In Search of the Great Attractor

HIGHLIGHTS OF THE APRIL MEETING

The April 6th meeting was called to order at 7:00 pm by Mike Pendley, and we immediately got underway with our feature guest speaker Dr. Patricia Henning of the UNM Physics and Astronomy Department. Dr. Henning is an observational cosmologist, and she updated us on her newest discovery—a massive, rich galaxy cluster. She collaborated with Dr. Renee Kraan-Korteweg and used the radio telescope of Capetown Observatory, S. Africa in the research.

Dr. Henning first presented a brief introduction to cosmological theory relevant to her work. We learned that the universe is expanding uniformly, but as it does, it is slowing down, in response to the gravity of its own mass. Using observational evidence, cosmologists have theorized the existence of a Great Attractor, a concentration of mass in the universe that all galaxies appear to be pulled towards. Unfortunately, the Great Attractor—presumably a super cluster of galaxies—lies in a Zone of Avoidance. The Zone of Avoidance is the dust laden (“Coal Sacks”) plane of the Milky Way; distant galaxies are obscured in optical wavelengths if located in this zone. The Great Attractor lies in the direction of Triangulum Australe, well inside the Zone of Avoidance.

While mapping at radio wavelengths in the Zone of Avoidance, Dr. Henning and collaborators discovered that a previously known galaxy cluster designated as Abell 3627 is far richer than previously thought. It is the size of the Coma cluster (Abell 1656), but apparently is closer to us than Coma. It also sits at the position of the theoretical Great Attractor! However, Abell 3627 is not the Great Attractor; more likely it is one of many giant galaxy clusters in this direction of space that together make up the Great Attractor.

Undoubtedly, Abell 3627 would be a nice target for large amateur scopes, such as an 18-inch Dob. However, Bill, you’ll have to travel about 4000 miles, er... light years, due south to escape the Milky Way’s dusty plane!

Many thanks to Patricia for the great (and scary) talk. A question and answer session followed.

Next, Karina Running Horse gave us a report about the successful Messier Marathon. Thanks Karina and Jay Hardin for the great eats, and Carl for use of his camper. Mike cited Gordon Pegue, Carl Frisch, Linda Hixon, Dave and Tom Pendell, and Kevin McKeown as those members having seen 105 or more Messier’s. On a related subject, Mike presented Gordon Pegue with a plaque for having completed the Herschel-400 list.

Mike also cited the recent Science Fare winners. Two winners were present with their exhibits: John Mancini (for “Holography”), and Kristen Madden for an exhibit on the variability of the speed of light in different media.

We next had a Comet Hyakutake update, with reports from various members. Especially notable were the 50 degree and longer tail lengths during the flyby!

The meeting wrapped up with the usual social hour, and a cake (courtesy of Kevin Ferguson) proved itself to be a “great attractor!”

—Kevin McKeown
President's Update

Congratulations to Messier Marathon Participants and Science Fair Winners

I would like to start off this month's column with a "welcome aboard" to Wade Douglas, the new Sidereal Times editor. As you can see, Wade is working hard to give our newsletter a new look. He will be evolving the format over the next few months, so this is a perfect time to tell us how we can make this monthly messenger more effective.

What do you like about the newsletter?
What don’t you like?
What's missing?
Any ideas?
Wade and I would also like YOU to consider submitting material for the newsletter. Technical articles, how-to-stories, observations, book reports, line drawings—any of these would make great additions to the Times.

Feel free to call me or the editor if you have any questions. Newsletter submissions should be mailed to Sidereal Times Editor, P.O. Box 1450, Tijeras, NM 87059. Please mark the envelopes: "Attention: Wade Douglas."

Last month we had a very successful Messier Marathon at GTNO. It was my first marathon, and I really had a good time. My most memorable moments have to be seeing M51 (The Whirlpool) and the Horse Head through Bill Tondreau's 30" Dobsonian and being there when Gordon Pegue completed his Herschel 400 list. Karina Running Horse has a follow up article in this issue of the Times, so I will not go into details here—with one exception. Karina thanked a number of volunteers responsible for assisting with the event. The only individual she forgot to mention was herself. Thank you Karina for all your help.

