

# THE DENVER OBSERVER



Newsletter of the DENVER ASTRONOMICAL SOCIETY

One Mile Nearer the Stars

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The Executive Board conducts the business of the DAS at 8:00 pm at Chamberlin Observatory: please see schedule for day of meeting. Everyone, and their input, is invited.

## SCHEDULE

Volume XLVIII,  
Number V,  
May, 2000

**May 6 – Saturday** -- LOCAL STAR PARTY; see p. #3 for directions and map.

**May 12 – Friday** -- E-Board Meeting @ 8:00 pm.

**May 13 – Saturday** -- Dusk.; Public Open House.

**May 19 - Friday** -- General Meeting at Olin Hall, D.U. Campus, beginning at 7:30 p.m. Speaker; Mark Kelly of CU on quasars and other active galactic nuclei.

**May 20 – Saturday** -- Work Day at Chamberlin; 9 am to noon.

**May 26-29** -- Riverside Telescope Makers Conference.

**June 3 – Saturday** -- LOCAL STAR PARTY; see p. #3 for directions and map.

**June 9 – Friday** -- E-Board Meeting @ 8:00 pm.

**June 10 – Saturday** -- Dusk.; Public Open House.

**June 16 - Friday** -- General Meeting at Olin Hall, D.U. Campus, beginning at 7:30 p.m.

**June 17 – Saturday** -- Work Day at Chamberlin; 9 am to noon.

**June 29-July 2** -- Star Stare; See pp 5-8. **Please Preregister!!**

**July 19-22** -- Astrocon 2000.

**July 27-30** -- Weekend Under the Stars. See pp 8-9.

\*\*\* Chamberlin Observatory; Mirror Grinding Class starts at 10:30 a.m. Please see p. 2 for schedule. \*\*\*

SKY & TELESCOPE sends only one notice before your subscription ends. Remember, the cost of this, and the other magazines, is over and above our yearly dues. The DAS sends only one issue of The Denver Observer after your dues run out. Also, for questions concerning new memberships, renewal memberships, address changes, and magazine subscriptions, please contact DAS Treasurer Chuck Carlson ([chcarlso@du.edu](mailto:chcarlso@du.edu)). Send in your money, with the renewal form on the back page to; DAS Treasurer, Chuck Carlson, 1521 South Vine St., Denver, CO 80210-2835

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Hey everyone, the summer star parties are about to start again.

The society provides lots of opportunities to everyone to do some great observing during the summer. The Dark Sky site is a great place to be around the New Moon. Take your large or small scopes out there. If you are new, you can always get help from some of the more experienced observers. If you don't have a scope, you are still welcome. Members will make you welcome to look through their scopes. When the photographers are taking pictures, they do want their privacy.

As the summer starts, we will begin to ask for volunteers to work on the Dark Sky site to make it more valuable. We are looking at installing a vault toilet, some concrete pads, and getting electricity. We may be calling on you to volunteer your services.

During the summer, there are also several camping trips and star parties. These trips will be announced in the Observer and on the Web site. These are great observing events as well as great times during the

day. There are speakers, youth activities, hiking, drawings, kite flying and lots of just loafing around. Once again, you do not need to own a telescope. Members enjoy sharing their scopes.

If you have any questions call me at (303) 986-5255 or email me at [Lbrooks100@aol.com](mailto:Lbrooks100@aol.com)

**Larry Brooks**

PS: There has been quite a lot of controversy concerning the possible removal of the Clark 20 inch in exchange for a larger, more modern instrument. That issue has been closed for now. The 20-inch will not be removed as of this time. We will now get back to working on the continuing issue of maintenance and upgrading both the scope and the building.

**Mirror-Grinding Classes**

The schedule for mirror-grinding classes is as follows: May 13, 27; June 10, 24. These are at 10:30 AM. Please call Terry Chatterton at 303-621-2442.

**THE URBAN OBSERVATORY -- FOR THE RECORD**

We are fortunate to have the University of Denver's historic Chamberlin Observatory both functional and situated in its present environment. It can and should continue to serve at least three purposes: (a) to educate people via DU classes and DAS Public Nights; (b) to conduct observational research, insofar as possible (this can include DAS, as well as DU people), and (c) to record and archive the astronomical conditions of our times.

