Many TAAS members have been receiving email notices from TAAS Board of Directors. Our hard working Secretary, Sammy Lockwood, uses this mechanism for periodic TAAS updates, timed to arrive between issues of the newsletter. If you would like to be included in these distributions, just make sure that our Treasurer, Dave Brown (taas-treasurer@home.com) has your email address as part of your TAAS member records. I’ll call this email notification the Board of Directors Official Email List (or BoDOEL), and our thanks go to Mike Pendley for sending out these messages.

As some of you know, there is also another email system in use by TAAS members, which is the TAAS-L listserv. The TAAS-L listserv is a group of TAAS members who have joined to form a discussion group related to TAAS and amateur astronomy in general. Your email address will only be added to this group when you choose to join TAAS-L, and it is up to you to take the steps to join. TAAS-L is limited to TAAS members only, and operates as a private discussion group, so new subscriptions have to be approved by the owner of TAAS-L.

TAAS-L serves as an automated email message relay where email addressed to the list is sent to all list members. Individuals wishing to reply to a message may do so in a public way by addressing their response to the list, or may reply in private by addressing a response directly to the originator. So far, TAAS-L has about 40 participants and we would like to invite all TAAS members to our discussions on topics ranging from objects observed, to equipment decisions and equipment for sale, to neat web sites we have seen. If you would like to join us, you can subscribe to the TAAS-L by sending the following message:

To: listserv@maillist.unm.edu
Subject: <leave subject line blank!>
Message body:
subscribe TAAS-L <first name> <last name>

Here is what my subscription request looked like:
To: listserv@maillist.unm.edu
Subject: subscribe TAAS-L Pete Eschman

Please note there is no “e” on the end of listserv, so your message to listserv@, NOT listserv@. The message body should only contain the subscription request, with no footer, signature or other extra text. Messages to the listserv should be in plain text, not HTML.

Please remember to print or save the subscription acknowledgment you will receive after your subscription has been approved. TAAS-L specific instructions can be found at the end of this initial message, along with instructions for getting help and how to unsubscribe from the list.

The Listserv software has recently been upgraded, so we now have access to a web based “front end” to the list. The home page for the listserv is http://maillist.unm.edu/cgi-bin/wa From this page you can access help files and manage your listserv configuration. You will need to choose a password to manage your listserv configuration or access TAAS-L archived messages through the new web front end. This password will work with all lists administered through this listserv engine. The TAAS-L messages are archived at http://maillist.unm.edu/archives/index.html

Please contact me at eschman@unm.edu if you have any questions.
I have the sad duty to advise our membership of the passing of one of our most beloved members. Robert Ortega passed away after a struggle with cancer on Monday February 26, 2001. Robert was a Board Member and the Director of the GNTO. In these positions he was instrumental in bringing astronomy to our members and is responsible for the improvements which have made the GNTO the fantastic facility it is today. He will be sorely missed. Look for a more in-depth tribute to Robert in the next issue of The Sidereal Times.

I would like to take this opportunity to announce two appointments. First, Gordon Pegue has been appointed as our newest member of the Board of Directors. We look forward to Gordon’s expertise (because of his vast experience in our Society) to help guide the board as it meets the challenges of the rest of the year. Second, Pete Eschman has been appointed to the position of Director of GNTO. Pete has worked closely with the GNTO committee and was Robert Ortega’s right hand for the last several months. I know it is with reluctance these men have taken their positions because of the circumstances which cause the positions to be open. I also know both of these individuals are extremely capable and are dedicated to the success of our Society. Please join me in welcoming them to their positions.

The company which is trying to accomplish zoning changes for a power plant near the GNTO will continue to receive resistance from our Society in conjunction with several other citizen groups in Valencia County. The Board of Directors voted at the last meeting provide a position statement to the Valencia County Commissioners. That statement will also be provided to media sources to produce as much positive public sentiment as possible before the next hearings. The first of these meetings will be conducted by the New Mexico State Environment Department Air Quality Bureau and will be held at the City of Belen Council Chambers, 100 South Main Street, Belen, New Mexico. This meeting will provide an opportunity for interested parties to heard by the Air Quality Bureau. The second meeting will be conducted by the Valencia County Commissioners and will be held in the City Council Chambers in Los Lunas. This is a ZONING meeting which is being held to determine if the area north of our observatory should be changed to INDUSTRIAL. I can’t tell you what the impact of having an industrial area near our observatory would have on the LIGHT POLLUTION and AIR QUALITY. We need to mobilize and provide as much public outrage as possible to dissuade these officials from changing the zoning and affecting our precious GNTO environment. Look below to read a copy of our statement.

