

OBSERVER

Newsletter of the Denver Astronomical Society
One Mile Nearer the Stars

A Reunion of the Celestial Kind

Some members have kicked off the summer observing season by travelling to a couple of the national star parties: TSP and RTMC. While the weather at these events can be dicey, it's always enjoyable to reunite with old comrades and make new ones. The "Swan" (or "Omega") nebula is an old friend that many of us look forward to seeing each year. M47 in Sagittarius is just spreading her wings for more northerly latitudes, but in Texas, Chris Tarr was able to image her as she flew a bit higher for those at the Prude Ranch. He used a 12-inch f/5 LX200 telescope and stacked four images for this lovely shot. —PK

Image: © Chris Tarr, 2002

Solar Spectacles

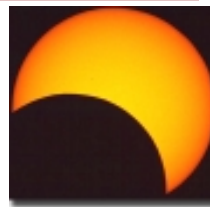
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JUNE SKIES 2002

The main event for this month is the **annular solar eclipse** of June 10. While we in Denver will not see the glorious "ring of fire," we will see better than 50% of the sun cloaked by the moon. Timing is pretty good for this: Most folks should home from work by the time the action starts. This event has all the makings of a terrific "impromptu" Open House. If nothing else, be sure to gather friends and neighbors together for the show. Don't forget your eclipse glasses or a pinhole projector—you could still cause irreversible sun damage to your eyes if you look at it without protection. Old Sol is also the main player for those who look forward to summer solstice: The longest day of the year. Stargazing in the dark is pretty impressive this month as well. **Venus and Jupiter** will be dancing close together at June's beginning. By the third, they're only 1.6° apart. The **summer triangle** is back and, we hope, marks the beginning of a terrific observing season. Enjoy the warm weather!—Patti Kurtz

- 2 Last quarter moon
- 10 New moon,
..... Annular solar eclipse begins 6:21 P.M.
- 17 First quarter moon
- 21 Summer Solstice at 7:24 A.M.
- 24 Full moon,
..... Penumbral lunar eclipse
(will need a photometer to detect)



The annular solar eclipse will look something like this at maximum (7:16 P.M.) for us Denverites. Could be a traffic stopper!

Image: © Joe Gafford, 2002

The summer star parties are in full swing. The month of May had astronomers boarding airplanes and driving some serious mileage with two of the most popular stellar events of the year—the Riverside Telescope Makers Conference Astronomy Expo (RTMC) at the YMCA Camp Oakes in California, and the Texas Star Party (TSP) at the Prude Ranch in Davis, Texas. At right is a local (Aurora) teenager who won a free night at Palomar Observatory as an award from RTMC this year. He built his 6-inch telescope and ground the mirror to boot!

This month we have Star Stare to look forward to as well as the Southern Skies Star Party in Bolivia.

Image: © Joe Gafford, 2002



PRESIDENT'S CORNER

Hello all you fair weather stargazers. It's summertime and that means no more eyelids freezing to your eyepiece. It's time to observe!

I want to thank all the people who have contributed time or money to making the Edmund G. Kline Dark Site the big success that it is. Without a doubt, it is the nicest permanent



dark sky site in the state of Colorado and getting better each year. This progress is due to the efforts of many people who have donated money and time to make the site what it is today.

We need some help with workers this summer to complete more pads and install a vault toilet. Please let me know if you can help. You can phone me at (303) 986-5255 or E-mail me at Lbrooks100@aol.com. Cash donations are always welcome and can be sent to treasurer Chuck Carlson at 1521 S. Vine St., Denver, 80210.

If you've not used the site, you are missing some great observing. You don't need a telescope—many members love to share. Please check the *Observer* or our website for rules at the site.—*Larry Brooks*

DAS Schedule

JUNE

- 6-9 *Star Stare*
- 7-9 *Dark Sky Site Weekend*
- 8-15 *Grand Canyon Star Party*
- 14 *E-Board meeting, 8 P.M.*
- 15 **Chamberlin Cleaning Day** at 10:00 A.M. and **Open House** (begins at 7:00 P.M.)
- 21 *General Meeting at Olin Hall, DU, 7:30 P.M.*—Bryan White, "Nitescapes 3-D, Northern Lights."

JULY

- 5-7 *Dark Sky Site Weekend*
- 12 *E-Board meeting, 8 P.M.*
- 20 **DAS Annual Picnic** and **Open House** (the Open House begins at dusk.)
- 26 *General Meeting at Olin Hall, DU, 7:30 P.M.*—"Travel Light Years on a Light Budget" (See Page 3).
- 31 *Astronomy League Convention (ALCON)* (See Page 5).