The 37th Northwestern New Mexico Regional Science and Engineering Fair was held on March 15. This year TAAS once again sponsored several special awards. Judges Bill Gaither, Brock Parker and Mike Pendley selected the following winners:

First Place
Kristen Madden of Jackson Middle School—"Does the speed of light change as it passes through different objects or elements"

Honorable Mention
Brandon Furst of Roosevelt Middle School—"How does the Speed and Angle of a Meteor Affect the Shape of the Resulting Crater?"
Cynthia Leatherman of Hope Christian School—"Venus, Renegade or Retrograde?"
John Mancini of Taylor Middle School—"Holography II"
Timothy Richey of Hoover Middle School—"How often will Venus, Mars, and Jupiter Appear in Conjunction?"

All these young men and women did a great job, and they should be very proud of themselves. Those of you that were at the April meeting had the opportunity to see Ms. Madden's and Mr. Mancini's projects and know what I mean. Spring break prevented the other winners from attending the April general meeting. We hope they will have the time to visit us at one of our upcoming meetings.

—Mike Pendley

May Meeting Preview

The regular meeting on Saturday, May 4, at 7:00 pm in Regener Hall will be a presentation by TAAS members themselves! Show us your latest astronomical projects such as mirror making, telescopes, or slides from trips to major astronomical observatories (a Kitt Peak tour, last year's Sac Peak trip, etc.).

We'll have a slide presentation of the April 20th McDonald trip for certain, and Carl Frisch has promised to show some slides of the Big Bend area. Many of you also have slides of past star parties, e.g. Riverside, that we'd like to see.

PANDA grad students are welcome also, to update their research, or tell us about things they've been up to!

Have a neat astrophoto? Show it to us. Anything you've been up to astronomically, goes! We've never done a true "show and tell" meeting, and from my past clubs, these are really great meetings. I know a lot of you have some experiences to tell about trips, etc.

Contact Kevin McKeown, at 254-9117, or Mike Pendley beforehand to get in on the schedule of presenters. First come, first served. Those participating will get five to ten minutes each.

We'll also have the usual social hour that includes cookies and goodies. A map to Regener Hall appears on the back page.

—Kevin McKeown

This Mug's for You!

TAAS now has mugs decorated with the society's logo on one side and an image of M13 made by Brad Hamlin at the GTNO site on the other side. Mugs are $3.00 for members and $5.00 for non-members and are available at TAAS meetings and events. I can't think of a better way to start off my morning than with coffee in a TAAS mug. Many thanks to Kevin McKeown and Karina Running Horse for helping me on the mug committee and to Lisa Wood for coming up with the mug idea in the first place.

—Elinor Gates

—The Official Newsletter of The Albuquerque Astronomical Society—
BOARD MEETING MINUTES SUMMARY
THURSDAY, APRIL 4TH

The meeting was called to order at 7:02 PM by Mike Pendley.
The minutes of the February 29, 1996 meeting were read by Secretary Steve Snider. After making corrections, a motion was made and seconded to approve the minutes as read. Motion approved.

Committee Reports: Gordon Pegue gave the Treasurer’s Report. The Society has $829.93, $4065.14, and $1441.77 respectively on deposit in the Education, Observatory, and General Funds for a total of $6336.84 on hand. It was noted that any contributions made to the Society in the name of Leo Broline would be placed in the Education Fund.

There was no Observatory Committee report and a brief Membership Committee report—membership is going up! Brock Parker updated the Board on Astronomy Day activities. Materials are arriving, minor maintenance is needed on some of the display panels, and phone lines are being ordered. Each phone line would cost us $112.27 for installation and service. Discussion of phone lines was deferred until New Business. It was decided that April 20th would be a good day for transport and preparation work at the UNM Campus Observatory from 9:00 AM - 12:00 Noon.

Old Business: Congratulations were given to the Messier Marathon organizers. Karina Running Horse asked that anyone who had viewed 50 or more objects to please contact her. She also informed us of a request from Sandia Pueblo asking the Society to hold mirror-grinding classes.

Science Fair winners were:
1st—Kristen Madden, Honorable Mention—Cynthia Leatherman, John Mancini, Tim Richey, and Brandon Furst. Kristen Madden will receive $50 and a complementary membership in TAAS.

Elinor Gates presented a TAAS coffee mug. The mugs have arrived; 120 mugs were intact with 20 damaged. There was a discussion regarding who should be given mugs. It was decided that a mug would be given to guest speakers, to new members signing up on Astronomy Day, and that mugs would be available for sale at $3.00 for members/$5.00 for non-members.