Please join me in voicing our outrage at the proposed zoning changes.

Valencia County
Board of County Commission
444 Luna Av./ PO Box 1119
Los Lunas, NM 87031

Dear Commissioners,

Ten Years ago, a handful of men, women, and children came together to realize a dream. That handful of citizens has grown to over 400 with many members residing in Valencia County. Their dream was to share a fragile and perishable resource, our precious night sky. TAAS (The Albuquerque Astronomical Society, a 501(c)(3) non-profit organization) was established for public education and scientific research through astronomy. TAAS has shared astronomy and the night sky with over 100,000 people across the state of New Mexico. Allowing the construction of the proposed Cobisa-Rio Puerco Power Plant will destroy that dream.

To realize that dream, a facility was built on the west mesa of Belen that has continued to grow over the last 10 years. The facility was built entirely from donations by individuals and local businesses. The focal point of the facility is a two story observatory serving as a portal to the night sky. A second building serves as a classroom, control center and planetarium.

The west mesa of Belen was chosen as the location for our observatory because of the pristine environment and long standing zoning that has, until now, protected that environment. Our sensitive telescopes, astrophotography equipment and electronic imaging instruments depend upon stable, clean, dark skies. Small amounts of pollution can damage optical coatings that are only a few atoms thick. Light and heat radiating from the power plant will effect the otherwise steady atmosphere and destroy the fine detail of astronomical objects that are at unimaginable distances from us.

The Texas-based Cobisa Corporation’s Rio Puerco power plant, with it’s air, heat and light pollution will put our observatory out of commission.

The people of Valencia County and the State of New Mexico will lose a priceless asset if you condemn this astronomical observatory by allowing a 19 foot wide, 100 foot tall, strobe-lit smoke stack to be built just north of our observatory. In the years since work on the observatory began, the dream has been to develop a resource for the community. Please don’t allow this valuable contribution to our community to come to an end. We respectfully request this commission uphold the current zoning for this area and deny the petition by Cobisa Corporation to build the Cobisa/Rio Puerco Power Plant.

Sincerely,

Eric Bucheit
President, TAAS
The March 8, 2001 Board of Directors (BoD) meeting of The Albuquerque Astronomical Society (TAAS) was called to order at 7 pm by President Eric Bucheit. Other board members present during the meeting were: Steve Snider, Dave Brown, Sammy Lockwood, Ray Collins, Pete Eschman, Randy Gauntt, Neil Goldberg, Dan Richey, Barry Spletzer, Judy Stanley and Chris Wilson. Observers included Barry Gordon, Gordon Pegue, Robert Williams, Kevin McKeown, Katherine Gauntt, David Beining, and Larry Cash.

The meeting agenda was accepted with the addition of Air Force Tech Transfer to the Unfinished Business category.

Minutes
Sammy motioned to accept the minutes from the Jan 11 Board meeting as printed in the newsletter. Steve seconded the motion, which passed.

Two actions were required as the result of the recent death of TAAS Board member and GNTO Director Robert Ortega:

Board Position: Eric noted that Gordon Pegue has offered to serve on the Board of Directors, which was so motioned by Neil. Barry Spletzer seconded the motion which passed.

GNTO Director Position: Eric noted that Pete Eschman has offered to serve as GNTO Director, which was so motioned by Gordon. Steve seconded the motion which passed.

Gordon called for a moment of silence for RO, which was observed.