Public Nights are held every Tuesday and Thursday from 8:30 P.M. at Chamberlin Observatory

Costs to non-members are: \$3.00 adults, \$2.00 children.

Please call (303) 281-9052 (new phone number) for reservations.

DAS Officers

President:

Larry Brooks (303) 986-5255
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Vice President:

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Ted Cox	Sandy Shaw
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Joe Gafford	Steve Solon
Patti Kurtz	Dan Wray
George Jones, Past President	

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(303) 948-5825

The Observer is available in color PDF format from the DAS website.

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.

www.denverastro society.org

View From the Top of Another World

A self proclaimed “ladder monkey,” I was surprised and seriously humbled when overcome with a severe case of acrophobia while attempting to descend “El Castillo” at Chichen Itza in Mexico’s Yucatan. Having made it to the top fairly easily, I found that even the simple gesture of reaching for the rope provided for stability on the steep descent was too frightening. I gazed at my son and our British friends standing at the bottom of the pyramid, oblivious to my plight and obviously wondering what was taking me so long. After a full 30 minutes of sitting on the top step, I managed to grasp the rope and begin the journey of 91 steps on my “bum.” I’ll probably never get the Kukulcán pyramid’s dust washed out of my light tan shorts.

Although the view from the top was unsettling, it offered a perspective that was not possible from the ground level. Near the top of the photo is the Plataforma de Venus with its stairways up each side guarded by feathered serpents. Here, rites for Venus the “morning star,” would have been performed. The road behind it, the Sacred Causeway, disappears into the jungle and leads to the Cenote de los Sacrificios. This cenote or “sinkhole” was the final resting place of many victims sacrificed to the Mayan gods.

Because of my interest in prehistoric astronomy, a pilgrimage to this auspicious site was a “must” during our Mexican vacation. We visited other ruins as well and I hope to contribute a few photos of this type to the July program, “Light Years on a Light Budget.”

I look forward to other members’ astronomically-inclined journeys in time and/or space—be sure to check with Carla Swartz by July 1st to coordinate details: (303) 246-6926, or E-mail: CSastrogirl@aol.com.

