ASTRONOMY DAY 1996

Great Fun
Great Turn-out
Great PR for TAAS

This year, Astronomy Day was a complete success, even better than last year’s event. I don’t have the space to thank everyone individually, and if I tried, I would probably leave someone out. So as a blanket “hurrah,” I would like to take this opportunity to thank all of those hard working people who made the event a memorable experience. The exception to this is our vice-president, Lisa Wood. She above all others, including myself, made the event work. Long hours spent typing correspondence and “working the phones” to coordinate all of the participants deserve the highest praise our Society can give.

I would also especially like to congratulate Kevin Jarigese and the kids from Moriarty Middle School who put on several outstanding displays. This was so successful, that we plan to expand school involvement in the future.

The only cloud on the proceedings, literally, were those clouds that obscured the Sun, and put a damper on the evening star-party at the Campus Observatory at UNM. Any observational event is a “roll of the dice,” and all I can say to Bruce Levin and Brad Hamlin is better luck next year.

Speaking of next year, we plan to observe Astronomy Day 1997 at the new Cottonwood Mall on the west side of Albuquerque. As soon as their management office is opened, I plan to camp out until they agree to allow us into this new mall.

For the record, I would like to include a list of the organizations that had displays at the mall this year.

- Institute of Astrophysics (UNM Dept. of Physics and Astronomy)
  - Loadstar Project
  - Graduate Students Display
- New Mexico State University Astronomy Dept.
- Museum of Natural History
- National Atomic Museum
- The Space Center and Space Hall of Fame
  - Starlab planetarium
  - Mercury Capsule
- Institute of Meteoritics, UNM
- Moriarty Middle School
  - Hands on meteor display
- Phillips Laboratory (Starfire Optical Range)
- National Radio Astronomy Observatory, (VLA, VLBA)
- Apache Point Observatory
- National Solar Observatory, (Sunspot Observatory)

Again, I thank all of you who were at the Mall and UNM, and for those who could not make it this time, please make plans to attend next year.

— Brock Parker

See Page 5 for More Photos from Astronomy Day—1996
**PRESIDENT’S UPDATE**

**Astronomy Day Efforts of Interest to ATM’s on the Internet**

**Item 1:** What do you think of the new Sidereal Times look? I had seen bits and pieces of the new format early on and I had a general idea of how it was all going to go together but when I finally saw the whole thing—wow, it was just great. Since then, I have received a number of positive remarks on the new format. Wade did an excellent job of creating the basic look AND completing his first issue in less than a month. In fact, we would have had the news letter to you sooner if not for the little mix-up by the company that does our printing and mailing. If you have any suggestions or comments, please do not hesitate to contact Wade or me.

**Item 2:** Saturday, July 6 is the date for the annual TAAS picnic at GNTO. The picnic will be followed by a night of observing. This is a great opportunity for new members to meet people and see the observatory in daylight. Long time members will be able to renew old acquaintances. Details will be printed in the next newsletter.

**Item 3:** Before we return to a more traditional general meeting format at the end of June, we wanted to try one more experiment. The June 1st general will once again feature TAAS members but this time with a hardware angle. Those of you with a love of gadgets should really love this one. I hope to have my first mirror grinding/polishing machine completed by then so I can share it with you. See Kevin McKeown’s write up for more details.

**Item 4:** Brock Parker’s article this month provides a general review of how Astronomy Day went last month. I had a particularly good time this year and I wanted to share, in a more personal way, how I spent most of my time.

We all have some area of astronomy that we hold above all others. Some of us have a passion for deep sky observing or planetary viewing while others like occultation timing or variable star observing. My particular interest is amateur telescope making (ATM) (thanks to the bug John Dobson gave me two years ago). For that reason, I look forward to Astronomy Day when I can share this love with the public at the mirror grinding/telescope making exhibit. I was able to spend quite a bit of time at the display this year, but my new position on the board did not afford me the time necessary to organize it. Fortunately, fellow ATM-er Kevin Ferguson (whom I first met through an Internet ATM discussion group) volunteered to take charge.

Since he had no experience giving public presentations on telescope making, he turned to that same discussion group where we met to ask for advice. After Astronomy Day he posted what he had learned for the benefit of others. Since our newsletter quite literally goes all over the world I thought that reprinting his post would serve as inspiration to others who might want to organize a similar display and document this year’s ATM activities at Astronomy Day. Thanks Kevin.

