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

May 26-29 -- Riverside Telescope Makers Conference.

Volume XLVIII, Number VI, June, 2000

tions 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. July 1 – Saturday -- LOCAL STAR PARTY; see p. #3 for directions and map.

June 3 – Saturday -- LOCAL STAR PARTY; see p. #3 for direc-

July 7 – Friday -- E-Board Meeting @ 8:00 pm. Budget Committee

July 8 – Saturday -- Sunset; Annual Picnic. Dusk.; Public Open House.

July 14 - Friday -- General Meeting at Olin Hall, D.U. Campus, beginning at 7:30 p.m.

July 19-22 -- Astrocon 2000.

July 22 – Saturday -- Work Day at Chamberlin; 9 am to noon. July 27-30 -- Weekend Under the Stars. See p 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). 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 IT"S SUMMER. Get out there and look at the skies.

The Dark Sky Committee is really moving now to get the site going. By the time you read this, weather permitting, the first of three pads will be laid.

Next they will be covered with astro turf or some other covering. Next comes electricity. That's right, we will have real electricity at each of the pads.

Plans for the vault toilet are being held off for the time being. I want to thank those that are working so hard to make the site something that will be an asset to the club for many years. The committee and other volunteers are doing a great job. Thanks If you have not been to the site, go out and do some great observing. Remember

that you don't need your own scope. Others love to share.

We also need help, if you have skills or a willingness to learn, please contact me by email or phone, and I will forward it to the people who can use it. If you don't have email use the phone. We also need money.

The current funds will probably be used by the time we get the electricity and the pads. I would call especially on those that use the site on a regular basis to be generous with their time and money.

We would also encourage you to write articles for the newsletter or the web page. Remember these venues are yours to use. I want to also take time to thank Pat for all his work in the Web page and the Observer.

If you have any questions call me at (303) 986-5255 or email me at Lbrooks100@aol.com *Larry Brooks*



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

Online Newsletter

In order to save money and to protect the environment as much as possible, you now have the option of taking the Observer on the web site and not in written form. If you do not want the paper newsletter, then email or call Chuck Carson and he will take you off the mailing list. The subscription/renewal form on the back of the newsletter has an option now, where you can specify how you want to get the newsletter.

Mirror-Grinding Classes

The schedule for mirror-grinding classes is as follows: May 27; June 10, 24; July 8, 22. These are at 10:30 AM. Please call Terry Chatterton at 303-621-2442.



Patrick Ryan

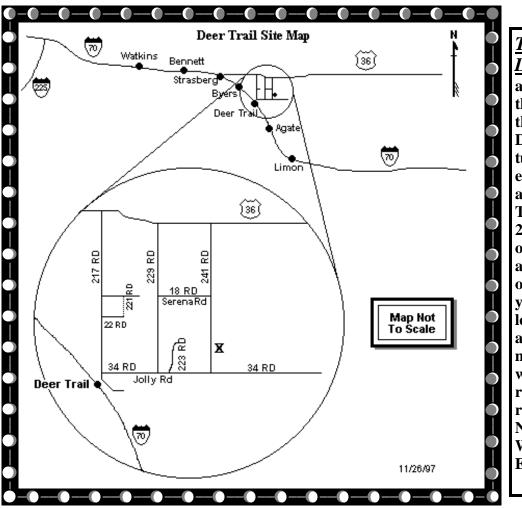
Denver Astronomical Society Secretary/ Newsletter Editor/Webmaster May, 2000 C.E.

Part 1

It had come upon me again. It was the time of The Fever. The Buying Fever was burning in me, sending me into a frenzy of frenetic web and catalog searching. My brain fried as I pored over statistics and characteristics. My heart soared at what I could acquire, and sank at what I could not. My fingers blistered at the calculator as I added, subtracted, figured trade-ins. My goal? To get my greedy claws on a general purpose binocular and a larger astronomical binocular.

This article concerns the first goal; obtaining a general purpose binocular.