But what can an urban observatory do in the face of brightly lit skies? While light pollution has grown over the recent decades, more people are becoming aware that we've blinded ourselves and our children to the universe, not to mention wasting electrical energy. Hence, there is reason for optimism about darker nighttime skies in the coming decades, especially if we keep reminding the public as to why and how ([www.darksky.org](http://www.darksky.org)).

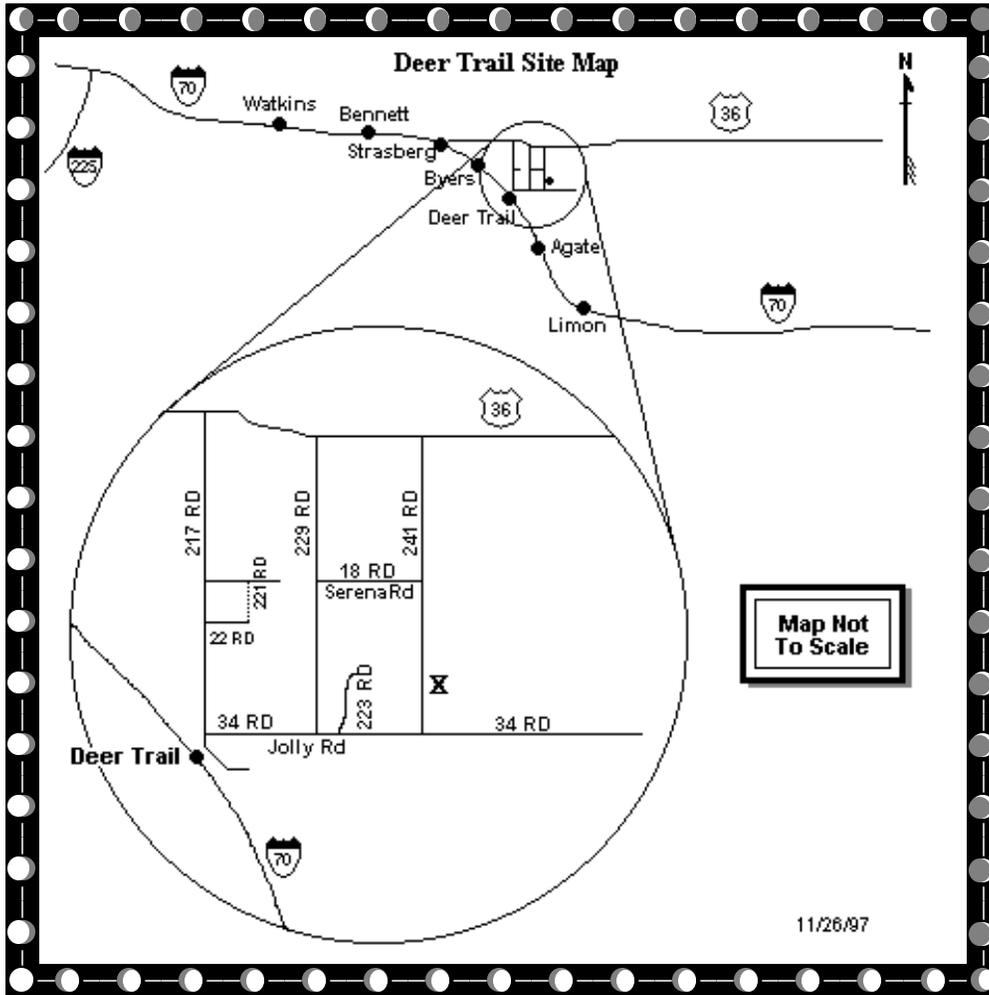
So what might the future hold for a place like Chamberlin? The DU administration has decided that my telescope changeout proposal for Chamberlin should be put "on hold" for various reasons. Thus, those who care about local astronomy, as well as heritage, need to continue to cooperate in order to sustain and enhance the existing resources at Chamberlin. If in the process of the discussion, we have raised awareness about the continuing needs of the facility, that may be considered a positive development. The DU astronomy program recognizes the valuable and long-term relationship between the DAS and DU at Chamberlin Observatory and wishes to sustain the same.