—Mike Pendley

**Editor’s Note:** The following is a reprint of Kevin Ferguson’s internet posting for ATM’s—

As promised, this is the follow up posting to my previous request for ideas on putting on a ATM display at the mall. Thanks for the suggestions earlier.

To remind those who don’t recall my earlier posting, this was done as part of the Astronomy Day exhibitions of The Albuquerque Astronomical Society, this past Saturday, at a local shopping mall.

Due to a shortage of table space, and a very sunny outdoor location, we decided not to have the John Dobson video playing after all.

TAAS president Michael Pendley (who really did a lot of work to make this event a success) supplied a board showing the various steps of mirror making. We had two tables full of visual aids... disks at every stage of completion, lathes, a KE tester, copies of Texereau, and Sam Brown. Mike will be running an ATM class in a month or so, and we were passing out fliers for that.

Bob Kyrilch made up a small board with squares of glass ground only with various grit sizes... this really helped in explaining the process. Bob is a retired school teacher. A few years back he had his physics students making mirrors from those glass cups you put under furniture legs. He had a number of these to show, in various stages, and problems... all arranged in neat "hands on" display box.

Our big attention getter was a sit down grinding stand, placed a few feet in front of the booth, right in the traffic flow for the mall entrance. It was fairly easy to entice the kids into trying out glass pushing, and with a kid on the stand, you have a real traffic stopper. We worked all day with the same pair of 6" plate glass disks. Small enough for the kids to handle, and cheap enough to sacrifice.

After a few hours with #120 carbo, I was getting bored (and the work was starting to drag on the cleats on the grinding stand) so I switched to #220. In retrospect this was a mistake. #220 tends to "catch" and "grab" in inexperienced, young hands, and lacks that satisfying feel that #120 gives. #60 or #80 would just wear out the disks faster, so I think 120 is about optimal for this use. One of my helpers, kept using a generating stroke... so the 220 did keep the curve from getting so deep, but that was the only good thing to be said for it.

If I do this again, I will try to come up with some sort of a "Newt-on-a-stick" telescope, to use in explaining how a reflector works. We did have a couple of home brewed Dobs on display, but their owners were understandably reluctant to sacrifice them to public manipulation. The reflector vs. refractor explanation always needs to be addressed when talking to the general public.

A single grinding stand was enough, and the sit down style accommodated all sizes of kids and adults.
There are plenty of questions to be answered while those who want to try wait their turn.

The outside location worked well, as we didn’t have to worry about spilled water, grit, etc. A picnic awning provided essential shade to keep laps, and ATMs from melting in the sun. It was handy to be able to focus sun from wet mirrors — really convinces people all this stuff works. Maybe I wouldn’t be so keen on the idea if it had rained, however!

BTW, We were lucky to have a "industrial strength" awning available. (Thanks George P.) An adjacent group had a “department store” version that didn’t stand up to a stiff afternoon breeze.

If anyone else is thinking of doing this, one thing to be aware of is the problem that is bound to occur when 2 or more ATMs congregate in the same place... they start talking mirror cell designs, etc., and forget that they are there to talk to the public. Not sure how to solve this (and it isn’t a HUGE problem) but it is a good reason to avoid scheduling too much help. I scheduled my helpers in 3 hr. shifts. I had only one no-show, and several ATMs stuck around much longer than their official "shift." No shortage of help!

No attempt was made to keep track of how many people we talked to... I do know that my throat was sore at the end of the day from explaining things, and my helpers were at least as busy as I was. We were busy enough that I was grateful for the few slow periods that came along. I’m sure a few folks will be taking Mike’s class as a result, and I know a lot of folks know more about telescopes, and our hobby than they did last week. It won’t change the world, but I still feel it was worth doing.

Since I was only able to spend part of my time outside I don’t know if I saw all the individuals that helped with the ATM display. Those I did see include Robert Semrad, Jon Pendley, Bob Kyrilch, and Roger Flegel. I apologize to those that helped but did not get mentioned here.

—Kevin Ferguson

Random Act of Kindness

Many thanks to the members of TAAS for the following donations of time, funds, equipment and energy:

Dan Leavitt and Bill and Myra Galther for helping out at the Santa Fe Children’s Museum Birthday Party.

