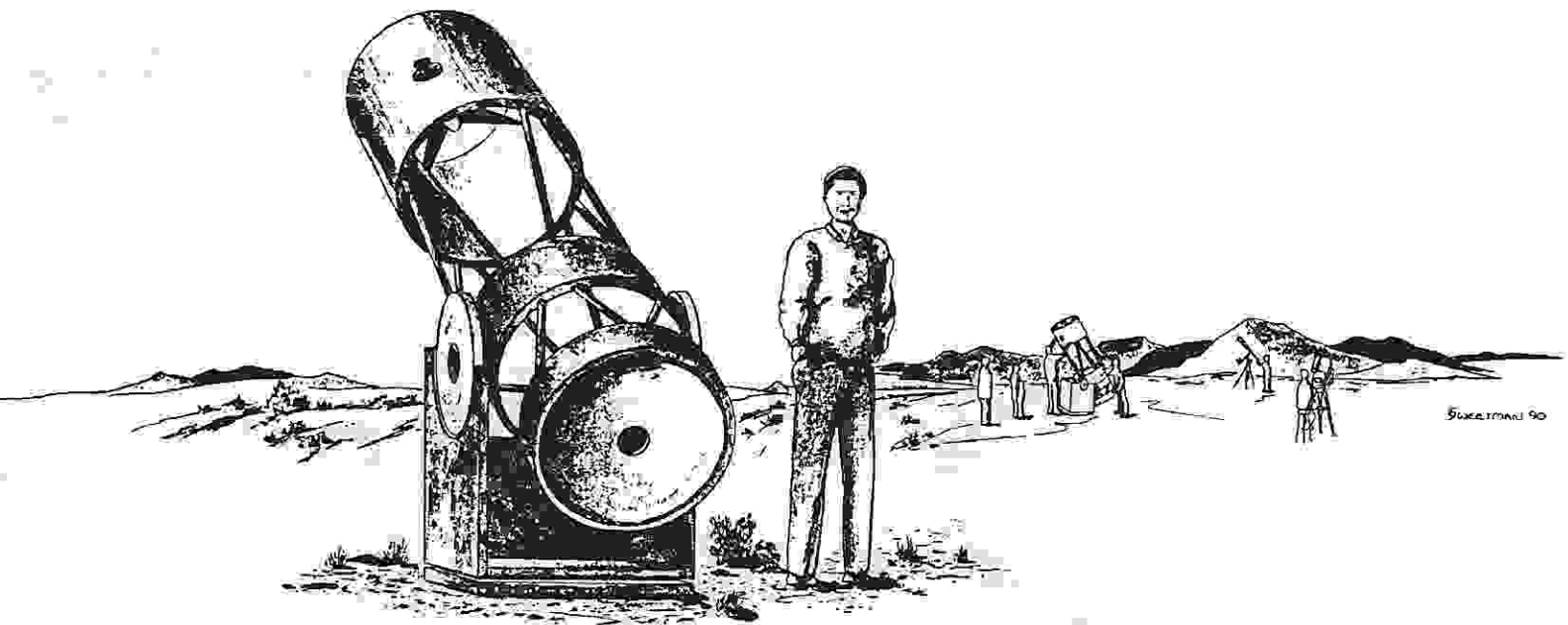


Desert Skies

MARCH 1990

First Step



Tucson Amateur Astronomy Association *30 inch telescope.*

Sat March 17 Bob Giff
12:30 pm - 4:30 pm
ANNOUNCEMENTS!

Fourault Testing
Mount + A Telescope
Mirror

MEETINGS

GENERAL MEETING - FRIDAY, MARCH 2, 7:30 P.M. at Flandrau Planetarium.
Rik Hill will present a talk entitled "Leonardo & the Telescope". Refreshments will be provided by Dean Ketelsen.

FRIDAY, APRIL 6, 7:30 P.M. at Flandrau Planetarium.
Dr. Bill Robinson, founder of International Dark Sky Association will speak on light pollution.

EXECUTIVE MEETING - THURSDAY, MARCH 9, 7:30 P.M. at Flandrau Planetarium.

STAR PARTIES - SATURDAY, MARCH 17 Star Party at the home of Vivien & Bob Lewis in Huachuca City.