Treasurers Report
Dave Brown distributed the January report. General Funds on deposit are $918.15. GNTO Funds on deposit are $1364.12. Education Funds on Deposit are $1271.96. Dark Sky NM funds are $84.36. Dave also distributed a donation report, and a membership report (332 current TAAS members)

Correspondence
Eric read (1) a letter from Mike Snider of the NM Environmental Dept of Air Quality, acknowledging TAAS’s letter of remarks about environmental permits for the Cobisa power plant, (2) a letter from NW New Mexico Engineering and Science Fair, requesting people to serve as judges, (3) a letter from TAAS member Jeff Goldmeer asking for help with a school star party, and (4) a letter from a private firm looking for help developing a dark sky observing site on the west mesa.

Unfinished Business
Resolutions and Bylaws – Pete reported that his inquiries to the NM State Corporation Commission show some vital TAAS documents are not on file there. Once a full record of our documents is received, and a list of missing items is established, the topic will be reopened at the April meeting.

Cobisa Power Plant – There was lengthy discussion about the actions of the Cobisa Corp. to build a power plant north of GNTO. Dave Brown has met with several parties, and has had several discussions over the past month on this issue. It was noted that Eric’s comments at last month’s Planning and Zoning meeting may have been misquoted or misunderstood. It was also noted that although TAAS has expressed concern about the plant, the TAAS board has not taken a clear stand on the project. Dave noted that he has an interview with a reporter coming up, and needed a clear TAAS position to quote. After more discussion, Sammy motioned that a task force immediately develop a position statement that clearly expresses TAAS’s opposition to the Cobisa power plant, because of the adverse effects it will have on TAAS facilities at GNTO. Gordon seconded the motion, which passed. Eric, Pete, Dave, and Sammy will meet within the week to develop the statement. Eric, or his appointee, will represent TAAS at Dave’s media interview.

AF Tech Transfer – Sammy & Dave to write a press release about Kirtland AFB’s donation of a 10’ dome to TAAS.

Membership
Neil introduced David Beining, Acting Executive Director of the Lodestar Astronomy Center. David gave an overview of operations at Lodestar, and expressed his desire to better relationship between Lodestar and TAAS. David extended an invitation to the board to visit Lodestar, and offered the facility for some future TAAS general meetings.

Neil then distributed early results of the TAAS membership poll. 27 polls have been returned, in person, via mail, and via the Internet. Early returns showed support for current dues structures and most TAAS programs. More member comments to be included in the final report.

Lastly, Neil noted that the sound system is improved at Regener, but our speakers need to use it better.

Observatory Committee
No meeting was held since the last board meeting.

GNTO Dues Allotment
Eric proposed raising the amount of TAAS membership dues that is allotted to GNTO from $5 to $10. After much discussion, the idea was tabled.

The GNTO Committee is tasked with creating a GNTO operating budget, to be presented at the May board meeting. Sammy noted that no one was prepared for this topic, and asked Eric to distribute future board meeting agendas prior to the meetings.

Warm-Up Room Dedication
Gordon motioned that a dedication ceremony for the GNTO Warm Up Building be planned and implemented.

Continued on page 9
# April 2001

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## Show and Tell (and flea market) at April Meeting

*by Steve Snider*

The April General Meeting program will be “Show & Tell” plus an Astronomical Gear Flea Market. All members who have something interesting to show and talk about are invited to do so.

Afterward, we will have a flea market with proceeds remaining with the sellers. Bring all those oddball eyepieces, dew heaters, T-Rings, or telescopes and accessories. Now’s your chance to sell or exchange them.

## April 21 is Astronomy Day

*by Steve Snider*

We will be celebrating National Astronomy Day on Saturday, April 21, 2001 at Coronado Shopping Center. We have invited quite a number of other astronomy/space-related organizations to participate as well. All members are invited to bring telescopes and/or other astronomical materials and share our love of astronomy with the public. We will have exhibits inside the mall, while telescopes with solar filters will be set up on the south side of the building for public solar viewing.

This is a great opportunity for us to educate the public and attract new members. Please join us at the mall. For details, please contact Steve Snider at sslsider423@yahoo.com.

## IADC Conference in May

*by Pat Appel*

May 2001

Sunrise/Sunset
05/01  06:14/19:54
05/15  06:02/08:05
05/31  05:53/20:17 (MDT)

1
• Venus @ greatest brightness: -4.2 mag
• Moon at perigee. 57.9 earth-radii @ 22:00

2
• ATM Workshop 7pm, Valley HS

3
• Board Meeting (7 pm @ PandA bld.)