The following two points are offered as a basis for future discussion:

1. Chamberlin Observatory is a special place that deserves protection, and that its MISSION AND PURPOSE should include continued use for astronomical instruction, outreach and some level of research;
2. The Clark-Saegmuller telescope is an antique worthy of preservation in some form, but that in its current condition, it does not completely meet the needs of the observatory mission when compared with



<http://www.vcas.org/astrocon/>



***The DAS Deer Trail Dark Site*** is located about 60 miles due east of the Mouse Trap. To get there, take I-70 east to the Deer Trail exit (exit 328), turn left at the end of the exit ramp and turn left again after you pass the Texaco station on to CR 217. Take CR 217 a little over 1/2 mile to CR 34 and turn right (East). Stay on 34 about 6 miles until you get to CR 241. Turn left (North) on CR 241 and continue about 1.5 miles; there's a culvert with a wide gate on the right (East) side of the road.

newer technology.

Assuming general agreement on the first point, what does the second suggest? We could, among other options: (1) do nothing; (2) RESTORE the Clark-Saegmuller telescope to original form and function, in its pre- electrical state; (3) REBUILD the Clark optics into a modern mount arrangement; (4) REPLACE the Clark-Saegmuller with a completely new, larger telescope, and placing the antique where it can be suitably housed, admired and/or used.

Evaluation of these options might run along these lines:

1. This "do nothing" alternative is rejected if the intent to improve on the quality of astronomical instruction and outreach is a mutual priority for both DU and the DAS.
2. Full historical restoration of the Clark-Saegmuller telescope would limit its usefulness for astronomy, making it increasingly difficult to use and maintain. This could result in a long-term decline of the MISSION of Chamberlin Observatory, turning it into a museum with little active astronomy. I believe that

this is not necessarily in the best interests of either DU or the DAS.

**3. REBUILD** -- Some of the work needed to improve the functionality of the existing 20 inch telescope could include:

- a. VISUAL IMAGE QUALITIES: chromatic aberration, astigmatism, low contrast --  
For example: can we improve the optics by baffling and optically black coating the interior of the current tube assembly to increase contrast; check and improve the optics by looking at the spacing and orientation of the lens system to increase the effectiveness from the current performance.
- b. POINTING AND TRACKING: Reconstruct the mount to permit dual manual and computer controls for pointing, tracking and guiding, effectiveness of slow motions, etc.
- c. FOCAL PLANE: The present limited area makes modern camera use difficult, and inefficient for mounting and remounting. Rebuilding the focus end with adequate carrying capacity for CCDs and electrical service could be useful.

*(Continued on page 4)*

(Continued from page 3)

**d. METAL FATIGUE:** After 100 plus years, some of the cast components and fasteners can be expected to be nearing their service lifetime. Careful inspection by qualified engineers should be able to assess the degree of concern needed here.

**e. SAFETY:** The vertical observing ladder poses a significant potential safety hazard as witnessed by a few events over the past several years. It needs continuing inspection, maintenance and possibly total remediation.

**f. Immediate improvements to the Clark-Saegmuller telescope** thus might include adding baffles and/or "flocking" the inside of the tube; easier to use setting circles -- some operators have trouble seeing even the brighter dec scale through the periscope (encoders and readouts have long been suggested); slow motion controls - mechanical repair to aid usability, and if possible, an electric slow motion in RA that would speed up or slow down the drive motor. It is important that we encourage more observing to happen in these ways. One of the prospects for more observing involves the Citizen Science concept being discussed as part of the new Space Science exhibit at the Museum.

**4. REPLACEMENT** of the existing telescope with a modern meter-class reflector would address all points enumerated under commentary for alternative 3, plus provide superior light gathering power, internet links and more. Sponsorship for this is welcome. However, there are substantial requirements for building improvement, funding and community cooperation to be met.

