



13th Annual Weekend Under the Stars

July 24 - 26, 2003



The 13th annual Weekend Under the Stars is hosted by the

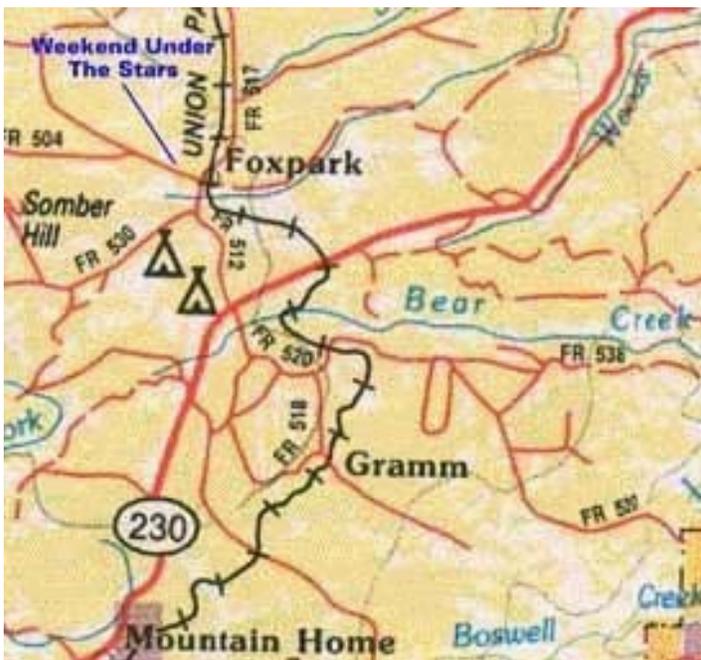
Cheyenne Astronomical Society

and the

Laramie Astronomical Society and Space Observers

Weekend Under The Stars is held in cooperation with the

Front Range Astronomical Super Cluster (FRASC)



Directions to the Star Party

From Laramie Wyoming, take HWY230 West 28 miles to Woods Landing. Continue from Woods Landing up HWY. 230 12 miles to the turn off to Foxpark (Forest Road 512). The turn is well marked and there will also be a sign marked "Weekend Under The Stars" with an arrow pointing the correct way. Take the county road approximately 2 miles to the small town of FoxPark. The town is closed up with big gates so you turn left when you get there. There will be a "Weekend Under The Stars" sign near that turn. After turning, go about 1/2 mile (approximately) and you will come to stop sign that enters another road. Get on that road and you will find the turn off to the observing site is to the right after you get on the other road. Watch close for the "Weekend Under the Stars" signs.

Information About The Observing Site

The observing site is the winter sports parking area for the south side of the Snowy Range. The site sits a 9100 feet with typical 7th mag stars visible naked eye. Most Messier objects are naked eye as well. The days are hot and the nights can be cold. Bring shorts, t-shirts, sun block, long johns, parkas, gloves and sun glasses. The sun will cook you to a crisp in less than an hour and the night can freeze you in less. Of course if you sun-burn your legs they'll be warm all night ;-). There are almost no facilities at the site. As a matter of fact, there are six outhouses and nothing else so bring water, food and any supplies you will need to camp out. There is food, gas and supplies at Woods Landing, so it's not too far to go if you forget something but their supplies are limited. There are two large camping areas and the ground is flat and level so you can camp right at the observing site or almost anywhere you like around Foxpark. There are specific campgrounds at Rob Roy Reservoir, Miller Lake, Lake Evans and Lake Owens. Laramie is about a 50 minute drive from the site.

REGISTRATION

There is no pre-registration for this Star Party. All registration will be taken care of at the time of arrival. Please sign in at our registration desk(at the big tent).

Fees: ADULTS = \$10.00 each CHILDREN (12 and under) = FREE

We record the number of people and how much aperture they brought with them for a grand total Saturday evening.

WUTS Cont.

EVENTS

We offer the following activities for the weekend.
Check the events list below.

Door Prize Giveaway
Saturday Evening

Guest Speakers
Saturday Evening before Door Prize Drawing

Junior Astronomy Classes
TBA

CONTACT US AT:

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Annual Picnic and Meeting Change for July

The DAS Potluck Picnic previously scheduled for July 12th has been changed to Friday, July 18th and combined with the DAS General Meeting. Both the picnic and meeting will be at Pine Valley Ranch Open Space Park near Pine, Colorado where we will have an evening picnic and then go up to the Pine Valley Observatory at dusk.