—Patti Kurtz

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

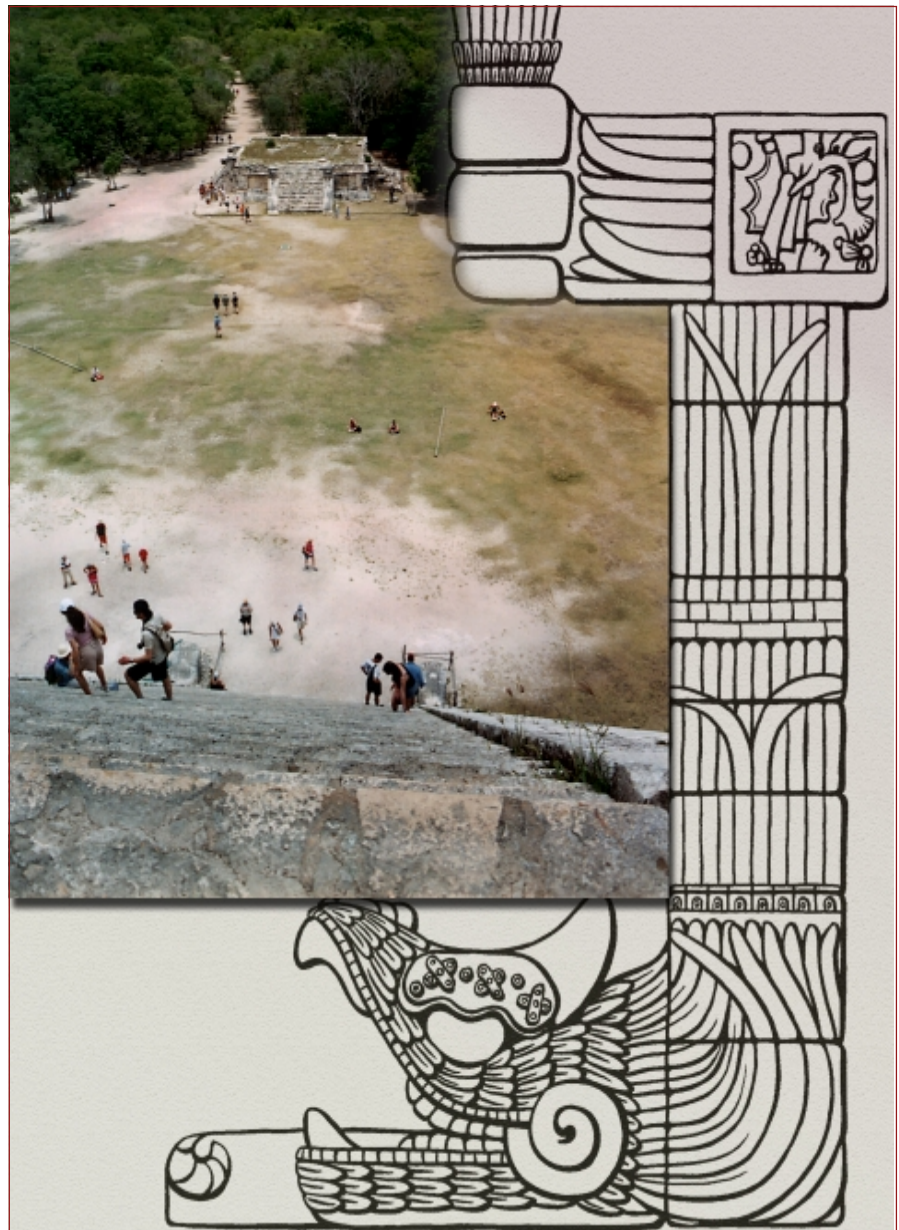


Photo: © Patricia A. Kurtz, 2002

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 20th of each month as follows:**

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

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

Text: Articles should be no more than

250 words, please, unless we’ve spoken about a longer feature. Please paste article(s) 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

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u p d a t e s

Conjunction Memories

by F. Jack Eastman

The following blast from the past is a direct transcript from the DAS archives known as the "D-Files." I thought it was interesting, especially with the spectacular conjunctions we've experienced over the last few months. This has not been edited. Surprise, Jack! You've been wondering when I'd get some of these D-Files on the website. Here's a printed version.—Ed.

Toward the end of last February 1999, you may remember the spectacular conjunction of Venus and Jupiter. The two planets approached within a quarter degree in the evening sky from here in Colorado. That reminded me of an event in the early '60s(?) shortly



The Parade of Planets

On the evening of April 28, Joe Gafford got out his brand new digital camera and shot the five bright planets in an alignment we haven't seen the likes of for almost 20 years. Zooming in for the image at top right, he captured Venus at the upper left of the photo, Mercury in the tree, and the Pleiades glittering through the top of the tree. While the twilight skies of April and May held court to these celestial wanderers, Venus and Jupiter will continue to grace the nights of early June.



Photos: © 2002, Joe Gafford

after I had completed my 12.5-inch reflector. It was a bright clear day and I thought I could find Jupiter in the daylight sky. I carefully calibrated the setting circles with the Sun, then set the telescope for the position of Jupiter. I hunted around the position of the setting but no Jupiter. Oh well, let's go after Venus, much brighter. This should be trivial, having done it many times before, even with the naked eye. I swung the 'scope to the position of Venus in the opposite part of the sky. Same story, no Venus, even after a couple of tries. Oh well, I needed to figure out what was wrong with this thing but I got sidetracked and didn't get back to it.

About 4:00 the following morning I got a call from Raul Granby, who was on the Manhattan Beach police force, and a long time friend from school.

He apologized profusely for getting me up and said neither he nor the cops wanted to bug anyone at that hour of the morning, but after a couple hundred UFO calls they wanted to know if I could help. I told Raul to come on over, and I'd go see what was going on. Out the window were two really bright lights over the Eastern horizon. What in he--?! They seemed too bright for planes approaching L.A. International, and these didn't seem to move, just hovered there. I was out back in a flash, but these things were too low to get the 'scope on them, so I grabbed my little portable refractor and headed

o b s e r v e r s d e c k

out the front door, just as Raul and his partner arrived. Just as I hit the front door it hit me, Jupiter and Venus!! Sure enough, Jupiter and Venus. Mystery solved, the cops went away happy and I went back to bed. Waitabloodyminute! When I was looking for these planets the previous afternoon they were in opposite parts of the sky. They don't move that fast, how could they get together, What in the world is going on? The next day I found the scrap of paper with the positions of these planets and confirmed them in the almanac. Yes the positions were the ones right out of the book, yep, right date, right month, no goof with Greenwich time. Even if I were off by a day it wouldn't make that much difference. As I put the almanac back on the shelf, I found the problem. The bloody thing was for the previous year! Oh well, we live and, hopefully, learn.

An interesting postscript is that the papers reported on the UFO business and passed it off as a rocket launch from Vandenburg AFB. Never mind that VAFB is to the West, these planets were rising in the East, and while sunset

launches out of VAFB can be spectacular, this was nowhere near sunset and there was no evidence at all of any rocket launches that evening.