SATURDAY, MARCH 24 Star Party...location to be announced...
Call Dean Ketelsen or Tim Hunter for info.

APRIL 6 through 15 Pima County Fair - TAAA Exhibit

SATURDAY, APRIL 28 Public Star Party at Sabino Canyon.

FRIDAY, MAY 18 Star Party at Sabino Canyon for Smithsonian Institution.

FRIDAY, MAY 25 Star Party at Sabino Canyon for Smithsonian Institution.

TAAA EXECUTIVE

President	Tim Hunter	299-2972
Vice-President	Dan Knauss	881-2639
Executive Sec.	Dick West	1-762-5831
Recording Sec.	Sharon Niehaus	883-4397
Treasurer	Terri Lappin	790-5053
Member-at-Large	Dean Ketelsen	293-2855
Chief Observer	Terri Lappin	790-5053
Past President	Duane Niehaus	883-4397
Desert Skies ed.	Dolores Hill	325-9820
Asst. ed.	Rik Hill	

MEMBERSHIP IN THE TAAA

Individual Membership	\$20.00
Family Membership	\$25.00
Senior Citizen (over 60)	\$18.00

Sky & Telescope subscription (optional) \$16.00

To become a member contact Treasurer, Teresa Lappin,
P.O. Box 41254, Tucson, AZ 85717 Phone: 790-5053

Desert Skies Publishing Guidelines

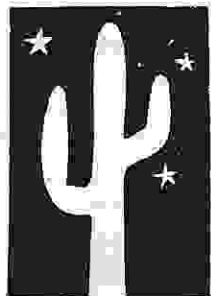
All articles, announcements, news etc. must be submitted by the 20th of the month.
Materials received after that date will appear in the NEXT issue.

All submissions are retained by the editor unless prior arrangements are made.

Articles, artwork, and photos should be camera ready. Photos should be screened.

We will not publish slanderous or libelous material

Send articles, announcements etc. to Desert Skies c/o Dolores Hill 4632 E. 14th St.,
Tucson, AZ 85711 (phone: 325-9820).



OBSERVER'S REPORT

Star Parties: March 17th Saturday, Vivian Lewis' house
see map elsewhere
March 24th Saturday. LOCATION: TO BE
ANNOUNCED--CALL TIM
HUNTER OR DEAN
KETELSEN FOR DETAILS
PHONE #S ON 1ST PAGE

We will have a star party at Vivian Lewis' house. If you want to observe without having to stay out in the cold, then come on out! The regular star party will be held at an unknown location. Tim Hunter and Dean Ketelsen have agreed to be the contact people as I'm not sure if I will be attending the star party.

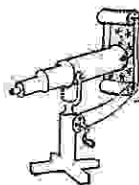
We also have some special star parties scheduled for the near future. If you can bring your telescope out to any of them I would appreciate it. Details will be in future newsletters.

April 28 — Sabino Canyon — Public Star Party

May 18 } — Sabino Canyon — for Smithsonian Institution
May 25 }

April 6 - 15 - Pima County Fair — weekends and Friday nights
Member participation during the daytime hours of the County Fair is greatly encouraged also. I'll have details at the March 2nd meeting. Call me if you are interested but miss the meeting.

Terri Lappin 790-5053



PIMA COUNTY FAIR IS SNEAKING UP ON US!!!!

The County Fair is scheduled to start about one month from now--April 6th actually. We will have a booth similiar to last years but I am told we will not have to man it all day long this time. I would like to have members bring telescopes on Friday and Saturday evenings (Sunday would be nice too) to show the public the moon. Last year we really had alot of fun and the few of us that helped out were blurry-eyed by the end of the fair. (Last year members that helped out had free admission to the fair and I assume the same will happen this year.) I'll give a report at the March meeting.

Terri Lappin 790-5053

P L E A S E !!!!!!! HELP IF YOU CAN!!!!!! GUARANTEED FUN!!!!

FOR SALE:

17.5" Odyssey Dobsonian telescope with several improvements. Sky & Telescope 1983-1989. Best offer...Call Erich Karkoschka 621-2819.

Heavy 8" diameter steel column on a triangular steel base with a rising heavy tube by rack & pinion. Min. height 5 ft. and max 7 ft. Was a NASA tooling stand. Good for a large refractor, etc. \$500. Call Mr. Sivilli 327-0665 450 S. Rosemont Ave., Tucson, AZ 85719.