The picnic starts at 6 p.m. with the grilling of meat and other delicacies. Following the picnic, we will car-pool or shuttle up to the observatory. If you want to work off that extra burger you can walk up, but it is a fairly steep climb.

What to bring:

Please bring a covered dish to share. The DAS will provide hamburgers, veggieburgers, hot dogs (and all the trimmings), cold drinks, plates, utensils, and napkins. You might also want to bring lawn chairs and mosquito repellent. Since the elevation is about 7000 feet it may get a bit chilly at dusk, so dressing in layers is advised. You can bring your own scope if you wish; however, observing and parking space next to the observatory is limited.

Directions to the DAS Annual Potluck Picnic:

From C470, take U.S. Highway 285 southwest 21.6 miles to Pine Junction. At Pine Junction, turn southeast onto Pine Valley Road (County Road 126). Continue 5.8 miles toward the town of Pine, then follow the signs to the park. Just before reaching Pine, turn west onto Crystal Lake Road and continue to the Pine Valley Ranch Open Space Park parking area. We'll

be in one of the shelters just below the lower parking lot.

About the Pine Valley Observatory:

Pine Valley Observatory was established in the late 1930s by the Pine Valley Ranch foreman Conrad Johnson. The observatory houses a 6-inch Fecker Refractor. The dome turns on track that was originally narrow gauge rail for an ice-train that ran in the ranch. The ranch was acquired by Jefferson County Open Space in the 1980's. The observatory and telescope has been beautifully restored by JeffCo Open Space where it now serves to show the public the stars and planets from high above this beautiful valley under dark skies.

The telescope has a weight driven clock drive, and looks very much like a miniature of the Clark 20-inch in Chamberlin. Late in 2002, the cable for the weights broke and dropped to the bottom of the pier. JeffCo Open Space coordinator Tabbi Kinnion called on Dave Trott for help in repairing the drive. Subsequent calls got DAS members, Ron Pearson, Neil Pearson, and Dan Wray all involved in the disassembly and repair of the drive. Dan successfully completed the repair in Feb. of this year. JeffCo Open Space and DAS invite you to come up and enjoy this beautiful observatory and park.

More information about the Pine Valley Ranch Open Space Park can be found at:
http://206.247.49.21/ext/dpt/comm_res/openspac/pvr.htm.
-- Ron Pearson

SEE MAP ON PAGE #4

Directions to the E.G. Kline Dark Site

The DAS Edmund G. Kline Dark Site is about 60 miles east of the "mousetrap" in downtown Denver.

Take I-70 east to the Deer Trail exit (exit 328), turn left at the end of the exit ramp, and turn left again on CR 217 (after the Texaco station). Take CR 217 just over 1/2 mile, and turn right (east) onto CR 34. Stay on CR 34 about 6 miles until you get to CR 241. Turn left (north) onto CR 241 and continue about 1.5 miles – you'll see a culvert with a wide gate on the right (east) side of the road.

Directions to the site from Denver, arrival from the North (for after-dark arrivals):

Take I-70 eastbound to exit 316 (Byers). Turn left at end of ramp which puts you on eastbound US-36. Take US-36 east 17.2 miles to CR 241. Turn right (south) onto CR 241 and continue for 6.2 miles. The DSS entrance is on the left between two tall posts.

