

# DENVER OBSERVER

Newsletter of the Denver Astronomical Society

*One Mile Nearer the Stars*



### A Valentine Bouquet

A winter bouquet of observational wonder can be picked during the cold nights of February. The dark skies hide some beautiful challenges, and Joe Gafford's image of M46 in Puppis is a fine example (left). Most of us observing this lovely open cluster are able to see the planetary nebula NGC 2438 without too much trouble. Can the same be said about P-K 231+4.1? You'll find this elusive little planetary on the far left side of Joe's image.

In this month's *Observer* you'll see that club members have been working hard behind eyepieces and camera lenses.

And, although there's much to see and do in this month's skies, don't forget your Valentine!

# Happy Valentine's Day

## Inside The Observer

*President's Corner* ..... 2

*Schedule of Events* ..... 2

*Officers* ..... 2

*Observers Deck* ..... 3, 4

*Odds 'n Ends* ..... 5

*Urban Observatory* ..... 5

*Astronomical League* ..... 5

*Membership Info* ..... 6

## FEBRUARY SKIES 2001

February is a great month for planetary viewing — **Venus** is so bright it can be seen naked-eye during the day and might cast shadows at night. It's also visible for about four hours at night during the early part of the month. **Saturn** is fading, but it and **Jupiter** still make a lovely couple in the skies as they continue to hang out with the Pleiades and Hyades. **Mars** is outshining its rival Antares in Scorpius as they seem to stake out territories close to each other. They're high in the south by sunrise. The **Alpha Centaurid** meteors peak on the 7th, and in the predawn sky you might check out fading comets **McNaught-Hartley** (C/1999 T1) and **Utsunomiya-Jones**, C/2000 W1).

- 1 ..... First quarter moon
- 8 ..... Full moon
- 12 ..... NEAR lands on Eros
- 15 ..... Last quarter moon
- 21 ..... Venus is at its brightest  
(Magnitude -4.6)
- 23 ..... New moon



Shadow casting on Jupiter.

Image: © David Shouldice, 2001

# PRESIDENT'S CORNER

## A Brief History of the Dark Sky Site

On October 1996, the E-board selected Wayne Kaaz, Steve Solon, George Jones, Debra Sorg, Terry Chatterton, and Patrick Ryan to start the process of getting a dark sky site for the DAS. The board gave the committee autonomy in planning. A commitment was made that the site development would be self-supporting so as not to burden the club membership. The club is picking up operational expenses such as porta-pottie and site lease.

George and others looked at over 50 sites in eastern Colorado. They located a site at \$250/year until someone at the Bureau of Land Management (B.L.M.) raised the ante to \$2,500/year. The committee decided to keep looking. We signed a lease

in February 1998 for \$350/year at the present site. The landlord is a generous man, and made some improvements to the site at no cost to the club.

Wayne and Terry met with Arapahoe County Planning Division and started the long process to get permission to develop the site through "Use by Special Review." Documentation included Certified Legal Document, Phase III Drainage Report (the report required the services of a civil engineer), and a Drainage Retention Plan. The Drainage Retention plan was waived after an appeal to the County. After all this was done, the county decided they needed a survey. That cost us about \$1,500.

In March 1999, packets were sent to the county with the mandatory \$920 and the review process began. In July, the county informed us we needed such things as security lighting, water mains, fire hydrants and 20 foot wide concrete or asphalt roads. After appealing, all were waived except for the paved road. The fire Marshall could make the decision that we needed the road but only the County Commissioners could rescind his decision.