3½" Alvan Clark refractor on tripod/mount... will trade for MacII computer system. Call Mr. Sivilli 327-0665 450 S. Rosemont, Tucson, AZ 85719.

Glass blanks (crown, flint) for 6" achromat... \$150 O.B.O. Call Bob Goff 790-1452.

Teflon 1/8" thick available...Call Jack Herron 885-6933.

EXECUTIVE MEETING - February 15, 1990

MEMBERS PRESENT - Tim Hunter, Duane and Sharon Niehaus, Dan Knauss, Dean Ketelsen, John Zajac, Deborah Smith, Teresa Lappin and Dick West.

1. The speaker for the April meeting will be Bill Robinson. The speaker for the May meeting will be John May. June is the annual club picnic.
2. The subject of refreshments was discussed. The Executive thanks those who in the past have provided refreshments. If any member would like to bring refreshments, please sign up at the General meeting.
3. The All Arizona Star Party will be October the 19th and 20th at the Empire Ranch.
4. Tim Hunter gave a report on the Orange County, California Astronomy Club's observing site. Tim was able to get several ideas that may be of use to our club.
5. A couple of observing sites on the Buenos Aires refuge were also discussed. One of the sites is 23 miles from the Three Points turn off. The other is further south. One or both of these may be a potential site for the observatory. There will be more on these at the General meetings and future newsletters.
6. Teresa gave the Treasurer's reports:

Checking	747.56
Savings	8045.67
Cash on Hand	46.31
	<u>\$8839.54</u>
- Land Fund - \$7644.17
7. Teresa suggested several amendments to the Constitution. Details are elsewhere in the newsletter. Any amendments must be approved by 2/3 vote of the general membership.
8. If any club member would like to be on the nominating committee, please see a member of the Executive.
9. The club is committed to a star party at Sabino Canyon on April 25th for Science and Technology week. On May 18th and 25th the Smithsonian would like for us to host star parties at Sabino.

Dick West
Executive Secretary

TREASURER POSITION OPEN...

The position of Treasurer will be open for nominations this coming election. Yes, after serving as Treasurer for almost 9 years I've decided to give somebody else a chance to balance the books. Actually, the executive is splitting my current duties in half by creating a "membership coordinator" position which I would like to run for. The duties of treasurer are basically to collect dues from members, make monthly deposits and send in the Sky & Telescope subscriptions. The treasurer also serves as our Statutory Agent and must fill out the Annual Report & Certificate of Disclosure each year. This is extremely important as our tax-exempt, non-profit status depends on this report being turned in on time. The treasurer also needs to know how our dues are spent. The membership coordinator will work closely with the treasurer as the membership coordinator will be responsible for keeping the membership roster current (address changes, etc), and sending renewal notices out (something we don't do right now and really need to do). Membership coordinator will also handle new member orientations, help to organize volunteers for special events, and take care of member benefits (Book Orders, T-shirts, Discounts, etc.). Another activity of membership coordinator will be to develop ways to increase our exposure in Tucson.

If you're interested in the treasurer (or membership coordinator) position contact me. The executive decided it would be best for anyone considering the treasurer position to serve as the treasurer's assistant before actually being nominated. Call me at 790-5053. I don't always get messages left on the answering machine so try again if I don't return your call.

AMENDMENTS TO THE TAAA CONSTITUTION AND BYLAWS

-to be voted on at the March 2nd meeting.

-as per Article IV, Section 4, amendments can be made upon 2/3 approval of the General Membership at any regular scheduled meeting provided a quorum is in attendance (those in attendance shall constitute a quorum). Prior notice of a vote on constitutional amendments must be given to the membership. (This notice to appear in the March newsletter.

-changes needed to reflect the creation of Membership Coordinator position.

Amend Article III, Section 2 to read as follows:

Executive Committee: The Executive Committee shall consist of the President, the immediate past President, Vice President, Executive Secretary, Recording Secretary, Treasurer, Chief Observer, member(s) at large, and Membership Coordinator. The Executive Committee shall set Association policy and plan Association activities.

What will change: drop 1 year limit on immediate past president and add Membership Coordinator to committee

Amend Article III, Section 4. (Powers and Duties of Officers:) to read as follows:

President, Vice President, Executive Secretary, Recording Secretary, Chief Observer duties unchanged.

