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<td>18 55.2</td>
<td>-0.46</td>
<td>13.0 Snyder</td>
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<tr>
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<td>11.4 &quot;</td>
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<td>04.1 12 &quot;</td>
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<td>50.8 11.5 &quot;</td>
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D. Snyder (Palominas, AZ). 0.50-m f/5 reflector. Coma diameter about 4’, diffuse with little central condensation. Motion about 5˚ toward northwest during Mar. 11.469-11.514 UT. Observed again Mar. 12.46-12.50.

Brian Skiff [mailto:brian.skiff@lowell.edu]
A first orbit has been published for this comet. Given the short arc, the ephemeris should be good enough for finding only over the coming couple of weeks. If things go as usual, an improved orbit will be done at the end of the current lunation. Since the comet is a good ways from Earth, the predicted sky location shouldn’t change dramatically as was the case with Ikeya-Zhang.

Nearby all the astrometric follow-up, by the way, was done by amateur observers all over the world. Complete details can be found at:
http://cfa-www.harvard.edu/mpec/K02/K02E43.html

Orbital elements:

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Ephemeris:

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</table>

Brian G. Marsden (C) Copyright 2002 MPC M.P.E.C.
Classified Ads

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Any TAAS member can use this coupon to borrow a TAAS telescope.
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Some restrictions apply. Offer valid for current TAAS members. Offer is first come first served. Latecomers will be put on a waiting list. Neither TAAS nor the telescope curators will be held liable for any lost sleep or other problems arising from the use of TAAS scopes.
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President/ATM Coordinator Ray Collins 344-9686(H) president@taas.org atm@taas.org
Vice President/Public Relations/Gen Mtg Coord Karen Keese 261-0040(C) vp@taas.org pr@taas.org
Secretary David Blair 296-9632(H) secretary@taas.org
treasurer@taas.org
Treasurer/Membership Services Dave Brown 275-9126(O) membership@taas.org
Director/Observatory Director Pete Eschman 873-1517 (H) gnto@taas.org
telescope_loans@taas.org
Director/Education Liaison Judy Stanley 838-2950 (H) education_coord@taas.org
Director/Membership Director Neil Goldberg 798-1958 (H) Neil@taas.org
Director/Newsletter Editor Dan Richey 293-3983 (H) editor@taas.org
Director Eric Buchheit 771-9050 (H) Eric@taas.org
Director Larry Cash 299-4686 (H) Larry@taas.org
Director Barry Spletzer 294-4601 (H) Barry@taas.org
Director Chris Wilson 821-1640 (H) Chris@taas.org

Events Coordinator Vacant events_coord@taas.org
TAAS Archivist Pat Appel 292-0463 (H) events_coord@taas.org
TAAS Librarian Dawn Gray 856-2054 (H) archivist@taas.org
ATM Coordinator Michael Pendley 296-0549 (H) librarian@taas.org
TAAS Web Master Sammy Lockwood 275-0258 (H) atm@taas.org
UNM Campus Observatory Coordinator Jay Harden 296-0537 (H) webmaster@taas.org
Telescope Curator Randall Gauntt 293-3410 (H) unnn_coord@taas.org
Explorer Post 110 President Ted Schuler-Sandy 856-7450 (H) telescope_loans@taas.org
Explorer Post 110 Advisor Mark Kroska 884-9108 (H) post110_pres@taas.org
Explorer Post 110 Advisor Mark Kroska 884-9108 (H) post110_advisor@taas.org
MEMBERSHIP: You may request a membership application by calling the Hotline or by sending e-mail to membership@taas.org. Applications may also be downloaded from the Web site. Annual dues to The Albuquerque Astronomical Society are $30/year for a full membership and $15/year for a full time student (High School or less) membership. Additional family members may join for $5/each (student and family memberships are not eligible to vote on society matters). New member information packets can be downloaded from the website or requested from the TAAS Membership Services Director at membership@taas.org You may send your dues by mail to our newsletter return address with your check written out to The Albuquerque Astronomical Society or give your check to the Treasurer at the next meeting.

MAGAZINES: Discount magazine subscriptions to Sky and Telescope and Astronomy as well as discounts on books from Sky Publishing Corporation are available when purchased by TAAS members through our society. Include any of the above magazine renewal mailers and subscription payments as part of your renewal check. Make checks out to TAAS (we will combine and send one check to the publisher). Warning: publishers take several months to process magazine subscriptions.

ARTICLES/ADVERTISEMENTS: Articles, personal astronomical classified advertisements and business card size advertisements for businesses related to astronomy must be submitted by the deadline shown on the Society calendar (generally the Saturday near the new Moon). Rates for commercial ads (per issue) are $120 per page, $60 per half page, $30 per quarter page. The newsletter editor reserves the right to include and/or edit any article or advertisement. E-mail attachments in Microsoft Word, 10 point Palatino, justified, no indent at paragraph beginning, one space between paragraphs is preferred. ASCII and RTF are acceptable. One column is approximately 350 words. Contact the Newsletter Editor at editor@taas.org for more information.

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TAAS on the World Wide Web:
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http://www.taas.org/download
taas@www.taas.org

Map to Regener Hall
(not to scale)

The Albuquerque Astronomical Society
P. O. Box 50581
Albuquerque, NM 87181-0581

Address Service Requested