*(Continued on next page)*



## D.A. S. Officers

### President:

Larry Brooks (303) 986-5255  
Email: [LBrooks100@aol.com](mailto:LBrooks100@aol.com)

### Vice President:

Ed Kline (303) 758-6953

### Secretary:

Ron Pearson (303) 670-1299  
Email: [rpearson@ecentral.com](mailto:rpearson@ecentral.com)

### Treasurer:

Chuck Carlson (303) 744-7331  
Email: [chcarlo@du.edu](mailto:chcarlo@du.edu)

### ALCor:

Jerry Sherlin (303) 680-6894  
Email: [SHERLIN@aol.com](mailto:SHERLIN@aol.com)

### Chief Observer:

Jack Eastman

## Executive Board Members

Jack Eastman	Bill Ormsby
Joe Gafford	Ron Pearson
Patti Kurtz	Debra Sorg
Greg Marino	Dan Wray
George Jones, Past President	

### D.A.S. Information Line:

(303) 986-5255

### D.A.S. Correspondence:

Denver Astronomical Society  
c/o Larry Brooks  
3686 South Depew, #8  
Denver, Colorado 80235

### Van Nattan Scholarship Fund

P.O. Box 150743  
Lakewood, Colorado 80215-0743

### Webmaster:

Terry Chatterton

### Newsletter:

Observer Editor, Patti Kurtz  
(303) 948-5825  
Email: [pkurtz@starfirecreations.com](mailto:pkurtz@starfirecreations.com)

**The Observer is available in color or b&w PDF format from the D.A.S. website.**

*The Executive Board conducts the business of the D.A.S. at 8 P.M. at Chamberlin Observatory. Please see the Schedule of Events for meeting dates. All members are welcome.*

## D.A.S. Schedule

### FEBRUARY

- 2 E-Board meeting, 8 P.M.
- 3 Open House
- 16 General Meeting at Olin Hall, D.U. 7:30 P.M. - Elections
- 23 - 25 Dark Sky Site Weekend
- 24 Open House - Kiowa Observatory (pg. 6)

### MARCH

- 2 E-Board meeting, 8 P.M.
- 3 Open House
- 10 Annual Banquet at Dardanos Restaurant — Installation of new officers. Speaker: John Balley
- 23 - 25 Dark Sky Site Weekend - Messier Marathon

*Public Nights are held every Tuesday and Thursday from 7:00-9:00 P.M. at Chamberlin Observatory*  
*Costs to non-members are: \$2.00 adults, \$1.00 children*  
*Please call (303) 871-3222 for reservations.*

# www.denverastro.org



Eros from an altitude of 22 miles. On February 12, NEAR-Shoemaker will attempt to do what it was designed to do — land on Eros almost one year to the day after it began its orbit. All cameras will be firing, and the world will be watching!

NEAR Shoemaker Mission Team, January 7, 2001

*Sky & Telescope sends only one notice before subscriptions end. The D.A.S. sends only one issue of The Denver Observer after dues expire. The cost of magazines (Astronomy and Sky & Telescope) is in addition to the annual dues. For questions concerning memberships, please contact D.A.S. Treasurer, Chuck Carlson (chcarlo@du.edu). See the back page of this newsletter for more information.*

M51 The Whirlpool Galaxy in Canes Venatici.

Image: ©Kiowa Observatory



### A Brief History of D.S.S. (Cont.):

A public hearing was held on November 1999, the county waived the paved roads and granted the “Use by Special Review.” Final plans were filed in January 2000. Now we could begin making the site our own.

Ted Cox agreed to ramrod the construction and Greg Marino supplied major support to develop the site as we see it today. Six concrete pads were poured in the spring of 2000 as soon as the ground thawed. In October we purchased a Warming hut and it was set on the site in December 2000. We

hope to have electrical wiring completed by February.

Many D.A.S. club members contributed personal money to develop the site. The E-board raised a great deal of money through the auction, approaching members for their support, and substantial personal cash donations.

Plans for this spring include more concrete pads and a real vault toilet if we can raise the money.

We owe a great deal to these fine people and to the E-Board for their efforts in developing the site. Thank you. — Larry Brooks and Wayne Kaaz

## S & S OPTIKA

### Colorado's Premier Astronomical Supply Store

5174 So. Broadway  
Englewood, CO 80110  
(303) 789-1089

*Hours: Tuesdays, Wednesdays, and  
Fridays: 10 A.M. - 6 P.M.  
Thursdays: 10 A.M. - 8 P.M.,  
Saturday: 10 A.M. - 4 P.M.  
Closed Sundays and Mondays*