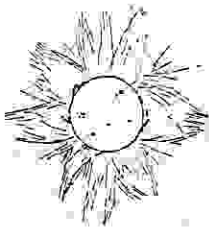
Treasurer: The Treasurer shall be custodian of the Association's funds, shall receive the dues of all Association members, shall keep a current list of dues paying and honorary members and provide same to the Membership Coordinator. The Treasurer shall keep complete and current records of account and shall give a written annual report and other reports of financial status either orally or written as required by the Executive Committee. The Treasurer shall also serve as statutory agent for the Association.

Membership Coordinator: The Membership Coordinator shall coordinate member activities and make membership privileges known to new members. The Membership Coordinator shall mail membership expiration notices to members 2 months prior to expiration date.

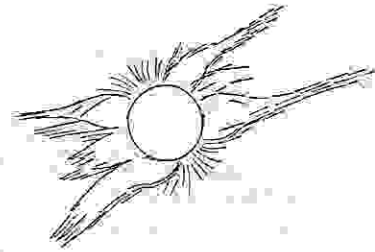
What will change: Add 'provide member list to Membership Coordinator' and give duties to Membership Coordinator.

Amendments submitted to membership on February 20th, 1990 by Teresa Lappin, Treasurer.

Teresa Lappin
20 Feb 90



BLISS
by
Richard Hill



How complacent we have become with our present knowledge of the universe. Likewise, how clever we think we are with that knowledge. How old are some of the ideas we now hold about the nature of the universe? What was it like to live in a world of unknowns where speculation was as good as fact and nature could strike, without reason or warning. True, we still have natural disasters, but, for example, people who live on the California coast now know that eventually they will be involved in an earthquake. We can, with increasing accuracy predict many, if not most, earthly hazards. Soon (if funding holds up) we will be able to predict many hazards beyond earth. But it wasn't so long ago that we understood and could predict little. Consider the following excerpt from the NILES WEEKLY REGISTER of Saturday, September 14, 1816. this was brought to my attention by Paul Hackett, a computer programmer that works with Dolores at Lunar & Planetary Labs. This publication was a review of articles that appeared in a wide variety of other publications that would be condensed and republished in "the colonies" - a sort of Readers Digest of its day.

"From the Essex Register. - Much has been said about the spots on the sun, but principally with a view to quiet the groundless fears of weak minds, who view the thing through the superstition incident to ignorance. Another class of speculators, rising a little higher in the scale of intellect, have attributed the coldness of the season to the influence of the spots. This latter class of philosophers have concluded to wait for Dr. Herschel's observations and speculations, and then the matter will be put to rest with them...

One class of philosophers call every extraordinary appearance a judgment, or a sign; another class-view everything as the working of matter and motion. These two sects are at war with each other; the one denounces the other as superstitious or atheistical. Whatever truth there may be in these allegations, it gives us no correct view of facts. They are distorted for party purposes. To me it is quite immaterial what changes take place in nature.- Whether new stars start into existence, or the planets assume new orbits, or the sun becomes black as sackcloth, I would not be disquieted, but would consider them as the movements of nature on a large scale; and why should not I contemplate these things with the same philosophical curiosity, as I would the eruption of Aetna, the extinction of a race of animals, the finding of marine shells on the tops of high mountains, and the various sports of nature?- Spots, however, do appear on the sun, and so they do on an apple. One set of philosophers account for them thus: They say that the sun is a globe of melted matter, kept burning by fuel, and that comets are this fuel to feed the flame. When the melted matter gets low the tops of mountains in the sun appear above the surface and thus exhibit the phenomena of spots. This is all contradicted by a more enlightened class of philosophers, who insist on it, that the sun is as cold as ice, or anything else you please, and that the sensation of heat is only peculiar to certain bodies which come in contact with the matter excited by the sun.-This was Dr. Franklin's opinion. There is no reason therefore why the sun is not inhabited. Thus they go on speculating, and finally convince us that they know no more about the matter, than they do of the man in the moon...