What about building improvements? After several years of activity to rehab Chamberlin, we've seen no new work since 1998. Beginning in 1993, we worked with the DAS and neighborhood to persuade DU to re-invest in Chamberlin by beginning the first \$20,000 worth of repairs (roof and mortar problems, mainly). DU then won a Colorado Historical Society (CHS) grant to repair the leaky dome and reseal the leaky basement (nearly \$200,000 in total, including DU matching money). However, about \$250,000 in additional repairs have been identified for Chamberlin Observatory in the CHS-mandated "Preservation Master Plan" of 1998. These include problems with electrical wiring, plumbing, heating system, floor damage related to the heating system, serious wood rot on nearly all the exterior window frames, plaster failures, inadequate fire and security alarm system, etc., as well as strategies for Americans with

Disability Act (ADA) accommodations, which are important. Therefore, it remains a priority to complete the preservation master plan to improve the building's condition. DU administration nominally agrees to this, but the source of funds and matching money remains to be identified.

Beyond the preservation master plan, there is a desire to expand the building, for the purposes of ADA, an improved meeting space ("digital classroom"), to provide decent restrooms and storage, etc. When DU deeded the park land to the city in 1952, it recognized this in the terms and conditions of transfer that stipulated the right to expand the building for astronomy purposes (as well as to control lighting in the park!). Similarly, DAS itself expressed an interest in this option with a 1967 proposal for adding a planetarium wing to the north side of Chamberlin, in the time before Gates Planetarium existed. Thus, this continuing idea of expansion may prove inevitable.

In summary, these are a few points concerning "where we are" in the long history and presumed future of Chamberlin Observatory. Many things are possible, but a consensus will be needed to proceed on the grander items. DU astronomy will seek to meet its teaching and training needs as best it can, at Chamberlin and perhaps at a separate facility, if necessary. Along with the DAS, the DU Astronomy program remains open to input of constructive ideas and energy for optimizing the future of Chamberlin Observatory.

Contact your club officers, or myself at 303-871-2135 or [rstencil@du.edu](mailto:rstencil@du.edu).

*Dr. Robert Stencil, Professor of Astronomy and Director, DU Observatories*

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**\*\* FOR SALE \*\***

**SALE SPECIALS:** 'Leitz' Binocs' 8 X 35, Center-focus, Like New ! In Leather case, Save 35% asking \$500....Also, B. & L. 70-mm. 'Scope, 15 to 40 X Near new, also Perfect Optical condition. With Carry case..Save 50%, asking \$325.!

Finally, a 'Tele-Vue' "Ranger" 70-mm 'Scope, "Near-New" Condition, with Case & Mount, No Eyepiece or Diag., Thus save over 55% at only \$300 !! **Contact member Gordon Teall, (303) 986-0289 or E-Mail at " [fotobugteall@msn.com](mailto:fotobugteall@msn.com) "**

**\*\* FOR SALE \*\***

**Meade 7" APO refractor, 1996 model with all standard accessories.**

(Continued on page 8)

**Rocky Mountain Star Stare Preregistration Form**  
**14th Annual Rocky Mountain Star Stare; June 29 - July 2, 2000**

**Registration forms RECEIVED on or before Saturday, May 27, 2000 will qualify for the discounted rates.** Any registrations RECEIVED after May 27 will be at regular rates. CSAS is not responsible for incimate weather conditions. After May 27, all registration fees are NON-refundable.

Pre-registration (received on or before May 27) Adults .....	\$10
Regular registration (after May 27 and on-site) Adults .....	\$15
Pre-registration (received on or before May 27) Children (15 and under).....	\$4
Regular registration (after May 27 and on-site) Children (15 and under).....	\$5

NAME(S) as you want them to appear on nametags:

1. Street Address
  
2. City
  
3. State
  
4. Zip Code
  
5. Area Code/Phone
  
6. E-mail Address

I have read and will comply with RMSS Star Party Rules and the RMSS Pets Policy;

(please initial) \_\_\_\_\_

Please indicate which of the following items apply to you:

- I will bring my pets to RMSS
- I will bring an RV or camper trailer
- I will bring a generator
- I wish to be placed on a mailing list for special offers from RMSS sponsors and vendors