I was reasonably sure that I wanted a waterproof roof prism binocular, of moderate power and size, with good eye relief. There were certainly plenty of makes and models to choose from. Ever



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. N39 38' 40.6" W103 55' 47.0" Elev: 5140 ft.

since they were introduced in the 1960's, roof prism binoculars have really caught on, despite their higher cost and tendency toward greater light loss when compared to porro prism binoculars. It's easy to see why; roof prisms are usually smaller and lighter, and they're generally tougher to misalign.¹

There was something that I had forgotten from my birdwatching days; birders know optics. Birders know binoculars, they test binoculars, they make recommendations to optics manufacturers. The manufacturers are listening. You can witness for yourself the huge crop of 8x42 binoculars that are out on the market now. The 8x42 seems to be replacing the 7x35 as the standard all purpose binocular, thanks in large measure to birdwatchers and other nature observers that optic companies have consulted. Some might think that a change from 7x35 to 8x42 means little to what would be seen in a binocular. But those people are not birders, who use binoculars *all the time*, and who know what they want and need. But things can get even more specific then that seemingly minor change to 8x42.

Just look at the Swift Audubon; an 8.5x44 bino, available in three models, no less. Guess what? The Audubons are very successful, and have been for a number of years. It's nice to see companies catering to consumers.²

It didn't take me long to find information and product reviews on the World Wide Web, mostly on birdwatching sites. These sites jarred loose knowledge and information that had become buried in my mind from my birdwatching days. I think that my involvement in amateur astronomy is the "blame" for this burial. It's just that astronomers don't seem to use binoculars very much, and when they do, the Celestron Ultima line seems to be the cream of the crop. Mind you, I'm not knocking the Ultimas. Reviews say that the Ultimas are good, ...for the price.

Isn't that strange? Here we are, as amateur astronomers, willing to drop thousands of dollars on telescopes, but giving "short shrift" to optical instruments that have a far greater number of potential applications then telescopes. Yet even the more expensive binoculars cost far less then a fully equipped 8" SCT, with all the eyepieces and filters and auto-butlers and beard trimmers and whatever else they have. But can you loop a strap around your neck and carry that SCT on a hike, or meander through a forest, or sit in a stadium and watch a ball game? I didn't think so.

Yes, the Ultimas are good, for the price, but there are other porro prism binoculars out there. Take the Bausch & Lomb Custom line, costing about as much as the Ultimas. The Customs are rated as fantastic for the price. The same can be said for the Nikon E line, and their Superior E line. Boy howdy, are those Superior E binoculars loved; a flat out no two ways about it five star kind of love. The Swift Ultralites are very well appreciated, as are the Fujinon lines.

Then there are the big boys; the Bausch and Lomb Elites, the Nikon Venturers, Swarovski, Leica, Zeiss. These cats are the magna primo roof prisms, the Rolls Royce and Jaguar crowd of the binocular world. Yeah,...well,...they'll always be the dream!

Maybe, MAYBE I could have bought one of those fellas, if I wanted just one good bino. But to make use of an extraordinarily bad paraphrasing of Genesis; I wanted a lesser glass to rule the day, and a greater glass to rule the night.³ Being the type who knows that there's more to see then just what's up at night, I wanted a nice and light bino to carry with me wherever I happened to go. But I also wanted a bigger bino for dark times and astronomical purposes. That meant no Bausch and Lomb Elite, no Nikon Venturer, no Swarovski, no Leica, no Zeiss. None of those are available in a general purpose size for \$300-400; my budget for this particular all purpose bino.⁴

I didn't have to worry. There are plenty of waterproof roof prisms with good eye relief on the market. As I've said earlier, these things have really caught on. Why waterproof? Because Binky, I didn't want to worry about the weather conditions. I didn't want a shower or sudden spritzing sending me into a panic about my binocular getting ruined. But let's get one thing straight here; rubber armor (fast becoming standard on most binos) does not equal waterproof. Make sure that the binocular you hanker after says that it is waterproof, and that it is also nitrogen purged. Purging and filling the interior with nitrogen will prevent inner fogging. You don't want that expensive piece of optics getting a case of the inner slimes because of dewing and temperature changes and whatnot. Many binoculars will say as a selling point that they are tested waterproof to a certain depth in water, for a certain length of time.