That the stars are suns, says Dr. Herschel hardly admits of a doubt. Their immense distance would perfectly exclude them from our view, if the light they send us were not of the solar kind. Besides, their analogy may be traced much farther. The sun turns on its axis; so does the star Algol. So do the stars Beta Lyrae, Delta Cephei Nu Antinoi [a constellation that used to lie south of and is now a part of Aquila] Omicron Ceti, and many more, most probably all. Again, our sun has spots on its surface; so has the star Algol, and so have the stars already named, and probably every star in the heavens. On the sun these spots are changeable; so they are in the star Omicron Ceti, as evidently appears from the irregularity of its changeable lustre, [all the above named stars are variable] which is often broken in upon by accidental changes, while the general period continues unaltered. The same little deviations have been observed in any other periodical stars, and ought to be ascribed to the same cause. But, if stars are suns and suns are inhabitants, [inhabited] what field for animation opens itself to our views. "

"From PHILOSOPHICAL TRANSACTIONS [of the Royal Society] for 1795-Many of the principal fixed stars are observed to change their position with respect to the adjacent stars, and this change of place is called the proper motion of the stars. Dr. Herschel from this infers the motion of the whole solar system in absolute space."

But what shall we say to still greater changes than these? Several of the stars have been known to disappear, as the stars Beta and Gamma, in the constellation Argo. Dr. Maskelyne says, vol. iii. page 148 of his observations, that the 55th of Hercules [55 Her] has disappeared. Again, others called new stars have appeared, and then entirely vanished. One of the most remarkable of these appeared in the year 1572, about the beginning of November, which, with the stars Alpha, Beta, and Gamma, of Cassiopeia, formed a perfect rhombus. Its apparent magnitude exceeded that of Sirius, one of the largest of the stars, and sometimes it could be seen in the day time. It continued in the same place for sixteen months, and then disappeared. On the 10th of October, 1604, a new star appeared in Serpentarius, which was as bright as the former, and entirely vanished October 8, 1605. Dr. Herschel has furnished us with a catalogue of stars which were formerly seen, but now no longer visible; and also a catalogue of new stars.

If stars therefore are seen to other systems, we see that some systems are becoming extinct, while others are coming into existence. Why may not this be, one day or other, the fate of our own? How small a portion of the works of an infinite being do we know!

After these considerations, how trifling in comparison do a few spots on the sun appear! Nay, if the whole sun was to be extinguished, how little would it effect the general system! How little in the eye of Him who sees

"Atoms of systems into ruin hurl'd,

"And now a bubble burst-and now a world!"

Let us now look a little more minutely into the history of the sun, as being more interesting to us who inhabit this nook of creation.

In 1761 on the 10th of July and 8th of August, more than fifteen spots were discovered on the face of the sun, and in the year 1783, remarkable for its fruitfulness and fine vintage, there were large spots observed on the sun, which could be seen with small telescopes, even when the sun was obscured with fog. [This may not seem very unusual to us but remember that this was shortly after the Maunder Minimum, a period of virtually spotlessness from 1645 to 1715. In the 18th century a spotted sun was regarded as an unusual condition and possibly threatening!] But for a particular record of the various spots which are continually appearing on the disc of this luminary, I must refer to the philosophical transactions and the publication of Dr. Herschel.--I shall conclude with a mention of the two most remarkable records of this kind that I have been able to find in history.

In the reign of Constantine Copronymus, [or Copronymos, a Byzantine emperor] which began in 742 [AD] there was an extraordinary darkness which lasted from the 4th of August to the 1st of October, nearly three months, there being little or no distinction during all that time between day and night. [Univ. History, Vol. XVIII] [I could find no modern reference to this.]

This fact is taken notice of by Mr. Gibbon who calls it an extraordinary paleness. [This is Edward Gibbon 1737-1794 of "Decline and Fall of the Roman Empire" fame.]