Astrophysics grad student, Eleanor Gates, for teaching astronomy for the Elder Hostel at Sante Fe Community College, after which Brock Parker brought out his array of telescopes for sky viewing.

Bill Tondreau and Brock Parker for bringing astronomy to Petroglyph Elementary School.

Brock Parker for also bringing astronomy instruction and telescopes to the following institutions this month: McKinley Middle School on Girl Scout Camp Day, Farmington Mesa View Middle School, Laguna Elementary, Valencia Campus, Baptist Conference Center in Glorieta and Lincoln Middle School.

Thanks also to all the Astronomy Day Workers, too numerous to mention!

Bushrod Lake for his loan of Pale Blue Dot to the library.

Dan Leavitt and Brock Parker for their participation at the May Celestial Highlights show at Santa Fe Community College on May 2nd.

Katie Noble, Lindsay Wood, Steve and Jon Pendley for representing the younger contingent of astronomers on Astronomy Day.

Pat yourselves on the back — you’re superlative! Have I forgotten someone? Call and let me know!!!! Lisa Wood 344-8308

Lisa Wood

What Board Meeting?

Editor’s Note:
The May 2nd Board Meeting failed to achieve a quorum. As a result no actions could be taken and no minutes were reported to the Sidereal Times.

All board members are encouraged to attend these very important meetings.

New Mexico Astronomical

Celestron • Meade • Televue
Parks Optical • Unitron • Home Dome
Telescopes • Eyepieces • Mounts • Accessories
Books • Sky Atlases • Observatory Fabrication
On-Site Observatory • Regular Star Parties

Come to the Country Telescope Store and Test Equipment Under Dark Skies!

834 N. Gabaldon Rd.
Belen, NM 87002
(505) 864-2953

MARK A. NAGRODSKY
OWNER

Hours — Wed & Fri: 6-9 pm & Sat: 12-6 pm (Additional Hours by Appointment)

Page 3 —The Official Newsletter of The Albuquerque Astronomical Society—
McDonald Observatory Trip Is Big Success

For those of you that attended the McDonald Observatory tour April 20th, I think you'll agree that this was one of the best trips sponsored by TAAS. The campsite was shady, the weather was warm, the skies clear and dry. On top of that, the company was top notch.

Although only about 20 TAAS members made the trip, the long (and sometimes bumpy) trek was well worth it. The Saturday afternoon tour was outstanding. The tour was augmented by a solar observation session, a shopping spree, and a great public star party. TAAS members Myra Galther and Linda Hixon ran the Observatory's 24" dob and other members entertained the public with their own scopes. Good job folks! After most of the public left around 11 PM, the visitor's center parking lot was ours for the night (thanks Marc and Julie). Personally, I think the viewing conditions that night were the best I have ever seen. The Sagittarius star cloud was bright enough to cast quite a shadow!

Many who went are already asking about doing it again next year. I'm all for doing it again and I think April is the ideal time. Let me know what you think.

—Carl Frisch

—MAY MEETING REPORT—

FROM ALPINE TEXAS TO THE TAJ MAJAL

Our May 4th regular meeting at Regener Hall was called to order at just after 7 p.m. by Mike Pendley. The main topic of this meeting was a color slide “show and tell” presented by several club members. Carl Frisch was the first speaker, and he presented an excellent slide show covering the April 20th McDonald Observatory tour, followed by some slides of his past Big Bend National Park excursions, along with some Big Bend “stock” slides.

From the slides of the McDonald trip, Carl very effectively captured the essence of that wonderful weekend in west Texas: the campsite, the animals, the terrain, aspects of the Observatory, and finally, our nighttime observing sessions and locations. The Big Bend slides served to heighten interest in an (as of yet) unscheduled trip to southwest Texas next year!

Next, Barry Gordon presented slides of some of his past total solar eclipse excursions. Barry’s slide show, along with his sage advice on how to chase, observe, and photograph a total solar eclipse, was riveting! We saw slides from excursions to Canada 1979, India 1980 (the Taj Majal was beautiful!), USSR 1981, Mexico 1991—just to mention a few.

Next, Carl showed slides of our April 27 Astronomy Day taken by Linda Hixon and Wade Douglas, recalling for us the many successful exhibits.

Additionally, science fare winner Timothy Richey presented an exhibit. The usual social hour followed club announcements.