4
• UNM

5
• TAAS General Meeting, 7pm, Regener Hall

6
• First quarter at 04:49
• Daylight Savings - clocks ahead @ 2am

7
• Full Moon at 07:53

8
• Bosque Prep

9
• Neptune stationary in RA. Begin retrograde motion

10
• UNM
• Mars stationary in RA. Begin retrograde motion

11
• UNM

12
• GNTO

13
• Sun enters Taurus

14
• Moon at apogee. 63.4 earth-radii @ 19:00
• Last quarter at 04:12

15
• ATM Workshop 7pm, Valley HS

16
• Last day to submit input for newsletter

17
• UNM
• GNTO

18
• UNM

19
• GNTO
• Astronomy 101

20

21

22
• New Moon at 20:47

23

24
• GNTO Meeting

25
• UNM
• Saturn at conjunction with Sun.; passes into morning sky

26
• Oak Flat

27
• Moon at perigee. 57.7 earth-radii @ 01:00

28

29
• First quarter at 16:10
• Uranus stationary in RA. Begin retrograde motion

30

31
• Board Meeting (7 pm @ PandA bld.)

Planet Rise / Set (05/15/2001)
(Rounded to 15 minutes, MDT)
M 07:00/22:45 S 06:45/20:45
V 04:00/16:30 U 02:00/12:45
M 22:45/08:15 N 01:00/11:30
J 07:30/21:45 P 20:45/07:45

TAAS / Lodestar Meetings
by Neil Goldberg

David Beining, Acting Executive Director of Lodestar Astronomy Center, introduced himself to the TAAS Board at its March meeting. He recognized the important contributions that TAAS has made to the local astronomy community, in particular, and to the citizens of New Mexico over the years. He offered to work with TAAS on projects in a cooperative and congenial spirit that should bring fruitful and mutually beneficial results to both organizations particularly in their quest to advance astronomy awareness and education to the general public.

As a start, TAAS will hold its General Meetings at the Lodestar Planetarium on Saturday, May 5 and Saturday, September 1 at the usual start time of 7:00 pm. The public will be invited. Admission is free. Although the museum itself will be closed, Lodestar will arrange for easy access to the Planetarium. The meetings will be publicized through the media and will give us an opportunity to introduce TAAS to a wider audience.

Keep a lookout for further details in The Sidereal Times and the TAAS List Server as plans are finalized. We will keep you informed.

NOTES:

TAAS = The Albuquerque Astronomical Society

GNTO = General Nathan Twining Observatory. Call Peter Eschman @ 873-1517 to confirm.

UNM = University of New Mexico Observatory. Call the TAAS hotline @ 296-0549, or the UNM hotline @ 277-1446 to confirm.

ACSA = Albuquerque Coffee Shop Astronomers. Contact Sammay for information or visit www.taas.org and select sidewalk astronomy

ATM = Amateur Telescope Making. Call Michael Pendley for information @ 296-0549.

PandA = UNM Physics and Astronomy. Corner of Lomas and Yale.
March Meeting Recap

by Steve Snider

The March General Meeting was held at UNM’s Kiva Lecture Hall instead of our usual location. Regner Hall was undergoing some electrical maintenance, so we were given a new room, unfortunately, with short notice. Many thanks to those members who made the transition and attended.

Eric Bucheit opened the meeting at 7:32 PM with the sad announcement of Robert Ortega’s passing. He then mentioned that the Board had voted to dedicate the GNTO warm-up building to Robert’s memory; this would be accomplished in the near future. Eric also announced that TAAS was looking for “event owners” for several upcoming events including the Oak Flats Star Party, the GNTO Picnic, and the TAAS Picnic. Some of the experienced Board members would act as “mentors” to help the new event owners.

Other announcements – Eric asked for volunteers to act as judges for the Science Fair, 3/16/01. Two power plant meetings were scheduled for 3/28/01 and 4/3/01 – all are welcome to attend. Astro 101 is scheduled for 3/17/01 at GNTO.