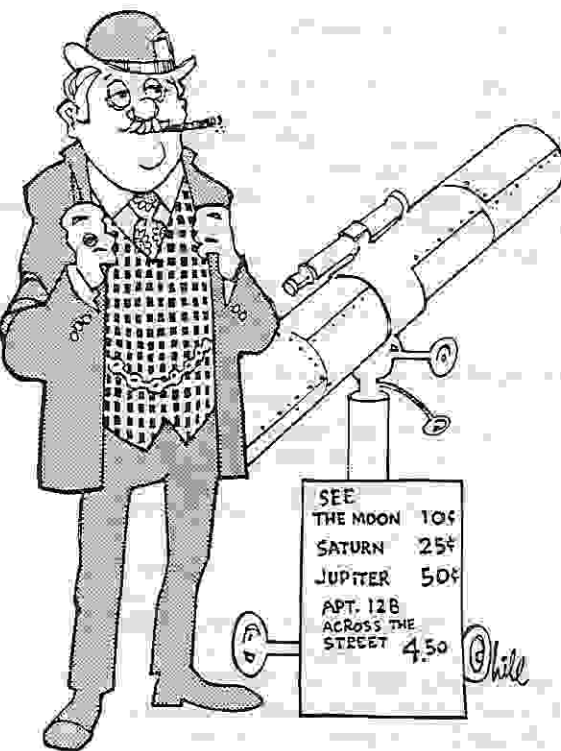
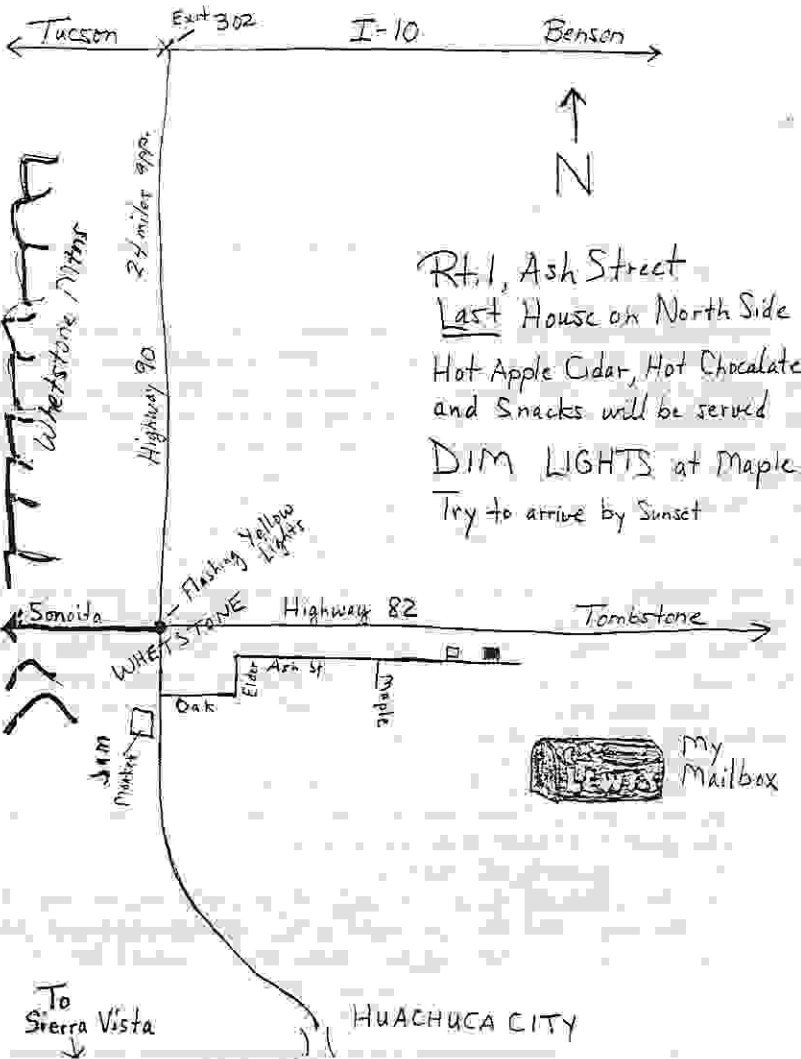
Again, in the year 1782, a little after sunrise, the solar light was lost, and the darkness continued till noon. At that time there was an eclipse. [Again no modern record!]

These facts are as well authenticated as any in history. Let no one, therefore, be astonished, even if the sun should be entirely black, or the moon turn red or new stars appear, or old ones go out of the system, or earthquakes remove kingdoms, and shake down cities, or mountains vomit fire, or floods inundate countries, or kingdoms change masters, or comets gleam athwart the heavens, or stones fall from the sky, or rain, hail, tempests, hurricanes, water spouts, &c, &c, &c, continue to appear; let no one be so ignorant of the mighty operations of nature as to conclude that no such wonders ever were seen. They are but the operations of nature, and though uncommon, are a part of the system of things, and are no more wonderful than the showers of spring or the return of winter."