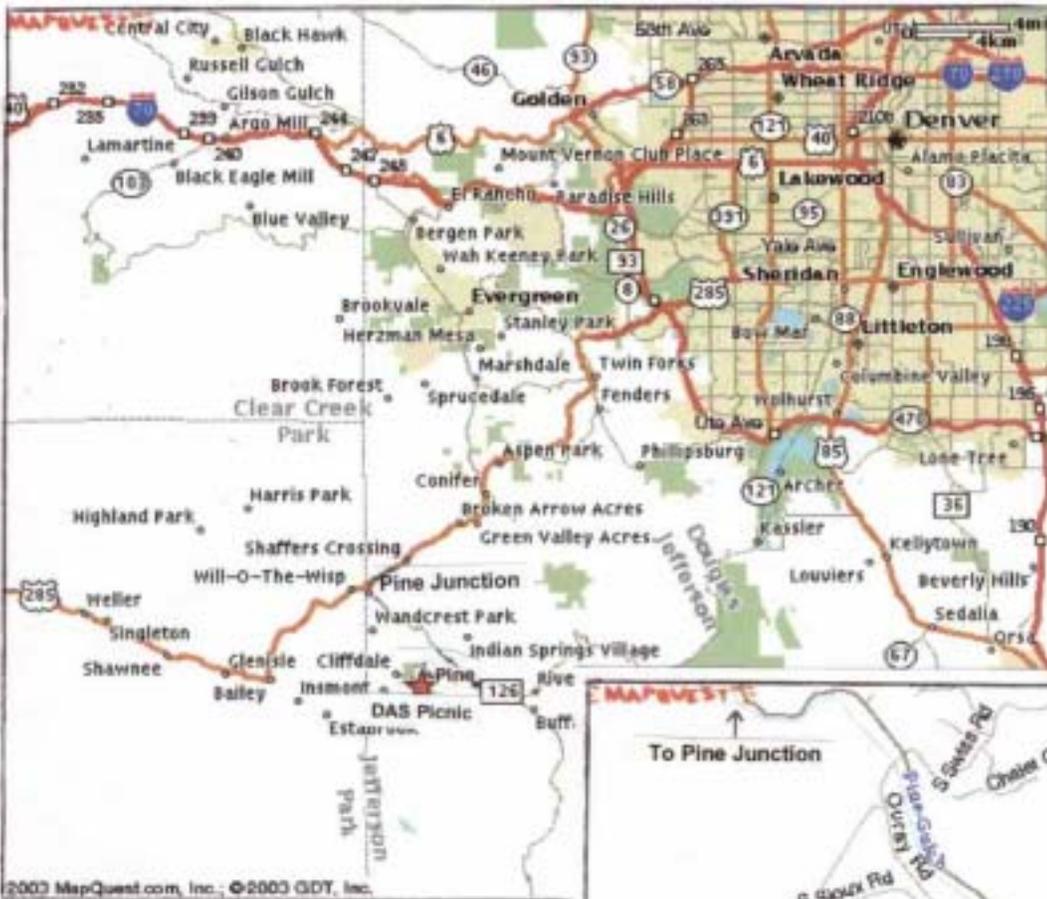
Note: Travel distance from Denver using the North route is actually 3.9 miles shorter than the traditional route. The first 5 miles of CR 241 going south from US-36 is narrow and somewhat rough. Be careful.

Warming Hut Rules:

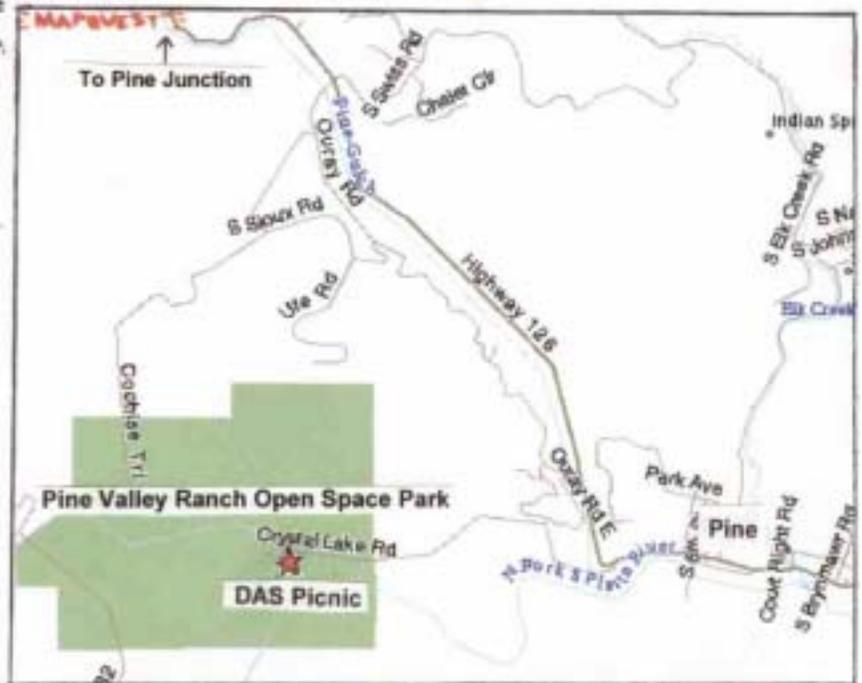
The last people on the site must turn off the lights and the heat.

A microwave will be provided for warming food. Please clean up after yourself.