Eric announced that Gordon Pegue was voted in as a Board Member and that Pete Eschman is now the Observatory Director. He then turned the meeting over to Steve Snider for the evening presentation.

Steve introduced Pete Eschman and Robert Williams who led a remembrance for Robert Ortega. While Pete and Robert spoke and read from a collection of e-mails received, Carl Frisch displayed a number of photographs of Robert Ortega taken at GNTO. Several members of the audience also contributed their thoughts and memories.

Steve asked for observing reports and then reintroduced Robert Williams for a discussion of the upcoming Messier Marathon. Robert, Pete, Carl, Kevin McKeown, and others contributed observing tips, descriptions of how Messier Marathons are usually conducted, gave out materials regarding the observing order of these objects, and answered many questions. The Messier Marathon will be held at GNTO on March 24 – 25, 2001. All TAAS members are invited to participate in this annual event.

After a brief announcement from Pete Eschman regarding the TAAS List-Serv, the meeting adjourned at 8:54 PM. Our Sidewalk Astronomers then set up telescopes across from the Frontier restaurant and held an observing session.

— Trivia —

Abq’s 7 Brightest

by Sammy Lockwood

This month’s trivia question has two parts. The first part may seem pretty easy to some, but not to all. I think that we have seen some pretty good examples of each side of the trivia difficulty spectrum here. The second part was harder for me.

1st Question - Name the 7 brightest stars (apparent magnitude) that can be seen from Albuquerque.

The first three are pretty easy. #1 is of course Sol, which warms us with mag. of minus 26. #2 is Sirius shining in April skies at mag. minus 1.47. #3 is Canopus, which now sits right on the Southern Horizon at minus 0.71. Being a beginner myself, I had glanced at Canopus before, but assumed that anything that bright on the horizon must be an airplane. Carl corrected me last year. I’m told by some that it cannot be seen from ABQ, but I saw it from La Queva High and from the airport last March.

#4 is Arcturus in the constellation Bootis shines at minus .06. A few summers ago when I decided to start learning the sky, Arcturus was the brightest star in the sky, and the first one that I learned. #5 is Vega at mag +0.8 (note that the mag numbers get bigger as the stars get dimmer, an elementary point that I didn’t know 2 years ago.) # 6 is Orion’s Rigel at mag. +0.8. Rounding out my list at #7 is Cappella at mag. +0.9. Cappella shines bright in my bedroom window, and after watching it for several years, I decided to learn more about it, which in part lead to my hobby of astronomy. My magnitude data comes from an older edition of Norton’s Star Atlas. If anyone has more recent data corrections, please jot them down, and file them in the nearest round receptacle.

2nd Question - If you volunteer to do a trivia question for the newsletter, you must actually: a) Write one for the newsletter. b) Write one for the TAAS meeting prior to the newsletter. c) Both

The answer is C, and I guess I missed that one this month.

Six TAAS Events Need Leaders

by Sammy Lockwood

Spring is here, and warmer nights mean more star parties. But TAAS needs new leaders for 5 star parties scheduled for this Spring and Summer. Let’s face it, the best reason for being in TAAS is not the Saturday meetings at Regener Hall, it’s not the guest speakers, it’s not even the newsletter. It’s the STAR PARTIES! That’s where we shine, and that’s where most memories of good times in TAAS are built. But a successful public star party takes a little legwork, from someone who cares enough and is creative enough to make it special.

TAAS needs 5 creative people to lead 5 popular public star parties at the Oak Flat Picnic Grounds on 5/26, 6/23, 7/28, 8/25, and 9/22. Setting up for these events can be as easy as just picking up the keys from the Forest Service, or it can be as involved as you would like it to be. And TAAS “old-timers” will be right there if you need or want them, to help iron out any snags that might come up. In addition to the Oak Flat parties, I am also looking for some one to lead the Annual TAAS picnic at GNTO on July 7th.

TAAS is one of the most active astronomy clubs in the country, currently with 332 members. Yet often, we see the “same old folks” running events, writing articles, talking at meetings etc.
The End is Near
by Judy Stanley

Another season of school star parties is coming to a close. We have two dates left; Tomasita Elem. on Tuesday, April 17, and Bosque Prep. Tuesday, May 8. If you have not attended a school star party this year do consider marking your calendar for these two events. If you have attended school star parties you know how much fun they are and I'm sure you are sorry that only two remain!