The McDonald Observatory trip scheduled for April 20th is still on. Registration of the Society name and logo has been accomplished. Our insurance has been paid. This concluded Old Business.

New Business: Mark Boslough from Sandia Labs made a presentation to the Board regarding "Comet Day II" to be held June 2-3, 1996 at the Albuquerque Hilton. TAAS was invited to organize a star party to be held at the Hilton on Sunday night, June 2nd. After discussion, Karina Running Horse volunteered to organize this event. A motion was made to add the event to the official events calendar. Motion was seconded and approved.

A motion was made to change a number of event dates to better fit holidays and the eclipse on September 26, 1996. Motion was seconded and approved.

It was agreed that there would be two meetings in June—general meetings are held during periods of full moon.

A motion was made to give complementary subscriptions of the Sidereal Times to John Fleck at the Albuquerque Tribune and Bill Eisenhood at KOB-TV. Motion was seconded and approved.

There was a discussion of what to do with Society materials that had been stored in George Pellegrino’s garage. It was decided that an inventory of the materials would be taken and various Board Members would take and store the materials.

There was a discussion of APS e-mail. APS is exploring information exchange possibilities. No action is needed at this time.

The ATM Class scheduled for May 22 - June 26 is a "go." A motion was made for Mike Pendley to charge $20 for members/$30 for non-members and be able to waive fees if appropriate. Motion was seconded and approved.

Other Items: Our outgoing newsletter editor, Steve Williams, was recognized for a job well done. Steve published 81 issues of the Sidereal Times. It was noted that our World Wide Web page was receiving notes from people around the world and that we were attracting new members through the Internet. A decision was made to send maps to the GNTO only by request. Lisa Wood asked for $20 for supplies for the "Wish & Fish" table at Astronomy Day—motion was made, seconded, and approved. Gordon Pegue informed the Board that his employer, Pace Iron Works, has donated all the materials except the "skin" for the new GNTO outhouse—solid steel! Lisa Wood had a question regarding school events—she would like to see some rules regarding smoking/language. After discussion, it was suggested that a list of suggestions for conduct be put together. Karina Running Horse volunteered to draft a list for the next Board meeting.

Gordon Pegue stated that our bank wants to change account structures. He will review the bank’s materials and make the appropriate choices.

Karina Running Horse received a letter requesting a pen-pal from the Society. It was decided to put the request in the newsletter.

Carl Frisch asked for volunteers to be contacts for various Society events. All events are now covered.

Steve Snider asked for feedback regarding the Society BBS. The Board had received only positive feedback and suggested that our BBS number be listed on the Society WWW Home Page.

There was a discussion of the phone line for Astronomy Day. The line would cost $112.27—is the line needed? UNM was funding their own line. A motion was made to fund the cost, seconded, and denied.

Karina Running Horse volunteered to organize a hospitality table at Astronomy Day.

Newsletter articles were assigned, and the meeting was adjourned at 9:32 PM.

Respectfully submitted,
Stephen L. Snider
Secretary

—The Official Newsletter of The Albuquerque Astronomical Society—
# May '96

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<td>TAAS Board Mtg (7:00pm)</td>
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<td>SFCC Observing</td>
<td>Eta Aquarid MS peaks</td>
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<td>Comet Hale-Bopp reappears from lunar occultation (12:27am)</td>
<td>Asteroid VESTA @ opposition (Mag 5.6 @ 12:00pm)</td>
<td>Venus @ its Max. Declination of the Century (+27.8°)</td>
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<td>Young Moon</td>
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<td>just 8° south of VENUS</td>
<td>ATM Class#1 (see Times article)</td>
<td>Young Astronauts Club Sleep-over</td>
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<td>Pluto @ opposition (7:00am)</td>
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<td>ATM Class#2 (see Times article)</td>
<td>TAAS Observatory Committee Mtg</td>
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<td>Asteroid Ceres @ opposition</td>
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### Observing in the Shadows of the Ancient Ones—Pt. II

On Saturday May 18, members of TAAS will once again be making the journey to Chaco Canyon. This will be our first official trip since October 29, 1994 (see “Observing in the Shadows of the Ancient Ones,” *Sidereal Times* October 1994) and the trip follow up in the November 1994 issue.