(Continued on page 4)



Area Map



Detail Map

(Continued from page 3)

- No pots and pans, appliances, or other supplies are to be left in the shed.
- No personal supplies are to be left in the shed overnight.
- Do not donate furniture or other things unless you clear it with the D.S.S. committee first.
- No food left overnight in the shed.
- No sleeping overnight in the shed.
- Quick naps are permitted if you feel you might fall asleep on the way home. We would prefer you get your nap rather than falling asleep on the road. However, we don't want it to become a tent for camping.
- Clean up after yourself before you leave the site.
- Please clean up all food that drops or is spilled, otherwise it will attract mice and insects.

Dark Sky Site Courtesy

- Please remember that white light disrupts the eye's dark adaptation and can ruin astrophotography. Following these simple guidelines will improve the experience for all:
- Upon arrival at the site, check to see if sign in has been instituted at the warming hut. We hope this will help alleviate problems members may be experiencing in trying to find a place to set up.
- Drive carefully on the road, there are blind spots in the low area and you will find cattle on the road at times.
- Try to arrive before dark.
- If you have to arrive after dark, turn off headlights when turning into site.
- Turn off all dome and trunk lights. If a light can't be



Cliff Simpson, 2nd from the right in the vest, was not present at the June meeting, so V.P. Frank Mancini and a contingent of DAS Members tracked him down at the Rocky Mtn. Star Stare and made the presentation on June 27th

turned off, pull the fuse, use layered red brake light tape or just duct tape over it.

When you drive in, position your car so you can drive out directly instead of using your back up lights.

Use only dim red flashlights. Never shine a flashlight in someone's face or on their scope.

Please wipe your feet carefully before using the warming hut.

Please chip in and do some cleaning up in the hut or at the observing sites. It is the responsibility of all users to keep the place nice.

Serious astrophotographers may wish to use the South field since it is somewhat isolated from the rest of the area.

If you are the last person to leave the site, turn off the lights and the heaters in the warming hut. Then, lock the warming hut and close the gate to the site.

Members are responsible for educating their guests as to the rules.

Prospective members, out of town astronomers, and others may be guests one time.

Members can bring family any time and personal friends on a limited basis, but should not abuse the privilege.

Groups of five or more guests must be cleared through the President or Vice President prior to visiting the Dark Sky

Site.

There is no sleeping in the warming shed overnight. However if you need to nap for a short period, you can use the shed. We would rather you fall asleep there rather than at the wheel on the way home.

You may warm drinks in the microwave—it is not there for warming food and cooking since we have no water to clean up. If you spill, please clean up after yourself.

OTHER SUGGESTIONS:

Wear warm clothing. The nights can be extremely cold in the winter and surprisingly cold in the summer.

Bring your own power such as a battery and/or an inverter since the power sites are limited. Also bring extension chords.

Hot drinks can help you survive the night!

When approaching the telescope of someone who does not know you, introduce yourself and ask before looking through the scope. Most members (with the exception of astrophotographers when they are taking pictures) will be happy to share their scopes.

Bring your own toilet paper in case that in the porta-potty runs out.



Jones imagines a scenario where multiple inflatable-wheel rovers could be sent out to explore the Martian terrain-easily and quickly traversing the rugged terrain. Samples gathered by the rovers could be returned to a central, stationary laboratory module for detailed analysis.

"The Martian surface is really very, very rough with a lot of rocks, and to be banging this laboratory equipment up and down over all of these rocks aboard the rovers doesn't make much sense," Jones says. "I suspect it might be better to leave it in a central location."

At the moment it's all very speculative; NASA currently has no definite plans to send inflatable rovers to Mars. But who knows, one day monster truck-like vehicles could be zipping over Mars' rough, red surface.



Monster Trucks on Mars

by Patrick L. Barry and Dr. Tony Phillips

We all know what Mars rovers look like now: Robotic platforms, bristling with scientific instruments, trundling along on small metallic wheels. Planetary rovers of the future, however, might look a little different-like miniature monster trucks!

Enormous, inflatable tires can easily roll right over the rocks and rugged terrain of alien planets, just as they bound over old cars like as many speed bumps.

That's the idea behind a novel concept for robotic planetary rovers known as the "big wheels inflatable rover." Unlike rovers similar to the Sojourner robot that explored the surface of Mars in 1997 that depend on instructions sent from Earth or complex programmed intelligence to steer through rough terrain, this rover has three beach ball-like tires roughly five feet across that make it a true off-road vehicle.

"We sent this rover out to Death Valley, to a place called Mars Hill that has a general geological formation like Mars, and nothing could stop it," says Jack Jones, the mastermind of the inflatable rover concept at JPL. "It just kept going and going and going."