### Note from the editor:

Newsletter contributions (ccd and film astrophotos, members with telescopes, star party candid, short observing anecdotes, observing and imaging tips, etc.) are welcome and encouraged. This is your chance to strut your stuff! **Please submit by the 15th of each month as follows:**

**Film:** Glossy prints by mail\*\* or scanned and uploaded (high res.) to the listserv upload area.

**CCD:** Uploaded to the listserv upload area (resolution as high as possible, please).

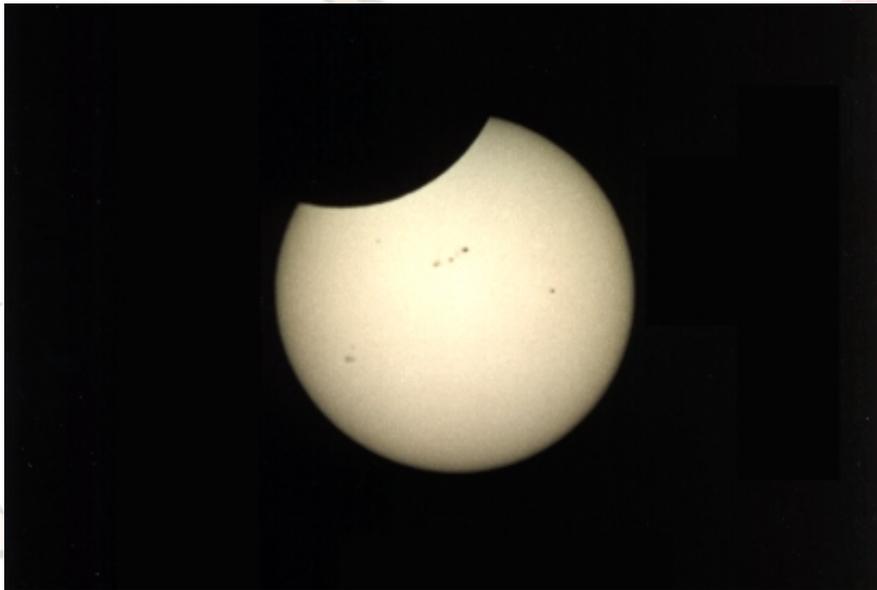
**Text:** Articles should be no more than 250 words, please. Paste into an email and send to me at: [pkurtz@starfirecreations.com](mailto:pkurtz@starfirecreations.com).

If you don't receive a confirmation email from me, I didn't get your email. Also, be sure to let me know if you've uploaded a file. Thank you!

*\*\*Patti Kurtz  
(303) 948-5825*

*All images used are © the  
photographer and may not be  
reproduced.*

# observers deck



The Christmas Eclipse from Saguaro National Park, December 25, 2000. C-90 at prime focus with a Nikon FM2 camera, Kodak Select+ 400 film, 1/1000-second exposure taken at 9:31 a.m. MST. (Nice sunspots!) Image: ©Leroy Guatney, 2001

## Kiowa Observatory Rules!

Saturday, November 25, 2000 my husband and I took a road trip to Kiowa.

To our disbelief they have an observatory on the eastern plains, and we also discovered that the D.A.S. has a dark sky site in our own little town of Deer Trail. We reached Kiowa Observatory and the home of Terry Chatterton.

This is no ordinary observatory. This is a monument that speaks about the heart, dreams, goals, and ambition of three friends. It is truly remarkable what these men put together for the sole desire to observe, learn, and stargaze. They served hot chocolate, coffee, cookies, and offered the use of their facilities inside. We knew it would be chilly but we were not prepared for how COLD it is after dark, in November, in the middle of nowhere! Of course our guides were well equipped to weather the night. The tour began with Terry explaining what type of telescopes they use and what they do. Terry operated the SCT-14 with a CCD (AP7) camera. This is a massive robotic telescope. He uses TheSky (Software Bisque) in conjunction with the scope. This software enables Terry to move the telescope and achieve different pictures with literally a click of the mouse.



The Owl Nebula (M97) in Ursa Major  
Image: ©Kiowa Observatory, 2001

The second telescope is a SCT-11 which Steve Solon manipulated. This particular telescope was a refracting telescope and also had a reflecting telescope. There were two separate eyepieces we could look through.