1. Registration Fees\*  
 Adults.....\$10, after May 27 - \$15 Adults  
 \_\_\_\_\_ x fee = \_\_\_\_\_  
 Children..... \$4, after May 27- \$5  
 Children \_\_\_\_\_ x fee =  
 (15 & under) \_\_\_\_\_

**Registration Fee Total** \_\_\_\_\_

2. RMSS Polo Shirt\*  
 (Color Scheme To Be Determined) Medium \_\_\_\_\_ x \$15 = \_\_\_\_\_  
 Large \_\_\_\_\_ x \$15 = \_\_\_\_\_  
 X-Large \_\_\_\_\_ x \$16 = \_\_\_\_\_  
 XX-Large \_\_\_\_\_ x \$16 = \_\_\_\_\_  
**T-shirt Total** \_\_\_\_\_

3. RMSS Sweat-shirt\*  
 (Color Scheme To Be Determined) Medium \_\_\_\_\_ x \$20 = \_\_\_\_\_  
 Large \_\_\_\_\_ x \$20 = \_\_\_\_\_  
 X-Large \_\_\_\_\_ x \$22 = \_\_\_\_\_  
 XX-Large \_\_\_\_\_ x \$22 = \_\_\_\_\_  
 Sweat-shirt Total \_\_\_\_\_

4. RMSS Baseball Cap\*  
 Burgundy with RMSS  
 Logo - one size fits all  
 Hats \_\_\_\_\_ x \$7 = \_\_\_\_\_  
 Hat Total \_\_\_\_\_

5. RMSS Group Photo Order\*  
 8 x 10 color enlargement Photos \_\_\_\_\_ x \$10 = \_\_\_\_\_  
 Photo Total \_\_\_\_\_

6. Friday Catered Meal:  
 All You Can Eat\*  
 (Menu To Be Determined) Adults \_\_\_\_\_ x \$10 = \_\_\_\_\_  
 Children \_\_\_\_\_ x \$6 = \_\_\_\_\_  
 (12 & under) \_\_\_\_\_  
 Friday Meal Total \_\_\_\_\_

7. Saturday Catered Meal:  
 All You Can Eat\*  
 (Menu To Be Determined) Adults \_\_\_\_\_ x \$10 = \_\_\_\_\_  
 Children \_\_\_\_\_ x \$6 = \_\_\_\_\_  
 (12 & under) \_\_\_\_\_  
 Saturday Meal Total \_\_\_\_\_

**Grand Total** \_\_\_\_\_

\*All attendees must check-in at the Registration desk upon arrival at the site. Your food vouchers for the Friday and Saturday Meals will be included in your Registration Kit when you check-in, as will door prize tickets and nametags. Only pre-ordered T-shirts, Sweatshirts, and Hats will be available at the site, although you may order additional shirts and hats to be shipped to you when available from the printer (shipping costs will apply). Group photos will be shipped directly to the address listed on your registration form when they become available.

Please print and mail this registration form along with your payment to:  
 RMSS'99  
 Colorado Spring Astronomical Society  
 P.O. Box 62022  
 Colorado Springs, CO 80962