Lots of current research is devoted to developing advanced robotic intelligence that allows rovers to detect rocks in their path and maneuver around them. The alternative to such on-the-spot intelligence is tedium: Ground controllers on Earth working out the maneuvers by hand and waiting an hour or more for the instructions to travel to the distant planet.

A "big wheels" rover would need such computer intelligence to avoid very large boulders, but Jones asks, "Why worry about every little rock, pebble, and crack when you can just roll right over most of them?"

Astro-Trivia Answers

A. The planet Mars was named Nirgal (Star of Death) by the Babylonians, Har dacher (Red One) by the Egyptians, Angakara (Burning Coal) by the Indians of south Asia, Huoxing (Fire Star) by the Chinese, Kasei (Fire Star) by the Japanese and Waijungari (an initiate who fled into the sky covered with red ochre) by the Australian aborigines. Other peoples have called Mars Mangala (Sanskrit), Auqakuh (Quechuan language of the Incan Empire), Maja (Nepali) and Simud (Sumerian); the Greeks named Mars Ares after their god of war. In late August Mars will reach its most favorable opposition for the next 284 years; it will come within 34.7 million miles to the Earth and present a disk 25.1 arc seconds in diameter, the maximum possible. DAS is sponsoring "Mars Midnight Madness" on August 27th, the date of closest approach. Watch the DAS website and see the next Denver Observer for details about this event.

OFFICERS AND E-BOARD of THE DENVER ASTRONOMICAL SOCIETY

The Executive Board conducts the business of the DAS at 8 p.m. at Chamberlin Observatory. Please see the Schedule of Events for meeting dates. All members are welcome.

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SCHEDULE

JULY

- 11** 8:00 PM E- Board meeting
- 12** Chamberlin Observatory Clean-up begins at 5:00 pm.
Open House begins at 7:30 pm

- 18** General Meeting and Picnic at Pine Valley Ranch, 6:00 pm. See pages 3 and 4.
- 24-27** Weekend Under the Stars; Foxpark, Wyoming. See pages 2-3.
- 26-27** Dark Sky Site Weekend.

AUGUST

- 8** 8:00 PM E- Board meeting - CAD planning
- 9** Open House at Chamberlin Observatory; begins at 7:30.
- 15** General Meeting at Olin Hall, DU, begins at 7:30
- 27** 10:00 pm at Chamberlin Observatory; Mars Midnight Madness.
- 30-31** Dark Sky Site Weekend.

A Little Note Here...

Patti's moving, and needed a break. That is why I'm here, as I have experience with this nonsense. This will be a very basic and quickly put together issue, but it should have all you need. Hopefully things will print out properly. So NO complaining and NO nitpicking. Things will not be in their normal place, so look through the whole issue. Information on Weekend Under the Stars, in late July, can be found on pages three and four. There is no preregistration. There is NO annual July picnic this year. Originally it would have been on July 12th. There is still an Open House that night. Instead of a picnic on the 12th, there will be a special General Meeting at Pine Valley Ranch Open Space Park on Friday, the 18th. All the details can be found on page three, with a map on page four. Originally we were planning on having a weekend star party up at Kenosha in August. That has been canceled. There is also "Mars Midnight Madness," at 10 pm over at Chamberlin, Wednesday, August 27th. At this time I have no further info about that. Check the website and the August issue.



About the Denver Astronomical Society

The DAS is a group of amateur and professional astronomers that share a mutual interest in the heavens. The DAS 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 DAS 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 DAS 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 _____ Renewal _____

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 web-site instead of by postal mail?

Yes _____ No _____

Do you want the above information excluded from the yearly roster?

Yes _____ No _____

Please Circle All That Apply:

Regular Membership: \$30 Associate: \$10 (Age 22 and younger)

*****\$ _____

Astronomy Magazine/\$29

Sky & Telescope Magazine/\$29.95

*****\$ _____

Van Nattan Scholarship Fund *****\$ _____

Chamberlin Restoration Fund *****\$ _____

Total Amount Paid *****\$ _____

Please mail Dark Sky Site donations to: DAS Treasurer, Chuck Carlson, at the address below. (Make checks payable to the Dark Sky Site Fund).

Please complete this form, or a copy, and mail it with your check or money order payable to:

The Denver Astronomical Society: DAS Treasurer, Chuck Carlson; 1521 So. Vine St.; Denver, CO 80210



Denver Astronomical Society

C/o Chamberlin Observatory

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Denver, CO 80208