Why long eye relief? My glasses. I have astigmatism in addition to near sightedness. So just focusing my binocular without my glasses will not achieve a sharp image. But whether you are just near or far sighted shouldn't matter. How many times have I seen people who wear glasses remove said glasses and then use their binocular? Heck, Howie, you don't gotta do that! Just get a binocular with an eye relief of at least 15 mm, preferably more. All you'll need to do then is fold, push, or screw down the eyecup, and you're set. You should be able to see most of the field of view, without removing your glasses. Many binoculars with good eye relief are out there; so don't settle for the ol' take-off-glasses-put-glasses-back-on routine. Part 2 will appear in a later issue.

Endnotes

1. In this article I use the correct grammatical term to refer to binoculars. One binocular should NOT be called a "pair of binoculars." One binocular is actually a pair of monoculars. That's why the prefix "bin," meaning "two," was put in front of the "ocular" part, so you wouldn't HAVE TO say "pair of."

Eye relief is the distance from the eyepiece that the image comes into focus at. Roof prism binoculars are characterized as having objectives inline with the eyepieces, as distinguished from bulkier and heavier porro prism binoculars, with objectives usually offset from the eyepieces.

- 2. When referring to a binocular configuration, such as 8x42, the "8" is the magnification, and the "42" is the size of each objective in millimeters. The Swift 8.5x44 Audubons are available in a normal porro prism model, a roof prism model, and a porro prism ED low dispersion model.
- I refer to Genesis 1:16; "God made the two great lights, the greater light to dominate the day and the lesser light to dominate the night, and the stars." <u>Tanakh</u>; The Jewish Publication Society, 1985.
- 4. Yes, you CAN find Swarovski, Leica, and Zeiss *compacts* in the \$300-400 range.

Rocky Mountain Star Stare ®

June 29-July 2,2000 .Registration Form

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

Pre-registration (postmarked on or before May 27) Children (age 15 and under).....\$4.00 **Regular registration (after May 27 and on-site)** Children (*age 15 and under*)......\$5.00 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 a RV or camper trailer I will bring a generator I wish to be placed on a mailing list for Rocky Mountain Star Stare 2001® 1. Registration Fees* Adults, \$10; after May 27, 2000, \$15. Children (age 15 and under) \$4; after May 27, 2000, \$5 **Registration Fee Total** 2. RMSS Polo Shirt* Short-sleeved polo shirt with embroidered RMSS 2000 logo Polo Shirt Total 3. RMSS T-Shirt* Short-sleeved "T" with RMSS 2000 artwork on back of shirt T-Shirt Total 4. RMSS Denim Shirt* (only available as a pre-ordered item, no reorders) Long-sleeved denim shirt with embroidered RMSS 2000 logo XX-Large x \$26.95 = Denim Shirt Total 5. RMSS Sweatshirt* Long-sleeved sweatshirt with embroidered RMSS 2000 logo Sweatshirt Total

6. RMSS Baseball Cap*

Cotton baseball cap with embroidered RMSS 2000 logo-one size fits all Hat Total 7. RMSS Group Photo Order* 8 x 10 color enlargement Photo Total 8. Friday Catered Meal-Bennett's Bar-B-Que* BBQ Beef Brisket, BBQ Spicy Sausage, BBQ Beans, Potato Salad, Cole Slaw, French Bread, Iced Tea, Lemonade, Brownies Children (ages 4-10) x \$8= Friday Meal Total 9. Saturday Catered Meal–Bennett's Bar-B-Que* BBQ Sliced Pork, BBQ Chicken, BBQ Beans, Potato Salad, Cole Slaw, French Bread, Iced Tea, Lemonade, Cookies Saturday Meal Total _____ **10. Subtotals from items 1-9**

Grand Total _____

*Attendees must check-in at Registration desk upon arrival at the site. Food vouchers for the catered meals will be included in your Registration Pack, as will door prize tickets and nametags. Only pre-ordered T-shirts, polo shirts, sweatshirts, and hats will be available on-site, you may order additional shirts and hats to be shipped to the address listed on this registration form when available (shipping costs will apply). Group photos will be shipped to same address when available.