Please make checks payable to:  
 Colorado Springs Astronomical Society

# Rocky Mountain Star Stare

© 2000

June 29 - July 2, 2000

Pike National Forest, Colorado

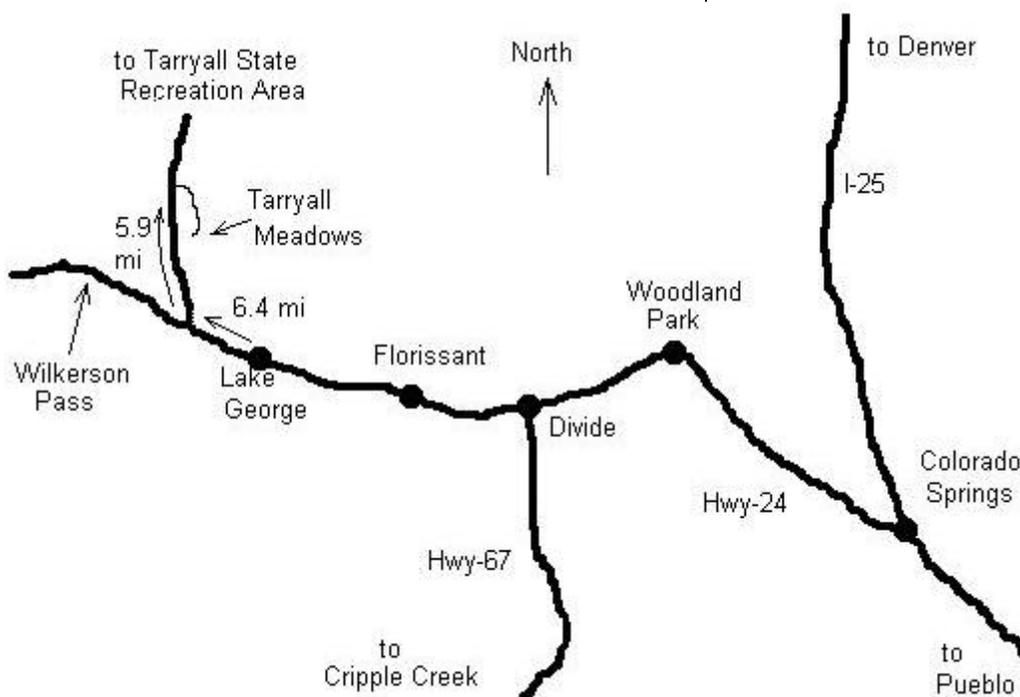
*Sponsored by the Colorado Springs  
Astronomical Society (CSAS)  
in cooperation with the Astronomical League  
and the USDA Forest Service  
CSAS is an equal opportunity service provider.*

## Introduction

RMSS 2000, the 14<sup>th</sup> annual Rocky Mountain Star Stare, is a star party set in the magnificent Colorado Rockies near famous Pike's Peak. At an altitude of nearly 9000 feet, the dark, clear skies provide unforgettable views of the summer Milky Way with star fields so rich that many first timers mistake them for approaching clouds.

## Location

RMSS 2000 will be held in Pike National Forest, about 60 miles west of Colorado Springs at one of our favorite sites, Tarryall Meadows. Tarryall Meadows is located in a broad meadow, encircled by fragrant, open Ponderosa pine forests. The night sky is exceptionally dark and transparent, only minimally obstructed by mountains. Many say that they have



never seen the Milky Way appear so close and stand out in such splendor. In fact, it's not uncommon to hear someone comment on the approach of high clouds, only to learn that they are seeing the Milky Way for the first time.

## Facilities & Accommodations

This area is unsparing in its enchanting vistas and its desirability for camping. However it is a primitive site and without water. Campfires are not allowed. CSAS will provide only the hospitality and portable restrooms. You will be responsible for bringing everything else you'll need, though with as many as 300 people nearby, some emergency supplies are likely to be available. Although some Star Starkers bring an RV of some sort, a tent and sleeping bag suffice for most. Daytime temperatures are often in the 80's, and nighttime temperatures in the thin, dry mountain air can drop to the low 30's which can seem downright cold in July. Bring your winter clothing, sun screen, a cooler full of cold drinks, and a lawn chair for seating at the speaker venues.

## RMSS Star Party Rules

*Be sure everyone in your group is familiar with this material!*

**Our "Prime Directive" - No white light after dark!** Use **RED filtered flashlights** on the observing field. There will be red cellophane available at the registration table to cover the lens of your flashlight if needed. Please pay special attention to automobile headlights, daytime running lights, dome lights, and backup lights. **TIP:** Rumor has it that one "click" of emergency brake will turn off your daytime running lights - useful if you're an astronomer! All after dark arrivals **MUST** park in the separate roped off area. Do not drive past the "after dark parking" area with your lights on! If you need to leave before dawn, you **MUST** park in the "after dark parking" area.