The camp sites have a restroom with running water but not much else. You will need to bring a tent, sleeping bag, warm clothes and food. If you have a scope, bring it. If you don’t, come along anyway—there will be plenty to share.

The drive from Albuquerque to Chaco Canyon takes about two and-a-half to three hours. We plan to meet at the campgrounds between noon and 5 p.m. on Saturday and begin the official program at 5 p.m. My advice is to get their as early as possible, so you will have some time to take a hike or two and see the sites. You might also want to bring a camera and take advantage of the many photo opportunities.

If you have any questions please feel free to call me at home. We will have additional information on activities and directions to Chaco Canyon at the May 4 regular TAAS meeting.

—Mike Pendley

### Notes:

- **TAAS**=The Albuquerque Astronomical Society
- **GNTO**=General Nathan Twining Observatory. Call Bill Tondreau @263-5949 to confirm.
- **SFCC**=Santa Fe Community College. Call Brock Parker @ 298-2792 to confirm.
- **UNM**=UNM Observatory observing nights. Call Brad Hamlin @ 343-8943 to confirm.
- **ATM**=Amateur Telescope Making. Call Michael Pendley for information @ 296-0549.

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|   | *Comet Day II @ ABQ Hilton (7pm)
Speakers & Star Party (see article)
"Hale-Bopp meets Shoemaker-Levy" |     |     | *ATM Class #3
(see Times article) | *SFCC Observing |     |     |
| 3 |     | 4   | 11  | 12  | 13  | 14  | 15  |
|   |     |     | *ATM Class #4
(see Times article) |     |     |     | *TAAS visits the VLA near Socorro
+ Mt. Withington Star Party after tour
(see article in this Times) |
| 9 |     | 10  | 17  | 18  | 19  | 20  | 21  |
|   |     |     |     | *ATM Class #5
(see Times article) | *TAAS Observatory Committee Mtg
+ SUMMER SOLSTICE (8:23PM) |     |     |
| 16| *NEW MOON
(7:37pm)
+ Mercury (Mag 0) 2.8° SSE of Mars (Mag 1.4)
22° from sun @ dawn | 17  | 18  | 19  | 20  | 21  | 22  |
| 23| *FIRST QUARTER MOON (11:24pm)
+ Mercury (Mag -0.5)
1.5° NNW of Venus (Mag -4.2) 19° from sun in morning sky |
| 24|     | 25  | 26  | 27  | 28  | 29  |     |
| 30| *FULL MOON
by American time, this is the 2nd full moon of the month (9:39pm) |     |     | *ATM Class #6
(see Times article) | *TAAS Board Mtg (7:00pm) |     |     |

### Oak Flats Star Party

Saturday, June 8th

Every summer that I have been a member of TAAS there have been summer star parties sponsored by The Sandia Ranger District and The Friends of Tijeras Pueblo at the Oak Flats Picnic Ground south of Tijeras. This year will prove no different.

The first of three events scheduled for 1996 is on June 8. It will be special, because The Albuquerque Archeological Society has invited TAAS to put on a star party for them. This will coincide with the regular public event.

Since there may be others from adjacent picnic loops attending, in addition to large numbers from the general public, I'm asking for as many telescopes and docents as I can muster. The UNM Department of Physics and Astronomy will also be supporting us with docents and telescopes.

The last quarter moon won't rise till late, so the skies will be quite dark.

Let me, Carl Frisch, know if you think you can attend. My phone number is 891-8978 or 272-7238. Look for more details in next month's *Sidereal Times.*

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*FireSide Chat*

On Saturday June 8th at 8pm, Elinor Gates will be presenting a talk titled "Objects in the Summer Sky" at the Elena Gallegos Recreation Area. After her presentation there will be a star party. Bring a telescope or just look through telescopes provided by other TAAS members. Admission to the recreation area is free for the *Fireside Chat Series.* More information will be printed in next month's newsletter.

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The Official Newsletter of The Albuquerque Astronomical Society
The Observer's Page

A Comet for the Ages

May Musings

Every year around May there is a celestial curiosity that I, religiously, have to check out. This is the long held observation that Beta Librae, or Zubeneschamali, of the zodiac constellation of the Scales, is the only green colored naked eye star of the night sky. I know most of you can detect the ruddy color of Antares, or the dazzling bluish tints of Vega and Sirius. But to detect an unusual tint in a second magnitude star such as Zubeneschamali seems unlikely. Back in spring, 1967, I do recall seeing the greenish tint by naked eye, but I can’t say that I rely on this observation: it was so long ago! Of course, you can use binoculars to better evaluate this enigma for yourselves, although the greater light may saturate your retina, voiding the green color.