ALCON 2002 to be held in Salt Lake City July 31-August 3

The national convention of the Astronomical League (ALCON 2002) will be held July 31 - August 3, 2002 at the University of Utah. You can download a registration form at <http://www.alcon2002.org/index1.html> or write to: ALCON 2002, P.O. Box 9574, Salt Lake City, UT 84109-9574.

If you have questions or comments about the 2002 convention you may contact the president of the ALCON 2002 Planning Committee, Lowell Lyon, E-mail: bolide@sisna.com, or call Josephine Grahn at (801) 277-1479 to have a registration form sent to you.



The skies at the Texas Star Party gave Chris Tarr yet another opportunity for some great astrophotography. Many of the galaxies in the Virgo Galaxy Cluster lie about 60 million light years away. The core of this cluster is shown above—M86 is just right of the photo's center and M84 is shown at far right. This is a composite of six images taken at f/5 through a 12-inch LX200 telescope. Photo: © 2002, Chris Tarr

observers deck

DAS Member Participation Prize Drawing

In an effort to increase member participation in outreach programs sponsored by the DAS, the DAS Member Participation Prize Drawing will become effective on July 1, 2002. The prizes will cost the club a total of \$120.00 annually, however, this type of incentive program demonstrates the value that our club places on volunteering and will encourage members to become active within our organization. Administration of this program will be added to the list of responsibilities of the acting Vice President.

Members who volunteer in various capacities will need to complete a DAS Member Participation Prize slip (below) and have an E-board member sign it. Slips will be available at DAS functions and the E-board member who signs the slip will be responsible for placing the slip in the designated file box in the boardroom at Chamberlin. E-board members are also eligible for this drawing, provided they have another E-board member sign off on their slip.

Examples of volunteer activities include:

- **Public Nights:** lecturing, operating the telescope, crowd control, etc.
- **Open Houses:** lecturing, operating the telescope, crowd control, selling DAS memorabilia, selling raffle tickets, bringing a personal telescope and talking with the public.
- **School Star Parties:** lecturing, bringing a personal telescope and talking with the public.
- **Chamberlin Clean Up Days:** assisting in any clean up activity at Chamberlin Observatory on designated days.

Image: © Carla Swartz, 2002



The Historic 20-inch Alvan Clark Refracting Telescope
Volunteers can be trained to use Chamberlin Observatory's prized 1894 telescope. The observatory is listed on the National Register of Historic Places and is used on a regular basis by club members and the general public.

- **Edmund G. Kline Dark Site:** assisting in any building or development activity
- **Colorado Astronomy Day:** lecturing, crowd control, selling DAS memorabilia, selling raffle tickets, any committee activity (food preparation, vendor setup, etc.), bringing a personal telescope and talking with the public.

On a quarterly basis at general meetings a volunteer from the audience will draw a name from the box. The DAS member whose name is drawn will receive a participation prize. Prizes will vary from

quarter to quarter, but will be equal to approximately \$30.00. Ideas for prizes are: a gift certificate to S&S Optika, yearly DAS membership dues, a *Sky and Telescope* or *Astronomy* magazine subscription, or other prizes that the E-board deems appropriate.

The first drawing will be held on September 20th and the next drawing will be on December 21st.

All participation slips will be entered into a random drawing that will be held on a quarterly basis during General Meetings.—

Carla Swartz

Welcome New Members!

The following folks joined the Denver Astronomical Society during the last month. Welcome new members!

- | | |
|------------------------|-------------------|
| • Chris Huston | • Bill Smyth |
| • Cecil Jenkins | • Thomas Stewart |
| • Patricia Kaluzienski | • Norma Villareal |
| • Chuck Riggs | • Craig Weinstein |
| | • Matt Whilden |

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For Sale
Complete SBIG ST-6 Camera System
\$1,000.00 (includes shipping in metro Littleton)

Includes:

Contact Steve Solon at: (303) 932-7613, or galaxyshots@compuserve.com.

LADIES NIGHT

For Ladies Only—Whether you're a DAS member or related to one, please join us on the evening of Saturday, June 29. The gathering place will be determined after we know how many women to expect. Please R.S.V.P. by June 21 to Patti Kurtz (either by e-mail: pkurtz@att.net or telephone: (303) 948-5825. If you R.S.V.P. between June 8 and June 16, please phone or e-mail Carla Swartz at (303) 246-6926 or CSastrogirl@aol.com

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 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.

Directions to the Dark Sky Site

The DAS Deer Trail Dark Sky Site (DSS) 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 DSS 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.
- 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.

for sale

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



Denver Astronomical Society

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

JUNE'S MEETING

JUNE 21:

Bryan White, "Nitescapes
3-D, Northern Lights."

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Colorado's Premier Astronomical Supply Store
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join us