—Kevin McKeown

TAAS MUGS ARE A BIG HIT WITH MEMBERS

TAAS now has mugs decorated with the society's logo on one side (see above) and an image of M13 made by Brad Hamlin at the GNTO site on the other side (see below). 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. Again 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

This image of the globular cluster M13 in Hercules was taken by Brad Hamlin and Dennis Mitchell using an SBIG ST-6 CCD camera mounted on a 25-inch Dobsonian reector owned by John Sefick. Brad and Dennis used a 30 second exposure; the Dob was mounted on an equatorial table during the exposure.

—The Official Newsletter of The Albuquerque Astronomical Society—
MORE FROM ASTRONOMY DAY

JUNE 1 MEETING PREVIEW
A HANDS ON LEARNING EXPERIENCE

In case you haven’t noticed, June 1996 is a “blue” month for TAAS regular meetings, as we will meet June 1st and June 29. The regular meeting on Saturday, May 4, at 7 pm in Regener Hall will feature a telescope, telescope accessories, and amateur telescope making clinic! This hands on meeting will cover topics such as aligning reflecting telescopes, improving telescope usability, mirror grinding and polishing, optical testing methods, mounts, observing techniques, etc. Carl Frisch and Gordon Pegue have kindly offered to discuss laser alignment. Mike Pendley will show us his new mirror grinding machine. Kevin McKeown is going to bring in a solar telescope used for the May 10, 1994 solar eclipse, along with a Foucault tester, and his 10-inch Dob. All of you are encouraged to bring in your telescopes, if for only show off purposes! If you have a telescope accessory, or binocular mount, or wish to share Dobsonian design methods, we’d like to see or hear about it! Call Kevin McKeown at 254-9117 or Mike Pendley at 296-0549 if you have any questions. A map to Regener Hall appears on the back of the newsletter.

By the way, the second June meeting is on the 29th, at Regener Hall, 7 pm, and will feature Dr. Earl Spillar of the University of Wyoming a cosmologist on sabbatical at the Starfire Optical Range.

— Kevin McKeown

A Word from your Sidereal Times Editor—

I appreciate all the favorable comments I received after the May issue of the Times was completed. In this issue, Mike mentions in his Presidential Update that the newsletter was late getting mailed because of a problem at the printer. Actually, it was only partly the printer’s fault (and you might argue, not his fault at all).

I turned in the artwork for the May issue on a Tuesday. The printer completed his work on Friday, and unfortunately took it to the post office for mailing quite late Friday afternoon. When he tried to bulk-mail our newsletter, it was discovered that our account at the post office had no funds. The courier that had been sent to the post office did not have a checkbook, so he or she was unable to mail the Times on Friday. Saturday the post office bulk-mailing department was closed, so we ended up mailing the newsletter on Monday morning—early in the morning.

This month, however, the lateness of the Sidereal Times is entirely my fault. Please accept my apologies.

— Wade Douglas

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

<table>
<thead>
<tr>
<th>SUN</th>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TAAS General Mtg @ Regener Hall (7:00pm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FULL MOON (2:48pm)</td>
</tr>
<tr>
<td>2</td>
<td>Comet Day II @ ABQ Hilton (7pm) Speakers &amp; Star Party (see article)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Hair-Bopp meets Shoemaker-Levy&quot;</td>
<td>3</td>
<td>Rising Jupiter, 3hrs after sunset, is very close (5') to waning gibbous moon</td>
<td>4</td>
<td>ATM Class #3 (see Times article)</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Venus @ inferior conjunction; watch for Venus to rise before the sun in about 1 week</td>
<td>10</td>
<td>Venus rises about 30 minutes before the sun</td>
<td>11</td>
<td>ATM Class #4 (see Times article)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>NEW MOON (7:37pm) Mercury (Mag 0.75) 2.8&quot; SSE of Mars (Mag 1.4) 22&quot; from sun @ dawn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Venus rises about 30 minutes before the sun</td>
<td>18</td>
<td>ATM Class #5 (see Times article)</td>
<td>19</td>
<td>TAAS Observatory Committee Mtg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUMMER SOLSTICE (8:45PM)</td>
<td>20</td>
<td>TAAS Board Mtg (7:00pm)</td>
<td>21</td>
<td>TAAS Board Mtg (7:00pm)</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>FIRST QUARTER MOON (11:24pm) Mercury (Mag 0.5) 15° NNW of Venus (Mag -2.19) 19&quot; from sun in morning sky</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Venus now rises more than an hour before the sun</td>
<td>25</td>
<td>ATM Class #6 (see Times article)</td>
<td>26</td>
<td>TAAS Board Mtg (7:00pm)</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>FULL MOON by American time, this is the 2nd full moon of the month (9-59pm) &quot;Blue Moon&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 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-LEVY 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

