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.

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!
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 to not 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)

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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 Bailey
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

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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

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

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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 listserve upload area.
CCD: Uploaded to the listserve 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.

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.
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 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 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
**February 2001 Opportunities**


The design and installation are being completed by Tom Melsheimer (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. 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) or myself (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, University of Denver Astronomy (www.du.edu/~rstencel/Chamberlin)

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

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**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 Correspondent) 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

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**The D.A.S. Listserv (For Members Only)**

The D.A.S. Listserv 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.

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**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.

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*NGC 1977 (The Running Man) in Orion*

Image: Joe Gafford

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*odds ‘n ends*

February 2001
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.

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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

j o i n u s

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