When Comet Hyakutake moved through Libra in March, I repeatedly observed beta with 10 x 50mm binoculars and it does in fact look greenish! However, beta Librae, with a spectral type of B8, should appear to have the same color as Rigel, also of spectral type B8. Does Rigel appear green to you? Perhaps beta Librae exhibits some unusual emission or absorption bands in its B8 continuum, to produce its color. Can any of the UNM graduate students shed some (green) light on this one? Let us know.

Speaking of May, this month offers your last chance to observe the great globular cluster omega Centauri, with ease. By early June, you have to catch omega right after sunset. Early May is also a good time to verify the statement that when Orion sets, his nemesis Scorpius, rises. Also, May offers some of the best stargazing in New Mexico until October. By the time June arrives, the bugs are bad, the weather is too hot, and the nights are annoyingly short!

Updates

R Coronae Borealis continues its deep fade. It was magnitude 12.0 on April 13. Comet Szczepanski seems to have disappeared prematurely! With excellent black skies for the week of April 7, I could not locate this object, predicted to be of magnitude 9.5. Can anyone confirm this?

The April 3rd Lunar Eclipse

I observed this sunset lunar eclipse from near Santa Rosa, NM. The moon rose about two thirds partially eclipsed in a windy, dusty, but otherwise clear sky. It was impressive! The moon was a deep orange red when first seen close to the horizon, and it looked roughly like a total lunar eclipse!

As I set up my camera mount in broad daylight before moon rise, I found that I could easily pick up KOA am-radio 85 from Denver, Colorado, which was broadcasting the Colorado Rockies/Philadelphia Phillies baseball game from Philly. The sportscasters gave good “live” descriptions of the total eclipse in a dark sky!

Comet Hyakutake C1996 B2: First Notes

This is a comet for the ages. Of this I have no doubt. After the late March flyby which produced a spectacle far better than we could have imagined, I believe that one hundred years from now folks will be astonished when they read about the “Great Comet of 1996.” The descriptions of Hyakutake read like some of the best cometary shows of the past centuries. I hope all of you had a chance to observe this object in a very black sky, when it appeared huge, and absolutely dominated the night sky before the moon of late March. The rare aspect of this apparition was our chance to view a large active comet close by. You could literally reach up and touch it, it was so big!

We were treated to a fine telescopic comet during February. Hyakutake then already had a noticeable binocular tail which strongly suggested it would not be a repeat of the tailless flyby comet IRAS-Araki-Alcock of 1983. On the morning of February 29, it shone at magnitude 6.7 with a rich blue green color. One morning later, after an apparent outburst, I could easily see the comet for the first time with the naked eye at magnitude 6.2. When the moon cleared in mid March, Hyakutake became an easy naked eye object, with a short tail. By March 15th, the comet was magnitude 3.0, with a tail of 8 degrees (naked eye) when I observed it from black skies west of Los Lunas, NM. The tail paralleled the ecliptic, and pointed to the gegenschein. By March 19th, Hyakutake was magnitude 2.4 with a 10 degree long tail.

By the night of March 20-21, both the brightness and tail length seemed to explode! Gordon Pogue and I observed the comet at magnitude +1.8 with a 30 degree long tail under exquisitely black skies near La Joya, NM. Most remarkable was a newly formed plasma tail that was pencil thin, bright, of uniform character, and about 6 degrees long. We also observed a major disconnection event! A disconnection event is the separation of the plasma tail from the coma in response to a reversal in direction of the magnetic field of the solar wind.

The night next, March 21-22, set the stage for the flyby show. I observed the comet to be of magnitude 0.6, a whopping 1.2 magnitude increase in 24 hours! This was certainly a result of another outburst apparently associated with the new plasma tail Gordon and I observed the morning before. March 22-23, at UNM, we observed Hyakutake rising in the east. The inner coma structure was beautiful. Unforgettable was the spine

Continued on Next Page
Observer’s Page Continued

Hyakutake showed, as seen in Brock Parker’s Meade SCT! Later that night I observed Hyakutake to be magnitude 0.4. On this morning, the coma reached its maximum diameter, about 1.1 degrees.