---

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

<table>
<thead>
<tr>
<th>SUN</th>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>• Venus stationary</td>
<td></td>
<td></td>
<td>• SFCC Observing</td>
<td>• Earth • aphelion</td>
<td>• TAAS Annual Picnic</td>
</tr>
<tr>
<td></td>
<td>• Jupiter 5° S of moon @ 3:00 am</td>
<td></td>
<td></td>
<td>• Jupiter • opposition (5:00 am)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>• LAST QUARTER MOON (11:55 am)</td>
<td></td>
<td></td>
<td></td>
<td>• Crescent Moon in Hyades</td>
<td></td>
<td>• TAAS • OAK FLAT STAR PARTY</td>
</tr>
<tr>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>• NEW MOON (11:15 am)</td>
<td>• Moon • apogee (7:00 am)</td>
<td>• Venus • greatest brilliancy</td>
<td>• TAAS Observatory Committee Mtg</td>
<td>• Saturn is stationary</td>
<td>• Ceres is stationary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Neptune • opposition (11:00 am)</td>
<td></td>
<td>• Rain date for GNTO ladies night out</td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>• FIRST QUARTER MOON (10:49 am)</td>
<td></td>
<td></td>
<td>• TAAS Board Mtg (7:00pm)</td>
<td>• URANUS • opposition</td>
<td>• TAAS General Mtg @ Regener Hall (7:00pm)</td>
</tr>
<tr>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• S delta-Aquarid Meteor Shower Max (4:00 am)</td>
<td>• FULL MOON (3:35 am)</td>
<td>• Moon • perigee (1:00 am)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### OAK FLAT STAR PARTY
Saturday, June 8th

This is a last reminder that if you haven’t worked Oak Flat into your schedule please try to. Food will be provided to TAAS docents who arrive early (about 6 PM). The Star Party will kick off around sunset.

This year, as last, the star party will be in the Juniper Picnic loop. To get there take I-40 east to Tijeras exit 175 (7.5 miles east of Tramway). Then go south 8.8 miles on NM 337 (South 14). Brown signs lead you east 1 mile on FR 413 to the picnic grounds.

We can stay all night if we wish. Usually we get some good observation time in after most of the public leaves by midnight. Hope to see you there.

—Carl Frisch

### MT. WITHINGTON STAR PARTY
Saturday, June 15th

Do you want to do some dark, deep sky observing? Mt. Withington is the place. June 15th is the date. All are welcome to come for a campout and star party, even if you don’t have a scope. There will be plenty of scopes to go around.

Prepare for primitive camping: bring tent, sleeping bag, food, water, and plenty of warm clothes. The night air can be quite cool above 10,000 feet!!

To get there just caravan with the VLA tour group after the tour, or from Albuquerque go to Socorro, then west on highway 60 past Magdelena about 12 miles to forest road (FR) 168. Turn south on FR 168 for about 17 miles to the Mt. Withington lookout. Just follow the signs.

### 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.
THE OBSERVER'S PAGE

Bootus—A Novel Asterism
(NOT Bootes—The Constellation)
and "How I Figured Out the MARFA LIGHTS"

June Musings
This year, on June 20th, the sun culminates at its highest celestial declination north, and summer begins! June 20-21 will be the shortest night, about nine and a half hours for Albuquerque. But you won't notice much difference in the length of the night for nearly three or four weeks on either side of the summer solstice. This is because the sun's declination changes almost imperceptibly around the point of the summer solstice. Remember, it's the declination of the sun that determines how many hours of night we get here locally.

However, for local astronomers, the nine to ten hours of night are cut into by lengthy twilight periods after sunset, and before sunrise, so make good use of the six hours of true darkness we really have! While this is not a long observing session for some of us in the club, keep in mind that amateurs in North Dakota have a measly three and a half hours of true darkness to observe under, while amateurs in Aberdeen, Scotland have... zero hours of true darkness on June 21st! That is to say, even at local midnight, "The Aberdeen AS" members can see some residual twilight in the due north, if the fog clears. (North of the arctic circle, the sun never sets on June 21st!)