**Please limit vehicle parking to within 100 yards from any access road.** This is to avoid im-

pecting the environment at Badger Flats by using only the roads that currently exist. The U.S. Forest Service will only allow us to return to this site if we do not create new roads.

**Minimize traffic and drive slowly.** To preserve the observing field and to keep dust down to a minimum, don't drive in and out of this site more than necessary and observe the speed limit of 5 mph.

**Quiet time before noon each day.** Because many of us will be observing until dawn, it is very important that the area remain quiet before noon each day. *Be kind with generators near other campers*, do not run them before noon each day. A separate area has been reserved for RVs and those using generators.

**No open fires.** No campfires, fireworks or model rockets allowed. This is by order of the U.S. Forest Service. Stoves, however, ARE permitted.

**Please use caution while smoking.** Be sure to extinguish your cigarettes completely and dispose of cigarette butts along with your trash. Do not drop cigarette butts on the ground. This area can be VERY dry in summer, and the risk of fire can be extreme. Also, use caution while smoking on the observing field-- matches and cigarette lighters can interfere with night vision and astrophotography set-ups.

**If you bring it in, take it out!** It is important that attendees practice *LEAVE NO TRACE* camping techniques. Dispose properly of all trash. For more information about "Leave No Trace" call 1-800-332-4100.

**Portable restrooms** Do not put anything into the portable restrooms that you wouldn't flush at home - this includes trash and diapers

### RMSS Pets Policy

*If you are bringing your pets, be sure everyone in your group is familiar with this material!*

Anyone bringing a pet or pets to RMSS must camp **only** in the designated "Pet Camping" area.

All pets must be either leashed or contained at **all** times.

**No** pets will be allowed in the observing areas, dining areas, presentation areas, exhibition areas, merchandise areas, registration areas or any non-pet camping areas. Anyone wishing to walk with a pet outside of the "Pet camping" area may do so **outside** of the RMSS permit area.

Anyone bringing a pet or pets to RMSS must immediately remove any waste or debris caused by those pets. Like all refuse, pet waste and debris must be packed out by those responsible.

Anyone bringing a pet or pets to RMSS will be re-

sponsible for those pets and **all** of the pets actions. This includes any damage or injury caused by the pet to people, property, animals (domestic and wild), or landscape.

Anyone bringing a pet or pets to RMSS will be responsible for ensuring that those pet(s) do not disturb, menace, or threaten other RMSS patrons by noise or action.

Since RMSS is held on USFS land which is home to many predators, neither RMSS or CSAS will be responsible if any pets are lost, injured, killed, or eaten. All pet food and supplies must be stored in a manner that will not attract predators or scavengers (including insects).

**Official Service or Guide animals in working harness are exempt from the above restrictions as required by law.**

*These rules are to promote the enjoyment of all.*

*Be safe, respect others, have fun!*

<http://www.rmss.org/rmss2000.html>

*(Continued from page 4)*

Mount upgraded to 750 with current 1697 Computer firmware.

Heavy duty tripod.

Eyepieces: Meade Super Wide Angle 40mm; TeleVue 27mm Panoptic.; TeleVue 12mm Nagler 4; TeleVue 7mm Nagler; TeleVue 2x Big Barlow

TeleVue 2" to 1.25" Brass Equalizer

Thousand Oaks Solar Filter:

ND-5 Meade 7" Type 2 Full Aperture.

Extra 25lb. Counter Weight.

DC Power Adapter.

**Asking \$7250.**

**Contact: Sam Andrews (303)-688-4429 Email: [sandrews@lasertech.com](mailto:sandrews@lasertech.com)**

## Weekend Under the Stars

*July 27 - 30, 2000*

Hosted by the Cheyenne Astronomical Society and the Laramie Astronomical Society and Space Observers, held in cooperation with the Front Range Astronomical Super Cluster (FRASC)

This will be number 10 for "The Weekend Under the Stars". Last year was such a great success that I do not know how we will top it, although we sure are going to try. We are expecting some of our regular speakers: including astronomers from the University of Wyoming and Denver University. We are also plan-

ning on having some wonderful door prizes from businesses including Orion Telescope, Roger Tuthill, Sky and Telescope, Astronomy, Software Bisque and Astrosystems. We are also planning on having some great Aquarids this year! This meteor shower peaks in late July.