The night of March 23-24 was generally cloudy, so I couldn’t tell what the comet was going to show on Sunday night, the 24-25th. This was the night of the flyby. I drove down to La Joya, arriving at about 10 pm. Just east on highway 60, I stopped for a “quick look” before moon set. Even without dark adapted eyes, I could not believe what I saw! Could it be? Hyakutake had somehow blown out a 50+ degree long tail! After moon set, the comet displayed a perfectly straight, distinct, 60 degree long tail which merged with the gegenschein, and a coma of magnitude +0.1. The tail resembled a searchlight, and the comet looked something like a giant exclamation point in the sky! Observing from Twining, Gordon Pegue and Bill Tondreau later corroborated what I was seeing.

From Deming, on March 25-26, the comet was even brighter, reaching a peak magnitude of -0.1. The 65 degree long tail now displayed a gentle curve, and was wider than the previous night. The big disconnection event had moved farther out from the coma, and was an easy binocular target. From Cañoncito, on March 26-27, the comet was perhaps at its finest. The tail stretched 72 degrees, and showed an unforgettable bend about 10 degrees out from the coma which left me with the impression that it was wagging in the solar wind! The coma was a bit fainter, approximately magnitude +0.5. On the last night of the flyby, March 27-28, from near San Acacia, the comet was markedly diminished in every way. The coma shone at magnitude +1.5, and the tail, still about 60 degrees long, was very much fainter in surface brightness. This last observation suggests to me that Hyakutake put on a well timed outburst as it flew by us. After March 28-29, moonlight interfered too much. The flyby was over.

As of this writing (April 12), comet Hyakutake continues to be an impressive naked eye object in the evening sky, although far reduced from the spectacle of just two weeks previously. The tail has remained greater than about 35 degrees, using binoculars. The coma, as we observed it during the flyby, is gone now, and a tiny, bright starlike nucleus sits at the exact tip of an emerging, parabola shaped dust tail. These striking changes reflect Hyakutake’s closer proximity to the sun and the very intense solar radiation and wind. But the show is not over yet! Please let us hear of your own personal observations in the Sidereal Times!

—Kevin McKeown

Mt. Withington Camp-out and Star Party

On June 15, 1996 TAAS will be visiting the VLA west of Socorro. This also coincides with the new moon. What better time for a star party and camp-out atop Mount Withington?

Such a camp-out/star party was attempted in August 1995, but rain and clouds got the better of us. Scheduling this year’s event in June should prove a bit drier, but it’s always a gamble.

Those who go on the VLA tour can caravan up to the mountain afterwards; or if you wish, just meet atop the mountain that afternoon. Even though it will be June, don’t forget to bring plenty of warm clothes; we’ll be camped above 10,000 feet!

More information will be in next month’s newsletter including how to get there. Feel free to call me, Carl Frisch, if you have any question @ 891-8978 or 272-7238.

The Kids’ Corner

Hi! My name is Lindsay Wood. My family and I live in Albuquerque. Sometimes on clear nights our family goes out to observe the vast outer space. Since I am only eleven, you probably won’t hear any really technical terms for awhile, so I guess you will have to live with my words for now. My mom has been involved in astronomy for as long as I’ve known her. In Salt Lake City she used to work at Hansen Planetarium. They had cool shows there. She has also been with TAAS for awhile. My mom is the one that got me interested in astronomy. I think observing is a pleasant way to do science. Well, that’s until you start telling ghost stories with your friends. Then it gets spooky. Looking at neat things is pretty cool. My favorite star is Vega. It’s so brilliant in the night sky. I also like the name Vega. It’s a very interesting name. What’s your favorite star? Think about it.

The KC is a new feature of the Sidereal Times, especially written for and by kids. Lindsay Wood has volunteered to be the editor of this column, and welcomes articles or questions written by TAAS kids. Please send your contributions to Lindsay at PO Box 90666, Albuquerque, NM 87199, and she will make sure they get into the newsletter at the first available slot.
Messier Marathon Thanks

Well folks, the Messier Marathon has come and gone, and we need to thank all of the folks that made it possible for the event to be such a great success.

First, we would like to thank Carl Frisch for his whole-hearted help and cooperation, but mostly for his advice, warm trailer and good cooking.