What a different world it was a mere 175 years ago, only a hundred millionth of the age of the universe ago. But let's not get too smug. We are by no means out of nature's grasp. Last year our planet was narrowly missed by two asteroids both of which were not found until after they had passed the earth. Either could have caused ecological havoc--just ask a dinosaur. By the same token we should be very careful as to what we accept as "fact". What is reported about Herschel's speculations on the sun are correct. He did indeed believe the sun was not hot, but that it caused heat in the earth's atmosphere. How many of our present day hypotheses and speculations will look equally nonsensical only 175 years from now? We've come a long way baby, but we still have a long way to go!

SATURDAY, MARCH 17

Star Party at the home of Vivien and Bob Lewis in Huachuca City.



(INFORMATION SHEET NUMBER 15 (Edition No. 2, January 1990))

INTERNATIONAL DARK-SKY ASSOCIATION

3545 N. Stewart, Tucson AZ 85716 U.S.A.

List of Information Sheets Available at the Date of This Edition

No.	Date	Title
1	Dec 88	Astronomy's Problem with Light Pollution
2	Dec 88	Light Pollution - A Problem for All of Us
3	Dec 88	Why We Don't Like the 175 Watt Mercury Fixture
4	Dec 89	Operating Data And the Economics of Different Lamps
5	Jan 89	Cities and Counties in Arizona with Outdoor Lighting Codes
6	Jan 89	Advice on Working with Community Leaders, Officials, and Others to Educate Them about the Issues and to Solicit Their Help
7	Dec 89	As a Non-Profit Organization, IDA Needs Help
8	Dec 89	Local Sections for IDA: Why? How?
9	Jan 90	Glossary of Basic Terms and Definitions
10	Feb 89	Summary of the IAU Colloquium No. 112
11	Nov 89	Estimating the Level of Sky Glow Due to Cities
12	Dec 89	Recommendations about Effective Outdoor Lighting
13	Dec 89	Summary of the City of San Diego Street Lighting Conversion
14	Dec 89	Fact Sheet on the International Dark-Sky Association
15	Jan 90	List of Information Sheets Available as of This Date
16	Dec 89	Items Currently (or Soon) Available from IDA
17	Dec 89	Vast Orbiting Displays... A Letter by Robert Dixon
18	Jan 90	Theft of the Night... Text of a Dec 1989 NAS Op-ED Press Release
19	Jan 90	The American Astronomical Society's Position on Light Pollution
20	Jan 90	Sky Glow Effects on Existing Large Telescopes
21	Jan 90	Poster Paper: Light Pollution, Another Threat to the Environment
22	Jan 90	Sample Letter to Help Build Awareness and Ask for Help
23	..	Campus Lighting, and Other Such Applications (Libraries, etc)
24	..	Security Lighting. Let's Have Real Security, Not Bad Lighting
25	Feb 90	How To Talk To Your Neighbor Who Has a Bad Light

2 Feb 1990

Newsnotes about the 7 April 1990 International Dark-Sky Association annual meeting:

Speakers are now being lined up and will include the following individuals or topics:

A 45 minute tutorial on outdoor lighting basics, terminology, techniques, tips, current and future technologies, ideas on how to dialog with lighting professionals, etc. The main speaker will be Dr. David DiLaura, a well renowned lighting professional, not associated with any lighting manufacturer. He is also a professor at the University of Colorado (an award winning instructor), and a board member of IDA, Inc. He is an avid amateur astronomer as well!

We will also have talks on the legal aspects of light pollution, by a lawyer. Topics will include how to sue your neighbor, etc.

And one or more talks on how to interface with the media, and how to give good talks on the issues in general.

There will also be talks on or by:

One or more city government staff, on how to best relate to such staff. The latest news on the Star Watching Program, jointly with Japan.

A talk by Dave Levy (know him?) on light pollution and the amateur.

An excellent short slide show, of some of the late Al Tanner's slides, informative and funny as well.

A report on the economic savings in San Diego, Glendale, and elsewhere, as well as information on how the cities like the new systems.

Others are pending, more information next month. Sign up now or then.

(Tear off below & give to Tim Hunter or Dave Crawford, or phone 327-9331 with message.)