Terry described how cameras make noise even if we do not hear it. The CCD made noise that the dark frame camera must subtract in order to get the accurate visual of the picture it is taking. Terry and Steve were great hosts. The views were incredible.

I feel like every little detail of the sky now jumps out at me and I begin to

## Classes

### UNIVERSITY OF DENVER

#### ASTRONOMY CLASSES:

All levels of instruction are available at Chamberlin and Mt. Evans Observatories. Contact Dr. Bob Stencel (303) 871-2135, [rstencel@du.edu](mailto:rstencel@du.edu), [www.du.edu/~rstencel](http://www.du.edu/~rstencel), and/or the D.U. Registrar's Office at (303) 871-2284.

#### CHAMBERLIN OBSERVATORY

##### MIRROR-GRINDING CLASSES:

December 9 and 23 - 10:30 A.M.  
Please call Terry Chatterton for details at (303) 621-2442.

#### Open House at Kiowa Observatory:

- **Date:** February 24
- **Time:** Dark (Terry will have snacks and hot drinks, but bring munchies to share.) Call with questions and for weather updates: (303) 621-2442.

**DIRECTIONS:** Take Parker Road south from Parker 9 miles to Franktown. Turn left at the light onto eastbound highway 86. Proceed 16 miles, through Elizabeth, to Kiowa. Go through downtown Kiowa to Road 45 (at the fire station with the water tower.) Turn right (southbound) and go 2.6 miles to the "Pavement Ends" sign. Turn left just after the sign into the Pine Meadows subdivision. Go to your 3rd left (Wilderness Drive), turn and go to your 2nd left (Wildwood Place), turn and look for the flashing light at the entrance to Terry's driveway. Turn right and douse the headlights. Pay close attention to ALL speed limit signs on your journey, especially from Franktown east; they are strictly enforced.

wonder what it is, where it is, etc. It is also amazing how something that used to seem so insignificant before now holds new mystery and meaning. I would recommend Kiowa Observatory to anyone who is interested in looking at the stars and learning about them. They truly cared, took the time to explain, and you could really sense their enthusiasm.

— Monica Haight

o b s e r v e r s   d e c k

## The Urban Observatory

**FEB. 2001 OPPORTUNITIES:** Installation of “digital setting circles” on the Clark-Saegmueller refractor at Chamberlin began in early January 2001.

The design and installation are being completed by Tom Melsheimer ([www.meridiancontrols.com](http://www.meridiancontrols.com)), who has been building computerized telescope control systems since 1972. The work was jointly paid for by the D.A.S. and the University of Denver (D.U.).

The encoders are passive and should not affect the regular mechanical operation of the telescope, but when properly calibrated, will allow operators to more efficiently find fainter objects under our less-than-dark skies in Denver. If you are interested in learning how to use the refractor, become a D.A.S. public night volunteer!

**LIGHT POLLUTION NOTES:** In December, Jefferson County planning commission passed 7-0, a decent light pollution control zoning code (Section 47) requiring full cutoff fixtures, etc. D.A.S. members who reside in Jeffco should consider appearing at the next hearing before the County Commissioners in April who will next vote on the proposal. See website: [planning.co.jefferson.co.us/zsrr/zsrr.html](http://planning.co.jefferson.co.us/zsrr/zsrr.html). In January 2001, the Colorado legislature was expected to introduce a light pollution control bill.

You can contact the Colorado section of the International Dark Sky Association (I.D.A.) (Jerry Sherlin, chairman, [sherlinj@aol.com](mailto:sherlinj@aol.com)) or myself ([rstencel@du.edu](mailto:rstencel@du.edu)) for an update. Ideally, the bill has survived initial hearing, and supportive constituent input to elected representatives is still highly appropriate.