Second, Brad Hamlin with the help of Kevin McKeown did a whiz-bang job of running the telescope in the dome along with sorting out all of the many little problems that sprang up. Thank you very much fellows.

Without the Messier Marathon packet list in which the objects were listed in the order they rose, many of us would not have had the success that we had. A really big thank you goes to Lee Mesibov for developing this remarkable list and sharing it with all of us.

Thank you again Kevin for making the directional signs and for volunteering to lead a caravan of members new to the General Nathan Twinning Observatory.

Also to Gordon Pegue and Bill Tondreau along with Ellie Gates and all those kind folks who provided the muscle to assemble all the luminarias, many thanks (especially to Gordon and Bill for placing, lighting, and maintaining those lovely directional pinpoints of light). Just think, nobody drove off the Mesa!

We mustn’t forget to thank the “Posole Guy,” Jay Harden, who drove his Winnebago over our rough, ROUGH road to provide us all with some of the best posole I’ve ever eaten.

To Lisa Wood, who has been an inspiration and a great help with ideas and advice on how to . . . and where do I go to get this done . . . I wish to extend a personal thank you.

Lastly, I would like to thank the Winds who came and blew the clouds away, so that we would be able to see the stars, and I would see my first comet. But mostly I wish to thank the Great Spirit who gave us the sky and the stars in the first place

—Karina Running Horse

Messier Marathon Scores

To the best of my knowledge, the following people viewed 100 Messier objects, or more, the night of our marathon:

Linda Hixon (105)  
Carl Frisch (108)  
Tom Pendell (106)  
Dave Pendell (106)  
Gordon Pegue (109) . . . albeit computer aided

This is a remarkable achievement and is to be much admired. To those of you who viewed over 100 objects at one sitting and have not been mentioned here, please let us know about it as we certainly wish to acknowledge your success. To those of you who are mentioned here please except our heartfelt congratulations. You are an inspiration to us all.

—Karina Running Horse

Comet Day II

Sunday evening June 2, 1996 in the Albuquerque Hilton, Albuquerque New Mexico, at 7:00 p.m., fellow T.A.A.S. members and friends will be treated to the encounter of the century (now for the drum roll) . . .

HALE-BOPP
MEETS
SHOEMAKER-LEY 9

FEATURED SPEAKERS:
Carolyn Shoemaker
Eugene Shoemaker
David Levy
Alan Hale
Thomas Bopp
. . . and more

TECHNICAL SESSIONS ON:
• Bolides & Atmospheric Entry Physics
• Micro meteorites and Space Debris
• Near-Earth Objects

SUNDAY NIGHT STAR PARTY
(time and place to be announced later)
Sunday evening
(no registration fee):
Alan Hale, Thomas Bopp,
Wolfgang Elston, David Levy
and Star Party
Monday (special one day registration, $100): Technical sessions
and lunch time lecture by Carolyn and Eugene Shoemaker

ATM CLASSES TO BEGIN ———

Arrangements for the Spring 1996 telescope making class have been completed. The class will meet in the Physics and Astronomy building (Lomas and Yale) from May 22 through June 26 (Wednesday nights) from 7-9 p.m. The class will cover mirror grinding and polishing, optical test procedures, telescope design issues, and how to build the neces—

Continued on Next Page
ATM Continued

sary mechanical components. Students should have a completed telescope by the end of the 6 week class. No special skills or tools are required (really!).

Class fees are $20 for TAAS members and $30 for non members (funds go to the TAAS education fund). Material cost will depend on the telescope size. Mirror kits range from $50 (4.25"), to $350 (12.5"). Other supplies will range from $150 to 7 depending on your ingenuity and how fancy you get.

Returning Fall '95 students and new TAAS members with ATM (amateur telescope making) skills promise to make this class the best ever. I would like to close registration in early May so I can get supplies ordered and class notes printed. Give me a call if you have any questions.

—Mike Pendley

RANDOM ACT OF KINDNESS

Many thanks to Society Benefactors! Financial donations were made by:

Marie Hughes Elementary PTA
Santa Fe Children’s Museum
Brad Hamlin
Paul Reifsnnyder
Jeff and Carol Macrandor
—(to the Leo Broline Awards Fund)

Also thanks to Tom Reilly of Pace Iron Works for a donation of labor and materials for the new outhouse to be built at the Twining Observatory. Observers rejoice!