Keep your fingers crossed for good weather. The three previous star parties at Roosevelt Middle, Sandia Prep. and Emmerson Elem. were cloudy! Despite the weather and low attendance these three events were tremendous successes. Bringing the “Cosmos” to the general public is what its all about for me and the many docents who give so generously of their time. Thanks to; Barry Spletzer, Derek Skinner, Chris Wilson, Robert Williams, Dan Richy, Brock Parker, Kevin McKeown, Jay Harden, Barry Gordon, Nancy Davis, Larry Cash, Carl Frisch, Ted Schuler-Sandy & his Scout troop, Judy & Mickey Binder, David Blair, Gordon Pogue, Neil & Joan Goldberg, John Landis, and Bruce Levin.

Believe it or not, we turn down far more requests for this service than we are able to provide. It is my goal to be able to expand our education outreach effort. Of course that requires volunteers. I would like to see us organize in teams. These teams would service schools in their respective areas possibly two to five times a year. If we had several teams the work load would be spread out among many members and we could service far more schools. I encourage you to think about this proposed program and seriously consider volunteering. Please contact me at jstanley@sdc.org.

Cool Internet Links

No room for descriptions. Some are cool and some are strange. Just visit them and see what you think.

- www.treasure-troves.com/astro/
- www.elights.com/darksky.html
- www.geocities.com/forelaws/THCG.html
- www.intellicast.com/Partners/HTML/EarthSky/SkyWatch/d1_00/
- http://www.intellicast.com/LocalWeather/World/

Spotlight on Sidewalk Astronomy

by Sammy Lockwood

Actually, I don’t think that we’ve set-up under a spotlight yet... But some of the street lights that we work under are just as bright. That’s because TAAS’s greatest special interest group, The Coffee Shop Astronomers, set-up in the heart of town where the bright lights and people are, bringing what is called “Sidewalk Astronomy” to the city. Leave your red light at home, you don’t need it here.

This month, I plan to take advantage of the combination of bright planets, and warmer nights, with lots of Sidewalking. Weather permitting, plan for:

April 1
The Juan Tabo Double Rainbow
April 7
Central and Cornell after the TAAS meeting
April 27
Irysh Mac’s Coffee House on Yale near Central for “Poetry Under the Stars” and at least one session at the “Bound to be Read” bookstore on San Mateo.

UNM Report
by Jay Harden,

19 Feb: Clouded out.

26 Feb: Good viewing night. We had 35 viewers. Docents: Brock Parker, Jim Lawrence, Gordon Pegue, Kevin McKeown.

2 Mar: Another good night for viewing and warm. We had 60 viewers at least. We were so busy I lost count. Docents: Brock Parker, Tom Sanders, Jim Lawrence.

9 Mar: Clouded out.

Page 7
The Observers Page

by Kevin McKeown

Question: Just how does the central obstruction of a reflector lower the contrast of the images it produces?

Answer: Contrary to popular belief, it doesn’t, except when sub arc-second planetary detail is considered— but only if the central obstruction (the secondary) is a sizable fraction (~18%) of the primary mirror’s diameter. Refractor owners will, (with a grin) tell you, that their unobstructed systems have “higher” contrast. Let’s debunk:

Basically, when we consider central obstructions and how they might lower contrast, what we really want to look at is the energy— the visible light photons— per unit area at prime focus. Imagine an ideal lens— a thin 5 inch lens, of any focal length. Now, let’s assume that you are observing a uniformly bright galaxy at a power of 50. We know that photons originate from every tiny part of the field— either from the galaxy, or from the background sky around the galaxy. The “black” background sky is not entirely black: airglow, light pollution, faint stars, and distant galaxies all contribute some background glow. Now, imagine that you stick your hand across the front of this 5 inch telescope. Your hand will not only block the photons of the galaxy, but it will also block the light of the background glow. The overall contrast from bright galaxy to “black” background doesn’t change! Everything is dimmed proportionately.