**M.A.R.S. REGION HAPPENINGS:** visit <http://hometown.aol.com/gkramer259/documents/index.htm> for updates.

—Dr. Bob Stencel, Email: [rstencel@du.edu](mailto:rstencel@du.edu), University of Denver Astronomy ([www.du.edu/~rstencel/Chamberlin](http://www.du.edu/~rstencel/Chamberlin))

*Regional newsletters are welcome to reprint any useful portion of this article.*



NGC 1977 (The Running Man) in Orion

Image: Joe Gafford

## The Astronomical League and You

The Denver Astronomical Society is a member of the Astronomical League, the world's largest federation of astronomy clubs, and has been for many years. As a result every member of the D.A.S. is a League member; you may not know this. The League offers many services to its member societies and individual members.

In order to make you aware of these I've asked the *Observer* editor for permission to run a monthly column highlighting “The Astronomical League and You.”

Each month you'll find a list of club officers in the newsletter. I am the D.A.S. ALCor (Astronomical League Correspon-

dent) which means that I am your link with the League.

Every League member receives its quarterly publication, *The Reflector*, and one of my ALCor duties is to make sure that you do. If you are not receiving *The Reflector*, please let me know. In future issues of the D.A.S. Newsletter

I will spotlight other League benefits. —

*Jerry Sherlin,*  
[sherlinj@aol.com](mailto:sherlinj@aol.com)



## The D.A. S. Listserve (For Members Only)

The D.A.S. Listserve is available to club members with an Internet connection. It's operated by the E-board and can be accessed from a link provided at the D.A.S. website. Members are encouraged to join up and share anecdotes, observing and imaging tips, or whatever moves you astronomically. Be sure to check the website for profiles of upcoming speakers.

### Upcoming Chats (8 P.M.):

Chats are held on Wednesdays. At this time, there are no scheduled chats for February — check the website for updates.

# odds 'n ends

## About the Denver Astronomical Society

The D. A. S. is a group of amateur and professional astronomers that share a mutual interest in the heavens. The D.A.S. operates the University of Denver's Chamberlin Observatory, along with its prized 1894 Alvan Clark 20-inch refracting telescope. Our members have been involved with the first public planetarium at the Denver Museum of Science and Nature and the Smithsonian Astrophysics Observatory's "Moon Watch" program. The D.A.S. successfully petitioned to have the Chamberlin Observatory listed on the National Register of Historic Places.

Our Credo is to provide members a forum for increasing and sharing their knowledge, to promote and educate the public about astronomy, and to preserve the historic telescope and observatory in cooperation with the University of Denver. To these ends we have established three tax deductible funds: the Van Nattan Scholarship Fund, the Chamberlin Restoration Fund, and the D.A.S. Dark Sky Site Fund. This last fund was established in order to construct and maintain observing facilities near Deer Trail in eastern Colorado.

Please call our Info Line at (303) 871-5172 and drop by the General Membership meetings. Become a member and enjoy speakers, facilities, events, and our monthly newsletter, *The Denver Observer*.

APPLICATION FOR MEMBERSHIP TO THE DENVER ASTRONOMICAL SOCIETY	
New <input type="checkbox"/>	Renewal <input type="checkbox"/>
Name: _____	
Address: _____	
City, State, Zip: _____	
Phone numbers: Home ( ) _____ Work ( ) _____	
E-mail Address: _____	
Occupation: _____	
Other Interests: _____	
(Associates Only) School: _____	Grade: _____
Do you want to download the newsletter in PDF format from our website instead of by postal mail?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
Do you want the above information excluded from the yearly roster?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
<i>Please Circle All That Apply:</i>	
Regular Membership: \$30	Associate: \$10 (Age 22 and younger)
..... \$ _____	
Astronomy Magazine/\$29	
Sky & Telescope Magazine/\$29.95	
..... \$ _____	
Dark Sky Site Fund Donation	..... \$ _____
Van Nattan Scholarship Fund	..... \$ _____
Chamberlin Restoration Fund	..... \$ _____
Total Amount Paid	..... \$ _____

*Complete this form, or a copy, and mail it with your check or money order payable to The Denver Astronomical Society;  
D.A.S. Treasurer, Chuck Carlson; 1521 So. Vine St.; Denver, CO 80210*



## Denver Astronomical Society

c/o Chamberlin Observatory  
2930 East Warren Avenue  
Denver, Colorado 80208

join us