11. Registration Information–Please print clearly and include first

and last name (or nickname) on same line (will be used for Name Badges):

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

Please complete and mail this registration form along with your payment to: RMSS'2000, c/o Colorado Springs Astronomical Society, P.O. Box 62022, Colorado Springs, CO 80962-2022. Please make checks payable to: Colorado Springs Astronomical Society.

The Colorado Springs Astronomical Society is an equal-opportunity service provider.

Rocky Mountain Star Stare © 2000 June 29 - July 2, 2000

Pike National Forest, Colorado

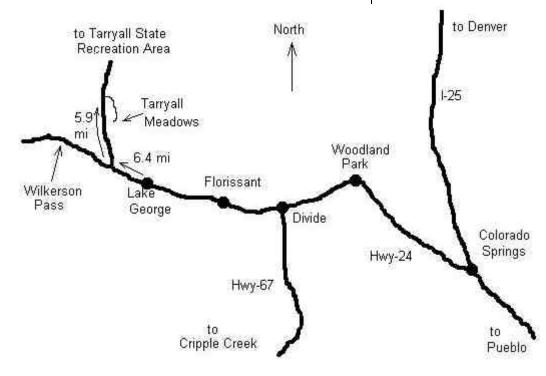
Sponsored by the Colorado Springs Astronomical Society (CSAS) in cooperation with the Astronomical League and the USDA Forest Service CSAS is an equal opportunity service provider.

Introduction

RMSS 2000, the 14th 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 Starers 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

pacting 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

* *FOR SALE* *

SALE SPECIALS: 'Leitz' Binocs' 8 X 35, Centerfocus, 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 ''

FOR SALE

Meade 7" APO refractor, 1996 model with all standard accessories; Mount upgraded to 750 with current 1697 Computer firmware.

Heavy duty tripod. Eyepieces: Meade Super Wide Angle 40mm; Tele-Vue 27mm Panoptic.; TeleVue 12mm Nagler 4; Tele-Vue 7mm Nagler; TeleVue 2x Big Barlow TeleVue 2" to 1.25" Brass Equalizer Thousand Oaks Solar Filter: ND-5 Meade 7" Type 2 Full Aperature. Extra 25lb. Counter Weight. DC Power Adapter. Asking \$7250. Contact: Sam Andrews (303)-688-4429 Email: 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 planning 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 won't 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, tshirts, 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:

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Charla Wagner PR Officer CAS P.O. Box 1967 Cheyenne, WY 82003 (307)634-7312 cwagne@missc.state.wy.us

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



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 <u>Denver Observer</u>.

Application f	or Membership to	The Denver Astronomical So	ociety
	() New	() Renew	-
Name:			

Audress	
City:	
State:	
Zip:	
Home Phone :	
Work Phone:	
E-Mail:	
Occupation:	
Other Interests:	
(Associates Only) School:	Grade
Do you want to download the newsl	letter from the web site, as a PD
file, instead of receiving it in the ma	il?
Yes	No
Do you want this information kept of	out of the yearly roster?
Yes	No
Please Circle Al	ll That Apply:
Regular - \$30 Associate - \$10 up to	age 22
	\$
Sky & Telescope;/\$29.95 Astronom	
	\$
Dark Site Fund Donation	\$
VanNattan Scholarship Fund	\$
Chamberlin Fund Donation	\$
Total Amount Paid	\$
Complete this form, or a copy, and s	send it with a check or money
order payable to The Denver Astron	nomical Society to:
DAS Treasurer, Chuck Carlson	. 1521 S. Vine St., Denver, Co

Addmaga

80210-2835



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