Brock Parker, for organizing the solar observing that occurred at the Santa Fe Children’s Museum for their seventh birthday celebration, resulting in a handsome donation to the society.

Barry Gordon, for donating a new slide tray with ring to the docents so they can stop playing 78 slide pick up!

Amateur Astronomers are Great! Thanks!

—Lisa Wood

Thank You HYAKUTAKE!!

During the week of Comet Hyakutake’s closest approach, I had the honor of sharing the skies with an amazing number of people!

-It all started on Friday March 22 at the UNM Campus Observatory. Many of us had our telescopes and binoculars set up well before the observatory officially opened, but that didn’t seem to make much difference. The public had gotten the word that a REAL bright comet is out there and a bunch of professional and amateur astronomers have set up telescopes to look at it. It wasn’t the best of nights for star watching but through the breaks in the clouds the comet was visible.

Immediately after the first few shouts of “There it is!” everyone manning a telescope found themselves to be a little island of knowledge surrounded by a sea of questions, all the while having to keep adjusting the scopes/binocs to keep the comet in view.

Even the media came out to be a part of it.

The night turned out to be long in time, yet quick in thought. I had a great time.

- On Sunday March 24th, a bunch of us again came out to UNM in the hopes of catching another glimpse of the comet, and we were rewarded. The skies were clear, and the comet was up early. Again the public came out in force, and again it seemed like time flew.

- The final night of the comet, star parties at UNM was held on Friday the 29th. Everybody was setup, press was getting their cameras out, and the crowd was enormous. The comet was up, the moon was up, even Venus was up. But so were the clouds. Everywhere!

I like using Hydrogen filters and I like using Oxygen filters, but I’ve found that if you mix the two together, you don’t see very much. The “pesky” clouds would hint that they were leaving. A few holes would open up and give a view of the comet, or Venus, or even the Orion Nebula, but just as soon as a telescope was pointed, the clouds would “eat” what you were looking at. It was quite frustrating, but the slide show about comets was a BIG hit.

-It’s been a few days now since the week was over, my feet are still sore a bit, but I feel great about what we’ve done, and I would like to extend my hand to all that participated (even those that tried, but found that their tires were flat). THANK YOU for all the help you gave; it could not have been done without you.

Sincerely,
Brad Hamlin

P.S. The campus observatory is open to the public every Friday night (weather permitting) from 8pm-10pm. It’s location is just north of Lomas ON Yale. Just get on Yale from Lomas, go to the top of the hill, and the observatory is on the west side of the road (look for the red lights on the building). See you there!
DUES: Please note the expiration date on your mailing label. If you are due for membership renewal, 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 (Gordon Pogue) at the next meeting. Please include the membership application that is sent with your newsletter when it is time to renew. NOTE: Discount magazine subscriptions to Sky and Telescope ($24/12 issues), Astronomy ($18/12 issues) and CCD Astronomy ($20/4 issues) 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 notices and subscription payments as part of your renewal check (We recommend you renew 1-2 months early to ensure uninterrupted magazine subscriptions.). Membership dues are $20.00 per year plus $3.00 per year for each additional family member. Also available for qualified applicants is an Educator Membership—contact a Board Member for details. Membership Packets cost $5.00 each for new members or renewing members without a packet. Contact the Treasurer for more information.

NEWSLETTER ARTICLES/ADVERTISEMENTS: Articles, personal astronomical classified advertisements and business card size advertisements for businesses related to astronomy can be submitted within 3 days after the latest Society general meeting for publication in the following Sidereal Times. Rates for business card size ads are $10/ad/issue or $7/ad/issue for 12 consecutive issues. The newsletter editor reserves the right to include and/or edit any article or advertisement. ASCII files uploaded to the TAAS BBS newsletter file section are preferred. Contact the Newsletter Editor (Wade Douglas) for more information.

CHANGE OF ADDRESS: Note that the Sidereal Times is mailed at a non-profit organization bulk mail rate. As a result, the newsletter will NOT be forwarded to your new address should you move!! Please provide the Secretary (Steve Snider) with your new mailing address to ensure that you receive your newsletter.

TAAS LIBRARY: Please contact the Librarian (Lisa Wood) to check out a book or make a contribution.

The Albuquerque Astronomical Society
P. O. Box 54072
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Address Correction Requested

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