This year promises a turnout exceeding last years total of 225 guests and 1207 inches of aperture. We brag up some of the greatest skies in the U.S. and I don't think were exaggerating. Previously invisible objects stick out like cosmic sore thumbs from Foxpark. If you make just one major star party this year, make it "The Weekend Under the Stars". You wont be sorry. See you in July.

**Marty Curran**

**Observation Officer**

**Cheyenne Astronomical Society**

### 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 two 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

#### **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. Take the left before you get to the town. There is also a "Weekend Under The Stars" sign there. You go about 1/2 mile (approximately) and come to another road. 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.

#### CONTACT US AT:

Marty Curran  
President CAS  
3539 Luther Place  
Cheyenne, WY 82001  
(307)635-5944

[mcurran@sisna.com](mailto:mcurran@sisna.com)

Charla Wagner  
PR Officer CAS  
P.O. Box 1967  
Cheyenne, WY 82003  
(307)634-7312

[cwagne@missc.state.wy.us](mailto:cwagne@missc.state.wy.us)

**Weekend Under the Stars web page:**  
<http://users.sisna.com/mcurran/wuts.htm>

## 50th Anniversary Group Portraits

Size	Standard	Archival
<b>8 x10</b>	<b>\$10.70</b>	<b>\$11.10</b>
<b>12 x 15</b>	<b>\$15.99</b>	<b>\$16.48</b>

Many have been asking about the portraits that were taken of the DAS as a group, and when they would be available. Well... they're available!

There were two portraits taken the day that we all gathered at Chamberlin. BOTH versions will be available. Samples of both versions will be at our meetings, as well as at S & S Optika.

Place Orders with Cathie Havens at S & S Optika; 303-789-1089 **by May 15**. Please state whether you want version 1 or 2, the size, and whether you want standard or archival. They will print by June 1st. This is a special ONE TIME pricing for DAS members. All prints will be printed in one batch. Prints after this run will be at normal retail prices.

**The DAS now has its own mail list serve. For more info, and to subscribe, go to;**

<http://www.cudenver.edu/~lguatney/DAS>

## About the Denver Astronomical Society

The DAS is a group of amateur and professional astronomers sharing a mutual interest in the heavens. The DAS operates the University of Denver's Chamberlin Observatory with its venerable 1894, Alvan Clark, 20" refracting telescope. Our members have been involved with the first public planetarium at the Denver Museum of Natural History 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 to 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 Site Fund. This last fund was established to construct and maintain observing facilities sites near Deer Trail in eastern Colorado.

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



**Denver Astronomical Society**  
c/o Chamberlin Observatory  
2930 East Warren Ave.  
Denver, CO 80208

## Application for Membership to The Denver Astronomical Society

( ) New      ( ) Renew

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
State: \_\_\_\_\_  
Zip: \_\_\_\_\_  
Home Phone : \_\_\_\_\_  
Work Phone: \_\_\_\_\_  
E-Mail: \_\_\_\_\_  
Occupation: \_\_\_\_\_  
Other Interests: \_\_\_\_\_  
(Associates Only) School: \_\_\_\_\_ Grade \_\_\_\_\_  
Do you want this information **kept out** of the yearly roster?  
Yes \_\_\_\_\_ No \_\_\_\_\_

### **Please Circle All That Apply:**

Regular - \$30 Associate - \$10 up to age 22 \$ \_\_\_\_\_  
Sky & Telescope;/\$29.95 Astronomy/\$29 \$ \_\_\_\_\_  
Dark Site Fund Donation .....\$ \_\_\_\_\_  
VanNattan Scholarship Fund .....\$ \_\_\_\_\_  
Chamberlin Fund Donation .....\$ \_\_\_\_\_  
Total Amount Paid .....\$ \_\_\_\_\_

Complete this form, or a copy, and send it with a check or money order payable to The Denver Astronomical Society to: DAS Treasurer, Chuck Carlson, 1521 S. Vine St., Denver, CO 80210-2835