Speaking of lingering twilight during June, what is the latest time (using MDT) in the evening that you can detect it? This "test" should be conducted under clean, black skies, with no light pollution to the north (so Twining is not a good observing site, because of the Albuquerque glow). Since this test is quite sensitive to both your site latitude and longitude, note this information! One hint: the (Mountain Daylight) time of the latest evening twilight for a given observing site is not on the night of the solstice! Why? Also, I recommend that you continue the test into July. Share your results with us at a meeting sometime.

Comet Updates
From April 13 to April 21, Comet Hyakutake continued to be a second to third magnitude naked eye comet in the northwest sky after sunset. However, after about April 16th, comet Hyakutake began falling behind predicted magnitudes by significant, and increasing degrees. On the evening of April 20, from McDonald Observatory, myself and several local amateurs viewed Hyakutake at about magnitude 3.0 (coma): nearly two magnitudes behind schedule. April 21 was my last view of Hyakutake, and it was a difficult, faint naked eye object very low in deep twilight, as seen from West Texas. This post flyby, preperihelion change in the activity of Hyakutake suggests the comet will not be an impressive object for the southern hemisphere.

Comet Hale-Bopp is developing nicely, and was an easy 10 x 50mm binocular object in mid May. It appears to be slightly ahead of schedule, magnitude wise. There was no tail.

Variable Star Updates
Carl Frisch and I observed the famous dwarf nova SS Cygni to be at maximum on the night of May 10-11. It was of about magnitude 8.4, and shone with a deep blue color. CH Cygni, the remarkable symbiotic variable that was so active and bright during the late 1970's and early 1980's, continues in dormancy at about magnitude 8.6. It shows a deep orange color. When will it become active again? We are waiting! R Coronae Borealis continues its deep fade.

Some Notes On The McDonald Trip
West Texas offers a rural terrane much different from what we are familiar with in the Albuquerque area. Alkaline volcanic rocks are very abundant, forming numerous mesas and ridges. As part of the Chihuahuan desert, the region features a great range in elevation, and likewise, varied habitat. West Texas to Big Bend National Park is generally more tropical than central New Mexico, and very rich in wildlife, especially birds. Carl Frisch, who spent all of his daylight hours either bird watching or eating, told us about a certain dove whose somber calls seemed to be saying "who cooks for you." Well for me at least, Linda Hixon served a great bowl of stew, Carl made up a great cup of coffee, and I had a great salad courtesy of a friend of the Hixons, I believe. Thanks, y'all.

One of the aspects of the night sky from McDonald Observatory is the nearly complete lack of light pollution! El Paso, and Alpine, Texas, and Chihuahua, Chi. are only small insignificant horizon glows. This lack of horizon lighting belies the true blackness of the sky for some reason. The night sky from west Texas can look like it has a "filter" over it, when in reality it is very clean and black!

Since McDonald is nearly five degrees farther south than Albuquerque, there is a view of the Milky Way below and west of Scorpius that we can't see from central NM: the rich star clouds and dark nebulae of Centaurus-Lupus-Norma-Ara. Clearly seen with the naked eye was the southern extension of The Great Rift, as it picks up SW of Scorpius! This rift begins in the tail of Scorpius, bisects the Norma star clouds, and heads towards alpha Centauri which lies just below the horizon at about midnight, late April. By the way, the summer Milky Way is so bright from McDonald that it clearly casts shadows.

Another unfamiliar sight from west Texas is the conspicuous Lupus-Centaurus area with its many bright second to third magnitude stars. From McDonald, this area is "lifted up" much higher, so you can get a better perspective of the region. After some study, we concluded that the bright stars of Lupus-Centaurus form a boot or a sock. I'll suggest this is the constellation of "Bootus", the cowboy boot, sent to step on the Scorpion after it stung Orion!

On two different nights I at Continued on Next Page
The bright stars of Centaurus-Crux should be even more apparent from LaSalle Co. TX. Since I once observed Achernar from near Deming, NM, when it was theoretically below the horizon demonstrates the feasibility of this explanation. And then, Achernar appeared as a bright second magnitude star, so clean was the atmosphere! I suspect the Marfa lights were not visible this year because forest fire smoke from Arizona and New Mexico caused great extinction for horizon objects.