Okay, given our ideal 5 inch lens, let’s place a round central obstruction of 3.54 inches diameter in front of the lens. This is a 71% obstruction. This central obstruction blocks 50% of the incoming photons of everything— galaxy and background light. At 50X, the galaxy will seem dimmer— along with the background field glow. However, the galaxy will appear identical to the view we see in an unobstructed, ideal 3.54 inch refractor! This is because an aperture of 3.54 inches represents half of the area of a 5 inch lens. Now, if we drop the magnification of obstructed 5 inch scope down to 25X, the galaxy appears half as large, but its surface intensity— photons per area—is exactly the same as the 5 inch, unobstructed lens working at 50X!

In fact, the absorption of the glass of a large, thick non-ideal lens, and the reflection of photons off the front of the lens— especially if non-coated— does exactly the same thing as the central obstruction of a reflector! Reflectors larger than about 6 inches actually out pace refractors of the same clear aperture, in terms of ability to gather photons per unit area! The thick glass absorption of the Yerkes 40 inch lens actually represents a substantial built in obstruction!

Now, let’s return to our ideal 5 inch lens. On a steady night, it will be able to resolve a double star of equal bright components separated by 1 arc-second. Now, let’s insert the 3.54 inch obstruction. What’s the resolving power of our “new” 5 inch, obstructed refractor? Well, 1 arc-second! At low power, how do planets appear? The same, except half as bright. However, at high power, on a steady night, our unobstructed 5 inch lens will show finer detail because the obstruction causes subtle changes in the diffraction pattern of the ideal 5 inch scope. Recall that a diffraction pattern, seen at high power in any telescope, consists of a bright Airy disc, surrounded by several diffraction rings. For a good optic, it is difficult to detect any more than one diffraction ring. Specifically, when the 3.54 inch diameter obstruction is placed over our ideal 5 inch lens, it causes more light to be thrown into the diffraction rings, at the expense of the Airy disc. These tiny, subtle changes in a diffraction pattern do slightly blur fine planetary detail, but we are talking fractions of an arc-second!
TAAS Events that need “Owners”: Oak Flat 5/26, Oak Flat 6/23, Oak Flat 7/28, Oak Flat 8/25, Oak Flat 9/22, TAAS Picnic 7/7, Chaco Canyon 6/16. Eric will solicit owners at the March general meeting.

Meeting agenda time of 10 pm reached. Gordon motioned to extend the meeting 30 minutes. The motion was seconded and passed.

**New Business**

**Asset Inventory** – no report

**Science Fair Judges** – Judges for the 3/17 Science Fair will be solicited at the March General Meeting

**Loaner Program** – Randy explained his efforts at tracking down TAAS loaner scopes that had appeared to be missing. He required no board action

The meeting adjourned at 10:30

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** Classified Ads **

**For Sale:** SBIG ST-6 CCD camera (no pixel defects), CFW-6A filter wheel with filters, CLA-6 camera lens adapter, 50mm lens, laptop computer, SVGA monitor, software, manuals, adapters, and cables. $2200. Sample images available. Call Carl Frisch at 239-6002.

**For Sale:** Meade telescope. 10” f/4.5 Starfinder equatorial. Homemade base allows use as Dobsonian. 8 X 50 finder and 12 VDC variable drive corrector. $500. Call Carl Frisch at 239-6002.

**For Sale:** Homemade 10” f/8 reflector. 2” Crayford focuser, Rigel systems QuickFinder, and 4 truss pole design with shroud. Includes matching full size mirror grinding tool. $500. Call Carl Frisch at 239-6002.

**For Sale:** Meade 16” F4.5 dob telescope, Telrad, Magellan I computer with Meade 4000 9.7 and 26mm eye pieces. Excellent deep sky performer! Only 1 year old. This is a big, heavy scope. Paid $1195 for scope and $295 for computer. Will sell all for $1100. Call Harry @ 286-5491.

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**MAGAZINES:** Discount magazine subscriptions to *Sky and Telescope* ($29.95/12 issues) and *Astronomy* ($29/12 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 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.

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**Map to UNM Campus Observatory**
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