Sign Up Sheet for Volunteers:

Name:

Address:

Phone:

Times I might be able to help:

How I might be able to help:

Needs: Office work, such as filing. Developing current mailing lists and information into mailings to those who may be interested in the issues. Library "research." Working with the Tucson Police Dept in a statistical investigation of accidents and crime vs. lighting. Help prepare a "mail" display. Work with local lighting suppliers, to collect and distribute good information. Computer advice (SW & HW). Help IDA grow! Help IDA obtain useful information! Help IDA spread the word to others!

IDA SECOND ANNUAL MEETING

The next annual meeting of the International Dark-Sky Association will be held in Tucson on April 7, 1990. We hope that many of you will be able to attend. Last year's meeting was well attended, including a good number from out of town.

The meeting will be held at the Hotel Park Tucson and Conference Center, which is located at 5151 East Grant Road. Their phone number is 602-323-6262.

The program schedule as it looks now:

6 April (Friday): The regular monthly meeting of the Tucson Amateur Astronomy Association is held this evening at the Flandrau Planetarium, mezzanine level. The speaker is William T. Robinson, who will talk on the light pollution issue, including "how to get ordinances." He will illustrate by slides, many examples of good and bad lighting in the southern Arizona area.

7 April (Saturday):

8:00 a.m. and continuing:	Registration
9:00 - 12:00	Program of talks
12:00 - 1:30	Lunch (on your own)
1:45 - 5:00	Program of talks
6:00 - 7:30	Social hour; no-host bar
7:30 - 9:30	Dinner, and short presentation

8 April (Sunday):

1:00-2:30 p.m. IDA Board Meeting. All are welcome.

We will be arranging what we expect to be an excellent program of 15 to 20 talks by interesting and informative speakers. Some of these will be in areas in which we have currently little information, such as effects of poor outdoor lighting on animals and plants, how city staff see the issues and the ordinances (with advice on how to interface to such city staff), how to best approach the media about the issues, how lawyers view nuisance suits with respect to offending lights, and so forth. We expect to have several exhibits of both poor lighting fixtures and good fixtures that could replace them.

We will have on hand copies of all the IDA materials, as well as T-shirts with good logos and other such PR materials that you can put to good use. These all will be available at cost. We will be glad to sign up members as well, and can accept unlimited numbers of gift memberships. Most board members will be attending, and will welcome the chance to discuss any and all issues of the nighttime environment with you, as well as any topics relating to IDA.

Registration fees will be \$8 in advance, \$10 at the meeting for those not attending the dinner, and \$30 in advance, \$35 at the meeting for those wishing to also attend the dinner and presentation afterwards. If you register, you will receive later mailings with additional details about the program, and other such information.

For more information contact Dr. David Crawford, IDA, 3535 N. Stewart Avenue, Tucson, Arizona 85716.

Tucson Amateur Astronomy Association
Membership Questionnaire

Information you supply will be included in the club directory.

Name _____

Address _____

Telephone (____) _____

Field(s) of interest:

Optical instruments owned:

You are an important resource to us. Below and on the back please identify skills and support you are willing to give to club projects (i.e. Star Parties, 30" Telescope Project, other). Please refer to specific projects.

YOU SAY THAT STEPHAN'S QUINTET ISN'T REAL OBVIOUS IN YOUR C-8?

Well--how would you like to see it through the TAAA 30" telescope someday? You will be able to and it may be sooner than you think.

It is going to take some \$\$\$\$ to make it happen. You can help out by making a donation to the TAAA 30" Telescope & Land Fund.

But let's be honest--most of us can't afford to make large sized donations. But maybe you can afford \$5 a month? That becomes \$60 in a year. That's \$60 closer to seeing Stephan's Quintet through the 30"!

Donate what you feel comfortable with and we'll keep a record. At the end of the year you'll get a receipt showing your total donation. Drop a check in the mail or bring it to the meetings each month. Please use the form below to make bookkeeping a little easier. Make checks payable to TAAA. Send to PO Box 41254, Tucson, AZ 85717.

.....

I WANT TO HELP OUT!!

I want to help out with a donation of \$_____ to the
TAAA 30" Telescope & Land Fund.

NAME _____ PHONE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

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A complete selection of telescopes
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Sunday by appointment only

571-0877