—Kevin McKeown

Editor's Note: The Kids' Corner (below) 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.

(Cowboy) Bootus?

The Kids' Corner

Our guest columnist this month is Hercules. He faxed me his story. This is how he worded it.

TAAS Members:

I'm glad you have star parties where people learn about the stars, but you have got to get your information straight! I went to a star party last night, and I heard someone called Carl referring to "Leo the Lion." As you all should know, it's not Leo, but the "Nemean Lion" who has entered the sky to remind you all of my heroic deed.

I am the strongest and bravest human who ever lived, but when I was young no one thought I was very kind. I had to do ten dangerous expeditions to make up for it. First I was sent to go destroy the Nemean Lion. He was a very strong and ghastly lion. He had a coat so thick that arrows couldn't enter it. The Nemean lion had a taste for humans, so I was to kill it. I started my trek to Nemea and I came across the ferocious lion. Its mane was thick with rancid blood. Drool was trickling down his chin. His claws were sharper than an eagle's, and he was swifter than a fox. ... I pulled out my bow and arrows and shot at him. When the arrows hit the lion they bounced off his leathery coat and snapped in two. Then I grabbed my club and I ran over to the lion and banzai attacked him on the head. But the club snapped in two. But I was still calm as I was facing my death. After that I had no other weapon but my dynamic hands, so I grabbed him around the neck and strangled him. With that task I succeeded. I took a sharp rock and I skinned him. For protection I now wear the Nemean Lion's coat.

So next time you see the spring constellation the Nemean Lion, remember my heroic task. Sincerely, Hercules the Great

—Lindsay Wood

—The Official Newsletter of The Albuquerque Astronomical Society—
The Albuquerque Astronomical Society
P. O. Box 54072
Albuquerque, NM 87153-4072
Address Correction Requested

SOCIETY STAFF

---

**Board Members**

President:
V. President/ Librarian:
Secretary/Society BBS Sysop:
Treasurer/Observatory Committee Chair:
Event Coordinator/Telescope Curator:
Board Member:
Board Member:
Board Member:
Board Member:
Membership Committee Chair:
Board Member:
Program Coordinator:
Board Member:
Education Coordinator:

**Non-Board Members**

Campus Observatory Coordinator:
Archivist:
Database Manager:
Newsletter Editor:

**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 $10/100 issue or $7/100 issue for 6 consecutive issues or $5/100 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.

---

**TAAS BBS:** Set your computer’s modem to 8N1 and call 867-4295 any time of day or night.

**TAAS on the World Wide Web:**
http://www.phys.unm.edu/~egates/TAAS/taas.html

**MAP TO REGENER HALL**

---

**NONPROFIT ORG.**
U. S. POSTAGE
PAID
ALBUQUERQUE, NM
PERMIT NO. 352

---

**President:**
Michael Pendley
296-0549 (H)
mycall@rt66.com

**V. President/ Librarian:**
Lisa Wood
344-8308 (H)
frisch@nrmei_gate.unm.edu

**Secretary/Society BBS Sysop:**
Steve Snider
867-4199 (H)
egates@ursaminor.phys.unm.edu

**Treasurer/Observatory Committee Chair:**
Gordon Pegue
299-5944 (H)
horse@carina.unm.edu

**Event Coordinator/Telescope Curator:**
Carl Frisch
272-7238 (W)

**Board Member:**
Elinor Gates
277-1529 (W)

**Board Member:**
Bill Galtier
296-2550 (H)

**Board Member:**
Allan Green
281-6651 (H)

**Board Member:**
George Pellegrino
821-8516 (H)

**Board Member:**
Jay Harden
296-0537 (H)

**Board Member:**
Bruce Levin
299-0891 (H)

**Board Member:**
Kevin McKeown
254-9117 (H)

**Board Member:**
Ruth Pendley
293-2630 (H)

**Board Member:**
Karina Running Horse
275-4797 (H)

**Membership Committee Chair:**
Brad Hamlin
343-8943 (H)
wolffe@wizrealm.com

**Board Member:**
Jaclyn Fuller Lane
296-4980 (H)

**Board Member:**
Bill Tondreau
263-5949 (H)

**Board Member:**
Michael Wade Douglas
281-8093 (H)
Skygazer@RT66.com

---